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Consolidated Remedial Investigation Report

1913 Marine View Drive
Tacoma, Washington

Facility No.: 1213
Cleanup Site ID: 3671

Prepared for

Glenn Springs Holdings Inc.
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Tacoma Washington

Prepared by

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Project Number TR0837R

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TABLE OF CONTENTS

1. Introduction 1
   - 1.1 Site Information 1
   - 1.2 Purpose and Report Organization 1
2. Site Description and Background 3
   - 2.1 Site Discovery and Regulatory Status 3
   - 2.2 Summary of Preliminary Cleanup Levels 4
   - 2.3 Site and Property Location/Definition 5
   - 2.4 Neighborhood Setting 5
   - 2.5 Past and Current Property Uses and Facilities 6
   - 2.6 Utilities and Water Supply 6
   - 2.7 Potential Sources of Contamination from Neighboring Properties 6
3. Natural Conditions 7
   - 3.1 Geology 7
   - 3.2 Groundwater 7
   - 3.3 Surface Water 8
   - 3.4 Natural Resources and Ecological Receptors 9
4. Contaminant Occurrence and Movement 10
   - 4.1 Summary of Investigations Conducted at the Site 10
     - 4.1.1 Investigations Prior to 2014 10
     - 4.1.2 2014 Investigation 11
     - 4.1.3 2024 Investigation 16
   - 4.2 Contaminant Occurrence in Soil/Fill 18
     - 4.2.1 Sand and Shredder Residue Fill, and Lime Waste Fill Delineation 18
     - 4.2.2 Investigation Data 19
   - 4.3 Contaminant Occurrence and Movement in Groundwater 21
   - 4.4 Contaminant Occurrence and Movement in Surface Water 22
   - 4.5 Contaminant Occurrence in Sediment 23
   - 4.6 Air/Soil Vapor Assessment 24
5. Conceptual Site Model 25
6. Cleanup Levels 28
   - 6.1 Groundwater Cleanup Levels 28
   - 6.2 Soil Cleanup Levels 28
   - 6.3 Surface Water Cleanup Levels 28
   - 6.4 Sediment Cleanup Levels 28
7. RI Conclusions and Recommendations 30
8. References 32

LIST OF TABLES

Table 2.1 Preliminary Cleanup Levels for the Detected Parameters
Table 4.1 Summary of Soil Analytical Data
Table 4.2 Summary of Groundwater Sampling Data
Table 4.3 Summary of Surface Water Analytical Data
Table 4.4 Summary of Sediment Analytical Data
Table 4.5 Groundwater Monitoring Wells Construction Details

LIST OF FIGURES

Figure 2.1 Site Plan 2024
Figure 2.2 Site Plan 2014
Figure 3.1 Stratigraphic Cross Sections – Plan 2014
Figure 3.2 Stratigraphic Cross Section A-A' 2014
Figure 3.3 Stratigraphic Cross Section B-B' 2014
Figure 3.4 Shallow Potentiometric Surface Contours – August 12, 2014
Figure 3.5 Shallow Potentiometric Surface Contours Beneath Lime Waste Fill – August 12, 2014
Figure 3.6 Shallow Potentiometric Surface Contours – June 10, 2024
Figure 3.7 Shallow Potentiometric Surface Contours Beneath Lime Waste Fill – June 10, 2024
Figure 4.1 Soil Results – Metals 1998–2014
Figure 4.2 Sediment Results – Metals 1998–2014
Figure 4.3 Groundwater Analytical Results (VOCs/SVOCs/Metals/PCBs) 2024
Figure 4.4 Surface Water Analytical Results (Metals) 2024
Figure 6.1 Human Health Conceptual Site Model

LIST OF APPENDICES

Appendix A Environmental Document List
Appendix B Property Legal Description
Appendix C Monitoring Well Stratigraphic and Instrumentation Logs
Appendix D Test Pit and Borehole Logs
Appendix E Terrestrial Ecological Evaluation Form
Appendix F Summary of Previous Investigations
Appendix G Laboratory Analytical Reports
Appendix H Figures of Groundwater and Surface Water Results Prior to 2024
Appendix I Slug Test Results
Appendix J Field Forms
Appendix K 2024 Data Verification Report (DVR)

ACRONYMS AND ABBREVIATIONS

AO	Agreed Order
ARARs	Applicable or Relevant and Appropriate. Requirements
4,4'-DDE	4,4'-dichlorodiphenyldichloroethane
a-BHC	alpha-hexachlorocyclohexane
AMSL	above mean sea level
B2EP	bis(2-ethylhexyl)phthalate or (DEHP)
Bluffs	Puget Sound Bluffs
CAP	Cleanup Action Plan
CrVI	hexavalent chromium
CrIII	trivalent chromium
CLARC	Cleanup Levels and Risk Calculation
cm/s	centimeter per seconds
CRA	Conestoga-Rovers & Associates
DVR	data verification report
Ecology	Washington State Department of Ecology
FS	Feasibility Study
ft	feet
ft bgs	feet below ground surface
ft/ft	foot/foot
g-BHC	gamma-hexachlorocyclohexane (Lindane)
General Metals	General Metals of Tacoma
GHD	GHD
Geosyntec	Geosyntec Consultants, Inc.
Hylebos	Hylebos Waterway
ICs	institutional controls
Ks	hydraulic conductivities
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MS/MSD	method spike and method spike duplicate
MTCA	Model Toxics Control Act
NTUs	nephelometric turbidity units
OCC	Occidental Chemical Corporation
OCCT	OCC Tacoma, Inc.
OSEP	OxyChem Special Environmental Programs
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PLP	potentially liable person
PMI	Port Maritime and Industrial
Property	1905 Marine View Drive
PVC	polyvinyl chloride
RCW	Revised Code of Washington
RI	Remedial Investigation
SCSL	Sediment Cleanup Screening Level
Site	the fill area within the Property and referred to as "1913 Marine View Drive"
SOW	Scope of Work
SRS Properties	Leslie P. Sussman, Paula Rose, and Alan Sussman, a partnership, d/b/a Sussman, Rose and Sussman

SVOCs	semi-volatile organic compounds
TCE	trichloroethene
TCL/TAL	Target Compound List/Target Analyte List
TCLP	Toxicity Characteristic Leaching Procedure
TEE	Terrestrial Ecological Evaluation
THA	Task Hazard Analysis
EPA	United States Environmental Protection Agency
VC	vinyl chloride
VOCs	volatile organic compounds
WAC	Washington Administrative Code

1. Introduction

1.1 Site Information

Site Name: "1913 Marine View Drive"

Property Address: 1905 Marine View Drive, Tacoma, Washington

Project Consultant: Geosyntec Consultants, Inc. (Geosyntec).

Project Consultant Contact Information:

Rick Bieber
520 Pike Street, Suite 2600
Seattle, WA 98101
Cell: 253-993-0190

Current Owner/Operator: SRS Properties

1.2 Purpose and Report Organization

The Washington State Department of Ecology (Ecology) has determined that Leslie P. Sussman, Paula Rose, and Alan Sussman, a partnership, d/b/a Sussman, Rose and Sussman (referred to as SRS Properties), Occidental Chemical Corporation (OCC), General Metals of Tacoma (General Metals), and Don Oline are potentially liable persons (PLPs) for fill materials historically placed in the southern portion of a property located at 1905 Marine View Drive in Tacoma, Washington (the Property) and referred to as the "1913 Marine View Drive Site" (Site).

Ecology and the PLPs entered into Agreed Order (AO) No. DE 1679, effective date of July 6, 2007 (Ecology, 2007b), that requires the PLPs to complete a Remedial Investigation (RI) at the Site (the fill area within the Property), conduct a Feasibility Study (FS) to determine a preferred cleanup action, and develop a draft Cleanup Action Plan (CAP). An RI Report (GHD, 2015), prepared by GHD on behalf of the PLPs, was submitted to Ecology in 2015 that presented the results of the data collected during investigations completed at the Site through 2014. Ecology provided comments and a revised RI Report (GHD, 2016) was submitted to Ecology in 2016. In 2023, Ecology reached out to the PLPs and requested additional data collection and for the RI Report to be updated. In 2024, Geosyntec Consultants, Inc. (Geosyntec) collected additional groundwater and surface samples in accordance with an Ecology approved Scope of Work[1] (SOW) on behalf of the PLPs.

Figure 2.1 depicts the layout of the Site from the 2024 investigation and Figure 2.2 depicts a layout of the Site from the 2016 RI.

This Consolidated RI Report combines the data from the 2016 RI with the results of the 2024 sample collection activities and updates the data assessments for the Site. A list of documents reviewed in the preparation of this Consolidate RI Report is included in Appendix A.

The Consolidated RI Report is organized as follows:

Section 1 - Introduction: Presents an overview of the administrative background of the project.

[1] Bieber, Richard. "Re: Marine View Drive - Tasks." Received by Misuraca, Tia (Ecology), 2 Nov. 2023.

Section 2 - Site Description and Background: Presents summary descriptions of the location, land use, and ownership of the Site as well as previous environmental investigations.

Section 3 - Natural Conditions: Presents natural conditions at the Site.

Section 4 - Contaminant Occurrence and Movement: Presents both historical and recent (2024) data collected related to the Site.

Section 5 - Conceptual Site Model: Presents a detail discussion of physical and chemical conceptual site model and potential exposure pathways.

Section 6 - Cleanup Levels: Presents a detail discussion of applicable cleanup levels for all media determined based on the conceptual site model and used to compare to data collected related to the Site.

Section 7 - RI Conclusions and Recommendations: Presents conclusions and recommendations based on the discussions in the above sections.

Section 8 - References: Presents the references used for the development of this report.

2. Site Description and Background

2.1 Site Discovery and Regulatory Status

The Property (1905 Marine View Drive) on which the Site (the fill area within the Property) is located was deeded to Don E. Oline and Alba Oline in 1971 by Dillingham Corporation. The Property was subsequently purchased from Don E. Oline and Alba Oline under a real estate contract in 1975 by SRS Properties and later deeded to SRS Properties in 1982 following payment in full of the contract. The Property is vacant industrial land and currently recorded by the Pierce County Assessors' office as Parcel #0321362051 and is zoned 9167 (Vacant Land Major Problem). The City of Tacoma identifies the portion of the Property where the Site is located as zoned M-2 Heavy Industrial District.

At the request of Ecology, investigations of the Site were conducted between 1984 and 1988. The investigations were conducted voluntarily by an affiliate of OCC Tacoma, Inc. (OCCT) to evaluate the environmental impact of lime waste fill, which was placed at the Site. The results of the investigations were reported in "Tacoma Off-Plant Disposal Site Investigation" (Conestoga-Rovers & Associates Limited [CRA], 1984) and a November 1988 memorandum by OxyChem Special Environmental Programs (OSEP, 1988). Data for samples collected from soil/fill and groundwater indicated elevated concentrations of halogenated organics, metals, non-halogenated solvents, and polychlorinated biphenyls (PCBs). Some of these elevated concentrations were related to other fill materials (e.g., sand and shredder residue, cobbles, dredged material, and construction/demolition debris) placed at the Site. The Site was listed in Ecology's Cleanup Site Information database and assigned ID number 3671 under the Toxics Cleanup Program in 1990. Ecology lists the current status of the Site as "Cleanup Started."

In 1998, Ecology requested that the Site investigation data and current Site condition be reviewed to determine whether additional work should be considered to complete the evaluation. A data review and work plan entitled "Review of Site Conditions and Proposed Additional Work" (CRA Services, 1998) (Work Plan) was prepared and submitted to Ecology for review and comment in September 1998. The Work Plan presented the results of the previous investigations as well as a review of the data with recommendations for appropriate further investigative activities. The activities proposed in the Work Plan were designed to confirm the results of the earlier investigations and to determine whether there are any sources or volumes of impacted materials that were not previously identified. Comments dated September 23, 1998, were received from Ecology and responses were submitted on October 29, 1998. OCCT and Ecology were in agreement on the responses to the comments and the field activities were conducted between November 18, 1998, and January 12, 1999. Results of the Site investigation were reported in "Site Characterization Report" (CRA Services, 1999) and confirmed the conclusions from the previous investigations with some modification of the limits of the lime waste fill and other fill materials (e.g., sand and shredder residue, cobbles, dredged material, and construction/demolition debris).

Ecology issued potentially liable person status letters dated September 29, 2003, to OCC, General Metals, SRS Properties, and Don Oline, pursuant to Revised Code of Washington (RCW) 70 105D 040, 020(16) and Washington Administrative Code (WAC) 173-340-500. Subsequently, Ecology issued determinations that OCC, General Metals, SRS Properties, and Don Oline are PLPs under RCW 70 105D 040 and notified each PLP of this determination by separate letters dated February 2, 2004.

In July 2007, AO No. DE 1679 (Ecology, 2007b) was executed between the PLPs and Ecology to complete an RI at the Site, develop an FS to determine a preferred cleanup strategy, and develop a draft CAP.

In 2013, a 2013 Remedial Investigation/Feasibility Study Work Plan, (2013 RI/FS Work Plan) (CRA, 2013) was submitted to Ecology and subsequently approved by Ecology.

An RI Report, completed by GHD, was submitted to Ecology in August 2015. The 2015 RI Report outlined the extent of the buried fill materials, groundwater flow regime, and proposed steps to remediate and clean up the Site. In February 2016, Ecology provided comments and questions for the RI Report, which were further clarified in May 2016. GHD prepared responses to the comments and questions and submitted them and a revised RI Report to Ecology in November 2016.

In October 2023, Ecology notified OCC of a change to the Ecology Project Coordinator.

In 2024 at the request of Ecology, OCC collected additional groundwater and surface water samples in accordance with the approved SOW to update the 2016 RI Report. This Consolidated RI Report combines the data from the 2016 RI with the results of the 2024 sample collection activities and updates the data assessments for the Site.

2.2 Summary of Preliminary Cleanup Levels

Preliminary cleanup levels for soil and groundwater that were used for purposes of a comparative discussion of the investigation results are presented in Table 2.1. Cleanup levels are more fully developed and discussed in Section 6. Descriptions of the bases for the preliminary cleanup levels are below.

The preliminary cleanup levels were obtained from Ecology's Cleanup Levels and Risk Calculation (CLARC) database tables and WAC 173-204-562(2) Table III, Marine Sediment, Sediment Cleanup Objectives and Cleanup Screening Levels, Chemical Criteria.

Soil: The Site (the fill area within the Property) is vacant industrial land zoned 9167 (Vacant Land Major Problem) (Pierce County) or M-2 Heavy Industrial District (City of Tacoma)—see Subsection 2.4 for more details. Because the historical land use and current zoning of the Site has been and is industrial and the likely potential future use as an industrial property, preliminary cleanup levels for soil have been established consistent with Model Toxics Control Act (MTCA) (Ecology, 2007a) Method C cleanup levels for industrial land use. These cleanup levels are further described in Subsection 6.2.

Groundwater and Surface Water: Ecology has determined that groundwater at the Site is designated as non-potable[2] pursuant to WAC 173-340-720(2) and eventually discharges to the Hylebos Waterway (Hylebos). Consequently, groundwater cleanup levels may be based on protection of surface water. The surface water near the Property is designated marine water in the Hylebos. Accordingly, the preliminary cleanup levels for groundwater and surface water at the Site have been established consistent with MTCA Method B and Applicable or Relevant and Appropriate Requirements (ARARs) surface water cleanup levels for marine receptors. Using the surface water cleanup levels for direct comparison to groundwater concentrations is considered conservative

[2] Ecology comments and questions for the 2015 RI Report, received February 1, 2016, and clarified in May 2016.

because the values do not take into consideration attenuation. These cleanup levels are further described in Subsections 6.1 and 6.3.

Sediment: Sediment chemical criteria established by WAC 173-204-562(2). According to WAC 173-204-562(2), two chemical criteria are established, including sediment cleanup objectives and cleanup screening levels for marine sediment. These two criteria are further described in Subsections 4.1.2.2 and 6.4.

2.3 Site and Property Location/Definition

The Site is an area of approximately 2.62 acres containing historically placed fill materials that are within the southern portion of a 6.25-acre property located at 1905 Marine View Drive in Tacoma, Washington (the Property). Plans showing the Property boundaries, sampling locations, and estimated fill materials boundaries are presented on Figures 2.1 and 2.2. The Property legal description—from Exhibit B of the AO No. DE 1679—is provided in Appendix B.

The Site (the fill area within the Property) is vacant without structures and is located on the north side of Marine View Drive. A soil/gravel access road runs north-south through the Site from Marine View Drive. The Property is bound along its entire southern boundary by a thin parcel owned by Manke Timber Company Inc. running parallel to Marine View Drive.

In general, the Property surface cover varies from sparse grass to densely vegetated—thick brush and trees—on the majority of the Property. The southwest portion of the Property is sparsely covered with grass and/or small standing brush. Two small wet areas are present along the southern boundary of the Site. A majority of the wet areas are located on the Manke Lumber Company Inc. parcel between the Site and Marine View Drive. Two drainage swales run south from the base of the hill on the north side of the Property, and then further south along the western and eastern flanks of the fill materials (within the southern portion of the Property). The drainage swales are densely vegetated with brush and trees. In 2024, it was observed that the western drainage swale was blocked by a small landslide near up-gradient groundwater monitoring well GM-B-3R and water was not flowing within. The eastern drainage swale traverses the Property to the south to a small wet area between the Site and Marine View Drive further to the south. Another drainage swale enters the wet areas from the east, off the southeastern corner of the Site. All of the surface water discharges through a culvert off the southwestern edge of the Property, ultimately discharging to the Hylebos further to the southwest.

2.4 Neighborhood Setting

The Property is vacant industrial land zoned 9167 (Vacant Land Major Problem) per Pierce County and City of Tacoma identifies the Property as M-2 Heavy Industrial District. The Site (the fill area within the Property) is located in the southern portion of the Property as depicted on Figure 2.2. The northern and northeastern flanks of the Property are steep bluffs. These hillsides make up much of the portion of the Property north of the fill area.

Adjacent properties to the north, west, east, and northeast are all at higher elevations than the industrial zoned portion of the Property and therefore the Site—see Figure 2.1 and Subsection 3.1. Adjacent properties to the southeast, and south are zoned 9180 or PMI (Port Maritime and Industrial). The adjacent property to the west is zoned 9180 or M-2. The properties to the north, east, and northeast that are at a higher elevation are zoned 9100 (Vacant Land Undeveloped –

Residential), 1101 (Single Family Dwelling – Residential), and 7600 (Parks – Residential) or R-2. These residential zoned properties are physically separated from the Property by steep inclines and are up-gradient to the Site.

2.5 Past and Current Property Uses and Facilities

An area in the southern portion of the Property was used for the placement of fill materials, comprised of lime waste, shredder residue, sand, cobbles, dredged material, and construction/demolition debris. The lime waste fill is a by-product of the production of chlorinated solvents such as trichloroethene (TCE) and tetrachloroethene (PCE).

Shredder residue consists of by-products of scrap metal and automobile recycling, such as rubber, metal, and wire (auto fluff).

The former Property owner Don Oline indicated at a July 8, 2004 Site meeting with Ecology that, during the 1960s or 1970s, approximately 20,000-30,000 cubic yards of material dredged from the Hylebos at the General Metals "graving dock" was placed at the Site in a 6-foot-thick layer on top of the lime waste fill and auto fluff.

The Site was also used for the storage of automobile scrap parts and other metal items.

The Site is not currently in use and nearly all scrap materials and other surface debris have been removed.

2.6 Utilities and Water Supply

No subsurface utilities are present beneath the Site. All known utilities run parallel to Marine View Drive south of the Property.

Based on Ecology's database (Ecology, 2024a), there are no water supply wells within a 0.5-mile radius of the Site.

2.7 Potential Sources of Contamination from Neighboring Properties

There are several properties identified as "Facilities" and/or "Sites" in Ecology's Facility/Site Database (Ecology, 2024b). However, all of the properties identified are located down- to cross-gradient or at a distance greater than 0.25 mile. The closest property is the Oline Storage Yard site located to the west at 1915 Marine View Drive that is cross-gradient to the Site based on the Site groundwater contours—see Subsection 3.2—and at a significantly higher elevation—see Figure 2.1 and Subsection 3.1. The Oline Storage Yard site status is listed as No Further Action having complied with an agreed order. Therefore, there does not appear to be a potential for future contaminant migration in groundwater to the Site from neighboring properties.

As discussed in Subsection 2.3, water from a drainage swale to the east enters the wet area that is south of the Site. The surface water and sediment quality from this drainage swale, which could impact the wet areas south of the Site, have not been assessed. Therefore, there appears to be a potential for future contaminant migration in surface water (including water and suspended sediment), if present, to the wet areas south of the Site from neighboring properties.

3. Natural Conditions

3.1 Geology

Regionally, the Site (the fill area within the Property) and the Property, Puyallup River Valley, and surrounding area are part of the Puget Sound Lowlands, which are surrounded by the Puget Sound Bluffs (Bluffs). The Bluffs extend along the sides of the Puyallup River Valley and correspond to the north side of the Property. The slope of the southern half of the Site rises from an approximate elevation of 11 feet (ft) above mean sea level (AMSL) along Marine View Drive to an approximate elevation of 27 ft AMSL at the northernmost monitoring well—up-gradient well GM-B-3R. The northern half of the Property—north of up-gradient well GM-B-3R—rises more steeply to a bluff. The properties to the east and west of the Site are at higher elevations. The property to the east is approximately 160 ft AMSL and the property to the west is approximately 120 ft AMSL. Figure 2.1 depicts these elevation changes.

The shallow subsurface geology of the Site has been defined using data collected during the installation of 37 test pits, 15 drilled boreholes, 7 hand-augered boreholes, and 9 monitoring wells (7 existing and 2 abandoned). The logs of the monitoring wells, test pits, and boreholes are presented in Appendix C—for monitoring wells and Appendix D—for test pits and boreholes.

The shallow soils at the Site are divided into three stratigraphic units; topsoil, fill materials [sand and shredder residue, construction/demolition debris and lime waste], and native sediments. The alignments of stratigraphic cross-sections through the Site are depicted on Figure 3.1. Stratigraphic cross-sections are presented on Figures 3.2 and 3.3.

The topsoil unit is brown, clayey silt having low plasticity. The thickness of the topsoil ranges from 0 to 0.7 ft but generally is not more than 0.5 ft thick.

Below the topsoil, the Site consists of imported fill materials made up primarily of sand and shredder residue fill with varying amounts of silt, gravel, cobbles, lime waste fill, and construction debris. The imported fill materials cover approximately 40 percent of the Property and extends from land surface to a depth of as great as 20 ft below ground surface (ft bgs). At some locations along the flanks of the Property in close proximity to the drainage swales, the shredder residue is observed at or just below the surface. The lime waste fill, as encountered during the investigations, is a gray to beige fine-grained material with medium to high plasticity and is typically present as a defined single layer at depth within the sand and shredder residue fill. A portion of the lime waste fill to the east, between GM-B-6A and TP-34, is overlain by the sand and shredder residue fill and underlain by native sand, silty sand with peat. The thickness of the lime waste fill ranges from approximately 1.0 to 5.0 ft and is typically greater than 7.5 ft below the ground surface. The estimated areal limits of sand and shredder residue fill and lime waste fill are depicted on Figure 3.1.

The upper native sediments below the imported fill materials are brown, intermixed, silty sands, clayey silts, and peat, with plasticity ranging from low to high.

3.2 Groundwater

Hydrographs from the 1998 hydraulic monitoring program indicate that there is no response in the monitoring wells to the tidal fluctuations in the Hylebos indicating a lack of hydraulic connection.

Water levels measured on August 12, 2014, during a groundwater sampling program, were used to prepare groundwater contour maps to determine groundwater flow direction within and below the imported fill materials. The 2014 groundwater contours presented on Figures 3.4 and 3.5 show that the groundwater flow direction at both depths is from northeast to southwest, the same direction that the ground surface slopes. As noted on Figure 3.5, well GM-B-6A was observed to be artesian when water levels were measured in 2014. The casing of GM-B-6A was temporarily extended to measure the hydraulic head at the well.

Water levels measured on June 10, 2024, during a groundwater sampling program, were used to prepare updated groundwater contour maps. The 2024 groundwater contours presented on Figures 3.6 and 3.7 show that the groundwater flow direction at both depths is from northeast to southwest, the same direction that the ground surface slopes, which is consistent with the 2014 contours. As noted on Figure 3.7, well GM-B-6A was observed to be artesian when water levels were measured in 2024. The casing of GM-B-6A was temporarily extended to measure the hydraulic head at the well.

On August 12, 2014, the horizontal flow gradient of the shallow groundwater ranged from 0.03 foot/foot (ft/ft) to 0.04 ft/ft. Horizontal flow gradients of the groundwater beneath the depth of the imported fill materials ranged from 0.03 ft/ft to 0.05 ft/ft.

On June 10, 2024, the horizontal flow gradient of the shallow groundwater ranged from 0.03 foot/foot (ft/ft) to 0.04 ft/ft. Horizontal flow gradients of the groundwater beneath the depth of the imported fill materials ranged from 0.02 ft/ft to 0.04 ft/ft. These gradients are consistent with the 2014 data.

In 2014, water level data between the shallow and deeper well pairs indicate upward vertical gradients that ranged from 0.18 ft/ft to 0.86 ft/ft. The average vertical gradient was calculated as 0.45 ft/ft upward.

Groundwater springs emerge from the base of the hill slope at the north side of the Property. During the 2014 investigation, the springs fed two small drainage swales that traversed the Property along the eastern and western flanks of the Property. During the 2024 investigation, it was observed that water was flowing within the eastern drainage swale—presumably from springs at or near the base of slope to the north—and the western drainage swale was blocked by a small landslide near up-gradient groundwater monitoring well GM-B-3R and water was not flowing within the swale.

3.3 Surface Water

Surface runoff on the Property is directed into a drainage swale running along the eastern flank of the Property and to a lesser extent across the Site as sheet flow, discharging to wet areas situated at the southern boundary of the Property generally between the southern property boundary and Marine View Drive. Previously, there was a drainage swale running along the western flank of the Property that is now blocked. A small surface water drainage swale enters the wet areas from the east, presumably consisting of surface runoff and/or spring water from properties to the east. The wet areas drain through a culvert off the southwestern corner of the Property and ultimately discharging to the Hylebos.

Two nearby surface water bodies, both marine waters, include Hylebos Waterway located approximately 700 ft southwest, and Commencement Bay located approximately 2.2 miles northwest.

3.4 Natural Resources and Ecological Receptors

A Terrestrial Ecological Evaluation (TEE) Form (Ecology, 2014) was completed for the Site. According to WAC 173-340-7492(2), a simplified TEE screening procedure includes exposure analysis, pathway analysis, and contaminants analysis. The simplified TEE screening steps are presented in the following documents that are included in Appendix E:

- Aerial Map showing a 500-ft radius surrounding the Site;
- TEE exposure analysis per Table 749-1 in WAC 173-340-900;
- TEE contaminants analysis per Table 749-2 in WAC 173-340-900; and
- TEE simplified evaluation documentation form.

The exposure analysis per Table 749-1 did not exclude the Site from further evaluation because of the impacted fill materials and undeveloped lands on and surrounding the Site. The contaminants analysis identified multiple concentrations on Site exceeding the hazardous substance concentrations listed in Table 749-2. Pathway analysis indicated that no physical barrier covering the imported sand and shredder residue fill is currently present on Site and therefore the terrestrial ecological protection pathway is currently complete. However, if a physical barrier were to be placed within a time frame acceptable to the Ecology as part of a remedy, this pathway would be considered incomplete according to WAC 173-340-7492(2)(b).

4. Contaminant Occurrence and Movement

The following subsections present a summary of investigations conducted, investigation results, and descriptions of contaminant occurrence and movement—as applicable—at the Site. The data from all investigations are presented in Tables 4.1, 4.2, 4.3, and 4.4. The subsections also compare concentrations in groundwater and surface water over time using the 2014 data—presented in the 2016 RI—and the 2024 data. The comparison appears to indicate that attenuation of organic contaminants in groundwater is occurring and there does not appear to be significant migration of contaminants from the Site (the fill area within the Property) as discussed in more detail below. Additionally, comparison of the 2024 metals data with the 1998/1999 metals data, groundwater quality appears to have improved at well locations GM-B-1A, GM-B-2A, GM-B-3R (up-gradient well), GM-B-6A, and GM-B-6R.

4.1 Summary of Investigations Conducted at the Site

Investigation conducted at the Site between 1984 and 2024 are summarized in the following Subsections:

Subsection 4.1.1 Investigations Prior to 2014

Subsection 4.1.2 2014 Investigation

Subsection 4.1.3 2024 investigation

4.1.1 Investigations Prior to 2014

Four investigations were conducted at the Site from 1984 to 2004. The 1984 to 2004 investigations include:

- **September 1984 Investigation:** This investigation included the installation of eight boreholes for geologic sampling, installation of four shallow groundwater monitoring wells to total depths ranging from 10 to 12 ft bgs and groundwater sampling, and the collection and analyses of two surface water samples. The sampling and well locations are depicted on Figure 2.2. The results of this investigation were previously reported in the Tacoma Off-Plant Disposal Site Investigation (CRA, 1984).
- **September 1988 Investigation:** This investigation included sampling groundwater from the four previously installed groundwater monitoring wells. The sampling and well locations are depicted on Figure 2.2. The results of this investigation were previously reported in the 1988 memorandum (OSEP, 1988).
- **November 1998 to January 1999 Investigation:** In 1998, Ecology requested that OCC review the existing Site investigation data and current Site conditions to determine whether additional work should be considered to complete the Site evaluation. Pursuant to Ecology's request, a data review and work plan entitled, Review of Site Conditions and Proposed Additional Work (CRA Services, 1998) was prepared and submitted to Ecology for review and comment in September 1998. The work plan presented the results of the previous investigations as well as a review of the data with recommendations for appropriate further investigative activities. The activities proposed in the work plan were designed to confirm the results of the earlier investigations and to determine whether there are any sources or volumes of impacted materials that were not previously identified. Comments dated September 23, 1998, were

received from Ecology and responses were submitted on October 29, 1998. OCC and Ecology were in agreement on the responses to the comments and field activities were conducted between November 18, 1998, and January 12, 1999. The sampling locations are depicted on Figure 2.2. The results of this investigation were previously reported in March 1999 in the Site Characterization Report (CRA Services, 1999). As presented in Table 4.1, elevated levels (concentrations above 2025 preliminary cleanup levels) of arsenic in shallow soils (up to 3.5 ft bgs), chromium and mercury in surface soils (0-0.5 ft bgs), and lead in surface soils and composited soils were present at a few 1998 investigation locations. Note that the preliminary screening levels for lead and mercury are based on MTCA Method A values for comparison purposes because there are no MTCA Method C values. Also, the chromium preliminary cleanup level is based on hexavalent chromium (CrVI). Chromium concentrations in soil are below the MTCA Method C industrial cleanup level for trivalent chromium (CrIII). The report confirmed the conclusions from the previous investigations with some modifications to the limits of the fill materials.

- **October 2004 Investigation:** This investigation included collecting four samples of the lime waste fill from four separate boreholes at the Site to characterize the lime waste fill for potential off-Site disposal purposes in anticipation of evaluating remedial alternatives for the Site. The sampling locations are depicted on Figure 2.2. The analytical results from this investigation were presented in Subsection 4.3 of the 2013 RI/FS Work Plan (CRA, 2013).

A summary of previous investigations conducted on Site is present in Appendix F. The logs of the monitoring wells, test pits, and boreholes are presented in Appendix C—for monitoring wells—and Appendix D—for test pits and boreholes.

4.1.2 2014 Investigation

The 2014 investigation was conducted pursuant to the 2007 Agreed Order No. DE 1679. CRA conducted an investigation between August and December 2014 based on CRA's approved 2013 RI/FS Work Plan. The investigation activities and results are discussed below.

4.1.2.1 2014 Site Activities

In order to determine the horizontal and vertical limits of the fill materials, delineate the horizontal and vertical extent of elevated parameter concentrations in soil/fill and groundwater, determine the physical properties of the soils and fill materials, and establish representative background concentrations for metals, the following field activities were conducted by CRA in 2014:

- inspected all existing groundwater monitoring wells GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R, and GM-B-6A, and identified that well GM-B-6R had approximately 2 ft of sediments accumulated at the bottom;
- redeveloped well GM-B-6R to ensure hydraulic connection between the monitoring well and surrounding groundwater;
- sampled all existing groundwater monitoring wells using low-flow methods;
- oversaw advancement of seven borings, GP-1 through GP-7, to depths ranging from 20 to 30 ft bgs via direct push drilling technique, and collected three to four soil/fill samples from the drilling cores corresponding to depths ranging from 4 to 25 ft bgs;

- oversaw excavation of 14 test pits, TP-24 through TP-38 (except TP-37 that was not completed during this mobilization due to access limitations), to depths ranging from 8 to 16 ft bgs, and collected soil/fill samples associated with test pits TP-24, TP-28, and TP-38 at depths ranging from 2.5 to 11 ft bgs;
- completed a borehole using a hand auger at location TP-37 to a depth of 8.0 ft bgs and collected three soil/fill samples at 2, 5, and 7.5 ft bgs;
- collected eight sediment samples, SD-05 through SD-12, and five surface water samples, SW-01 through SW-05;
- completed six hand auger boreholes at locations HA-01 through HA-05B to a maximum depth of 8.0 ft bgs, to further delineate the lateral extent of the sand and shredder residue fill; and
- conducted slug tests in all existing monitoring wells.

4.1.2.2 2014 Investigation Results

Soil/Fill Analytical Results

Boring and test pit locations are depicted on Figure 2.2. Selected samples from the borings and test pits were collected and analyzed for the Target Compound List/Target Analyte List (TCL/TAL) parameters in 2014. These parameters include volatile organic compounds (VOCs,) semi-volatile organic compounds (SVOCs), pesticides, PCBs, and metals. The laboratory analytical reports are provided in Appendix G.

CRA collected 21 soil/fill samples from the seven borings GP-1 through GP-7, at depths ranging from 4 and 25 ft bgs in 2014. These soil/fill samples include soil below or within the fill materials and native soil samples. CRA also collected seven soil/fill samples from two test pits TP-24 and TP-38 and one hand-auger borehole TP-37 in 2014. Among these, TP-24 is located on the north end of the sand and shredder residue fill; TP-37 and TP-38 are located outside the fill materials and serve as background data points. All soil/fill samples were analyzed for TCL/TAL parameters. The soil/fill analytical results from this investigation along with historical soil/fill analytical data are included in Table 4.1. No concentrations in soil/fill samples from the 2014 investigation exceeded Ecology's MTCA Method C cleanup levels for industrial land. There are no MTCA Method C cleanup levels for industrial land for lead and mercury; however, there are values for Method A that are presented in Table 4.1 for comparison purposes. The 2014 soil/fill samples collected from the sand and shredder residue fill at 11 ft bgs from borings GP-1 and GP-2 and at 5 ft bgs from boring GP-4 contained elevated concentrations of lead—ranging from 1,230 milligrams per kilogram (mg/kg) in GP-1 to 2,310 mg/kg in GP-2. Elevated concentrations of mercury were present in GP-1 (23 ft bgs) and GP-2 (11 ft bgs)—ranging from 3.09 mg/kg in GP-2 to 4.63 J (estimated) mg/kg in GP-1. These lead and mercury concentrations exceed Ecology's MTCA Method A cleanup levels for industrial land. Prior to 2014, elevated concentrations of lead, mercury, arsenic, and chromium were detected—see Table 4.1. Figure 4.1 depicts the exceedances in soil.

Separate from the other imported fill materials (e.g., sand and shredder residue, cobbles, dredged material, and construction/demolition debris) is a layer of lime waste fill. During the 2014 field effort, the lime waste fill was encountered in borings GP-1 and GP-2 between approximately 9 and 10 ft bgs, and in test pit TP-28 between approximately 7.5 and 8.5 ft bgs. Lime waste fill was not encountered in other borings and test pits.

CRA collected soil/lime waste fill samples at 10 ft bgs from GP-1, 9 ft bgs from GP-2, and 8 ft bgs from TP-28 for Toxicity Characteristic Leaching Procedure (TCLP) analyses of VOCs, SVOCs and metals in 2014. The analytical results are presented in Table 4.1. TCE and PCE are the only two VOCs, lead the only metal, and 4-methylphenol and hexachlorobutadiene the only two SVOCs with detectable TCLP concentrations. These concentrations are all below United States Environmental Protection Agency (EPA) (EPA, 2006) and Ecology (Ecology, 2020) TCLP regulatory levels. A more detailed discussion of the TCLP analyses of lime waste fill samples collected during the historical borehole installations and sampling program (CRA, 2004) is presented in Subsection 4.2.2.

Groundwater Analytical Results

CRA collected groundwater samples from all existing monitoring wells GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R (up-gradient well), GM-B-6R, and GM-B-6A in 2014 (Figure 2.2). All 2014 groundwater samples were analyzed for TCL/TAL parameters. The laboratory analytical reports are provided in Appendix G. The analytical results from this investigation along with historical groundwater sampling data are included in Table 4.2. During the 2014 investigation, concentrations were detected above surface water cleanup levels for marine receptors (refer to Subsection 2.2) for the following parameters (locations shown in parentheses):

- arsenic (GM-B-1, GM-B-2, GM-B-6R);
- chromium (GM-B-1, GM-B-2A);
- copper (GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R);
- lead (GM-B-1, GM-B-2, GM-B-6R);
- manganese (GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R);
- mercury (GM-B-1, GM-B-6R);
- nickel (GM-B-1, GM-B-2, GM-B-6R);
- zinc (GM-B-1, GM-B-2);
- aroclor-1254 (GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6A);
- total cyanide (GM-B-1);
- bis(2-ethylhexyl)phthalate—B2EP or DEHP (GM-B-2, GM-B-2A, GM-B-6A, GM-B-6R);
- hexachlorobutadiene (GM-B-6R);
- benzene (GM-B-6R);
- PCE (GM-B-6R);
- TCE (GM-B-6R);
- vinyl chloride (VC) (GM-B-2, GM-B-6A, GM-B-6R); and
- hexachlorobenzene (GM-B-6A, GM-B-6R).

The parameters that exceed surface water cleanup levels for marine receptors at the up-gradient well GM-B-3R include copper, manganese, and aroclor-1254, which were present at all wells at the Site except aroclor-1254 in GM-B-6R. The other metals listed above were also detected at the up-gradient well GM-B-3R, but below the cleanup levels. Concentrations of organic parameters were most prevalent at well GM-B-6R.

Note that the above comparison does not take into account attenuation related to the groundwater to surface water pathway.

The exceedances for available groundwater data are depicted on Figures H.1 (VOCs/SVOCs), H.2 (metals), and H.3 (PCBs, pesticides and total cyanide) in Appendix H.

Surface Water Analytical Results

CRA collected five surface water samples, SW-01 through SW-05, from each of the drainage swales at the locations depicted on Figure 2.2 in 2014. Sample SW-01, SW-03, and SW-05 were collected in the up-drainage, down-drainage, and middle-drainage of the southern drainage swale, respectively. Sample SW-01 represents the quality of surface water up-drainage of the Site or the background condition. Sample SW-03 and SW-05, when compared to sample SW-01, represents the potential influence of surface water discharged from the Site. Sample location SW-02 was collected from the east drainage swale representing the quality of the water discharged from the eastern portion of the Site. Sample SW-04 was collected from the west drainage swale representing the quality of the water discharged from the western portion of the Site.

2014 surface water samples were analyzed for TCL/TAL parameters. The laboratory analytical reports are provided in Appendix G. The 2014 surface water analytical results from this investigation along with historical surface water analytical data are included in Table 4.3. As depicted in Table 4.3, the 2014 data indicate concentrations of the following parameters (locations shown in parentheses) were detected above the surface water cleanup levels for marine receptors:

- arsenic (SW-02, SW-05);
- copper (SW-02);
- manganese (SW-03, SW-04);
- aroclor-1254 (SW-01, SW-02, SW-03, SW-04, SW-05); and
- hexachlorobenzene (SW-01, SW-02, SW-05).

The data and exceedances are depicted on Figures H.4 (metals) and H.5 (PCBs and pesticides), in Appendix H, along with historical data.

Arsenic was detected at concentrations exceeding the surface water cleanup level for marine receptors at location SW-02 (duplicate— original sample and average of the two samples concentrations were below cleanup level) and SW-05 in 2014. These arsenic concentrations were marginally above the background concentration, but similar. These concentrations decrease to below the surface water cleanup level for marine receptors and background concentrations after merging with the west runoff and at the final outflow along the southwest corner of the Property (SW-03).

Copper was detected at a concentration marginally exceeding surface water cleanup level for marine receptors at location SW-02 (duplicate—original sample and average of the two samples concentrations were below cleanup level) in 2014. However, the down-drainage 2014 sample SW-03 contained a copper concentration that was lower than the 2014 background concentration at SW-01.

Manganese was detected at concentrations exceeding the surface water cleanup level for marine receptors in the 2014 samples collected from the west drainage swale (SW-04) and down-drainage of the Site (SW-03), ranging from 265 micrograms per liter (µg/L) (SW-04) to 276 µg/L (SW-03). The 2014 background manganese concentration in sample SW-01 was 62.4 µg/L.

Aroclor-1254 was detected at concentrations exceeding surface water cleanup level for marine receptors in all 2014 surface water samples, including the background sample. The 2014 concentrations of aroclor-1254 ranged from 0.0010 J (estimated) µg/L in the up-drainage sample

SW-01 to 0.017 J (estimated) µg/L in the east drainage swale sample SW-02. The concentrations decreased down-drainage from SW-02.

Hexachlorobenzene was detected at similar estimated concentrations in the 2014 samples from background location SW-01, the east drainage swale at SW-02, and the middle of the southern drainage swale at SW-05 at above the surface water cleanup level. Hexachlorobenzene was not detected down-drainage at SW-03.

Note that the above comparison does not take into account attenuation related surface water discharging to the Hylebos.

Sediment Analytical Results

CRA collected eight sediment samples, SD-05 though SD-12, at the locations depicted on Figure 2.2 in 2014. The 2014 samples were analyzed for TCL/TAL parameters. The laboratory analytical reports are provided in Appendix G. Samples SD-05 and SD-06 were collected from the east drainage swale and samples SD-09 and SD-10 were collected from the west drainage swale. Samples SD-07 and SD-08 were collected from the southern drainage swale. Sample SD-11 was collected on north end of the Site up-drainage of the east and west drainage swales. Sample SD-12 was collected up-drainage of the southern drainage swale representing the quality of sediments up-drainage of the Site or the background condition.

All 2014 analytical results were compared to the sediment chemical criteria established by WAC 173-204-562(2) Table III, Marine Sediment. According to WAC 173-204-562(2), two chemical criteria are established, including sediment cleanup objectives and cleanup screening levels. The sediment cleanup objectives establish a no adverse effects level; chemical concentrations at or below the sediment cleanup objectives correspond to sediment quality that results in no adverse effects to the benthic community. The sediment cleanup screening levels (SCSLs) establish a minor adverse effects level; chemical concentrations at or below the cleanup screening levels but greater than the sediment cleanup objectives correspond to sediment quality that results in minor adverse effects to the benthic community. The 2014 sediment analytical results from this investigation and historical investigation along with two chemical criteria are included in Table 4.4.

Concentrations of VOCs, SVOCs, PCBs, pesticides, and most metals reported in 2014 were detected below the corresponding sediment cleanup objectives, meaning these concentrations would not cause adverse effects.

Two metals—zinc and arsenic—were detected above the corresponding sediment cleanup objectives, but below the cleanup screening levels. Zinc in SD-05 from east drainage swale, and SD-07 and SD-08 from southern drainage swale was detected at concentrations ranging from 570 mg/kg (SD-05) to 947 mg/kg (SD-07). Arsenic in SD-08 from southern drainage swale was detected at a concentration of 66.3 mg/kg. These concentrations could potentially result in minor adverse effects. Mercury, a third metal, was detected at 0.846 mg/kg in sample SD-07 and at 3.03 mg/kg in sample SD-06 above the corresponding cleanup screening levels and could potentially result in greater adverse effect. Sample SD-06 was collected from east drainage swale and SD-07 was collected from the east portion of the southern drainage swale, indicating the mercury impact is present in the sediment on the eastern portion of the Site.

Note that the above comparison does not take into account attenuation related to potential sediment migration to the Hylebos.

The data and exceedances are depicted on Figures 4.2 (metals) along with historical data.

Slug Test Results

CRA conducted slug tests in 2014 to collect data for determining hydraulic conductivity at the Site for potential future use. The slug tests were conducted on all existing monitoring wells, GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R, and GM-B-6A, on December 19 and 22, 2014. All test exhibit exponential-decay (over-damped) slug test response behavior indicative of low to intermediate permeability conditions. The calculated estimated average hydraulic conductivities (Ks) range between 0.0000257 centimeter per seconds (cm/s) to 0.000254 cm/s, or 0.073 to 0.72 ft per day. Based on the hydraulic conductivity values, the perched water unit on Site is semi-pervious and has low permeability. The slug test results are presented in Appendix I.

4.1.3 2024 Investigation

Geosyntec conducted an investigation between February and June 2024 based on the approved SOW. The investigation activities and results are discussed below.

4.1.3.1 2024 Site Activities

The objective of the 2024 investigation was to supplement the 2016 RI data with current conditions data for the purpose of confirming the conceptual site model (Section 5) and completing the RI. The following field activities were conducted in 2024:

- Prior to any field mobilization, a project specific Task Hazard Analysis (THA) was completed, reviewed, and signed by field staff and subcontractors in accordance with Geosyntec's Health and Safety program requirements.
- On February 21 and 22, 2024, Geosyntec conducted Site reconnaissance to observe Site conditions and oversight of vegetation clearing activities—conducted by Land Care (a Geosyntec subcontractor)—to provide access to the proposed sampling locations. During the Site reconnaissance, Geosyntec noted that the seven groundwater monitoring wells proposed to be sampled required redevelopment because of obstructions in the casings or buildup of silt in the bases of the monitoring wells.
- On March 28th, 2024, Geosyntec staff completed surface water sampling at 6 locations—SW-01, SW-02, SW-03, SW-05, SW-07 and SW-08—and quality control sampling that included one trip blank, one duplicate sample, and one method spike and method spike duplicate (MS/MSD) sample set. Samples were collected consistent with the methods outlined in the approved SOW. Sample locations are presented on Figure 2.1. Sample locations SW-01 through SW-05 were attempted to be collected at the same former locations sampled in 2014. Due to a drainage swale change, sample locations at SW-02 and SW-03 were minorly shifted from the original locations. Due to a small landslide near up-gradient groundwater monitoring well GM-B-3R (Figure 2.1), the drainage swale on the west side of the Site was blocked and water was not flowing within; therefore SW-04 (at the former SW-04 location) and SW-06 (a new proposed sample up-drainage of SW-04) were not capable of being sampled. Sample location SW-05 was sampled in approximately the same area as previous sampling. Sample

locations SW-07 and SW-08 were added to the surface water sampling program to provide a more comprehensive understanding of up-drainage surface water quality.

- On May 14th, 2024, based on the Site reconnaissance event, Geosyntec staff completed oversight of groundwater monitoring well redevelopment conducted by Holt Services (a Geosyntec subcontractor) at monitoring well locations depicted on Figure 2.1. Holt Services bailed silt material collected at the bottom of each well with a decontaminated stainless-steel bailer until a "hard" bottom was observed in the monitoring well. Holt then surged each monitoring well screen with a surge block to clear the screen. Holt then purged each well with a down-well electric pump until turbidity below 50 nephelometric turbidity units (NTUs) was achieved. All wells achieved below the target NTUs besides location GM-B-1A which exhibited slow recharge and remained slightly turbid (approximately 150 NTUs). Approximately 25 to 40 gallons of groundwater was purged from each well. No odors or sheens were observed. After the completion of redevelopment activities, monitoring wells were gauged to total depth with a water level meter, well caps were replaced with new caps, and wells were locked for security.
- On June 10 and 11, 2024, Geosyntec staff completed groundwater gauging and groundwater sampling activities at monitoring well locations depicted on Figure 2.1. During groundwater monitoring activities, one groundwater sample was collected from each of the seven existing monitoring wells, along with quality control samples including one trip blank, one duplicate sample, and one method spike and method spike duplicate (MS/MSD) set. Monitoring wells were sampled using low-flow sampling techniques following procedures in the approved SOW. During gauging, monitoring well location GM-B-6A was observed to be artesian, and a polyvinyl chloride (PVC) extender was added to the top of the casing to facilitate groundwater collection.

4.1.3.2 2024 Investigation Results

The groundwater and surface water sample locations are depicted on Figure 2.1. The laboratory analytical reports are provided in Appendix G. Field Forms are presented in Appendix J. Data Verification Reports (DVRs) for 2024 are presented in Appendix K.

Groundwater Analytical Results

Groundwater from seven monitoring wells within the fill area was sampled and analyzed for TCL/TAL parameters to determine groundwater quality at the Site in 2024. Table 4.2 provides an analytical summary of parameters detected in the groundwater and the chemical concentrations of these parameters at each well. During the 2024 investigation, concentrations were detected above surface water cleanup levels for marine receptors (refer to Subsection 2.2) for the following parameters (locations shown in parentheses):

- arsenic (GM-B-1, GM-B-2, GM-B-3R);
- chromium (GM-B-1, GM-B-6A);
- copper (GM-B-1, GM-B-2, GM-B-3R, GM-B-6A);
- lead (GM-B-1, GM-B-2, GM-B-6R);
- manganese (GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R);
- nickel (GM-B-1, GM-B-2, GM-B-3R);
- silver (GM-B-1A, GM-B-2);
- zinc (GM-B-1, GM-B-2);
- aroclor-1254 (GM-B-1);
- B2EP (GM-B-1, GM-B-2);

- benzene (GM-B-1); and
- vinyl chloride (VC) (GM-B-2, GM-B-6A, GM-B-6R).

The exceedances and sample locations are depicted on Figure 4.3. As depicted on Figure 4.3, concentrations of parameters that were detected in the up-gradient well GM-B-3R exceeding the cleanup levels include four metals: arsenic, copper, manganese, and nickel. VOCs, SVOCs, and PCBs were not detected in up-gradient well GM-B-3R.

Surface Water Analytical Results

Surface water samples were collected from the drainage swales immediately west, north, and south of the fill area. Table 4.3 presents a summary of parameters detected in the surface water samples and the concentrations of these parameters. As depicted in Table 4.3, the 2024 data indicate concentrations of the following parameters (locations shown in parentheses) were detected above the surface water cleanup levels for marine receptors:

- copper (SW-07);
- manganese (SW-03);
- thallium (SW-05); and
- B2EP (SW-01).

The exceedances and sample locations are depicted on Figure 4.4. As depicted on Figure 4.4, the exceedances are sporadic. No VOCs or SVOCs were detected except for acetone, B2EP, and dimethyl phthalate. No pesticides or cyanide were detected in surface water samples.

4.2 Contaminant Occurrence in Soil/Fill

Soils and fill (soil/fill) at the Site were investigated between 1984 and 2014. During these investigations, the following scope of work was completed:

- A total of 37 test pits were excavated, including TP-1 through TP-23 in 1998 and TP-24 through TP-36 and TP-38 in 2014;
- A total of 17 borings were advanced, including BH-1 through BH-4 in 2004 and GP-1 through GP-7, HA-1 through HA-5B, and TP-37 in 2014;
- A total of 45 soil or fill (soil/fill) material (lime waste, shredder residue, sand, etc.) samples were collected from these borings and test pits and submitted for laboratory analyses; and
- One surficial soil sample was collected in 1998 representing background.

4.2.1 Sand and Shredder Residue Fill, and Lime Waste Fill Delineation

Delineation of Sand and Shredder Residue Fill

Delineation of sand and shredder residue fill (including gravel, sand, cobbles, and various debris) is well defined immediately surrounding the lime waste fill as illustrated by the cross-sections depicted on Figures 3.2 and 3.3 as a result of previous investigations prior to 2014 that were focused on delineation of the lime waste fill. However, the lateral extent of the sand and shredder residue fill within the Property was not as well defined. Consequently, fourteen additional test pits (TP-24 through TP-36 and TP-38) were completed in 2014 focused along the periphery of the known sand and shredder residue fill to better define the limits. Test pit location TP-37 was completed with a

hand auger due to limited access and permit restrictions. Thirteen test pits (TP-24 through TP-36) encountered sand and shredder residue fill. The limits of the sand and shredder residue fill extend across nearly all of the flat land between the hill slopes along the western and eastern flanks of the Property.

Locations TP-37 and TP-38 were completed on the north side of the drainage swales headwaters at locations of expected native material. The material observed was consistent with native soils and not the fill materials. Soil samples from locations TP-37 and TP-38 are considered background soil conditions for the Site. Limited access and steep terrain prevented the continuation of test pitting beyond the drainage swales on either the western or the eastern sides of the Property. To confirm the lateral extent of the sand and shredder residue fill, a series of six hand-auger boreholes were advanced as depicted on Figure 2.2. No sand and shredder residue fill were observed in the six hand-auger boreholes except at HA-05B. A review of the local topography and hand auger data (HA-01 to HA-05B) suggest portions of the drainage swales are flowing across sand and shredder residue fill. Figure 3.1 depicts an estimated limit of fill materials.

Delineation of Lime Waste Fill

Delineation of the lime waste fill was conducted through a combination of test pit excavations for horizontal delineation and borehole drilling for vertical delineation. Test pits were excavated on a grid pattern with a spacing of approximately 25 ft in order to delineate the horizontal extent of lime waste fill. Boreholes were then advanced to delineate the vertical extent of the lime waste fill. The defined areal extent of the lime waste fill is depicted on Figure 3.1 and is well defined. The vertical extent is depicted on the cross-sections presented on Figures 3.2 and 3.3 and also is well defined. As depicted on the figures, the lime waste fill is located at depth and typically within the sand and shredder residue fill. A portion of the lime waste fill to the west, between GM-B-6A and TP-34, is overlain by the sand and shredder residue fill and underlain by native sand, silty sand with peat.

4.2.2 Investigation Data

Table 4.1 presents a summary of the parameters detected in the soils/fill related to various fill materials along with the analyte concentrations of these parameters. The soil/fill exceedances and sample locations are depicted on Figure 4.1.

Lime Waste Fill Investigation Data

Samples collected from or immediately beneath the lime waste fill layer include: one 1998 composite sample from test pits TP1-98/TP3-98/TP-4-98/TP5-98/TP8-98; three 2004 discrete samples from boreholes BH-1, BH-2, and BH-4; two soil/fill samples from 2014 borings GP-1 and GP-2; and one soil/fill sample from 2014 test pit TP-28. The 1998 and 2004 samples were analyzed for the TCL/TAL parameters to determine their analyte composition. The four samples from boreholes BH-1 through BH-4 and three samples from boring GP-1, boring GP-2, and test pit TP-27 were analyzed by TCLP to characterize the material. The lime waste fill analytical data are presented in Table 4.1.

As depicted in Table 4.1, there were no parameters detected in the lime waste fill at concentrations that exceed MTCA Method C industrial soil cleanup levels. The results from the TCLP analyses completed in 2004 indicate one concentration (PCE in the sample from BH-4) that exceeded EPA's

and Ecology's TCLP regulatory level. Data from 2014 indicate no exceedances of the TCLP regulatory levels.

Sand and Shredder Residue Fill Investigation Data

A total of 15 soil/fill samples collected to date are associated with the sand and shredder residue fill. These samples were analyzed for TCL/TAL parameters. No metal concentrations were above MTCA Method C industrial soil cleanup levels in the sand and shredder residue fill samples. No concentrations of VOCs, SVOCs, PCBs, or pesticides were detected above MTCA Method C industrial soil cleanup levels in these samples.

As depicted in Table 4.1, five samples containing concentrations of lead and one sample containing a concentration of mercury exceeding MTCA Method A industrial soil cleanup levels (no MTCA Method C values are available for these metals) include

- lead: 1,230 mg/kg from GP-1 (11 to 11.5 ft bgs), 2,310 mg/kg from GP-2 (11 to 11.5 ft bgs), 1,280 mg/kg from GP-4 (5 to 5.5 ft bgs), 2,470 and 2,690 mg/kg from TP comp(A2) (1 to 8.5 ft bgs). As stated in Subsection 4.1.2, soil samples from TP-37 and TP-38 provide background data. The background lead concentrations are 6.6 mg/kg from 5 to 5.5 ft bgs (TP-37), 3.6 mg/kg from 11 to 11.5 ft bgs (TP-38), and 1.8 mg/kg from 7.5 to 8 ft bgs (TP-37); and
- mercury: 3.09/4.63 J (estimated) mg/kg from GP-1 (11 to 11.5 ft bgs). The background mercury concentration is 0.015 J (estimated) mg/kg from 11 to 11.5 ft bgs (TP-38).

Other Types of Fill Materials Investigation Data

Surficial and subsurface soil/fill samples were collected from fill materials within, or immediately below other types of fill materials encountered such as sand fill, debris, and "cobbles."

One composite subsurface soil/fill sample was collected from sand fill between the depths of 0.5 and 8.5 ft bgs and analyzed for TCL/TAL parameters. No concentrations were detected above MTCA Method C industrial soil cleanup levels in this sand fill sample.

Porous orange to black rock-like fragments were encountered in test pits TP-17 and TP-23. These fragments are referred to in the test pit logs and this report as "cobbles." Since the source of the cobbles could not be determined from their appearance, one soil/fill sample was collected underlying the cobbles from TP-17 between 3 and 3.5 ft bgs and analyzed for TCL/TAL parameters to determine whether the cobbles may have contributed to elevated concentrations in soils/fill. The sample below the cobbles contained a concentration of arsenic of 422 mg/kg that exceeds the MTCA Method C industrial soil cleanup level. The background arsenic concentration at the Site is 4.3 mg/kg from 2.5 to 3 ft bgs (TP-38).

Surficial soil/fill sample SL-1 collected on the west side of the Site from another fill material containing debris, not consistent with sand and shredder residue fill, at depths between 0.5 and 1 ft bgs contained concentration of arsenic of 1,180 mg/kg exceeding the MTCA Method C industrial soil cleanup level. Surficial soil/fill sample TP-21 collected on the northern part of the Site from another fill material, not consistent with sand and shredder residue fill, at depths between 0 and 0.5 ft bgs contained concentrations of arsenic (103 mg/kg) and chromium (849 J [estimated] mg/kg) exceeding MTCA Method C industrial soil cleanup levels and lead (6,030 mg/kg) and mercury

(17.6 J [estimated] mg/kg) exceeding MTCA Method A industrial soil cleanup levels. The arsenic, chromium, lead and mercury concentrations in shallow soil from 2 to 2.5 ft bgs in background test pit TP-37 are 2.9 J (estimated), 23.5, 6.4 and 0.026 mg/kg, respectively.

A composite surficial soil/fill sample was also collected from the fill materials within the footprint of and above the lime waste fill at depths between 0 and 0.5 ft bgs. No concentrations were detected above MTCA Method C industrial soil cleanup levels in this surficial soil/fill sample.

The Site is located within the Tacoma Smelter Plume area. According to a data report prepared for Ecology in 2004 (Glass, 2004), arsenic concentrations in the background soils in this area range from non-detect to 20 mg/kg. The lead concentrations range from non-detect to 250 mg/kg. Arsenic and lead were detected on the Site at concentrations above these values.

Subsurface Native Soil Investigation Data

A total of 14 native soil samples were collected within the footprint of the fill materials between depths of 14 and 25.5 ft bgs. Additionally, six native soil samples were collected outside of fill materials between depths of 2 and 11.5 ft bgs. All these native soil samples were analyzed for TCL/TAL parameters. No concentrations were detected above MTCA Method C industrial soil cleanup levels in these samples.

4.3 Contaminant Occurrence and Movement in Groundwater

A total of nine groundwater monitoring wells were installed on Site—within the fill area on the Property. Wells GM-B-1, GM-B-2, GM-B-3, and GM-B-6 were installed in 1984. Wells GM-B-3R, GM-B-6R, GM-B-1A, GM-B-2A, and GM-B-6A were installed in 1998. Wells GM-B-3R and GM-B-6R were installed to replace decommissioned wells GM-B-3 and GM-B-6, respectively.

Therefore, a total of seven monitoring wells are present on Site that include GM-B-1, GM-B-1A, GM-B-2, GM-B-2A, GM-B-3R, GM-B-6R, and GM-B-6A. The construction details for these groundwater monitoring wells are presented in Table 4.5.

Wells GM-B-1, GM-B-2, and GM-B-3R, are located within the imported fill materials, but outside the areal limits of the lime waste fill. However, the screened intervals of these wells are at depths comparable to elevations of the lime waste fill layer. Well GM-B-3R is located within the defined extent of sand and shredder residue fill near the northern limit of the fill materials and up-gradient of the horizontal limits of the lime waste fill on Site. Wells GM-B-1 and GM-B-2 are located down-gradient of the lime waste fill and GM-B-6R.

Wells GM-B-6R and GM-B-6A are both located within the areal limits of the lime waste fill. Well GM-B-6R is screened within the lime waste fill and well GM-B-6A is screened within fill materials below the lime waste fill.

Wells GM-B-1A and GM-B-2A are screened within the fill materials at depths below elevations comparable to the lime waste fill layer, outside the areal limits of the lime waste fill, and down-gradient of GM-B-6A.

Six rounds of groundwater sampling were conducted in 1984, 1988, 1998, 1999, 2014, and 2024. Groundwater samples from monitoring wells were analyzed for TCL/TAL parameters to determine groundwater quality at the Site. Table 4.2 presents a summary of parameters detected in the

groundwater samples and the concentrations of these parameters at each well. As depicted in the table, groundwater concentrations of 12 parameters detected in groundwater samples from the 2024 investigation exceeded the surface water cleanup levels for marine receptors including two VOCs (benzene, and VC), one SVOC (B2EP), eight metals (arsenic, chromium, copper, lead, manganese, nickel, silver, and zinc), and one PCB (aroclor-1254)—see Subsection 4.1.3.2. The exceedances and sample locations for 2024 are depicted on Figure 4.3 for VOCs, SVOCs, Metals, and PCBs. The number of parameters with exceedances in 2024 is about half of the 23 parameters that had groundwater concentrations exceeding the surface water cleanup levels for marine receptors at some point in time. Overall, concentrations have decreased and there are fewer exceedances for the 2024 data when compared to historical data.

Well GM-B-3R is located within the defined extent of sand and shredder residue fill and up-gradient of the horizontal limits of the lime waste fill on Site. Parameters that were detected in up-gradient well GM-B-3R at concentrations exceeding the cleanup levels in 2024 include arsenic, copper, manganese, and nickel. Other parameters detected below the cleanup levels at this location include chromium, lead, and zinc.

Comparing 2024 data with 2024 surface water (see Subsection 4.4) and 2014 groundwater data, there does not appear to be significant migration of contaminants from the Site and water quality may have improved for organic parameters over time based on

- In 2024, well GM-B-6R exhibited exceedances of only one VOC (VC) and no VOCs were detected in surface water;
- Detected SVOC concentrations have decreased in some wells;
- PCBs concentrations in 2024 were not detected except at GM-B-1; however, the concentration at GM-B-1 in 2024 is lower than the 2014 concentration. No PCBs were detected in surface water; and
- No pesticides were detected in groundwater or surface water.

Additionally, comparison of the 2024 metals data with the 1998/1999 metals data, groundwater quality appears to have improved at well locations GM-B-1A, GM-B-2A, GM-B-3R, GM-B-6A, and GM-B-6R. Groundwater quality for metals does not appear to have improved at well locations GM-B-1 and GM-B-2.

4.4 Contaminant Occurrence and Movement in Surface Water

A total of 17 surface water samples were collected to date—two samples at locations SWS-1 and SWS-2 in 1984, four samples at locations SW-01 through SW-04 in 1998, five samples at locations SW-01 through SW-05 in 2014, and six samples at locations SW-01 through SW-03, SW-05, and SW-07 to SW-08 in 2024. These surface water samples were collected from the drainage swales at the edge or immediately east, west, north, and south of the mapped areal extent of the fill materials. Table 4.3 presents a summary of parameters detected in the surface water samples and the concentrations of these parameters. As depicted in Table 4.3, eight of the parameters detected in the surface water were present at concentrations that exceed the surface water cleanup levels for marine receptors, including one VOC (carbon tetrachloride in 1998), two SVOCs (B2EP in 2024 and hexachlorobenzene in 2014), nine metals (arsenic, chromium, copper, lead, manganese, mercury, nickel, thallium, and zinc), and one PCB (aroclor-1254 in 2014). No other concentrations were

detected in surface water samples above surface water cleanup levels for marine receptors. In 2024, no VOCs or SVOCs were detected except for acetone, B2EP, and dimethyl phthalate, which were all below their corresponding cleanup levels except B2EP at location SW-01 (up-drainage/background of Site), and no pesticides, PCBs, or cyanide were detected in surface water samples. In 2024, three metals (copper, manganese, and thallium) were detected above surface water cleanup levels for marine receptors. The exceedances and sample locations are depicted on Figure 4.4 and Table 4.3 and are discussed below.

As depicted on Figure 4.4:

- copper was detected above the cleanup level at up-drainage location SW-07. Copper was also detected at up-drainage location SW-01 but below the cleanup level;
- manganese was detected above the cleanup level at location SW-03, furthest down-drainage of the Site. Note that the 2024 concentration is lower than the 2014; and
- thallium was detected above the cleanup level at location SW-05, middle-drainage of the southern drainage swale. Thallium was also detected at locations SW-02 (up-drainage) and SW-03 (down-drainage) but below the cleanup level.

There were fewer metals exceedances in 2024 compared to 2014.

Comparing 2024 data with 2014 data, there does not appear to be significant migration of contaminants from the Site and water quality may have improved over time based on

- no PCBs were detected in the 2024 surface water samples;
- the number of exceedances for metals decreased between 2014 and 2024 even though there were more samples collected; and
- decreased concentrations were observed for a majority of metals at locations sampled over time since 1998.

4.5 Contaminant Occurrence in Sediment

A total of 12 sediment samples were collected to date—four samples at locations SD-01 through SD-04 in 1998, and nine samples at locations SD-04 through SD-12 in 2014. These sediment samples were collected from the drainage swales at the edge or immediately east, west, and south of the mapped areal extent of the fill materials. Table 4.4 presents a summary of parameters detected in the sediment samples and the concentrations of these parameters compared to chemical criteria established by WAC 173-204-562(2). As stated in Subsection 4.1.2.2, two chemical criteria are established per WAC 173-204-562(2), including sediment cleanup objectives ("no adverse effects" level) and cleanup screening levels ("minor adverse effects" level).

As depicted in Table 4.4, four of the parameters detected in the sediments were present at concentrations that exceed the sediment cleanup objectives, including one SVOC (4-methylphenol) and three metals (arsenic, mercury, and zinc).

4-Methylphenol was detected in sediment in 1998 at a concentration that marginally exceeds the sediment cleanup objective and cleanup screening level of 0.67 mg/kg at location SD-03 (1.1 J [estimated] mg/kg; 0 to 0.5 ft bgs), south of the Site. In 2014, sample SD-08 was collected nearby

and the concentration reported (0.027 J [estimated] mg/kg) is below the sediment cleanup objective and cleanup screening level.

Arsenic was detected in sediments at concentrations that marginally exceed the sediment cleanup objective of 57 mg/kg but not the SCSL of 93 mg/kg in 1998 at location SD-02 (59.9 J [estimated] mg/kg; 0 to 0.5 ft bgs) up-drainage of the Site, and in 2014 at location SD-08 (66.3 mg/kg) within southern drainage swale. Zinc was detected in sediments at concentrations that marginally exceed the sediment cleanup objective of 410 mg/kg but not the SCSL of 960 mg/kg in 1998 at location SD-03 (705 J [estimated] mg/kg; 0 to 0.5 ft bgs) and in 2014 at locations SD-05 (570 mg/kg), SD-07 (947 mg/kg), and SD-08 (690 mg/kg), all within the southern drainage swale. Mercury was detected in sediments at concentrations that exceed both criteria of 0.41 and 0.59 mg/kg in 2014 at locations SD-06 (3.03 mg/kg) in the east drainage swale and SD-07 (0.846 mg/kg) in the southern drainage swale, which is down-drainage of the east drainage swale. The exceedances and sample locations for metals are depicted on Figure 4.2.

In 2014, metals (arsenic, mercury, and zinc) were detected above marine sediment cleanup objectives ("no adverse effects" level) in the sediment samples collected from the east and southern drainage swales. The arsenic and zinc concentrations are below the marine SCSLs ("minor adverse effects" level). The mercury concentrations down-drainage are below both criteria. There does not appear to be significant migration of contaminants in sediment from the Site based on

- arsenic and zinc concentrations are below the marine SCSLs ("minor adverse effects" level); and
- mercury concentrations down-drainage are below both criteria.

No additional sediment sampling was conducted by Geosyntec during the 2024 investigation.

4.6 Air/Soil Vapor Assessment

Vapor assessment, for the purpose of human health risk, has not been conducted at the Site. Based on current use of the Property, the vapor intrusion pathway is incomplete because there are no occupants and therefore no vapor intrusion receptors are on the Property.

5. Conceptual Site Model

An area in the southern portion of the Site (the fill area within the Property) was used for the placement of fill materials, comprised of lime waste, shredder residue, sand, cobbles, dredged material, and construction/demolition debris. The lime waste fill is a by-product of the production of chlorinated solvents such as TCE and PCE. Shredder residue consists of by-products of scrap metal and automobile recycling, such as rubber, metal, and wire. The Site was also used for the storage of automobile scrap parts and other metal items. The Site is not currently in use and nearly all scrap materials and other surface debris have been removed.

The Site consists primarily of sand with varying amounts of silt, gravel, lime waste fill, shredder residue, and other refuse. Previous investigations observed the lime waste fill typically present as a single layer and always within the other fill materials, typically greater than 7.5 ft bgs. Imported fill materials have been observed from land surface extending to a depth of 20 ft. Observations during the 2014 and 2024 investigation activities support the findings from previous investigations. Subsurface work conducted in 2014 resulted in adjustments to the previously mapped boundaries of fill materials. The fill materials extend across the central portion of the Property from the base of the eastern and western hillsides. The entirety of the lime waste fill observed is at depth and within the southern portion of this footprint. At some locations along the flanks of the Property in close proximity to the drainage swales, the sand and shredder residue fill is observed at or just below the surface.

The lime waste fill is a gray to beige, fine-grained material with medium to high plasticity. The thickness of the lime waste fill ranges from 1.0 to approximately 5.0 ft. The estimated horizontal limits of sand and shredder residue fill and lime waste fill are depicted on Figure 3.1. The upper native sediments are brown, intermixed silty sands, clayey silts, and peat, with plasticity ranging from low to high. Cross-sections presented on Figures 3.2 through 3.3 depict the estimated depth of the observed fill materials.

The surficial and subsurface samples collected within the mapped areal extent of the sand and shredder residue fill contained elevated concentrations of lead and mercury exceeding MTCA Method A industrial cleanup levels (no MTCA Method C values are available for these metals) between ground surface (0 ft bgs) and 11.5 ft bgs. Groundwater beneath the Site is observed within the mixed fill materials in two distinct zones, a shallow zone at a depth consistent with the sand and shredder residue fill and lime waste fill layers and a deeper zone below the depth comparable to the lime waste fill layers. Therefore, groundwater within the wells is in direct contact with the fill materials within the two distinct zones. Groundwater generally flows towards the south-southwest in both zones based on the data collected in 2014 and 2024, aligning with the slope of the land and in the direction of Hylebos waterway. Figures 3.4 to 3.7 depict the groundwater contours in the shallow zone and deeper zone, respectively.

As discussed in Subsection 4.3, based on the historical and recent groundwater analytical data, the groundwater at the Site historically contained elevated concentrations of VOCs, SVOCs, metals, PCBs, and pesticides. Pesticides (4,4'-dichlorodiphenyldichloroethane [4,4'-DDE], alpha-hexachlorocyclohexane [a-BHC], endrin aldehyde, and gamma-hexachlorocyclohexane [g-BHC] [Lindane]) concentrations were historically elevated in the fill materials (wells GM-B-1 and GM-B-6A) but have attenuated based on the recent data collected in 2014 and 2024 that did not indicate the presence of elevated concentrations of pesticide in groundwater. One elevated VOC

(VC) concentration above 1 µg/L in 2024 appears to be confined within the shallow groundwater zone within the lime waste fill (well GM-B-6R). Another elevated VOC (benzene) concentration in 2024 is within the sand and shedder residue fill (well GM-B-1). Historically, VOC PCE concentrations appear to have migrated downward to deeper groundwater in well GM-B-6A; however, have attenuated over time based on the 2014 and 2024 data. The elevated SVOC (B2EP), PCB (aroclor-1254), and metals (arsenic, chromium, copper, lead, manganese, nickel, silver, and zinc), concentrations appear to be dispersed within the sand and shredder residue fill and/or lime waste fills in one or both groundwater zones, including metals in up-gradient well GM-B-3R. Comparison of the 2024 with the 2014 groundwater and 2024 surface water data appears to indicate attenuation of organic contaminants in groundwater and there does not appear to be significant migration of contaminants in groundwater from the Site. Comparison of 2024 metals data with historical data indicates groundwater quality appears to have improved at well locations GM-B-1A, GM-B-2A, GM-B-3R, GM-B-6A, and GM-B-6R. Groundwater quality for metals does not appear to have improved at well locations GM-B-1 and GM-B-2.

Surface runoff on the Property is either directed into the drainage swale running along the eastern flank of the Property or across the Site as sheet flow, discharging to wet areas situated at the southern boundary of the Property. A small surface water drainage swale enters the wet areas from the east. Surface water samples collected from the eastern drainage swale and southern drainage swale entering the wet area during the 2014 investigation indicated the presence of arsenic and copper) concentrations exceeding or marginally below the surface water cleanup levels for marine receptors. In 2014, manganese concentrations were above surface water cleanup levels for marine receptors in the west drainage swale and down-drainage of the Site. Follow up sampling of surface water in 2024 indicated the presence of copper at an up-drainage location north of the fill area, manganese down-drainage of the Site (at a lower concentration compared to 2014), and thallium in the southern drainage swale at concentrations exceeding the surface water cleanup levels for marine receptors. Comparison of the 2024 with historical surface water data appears to indicate attenuation of contaminants in surface water and there does not appear to be significant migration of contaminants in surface water from the Site.

In 2014, metals (arsenic, mercury, and zinc) were detected above marine sediment cleanup objectives ("no adverse effects" level) in the sediment samples collected from the east and southern drainage swales. The arsenic and zinc concentrations are below the marine SCSLs ("minor adverse effects" level). The mercury concentrations down-drainage are below both criteria. Therefore, there does not appear to be significant migration of contaminants in sediment from the Site. Sediment samples were not collected in 2024.

The Site (the fill area within the Property) is currently zoned for industrial use (see Subsection 2.4), and future zoning is not anticipated to change. In accordance with MTCA, potential exposure pathways for human and environmental receptors that may need to be addressed include the following:

- Human health protection from soil to groundwater (drinking water);
- Human health protection from direct soil contact and fugitive dust;
- Human health protection from groundwater (direct contact);
- Human health protection from soil and groundwater vapor inhalation;
- Human health protection from soil to sediment/surface water;

- Human health protection from groundwater to surface water; and
- Terrestrial/aquatic ecological protection.

Based on information acquired during the RI and based on the current and planned land use identified, the following conclusions can be made:

- soil and groundwater vapor inhalation are incomplete human health exposure pathways due to lack of receptors based on the current and future Site use and the lack of VOC concentrations in surface soils; and
- soil to groundwater (drinking water) and groundwater direct contact are incomplete human health exposure pathways due to a current lack of receptors and future expected non-use of groundwater based on the determination by Ecology that groundwater at this Site is non-potable.

Per MTCA, potential exposure pathways requiring additional evaluation and management include the following:

- Human health protection from direct soil contact;
- Human health protection from soil to sediment/surface water;
- Human health protection from groundwater to surface water; and
- Terrestrial/aquatic ecological protection.

Figure 6.1 presents the human health conceptual site model for potential exposure pathways. Cleanup standards addressing the aforementioned pathways are presented below.

6. Cleanup Levels

According to the MTCA, "The purpose of a remedial investigation/feasibility study (RI/FS) is to collect, develop and evaluate sufficient information regarding a site to select a cleanup action under WAC 173-340-360 through 173-340-390." In order to evaluate data from the previous investigations and determine the need for additional remedial investigation, preliminary groundwater and soil cleanup levels have been identified for the Site (the fill area within the Property) as described in Subsection 2.1.

The preliminary cleanup levels for are presented for reference in Table 2.1. These cleanup levels for the Site may be refined during the FS and will be presented in the FS report.

6.1 Groundwater Cleanup Levels

As noted in Subsection 2.2, Ecology has determined that groundwater at the Site is designated as non-potable. Therefore, the groundwater is not expected to be used as a drinking water source and the groundwater cleanup level will be driven by the next stringent pathway, which is groundwater to surface water pathway. The groundwater at the Site eventually discharges into the Hylebos Waterway, which is marine water. As such, groundwater cleanup levels should be based on protection of applicable marine surface water beneficial uses. Accordingly, the preliminary cleanup levels for groundwater at the Site have been established consistent with MTCA Method B surface water cleanup levels for marine receptors.

6.2 Soil Cleanup Levels

As stated above, the groundwater is not used as a drinking water source. Therefore, the soil to groundwater (drinking water) pathway is incomplete. As stated in Subsection 3.4, exposure to terrestrial ecological receptors pathway can be considered incomplete if a physical barrier were to be placed within a time frame acceptable to the Ecology per WAC 173-340-7492(2)(b). The PLPs will propose remedial actions to eliminate the terrestrial ecological pathway as well as the surficial soil to surface water pathway. Therefore, the soil cleanup levels will be driven by soil direct contact pathway. The Property is industrial and zoned 9167 (Vacant Land Major Problem) per Pierce County and City of Tacoma identifies the portion of the Property where the Site (the fill area within the Property) is located as zoned M-2 Heavy Industrial District (see Subsection 2.4). Considering the historical land use and zoning of the Site, MTCA Method C industrial soil cleanup levels for direct contact are appropriate. Depending on the selected cleanup action, institutional controls (ICs) may be required to restrict the future land use of the Site to "industrial." Accordingly, MTCA Method C industrial soil cleanup levels have been established for use as preliminary cleanup levels.

6.3 Surface Water Cleanup Levels

Surface water from the Site eventually discharges into Hylebos Waterway, which is marine water. Therefore, MTCA Method B cleanup levels for marine receptors have been established for use as surface water preliminary cleanup levels.

6.4 Sediment Cleanup Levels

According to WAC 173-204-562(2), two chemical criteria are established: sediment cleanup objectives, which establish a no adverse effects level; and SCSLs, which establish a minor adverse

effects level. To ensure Site sediment quality resulting in no adverse effects to the benthic community in the Hylebos, marine sediment cleanup objectives could be used as sediment cleanup levels for the Site. Alternatively, if it can be shown that the marine SCSLs would not likely cause an adverse effect in the Hylebos, these values may be used as sediment cleanup levels. Preliminary cleanup levels for sediment have been established for use that include both levels.

7. RI Conclusions and Recommendations

The 2024 groundwater data indicate concentrations of benzene, VC, B2EP, metals (arsenic, chromium, copper, lead, manganese, nickel, silver, and zinc), and aroclor-1254 exceeding MTCA Method B cleanup levels for surface water impacting marine receptors in one or both groundwater zones. Surface water also exhibited elevated levels of metals (copper, manganese, and thallium) exceeding cleanup standards. These concentrations are generally just above the cleanup standards.

Comparison of the 2024 with the 2014 groundwater and 2024 surface water data appears to indicate attenuation of organic contaminants in groundwater and there does not appear to be significant migration of contaminants in groundwater from the Site (the fill area within the Property). Comparison of 2024 metals data with historical data indicates groundwater quality appears to have improved at well locations GM-B-1A, GM-B-2A, GM-B-3R (up-gradient well), GM-B-6A, and GM-B-6R. Groundwater quality for metals does not appear to have improved at well locations GM-B-1 and GM-B-2.

Comparison of the 2024 with historical surface water data appears to indicate attenuation of contaminants in surface water and there does not appear to be significant migration of contaminants in surface water from the Site.

In 2014, metals (arsenic, mercury, and zinc) were detected above marine sediment cleanup objectives ("no adverse effects" level) in the sediment samples collected from the east and southern drainage swales. The arsenic and zinc concentrations are below the marine SCSLs ("minor adverse effects" level). The mercury concentrations down-drainage are below both criteria. Therefore, there does not appear to be significant migration of contaminants in sediment from the Site. Sediment samples were not collected in 2024.

Investigations prior to 2024 indicate soils/fill materials with metals (arsenic and chromium) concentrations exceeding MTCA Method C industrial cleanup levels are present at shallow depths in fill materials from surface to 3.5 ft bgs. The chromium preliminary cleanup level is based on CrVI. Chromium concentrations in soil are below the MTCA Method C industrial cleanup level for CrIII.

Per MTCA, potential exposure pathways requiring additional evaluation and management include the following:

- Human health protection from direct soil contact;
- Human health protection from soil to sediment/surface water;
- Human health protection from groundwater to surface water; and
- Terrestrial/aquatic ecological protection

To address potential exposure pathways, proposed remedial actions include:

1. Excavation and Relocation: Near-surface fill materials from drainage swales and adjacent areas would be relocated to the center of the Site, consolidated with other fill materials. The excavated areas would be graded, and clean fill would be added to restore the habitat around the drainage swales;

2. Containment and Cover: A cover layer of clean fill and vegetation would be installed to contain the remaining fill materials, prevent direct contact with receptors, limit contaminant migration, and support plant growth. This cover would also prevent future re-contamination; and

3. Institutional Controls and Monitoring: Deed restrictions and surface water monitoring would be implemented to manage potential surface water runoff. The seven on-Site monitoring wells would be decommissioned.

This plan is designed to guide stakeholder discussions, with a detailed evaluation and comparison of alternatives to follow in a Feasibility Study after Ecology reviews the Consolidated RI Report and provides comments.

8. References

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TABLES

Table 2.1

Preliminary Cleanup Levels For Detected Parameters
1913 Marine View Drive Site
Tacoma, Washington

Parameter	CASRN	Preliminary Cleanup Levels for Soil (a) (Industrial) Value (mg/kg)	Sediment Management Standards (b) Sediment Cleanup Objectives (mg/kg)	Sediment Management Standards (b) Sediment Cleanup Screening Levels (mg/kg)	Preliminary Cleanup Levels for Surface Water and Groundwater (c) Value (µg/L)	Source
Volatile Organic Compounds						
Acetone	67-64-1	3.20E+06	NV	NV	NV	--
Benzene	71-43-2	2.40E+03	NV	NV	1.6	aa
Bromoform	75-25-2	1.70E+04	NV	NV	12	bb
2-Butanone (MEK)	78-93-3	2.10E+06	NV	NV	NV	--
Carbon disulfide	75-15-0	3.50E+05	NV	NV	NV	--
Carbon tetrachloride	56-23-5	1.90E+03	NV	NV	0.35	aa
Chloromethane (Methyl chloride)	74-87-3	NV	NV	NV	NV	--
Dibromochloromethane	124-48-1	1.60E+03	NV	NV	2.2	bb
1,1-Dichloroethene	75-35-4	1.80E+05	NV	NV	4000	bb
cis-1,2-Dichloroethene	156-59-2	7.00E+03	NV	NV	NV	--
trans-1,2-Dichloroethene	156-60-5	7.00E+04	NV	NV	1000	bb
Ethylbenzene	100-41-4	3.50E+05	NV	NV	21	cc
2-Hexanone	591-78-6	1.80E+04	NV	NV	NV	--
4-Methyl-2-pentanone (MIBK)	108-10-1	2.80E+05	NV	NV	NV	--
Methylene chloride	75-09-2	2.10E+04	NV	NV	100	bb
Naphthalene	91-20-3	7.00E+04	99	170	4940	dd
Styrene	100-42-5	7.00E+05	NV	NV	NV	--
Tetrachloroethene	127-18-4	2.10E+04	NV	NV	2.9	bb
Toluene	108-88-3	2.80E+05	NV	NV	102	cc
1,2,4-Trichlorobenzene	120-82-1	4.50E+03	0.81	1.8	0.037	bb
Trichloroethene	79-01-6	1.80E+03	NV	NV	0.7	bb
1,2,4-Trimethylbenzene	95-63-6	3.50E+04	NV	NV	NV	--
Vinyl chloride	75-01-4	8.80E+01	NV	NV	0.18	bb
Xylenes	1330-20-7	7.00E+05	NV	NV	106	cc
Semi-Volatile Organic Compounds						
Butyl benzyl phthalate	85-68-7	6.90E+04	4.9	64	0.013	bb
Chrysene	218-01-9	NV	110	460	0.016	bb
Diethyl phthalate	84-66-2	2.80E+06	61	110	200	bb
Dimethyl phthalate	131-11-3	NV	53	53	600	bb
2,4-Dimethylphenol	105-67-9	7.00E+04	0.029	0.029	97	aa
Di-n-octyl phthalate	117-84-0	3.50E+04	58	4500	NV	--
4,6-Dinitro-2-methylphenol	534-52-1	2.80E+02	NV	NV	7	bb
bis(2-ethylhexyl)phthalate	117-81-7	9.40E+03	47	78	0.046	bb
Fluoranthene	206-44-0	1.40E+05	160	1200	6	bb
Hexachlorobenzene	118-74-1	8.20E+01	0.38	2.3	0.000005	bb
Hexachlorobutadiene	87-68-3	1.70E+03	3.9	6.2	0.01	bb; ee
2-Methylphenol	95-48-7	1.80E+05	0.063	0.063	NV	--
4-Methylphenol	106-44-5	3.50E+05	0.67	0.67	NV	--
Phenol	108-95-2	1.10E+06	0.42	1.2	70000	bb
Pyrene	129-00-0	1.10E+05	1000	1400	8	bb
Pesticides						
a-BHC	319-84-6	2.10E+01	NV	NV	0.000048	bb
b-BHC	319-85-7	7.30E+01	NV	NV	0.0014	bb
d-BHC	319-86-8	2.10E-01	NV	NV	NV	--
gamma-BHC (lindane)	58-89-9	1.20E+02	NV	NV	0.16	aa; ee
gamma-Chlordane	5103-74-2	1.80E+03	NV	NV	NV	--
4,4'-DDD	72-54-8	5.50E+02	NV	NV	0.0000079	bb
4,4'-DDE	72-55-9	3.90E+02	NV	NV	0.00000088	bb
4,4'-DDT	50-29-3	3.90E+02	NV	NV	0.0000012	bb
Endrin aldehyde	7421-93-4	NV	NV	NV	0.035	aa
Heptachlor	76-44-8	2.90E+01	NV	NV	0.00000034	bb
Aroclor-1254	11097-69-1	6.60E+01	12*	65*	0.000104	dd
Aroclor-1260	11096-82-5	6.60E+01	12*	65*	NV	--

Table 2.1

Preliminary Cleanup Levels For Detected Parameters
1913 Marine View Drive Site
Tacoma, Washington

Parameter	CASRN	Preliminary Cleanup Levels for Soil (a) (Industrial) Value (mg/kg)	Sediment Management Standards (b) Sediment Cleanup Objectives (mg/kg)	Sediment Management Standards (b) Sediment Cleanup Screening Levels (mg/kg)	Preliminary Cleanup Levels for Surface Water and Groundwater (c) Value (µg/L)	Source
Metals						
Aluminum	7429-90-5	3.50E+06	NV	NV	NV	--
Antimony	7440-36-0	1.40E+03	NV	NV	90	bb
Arsenic	7440-38-2	8.80E+01	57	93	5	ff
Barium	7440-39-3	7.00E+05	NV	NV	NV	--
Beryllium	7440-41-7	7.00E+03	NV	NV	273	dd
Cadmium	7440-43-9	3.50E+03	5.1	6.7	7.9	aa; ee
Chromium	18540-29-9	8.20E+02**	260	270	4.13***	dd
Cobalt	7440-48-4	1.10E+03	NV	NV	NV	--
Copper	7440-50-8	1.40E+05	390	390	3.1	aa; ee
Cyanide	57-12-5	2.20E+03	NV	NV	1	ee
Iron	7439-89-6	2.50E+06	NV	NV	NV	--
Lead	7439-92-1	1.00E+03 (d)	450	530	8.1	aa; ee
Manganese	7439-96-5	1.60E+05	NV	NV	100	ee
Mercury	7439-97-6	2.00E+00 (d)	0.41	0.59	0.025	aa
Nickel	7440-02-0	7.00E+04	NV	NV	8.2	aa; ee
Selenium	7782-49-2	1.80E+04	NV	NV	71	aa; ee
Silver	7440-22-4	1.80E+04	6.1	6.1	0.91	aa
Thallium	7440-28-0	3.50E+01	NV	NV	0.223	dd
Vanadium	7440-62-2	1.80E+04	NV	NV	NV	--
Zinc	7440-66-6	1.10E+06	410	960	81	aa; ee

Notes:

(a) Preliminary Cleanup Levels for soil established consistent with MTCA Method C industrial soil cleanup levels.
(b) Preliminary Cleanup Levels for sediment established consistent with WAC 173-204-562(2) Table III Marine sediment - Chemical criteria.
(c) Preliminary Cleanup Levels for groundwater established consistent with MTCA Method B surface water cleanup levels for marine water.
(d) Preliminary Cleanup Levels for surface water established consistent with MTCA Method A (default) industrial value shown because no value is available for MTCA Method C.
NV No published value.
aa WAC 173-201A Table 240 Acute or Chronic Marine Water, or Human Health—consumption of organisms only.
bb Surface Water ARAR National Toxics Rule 40 CFR 131 Marine Water Human Health.
cc Ecology TPH - Concentrations Protective of Aquatic Receptors in Surface Water, Implementation Memo #23 (IM 23).
dd MTCA Method B Surface water calculated from MTCA equations 730-1 and/or 730-2.
ee Surface Water ARAR USEPA Clean Water Act §304 Marine Acute Aquatic, Chronic Aquatic or Human Health, consumption of organisms only.
ff Ecology background value.
CLARC Ecology's Cleanup Levels and Risk Calculation database tables.
CLARC Tables: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC.
* Criteria is for total PCBs.
** Value for Chromium VI. The value for Chromium III is 5,300,000 (5.30E+06).
*** Value for Chromium VI. WQC adjusted to a lower concentration so that the excess cancer risk is one in one hundred thousand (1 x 10-5). See WAC 173-340-730(5)(b). The value for Chromium III is 243,000 (2.43E+05).

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Lime Waste Fill								Native Soil			
Sample Location:			BH-1	BH-2	BH-4	BH-4	GP-1	GP-2	TP comp(B)	TP-28	GP-1	GP-2	GP-2	GP-3
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole
Location Purpose:														
Sample ID:			SL-101804-1	SL-101804-2	SL-101804-4	SL-101804-5	S-082114-NH-GP1-10	S-082114-NH-GP2-9	S-9973-111798-GS01	S-082614-RB-TP28-8	S-082114-NH-GP1-23	S-082114-NH-GP2-14	S-082114-NH-GP2-20	S-082114-NH-GP3-16
Sample Date:			10/18/2004	10/18/2004	10/18/2004	10/18/2004	8/21/2014	8/21/2014	11/17/1998	8/26/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(8-11) ft BGS	(7-9) ft BGS	(8-11) ft BGS	(8-11) ft BGS (Duplicate)	(10-10.5) ft BGS	(9-9.5) ft BGS	(6-9) ft BGS	(8-8.5) ft BGS	(23-23.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(16-16.5) ft BGS
Parameters	**Units**													
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**												
1,1,1,2-Tetrachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,1-Dichloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,1-Dichloroethene	mg/kg	180000	0.01 U	0.01 U	0.01 U	0.0056 J	-	-	0.012 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
1,1-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	4500	0.01 U	0.01 U	0.005 J	0.0064 J	-	-	-	-	0.18 UJ	0.058 UJ	0.027 U	0.0006 J
1,2,4-Trimethylbenzene	mg/kg	35000	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,2-Dichloropropane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2100000	0.0088 J	0.01 U	0.036 J	0.047	-	-	0.2 J	-	0.25 J	0.07 J	0.027 U	0.017 J
2-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	18000	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	0.18 UJ	0.058 UJ	0.027 U	0.019 UJ
2-Phenylbutane (sec-Butylbenzene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	280000	0.01 U	0.01 U	0.01 U	0.018	-	-	0.035 J	-	0.18 UJ	0.058 UJ	0.027 U	0.019 UJ
Acetone	mg/kg	3200000	0.05	0.036	1.8	2	-	-	0.8 J	-	1.9 J	0.37 J	0.047	0.089 J
Benzene	mg/kg	2400	0.01 U	0.0097 J	0.0089 J	0.013	-	-	0.0085 J	-	0.045 UJ	0.015 UJ	0.0066 U	0.0077 J
Bromobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
Bromoform	mg/kg	17000	0.009 J	0.0073 J	0.007 J	0.01 U	-	-	0.012 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
Bromomethane (Methyl bromide)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.025 U	-	-	-	-	-
Carbon disulfide	mg/kg	350000	0.066	0.076	0.062	0.065	-	-	0.04 J	-	0.015 J	0.14 J	0.00085 J	0.015 J
Carbon tetrachloride	mg/kg	1900	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
Chlorobenzene	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
Chlorobromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.025 U	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	NV	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.025 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
cis-1,2-Dichloroethene	mg/kg	7000	0.023	0.0081 J	0.4 J	0.33 J	-	-	0.012 U	-	0.045 UJ	0.00066 J	0.0066 U	0.0048 UJ
cis-1,3-Dichloropropene	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
Cyclohexane	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	1600	0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
Dibromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
Ethyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	350000	0.01 U	0.01 U	0.01 UJ	0.0068 J	-	-	0.009 J	-	0.045 UJ	0.0046 J	0.0066 U	0.079 J
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Iodomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
m&p-Xylenes	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	0.045 UJ	0.002 J	0.0066 U	0.03 J
Methyl acetate	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	21000	0.0051 J	0.0055 J	0.014 J	0.0061 J	-	-	0.019 J	-	0.089 UJ	0.029 UJ	0.014 U	0.0095 UJ
Naphthalene	mg/kg	70000	-	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene A	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	0.045 UJ	0.0024 J	0.0066 U	0.016 J
Pentachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	700000	0.01 U	0.01 U	0.01 UJ	0.0076 J	-	-	0.038 J	-	0.045 UJ	0.015 UJ	0.0066 U	0.00055 J

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Lime Waste Fill								Native Soil			
Sample Location:			BH-1	BH-2	BH-4	BH-4	GP-1	GP-2	TP comp(B)	TP-28	GP-1	GP-2	GP-2	GP-3
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole
Location Purpose:														
Sample ID:			SL-101804-1	SL-101804-2	SL-101804-4	SL-101804-5	S-082114-NH-GP1-10	S-082114-NH-GP2-9	S-9973-111798-GS01	S-082614-RB-TP28-8	S-082114-NH-GP1-23	S-082114-NH-GP2-14	S-082114-NH-GP2-20	S-082114-NH-GP3-16
Sample Date:			10/18/2004	10/18/2004	10/18/2004	10/18/2004	8/21/2014	8/21/2014	11/17/1998	8/26/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(8-11) ft BGS	(7-9) ft BGS	(8-11) ft BGS	(8-11) ft BGS (Duplicate)	(10-10.5) ft BGS	(9-9.5) ft BGS	(6-9) ft BGS	(8-8.5) ft BGS	(23-23.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(16-16.5) ft BGS
Parameters	**Units**													
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**												
tert-Butylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	21000	24	5.8	30	39	-	-	6 J	-	0.045 UJ	0.0022 J	0.00051 J	0.0048 UJ
Tetrahydrofuran	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	280000	0.01 U	0.01 U	0.0095 J	0.019	-	-	0.014 J	-	0.005 J	0.00089 J	0.0066 U	0.0092 J
trans-1,2-Dichloroethene	mg/kg	70000	0.006 J	0.01 U	0.068 J	0.099	-	-	0.28 J	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
trans-1,3-Dichloropropene	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	0.012 U	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	1800	0.049	0.041	6.2	4	-	-	0.28 J	-	0.045 UJ	0.002 J	0.00041 J	0.0048 UJ
Trichlorofluoroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg		0.01 U	0.01 U	0.01 U	0.01 U	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg		0.01 U	0.01 U	0.01 UJ	0.01 U	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	88	0.0072 J	0.01 U	0.035	0.052	-	-	0.025 U	-	0.045 UJ	0.015 UJ	0.0066 U	0.0048 UJ
Xylenes (total)	mg/kg	700000	-	-	-	-	-	-	0.018 J	-	-	-	-	-
Volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***												
1,1-Dichloroethene	µg/L	700	0.5 U	0.5 UJ	0.5 U	-	200 U	200 U	-	200 U	-	-	-	-
1,2-Dichloroethane	µg/L	500	0.5 U	0.5 UJ	0.5 U	-	200 U	200 U	-	200 U	-	-	-	-
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	200 U	200 U	-	200 U	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200000	5 U	5 UJ	5 U	-	8000 U	8000 U	-	8000 U	-	-	-	-
Benzene	µg/L	500	0.41 J	0.96 J	0.76	-	200 U	200 U	-	200 U	-	-	-	-
Carbon tetrachloride	µg/L	500	0.5 U	0.5 UJ	0.5 U	-	200 U	200 U	-	200 U	-	-	-	-
Chlorobenzene	µg/L	100000	0.5 U	0.5 UJ	0.29 J	-	200 U	200 U	-	200 U	-	-	-	-
Chloroform (Trichloromethane)	µg/L	6000	0.5 U	0.5 UJ	0.5 U	-	200 U	200 U	-	200 U	-	-	-	-
Tetrachloroethene	µg/L	700	250	470 J	**2700**	-	320	200 U	-	64 J	-	-	-	-
Trichloroethene	µg/L	500	6.8	19 J	320	-	64 J	200 U	-	200 U	-	-	-	-
Vinyl chloride	µg/L	200	1 U	1 UJ	1 U	-	80 U	80 U	-	80 U	-	-	-	-
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**												
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	-	-	0.82 U	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	-	0.82 U	-	-	-	-	-
1,2-Diphenylhydrazine	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	-	0.82 U	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	-	0.82 U	-	-	-	-	-
1-Methyl-7-isopropylphenanthrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
2,4-Dichlorophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	70000	R	R	R	R	-	-	R	-	0.17 J	0.59 UJ	0.40 U	3.1 U
2,4-Dinitrophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
2-Chloronaphthalene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
2-Chlorophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
2-Methylnaphthalene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
2-Methylphenol	mg/kg	180000	R	R	R	R	-	-	R	-	1.5 UJ	0.59 UJ	0.40 U	3.1 U
2-Nitroaniline	mg/kg		0.83 U	0.83 U	0.83 U	4.15 U	-	-	2 U	-	-	-	-	-
2-Nitrophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
3B-Coprostanol	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg		0.83 U	0.83 U	0.83 U	4.15 U	-	-	2 U	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	280	R	R	0.28 J	R	-	-	R	-	8.8 UJ	3.6 UJ	2.4 U	19 U
4-Bromophenyl phenyl ether	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
4-Chloroaniline	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
4-Methylphenol	mg/kg	350000	R	R	R	R	-	-	0.6 J	-	1.5 UJ	0.59 UJ	0.40 U	3.1 U
4-Nitroaniline	mg/kg		0.83 U	0.83 U	0.83 U	4.15 U	-	-	2 U	-	-	-	-	-
4-Nitrophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
Acenaphthene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Lime Waste Fill								Native Soil			
Sample Location:			BH-1	BH-2	BH-4	BH-4	GP-1	GP-2	TP comp(B)	TP-28	GP-1	GP-2	GP-2	GP-3
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole
Location Purpose:														
Sample ID:			SL-101804-1	SL-101804-2	SL-101804-4	SL-101804-5	S-082114-NH-GP1-10	S-082114-NH-GP2-9	S-9973-111798-GS01	S-082614-RB-TP28-8	S-082114-NH-GP1-23	S-082114-NH-GP2-14	S-082114-NH-GP2-20	S-082114-NH-GP3-16
Sample Date:			10/18/2004	10/18/2004	10/18/2004	10/18/2004	8/21/2014	8/21/2014	11/17/1998	8/26/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(8-11) ft BGS	(7-9) ft BGS	(8-11) ft BGS	(8-11) ft BGS (Duplicate)	(10-10.5) ft BGS	(9-9.5) ft BGS	(6-9) ft BGS	(8-8.5) ft BGS	(23-23.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(16-16.5) ft BGS
Parameters	**Units**													
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**												
Acenaphthylene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Acetophenone	mg/kg		0.33 U	0.33 U	R	1.65 U	-	-	-	-	-	-	-	-
Aniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Atrazine	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg		0.33 U	0.33 U	0.33 U	0.33 U	-	-	-	-	-	-	-	-
Benzidine	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Benzo(a)pyrene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Benzoic acid	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	9400	2 J	0.89 J	1.3 J	17 J	-	-	0.82 U	-	92 J	2.8 J	1.2	11
Butyl benzylphthalate (BBP)	mg/kg	69000	0.77	0.19 J	0.3 J	6.4 J	-	-	0.82 U	-	1.9 J	1.4 J	0.40 U	3.1 U
Caffeine	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	-	-	-	-	-	-
Carbazole	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Chrysene	mg/kg	NV	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	0.25 J	0.033 J	0.025 J	0.13 J
Dibenz(a,h)anthracene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Dibenzofuran	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Diethyl phthalate	mg/kg	2800000	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	1.5 UJ	0.59 UJ	0.40 U	3.1 U
Dimethyl phthalate	mg/kg	NV	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	35000	0.33 U	0.33 U	0.33 UJ	0.84 J	-	-	0.82 U	-	0.96 J	0.59 UJ	0.40 U	0.33 J
Fluoranthene	mg/kg	140000	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	0.18 J	0.031 J	0.40 U	0.12 J
Fluorene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Hexachlorobenzene	mg/kg	82	0.71 J	1.2 J	1.1 J	0.97 J	-	-	1.5 J	-	1.5 UJ	0.59 UJ	0.40 U	3.1 U
Hexachlorobutadiene	mg/kg	1700	43 J	40 J	31 J	49 J	-	-	30 J	-	0.11 J	0.59 UJ	0.40 U	3.1 U
Hexachlorocyclopentadiene	mg/kg		0.33 U	0.33 U	R	1.65 U	-	-	0.82 U	-	-	-	-	-
Hexachloroethane	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Isophorone	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Naphthalene	mg/kg	70000	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Nitrobenzene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg		0.33 U	0.33 U	0.33 UJ	1.65 U	-	-	0.82 U	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Pentachlorophenol	mg/kg		R	R	R	R	-	-	R	-	-	-	-	-
Phenanthrene	mg/kg		0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	-	-	-	-
Phenol	mg/kg	1100000	R	R	R	R	-	-	R	-	1.5 UJ	0.59 UJ	0.40 U	3.1 U
Pyrene	mg/kg	110000	0.33 U	0.33 U	0.33 U	1.65 U	-	-	0.82 U	-	0.37 J	0.037 J	0.020 J	0.18 J
Pyridine	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***												
1,4-Dichlorobenzene	µg/L	7500	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	400000	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
2,4,6-Trichlorophenol	µg/L	2000	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
2,4-Dinitrotoluene	µg/L	130	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
2-Methylphenol	µg/L	200000	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
4-Methylphenol	µg/L	200000	10 U	10 U	10 U	-	17 J	110	-	100 U	-	-	-	-
Hexachlorobenzene	µg/L	130	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
Hexachlorobutadiene	µg/L	500	200	53	59	-	23 J	100 U	-	290	-	-	-	-
Hexachloroethane	µg/L	3000	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
Nitrobenzene	µg/L	2000	10 U	10 U	10 U	-	100 U	100 U	-	100 U	-	-	-	-
Pentachlorophenol	µg/L	100000	50 U	50 U	50 U	-	250 U	250 U	-	250 U	-	-	-	-
Pyridine	µg/L	5000	10 U	10 U	10 U	-	500 U	500 U	-	500 U	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Lime Waste Fill								Native Soil			
Sample Location:			BH-1	BH-2	BH-4	BH-4	GP-1	GP-2	TP comp(B)	TP-28	GP-1	GP-2	GP-2	GP-3
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole
Location Purpose:														
Sample ID:			SL-101804-1	SL-101804-2	SL-101804-4	SL-101804-5	S-082114-NH-GP1-10	S-082114-NH-GP2-9	S-9973-111798-GS01	S-082614-RB-TP28-8	S-082114-NH-GP1-23	S-082114-NH-GP2-14	S-082114-NH-GP2-20	S-082114-NH-GP3-16
Sample Date:			10/18/2004	10/18/2004	10/18/2004	10/18/2004	8/21/2014	8/21/2014	11/17/1998	8/26/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(8-11) ft BGS	(7-9) ft BGS	(8-11) ft BGS	(8-11) ft BGS (Duplicate)	(10-10.5) ft BGS	(9-9.5) ft BGS	(6-9) ft BGS	(8-8.5) ft BGS	(23-23.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(16-16.5) ft BGS
Parameters	**Units**													
Metals		**Soil MTCA Method C Industrial Cleanup Level[1]**												
Aluminum	mg/kg	3500000	3150	2490	2150	2270	-	-	5850 J	-	5060 J	10400 J	6910	9220
Antimony	mg/kg	1400	13.4 J	13.6 J	14.7 J	14.7 J	-	-	1.5 J	-	5.1 UJ	0.7 J	0.6 J	1.9 J
Arsenic	mg/kg	88	2.1	9.3	2.3	4.0	-	-	5.3 J	-	17.0 J	16.8 J	2.7 J	23.4
Barium	mg/kg	700000	20 U	75.7	27.6	126	-	-	103 J	-	53.8 J	37.1 J	104	87.0
Beryllium	mg/kg	7000	0.5 U	0.5 U	0.5 U	0.5 U	-	-	0.5 J	-	0.25 UJ	0.23 UJ	0.23 U	0.20 U
Cadmium	mg/kg	3500	0.5 U	1.3	0.56	2.3	-	-	1.3 U	-	0.76 J	0.87 J	1.62	2.03
Calcium	mg/kg		153000	142000	145000	152000	-	-	340000 J	-	19600 J	6300 J	4730	4800
Chromium	mg/kg	820**	4.8	6.5	5.4	11.2	-	-	10.8 J	-	10.3 J	15.4 J	25.5	21.3
Cobalt	mg/kg	1100	5 U	5 U	5 U	5 U	-	-	11.0 J	-	4.33 J	8.29 J	3.51	6.85
Copper	mg/kg	140000	4.6	16.2	6.1	29.8	-	-	20.8 J	-	20.5 J	45.8 J	22.2 J	54.8 J
Flash point (closed cup)	Deg C		-	-	-	-	-	-	-	110 >	-	-	-	-
Iron	mg/kg	2500000	1680	2530	1480	4670	-	-	3780 J	-	10100 J	15200 J	11000	21200
Lead	mg/kg	1000 (d)	59.5	141	61.3	191	-	-	333 J	-	46.7 J	69.9 J	68.1	135
Magnesium	mg/kg		2300	2470	1430	2450	-	-	8030 J	-	4360 J	4990 J	2800 J	3530 J
Manganese	mg/kg	160000	16.2	31.3	19.6	43.0	-	-	67.5 J	-	94.1 J	93.5 J	98.2	201
Mercury	mg/kg	2 (d)	0.1 U	0.21	0.1 U	0.15	-	-	0.3 U	-	0.075 J	0.088 J	0.114	1.78
Nickel	mg/kg	70000	28.2	45.6	30.5	39.3	-	-	92.5 J	-	12.9 J	17.1 J	12.0	19.6
Potassium	mg/kg		500 U	500 U	500 U	500 U	-	-	133 J	-	227 J	982 J	381	756
Selenium	mg/kg	18000	0.5 U	0.5 U	0.5 U	0.5 U	-	-	1.3 U	-	1.8 J	2.4 J	1.4 J	4.0 U
Silver	mg/kg	18000	1.1	1 U	1 U	1 U	-	-	0.3 U	-	1.0 UJ	0.9 UJ	0.9 U	0.4 J
Sodium	mg/kg		500 U	500 U	679	715	-	-	1400 J	-	265 J	2690 J	510	573
Thallium	mg/kg	35	1 U	1 U	1 U	1 U	-	-	5.0 U	-	5.1 UJ	4.6 UJ	4.6 U	4.0 U
Vanadium	mg/kg	18000	27.6	39.5	28.8	28.1	-	-	65.0 J	-	39.6 J	95.3 J	37.4	48.8
Zinc	mg/kg	1100000	33.9	117	63.3	560	-	-	97.5 J	-	232 J	103 J	149	397
Metals - TCLP		***TCLP Regulatory Level[2]***												
Arsenic	µg/L	5000	5 U	5 U	5 U	-	50 U	50 U	-	50 U	-	-	-	-
Barium	µg/L	100000	490	700	630	-	920 J	540 J	-	1000 U	-	-	-	-
Cadmium	µg/L	1000	5 U	5 U	5 U	-	50 U	50 U	-	50 U	-	-	-	-
Chromium	µg/L	5000	10	10	11	-	50 U	50 U	-	50 U	-	-	-	-
Lead	µg/L	5000	210	240	210	-	130	90	-	150	-	-	-	-
Mercury	µg/L	200	2 U	2 U	2 U	-	1 U	1 U	-	1 U	-	-	-	-
Selenium	µg/L	1000	5 U	5 U	5 U	-	200 U	200 U	-	200 U	-	-	-	-
Silver	µg/L	5000	15	14	16	-	100 U	100 U	-	100 U	-	-	-	-
Polychlorinated Biphenyls (PCBs)		**Soil MTCA Method C Industrial Cleanup Level[1]**												
Aroclor-1016 (PCB-1016)	mg/kg		1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.074 UJ	0.030 UJ	0.020 U	0.016 U
Aroclor-1221 (PCB-1221)	mg/kg		1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.15 UJ	0.060 UJ	0.040 U	0.032 U
Aroclor-1232 (PCB-1232)	mg/kg		1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.074 UJ	0.030 UJ	0.020 U	0.016 U
Aroclor-1242 (PCB-1242)	mg/kg		1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.069 J	0.061 J	0.33	0.33
Aroclor-1248 (PCB-1248)	mg/kg		1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.074 UJ	0.030 UJ	0.020 U	0.016 U
Aroclor-1254 (PCB-1254)	mg/kg	66	1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	0.054 J	0.048 J	0.25	0.57
Aroclor-1260 (PCB-1260)	mg/kg	66	0.8 U	0.8 U	0.8 U	0.8 U	-	-	-	-	0.030 J	0.025 J	0.14	0.36 J
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**												
4,4'-DDD	mg/kg	550	-	-	-	-	-	-	-	-	0.014 UJ	0.003 UJ	0.0049	0.011
4,4'-DDE	mg/kg	390	-	-	-	-	-	-	0.04 U	-	0.0074 UJ	0.003 UJ	0.002 U	0.0039 U
4,4'-DDE/DDD	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
4,4'-DDT	mg/kg	390	-	-	-	-	-	-	0.04 U	-	0.0074 UJ	0.003 UJ	0.012 U	0.033 U
Aldrin	mg/kg		-	-	-	-	-	-	0.02 U	-	-	-	-	-
alpha-BHC	mg/kg	21	-	-	-	-	-	-	0.02 U	-	0.0074 UJ	0.003 UJ	0.002 U	0.0032 U
alpha-Chlordane	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	-	1.2 U	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	-	1.2 U	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	-	1.2 U	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	-	1.2 U	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	-	0.2 U	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	-	0.2 U	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	-	0.2 U	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Lime Waste Fill								Native Soil			
Sample Location:			BH-1	BH-2	BH-4	BH-4	GP-1	GP-2	TP comp(B)	TP-28	GP-1	GP-2	GP-2	GP-3
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole
Location Purpose:														
Sample ID:			SL-101804-1	SL-101804-2	SL-101804-4	SL-101804-5	S-082114-NH-GP1-10	S-082114-NH-GP2-9	S-9973-111798-GS01	S-082614-RB-TP28-8	S-082114-NH-GP1-23	S-082114-NH-GP2-14	S-082114-NH-GP2-20	S-082114-NH-GP3-16
Sample Date:			10/18/2004	10/18/2004	10/18/2004	10/18/2004	8/21/2014	8/21/2014	11/17/1998	8/26/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(8-11) ft BGS	(7-9) ft BGS	(8-11) ft BGS	(8-11) ft BGS (Duplicate)	(10-10.5) ft BGS	(9-9.5) ft BGS	(6-9) ft BGS	(8-8.5) ft BGS	(23-23.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(16-16.5) ft BGS
Parameters	**Units**													
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**												
beta-BHC	mg/kg	73	-	-	-	-	-	-	0.02 U	-	0.0074 UJ	0.003 UJ	0.0031 U	0.0052 U
delta-BHC	mg/kg	0.21	-	-	-	-	-	-	0.02 U	-	0.0074 UJ	0.003 UJ	0.002 U	0.0032 U
Dieldrin	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
Endosulfan I	mg/kg		-	-	-	-	-	-	0.02 U	-	-	-	-	-
Endosulfan II	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
Endosulfan sulfate	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
Endrin	mg/kg		-	-	-	-	-	-	0.04 U	-	-	-	-	-
Endrin aldehyde	mg/kg	NV	-	-	-	-	-	-	0.04 U	-	0.0074 UJ	0.003 UJ	0.0025 U	0.005 U
gamma-BHC (lindane)	mg/kg	120	-	-	-	-	-	-	0.02 U	-	0.0074 UJ	0.003 UJ	0.002 U	0.0032 U
gamma-Chlordane	mg/kg	1800	-	-	-	-	-	-	0.04 U	-	-	-	-	-
Heptachlor	mg/kg	29	-	-	-	-	-	-	0.02 U	-	0.0033 J	0.003 UJ	0.002 UJ	0.0032 UJ
Heptachlor epoxide	mg/kg		-	-	-	-	-	-	0.02 U	-	-	-	-	-
Methoxychlor	mg/kg		-	-	-	-	-	-	0.2 U	-	-	-	-	-
Toxaphene	mg/kg		-	-	-	-	-	-	0.4 U	-	-	-	-	-
Pesticides - TCLP		***TCLP Regulatory Level[2]***												
alpha-Chlordane	µg/L	30	15 U	15 U	15 U	-	-	-	-	-	-	-	-	-
Endrin	µg/L	20	10 U	10 U	10 U	-	-	-	-	-	-	-	-	-
gamma-BHC (lindane)	µg/L	400	200 U	200 U	200 U	-	-	-	-	-	-	-	-	-
gamma-Chlordane	µg/L	30	15 U	15 U	15 U	-	-	-	-	-	-	-	-	-
Heptachlor	µg/L	8	4.0 U	4.0 U	4.0 U	-	-	-	-	-	-	-	-	-
Methoxychlor	µg/L	10000	5000 U	5000 U	5000 U	-	-	-	-	-	-	-	-	-
Toxaphene	µg/L	500	250 U	250 U	250 U	-	-	-	-	-	-	-	-	-
Herbicides - TCLP		***TCLP Regulatory Level[2]***												
2,4,5-TP (Silvex)	µg/L	1000	500 U	500 U	500 U	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	10000	5000 U	5000 U	5000 U	-	-	-	-	-	-	-	-	-
Miscellaneous														
Asbestos	%		U	U	TR	-	-	-	-	-	-	-	-	-
General Chemistry		**Soil MTCA Method C Industrial Cleanup Level[1]**												
Cyanide (total)	mg/kg	2200	1.0 U	1.0 U	1.0 U	-	-	-	4.5 J	-	1.2 UJ	0.46 UJ	0.14 J	0.08 J
Miscellaneous		***Characteristics[2]***												
Flash point (closed cup)	Deg C	<60	-	-	-	-	110 >	110 >	-	-	-	-	-	-
Ignitability	Deg F	<140	0 U	0 U	0 U	-	-	-	-	-	-	-	-	-
pH (soil)	s.u.	12.5	12.4	12.1	12.0	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	12.5	-	-	-	-	12.4	12.3	-	12.5	-	-	-	-
Reactive sulfide	mg/kg		10 U	10 U	10 U	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:												Native Soil
Sample Location:			GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-7	TP-37
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit
Location Purpose:													Background
Sample ID:			S-082114-NH-GP3-19	S-082114-NH-GP4-14	S-082114-NH-GP4-20	S-082214-NH-GP5-19	S-082214-NH-GP5-23	S-082114-NH-GP6-16	S-082114-NH-GP6-18	S-082214-NH-GP7-9	S-082214-NH-GP7-14	S-082214-NH-GP7-25	SO-091514-RB-TP37-2
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/22/2014	9/15/2014
Sample Depth:			(19-19.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(19-19.5) ft BGS	(23-23.5) ft BGS	(16-16.5) ft BGS	(18-18.5) ft BGS	(9-9.5) ft BGS	(14-14.5) ft BGS	(25-25.5) ft BGS	(2-2.5) ft BGS
Parameters	**Units**												
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
1,1,1,2-Tetrachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	180000	0.027 UJ	0.0091 U	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
1,1-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	4500	0.11 UJ	0.037 U	0.11 UJ	0.19 UJ	0.056 UJ	0.041 UJ	0.031 U	0.029 U	0.021 U	-	-
1,2,4-Trimethylbenzene	mg/kg	35000	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2100000	0.13 J	0.037 U	0.24 J	0.24 J	0.056 UJ	0.054 J	0.031 U	0.029 U	0.021 U	-	-
2-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	18000	0.11 UJ	0.037 U	0.11 UJ	0.19 UJ	0.056 UJ	0.041 UJ	0.031 U	0.029 U	0.021 U	-	-
2-Phenylbutane (sec-Butylbenzene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	280000	0.11 UJ	0.037 U	0.11 UJ	0.19 UJ	0.056 UJ	0.041 UJ	0.031 U	0.029 U	0.021 U	-	-
Acetone	mg/kg	3200000	0.88 J	0.13	1.4 J	1.6 J	0.35 J	0.29 J	0.053	0.047	0.032	-	-
Benzene	mg/kg	2400	0.0011 J	0.0091 U	0.027 UJ	0.0027 J	0.0007 J	0.011 UJ	0.0076 U	0.00033 J	0.00091 J	-	-
Bromobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	17000	0.027 UJ	0.0091 U	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Bromomethane (Methyl bromide)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	350000	0.01 J	0.047	0.015 J	0.091 J	0.001 J	0.033 J	0.011	0.0063 J	0.0006 J	-	-
Carbon tetrachloride	mg/kg	1900	0.027 UJ	0.0091 U	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Chlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chlorobromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	NV	0.027 UJ	0.0091 U	0.027 UJ	0.0018 J	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
cis-1,2-Dichloroethene	mg/kg	7000	0.027 UJ	0.0091 U	0.027 UJ	0.16 J	0.014 UJ	0.022 J	0.0076 U	0.0072 U	0.0052 U	-	-
cis-1,3-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	1600	0.027 UJ	0.0091 U	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Dibromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Ethyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	350000	0.027 UJ	0.00081 J	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Iodomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	mg/kg		0.00089 J	0.00049 J	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.00021 J	-	-
Methyl acetate	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	21000	0.053 UJ	0.019 U	0.053 UJ	0.091 UJ	0.049 J	0.021 UJ	0.016 U	0.015 U	0.011 U	-	-
Naphthalene	mg/kg	70000	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene A	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg		0.027 UJ	0.00022 J	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.00016 J	-	-
Pentachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	700000	0.027 UJ	0.0091 U	0.027 UJ	0.046 UJ	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil									
Sample Location:			GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-7	TP-37
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit
Location Purpose:													Background
Sample ID:			S-082114-NH-GP3-19	S-082114-NH-GP4-14	S-082114-NH-GP4-20	S-082214-NH-GP5-19	S-082214-NH-GP5-23	S-082114-NH-GP6-16	S-082114-NH-GP6-18	S-082214-NH-GP7-9	S-082214-NH-GP7-14	S-082214-NH-GP7-25	SO-091514-RB-TP37-2
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/22/2014	9/15/2014
Sample Depth:			(19-19.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(19-19.5) ft BGS	(23-23.5) ft BGS	(16-16.5) ft BGS	(18-18.5) ft BGS	(9-9.5) ft BGS	(14-14.5) ft BGS	(25-25.5) ft BGS	(2-2.5) ft BGS
Parameters	**Units**												
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
tert-Butylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	21000	0.027 UJ	0.0091 U	0.027 UJ	0.083 J	0.0088 J	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Tetrahydrofuran	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	280000	0.0021 J	0.001 J	0.0032 J	0.0085 J	0.0011 J	0.00082 J	0.0076 U	0.00031 J	0.00041 J	-	-
trans-1,2-Dichloroethene	mg/kg	70000	0.027 UJ	0.0091 U	0.027 UJ	0.22 J	0.014 UJ	0.068 J	0.00041 J	0.0072 U	0.0052 U	-	-
trans-1,3-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	1800	0.027 UJ	0.0091 U	0.027 UJ	0.0085 J	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Trichlorofluoroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	88	0.027 UJ	0.0091 U	0.027 UJ	0.0057 J	0.014 UJ	0.011 UJ	0.0076 U	0.0072 U	0.0052 U	-	-
Xylenes (total)	mg/kg	700000	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***											
1,1-Dichloroethene	µg/L	700	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200000	-	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	100000	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	6000	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	700	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	200	-	-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1-Methyl-7-isopropylphenanthrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	70000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.018 J	0.30 U	-
2,4-Dinitrophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	180000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
2-Nitroaniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
3B-Coprostanol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	280	5.2 UJ	3.0 U	7.3 UJ	6.5 UJ	3.6 UJ	3.1 UJ	2.2 U	2.3 U	1.8 U	1.8 U	-
4-Bromophenyl phenyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	mg/kg	350000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.044 J	0.30 U	-
4-Nitroaniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg		-	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil									
Sample Location:			GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-7	TP-37
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit
Location Purpose:													Background
Sample ID:			S-082114-NH-GP3-19	S-082114-NH-GP4-14	S-082114-NH-GP4-20	S-082214-NH-GP5-19	S-082214-NH-GP5-23	S-082114-NH-GP6-16	S-082114-NH-GP6-18	S-082214-NH-GP7-9	S-082214-NH-GP7-14	S-082214-NH-GP7-25	SO-091514-RB-TP37-2
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/22/2014	9/15/2014
Sample Depth:			(19-19.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(19-19.5) ft BGS	(23-23.5) ft BGS	(16-16.5) ft BGS	(18-18.5) ft BGS	(9-9.5) ft BGS	(14-14.5) ft BGS	(25-25.5) ft BGS	(2-2.5) ft BGS
Parameters	**Units**												
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Acenaphthylene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Acetophenone	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Atrazine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzidine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzoic acid	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	9400	0.85 UJ	1.7	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Butyl benzylphthalate (BBP)	mg/kg	69000	0.85 UJ	0.84	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Caffeine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	NV	0.85 UJ	0.026 J	0.061 J	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.11 J	0.16 J	0.30 U	-
Dibenz(a,h)anthracene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Diethyl phthalate	mg/kg	2800000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Dimethyl phthalate	mg/kg	NV	-	-	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	35000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Fluoranthene	mg/kg	140000	0.85 UJ	0.022 J	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.38	0.36	0.30 U	-
Fluorene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	82	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Hexachlorobutadiene	mg/kg	1700	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Hexachlorocyclopentadiene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Isophorone	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	70000	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	1100000	0.85 UJ	0.49 U	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.37 U	0.29 U	0.30 U	-
Pyrene	mg/kg	110000	0.85 UJ	0.041 J	1.3 UJ	1.1 UJ	0.60 UJ	0.51 UJ	0.36 U	0.26 J	0.37	0.30 U	-
Pyridine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***											
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	400000	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	2000	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	130	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	µg/L	200000	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	µg/L	200000	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	130	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	µg/L	3000	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	µg/L	2000	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	µg/L	100000	-	-	-	-	-	-	-	-	-	-	-
Pyridine	µg/L	5000	-	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil									
Sample Location:			GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-7	TP-37
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit
Location Purpose:													Background
Sample ID:			S-082114-NH-GP3-19	S-082114-NH-GP4-14	S-082114-NH-GP4-20	S-082214-NH-GP5-19	S-082214-NH-GP5-23	S-082114-NH-GP6-16	S-082114-NH-GP6-18	S-082214-NH-GP7-9	S-082214-NH-GP7-14	S-082214-NH-GP7-25	SO-091514-RB-TP37-2
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/22/2014	9/15/2014
Sample Depth:			(19-19.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(19-19.5) ft BGS	(23-23.5) ft BGS	(16-16.5) ft BGS	(18-18.5) ft BGS	(9-9.5) ft BGS	(14-14.5) ft BGS	(25-25.5) ft BGS	(2-2.5) ft BGS
Parameters	**Units**												
Metals		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Aluminum	mg/kg	3500000	13200 J	11300	36100 J	7270 J	11400 J	12300 J	11000	12900	9250	8400	10900
Antimony	mg/kg	1400	3.7 UJ	4.0 UJ	3.9 UJ	4.3 UJ	4.2 UJ	4.2 UJ	4.6 UJ	3.4 UJ	4.2 J	4.5 UJ	3.2 UJ
Arsenic	mg/kg	88	12.1 J	9.9	18.0 J	16.5 J	3.1 J	12.2 J	7.3 J	6.3 J	4.6 J	9.0 U	2.9 J
Barium	mg/kg	700000	34.7 J	24.2	102 J	7.52 J	57.0 J	33.8 J	33.0	20.6	86.3	49.1	52.6
Beryllium	mg/kg	7000	0.19 UJ	0.20 U	0.81 J	0.17 J	0.31 J	0.23 J	0.23 U	0.22	0.37	0.22 U	0.18
Cadmium	mg/kg	3500	0.19 UJ	0.40	0.20 UJ	0.22 UJ	0.21 UJ	0.64 J	0.23 U	0.17 U	0.52	0.22 U	0.08 J
Calcium	mg/kg		9880 J	5100	14400 J	7580 J	6670 J	6250 J	2740	5020	3860	1830	2420 J
Chromium	mg/kg	820**	31.2 J	17.1	55.8 J	21.5 J	28.6 J	22.9 J	21.8	27.6	22.2	21.2	23.5
Cobalt	mg/kg	1100	5.22 J	7.68	16.1 J	13.2 J	3.32 J	8.08 J	4.80	6.59	8.48	4.52	5.00
Copper	mg/kg	140000	19.6 J	26.2 J	74.2 J	16.6 J	14.6 J	34.3 J	12.0 J	28.0 J	56.8 J	10.0 J	12.0
Flash point (closed cup)	Deg C		-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	2500000	13600 J	14800	33700 J	12600 J	9210 J	16500 J	13600	16800	21700	8820	13100
Lead	mg/kg	1000 (d)	12.9 J	16.2	11.9 J	2.4 J	3.3 J	27.5 J	4.1	7.9	82.8	2.8	6.4
Magnesium	mg/kg		5840 J	4730 J	12300 J	6740 J	3250 J	5220 J	2870 J	4800 J	3420 J	2650 J	3260
Manganese	mg/kg	160000	118 J	95.2	272 J	115 J	85.9 J	137 J	104	124	376	94.7	189
Mercury	mg/kg	2 (d)	0.053 J	0.098	0.080 J	0.036 J	0.041 J	0.033 J	0.013 J	0.027	0.183	0.010 J	0.026
Nickel	mg/kg	70000	18.0 J	13.4	38.3 J	11.5 J	11.0 J	16.6 J	10.2	14.7	25.5	15.4	22.4
Potassium	mg/kg		697 J	1110	1560 J	699 J	588 J	1150 J	715	1220	1050	516	516
Selenium	mg/kg	18000	1.2 J	1.3 J	3.9 UJ	2.5 J	1.8 J	1.8 J	4.6 U	3.4 U	4.3 U	4.5 U	1.2 J
Silver	mg/kg	18000	0.7 UJ	0.8 U	0.8 UJ	0.9 UJ	0.8 UJ	0.8 UJ	0.9 U	0.7 U	0.9 U	0.9 U	0.2 J
Sodium	mg/kg		418 J	1660	2250 J	3110 J	373 J	1790 J	354	2950	285	87.3	162
Thallium	mg/kg	35	3.7 UJ	4.0 U	3.9 UJ	4.3 UJ	4.2 UJ	4.2 UJ	4.6 U	3.4 U	4.3 U	4.5 U	1.6 U
Vanadium	mg/kg	18000	89.6 J	66.0	161 J	171 J	60.7 J	82.5 J	49.9	52.8	37.2	34.6	32.8
Zinc	mg/kg	1100000	36.0 J	48.0	75.4 J	35.1 J	22.0 J	110 J	21.8	46.4	242	24.4	30.7
Metals - TCLP		***TCLP Regulatory Level[2]***											
Arsenic	µg/L	5000	-	-	-	-	-	-	-	-	-	-	-
Barium	µg/L	100000	-	-	-	-	-	-	-	-	-	-	-
Cadmium	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	5000	-	-	-	-	-	-	-	-	-	-	-
Lead	µg/L	5000	-	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	200	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	5000	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Aroclor-1016 (PCB-1016)	mg/kg		0.043 UJ	0.025 U	0.060 UJ	0.054 UJ	0.030 UJ	0.026 UJ	0.018 U	0.019 U	0.015 U	0.015 U	-
Aroclor-1221 (PCB-1221)	mg/kg		0.085 UJ	0.049 U	0.12 UJ	0.11 UJ	0.059 UJ	0.052 UJ	0.036 U	0.038 U	0.030 U	0.030 U	-
Aroclor-1232 (PCB-1232)	mg/kg		0.043 UJ	0.025 U	0.060 UJ	0.054 UJ	0.030 UJ	0.026 UJ	0.018 U	0.019 U	0.015 U	0.015 U	-
Aroclor-1242 (PCB-1242)	mg/kg		0.043 UJ	0.015 J	0.060 UJ	0.054 UJ	0.030 UJ	0.026 UJ	0.018 U	0.019 U	0.016	0.015 U	-
Aroclor-1248 (PCB-1248)	mg/kg		0.043 UJ	0.025 U	0.060 UJ	0.054 UJ	0.030 UJ	0.026 UJ	0.018 U	0.019 U	0.015 U	0.015 U	-
Aroclor-1254 (PCB-1254)	mg/kg	66	0.043 UJ	0.035	0.027 J	0.054 UJ	0.030 UJ	0.014 J	0.018 U	0.038	0.18	0.015 U	-
Aroclor-1260 (PCB-1260)	mg/kg	66	0.043 UJ	0.015 J	0.060 UJ	0.054 UJ	0.030 UJ	0.026 UJ	0.018 U	0.016 J	0.12 J	0.015 U	-
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**											
4,4'-DDD	mg/kg	550	0.014 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.0032 UJ	0.0026 UJ	0.0018 U	0.0019 U	0.0014 J	0.0015 U	-
4,4'-DDE	mg/kg	390	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 U	0.0019 U	0.0016 U	0.0016 U	-
4,4'-DDE/DDD	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4,4'-DDT	mg/kg	390	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 U	0.004 U	0.02 U	0.0015 U	-
Aldrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
alpha-BHC	mg/kg	21	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 U	0.0019 U	0.0015 U	0.0015 U	-
alpha-Chlordane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil									
Sample Location:			GP-3	GP-4	GP-4	GP-5	GP-5	GP-6	GP-6	GP-7	GP-7	GP-7	TP-37
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit
Location Purpose:													Background
Sample ID:			S-082114-NH-GP3-19	S-082114-NH-GP4-14	S-082114-NH-GP4-20	S-082214-NH-GP5-19	S-082214-NH-GP5-23	S-082114-NH-GP6-16	S-082114-NH-GP6-18	S-082214-NH-GP7-9	S-082214-NH-GP7-14	S-082214-NH-GP7-25	SO-091514-RB-TP37-2
Sample Date:			8/21/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/21/2014	8/21/2014	8/22/2014	8/22/2014	8/22/2014	9/15/2014
Sample Depth:			(19-19.5) ft BGS	(14-14.5) ft BGS	(20-20.5) ft BGS	(19-19.5) ft BGS	(23-23.5) ft BGS	(16-16.5) ft BGS	(18-18.5) ft BGS	(9-9.5) ft BGS	(14-14.5) ft BGS	(25-25.5) ft BGS	(2-2.5) ft BGS
Parameters	**Units**												
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**											
beta-BHC	mg/kg	73	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	-
delta-BHC	mg/kg	0.21	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 U	0.0019 U	0.0015 U	0.0015 U	-
Dieldrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan I	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan sulfate	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endrin aldehyde	mg/kg	NV	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0025 U	0.0025 U	0.0025 U	0.0025 U	-
gamma-BHC (lindane)	mg/kg	120	0.0043 UJ	0.0025 U	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 U	0.0019 U	0.0015 U	0.0015 U	-
gamma-Chlordane	mg/kg	1800	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	mg/kg	29	0.0043 UJ	0.0025 UJ	0.006 UJ	0.0054 UJ	0.003 UJ	0.0026 UJ	0.0018 UJ	0.0019 UJ	0.0015 UJ	0.0015 UJ	-
Heptachlor epoxide	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Toxaphene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Pesticides - TCLP		***TCLP Regulatory Level[2]***											
alpha-Chlordane	µg/L	30	-	-	-	-	-	-	-	-	-	-	-
Endrin	µg/L	20	-	-	-	-	-	-	-	-	-	-	-
gamma-BHC (lindane)	µg/L	400	-	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	µg/L	30	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	µg/L	8	-	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	µg/L	8	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	µg/L	10000	-	-	-	-	-	-	-	-	-	-	-
Toxaphene	µg/L	500	-	-	-	-	-	-	-	-	-	-	-
Herbicides - TCLP		***TCLP Regulatory Level[2]***											
2,4,5-TP (Silvex)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	10000	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous													
Asbestos	%		-	-	-	-	-	-	-	-	-	-	-
General Chemistry		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Cyanide (total)	mg/kg	2200	0.64 UJ	0.39 U	0.83 UJ	0.80 UJ	0.47 UJ	0.37 UJ	0.28 U	0.30 U	0.22 U	0.22 U	0.25 U
Miscellaneous		***Characteristics[2]***											
Flash point (closed cup)	Deg C	<60	-	-	-	-	-	-	-	-	-	-	-
Ignitability	Deg F	<140	-	-	-	-	-	-	-	-	-	-	-
pH (soil)	s.u.	12.5	-	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	12.5	-	-	-	-	-	-	-	-	-	-	-
Reactive sulfide	mg/kg		-	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil					Sand and Shredder Fill					
Sample Location:			TP-37	TP-37	TP-38	TP-38	TP-38	BH-3	GP-1	GP-1	GP-2	GP-3	GP-4
Location Type:			Test Pit	Test Pit	Test Pit	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole
Location Purpose:			Background	Background	Background	Background	Background						
Sample ID:			SO-091514-RB-TP37-5	SO-091514-RB-TP37-7.5	S-082814-RB-TP38-2.5	S-082814-RB-TP38-4.5	S-082814-RB-TP38-11.0	SL-101804-3	S-082114-NH-GP1-11	S-082114-NH-GP1-FD1	S-082114-NH-GP2-11	S-082114-NH-GP3-7	S-082114-NH-GP4-5
Sample Date:			9/15/2014	9/15/2014	8/28/2014	8/28/2014	8/28/2014	10/18/2004	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(5-5.5) ft BGS	(7.5-8) ft BGS	(2.5-3) ft BGS	(4.5-5) ft BGS	(11-11.5) ft BGS	(7-9) ft BGS	(11-11.5) ft BGS	(11-11.5) ft BGS (Duplicate)	(11-11.5) ft BGS	(7-7.5) ft BGS	(5-5.5) ft BGS
Parameters	**Units**												
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
1,1,1,2-Tetrachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,1-Dichloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,1-Dichloroethene	mg/kg	180000	-	-	-	-	-	0.01 U	0.00054 J	0.071 UJ	0.0019 J	0.0053 U	0.0061 U
1,1-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	-	0.01 U	0.034 UJ	0.034 J	0.003 J	0.022 U	0.00058 J
1,2,4-Trimethylbenzene	mg/kg	35000	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,2-Dichloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,2-Dichloropropane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
1,3-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
2,2-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2100000	-	-	-	-	-	0.048	0.041 J	2.9 UJ	0.12	0.022 U	0.054
2-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	18000	-	-	-	-	-	0.01 U	0.0036 J	2.9 UJ	0.025 U	0.022 U	0.025 U
2-Phenylbutane (sec-Butylbenzene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	280000	-	-	-	-	-	0.011	0.0044 J	2.9 UJ	0.042	0.022 U	0.015 J
Acetone	mg/kg	3200000	-	-	-	-	-	1.4	0.19 J	2.9 UJ	0.46	0.061	0.25
Benzene	mg/kg	2400	-	-	-	-	-	0.021	0.0073 J	0.037 J	0.03	0.0016 J	0.0068
Bromobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Bromoform	mg/kg	17000	-	-	-	-	-	0.0067 J	0.0085 UJ	0.071 UJ	0.0061 U	0.0053 U	0.0061 U
Bromomethane (Methyl bromide)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Carbon disulfide	mg/kg	350000	-	-	-	-	-	0.05	0.028 J	0.071 UJ	0.017	0.0002 J	0.0066
Carbon tetrachloride	mg/kg	1900	-	-	-	-	-	0.01 U	0.0085 UJ	0.071 UJ	0.0061 U	0.0053 U	0.0061 U
Chlorobenzene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Chlorobromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	NV	-	-	-	-	-	0.01 U	0.00034 J	0.071 UJ	0.00098 J	0.0053 U	0.0061 U
cis-1,2-Dichloroethene	mg/kg	7000	-	-	-	-	-	0.071	0.034 J	0.17 J	0.17	0.0053 U	0.00062 J
cis-1,3-Dichloropropene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Cyclohexane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	1600	-	-	-	-	-	0.01 U	0.0085 UJ	0.071 UJ	0.0061 U	0.0053 U	0.0061 U
Dibromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Ethyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	350000	-	-	-	-	-	0.01 U	0.0056 J	0.11 J	0.037	0.0021 J	0.028
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Iodomethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
m&p-Xylenes	mg/kg		-	-	-	-	-	0.01 U	0.0035 J	0.046 J	0.028	0.001 J	0.024
Methyl acetate	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Methyl cyclohexane	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Methylene chloride	mg/kg	21000	-	-	-	-	-	0.01 U	0.017 UJ	0.29 UJ	0.013 U	0.011 U	0.013 U
Naphthalene	mg/kg	70000	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene A	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg		-	-	-	-	-	0.01 U	0.002 J	0.027 J	0.018	0.00069 J	0.014
Pentachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	700000	-	-	-	-	-	0.01 U	0.00037 J	0.060 J	0.032	0.0053 U	0.013

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil					Sand and Shredder Fill					
Sample Location:			TP-37	TP-37	TP-38	TP-38	TP-38	BH-3	GP-1	GP-1	GP-2	GP-3	GP-4
Location Type:			Test Pit	Test Pit	Test Pit	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole
Location Purpose:			Background	Background	Background	Background	Background						
Sample ID:			SO-091514-RB-TP37-5	SO-091514-RB-TP37-7.5	S-082814-RB-TP38-2.5	S-082814-RB-TP38-4.5	S-082814-RB-TP38-11.0	SL-101804-3	S-082114-NH-GP1-11	S-082114-NH-GP1-FD1	S-082114-NH-GP2-11	S-082114-NH-GP3-7	S-082114-NH-GP4-5
Sample Date:			9/15/2014	9/15/2014	8/28/2014	8/28/2014	8/28/2014	10/18/2004	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(5-5.5) ft BGS	(7.5-8) ft BGS	(2.5-3) ft BGS	(4.5-5) ft BGS	(11-11.5) ft BGS	(7-9) ft BGS	(11-11.5) ft BGS	(11-11.5) ft BGS (Duplicate)	(11-11.5) ft BGS	(7-7.5) ft BGS	(5-5.5) ft BGS
Parameters	**Units**												
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
tert-Butylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	21000	-	-	-	-	-	3.1	0.12 J	0.44 J	1.8	0.0053 U	0.0061 U
Tetrahydrofuran	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	280000	-	-	-	-	-	0.0052 J	0.0082 J	0.12 J	0.048	0.00051 J	0.052
trans-1,2-Dichloroethene	mg/kg	70000	-	-	-	-	-	0.012	0.0093 J	0.14 J	0.05	0.0053 U	0.0061 U
trans-1,3-Dichloropropene	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	1800	-	-	-	-	-	0.083	0.23 J	0.49 J	2.7	0.0053 U	0.0006 J
Trichlorofluoroethane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg		-	-	-	-	-	0.01 U	-	-	-	-	-
Vinyl chloride	mg/kg	88	-	-	-	-	-	0.026	0.0042 J	0.071 UJ	0.024	0.0053 U	0.0061 U
Xylenes (total)	mg/kg	700000	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***											
1,1-Dichloroethene	µg/L	700	-	-	-	-	-	0.5 UJ	-	-	-	-	-
1,2-Dichloroethane	µg/L	500	-	-	-	-	-	0.5 UJ	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200000	-	-	-	-	-	5 UJ	-	-	-	-	-
Benzene	µg/L	500	-	-	-	-	-	0.5 UJ	-	-	-	-	-
Carbon tetrachloride	µg/L	500	-	-	-	-	-	0.5 UJ	-	-	-	-	-
Chlorobenzene	µg/L	100000	-	-	-	-	-	0.5 UJ	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	6000	-	-	-	-	-	0.5 UJ	-	-	-	-	-
Tetrachloroethene	µg/L	700	-	-	-	-	-	5.4 J	-	-	-	-	-
Trichloroethene	µg/L	500	-	-	-	-	-	0.32 J	-	-	-	-	-
Vinyl chloride	µg/L	200	-	-	-	-	-	1 UJ	-	-	-	-	-
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1-Methyl-7-isopropylphenanthrene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
2,4-Dichlorophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	70000	-	-	-	-	-	R	4.1 U	3.6 U	R	0.28 U	3.4 U
2,4-Dinitrophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
2-Chloronaphthalene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
2-Chlorophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
2-Methylnaphthalene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
2-Methylphenol	mg/kg	180000	-	-	-	-	-	R	4.1 U	3.6 U	R	0.28 U	3.4 U
2-Nitroaniline	mg/kg		-	-	-	-	-	4.15 U	-	-	-	-	-
2-Nitrophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
3B-Coprostanol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg		-	-	-	-	-	4.15 U	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	280	-	-	-	-	-	R	25 U	22 U	R	1.7 U	21 U
4-Bromophenyl phenyl ether	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
4-Chloroaniline	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
4-Methylphenol	mg/kg	350000	-	-	-	-	-	R	4.1 U	3.6 U	0.28 J	0.28 U	3.4 U
4-Nitroaniline	mg/kg		-	-	-	-	-	4.15 U	-	-	-	-	-
4-Nitrophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
Acenaphthene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-

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1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil					Sand and Shredder Fill					
Sample Location:			TP-37	TP-37	TP-38	TP-38	TP-38	BH-3	GP-1	GP-1	GP-2	GP-3	GP-4
Location Type:			Test Pit	Test Pit	Test Pit	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole
Location Purpose:			Background	Background	Background	Background	Background						
Sample ID:			SO-091514-RB-TP37-5	SO-091514-RB-TP37-7.5	S-082814-RB-TP38-2.5	S-082814-RB-TP38-4.5	S-082814-RB-TP38-11.0	SL-101804-3	S-082114-NH-GP1-11	S-082114-NH-GP1-FD1	S-082114-NH-GP2-11	S-082114-NH-GP3-7	S-082114-NH-GP4-5
Sample Date:			9/15/2014	9/15/2014	8/28/2014	8/28/2014	8/28/2014	10/18/2004	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(5-5.5) ft BGS	(7.5-8) ft BGS	(2.5-3) ft BGS	(4.5-5) ft BGS	(11-11.5) ft BGS	(7-9) ft BGS	(11-11.5) ft BGS	(11-11.5) ft BGS (Duplicate)	(11-11.5) ft BGS	(7-7.5) ft BGS	(5-5.5) ft BGS
Parameters	**Units**												
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Acenaphthylene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Acetophenone	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Aniline	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Atrazine	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzaldehyde	mg/kg		-	-	-	-	-	0.33 U	-	-	-	-	-
Benzidine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzo(a)pyrene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Benzoic acid	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	9400	-	-	-	-	-	4.6 J	71	79	130	0.28 U	38
Butyl benzylphthalate (BBP)	mg/kg	69000	-	-	-	-	-	1.1 J	19 J	48 J	46	0.28 U	16
Caffeine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Carbazole	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Chrysene	mg/kg	NV	-	-	-	-	-	1.65 U	0.98 J	0.99 J	1.7 J	0.28 U	11
Dibenz(a,h)anthracene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Dibenzofuran	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Diethyl phthalate	mg/kg	2800000	-	-	-	-	-	1.65 U	4.1 U	3.6 U	3.9 U	0.28 U	3.4 U
Dimethyl phthalate	mg/kg	NV	-	-	-	-	-	1.65 U	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	35000	-	-	-	-	-	1.65 U	4.1 U	3.3 J	10	0.28 U	6.0
Fluoranthene	mg/kg	140000	-	-	-	-	-	1.65 U	0.75 J	0.63 J	1.2 J	0.28 U	5.9
Fluorene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Hexachlorobenzene	mg/kg	82	-	-	-	-	-	1.1 J	4.1 U	3.6 U	3.9 U	0.28 U	3.4 U
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	-	30 J	0.49 J	0.41 J	1.2 J	0.28 U	3.4 U
Hexachlorocyclopentadiene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Isophorone	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Naphthalene	mg/kg	70000	-	-	-	-	-	1.65 U	-	-	-	-	-
Nitrobenzene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
N-Nitrosodimethylamine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Pentachlorophenol	mg/kg		-	-	-	-	-	R	-	-	-	-	-
Phenanthrene	mg/kg		-	-	-	-	-	1.65 U	-	-	-	-	-
Phenol	mg/kg	1100000	-	-	-	-	-	R	4.1 U	3.6 U	0.30 J	0.28 U	3.4 U
Pyrene	mg/kg	110000	-	-	-	-	-	1.65 U	1.6 J	1.3 J	1.8 J	0.28 U	6.4
Pyridine	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***											
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	10 U	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	400000	-	-	-	-	-	10 U	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	2000	-	-	-	-	-	10 U	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	130	-	-	-	-	-	10 U	-	-	-	-	-
2-Methylphenol	µg/L	200000	-	-	-	-	-	10 U	-	-	-	-	-
4-Methylphenol	µg/L	200000	-	-	-	-	-	10 U	-	-	-	-	-
Hexachlorobenzene	µg/L	130	-	-	-	-	-	10 U	-	-	-	-	-
Hexachlorobutadiene	µg/L	500	-	-	-	-	-	27	-	-	-	-	-
Hexachloroethane	µg/L	3000	-	-	-	-	-	10 U	-	-	-	-	-
Nitrobenzene	µg/L	2000	-	-	-	-	-	10 U	-	-	-	-	-
Pentachlorophenol	µg/L	100000	-	-	-	-	-	50 U	-	-	-	-	-
Pyridine	µg/L	5000	-	-	-	-	-	10 U	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil					Sand and Shredder Fill					
Sample Location:			TP-37	TP-37	TP-38	TP-38	TP-38	BH-3	GP-1	GP-1	GP-2	GP-3	GP-4
Location Type:			Test Pit	Test Pit	Test Pit	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole
Location Purpose:			Background	Background	Background	Background	Background						
Sample ID:			SO-091514-RB-TP37-5	SO-091514-RB-TP37-7.5	S-082814-RB-TP38-2.5	S-082814-RB-TP38-4.5	S-082814-RB-TP38-11.0	SL-101804-3	S-082114-NH-GP1-11	S-082114-NH-GP1-FD1	S-082114-NH-GP2-11	S-082114-NH-GP3-7	S-082114-NH-GP4-5
Sample Date:			9/15/2014	9/15/2014	8/28/2014	8/28/2014	8/28/2014	10/18/2004	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(5-5.5) ft BGS	(7.5-8) ft BGS	(2.5-3) ft BGS	(4.5-5) ft BGS	(11-11.5) ft BGS	(7-9) ft BGS	(11-11.5) ft BGS	(11-11.5) ft BGS (Duplicate)	(11-11.5) ft BGS	(7-7.5) ft BGS	(5-5.5) ft BGS
Parameters	**Units**												
Metals		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Aluminum	mg/kg	3500000	10700	9930	9810	12100	11000	2090	8530 J	13200 J	9840	10800	10200
Antimony	mg/kg	1400	3.6 UJ	3.5 UJ	3.6 UJ	3.7 UJ	3.5 UJ	15.6 J	14.8 J	12.5 J	61.3 J	3.9 UJ	20.8 J
Arsenic	mg/kg	88	3.7	0.9 J	4.3	3.2 J	4.0	2.1	13.5	17.7	37.9	3.3 J	16.2
Barium	mg/kg	700000	56.8	45.8	52.2	50.5	50.2	43.3	764 J	691	2430	74.0	898
Beryllium	mg/kg	7000	0.18 J	0.20	0.14 J	0.16 J	0.16 J	0.5 U	0.05 J	0.23 U	0.22 U	0.20 U	0.17 J
Cadmium	mg/kg	3500	0.07 J	0.04 J	0.18 U	0.18 U	0.17 U	0.67	28.9 J	42.3 J	54.4	0.20 U	32.0
Calcium	mg/kg		2430 J	2250 J	2010	2250	1970	164000	14900	14300	42000	2230	10500
Chromium	mg/kg	820**	25.1	40.7	19.4	25.2	22.7	5.6	60.0 J	112 J	198	22.4	98.0
Cobalt	mg/kg	1100	4.88	3.89	5.25	7.22	5.21	5 U	13.6	13.6	36.3	6.87	18.3
Copper	mg/kg	140000	11.8	8.6	12.0	15.0	11.4	35.6	286 J	311 J	1180 J	11.7 J	249 J
Flash point (closed cup)	Deg C		-	-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	2500000	13100	9990	13000	14600	12900	1950	43300	44600	82600	16000	57100
Lead	mg/kg	1000 (d)	6.6	1.8	5.5	6.6	3.6	122	**1230**	**1610**	**2310**	5.6	**1280**
Magnesium	mg/kg		3170	2840	3640	4770	3620	2010	4280 J	4710 J	8850 J	3490 J	6570 J
Manganese	mg/kg	160000	263	91.7	258	175	201	23.1	313	398	970	389	589
Mercury	mg/kg	2 (d)	0.026	0.009 J	0.016 J	0.026	0.015 J	0.1 U	0.609 J	**4.63 J**	**3.09**	0.112	0.949
Nickel	mg/kg	70000	22.3	19.1	24.4	32.5	20.7	33.8	67.5 J	85.7	1580	25.8	142
Potassium	mg/kg		606	687	455	501	602	500 U	725	619	1000	672	860
Selenium	mg/kg	18000	1.7 J	1.6 J	3.6 U	1.2 J	1.1 J	0.5 U	2.8 J	1.5 J	1.1 J	3.9 U	4.3 U
Silver	mg/kg	18000	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	1.1	0.6 J	0.8 J	1.5	0.8 U	0.7 J
Sodium	mg/kg		167	141	81.1	99.0	101	500 U	1100	1130	1450	270	1510
Thallium	mg/kg	35	1.8 U	1.8 U	3.6 U	3.7 U	3.5 U	1 U	5.3 U	4.5 U	4.4 U	3.9 U	4.3 U
Vanadium	mg/kg	18000	30.9	45.6	31.9	35.2	36.3	32.9	47.0	41.2	47.6	36.4	41.2
Zinc	mg/kg	1100000	30.9	23.9	29.1	35.8	23.7	95.9	3240	2880	7060	36.0	3840
Metals - TCLP		***TCLP Regulatory Level[2]***											
Arsenic	µg/L	5000	-	-	-	-	-	5 U	-	-	-	-	-
Barium	µg/L	100000	-	-	-	-	-	590	-	-	-	-	-
Cadmium	µg/L	1000	-	-	-	-	-	5 U	-	-	-	-	-
Chromium	µg/L	5000	-	-	-	-	-	11	-	-	-	-	-
Lead	µg/L	5000	-	-	-	-	-	350	-	-	-	-	-
Mercury	µg/L	200	-	-	-	-	-	2 U	-	-	-	-	-
Selenium	µg/L	1000	-	-	-	-	-	5 U	-	-	-	-	-
Silver	µg/L	5000	-	-	-	-	-	15	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	1.6 U	0.21 U	0.18 U	0.20 U	0.014 U	0.17 U
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	1.6 U	0.41 U	0.36 U	0.39 U	0.028 U	0.34 U
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	1.6 U	0.21 U	0.18 U	0.20 U	0.014 U	0.17 U
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	1.6 U	10	7.9	4.0	0.014 U	2.2
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	1.6 U	0.21 U	0.18 U	0.20 U	0.014 U	0.17 U
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	1.6 U	5.0 J	3.4 J	4.7	0.014 U	3.6
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	0.8 U	2.0 U	1.4 U	2.6 J	0.014 U	1.8
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**											
4,4'-DDD	mg/kg	550	-	-	-	-	-	-	0.067 J	0.045 J	0.066	0.0014 U	0.041
4,4'-DDE	mg/kg	390	-	-	-	-	-	-	0.031 U	0.026 U	0.037 U	0.0016 U	0.031 U
4,4'-DDE/DDD	mg/kg		-	-	-	-	-	-	-	-	-	-	-
4,4'-DDT	mg/kg	390	-	-	-	-	-	-	0.16 U	0.15 U	0.2 U	0.0014 U	0.14 U
Aldrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
alpha-BHC	mg/kg	21	-	-	-	-	-	-	0.0021 U	0.009 U	0.0097 U	0.0014 U	0.0028 U
alpha-Chlordane	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Native Soil					Sand and Shredder Fill					
Sample Location:			TP-37	TP-37	TP-38	TP-38	TP-38	BH-3	GP-1	GP-1	GP-2	GP-3	GP-4
Location Type:			Test Pit	Test Pit	Test Pit	Test Pit	Test Pit	Borehole	Borehole	Borehole	Borehole	Borehole	Borehole
Location Purpose:			Background	Background	Background	Background	Background						
Sample ID:			SO-091514-RB-TP37-5	SO-091514-RB-TP37-7.5	S-082814-RB-TP38-2.5	S-082814-RB-TP38-4.5	S-082814-RB-TP38-11.0	SL-101804-3	S-082114-NH-GP1-11	S-082114-NH-GP1-FD1	S-082114-NH-GP2-11	S-082114-NH-GP3-7	S-082114-NH-GP4-5
Sample Date:			9/15/2014	9/15/2014	8/28/2014	8/28/2014	8/28/2014	10/18/2004	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
Sample Depth:			(5-5.5) ft BGS	(7.5-8) ft BGS	(2.5-3) ft BGS	(4.5-5) ft BGS	(11-11.5) ft BGS	(7-9) ft BGS	(11-11.5) ft BGS	(11-11.5) ft BGS (Duplicate)	(11-11.5) ft BGS	(7-7.5) ft BGS	(5-5.5) ft BGS
Parameters	**Units**												
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**											
beta-BHC	mg/kg	73	-	-	-	-	-	-	0.065 U	0.061 U	0.066 U	0.0025 U	0.027 U
delta-BHC	mg/kg	0.21	-	-	-	-	-	-	0.036 U	0.042 U	0.018 U	0.0014 U	0.036 U
Dieldrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan I	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endosulfan sulfate	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endrin	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Endrin aldehyde	mg/kg	NV	-	-	-	-	-	-	0.015 U	0.013 U	0.02 U	0.0025 U	0.007 U
gamma-BHC (lindane)	mg/kg	120	-	-	-	-	-	-	0.016 U	0.015 U	0.0097 U	0.0014 U	0.0075 U
gamma-Chlordane	mg/kg	1800	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	mg/kg	29	-	-	-	-	-	-	0.031 UJ	0.035 UJ	0.035 UJ	0.0014 UJ	0.0018 UJ
Heptachlor epoxide	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Toxaphene	mg/kg		-	-	-	-	-	-	-	-	-	-	-
Pesticides - TCLP		***TCLP Regulatory Level[2]***											
alpha-Chlordane	µg/L	30	-	-	-	-	-	15 U	-	-	-	-	-
Endrin	µg/L	20	-	-	-	-	-	10 U	-	-	-	-	-
gamma-BHC (lindane)	µg/L	400	-	-	-	-	-	200 U	-	-	-	-	-
gamma-Chlordane	µg/L	30	-	-	-	-	-	15 U	-	-	-	-	-
Heptachlor	µg/L	8	-	-	-	-	-	4.0 U	-	-	-	-	-
Methoxychlor	µg/L	10000	-	-	-	-	-	5000 U	-	-	-	-	-
Toxaphene	µg/L	500	-	-	-	-	-	250 U	-	-	-	-	-
Herbicides - TCLP		***TCLP Regulatory Level[2]***											
2,4,5-TP (Silvex)	µg/L	1000	-	-	-	-	-	500 U	-	-	-	-	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	10000	-	-	-	-	-	5000 U	-	-	-	-	-
Miscellaneous													
Asbestos	%		-	-	-	-	-	TR	-	-	-	-	-
General Chemistry		**Soil MTCA Method C Industrial Cleanup Level[1]**											
Cyanide (total)	mg/kg	2200	0.24 U	0.24 U	0.21 U	0.21 U	0.22 U	1.0 U	1.02	0.75	0.96	0.19 U	0.29
Miscellaneous		***Characteristics[2]***											
Flash point (closed cup)	Deg C	<60	-	-	-	-	-	-	-	-	-	-	-
Ignitability	Deg F	<140	-	-	-	-	-	0 U	-	-	-	-	-
pH (soil)	s.u.	12.5	-	-	-	-	-	12.0	-	-	-	-	-
pH, lab	s.u.	12.5	-	-	-	-	-	-	-	-	-	-	-
Reactive sulfide	mg/kg		-	-	-	-	-	10 U	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Sand and Shredder Fill									Sand Fill
Sample Location:			GP-5	GP-5	GP-5	GP-6	GP-7	TP comp(A2)	TP comp(A2)	TP21	TP-24	TP 1,3,8
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Test Pit	Test Pit	Test Pit
Location Purpose:												
Sample ID:			S-082214-NH-GP5-4	S-082214-NH-GP5-10	S-082214-NH-GP5-FD1	S-082114-NH-GP6-5	S-082214-NH-GP7-4	S-9973-111798-GS02	S-9973-111898-GS07	S-9973-111898-GS06	S-082714-NH-TP24-8.5	S-9973-111898-GS03
Sample Date:			8/22/2014	8/22/2014	8/22/2014	8/21/2014	8/22/2014	11/17/1998	11/18/1998	11/18/1998	8/27/2014	11/18/1998
Sample Depth:			(4-4.5) ft BGS	(10-10.5) ft BGS	(10-10.5) ft BGS (Duplicate)	(5-5.5) ft BGS	(4-4.5) ft BGS	(1-8.5) ft BGS	(1-8.5) ft BGS	(0.5-2) ft BGS	(8.5-9) ft BGS	(0.5-8.5) ft BGS
Parameters	**Units**											
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**										
1,1,1,2-Tetrachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
1,1,2,2-Tetrachloroethane	mg/kg		-	-	-	-	-	0.0065 U	R	0.0058 U	-	0.0058 U
1,1,2-Trichloroethane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
1,1-Dichloroethane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
1,1-Dichloroethene	mg/kg	180000	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0065 U	0.0064 U	0.0058 U	0.070 U	0.0058 U
1,1-Dichloropropene	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	4500	0.029 U	0.024 J	0.015 J	0.021 U	0.022 U	-	-	-	0.034 J	-
1,2,4-Trimethylbenzene	mg/kg	35000	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
1,2-Dichloropropane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
1,3,5-Trimethylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg		-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2100000	0.029 U	2.9 U	2.7 U	0.021 U	0.022 U	0.044 J	0.024 J	0.0058 U	2.8 U	0.0058 U
2-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-
2-Hexanone	mg/kg	18000	0.029 U	2.9 U	2.7 U	0.021 U	0.022 U	0.0065 U	0.0041 J	0.0058 U	2.8 U	0.0058 U
2-Phenylbutane (sec-Butylbenzene)	mg/kg		-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/kg		-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	280000	0.029 U	2.9 U	2.7 U	0.021 U	0.022 U	0.0065 U	0.015 J	0.0058 U	2.8 U	0.0058 U
Acetone	mg/kg	3200000	0.053	2.9 U	2.7 U	0.043	0.067	0.2	0.35 J	0.023 U	2.8 U	0.04
Benzene	mg/kg	2400	0.00068 J	0.028 J	0.067 U	0.00043 J	0.00048 J	0.0046 J	0.0064 U	0.0058 U	0.070 U	0.0058 U
Bromobenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
Bromoform	mg/kg	17000	0.0072 U	0.071 UJ	0.067 UJ	0.0051 U	0.0054 U	0.0065 U	0.0064 U	0.0058 U	0.070 U	0.0058 U
Bromomethane (Methyl bromide)	mg/kg		-	-	-	-	-	0.013 U	0.013 U	0.012 U	-	0.012 U
Carbon disulfide	mg/kg	350000	0.0035 J	0.071 U	0.067 U	0.011	0.00057 J	0.0065 U	0.0036 J	0.0058 U	0.015 J	0.0058 U
Carbon tetrachloride	mg/kg	1900	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0065 U	0.0064 U	0.0058 U	0.070 U	0.0058 U
Chlorobenzene	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
Chlorobromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg		-	-	-	-	-	0.013 U	0.013 U	0.012 U	-	0.012 U
Chloroform (Trichloromethane)	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
Chloromethane (Methyl chloride)	mg/kg	NV	0.00041 J	0.071 U	0.067 U	0.0051 U	0.00031 J	0.013 U	0.013 U	0.012 U	0.070 U	0.012 U
cis-1,2-Dichloroethene	mg/kg	7000	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0065 U	0.0064 U	0.0058 U	0.070 U	0.0058 U
cis-1,3-Dichloropropene	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
Cyclohexane	mg/kg		-	-	-	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg		-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	1600	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0065 U	0.027 J	0.0058 U	0.070 U	0.0058 U
Dibromomethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg		-	-	-	-	-	-	-	-	-	-
Ethyl ether	mg/kg		-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	350000	0.0072 U	0.17 J	0.035 J	0.0051 U	0.0054 U	0.0087 J	0.058 J	0.0058 U	0.070 U	0.0038 J
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Iodomethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	mg/kg		-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	mg/kg		0.00021 J	0.14 J	0.016 J	0.0051 U	0.0054 U	-	-	-	0.070 U	-
Methyl acetate	mg/kg		-	-	-	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg		-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg		-	-	-	-	-	-	-	-	-	-
Methylene chloride	mg/kg	21000	0.015 U	0.29 U	0.27 U	0.011 U	0.011 U	0.0096 J	0.02 J	0.012 U	0.28 U	0.009 J
Naphthalene	mg/kg	70000	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene A	mg/kg		-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
o-Xylene	mg/kg		0.0072 U	0.062 J	0.015 J	0.0051 U	0.0054 U	-	-	-	0.070 U	-
Pentachloroethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	700000	0.0072 U	0.025 J	0.015 J	0.0051 U	0.0054 U	0.016 J	0.051 J	0.0058 U	0.070 U	0.0058 U

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Sand and Shredder Fill									Sand Fill
Sample Location:			GP-5	GP-5	GP-5	GP-6	GP-7	TP comp(A2)	TP comp(A2)	TP21	TP-24	TP 1,3,8
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Test Pit	Test Pit	Test Pit
Location Purpose:												
Sample ID:			S-082214-NH-GP5-4	S-082214-NH-GP5-10	S-082214-NH-GP5-FD1	S-082114-NH-GP6-5	S-082214-NH-GP7-4	S-9973-111798-GS02	S-9973-111898-GS07	S-9973-111898-GS06	S-082714-NH-TP24-8.5	S-9973-111898-GS03
Sample Date:			8/22/2014	8/22/2014	8/22/2014	8/21/2014	8/22/2014	11/17/1998	11/18/1998	11/18/1998	8/27/2014	11/18/1998
Sample Depth:			(4-4.5) ft BGS	(10-10.5) ft BGS	(10-10.5) ft BGS (Duplicate)	(5-5.5) ft BGS	(4-4.5) ft BGS	(1-8.5) ft BGS	(1-8.5) ft BGS	(0.5-2) ft BGS	(8.5-9) ft BGS	(0.5-8.5) ft BGS
Parameters	**Units**											
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**										
tert-Butylbenzene	mg/kg		-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	21000	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0066 J	0.017 J	0.0058 U	0.070 U	0.0058 U
Tetrahydrofuran	mg/kg		-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	280000	0.00045 J	0.12 J	0.019 J	0.00034 J	0.00028 J	0.016	0.015 J	0.0058 U	0.011 J	0.0029 J
trans-1,2-Dichloroethene	mg/kg	70000	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.013 J	0.027 J	0.0058 U	0.070 U	0.0058 U
trans-1,3-Dichloropropene	mg/kg		-	-	-	-	-	0.0065 U	0.0064 U	0.0058 U	-	0.0058 U
trans-1,4-Dichloro-2-butene	mg/kg		-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	1800	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.0035 J	0.045 J	0.0058 U	0.070 U	0.0058 U
Trichlorofluoroethane	mg/kg		-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg		-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg		-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	88	0.0072 U	0.071 U	0.067 U	0.0051 U	0.0054 U	0.013 U	0.013 U	0.012 U	0.070 U	0.012 U
Xylenes (total)	mg/kg	700000	-	-	-	-	-	0.017 J	0.033 J	0.0058 U	-	0.0058 U
Volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***										
1,1-Dichloroethene	µg/L	700	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	500	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200000	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	500	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	500	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	100000	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	6000	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	700	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	500	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	200	-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**										
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
1,2-Dichlorobenzene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
1,2-Diphenylhydrazine	mg/kg		-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
1,4-Dichlorobenzene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
1-Methyl-7-isopropylphenanthrene	mg/kg		-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg		-	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2,4,5-Trichlorophenol	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
2,4,6-Trichlorophenol	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2,4-Dichlorophenol	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2,4-Dimethylphenol	mg/kg	70000	0.37 U	3.1 U	0.045 J	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
2,4-Dinitrophenol	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
2,4-Dinitrotoluene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2,6-Dinitrotoluene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2-Chloronaphthalene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2-Chlorophenol	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2-Methylnaphthalene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
2-Methylphenol	mg/kg	180000	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
2-Nitroaniline	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
2-Nitrophenol	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
3,3'-Dichlorobenzidine	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
3B-Coprostanol	mg/kg		-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
4,6-Dinitro-2-methylphenol	mg/kg	280	2.3 U	19 U	2.0 U	20 U	1.8 U	21 U	51 U	0.93 U	1.9 U	9.2 U
4-Bromophenyl phenyl ether	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
4-Chloro-3-methylphenol	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
4-Chloroaniline	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
4-Chlorophenyl phenyl ether	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
4-Methylphenol	mg/kg	350000	0.37 U	3.1 U	0.061 J	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
4-Nitroaniline	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
4-Nitrophenol	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
Acenaphthene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Sand and Shredder Fill									Sand Fill
Sample Location:			GP-5	GP-5	GP-5	GP-6	GP-7	TP comp(A2)	TP comp(A2)	TP21	TP-24	TP 1,3,8
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Test Pit	Test Pit	Test Pit
Location Purpose:												
Sample ID:			S-082214-NH-GP5-4	S-082214-NH-GP5-10	S-082214-NH-GP5-FD1	S-082114-NH-GP6-5	S-082214-NH-GP7-4	S-9973-111798-GS02	S-9973-111898-GS07	S-9973-111898-GS06	S-082714-NH-TP24-8.5	S-9973-111898-GS03
Sample Date:			8/22/2014	8/22/2014	8/22/2014	8/21/2014	8/22/2014	11/17/1998	11/18/1998	11/18/1998	8/27/2014	11/18/1998
Sample Depth:			(4-4.5) ft BGS	(10-10.5) ft BGS	(10-10.5) ft BGS (Duplicate)	(5-5.5) ft BGS	(4-4.5) ft BGS	(1-8.5) ft BGS	(1-8.5) ft BGS	(0.5-2) ft BGS	(8.5-9) ft BGS	(0.5-8.5) ft BGS
Parameters	**Units**											
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**										
Acenaphthylene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Acetophenone	mg/kg		-	-	-	-	-	-	-	-	-	-
Aniline	mg/kg		-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Atrazine	mg/kg		-	-	-	-	-	-	-	-	-	-
Benzaldehyde	mg/kg		-	-	-	-	-	-	-	-	-	-
Benzidine	mg/kg		-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Benzo(a)pyrene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Benzo(b)fluoranthene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Benzo(g,h,i)perylene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Benzo(k)fluoranthene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Benzoic acid	mg/kg		-	-	-	-	-	-	-	-	-	-
Benzyl alcohol	mg/kg		-	-	-	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	mg/kg		-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
bis(2-Chloroethyl)ether	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	9400	0.37 U	75	59	5.2	0.30 U	220	240	0.38 U	1.4	10
Butyl benzylphthalate (BBP)	mg/kg	69000	0.37 U	44 J	4.1 J	3.2 U	0.30 U	35	60	0.38 U	0.17 J	5.2
Caffeine	mg/kg		-	-	-	-	-	-	-	-	-	-
Caprolactam	mg/kg		-	-	-	-	-	-	-	-	-	-
Carbazole	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Chrysene	mg/kg	NV	0.031 J	0.95 J	0.57	0.14 J	0.087 J	8.6 U	22 U	0.38 U	0.13 J	3.8 U
Dibenz(a,h)anthracene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Dibenzofuran	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Diethyl phthalate	mg/kg	2800000	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
Dimethyl phthalate	mg/kg	NV	-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Di-n-butylphthalate (DBP)	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Di-n-octyl phthalate (DnOP)	mg/kg	35000	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.044 J	3.8 U
Fluoranthene	mg/kg	140000	0.057 J	0.53 J	0.52	0.16 J	0.071 J	8.6 U	22 U	0.38 U	0.19 J	3.8 U
Fluorene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Hexachlorobenzene	mg/kg	82	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
Hexachlorobutadiene	mg/kg	1700	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
Hexachlorocyclopentadiene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Hexachloroethane	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Indeno(1,2,3-cd)pyrene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Isophorone	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Naphthalene	mg/kg	70000	-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Nitrobenzene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
N-Nitrosodimethylamine	mg/kg		-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
N-Nitrosodiphenylamine	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Pentachlorophenol	mg/kg		-	-	-	-	-	21 U	51 U	0.93 U	-	9.2 U
Phenanthrene	mg/kg		-	-	-	-	-	8.6 U	22 U	0.38 U	-	3.8 U
Phenol	mg/kg	1100000	0.37 U	3.1 U	0.33 U	3.2 U	0.30 U	8.6 U	22 U	0.38 U	0.31 U	3.8 U
Pyrene	mg/kg	110000	0.051 J	0.91 J	0.70	0.25 J	0.092 J	8.6 U	22 U	0.38 U	0.29 J	3.8 U
Pyridine	mg/kg		-	-	-	-	-	-	-	-	-	-
Semi-volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***										
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	400000	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	2000	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	130	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	µg/L	200000	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	µg/L	200000	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	130	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	500	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	µg/L	3000	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	µg/L	2000	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	µg/L	100000	-	-	-	-	-	-	-	-	-	-
Pyridine	µg/L	5000	-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Sand and Shredder Fill									Sand Fill
Sample Location:			GP-5	GP-5	GP-5	GP-6	GP-7	TP comp(A2)	TP comp(A2)	TP21	TP-24	TP 1,3,8
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Test Pit	Test Pit	Test Pit
Location Purpose:												
Sample ID:			S-082214-NH-GP5-4	S-082214-NH-GP5-10	S-082214-NH-GP5-FD1	S-082114-NH-GP6-5	S-082214-NH-GP7-4	S-9973-111798-GS02	S-9973-111898-GS07	S-9973-111898-GS06	S-082714-NH-TP24-8.5	S-9973-111898-GS03
Sample Date:			8/22/2014	8/22/2014	8/22/2014	8/21/2014	8/22/2014	11/17/1998	11/18/1998	11/18/1998	8/27/2014	11/18/1998
Sample Depth:			(4-4.5) ft BGS	(10-10.5) ft BGS	(10-10.5) ft BGS (Duplicate)	(5-5.5) ft BGS	(4-4.5) ft BGS	(1-8.5) ft BGS	(1-8.5) ft BGS	(0.5-2) ft BGS	(8.5-9) ft BGS	(0.5-8.5) ft BGS
Parameters	**Units**											
Metals		**Soil MTCA Method C Industrial Cleanup Level[1]**										
Aluminum	mg/kg	3500000	11800	8040	7130	9580	8670	9510	8270	12800	8080	10200
Antimony	mg/kg	1400	0.6 J	9.2 J	4.0 J	4.3 UJ	10.6 J	41.6 J	53.7 J	7.2 J	1.6 J	4.5 J
Arsenic	mg/kg	88	7.9 J	8.8	10.0	2.5 J	4.6 J	24.7	30.7	4.9	6.8	5.5
Barium	mg/kg	700000	66.5	437	382	207	29.8	1530	2400	45.3	51.6	361
Beryllium	mg/kg	7000	0.24 J	0.21 U	0.07 J	0.22 U	0.22 U	0.3 U	0.3 U	0.2	0.12 J	0.2 U
Cadmium	mg/kg	3500	1.58	14.8	15.3	4.57	0.34	44.2	57.5	1.2	0.95	9.3
Calcium	mg/kg		6030	5480 J	17300 J	3860	3680	18300	19200	3810	2790	6110
Chromium	mg/kg	820**	26.5	44.3	31.9	35.9	19.5	94.9 J	137 J	25.6 J	18.6	39.1 J
Cobalt	mg/kg	1100	9.91	11.0	10.1	8.99	6.89	15.6	23.0	6.5	6.74	8.7
Copper	mg/kg	140000	85.4 J	450 J	171 J	309 J	32.1 J	515 J	10000 J	39.5	53.1	122
Flash point (closed cup)	Deg C		-	-	-	-	-	-	-	-	-	-
Iron	mg/kg	2500000	27500	29300	31000	21600	15500	57300	71100	20400	14900	27300
Lead	mg/kg	1000 (d)	102	680	624	175	77.4	**2470**	**2690**	34.8	69.9	353
Magnesium	mg/kg		4710 J	3960 J	9900 J	5080 J	3380 J	5790	7510	3220	3300	4050
Manganese	mg/kg	160000	222	393 J	873 J	276	222	460	514	301	244	352
Mercury	mg/kg	2 (d)	0.140	0.377 J	0.263 J	0.104	0.207	1.4 J	1.7 J	0.2 J	0.164	0.3 J
Nickel	mg/kg	70000	45.5	108	122	65.6	15.4	159	143	17.4	18.1	64.4
Potassium	mg/kg		1100	680	605	753	835	598	673	1040	960	825
Selenium	mg/kg	18000	5.4 U	4.3 U	4.4 U	4.3 U	4.3 U	0.7 U	1.9	0.6 U	1.2 J	0.6 U
Silver	mg/kg	18000	1.1 U	0.2 J	0.2 J	1.2	0.9 U	1.0	0.9	0.1 U	0.7 U	0.1
Sodium	mg/kg		1650	508	656	195	1380	737	896	650	546	524
Thallium	mg/kg	35	5.4 U	4.3 U	4.4 U	4.3 U	4.3 U	2.6 U	2.6 U	2.3 U	3.6 U	2.3 U
Vanadium	mg/kg	18000	59.0	30.0	26.3	35.3	48.8	37.7	39.6	54.6	37.3	36.8
Zinc	mg/kg	1100000	433	4180 J	5150	1120	132	7200	7770	116	248	1170
Metals - TCLP		***TCLP Regulatory Level[2]***										
Arsenic	µg/L	5000	-	-	-	-	-	-	-	-	-	-
Barium	µg/L	100000	-	-	-	-	-	-	-	-	-	-
Cadmium	µg/L	1000	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	5000	-	-	-	-	-	-	-	-	-	-
Lead	µg/L	5000	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	200	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	1000	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	5000	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)		**Soil MTCA Method C Industrial Cleanup Level[1]**										
Aroclor-1016 (PCB-1016)	mg/kg		0.019 U	0.016 U	0.017 U	0.016 U	0.015 U	-	-	-	0.016 U	-
Aroclor-1221 (PCB-1221)	mg/kg		0.037 U	0.031 U	0.033 U	0.032 U	0.030 U	-	-	-	0.031 U	-
Aroclor-1232 (PCB-1232)	mg/kg		0.019 U	0.016 U	0.017 U	0.016 U	0.015 U	-	-	-	0.016 U	-
Aroclor-1242 (PCB-1242)	mg/kg		0.035	0.69	0.95 J	0.22	0.025	-	-	-	0.19	-
Aroclor-1248 (PCB-1248)	mg/kg		0.019 U	0.016 U	0.017 U	0.016 U	0.015 U	-	-	-	0.016 U	-
Aroclor-1254 (PCB-1254)	mg/kg	66	0.18	1.3	1.3	0.95	0.091	-	-	-	0.30 J	-
Aroclor-1260 (PCB-1260)	mg/kg	66	0.16	0.50	0.45	0.40 J	0.033	-	-	-	0.15 J	-
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**										
4,4'-DDD	mg/kg	550	0.0014 J	0.061 J	0.8 J	0.018	0.0015 U	-	-	-	0.0021	-
4,4'-DDE	mg/kg	390	0.0019 U	0.02 UJ	0.11 J	0.0049 U	0.0016 U	0.088 J	0.19 J	0.019 U	0.0016 U	0.029 J
4,4'-DDE/DDD	mg/kg		-	-	-	-	-	0.066 J	0.1 J	0.019 U	-	0.025 J
4,4'-DDT	mg/kg	390	0.024 U	0.15 U	0.14 U	0.075 U	0.0081 U	0.09 J	0.086 J	0.019 U	0.036 U	0.018 U
Aldrin	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.0093 U	-	0.018 U
alpha-BHC	mg/kg	21	0.0019 U	0.0031 U	0.0081 U	0.0016 U	0.0015 U	0.052 U	0.02 U	0.0093 U	0.0016 U	0.018 U
alpha-Chlordane	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.093 U	-	0.46 U
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.093 U	-	0.46 U
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.093 U	-	0.46 U
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.093 U	-	0.46 U
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.093 U	-	0.46 U
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	*	*	*	-	*
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	3.9 J*	4.2 J*	0.098 *	-	1 J*

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Sand and Shredder Fill								Sand Fill
Sample Location:			GP-5	GP-5	GP-5	GP-6	GP-7	TP comp(A2)	TP comp(A2)	TP21	TP-24	TP 1,3,8
Location Type:			Borehole	Borehole	Borehole	Borehole	Borehole	Test Pit	Test Pit	Test Pit	Test Pit	Test Pit
Location Purpose:												
Sample ID:			S-082214-NH-GP5-4	S-082214-NH-GP5-10	S-082214-NH-GP5-FD1	S-082114-NH-GP6-5	S-082214-NH-GP7-4	S-9973-111798-GS02	S-9973-111898-GS07	S-9973-111898-GS06	S-082714-NH-TP24-8.5	S-9973-111898-GS03
Sample Date:			8/22/2014	8/22/2014	8/22/2014	8/21/2014	8/22/2014	11/17/1998	11/18/1998	11/18/1998	8/27/2014	11/18/1998
Sample Depth:			(4-4.5) ft BGS	(10-10.5) ft BGS	(10-10.5) ft BGS (Duplicate)	(5-5.5) ft BGS	(4-4.5) ft BGS	(1-8.5) ft BGS	(1-8.5) ft BGS	(0.5-2) ft BGS	(8.5-9) ft BGS	(0.5-8.5) ft BGS
Parameters	**Units**											
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**										
beta-BHC	mg/kg	73	0.0025 U	0.012 U	0.037 U	0.0065 U	0.0025 U	0.052 U	0.02 U	0.0093 U	0.0026 U	0.018 U
delta-BHC	mg/kg	0.21	0.0019 U	0.026 U	0.0081 U	0.0016 U	0.0015 U	0.052 U	0.02 U	0.0093 U	0.0016 U	0.018 U
Dieldrin	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Endosulfan I	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.0093 U	-	0.018 U
Endosulfan II	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Endosulfan sulfate	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Endrin	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Endrin aldehyde	mg/kg	NV	0.0025 U	0.0037 U	0.011 U	0.0025 U	0.0025 U	0.052 U	0.02 U	0.019 U	0.0025 U	0.018 U
gamma-BHC (lindane)	mg/kg	120	0.0019 U	0.0051 U	0.0081 U	0.0016 U	0.0015 U	0.052 U	0.02 U	0.0093 U	0.0016 U	0.018 U
gamma-Chlordane	mg/kg	1800	-	-	-	-	-	0.052 U	0.02 U	0.019 U	-	0.018 U
Heptachlor	mg/kg	29	0.0019 UJ	0.0031 UJ	0.0081 UJ	0.0016 UJ	0.0015 UJ	0.052 U	0.02 U	0.0093 U	0.0016 UJ	0.021 J
Heptachlor epoxide	mg/kg		-	-	-	-	-	0.052 U	0.02 U	0.0093 U	-	0.018 U
Methoxychlor	mg/kg		-	-	-	-	-	0.052 U	0.1 U	0.093 U	-	0.092 U
Toxaphene	mg/kg		-	-	-	-	-	0.91 U	0.51 U	0.19 U	-	0.46 U
Pesticides - TCLP		***TCLP Regulatory Level[2]***										
alpha-Chlordane	µg/L	30	-	-	-	-	-	-	-	-	-	-
Endrin	µg/L	20	-	-	-	-	-	-	-	-	-	-
gamma-BHC (lindane)	µg/L	400	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	µg/L	30	-	-	-	-	-	-	-	-	-	-
Heptachlor	µg/L	8	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	µg/L	8	-	-	-	-	-	-	-	-	-	-
Methoxychlor	µg/L	10000	-	-	-	-	-	-	-	-	-	-
Toxaphene	µg/L	500	-	-	-	-	-	-	-	-	-	-
Herbicides - TCLP		***TCLP Regulatory Level[2]***										
2,4,5-TP (Silvex)	µg/L	1000	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	10000	-	-	-	-	-	-	-	-	-	-
Miscellaneous												
Asbestos	%		-	-	-	-	-	-	-	-	-	-
General Chemistry		**Soil MTCA Method C Industrial Cleanup Level[1]**										
Cyanide (total)	mg/kg	2200	0.29 U	0.19 J	0.13 J	0.09 J	0.23 U	1.1 J	1.2	0.58 U	0.23 U	0.58 U
Miscellaneous		***Characteristics[2]***										
Flash point (closed cup)	Deg C	<60	-	-	-	-	-	-	-	-	-	-
Ignitability	Deg F	<140	-	-	-	-	-	-	-	-	-	-
pH (soil)	s.u.	12.5	-	-	-	-	-	-	-	-	-	-
pH, lab	s.u.	12.5	-	-	-	-	-	-	-	-	-	-
Reactive sulfide	mg/kg		-	-	-	-	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Soil (Fill) Below Cobbles	Soil (Fill) Below Debris	Surficial Soil (FILL) Above Lime Waste Fill	Surficial Soil Above Sand and Shredder Residue Fill		
Sample Location:			TP17	SL-1	TP comp(A1)	TP21	ECOLOGY	ECOLOGY
Location Type:			Test Pit	Soil Sample	Test Pit	Test Pit	Other	Other
Location Purpose:								
Sample ID:			S-9973-111898-GS04	S-9973-111998-GS08	S-9973-111998-GS09	S-9973-111898-GS05	OXYREDS	OXYWHITE
Sample Date:			11/18/1998	11/19/1998	11/19/1998	11/18/1998	12/2/2002	12/2/2002
Sample Depth:			(3-3.5) ft BGS	(0.5-1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	-	-
Parameters	**Units**							
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**						
1,1,1,2-Tetrachloroethane	mg/kg		-	-	-	-	0.18 U	0.30 U
1,1,1-Trichloroethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,1,2,2-Tetrachloroethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,1,2-Trichloroethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,1-Dichloroethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,1-Dichloroethene	mg/kg	180000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,1-Dichloropropene	mg/kg		-	-	-	-	0.18 U	0.30 U
1,2,3-Trichlorobenzene	mg/kg		-	-	-	-	0.92 U	1.5 U
1,2,3-Trichloropropane	mg/kg		-	-	-	-	0.18 U	0.30 U
1,2,4-Trichlorobenzene	mg/kg	4500	-	-	-	-	0.37 U	0.60 U
1,2,4-Trimethylbenzene	mg/kg	35000	-	-	-	-	0.18 U	0.30 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg		-	-	-	-	0.18 U	0.30 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg		-	-	-	-	0.18 U	0.30 U
1,2-Dichlorobenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
1,2-Dichloroethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,2-Dichloropropane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
1,3,5-Trimethylbenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
1,3-Dichlorobenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
1,3-Dichloropropane	mg/kg		-	-	-	-	0.18 U	0.30 U
1,4-Dichlorobenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
2,2-Dichloropropane	mg/kg		-	-	-	-	0.18 U	0.30 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	2100000	0.022	0.0065 U	0.0065 U	0.0063 U	0.37 U	0.60 U
2-Chlorotoluene	mg/kg		-	-	-	-	0.18 U	0.30 U
2-Hexanone	mg/kg	18000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.37 U	0.60 U
2-Phenylbutane (sec-Butylbenzene)	mg/kg		-	-	-	-	0.18 U	0.30 U
4-Chlorotoluene	mg/kg		-	-	-	-	0.18 U	0.30 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	280000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.37 U	0.60 U
Acetone	mg/kg	3200000	0.1	0.026 U	0.026 U	0.025 U	2.4 J	5.1 J
Benzene	mg/kg	2400	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Bromobenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
Bromodichloromethane	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Bromoform	mg/kg	17000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Bromomethane (Methyl bromide)	mg/kg		0.012 U	0.013 U	0.013 U	0.013 U	0.18 U	0.30 U
Carbon disulfide	mg/kg	350000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.37 U	0.60 U
Carbon tetrachloride	mg/kg	1900	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Chlorobenzene	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Chlorobromomethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Chloroethane	mg/kg		0.012 U	0.013 U	0.013 U	0.013 U	0.18 U	0.30 U
Chloroform (Trichloromethane)	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Chloromethane (Methyl chloride)	mg/kg	NV	0.012 U	0.013 U	0.013 U	0.013 U	0.18 U	0.30 U
cis-1,2-Dichloroethene	mg/kg	7000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.03 J	1.7
cis-1,3-Dichloropropene	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Cyclohexane	mg/kg		-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg		-	-	-	-	0.18 U	0.30 U
Dibromochloromethane	mg/kg	1600	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Dibromomethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Dichlorodifluoromethane (CFC-12)	mg/kg		-	-	-	-	0.18 U	0.30 U
Ethyl ether	mg/kg		-	-	-	-	0.18 U	0.30 U
Ethylbenzene	mg/kg	350000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
Hexachlorobutadiene	mg/kg	1700	-	-	-	-	0.18 U	0.30 U
Hexachloroethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Iodomethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Isopropyl benzene	mg/kg		-	-	-	-	0.18 U	0.30 U
m&p-Xylenes	mg/kg		-	-	-	-	0.37 U	0.60 U
Methyl acetate	mg/kg		-	-	-	-	-	-
Methyl cyclohexane	mg/kg		-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg		-	-	-	-	1.1 J	1.4 J
Methylene chloride	mg/kg	21000	0.017	0.013 U	0.013 U	0.014 J	0.51 UJ	0.66 UJ
Naphthalene	mg/kg	70000	-	-	-	-	0.92 U	1.5 U
N-Butylbenzene A	mg/kg		-	-	-	-	0.18 U	0.30 U
N-Propylbenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
o-Xylene	mg/kg		-	-	-	-	0.18 U	0.30 U
Pentachloroethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Styrene	mg/kg	700000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.23 UJ	0.30 U

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Soil (Fill) Below Cobbles	Soil (Fill) Below Debris	Surficial Soil (FILL) Above Lime Waste Fill	Surficial Soil Above Sand and Shredder Residue Fill		
Sample Location:			TP17	SL-1	TP comp(A1)	TP21	ECOLOGY Other	ECOLOGY Other
Location Type:			Test Pit	Soil Sample	Test Pit	Test Pit		
Location Purpose:								
Sample ID:			S-9973-111898-GS04	S-9973-111998-GS08	S-9973-111998-GS09	S-9973-111898-GS05	OXYREDS	OXYWHITE
Sample Date:			11/18/1998	11/19/1998	11/19/1998	11/18/1998	12/2/2002	12/2/2002
Sample Depth:			(3-3.5) ft BGS	(0.5-1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	-	-
Parameters	**Units**							
Volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**						
tert-Butylbenzene	mg/kg		-	-	-	-	0.18 U	0.30 U
Tetrachloroethene	mg/kg	21000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	1.6
Tetrahydrofuran	mg/kg		-	-	-	-	0.26	0.39
Toluene	mg/kg	280000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.21	0.30 U
trans-1,2-Dichloroethene	mg/kg	70000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.16 J
trans-1,3-Dichloropropene	mg/kg		0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	0.30 U
trans-1,4-Dichloro-2-butene	mg/kg		-	-	-	-	0.18 U	0.30 U
Trichloroethene	mg/kg	1800	0.0061 U	0.0065 U	0.0065 U	0.0063 U	0.18 U	7.9
Trichlorofluoroethane	mg/kg		-	-	-	-	0.18 U	0.30 U
Trichlorofluoromethane (CFC-11)	mg/kg		-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	mg/kg		-	-	-	-	0.18 UJ	0.30 UJ
Vinyl chloride	mg/kg	88	0.012 U	0.013 U	0.013 U	0.013 U	0.18 U	0.30 U
Xylenes (total)	mg/kg	700000	0.0061 U	0.0065 U	0.0065 U	0.0063 U	-	-
Volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***						
1,1-Dichloroethene	µg/L	700	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	500	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200000	-	-	-	-	-	-
Benzene	µg/L	500	-	-	-	-	-	-
Carbon tetrachloride	µg/L	500	-	-	-	-	-	-
Chlorobenzene	µg/L	100000	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	6000	-	-	-	-	-	-
Tetrachloroethene	µg/L	700	-	-	-	-	-	-
Trichloroethene	µg/L	500	-	-	-	-	-	-
Vinyl chloride	µg/L	200	-	-	-	-	-	-
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**						
1,2,4-Trichlorobenzene	mg/kg	4500	0.4 U	0.43 U	0.43 U	4.2 U	0.026	0.56 U
1,2-Dichlorobenzene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
1,2-Diphenylhydrazine	mg/kg		-	-	-	-	0.013 U	0.56 U
1,3-Dichlorobenzene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
1,4-Dichlorobenzene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
1-Methyl-7-isopropylphenanthrene	mg/kg		-	-	-	-	0.155	0.56 U
1-Methylnaphthalene	mg/kg		-	-	-	-	0.054	0.56 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 U	1.12 U
2,4,5-Trichlorophenol	mg/kg		0.97 U	1 U	1 U	10 U	0.026 U	1.12 U
2,4,6-Trichlorophenol	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 U	1.12 U
2,4-Dichlorophenol	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 U	1.12 U
2,4-Dimethylphenol	mg/kg	70000	0.4 U	0.43 U	0.43 U	4.2 U	0.16 J	2.07 J
2,4-Dinitrophenol	mg/kg		0.97 U	1 U	1 U	10 U	1.04 U	44.8 U
2,4-Dinitrotoluene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 U	1.12 U
2,6-Dinitrotoluene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 U	1.12 U
2-Chloronaphthalene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
2-Chlorophenol	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
2-Methylnaphthalene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.111	0.56 U
2-Methylphenol	mg/kg	180000	0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
2-Nitroaniline	mg/kg		0.97 U	1 U	1 U	10 U	0.026 U	1.12 U
2-Nitrophenol	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.052 U	2.24 U
3,3'-Dichlorobenzidine	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.518 U	REJ
3B-Coprostanol	mg/kg		-	-	-	-	0.259 U	11.2 U
3-Nitroaniline	mg/kg		0.97 U	1 U	1 U	10 U	0.052 UJ	2.24 UJ
4,6-Dinitro-2-methylphenol	mg/kg	280	0.97 U	1 U	1 U	10 U	0.259 U	11.2 U
4-Bromophenyl phenyl ether	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
4-Chloro-3-methylphenol	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
4-Chloroaniline	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 UJ	0.56 UJ
4-Chlorophenyl phenyl ether	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
4-Methylphenol	mg/kg	350000	0.4 U	0.43 U	0.43 U	4.2 U	0.773	0.56 U
4-Nitroaniline	mg/kg		0.97 U	1 U	1 U	10 U	0.052 UJ	2.24 UJ
4-Nitrophenol	mg/kg		0.97 U	1 U	1 U	10 U	0.052 U	2.24 U
Acenaphthene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.022	0.56 U

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Soil (Fill) Below Cobbles	Soil (Fill) Below Debris	Surficial Soil (FILL) Above Lime Waste Fill	Surficial Soil Above Sand and Shredder Residue Fill		
Sample Location:			TP17	SL-1	TP comp(A1)	TP21	ECOLOGY Other	ECOLOGY Other
Location Type:			Test Pit	Soil Sample	Test Pit	Test Pit		
Location Purpose:								
Sample ID:			S-9973-111898-GS04	S-9973-111998-GS08	S-9973-111998-GS09	S-9973-111898-GS05	OXYREDS	OXYWHITE
Sample Date:			11/18/1998	11/19/1998	11/19/1998	11/18/1998	12/2/2002	12/2/2002
Sample Depth:			(3-3.5) ft BGS	(0.5-1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	-	-
Parameters	**Units**							
Semi-volatile Organic Compounds		**Soil MTCA Method C Industrial Cleanup Level[1]**						
Acenaphthylene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.015	0.56 U
Acetophenone	mg/kg		-	-	-	-	-	-
Aniline	mg/kg		-	-	-	-	0.026 U	1.12 U
Anthracene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.044	0.56 U
Atrazine	mg/kg		-	-	-	-	-	-
Benzaldehyde	mg/kg		-	-	-	-	-	-
Benzidine	mg/kg		-	-	-	-	2.59 U	REJ
Benzo(a)anthracene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.28	0.56 U
Benzo(a)pyrene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.827	0.56 U
Benzo(b)fluoranthene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.925	0.56 U
Benzo(g,h,i)perylene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.55	1.12 U
Benzo(k)fluoranthene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.546	0.56 U
Benzoic acid	mg/kg		-	-	-	-	0.821	22.4 U
Benzyl alcohol	mg/kg		-	-	-	-	0.026 U	2.47
Biphenyl (1,1-Biphenyl)	mg/kg		-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
bis(2-Chloroethyl)ether	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	9400	3.2	0.43 U	0.52	89	9.54 J	2.77
Butyl benzylphthalate (BBP)	mg/kg	69000	1.2	0.43 U	0.43 U	4.2 U	16.6 J	0.56 U
Caffeine	mg/kg		-	-	-	-	0.013 U	0.56 U
Caprolactam	mg/kg		-	-	-	-	-	-
Carbazole	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.05	0.56 U
Chrysene	mg/kg	NV	0.45	0.43 U	0.22 J	4.2 U	0.788	0.56 U
Dibenz(a,h)anthracene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.183	1.12 U
Dibenzofuran	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.024	0.56 U
Diethyl phthalate	mg/kg	2800000	0.4 U	0.43 U	0.43 U	4.2 U	0.017	0.56 U
Dimethyl phthalate	mg/kg	NV	0.4 U	0.43 U	0.43 U	4.2 U	0.044	0.56 U
Di-n-butylphthalate (DBP)	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.978	0.56 U
Di-n-octyl phthalate (DnOP)	mg/kg	35000	0.4 U	0.43 U	0.43 U	4.2 U	0.236	0.56 U
Fluoranthene	mg/kg	140000	0.46	0.43 U	0.43 U	2.3 J	0.559	0.56 U
Fluorene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.031	0.56 U
Hexachlorobenzene	mg/kg	82	0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
Hexachlorobutadiene	mg/kg	1700	0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
Hexachlorocyclopentadiene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.026 UJ	1.12 UJ
Hexachloroethane	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
Indeno(1,2,3-cd)pyrene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.363	1.12 U
Isophorone	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
Naphthalene	mg/kg	70000	0.4 U	0.43 U	0.43 U	4.2 U	0.097	0.56 U
Nitrobenzene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
N-Nitrosodimethylamine	mg/kg		-	-	-	-	0.129 U	5.6 U
N-Nitrosodi-n-propylamine	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.013 U	0.56 U
N-Nitrosodiphenylamine	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.044 J	0.56 UJ
Pentachlorophenol	mg/kg		0.97 U	1 U	1 U	10 U	0.183	5.6 U
Phenanthrene	mg/kg		0.4 U	0.43 U	0.43 U	4.2 U	0.348	0.56 U
Phenol	mg/kg	1100000	0.4 U	0.43 U	0.43 U	4.2 U	0.364	3.75
Pyrene	mg/kg	110000	0.56	0.43 U	0.43 U	2.1 J	0.695	0.24 J
Pyridine	mg/kg		-	-	-	-	0.518 U	22.4 U
Semi-volatile Organic Compounds - TCLP		***TCLP Regulatory Level[2]***						
1,4-Dichlorobenzene	µg/L	7500	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	400000	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	2000	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	130	-	-	-	-	-	-
2-Methylphenol	µg/L	200000	-	-	-	-	-	-
4-Methylphenol	µg/L	200000	-	-	-	-	-	-
Hexachlorobenzene	µg/L	130	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	500	-	-	-	-	-	-
Hexachloroethane	µg/L	3000	-	-	-	-	-	-
Nitrobenzene	µg/L	2000	-	-	-	-	-	-
Pentachlorophenol	µg/L	100000	-	-	-	-	-	-
Pyridine	µg/L	5000	-	-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:			Soil (Fill) Below Cobbles	Soil (Fill) Below Debris	Surficial Soil (FILL) Above Lime Waste Fill	Surficial Soil Above Sand and Shredder Residue Fill	ECOLOGY Other	ECOLOGY Other
Sample Location:			TP17	SL-1	TP comp(A1)	TP21		
Location Type:			Test Pit	Soil Sample	Test Pit	Test Pit		
Location Purpose:								
Sample ID:			S-9973-111898-GS04	S-9973-111998-GS08	S-9973-111998-GS09	S-9973-111898-GS05	OXYREDS	OXYWHITE
Sample Date:			11/18/1998	11/19/1998	11/19/1998	11/18/1998	12/2/2002	12/2/2002
Sample Depth:			(3-3.5) ft BGS	(0.5-1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	-	-
Parameters	**Units**							
Metals		**Soil MTCA Method C Industrial Cleanup Level[1]**						
Aluminum	mg/kg	3500000	8980	18200	16100	9770	-	-
Antimony	mg/kg	1400	70.5 J	129 J	7.9 J	329 J	6.98	4.40
Arsenic	mg/kg	88	**422**	**1180**	28.8	**103**	33.7	32.7
Barium	mg/kg	700000	82.6	94.4	238	496	-	-
Beryllium	mg/kg	7000	0.2	0.6	0.3 U	0.3	0.26	0.5 U
Cadmium	mg/kg	3500	2.3	4.1	4.5	63.0	12.8	1.28
Calcium	mg/kg		6010	4800	5450	7720	-	-
Chromium	mg/kg	820**	25.5 J	56.9 J	51.0 J	**849 J**	168	8.35
Cobalt	mg/kg	1100	10.4	40.1	13.1	37.8	-	-
Copper	mg/kg	140000	102	1170	144	1660	353	27.4
Flash point (closed cup)	Deg C		-	-	-	-	-	-
Iron	mg/kg	2500000	23100	38300	41000	387000	-	-
Lead	mg/kg	1000 (d)	106	375	152	**6030**	672	54.3
Magnesium	mg/kg		3180	4230	3680	2520	-	-
Manganese	mg/kg	160000	316	1280	2950	3070	-	-
Mercury	mg/kg	2 (d)	0.1 J	0.1 J	0.5 J	**17.6 J**	0.621	0.175
Nickel	mg/kg	70000	30.4	49.2	45.8	622	86.6	32.8
Potassium	mg/kg		659	1820	1360	542	-	-
Selenium	mg/kg	18000	0.6 U	0.6 U	0.7 U	0.6 U	0.5 U	1.0
Silver	mg/kg	18000	0.1	1.4	0.4	4.7	0.43	0.11
Sodium	mg/kg		555	461	598	651	-	-
Thallium	mg/kg	35	2.4 U	2.6 U	2.6 U	4.7	0.1 U	0.1 U
Vanadium	mg/kg	18000	49.8	66.0	61.5	71.8	-	-
Zinc	mg/kg	1100000	660	3320	671	13900	2800	213
Metals - TCLP		***TCLP Regulatory Level[2]***						
Arsenic	µg/L	5000	-	-	-	-	-	-
Barium	µg/L	100000	-	-	-	-	-	-
Cadmium	µg/L	1000	-	-	-	-	-	-
Chromium	µg/L	5000	-	-	-	-	-	-
Lead	µg/L	5000	-	-	-	-	-	-
Mercury	µg/L	200	-	-	-	-	-	-
Selenium	µg/L	1000	-	-	-	-	-	-
Silver	µg/L	5000	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)		**Soil MTCA Method C Industrial Cleanup Level[1]**						
Aroclor-1016 (PCB-1016)	mg/kg		-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg		-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg		-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg		-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg		-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	66	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	66	-	-	-	-	-	-
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**						
4,4'-DDD	mg/kg	550	-	-	-	-	-	-
4,4'-DDE	mg/kg	390	0.0081 J	0.021 U	0.021 U	0.2 J	-	-
4,4'-DDE/DDD	mg/kg		0.0094 J	0.021 U	0.021 U	0.14 J	-	-
4,4'-DDT	mg/kg	390	0.019 U	0.021 U	0.021 U	0.19 J	-	-
Aldrin	mg/kg		0.0097 U	0.01 U	0.01 U	0.05 U	-	-
alpha-BHC	mg/kg	21	0.0097 U	0.01 U	0.01 U	0.05 U	-	-
alpha-Chlordane	mg/kg		0.019 U	0.021 U	0.021 U	0.05 U	-	-
Aroclor-1016 (PCB-1016)	mg/kg		0.097 U	0.1 U	0.1 U	0.88 U	-	-
Aroclor-1221 (PCB-1221)	mg/kg		0.097 U	0.1 U	0.1 U	0.88 U	-	-
Aroclor-1232 (PCB-1232)	mg/kg		0.097 U	0.1 U	0.1 U	0.88 U	-	-
Aroclor-1242 (PCB-1242)	mg/kg		0.097 U	0.1 U	0.1 U	0.88 U	-	-
Aroclor-1248 (PCB-1248)	mg/kg		0.097 U	0.1 U	0.1 U	0.88 U	-	-
Aroclor-1254 (PCB-1254)	mg/kg	66	*	*	*	*	-	-
Aroclor-1260 (PCB-1260)	mg/kg	66	0.33 *	0.22 J*	0.37 *	7.6 J*	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Comment:		Soil (Fill) Below Cobbles	Soil (Fill) Below Debris	Surficial Soil (FILL) Above Lime Waste Fill	Surficial Soil Above Sand and Shredder Residue Fill	ECOLOGY Other	ECOLOGY Other
Sample Location:		TP17	SL-1	TP comp(A1)	TP21		
Location Type:		Test Pit	Soil Sample	Test Pit	Test Pit		
Location Purpose:							
Sample ID:		S-9973-111898-GS04	S-9973-111998-GS08	S-9973-111998-GS09	S-9973-111898-GS05	OXYREDS	OXYWHITE
Sample Date:		11/18/1998	11/19/1998	11/19/1998	11/18/1998	12/2/2002	12/2/2002
Sample Depth:		(3-3.5) ft BGS	(0.5-1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	-	-
Parameters	**Units**						
Pesticides		**Soil MTCA Method C Industrial Cleanup Level[1]**					
beta-BHC	mg/kg	73	0.0097 U	0.01 U	0.01 U	0.033 J	-
delta-BHC	mg/kg	0.21	0.0097 U	0.01 U	0.01 U	0.05 U	-
Dieldrin	mg/kg		0.019 U	0.021 U	0.021 U	0.05 U	-
Endosulfan I	mg/kg		0.0097 U	0.01 U	0.01 U	0.05 U	-
Endosulfan II	mg/kg		0.019 U	0.021 U	0.021 U	0.05 U	-
Endosulfan sulfate	mg/kg		0.019 U	0.021 U	0.021 U	0.05 U	-
Endrin	mg/kg		0.019 U	0.021 U	0.021 U	0.05 U	-
Endrin aldehyde	mg/kg	NV	0.019 U	0.021 U	0.021 U	0.05 U	-
gamma-BHC (lindane)	mg/kg	120	0.0097 U	0.01 U	0.01 U	0.05 U	-
gamma-Chlordane	mg/kg	1800	0.019 U	0.021 U	0.021 U	0.05 U	-
Heptachlor	mg/kg	29	0.0097 U	0.01 U	0.01 U	0.05 U	-
Heptachlor epoxide	mg/kg		0.0097 U	0.01 U	0.01 U	0.05 U	-
Methoxychlor	mg/kg		0.097 U	0.1 U	0.1 U	0.1 U	-
Toxaphene	mg/kg		0.19 U	0.21 U	0.21 U	0.88 U	-
Pesticides - TCLP		***TCLP Regulatory Level[2]***					
alpha-Chlordane	µg/L	30	-	-	-	-	-
Endrin	µg/L	20	-	-	-	-	-
gamma-BHC (lindane)	µg/L	400	-	-	-	-	-
gamma-Chlordane	µg/L	30	-	-	-	-	-
Heptachlor	µg/L	8	-	-	-	-	-
Heptachlor epoxide	µg/L	8	-	-	-	-	-
Methoxychlor	µg/L	10000	-	-	-	-	-
Toxaphene	µg/L	500	-	-	-	-	-
Herbicides - TCLP		***TCLP Regulatory Level[2]***					
2,4,5-TP (Silvex)	µg/L	1000	-	-	-	-	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	10000	-	-	-	-	-
Miscellaneous							
Asbestos	%		-	-	-	-	-
General Chemistry		**Soil MTCA Method C Industrial Cleanup Level[1]**					
Cyanide (total)	mg/kg	2200	0.61 U	0.65 U	0.65 U	2.3	-
Miscellaneous		***Characteristics[2]***					
Flash point (closed cup)	Deg C	<60	-	-	-	-	-
Ignitability	Deg F	<140	-	-	-	-	-
pH (soil)	s.u.	12.5	-	-	-	-	-
pH, lab	s.u.	12.5	-	-	-	-	-
Reactive sulfide	mg/kg		-	-	-	-	-

Table 4.1

Summary of Soil Analytical Data
1913 Marine View Drive
Tacoma, Washington

Notes:

[1]	Preliminary Cleanup Levels for soil established consistent with MTCA Method C Cleanup Levels for Industrial Land are from Washington State Department of Ecology, Cleanup Levels and Risk Calculation (CLARC) database, (detected parameters).
[2]	TCLP regulatory levels are from 40 CFR 261.24 Toxicity characteristic, Table 1 —Maximum Concentration of Contaminants for the Toxicity Characteristic, as amended by 71 FR 40259, July 14, 2006; and WAC 173-303-090 Dangerous waste characteristics, Maximum Concentration of Contaminants for the Toxicity Characteristic, per 70.105, 70.105D RCW effective 10/31/20.
	TCLP - Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.
ft BGS	feet below ground surface.
mg/kg	milligrams per kilogram.
µg/L	micrograms per liter.
Deg C	Degrees Celsius.
Deg F	Degrees Fahrenheit.
s.u.	Standard pH unit.
%	Percent.
39.0	Concentration detected above the cleanup level.
-	Not applicable.
NV	No published value.
J	Estimated concentration.
ND or U	Not detected at the associated concentration.
UJ	Not detected; associated concentration is estimated.
R or REJ	Rejected.
TR	Trace amount detected at less than 0.25%.
**	Value for Chromium VI. The value for Chromium III is 5,300,000 (5.30E+06).
(d)	MTCA Method A (default) industrial value shown because no value is available for MTCA Method C.

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1A	GM-B-1A	GM-B-1A	GM-B-1A
Sample ID:			GM-B-1	GM-B-1 (Duplicate)	GM-B-1	GW-9973-113098-GS03	GW-9973-011199-GS03	G-081314-RB-GMB1-005	GW-061024-RN-B1	GW-061024-RN-DUP	GW-9973-113098-GS02	GW-9973-011199-GS02	G-081314-RB-GMB1A-006	GW-061024-RN-B1A
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/10/2024	6/10/2024 (Duplicate)	11/30/1998	1/11/1999	8/13/2014	6/10/2024
Parameters	**Units**	**Criteria[1]**												
Volatile Organic Compounds														
1,1,1,2-Tetrachloroethane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,1,1-Trichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1,2,2-Tetrachloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1,2-Trichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1-Dichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1-Dichloroethene	µg/L	4000	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
1,1-Dichloropropene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,2,3-Trichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,2,3-Trichloropropane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,2,4-Trichlorobenzene	µg/L	0.037	-	-	-	-	-	10 U	2.0 U	2.0 U	-	-	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	NV	-	-	-	-	-	-	2.0 U	2.1	-	-	-	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L		-	-	-	-	-	-	10 U	10 U	-	-	-	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L		-	-	-	-	-	-	0.010 U	0.010 U	-	-	-	0.010 U
1,2-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,2-Dichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,2-Dichloropropane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
1,3,5-Trimethylbenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,3-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,3-Dichloropropane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
1,4-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
2,2-Dichloropropane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	NV	-	-	-	5.0 U	5.0 U	100 U	10 U	10 U	5.0 U	5.0 U	20 U	10 U
2-Chlorotoluene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
2-Hexanone	µg/L	NV	-	-	-	5.0 U	5.0 U	100 U	10 U	10 U	5.0 U	5.0 U	20 U	10 U
2-Phenylbutane (sec-Butylbenzene)	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
4-Chlorotoluene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	NV	-	-	-	5.0 U	5.0 U	100 U	10 U	10 U	5.0 U	5.0 U	20 U	10 U
Acetone	µg/L	NV	-	-	-	20 U	50 U	100 U	25 U	25 U	20 U	5.0 U	20 U	25 U
Acrylonitrile	µg/L		-	-	-	-	-	-	10 U	10 U	-	-	-	10 U
Benzene	µg/L	1.6	-	-	-	5.6	5.0	5.5	2.8	4.5	5.0 U	5.0 U	0.50 U	2.0 U
Bromobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Bromodichloromethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
Bromoform	µg/L	12	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Bromomethane (Methyl bromide)	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 U	10 U	10 U	-	2.0 U
Carbon disulfide	µg/L	NV	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Carbon tetrachloride	µg/L	0.35	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Chlorobenzene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
Chlorobromomethane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Chloroethane	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 U	10 U	10 U	-	2.0 U
Chloroform (Trichloromethane)	µg/L		2 U	2 U	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
Chloromethane (Methyl chloride)	µg/L	NV	-	-	-	10 U	10 U	2.5 U	2.0 U	2.0 U	10 U	10 U	0.50 U	2.0 U
cis-1,2-Dichloroethene	µg/L	NV	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
cis-1,3-Dichloropropene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
Cymene (p-Isopropyltoluene)	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Dibromochloromethane	µg/L	2.2	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Dibromomethane	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Ethylbenzene	µg/L	21	-	-	-	5.0 U	5.0 U	0.25 J	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Hexachlorobutadiene	µg/L	0.01	-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Isopropyl benzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
m&p-Xylenes	µg/L		-	-	-	-	-	2.6	-	-	-	-	0.50 U	-
Methyl tert butyl ether (MTBE)	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Methylene chloride	µg/L	100	-	-	-	10 U	10 U	10 U	5.0 U	5.0 U	10 U	10 U	2.0 U	5.0 U
Naphthalene	µg/L	4940	-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
N-Butylbenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
N-Propylbenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
o-Xylene	µg/L		-	-	-	-	-	3.5	-	-	-	-	0.50 U	-
Styrene	µg/L	NV	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
tert-Butylbenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Tetrachloroethene	µg/L	2.9	2 U	2 U	1 U	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Toluene	µg/L	102	-	-	-	5.0 U	5.0 U	0.85 J	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
trans-1,2-Dichloroethene	µg/L	1000	-	-	-	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
trans-1,3-Dichloropropene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	2.0 U	5.0 U	5.0 U	-	2.0 U
Trichloroethene	µg/L	0.7	2 U	2 U	1 U	5.0 U	5.0 U	2.5 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L		-	-	-	-	-	-	2.0 U	2.0 U	-	-	-	2.0 U
Vinyl chloride	µg/L	0.18	-	-	-	10 U	10 U	2.5 UJ	0.20 U	0.20 U	10 U	10 U	0.50 U	0.20 U
Xylenes (total)	µg/L	106	-	-	-	10	7.2	-	3.9 J	6.5 J	5.0 U	5.0 U	-	2.0 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1A	GM-B-1A	GM-B-1A	GM-B-1A
Sample ID:			GM-B-1	GM-B-1 (Duplicate)	GM-B-1	GW-9973-113098-GS03	GW-9973-011199-GS03	G-081314-RB-GMB1-005	GW-061024-RN-B1	GW-061024-RN-DUP	GW-9973-113098-GS02	GW-9973-011199-GS02	G-081314-RB-GMB1A-006	GW-061024-RN-B1A
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/10/2024	6/10/2024 (Duplicate)	11/30/1998	1/11/1999	8/13/2014	6/10/2024
Parameters	**Units**	**Criteria[1]**												
Semi-volatile Organic Compounds														
1,2,4-Trichlorobenzene	µg/L	0.037	-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
1,2-Dichlorobenzene	µg/L		-	-	-	6 U	6 U	-	2.0 U	2.0 UJ	6 U	6 U	-	2.0 U
1,3-Dichlorobenzene	µg/L		-	-	-	6 U	6 U	-	2.0 U	2.0 UJ	6 U	6 U	-	2.0 U
1,4-Dichlorobenzene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	-	10 U	10 U	-	-	-	10 U	10 U	-	-
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
2,3,4,6-Tetrachlorophenol	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
2,4,5-Trichlorophenol	µg/L		-	-	-	25 U	25 U	-	2.0 U	2.0 UJ	25 U	25 U	-	2.0 U
2,4,6-Trichlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2,4-Dichlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2,4-Dimethylphenol	µg/L	97	-	-	-	7.3 J	6.0 J	20 U	5.9 J	2.0 UJ	10 U	10 U	3.9 U	2.0 U
2,4-Dinitrophenol	µg/L		-	-	-	25 U	25 U	-	10 U	10 UJ	25 U	25 U	-	10 U
2,4-Dinitrotoluene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2,6-Dichlorophenol	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
2,6-Dinitrotoluene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2-Chloronaphthalene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2-Chlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2-Methylnaphthalene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
2-Methylphenol	µg/L	NV	-	-	-	10 U	10 U	2.5 U	2.0 U	2.0 UJ	10 U	10 U	0.49 U	2.0 U
2-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	2.0 U	2.0 UJ	25 U	25 U	-	2.0 U
2-Nitrophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
3&4-Methylphenol	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
3,3'-Dichlorobenzidine	µg/L		-	-	-	20 U	20 U	-	2.0 U	2.0 UJ	20 U	20 U	-	2.0 U
3-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	5.0 U	5.0 UJ	25 U	25 U	-	5.0 U
4,6-Dinitro-2-methylphenol	µg/L	7	-	-	-	25 U	25 U	10 U	2.0 U	2.0 UJ	25 U	25 U	2.0 U	2.0 U
4-Bromophenyl phenyl ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
4-Chloro-3-methylphenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
4-Chloroaniline	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
4-Chlorophenyl phenyl ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
4-Methylphenol	µg/L	NV	-	-	-	10 U	10 U	1.4 J	-	-	10 U	10 U	0.49 U	-
4-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	2.0 U	2.0 UJ	25 U	25 U	-	2.0 U
4-Nitrophenol	µg/L		-	-	-	25 U	25 U	-	2.0 U	2.0 UJ	25 U	25 U	-	2.0 U
Acenaphthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Acenaphthylene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Aniline	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
Anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Azobenzene	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
Benzo(a)anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Benzo(a)pyrene	µg/L		-	-	-	1 U	1 U	-	2.0 U	2.0 UJ	1 U	1 U	-	2.0 U
Benzo(b)fluoranthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Benzo(g,h,i)perylene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Benzo(k)fluoranthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Benzoic acid	µg/L		-	-	-	-	-	-	10 U	10 UJ	-	-	-	10 U
Benzyl alcohol	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
bis(2-Chloroethoxy)methane	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
bis(2-Chloroethyl)ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	0.046	-	-	-	**3.4 J**	**39**	5.0 U	**13 J**	2.0 UJ	**17**	**20**	0.97 U	2.0 U
Butyl benzylphthalate (BBP)	µg/L	0.013	-	-	-	10 U	10 U	1.0 U	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Carbazole	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Chrysene	µg/L	0.016	-	-	-	10 U	10 U	1.0 U	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Dibenz(a,h)anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Dibenzofuran	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Diethyl phthalate	µg/L	200	-	-	-	23	17	1.8	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Dimethyl phthalate	µg/L	600	-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Di-n-butylphthalate (DBP)	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Di-n-octyl phthalate (DnOP)	µg/L	NV	-	-	-	10 U	10 U	1.0 U	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Fluoranthene	µg/L	6	-	-	-	10 U	10 U	0.14 J	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Fluorene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Hexachlorobenzene	µg/L	0.000005	-	-	-	1 U	1 U	-	2.0 U	2.0 UJ	1 U	1 U	-	2.0 U
Hexachlorobutadiene	µg/L	0.01	-	-	-	4 U	4 U	1.0 U	2.0 U	2.0 UJ	4 U	4 U	0.20 U	2.0 U
Hexachlorocyclopentadiene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Hexachloroethane	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Isophorone	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Naphthalene	µg/L	4940	-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Nitrobenzene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
N-Nitrosodimethylamine	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
N-Nitrosodi-n-propylamine	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1A	GM-B-1A	GM-B-1A	GM-B-1A
Sample ID:			GM-B-1	GM-B-1 (Duplicate)	GM-B-1	GW-9973-113098-GS03	GW-9973-011199-GS03	G-081314-RB-GMB1-005	GW-061024-RN-B1	GW-061024-RN-DUP	GW-9973-113098-GS02	GW-9973-011199-GS02	G-081314-RB-GMB1A-006	GW-061024-RN-B1A
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/10/2024	6/10/2024 (Duplicate)	11/30/1998	1/11/1999	8/13/2014	6/10/2024
Parameters	**Units**	**Criteria[1]**												
Semi-volatile Organic Compounds														
N-Nitrosodiphenylamine	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Pentachlorophenol	µg/L		-	-	-	20 U	20 U	-	5.0 U	5.0 UJ	20 U	20 U	-	5.0 U
Phenanthrene	µg/L		-	-	-	10 U	10 U	-	2.0 U	2.0 UJ	10 U	10 U	-	2.0 U
Phenol	µg/L	70000	-	-	-	10 U	10 U	2.5 U	2.0 U	2.0 UJ	10 U	10 U	0.49 U	2.0 U
Pyrene	µg/L	8	-	-	-	10 U	10 U	0.32 J	2.0 U	2.0 UJ	10 U	10 U	0.20 U	2.0 U
Pyridine	µg/L		-	-	-	-	-	-	2.0 U	2.0 UJ	-	-	-	2.0 U
Semi-volatile Organic Compounds - SIM														
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	0.016	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	4940	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	8	-	-	-	-	-	-	-	-	-	-	-	-
Metals														
Aluminum	µg/L	NV	-	-	-	643	2280	2130 J	1500	1400	26200	3780	2000	630
Antimony	µg/L	90	-	-	-	5 U	5 U	3.03 J	3.4	3.0	5 U	5 U	0.050 U	1.0 U
Arsenic	µg/L	5	-	-	-	**37.0**	**38.8**	**50.7 J**	**61**	**60**	5 U	5 U	0.4 J	1.0 U
Barium	µg/L	NV	-	-	-	1640	1660	1530 J	1900	2000	126	44.4	33.9	27
Beryllium	µg/L	273	-	-	-	2 U	2 U	0.226 J	1.0 U	1.0 U	2 U	2 U	0.058	1.0 U
Cadmium	µg/L	7.9	-	-	-	5 U	7.6	4.85 J	4.6	4.3	5 U	5 U	0.016 J	1.0 U
Calcium	µg/L		-	-	-	26400	29700	28000 J	35000	36000	50700	40700	42900	45000
Chromium	µg/L	4.13***	-	-	-	**12.0**	**19.5**	**19.5 J**	**16**	**14**	**22.0**	**11.2**	2.91	2.0 U
Cobalt	µg/L	NV	-	-	-	5 U	7.2	6.05 J	6.7	6.6	5.0	5 U	1.15	1.0 U
Copper	µg/L	3.1	-	-	-	**15.0**	**50.8**	**33.7 J**	**31 J**	**28 J**	**54.0**	**14.0**	**5.77**	2.0 U
Iron	µg/L	NV	-	-	-	16000	26400	39000 J	19000	17000	25000	29900	18200	8700
Lead	µg/L	8.1	-	-	-	**63.0**	**421**	**253 J**	**290**	**270**	19.0 U	7.6 U	0.744	1.0 U
Magnesium	µg/L		-	-	-	50600	55600	53900 J	64000	62000	15000	12000	13900	14000
Manganese	µg/L	100	-	-	-	**128**	**198**	**164 J**	**120 J-**	**110 J-**	**398**	**296**	**219**	**220 J-**
Mercury	µg/L	0.025	-	-	-	0.2 U	**0.3**	**0.0894 J**	0.20 U	0.20 U	0.2 U	0.2 U	0.00162	0.20 U
Nickel	µg/L	8.2	-	-	-	**92.0**	**110**	**119 J**	**150**	**150**	**17.0**	7.7	3.49	2.0 U
Potassium	µg/L		-	-	-	46000	44000	38000 J	36000	36000	6600	5100	5050	5200
Selenium	µg/L	71	-	-	-	5 U	5 U	16.4 J	4.0 U	4.0 U	5 U	5 U	1.0 U	4.0 U
Silver	µg/L	0.91	-	-	-	1 U	1 U	0.051 UJ	1.0 U	1.0 U	1 U	1 U	0.020 U	**34**
Sodium	µg/L		-	-	-	399000	414000	401000 J	470000 J+	470000 J+	215000	15000	14300	13000 J+
Thallium	µg/L	0.223	-	-	-	5 U	5 U	0.026 J	1.0 U	1.0 U	5 U	5 U	0.007 J	1.0 U
Vanadium	µg/L	NV	-	-	-	9.6	13.5	45.2 J	10	11	63.0	15.4	7.57	5.3
Zinc	µg/L	81	-	-	-	**120**	**670**	**441 J**	**520**	**470**	69.0	50 U	20.4	3.9
Polychlorinated Biphenyls (PCBs)														
Aroclor-1016 (PCB-1016)	µg/L		-	-	-	-	-	0.026 UJ	0.10 U	0.10 U	-	-	0.0050 UJ	0.10 U
Aroclor-1221 (PCB-1221)	µg/L		-	-	-	-	-	0.051 UJ	0.10 U	0.10 U	-	-	0.010 UJ	0.10 U
Aroclor-1232 (PCB-1232)	µg/L		-	-	-	-	-	0.026 UJ	0.10 U	0.10 U	-	-	0.0050 UJ	0.10 U
Aroclor-1242 (PCB-1242)	µg/L		-	-	-	-	-	0.080 J	0.10 U	0.10 U	-	-	0.0017 J	0.10 U
Aroclor-1248 (PCB-1248)	µg/L		-	-	-	-	-	0.026 UJ	0.10 U	0.10 U	-	-	0.0050 UJ	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	-	-	-	-	**0.67**	**0.10**	0.10 U	-	-	**0.0021 J**	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	NV	-	-	-	-	-	0.13	0.10 U	0.10 U	-	-	0.0050 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L		-	-	-	-	-	-	0.10 U	0.10 U	-	-	-	0.10 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1	GM-B-1A	GM-B-1A	GM-B-1A	GM-B-1A
Sample ID:			GM-B-1	GM-B-1 (Duplicate)	GM-B-1	GW-9973-113098-GS03	GW-9973-011199-GS03	G-081314-RB-GMB1-005	GW-061024-RN-B1	GW-061024-RN-DUP	GW-9973-113098-GS02	GW-9973-011199-GS02	G-081314-RB-GMB1A-006	GW-061024-RN-B1A
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/10/2024	6/10/2024 (Duplicate)	11/30/1998	1/11/1999	8/13/2014	6/10/2024
Parameters	**Units**	**Criteria[1]**												
Pesticides														
4,4'-DDD	µg/L	0.0000079	-	-	-	-	-	0.0094 U	0.050 UJ	0.050 UJ	-	-	0.001 U	0.050 UJ
4,4'-DDE	µg/L	0.00000088	-	-	-	0.05 U	**0.057 J**	0.0051 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
4,4'-DDE/DDD	µg/L		-	-	-	0.05 U	0.05 U	-	-	-	0.05 U	0.05 U	-	-
4,4'-DDT	µg/L	0.0000012	-	-	-	0.05 U	0.05 U	0.0051 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
Aldrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
alpha-BHC	µg/L	0.000048	-	-	-	0.05 U	0.05 U	0.0051 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
alpha-Chlordane	µg/L		-	-	-	-	-	-	0.050 UJ	0.050 UJ	-	-	-	0.050 UJ
Aroclor-1016 (PCB-1016)	µg/L		-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1221 (PCB-1221)	µg/L		-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1232 (PCB-1232)	µg/L		-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1242 (PCB-1242)	µg/L		-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1248 (PCB-1248)	µg/L		-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
Aroclor-1260 (PCB-1260)	µg/L	NV	-	-	-	1.0 U	1.0 U	-	-	-	1.0 U	1.0 U	-	-
beta-BHC	µg/L	0.0014	-	-	-	0.05 U	0.05 U	0.0051 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
Chlordane	µg/L		-	-	-	0.05 U	0.05 U	-	-	-	0.05 U	0.05 U	-	-
delta-BHC	µg/L	NV	-	-	-	0.05 U	0.05 U	0.017 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
Dieldrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan I	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan II	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan sulfate	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endrin aldehyde	µg/L	0.035	-	-	-	0.05 U	**0.21 J**	0.0092 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
Endrin ketone	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
gamma-BHC (lindane)	µg/L	0.16	-	-	-	0.05 U	0.05 U	0.0056 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
gamma-Chlordane	µg/L	NV	-	-	-	-	-	-	0.054 J-	0.050 UJ	-	-	-	0.050 UJ
Heptachlor	µg/L	0.00000034	-	-	-	0.05 U	0.05 U	0.016 U	0.050 UJ	0.050 UJ	0.05 U	0.05 U	0.001 U	0.050 UJ
Heptachlor epoxide	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	0.019 U	-	-	-	-	0.001 U	-
Methoxychlor	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Toxaphene	µg/L		-	-	-	1.0 U	1.0 U	-	2.0 UJ	2.0 UJ	1.0 U	1.0 U	-	2.0 UJ
General Chemistry														
Cyanide (total)	µg/L	1	-	-	-	10 U	10 U	**4.5 J**	50 U	50 U	10 U	10 U	4.7 U	50 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A
Sample ID:			GM-B-2	GM-B-2 (Duplicate)	GM-B-2	GW-9973-120198-GS06	GW-9973-011299-GS06	G-081214-RB-GMB2-003	GW-061024-RN-B2	GW-9973-120198-GS05	GW-9973-120198-GS07	GW-9973-011199-GS05	GW-9973-011199-GS07	G-081214-RB-FD-002
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	12/1/1998	1/12/1999	8/12/2014	6/10/2024	12/1/1998	12/1/1998 (Duplicate)	1/11/1999	1/11/1999 (Duplicate)	8/12/2014 (Duplicate)
Parameters	**Units**	**Criteria[1]**												
Volatile Organic Compounds														
1,1,1,2-Tetrachloroethane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,1,1-Trichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,1,2,2-Tetrachloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,1,2-Trichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,1-Dichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,1-Dichloroethene	µg/L	4000	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
1,1-Dichloropropene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,2,3-Trichloropropane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/L	0.037	-	-	-	-	-	2.0 U	2.0 U	-	-	-	-	2.0 U
1,2,4-Trimethylbenzene	µg/L	NV	-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/L		-	-	-	-	-	-	10 U	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	µg/L		-	-	-	-	-	-	0.010 U	-	-	-	-	-
1,2-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,2-Dichloroethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,2-Dichloropropane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
1,3,5-Trimethylbenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,3-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,3-Dichloropropane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
1,4-Dichlorobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2,2-Dichloropropane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	NV	-	-	-	5.0 U	5.0 U	20 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U
2-Chlorotoluene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2-Hexanone	µg/L	NV	-	-	-	5.0 U	5.0 U	20 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U
2-Phenylbutane (sec-Butylbenzene)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
4-Chlorotoluene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	NV	-	-	-	5.0 U	5.0 U	20 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U
Acetone	µg/L	NV	-	-	-	20 U	5.0 U	20 U	25 U	18 J	20 U	5.0 U	5.0 U	20 U
Acrylonitrile	µg/L		-	-	-	-	-	-	10 U	-	-	-	-	-
Benzene	µg/L	1.6	-	-	-	**7.1**	**7.2**	**2.1**	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Bromobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Bromodichloromethane	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
Bromoform	µg/L	12	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Bromomethane (Methyl bromide)	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Carbon disulfide	µg/L	NV	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Carbon tetrachloride	µg/L	0.35	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Chlorobenzene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
Chlorobromomethane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Chloroethane	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Chloroform (Trichloromethane)	µg/L		2 U	2 U	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
Chloromethane (Methyl chloride)	µg/L	NV	-	-	-	10 U	10	0.50 U	2.0 U	10 U	10 U	10 U	10 U	0.50 U
cis-1,2-Dichloroethene	µg/L	NV	-	-	-	5.0 U	5.0 U	0.20 J	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
cis-1,3-Dichloropropene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
Cymene (p-Isopropyltoluene)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Dibromochloromethane	µg/L	2.2	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Dibromomethane	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Ethylbenzene	µg/L	21	-	-	-	11	11	3.1	4.1	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Hexachlorobutadiene	µg/L	0.01	-	-	-	-	-	-	2.0 U	-	-	-	-	-
Isopropyl benzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
m&p-Xylenes	µg/L		-	-	-	-	-	1.3	-	-	-	-	-	0.50 U
Methyl tert butyl ether (MTBE)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Methylene chloride	µg/L	100	-	-	-	10 U	10 U	2.0 U	5.0 U	10 U	10 U	10 U	10 U	2.0 U
Naphthalene	µg/L	4940	-	-	-	-	-	-	2.5	-	-	-	-	-
N-Butylbenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
N-Propylbenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
o-Xylene	µg/L		-	-	-	-	-	0.83	-	-	-	-	-	0.50 U
Styrene	µg/L	NV	-	-	-	6.7	4.7 J	0.67	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
tert-Butylbenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Tetrachloroethene	µg/L	2.9	-	-	1 U	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Toluene	µg/L	102	-	-	-	38	38	9.8	10	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
trans-1,2-Dichloroethene	µg/L	1000	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
trans-1,3-Dichloropropene	µg/L		-	-	-	5.0 U	5.0 U	-	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	-
Trichloroethene	µg/L	0.7	2 U	**2.8**	1 U	5.0 U	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.50 U
Trichlorofluoromethane (CFC-11)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Vinyl chloride	µg/L	0.18	-	-	-	10 U	10 U	**0.25 J**	**0.20**	10 U	10 U	10 U	10 U	0.50 U
Xylenes (total)	µg/L	106	-	-	-	6.5	6.8	-	4.6	5.0 U	5.0 U	5.0 U	5.0 U	-

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A
Sample ID:			GM-B-2	GM-B-2 (Duplicate)	GM-B-2	GW-9973-120198-GS06	GW-9973-011299-GS06	G-081214-RB-GMB2-003	GW-061024-RN-B2	GW-9973-120198-GS05	GW-9973-120198-GS07	GW-9973-011199-GS05	GW-9973-011199-GS07	G-081214-RB-FD-002
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	12/1/1998	1/12/1999	8/12/2014	6/10/2024	12/1/1998	12/1/1998 (Duplicate)	1/11/1999	1/11/1999 (Duplicate)	8/12/2014 (Duplicate)
Parameters	**Units**	**Criteria[1]**												
Semi-volatile Organic Compounds														
1,2,4-Trichlorobenzene	µg/L	0.037	-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
1,2-Dichlorobenzene	µg/L		-	-	-	6 U	6 U	-	2.0 U	6 U	6 U	6 U	6 U	-
1,3-Dichlorobenzene	µg/L		-	-	-	6 U	6 U	-	2.0 U	6 U	6 U	6 U	6 U	-
1,4-Dichlorobenzene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	-	10 U	10 U	-	-	10 U	10 U	10 U	10 U	-
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2,3,4,6-Tetrachlorophenol	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L		-	-	-	25 U	25 U	-	2.0 U	25 U	25 U	25 U	25 U	-
2,4,6-Trichlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2,4-Dichlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2,4-Dimethylphenol	µg/L	97	-	-	-	36	38	12	9.1	10 U	10 U	10 U	10 U	3.8 U
2,4-Dinitrophenol	µg/L		-	-	-	25 U	25 U	-	10 U	25 U	25 U	25 U	25 U	-
2,4-Dinitrotoluene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2,6-Dichlorophenol	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
2,6-Dinitrotoluene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2-Chloronaphthalene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2-Chlorophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2-Methylnaphthalene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
2-Methylphenol	µg/L	NV	-	-	-	10 U	10 U	0.60	2.0 U	10 U	10 U	10 U	10 U	0.48 U
2-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	2.0 U	25 U	25 U	25 U	25 U	-
2-Nitrophenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
3&4-Methylphenol	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
3,3'-Dichlorobenzidine	µg/L		-	-	-	20 U	20 U	-	2.0 U	20 U	20 U	20 U	20 U	-
3-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	5.0 U	25 U	25 U	25 U	25 U	-
4,6-Dinitro-2-methylphenol	µg/L	7	-	-	-	25 U	25 U	9.5 U	2.0 U	25 U	25 U	25 U	25 U	1.9 U
4-Bromophenyl phenyl ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
4-Chloro-3-methylphenol	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
4-Chloroaniline	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
4-Chlorophenyl phenyl ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
4-Methylphenol	µg/L	NV	-	-	-	10 U	10 U	0.48 U	-	10 U	10 U	10 U	10 U	0.48 U
4-Nitroaniline	µg/L		-	-	-	25 U	25 U	-	2.0 U	25 U	25 U	25 U	25 U	-
4-Nitrophenol	µg/L		-	-	-	25 U	25 U	-	2.0 U	25 U	25 U	25 U	25 U	-
Acenaphthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Acenaphthylene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Aniline	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Azobenzene	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Benzo(a)anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Benzo(a)pyrene	µg/L		-	-	-	1 U	1 U	-	2.0 U	1 U	1 U	1 U	1 U	-
Benzo(b)fluoranthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Benzo(g,h,i)perylene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Benzo(k)fluoranthene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Benzoic acid	µg/L		-	-	-	-	-	-	10 U	-	-	-	-	-
Benzyl alcohol	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
bis(2-Chloroethoxy)methane	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
bis(2-Chloroethyl)ether	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	0.046	-	-	-	6 U	**3.6 J**	**1.9 J**	**4.3**	**11**	**13**	**14**	**18**	**5.3 J**
Butyl benzylphthalate (BBP)	µg/L	0.013	-	-	-	10 U	10 U	0.19 U	2.0 U	10 U	10 U	10 U	10 U	0.19 U
Carbazole	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Chrysene	µg/L	0.016	-	-	-	10 U	10 U	0.19 U	2.0 U	10 U	10 U	10 U	10 U	0.19 U
Dibenz(a,h)anthracene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Dibenzofuran	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Diethyl phthalate	µg/L	200	-	-	-	15	33	0.95 U	2.0 U	10 U	10 U	10 U	10 U	0.19 U
Dimethyl phthalate	µg/L	600	-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Di-n-butylphthalate (DBP)	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Di-n-octyl phthalate (DnOP)	µg/L	NV	-	-	-	10 U	10 U	0.19 U	2.0 U	10 U	10 U	10 U	10 U	0.19 U
Fluoranthene	µg/L	6	-	-	-	10 U	10 U	0.16 J	2.0 U	10 U	10 U	10 U	10 U	0.028 J
Fluorene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	1 U	1 U	-	2.0 U	1 U	1 U	1 U	1 U	-
Hexachlorobutadiene	µg/L	0.01	-	-	-	4 U	4 U	0.19 U	2.0 U	4 U	4 U	4 U	4 U	0.19 U
Hexachlorocyclopentadiene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Hexachloroethane	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Isophorone	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Naphthalene	µg/L	4940	-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Nitrobenzene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
N-Nitrosodimethylamine	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
N-Nitrosodi-n-propylamine	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A
Sample ID:			GM-B-2	GM-B-2 (Duplicate)	GM-B-2	GW-9973-120198-GS06	GW-9973-011299-GS06	G-081214-RB-GMB2-003	GW-061024-RN-B2	GW-9973-120198-GS05	GW-9973-120198-GS07	GW-9973-011199-GS05	GW-9973-011199-GS07	G-081214-RB-FD-002
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	12/1/1998	1/12/1999	8/12/2014	6/10/2024	12/1/1998	12/1/1998 (Duplicate)	1/11/1999	1/11/1999 (Duplicate)	8/12/2014 (Duplicate)
Parameters	**Units**	**Criteria[1]**												
Semi-volatile Organic Compounds														
N-Nitrosodiphenylamine	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Pentachlorophenol	µg/L		-	-	-	20 U	20 U	-	5.0 U	20 U	20 U	20 U	20 U	-
Phenanthrene	µg/L		-	-	-	10 U	10 U	-	2.0 U	10 U	10 U	10 U	10 U	-
Phenol	µg/L	70000	-	-	-	10 U	10 U	0.48 U	2.0 U	10 U	10 U	10 U	10 U	0.48 U
Pyrene	µg/L	8	-	-	-	10 U	10 U	0.19 J	2.0 U	10 U	10 U	10 U	10 U	0.029 J
Pyridine	µg/L		-	-	-	-	-	-	2.0 U	-	-	-	-	-
Semi-volatile Organic Compounds - SIM														
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	0.016	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	4940	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	8	-	-	-	-	-	-	-	-	-	-	-	-
Metals														
Aluminum	µg/L	NV	-	-	-	100 U	161	148	280	22100	22700	4460	4620	1370
Antimony	µg/L	90	-	-	-	5 U	5 U	0.374	1.0 U	5 U	5 U	5 U	5 U	0.120
Arsenic	µg/L	5	-	-	-	5 U	**17.4**	**9.5**	**15**	**12.0**	**14.0**	5 U	5 U	3.5
Barium	µg/L	NV	-	-	-	49.0 U	4290	2430	2600	130	131	50.9	49.3	18.4
Beryllium	µg/L	273	-	-	-	2 U	2 U	0.028	1.0 U	2 U	2 U	2 U	2 U	0.058
Cadmium	µg/L	7.9	-	-	-	5 U	5 U	0.724	1.3	5 U	5 U	5 U	5 U	0.168
Calcium	µg/L		-	-	-	26200	129000	81300	73000	20400	19800	15400	15400	13900
Chromium	µg/L	4.13***	-	-	-	5 U	5 U	2.38	2.7	**113**	**108**	**22.6**	**21.9**	**7.83**
Cobalt	µg/L	NV	-	-	-	5 U	6.9	5.64	8.3	7.6	7.1	5 U	5 U	0.957
Copper	µg/L	3.1	-	-	-	5 U	**8.2**	**6.17**	**9.1 J**	**66.0**	**59.0**	**13.3**	**13.0**	**6.64**
Iron	µg/L	NV	-	-	-	50 U	24800	44900	29000	42400	39400	19900	19900	17300
Lead	µg/L	8.1	-	-	-	3 U	**62.7**	**42.8**	**76**	**96.0**	**92.0**	**24.2**	**24.4**	8.10
Magnesium	µg/L		-	-	-	2450	23200	28300	21000	15000	14300	11400	11400	11400
Manganese	µg/L	100	-	-	-	5 U	**143**	**228**	**290 J-**	**636**	**606**	**417**	**416**	**375**
Mercury	µg/L	0.025	-	-	-	0.2 U	0.2 U	0.0166	0.20 U	**0.2**	**0.3**	0.2 U	0.2 U	0.00326
Nickel	µg/L	8.2	-	-	-	5 U	**51.7**	**43.5**	**59**	**34.0**	**33.0**	**8.7**	**8.7**	4.45
Potassium	µg/L		-	-	-	1400	14000	17300	11000	4300	4100	3100	3200	3190
Selenium	µg/L	71	-	-	-	5 U	5 U	4.5	4.0 U	5 U	5 U	5 U	5 U	1.0 U
Silver	µg/L	0.91	-	-	-	1 U	1 U	0.026 U	**28**	1 U	1 U	1 U	1 U	0.020 U
Sodium	µg/L		-	-	-	42000	166000	185000	130000 J+	12000	12000	11000	11000	9520
Thallium	µg/L	0.223	-	-	-	5 U	5 U	0.020 U	1.0 U	5 U	5 U	5 U	5 U	0.008 J
Vanadium	µg/L	NV	-	-	-	5 U	5 U	1.37	2.0 U	96.0	92.0	17.6	17.3	7.08
Zinc	µg/L	81	-	-	-	50 U	**333**	**348**	**910**	**251**	**249**	74.1	**81.7**	46.7
Polychlorinated Biphenyls (PCBs)														
Aroclor-1016 (PCB-1016)	µg/L		-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-	0.0050 UJ
Aroclor-1221 (PCB-1221)	µg/L		-	-	-	-	-	0.010 UJ	0.10 U	-	-	-	-	0.010 UJ
Aroclor-1232 (PCB-1232)	µg/L		-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-	0.0050 UJ
Aroclor-1242 (PCB-1242)	µg/L		-	-	-	-	-	0.029 J	0.10 U	-	-	-	-	0.0045 J
Aroclor-1248 (PCB-1248)	µg/L		-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-	0.0050 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	-	-	-	-	**0.037**	0.10 U	-	-	-	-	**0.027**
Aroclor-1260 (PCB-1260)	µg/L	NV	-	-	-	-	-	0.028	0.10 U	-	-	-	-	0.022
Aroclor-1268 (PCB-1268)	µg/L		-	-	-	-	-	-	0.10 U	-	-	-	-	-

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A	GM-B-2A
Sample ID:			GM-B-2	GM-B-2 (Duplicate)	GM-B-2	GW-9973-120198-GS06	GW-9973-011299-GS06	G-081214-RB-GMB2-003	GW-061024-RN-B2	GW-9973-120198-GS05	GW-9973-120198-GS07	GW-9973-011199-GS05	GW-9973-011199-GS07	G-081214-RB-FD-002
Sample Date:			9/26/1984	9/26/1984 (Duplicate)	9/16/1988	12/1/1998	1/12/1999	8/12/2014	6/10/2024	12/1/1998	12/1/1998 (Duplicate)	1/11/1999	1/11/1999 (Duplicate)	8/12/2014 (Duplicate)
Parameters	**Units**	**Criteria[1]**												
Pesticides														
4,4'-DDD	µg/L	0.0000079	-	-	-	-	-	0.005 U	0.050 UJ	-	-	-	-	0.0028 U
4,4'-DDE	µg/L	0.00000088	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.001 U
4,4'-DDE/DDD	µg/L		-	-	-	0.05 U	0.05 U	-	-	0.05 U	0.05 U	0.05 U	0.05 U	-
4,4'-DDT	µg/L	0.0000012	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.001 U
Aldrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
alpha-BHC	µg/L	0.000048	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.001 U
alpha-Chlordane	µg/L		-	-	-	-	-	-	0.050 UJ	-	-	-	-	-
Aroclor-1016 (PCB-1016)	µg/L		-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1221 (PCB-1221)	µg/L		-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1232 (PCB-1232)	µg/L		-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1242 (PCB-1242)	µg/L		-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1248 (PCB-1248)	µg/L		-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
Aroclor-1260 (PCB-1260)	µg/L	NV	-	-	-	1.0 U	1.0 U	-	-	1.0 U	1.0 U	1.0 U	1.0 U	-
beta-BHC	µg/L	0.0014	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.001 U
Chlordane	µg/L		-	-	-	0.05 U	0.05 U	-	-	0.05 U	0.05 U	0.05 U	0.05 U	-
delta-BHC	µg/L	NV	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.06 J	0.05 U	0.05 U	0.05 U	0.001 U
Dieldrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Endosulfan I	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Endosulfan II	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Endosulfan sulfate	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Endrin	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Endrin aldehyde	µg/L	0.035	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.0018 U
Endrin ketone	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
gamma-BHC (lindane)	µg/L	0.16	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.10 J	0.05 U	0.05 U	0.05 U	0.001 U
gamma-Chlordane	µg/L	NV	-	-	-	-	-	-	0.050 UJ	-	-	-	-	-
Heptachlor	µg/L	0.00000034	-	-	-	0.05 U	0.05 U	0.005 U	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.001 U
Heptachlor epoxide	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	0.0065 U	-	-	-	-	-	0.001 U
Methoxychlor	µg/L		-	-	-	0.05 U	0.05 U	-	0.050 UJ	0.05 U	0.05 U	0.05 U	0.05 U	-
Toxaphene	µg/L		-	-	-	1.0 U	1.0 U	-	2.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	-
General Chemistry														
Cyanide (total)	µg/L	1	-	-	-	10 U	10 U	4.7 U	50 U	10 U	10 U	10 U	10 U	4.7 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Criteria[1]	Sample Location: GM-B-2A Sample ID: G-081214-RB-GMB2A-001 Sample Date: 8/12/2014	GM-B-2A GW-061024-RN-B2A 6/10/2024	GM-B-3 GM-B-3 9/26/1984	GM-B-3 GM-B-3 (Duplicate) 9/26/1984 (Duplicate)	GM-B-3 GM-B-3 9/16/1988	GM-B-3R GW-9973-113098-GS01 11/30/1998	GM-B-3R GW-9973-011199-GS01 1/11/1999	GM-B-3R G-081314-RB-GMB3R-004 8/13/2014	GM-B-3R GW-061124-RN-B3R 6/11/2024	GM-B-6 GM-B-6 10/1/1984	GM-B-6 GM-B-6 (Duplicate) 10/1/1984 (Duplicate)	GM-B-6 GM-B-6 9/6/1988	GM-B-6A GW-9973-120198-GS08 12/1/1998
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,1,1-Trichloroethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,1,2,2-Tetrachloroethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,1,2-Trichloroethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,1-Dichloroethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,1-Dichloroethene	µg/L	4000	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
1,1-Dichloropropene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,2,3-Trichlorobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,2,3-Trichloropropane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,2,4-Trichlorobenzene	µg/L	0.037	2.0 U	2.0 U	-	-	-	-	-	2.0 U	2.0 U	-	-	-	-
1,2,4-Trimethylbenzene	µg/L	NV	-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/L		-	10 U	-	-	-	-	-	-	10 U	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	µg/L		-	0.010 U	-	-	-	-	-	-	0.010 U	-	-	-	-
1,2-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,2-Dichloroethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,2-Dichloropropane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
1,3,5-Trimethylbenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,3-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,3-Dichloropropane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
1,4-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2,2-Dichloropropane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	NV	20 U	10 U	-	-	-	5.0 U	5.0 U	20 U	10 U	-	-	-	5.0 U
2-Chlorotoluene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2-Hexanone	µg/L	NV	20 U	10 U	-	-	-	5.0 U	5.0 U	20 U	10 U	-	-	-	5.0 U
2-Phenylbutane (sec-Butylbenzene)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
4-Chlorotoluene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	NV	20 U	10 U	-	-	-	5.0 U	5.0 U	20 U	10 U	-	-	-	5.0 U
Acetone	µg/L	NV	20 U	25 U	-	-	-	14 J	9.8 U	20 U	25 U	-	-	-	20 U
Acrylonitrile	µg/L		-	10 U	-	-	-	-	-	-	10 U	-	-	-	-
Benzene	µg/L	1.6	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Bromobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Bromodichloromethane	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
Bromoform	µg/L	12	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Bromomethane (Methyl bromide)	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Carbon disulfide	µg/L	NV	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Carbon tetrachloride	µg/L	0.35	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Chlorobenzene	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
Chlorobromomethane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Chloroethane	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Chloroform (Trichloromethane)	µg/L		-	2.0 U	2 U	2 U	-	5.0 U	5.0 U	-	2.0 U	1500 U	1500 U	-	5.0 U
Chloromethane (Methyl chloride)	µg/L	NV	0.50 U	2.0 U	-	-	-	10 U	10 U	0.50 U	2.0 U	-	-	-	10 U
cis-1,2-Dichloroethene	µg/L	NV	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
cis-1,3-Dichloropropene	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
Cymene (p-Isopropyltoluene)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Dibromochloromethane	µg/L	2.2	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Dibromomethane	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Dichlorodifluoromethane (CFC-12)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Ethylbenzene	µg/L	21	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
Hexachlorobutadiene	µg/L	0.01	-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Isopropyl benzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
m&p-Xylenes	µg/L		0.50 U	-	-	-	-	-	-	0.50 U	-	-	-	-	-
Methyl tert butyl ether (MTBE)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Methylene chloride	µg/L	100	2.0 U	5.0 U	-	-	-	10 U	10 U	2.0 U	5.0 U	-	-	-	10 U
Naphthalene	µg/L	4940	-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
N-Butylbenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
N-Propylbenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
o-Xylene	µg/L		0.50 U	-	-	-	-	-	-	0.50 U	-	-	-	-	-
Styrene	µg/L	NV	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
tert-Butylbenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Tetrachloroethene	µg/L	2.9	0.50 U	2.0 U	2 U	2 U	1 U	5.0 U	5.0 U	0.50 U	2.0 U	**2500**	**1400**	**3900**	**8.0**
Toluene	µg/L	102	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
trans-1,2-Dichloroethene	µg/L	1000	0.50 U	2.0 U	-	-	-	5.0 U	5.0 U	0.50 U	2.0 U	-	-	-	5.0 U
trans-1,3-Dichloropropene	µg/L		-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U
Trichloroethene	µg/L	0.7	0.50 U	2.0 U	2 U	2 U	1 U	5.0 U	5.0 U	0.50 U	2.0 U	**10200**	**8800**	**4950**	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Vinyl chloride	µg/L	0.18	0.50 U	0.20 U	-	-	-	10 U	10 U	0.50 U	0.20 U	-	-	-	10 U
Xylenes (total)	µg/L	106	-	2.0 U	-	-	-	5.0 U	5.0 U	-	2.0 U	-	-	-	5.0 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2A	GM-B-2A	GM-B-3	GM-B-3	GM-B-3	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-6	GM-B-6	GM-B-6	GM-B-6A
Sample ID:			G-081214-RB-GMB2A-001	GW-061024-RN-B2A	GM-B-3	GM-B-3 (Duplicate)	GM-B-3	GW-9973-113098-GS01	GW-9973-011199-GS01	G-081314-RB-GMB3R-004	GW-061124-RN-B3R	GM-B-6	GM-B-6 (Duplicate)	GM-B-6	GW-9973-120198-GS08
Sample Date:			8/12/2014	6/10/2024	9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/11/2024	10/1/1984	10/1/1984 (Duplicate)	9/6/1988	12/1/1998
Parameters	**Units**	**Criteria[1]**													
Semi-volatile Organic Compounds															
1,2,4-Trichlorobenzene	µg/L	0.037	-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
1,2-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	6 U	6 U	-	2.0 U	-	-	-	6 U
1,3-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	6 U	6 U	-	2.0 U	-	-	-	6 U
1,4-Dichlorobenzene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
1-Methylnaphthalene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	-	-	-	10 U	10 U	-	-	-	-	-	10 U
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2,3,4,6-Tetrachlorophenol	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2,4,5-Trichlorophenol	µg/L		-	2.0 U	-	-	-	25 U	25 U	-	2.0 U	-	-	-	25 U
2,4,6-Trichlorophenol	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2,4-Dichlorophenol	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2,4-Dimethylphenol	µg/L	97	3.8 U	2.0 U	-	-	-	10 U	10 U	4.0 U	2.0 U	-	-	-	10 U
2,4-Dinitrophenol	µg/L		-	10 U	-	-	-	25 U	25 U	-	10 U	-	-	-	25 U
2,4-Dinitrotoluene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2,6-Dichlorophenol	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
2,6-Dinitrotoluene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2-Chloronaphthalene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2-Chlorophenol	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2-Methylnaphthalene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
2-Methylphenol	µg/L	NV	0.48 U	2.0 U	-	-	-	10 U	10 U	0.50 U	2.0 U	-	-	-	10 U
2-Nitroaniline	µg/L		-	2.0 U	-	-	-	25 U	25 U	-	2.0 U	-	-	-	25 U
2-Nitrophenol	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
3&4-Methylphenol	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
3,3'-Dichlorobenzidine	µg/L		-	2.0 U	-	-	-	20 U	20 U	-	2.0 U	-	-	-	20 U
3-Nitroaniline	µg/L		-	5.0 U	-	-	-	25 U	25 U	-	5.0 U	-	-	-	25 U
4,6-Dinitro-2-methylphenol	µg/L	7	1.9 U	2.0 U	-	-	-	25 U	25 U	2.0 U	2.0 U	-	-	-	25 U
4-Bromophenyl phenyl ether	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
4-Chloro-3-methylphenol	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
4-Chloroaniline	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
4-Chlorophenyl phenyl ether	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
4-Methylphenol	µg/L	NV	0.48 U	-	-	-	-	10 U	10 U	0.50 U	-	-	-	-	10 U
4-Nitroaniline	µg/L		-	2.0 U	-	-	-	25 U	25 U	-	2.0 U	-	-	-	25 U
4-Nitrophenol	µg/L		-	2.0 U	-	-	-	25 U	25 U	-	2.0 U	-	-	-	25 U
Acenaphthene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Acenaphthylene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Aniline	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Anthracene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Azobenzene	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Benzo(a)anthracene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Benzo(a)pyrene	µg/L		-	2.0 U	-	-	-	1 U	1 U	-	2.0 U	-	-	-	1 U
Benzo(b)fluoranthene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Benzo(g,h,i)perylene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Benzo(k)fluoranthene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Benzoic acid	µg/L		-	10 U	-	-	-	-	-	-	10 U	-	-	-	-
Benzyl alcohol	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
bis(2-Chloroethoxy)methane	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
bis(2-Chloroethyl)ether	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	0.046	**6.6 J**	2.0 U	-	-	-	6 U	6 U	1.0 U	2.0 U	-	-	-	**23**
Butyl benzylphthalate (BBP)	µg/L	0.013	0.19 U	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Carbazole	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Chrysene	µg/L	0.016	0.19 U	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Dibenz(a,h)anthracene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Dibenzofuran	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Diethyl phthalate	µg/L	200	0.19 U	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Dimethyl phthalate	µg/L	600	-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Di-n-butylphthalate (DBP)	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Di-n-octyl phthalate (DnOP)	µg/L	NV	0.19 U	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Fluoranthene	µg/L	6	0.039 J	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Fluorene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Hexachlorobenzene	µg/L	0.000005	-	2.0 U	-	-	-	1 U	1 U	-	2.0 U	-	-	-	1 U
Hexachlorobutadiene	µg/L	0.01	0.19 U	2.0 U	-	-	-	4 U	4 U	0.20 U	2.0 U	-	-	-	**2.6 J**
Hexachlorocyclopentadiene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Hexachloroethane	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Indeno(1,2,3-cd)pyrene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Isophorone	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Naphthalene	µg/L	4940	-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Nitrobenzene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
N-Nitrosodimethylamine	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
N-Nitrosodi-n-propylamine	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2A	GM-B-2A	GM-B-3	GM-B-3	GM-B-3	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-6	GM-B-6	GM-B-6	GM-B-6A
Sample ID:			G-081214-RB-GMB2A-001	GW-061024-RN-B2A	GM-B-3	GM-B-3 (Duplicate)	GM-B-3	GW-9973-113098-GS01	GW-9973-011199-GS01	G-081314-RB-GMB3R-004	GW-061124-RN-B3R	GM-B-6	GM-B-6 (Duplicate)	GM-B-6	GW-9973-120198-GS08
Sample Date:			8/12/2014	6/10/2024	9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/11/2024	10/1/1984	10/1/1984 (Duplicate)	9/6/1988	12/1/1998
Parameters	**Units**	**Criteria[1]**													
Semi-volatile Organic Compounds															
N-Nitrosodiphenylamine	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Pentachlorophenol	µg/L		-	5.0 U	-	-	-	20 U	20 U	-	5.0 U	-	-	-	20 U
Phenanthrene	µg/L		-	2.0 U	-	-	-	10 U	10 U	-	2.0 U	-	-	-	10 U
Phenol	µg/L	70000	0.48 U	2.0 U	-	-	-	10 U	10 U	0.50 U	2.0 U	-	-	-	10 U
Pyrene	µg/L	8	0.19 U	2.0 U	-	-	-	10 U	10 U	0.20 U	2.0 U	-	-	-	10 U
Pyridine	µg/L		-	2.0 U	-	-	-	-	-	-	2.0 U	-	-	-	-
Semi-volatile Organic Compounds - SIM															
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	4940	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals															
Aluminum	µg/L	NV	1330	280	-	-	-	4130	3420	730	310	-	-	-	25800
Antimony	µg/L	90	0.116	1.0 U	-	-	-	5 U	5 U	0.402	1.0 U	-	-	-	5 U
Arsenic	µg/L	5	3.4	3.1	-	-	-	**8.2**	5 U	4.7	**6.7**	-	-	-	**10.0**
Barium	µg/L	NV	17.9	16	-	-	-	120	93.5	79.3	62	-	-	-	134
Beryllium	µg/L	273	0.055	1.0 U	-	-	-	2 U	2 U	0.034	1.0 U	-	-	-	2 U
Cadmium	µg/L	7.9	0.142	1.0 U	-	-	-	5 U	5 U	0.068	1.0 U	-	-	-	5 U
Calcium	µg/L		13800	15000	-	-	-	42200	41200	45100	34000	-	-	-	57600
Chromium	µg/L	4.13***	**7.22**	2.4	-	-	-	**6.6**	**10.0**	2.82	2.8	-	-	-	**73.0**
Cobalt	µg/L	NV	0.895	1.0 U	-	-	-	5 U	5 U	0.998	4.7	-	-	-	6.6
Copper	µg/L	3.1	**6.35**	2.0 U	-	-	-	**18.0**	**17.9**	**5.06**	**3.8 J**	-	-	-	**70.0**
Iron	µg/L	NV	16800	14000	-	-	-	38100	72700	32700	26000	-	-	-	26300
Lead	µg/L	8.1	7.42	1.3	-	-	-	16.0 U	**19.0**	3.15	1.6	-	-	-	**105**
Magnesium	µg/L		11300	13000	-	-	-	50300	49500	32900	25000	-	-	-	18800
Manganese	µg/L	100	**366**	**400 J-**	-	-	-	**6070**	**6310**	**2010**	**1900 J-**	-	-	-	**331**
Mercury	µg/L	0.025	0.00407	0.20 U	-	-	-	**0.2**	**0.2**	0.0101	0.20 U	-	-	-	**0.4**
Nickel	µg/L	8.2	4.04	2.0 U	-	-	-	**10.0**	6.7	3.62	**29**	-	-	-	**36.0**
Potassium	µg/L		3110	4700	-	-	-	33000	27000	11400	8700	-	-	-	5700
Selenium	µg/L	71	0.4 J	4.0 U	-	-	-	5 U	5 U	1.1	4.0 U	-	-	-	5 U
Silver	µg/L	0.91	0.020 U	1.0 U	-	-	-	1 U	1 U	0.022 U	1.0 U	-	-	-	1 U
Sodium	µg/L		9420	12000 J+	-	-	-	391000	264000	98300	68000 J+	-	-	-	15000
Thallium	µg/L	0.223	0.007 J	1.0 U	-	-	-	5 U	5 U	0.020 U	1.0 U	-	-	-	5 U
Vanadium	µg/L	NV	6.51	4.9	-	-	-	14.0	13.9	3.10	2.5 U	-	-	-	103
Zinc	µg/L	81	42.1	11	-	-	-	**112**	**109**	21.7	14	-	-	-	**308**
Polychlorinated Biphenyls (PCBs)															
Aroclor-1016 (PCB-1016)	µg/L		0.0051 UJ	0.10 U	-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-
Aroclor-1221 (PCB-1221)	µg/L		0.011 UJ	0.10 U	-	-	-	-	-	0.010 UJ	0.10 U	-	-	-	-
Aroclor-1232 (PCB-1232)	µg/L		0.0051 UJ	0.10 U	-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-
Aroclor-1242 (PCB-1242)	µg/L		0.0052 J	0.10 U	-	-	-	-	-	0.0019 J	0.10 U	-	-	-	-
Aroclor-1248 (PCB-1248)	µg/L		0.0051 UJ	0.10 U	-	-	-	-	-	0.0050 UJ	0.10 U	-	-	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.000104	**0.029**	0.10 U	-	-	-	-	-	**0.013**	0.10 U	-	-	-	-
Aroclor-1260 (PCB-1260)	µg/L	NV	0.026	0.10 U	-	-	-	-	-	0.035	0.10 U	-	-	-	-
Aroclor-1268 (PCB-1268)	µg/L		-	0.10 U	-	-	-	-	-	-	0.10 U	-	-	-	-

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-2A	GM-B-2A	GM-B-3	GM-B-3	GM-B-3	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-3R	GM-B-6	GM-B-6	GM-B-6	GM-B-6A
Sample ID:			G-081214-RB-GMB2A-001	GW-061024-RN-B2A	GM-B-3	GM-B-3 (Duplicate)	GM-B-3	GW-9973-113098-GS01	GW-9973-011199-GS01	G-081314-RB-GMB3R-004	GW-061124-RN-B3R	GM-B-6	GM-B-6 (Duplicate)	GM-B-6	GW-9973-120198-GS08
Sample Date:			8/12/2014	6/10/2024	9/26/1984	9/26/1984 (Duplicate)	9/16/1988	11/30/1998	1/11/1999	8/13/2014	6/11/2024	10/1/1984	10/1/1984 (Duplicate)	9/6/1988	12/1/1998
Parameters	**Units**	**Criteria[1]**													
Pesticides															
4,4'-DDD	µg/L	0.0000079	0.003 U	0.050 UJ	-	-	-	-	-	0.001 U	0.050 UJ	-	-	-	-
4,4'-DDE	µg/L	0.00000088	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	0.05 U
4,4'-DDE/DDD	µg/L		-	-	-	-	-	0.05 U	0.05 U	-	-	-	-	-	0.05 U
4,4'-DDT	µg/L	0.0000012	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	0.05 U
Aldrin	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
alpha-BHC	µg/L	0.000048	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	**0.06**
alpha-Chlordane	µg/L		-	0.050 UJ	-	-	-	-	-	-	0.050 UJ	-	-	-	-
Aroclor-1016 (PCB-1016)	µg/L		-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1221 (PCB-1221)	µg/L		-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1232 (PCB-1232)	µg/L		-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1242 (PCB-1242)	µg/L		-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1248 (PCB-1248)	µg/L		-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
Aroclor-1260 (PCB-1260)	µg/L	NV	-	-	-	-	-	1.0 U	1.0 U	-	-	-	-	-	1.0 U
beta-BHC	µg/L	0.0014	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	0.05 U
Chlordane	µg/L		-	-	-	-	-	0.05 U	0.05 U	-	-	-	-	-	0.05 U
delta-BHC	µg/L	NV	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	0.08
Dieldrin	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endosulfan I	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endosulfan II	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endosulfan sulfate	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endrin	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endrin aldehyde	µg/L	0.035	0.0022 U	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Endrin ketone	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
gamma-BHC (lindane)	µg/L	0.16	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	**0.22**
gamma-Chlordane	µg/L	NV	-	0.050 UJ	-	-	-	-	-	-	0.050 UJ	-	-	-	-
Heptachlor	µg/L	0.00000034	0.0011 U	0.050 UJ	-	-	-	0.05 U	0.05 U	0.001 U	0.050 UJ	-	-	-	0.05 U
Heptachlor epoxide	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Hexachlorobenzene	µg/L	0.000005	0.0011 U	-	-	-	-	-	-	0.001 U	-	-	-	-	-
Methoxychlor	µg/L		-	0.050 UJ	-	-	-	0.05 U	0.05 U	-	0.050 UJ	-	-	-	0.05 U
Toxaphene	µg/L		-	2.0 UJ	-	-	-	1.0 U	1.0 U	-	2.0 UJ	-	-	-	1.0 U
General Chemistry															
Cyanide (total)	µg/L	1	4.7 U	50 U	-	-	-	10 U	10 U	4.7 U	50 U	-	-	-	10 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-6A	GM-B-6A	GM-B-6A	GM-B-6R	GM-B-6R	GM-B-6R	GM-B-6R
Sample ID:			GW-9973-011299-GS08	G-081314-RB-GMB6A-007	GW-061124-RN-B6A	GW-9973-120198-GS09	GW-9973-011299-GS09	G-081314-RB-GMB6R-008	GW-061124-RN-B6R
Sample Date:			1/12/1999	8/13/2014	6/11/2024	12/1/1998	1/12/1999	8/13/2014	6/11/2024
Parameters	**Units**	**Criteria[1]**							
Volatile Organic Compounds									
1,1,1,2-Tetrachloroethane	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,1,1-Trichloroethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1,2,2-Tetrachloroethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1,2-Trichloroethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1-Dichloroethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,1-Dichloroethene	µg/L	4000	5.0 U	0.50 U	2.0 U	9.1	12	2.2	2.0 U
1,1-Dichloropropene	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,2,3-Trichlorobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,2,3-Trichloropropane	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,2,4-Trichlorobenzene	µg/L	0.037	-	2.0 U	2.0 U	-	-	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	NV	-	-	2.0 U	-	-	-	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L		-	-	10 U	-	-	-	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L		-	-	0.010 U	-	-	-	0.010 U
1,2-Dichlorobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,2-Dichloroethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,2-Dichloropropane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
1,3,5-Trimethylbenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,3-Dichlorobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,3-Dichloropropane	µg/L		-	-	2.0 U	-	-	-	2.0 U
1,4-Dichlorobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
2,2-Dichloropropane	µg/L		-	-	2.0 U	-	-	-	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	NV	5.0 U	20 U	10 U	48 U	52	22	10 U
2-Chlorotoluene	µg/L		-	-	2.0 U	-	-	-	2.0 U
2-Hexanone	µg/L	NV	5.0 U	20 U	10 U	5.0 U	5.0 U	20 U	10 U
2-Phenylbutane (sec-Butylbenzene)	µg/L		-	-	2.0 U	-	-	-	2.0 U
4-Chlorotoluene	µg/L		-	-	2.0 U	-	-	-	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	NV	5.0 U	20 U	10 U	9.1	11	20 U	10 U
Acetone	µg/L	NV	5.0 U	20 U	25 U	430	420	28	25 U
Acrylonitrile	µg/L		-	-	10 U	-	-	-	10 U
Benzene	µg/L	1.6	5.0 U	0.50 U	2.0 U	**11**	**12**	**4.4**	2.0 U
Bromobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
Bromodichloromethane	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
Bromoform	µg/L	12	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Bromomethane (Methyl bromide)	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
Carbon disulfide	µg/L	NV	5.0 U	0.50 U	2.0 U	9.0	10	0.19 J	2.0 U
Carbon tetrachloride	µg/L	0.35	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Chlorobenzene	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
Chlorobromomethane	µg/L		-	-	2.0 U	-	-	-	2.0 U
Chloroethane	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
Chloroform (Trichloromethane)	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
Chloromethane (Methyl chloride)	µg/L	NV	10 U	0.50 U	2.0 U	10 U	5.2 J	0.50 U	2.0 U
cis-1,2-Dichloroethene	µg/L	NV	5.0 U	0.50 U	2.0 U	450	570	100	4.5
cis-1,3-Dichloropropene	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
Cymene (p-Isopropyltoluene)	µg/L		-	-	2.0 U	-	-	-	2.0 U
Dibromochloromethane	µg/L	2.2	5.0 U	0.50 U	2.0 U	5.0 U	5.0 U	0.50 U	2.0 U
Dibromomethane	µg/L		-	-	2.0 U	-	-	-	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L		-	-	2.0 U	-	-	-	2.0 U
Ethylbenzene	µg/L	21	5.0 U	0.50 U	2.0 U	6.4	5.6	2.7	2.0 U
Hexachlorobutadiene	µg/L	0.01	-	-	2.0 U	-	-	-	2.0 U
Isopropyl benzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
m&p-Xylenes	µg/L		-	0.50 U	-	-	-	3.0	-
Methyl tert butyl ether (MTBE)	µg/L		-	-	2.0 U	-	-	-	2.0 U
Methylene chloride	µg/L	100	10 U	2.0 U	5.0 U	10 U	10 U	2.0 U	5.0 U
Naphthalene	µg/L	4940	-	-	2.0 U	-	-	-	2.0 U
N-Butylbenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
N-Propylbenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
o-Xylene	µg/L		-	0.50 U	-	-	-	1.9	-
Styrene	µg/L	NV	5.0 U	0.50 U	2.0 U	17	14	4.0	2.0 U
tert-Butylbenzene	µg/L		-	-	2.0 U	-	-	-	2.0 U
Tetrachloroethene	µg/L	2.9	5.0 U	0.50 U	2.0 U	**1800**	**2800**	**260**	2.0 U
Toluene	µg/L	102	5.0 U	0.50 U	2.0 U	15	18	8.2	2.0 U
trans-1,2-Dichloroethene	µg/L	1000	5.0 U	0.25 J	2.0 U	160	190	57	2.0 U
trans-1,3-Dichloropropene	µg/L		5.0 U	-	2.0 U	5.0 U	5.0 U	-	2.0 U
Trichloroethene	µg/L	0.7	5.0 U	0.50 U	2.0 U	**3800**	**6500**	**270**	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L		-	-	2.0 U	-	-	-	2.0 U
Vinyl chloride	µg/L	0.18	10 U	**0.31 J**	**0.23**	**75**	**98**	**15**	**2.6**
Xylenes (total)	µg/L	106	5.0 U	-	2.0 U	16	14	-	2.0 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-6A	GM-B-6A	GM-B-6A	GM-B-6R	GM-B-6R	GM-B-6R	GM-B-6R
Sample ID:			GW-9973-011299-GS08	G-081314-RB-GMB6A-007	GW-061124-RN-B6A	GW-9973-120198-GS09	GW-9973-011299-GS09	G-081314-RB-GMB6R-008	GW-061124-RN-B6R
Sample Date:			1/12/1999	8/13/2014	6/11/2024	12/1/1998	1/12/1999	8/13/2014	6/11/2024
Parameters	**Units**	**Criteria[1]**							
Semi-volatile Organic Compounds									
1,2,4-Trichlorobenzene	µg/L	0.037	10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
1,2-Dichlorobenzene	µg/L		6 U	-	2.0 U	6 U	6 U	-	2.0 UJ
1,3-Dichlorobenzene	µg/L		6 U	-	2.0 U	6 U	6 U	-	2.0 UJ
1,4-Dichlorobenzene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
1-Methylnaphthalene	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		10 U	-	-	10 U	10 U	-	-
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
2,3,4,6-Tetrachlorophenol	µg/L		-	-	2.0 U	-	-	-	2.0 U
2,4,5-Trichlorophenol	µg/L		25 U	-	2.0 U	25 U	25 U	-	2.0 U
2,4,6-Trichlorophenol	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
2,4-Dichlorophenol	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
2,4-Dimethylphenol	µg/L	97	10 U	3.9 U	2.0 U	**280**	**380**	7.7	2.4 U
2,4-Dinitrophenol	µg/L		25 U	-	10 U	25 U	25 U	-	10 U
2,4-Dinitrotoluene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
2,6-Dichlorophenol	µg/L		-	-	2.0 U	-	-	-	2.0 U
2,6-Dinitrotoluene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
2-Chloronaphthalene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
2-Chlorophenol	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
2-Methylnaphthalene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
2-Methylphenol	µg/L	NV	10 U	0.49 U	2.0 U	20	25	2.3	2.0 U
2-Nitroaniline	µg/L		25 U	-	2.0 U	25 U	25 U	-	2.0 UJ
2-Nitrophenol	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
3&4-Methylphenol	µg/L		-	-	2.0 U	-	-	-	2.0 U
3,3'-Dichlorobenzidine	µg/L		20 U	-	2.0 U	20 U	20 U	-	2.0 UJ
3-Nitroaniline	µg/L		25 U	-	5.0 U	25 U	25 U	-	5.0 UJ
4,6-Dinitro-2-methylphenol	µg/L	7	25 U	2.0 U	2.0 U	25 U	25 U	2.0 U	2.0 U
4-Bromophenyl phenyl ether	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
4-Chloro-3-methylphenol	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 U
4-Chloroaniline	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
4-Chlorophenyl phenyl ether	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
4-Methylphenol	µg/L	NV	10 U	0.49 U	-	520	640	16	-
4-Nitroaniline	µg/L		25 U	-	2.0 U	25 U	25 U	-	2.0 UJ
4-Nitrophenol	µg/L		25 U	-	2.0 U	25 U	25 U	-	2.0 U
Acenaphthene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Acenaphthylene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Aniline	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
Anthracene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Azobenzene	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
Benzo(a)anthracene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Benzo(a)pyrene	µg/L		1 U	-	2.0 U	1 U	1 U	-	2.0 UJ
Benzo(b)fluoranthene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Benzo(g,h,i)perylene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Benzo(k)fluoranthene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Benzoic acid	µg/L		-	-	10 U	-	-	-	10 U
Benzyl alcohol	µg/L		-	-	2.0 U	-	-	-	2.0 U
bis(2-Chloroethoxy)methane	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
bis(2-Chloroethyl)ether	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	0.046	**12**	**2.0 J**	2.0 U	6 U	6 U	**3.9 J**	2.0 UJ
Butyl benzylphthalate (BBP)	µg/L	0.013	10 U	0.20 U	2.0 U	10 U	10 U	0.20 U	2.0 UJ
Carbazole	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Chrysene	µg/L	0.016	10 U	0.20 U	2.0 U	10 U	10 U	0.20 U	2.0 UJ
Dibenz(a,h)anthracene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Dibenzofuran	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Diethyl phthalate	µg/L	200	10 U	0.20 U	2.0 U	10 U	10 U	2.0	2.0 UJ
Dimethyl phthalate	µg/L	600	10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Di-n-butylphthalate (DBP)	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Di-n-octyl phthalate (DnOP)	µg/L	NV	10 U	0.20 U	2.0 U	10 U	10 U	0.17 J	2.0 UJ
Fluoranthene	µg/L	6	10 U	0.023 J	2.0 U	10 U	10 U	0.062 J	2.0 UJ
Fluorene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Hexachlorobenzene	µg/L	0.000005	1 U	-	2.0 U	1 U	1 U	-	2.0 UJ
Hexachlorobutadiene	µg/L	0.01	4 U	0.20 U	2.0 U	**21**	**47**	**4.0**	2.0 UJ
Hexachlorocyclopentadiene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Hexachloroethane	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Indeno(1,2,3-cd)pyrene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Isophorone	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Naphthalene	µg/L	4940	10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Nitrobenzene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
N-Nitrosodimethylamine	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
N-Nitrosodi-n-propylamine	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-6A	GM-B-6A	GM-B-6A	GM-B-6R	GM-B-6R	GM-B-6R	GM-B-6R
Sample ID:			GW-9973-011299-GS08	G-081314-RB-GMB6A-007	GW-061124-RN-B6A	GW-9973-120198-GS09	GW-9973-011299-GS09	G-081314-RB-GMB6R-008	GW-061124-RN-B6R
Sample Date:			1/12/1999	8/13/2014	6/11/2024	12/1/1998	1/12/1999	8/13/2014	6/11/2024
Parameters	**Units**	**Criteria[1]**							
Semi-volatile Organic Compounds									
N-Nitrosodiphenylamine	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Pentachlorophenol	µg/L		20 U	-	5.0 U	20 U	20 U	-	5.0 U
Phenanthrene	µg/L		10 U	-	2.0 U	10 U	10 U	-	2.0 UJ
Phenol	µg/L	70000	10 U	0.49 U	2.0 U	160	170	6.0	2.0 U
Pyrene	µg/L	8	10 U	0.20 U	2.0 U	10 U	10 U	0.061 J	2.0 UJ
Pyridine	µg/L		-	-	2.0 U	-	-	-	2.0 UJ
Semi-volatile Organic Compounds - SIM									
1-Methylnaphthalene	µg/L		-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L		-	-	-	-	-	-	-
Acenaphthene	µg/L		-	-	-	-	-	-	-
Acenaphthylene	µg/L		-	-	-	-	-	-	-
Anthracene	µg/L		-	-	-	-	-	-	-
Benzo(a)anthracene	µg/L		-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L		-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/L		-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L		-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L		-	-	-	-	-	-	-
Chrysene	µg/L	0.016	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L		-	-	-	-	-	-	-
Fluoranthene	µg/L	6	-	-	-	-	-	-	-
Fluorene	µg/L		-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	0.000005	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L		-	-	-	-	-	-	-
Naphthalene	µg/L	4940	-	-	-	-	-	-	-
Phenanthrene	µg/L		-	-	-	-	-	-	-
Pyrene	µg/L	8	-	-	-	-	-	-	-
Metals									
Aluminum	µg/L	NV	4670	585	830	390	232	34.5 J	95
Antimony	µg/L	90	5 U	0.062	1.0 U	17.0	17.9	2.37 J	1.2
Arsenic	µg/L	5	5 U	0.4 J	1.8	**8.2**	**10.9**	**9.3 J**	4.4
Barium	µg/L	NV	51.0	10.1	16	4170	4200	711 J	89
Beryllium	µg/L	273	2 U	0.019 J	1.0 U	2 U	2 U	0.013 J	1.0 U
Cadmium	µg/L	7.9	5 U	0.050	1.0 U	5 U	5 U	1.07 J	1.0 U
Calcium	µg/L		32500	19300	20000	1450000	1510000	86700 J	59000
Chromium	µg/L	4.13***	**15.2**	2.19	**7.6**	5 U	5 U	1.21 J	2.0 U
Cobalt	µg/L	NV	5 U	0.316	1.0 U	5 U	5 U	1.22 J	1.0 U
Copper	µg/L	3.1	**15.6**	2.12	**6.4 J**	5 U	5 U	**3.57 J**	2.0 U
Iron	µg/L	NV	10100	4040	7300	777	1810	2840 J	17000
Lead	µg/L	8.1	**27.6**	2.46	4.1	23.0 U	**23.5**	**70.0 J**	**27**
Magnesium	µg/L		17100	12600	14000	2250	3850	38400 J	29000
Manganese	µg/L	100	**183**	77.6	100 J-	11.0	14.6	**102 J**	**250 J-**
Mercury	µg/L	0.025	0.2 U	0.00243	0.20 U	0.2 U	0.2 U	**0.0267 J**	0.20 U
Nickel	µg/L	8.2	**8.7**	1.48	4.2	**48.0**	**54.8**	**20.1 J**	5.6
Potassium	µg/L		4900	4150	4500	35000	34000	22900 J	16000
Selenium	µg/L	71	5 U	1.0 U	4.0 U	5 U	5 U	2.3 J	4.0 U
Silver	µg/L	0.91	1 U	0.020 U	1.0 U	1 U	1 U	0.020 UJ	1.0 U
Sodium	µg/L		16000	14200	17000 J+	395000	342000	199000 J	120000 J+
Thallium	µg/L	0.223	5 U	0.020 U	1.0 U	5 U	5 U	0.020 UJ	1.0 U
Vanadium	µg/L	NV	18.8	2.73	7.3	6.0	8.5	1.59 J	5.2 J+
Zinc	µg/L	81	**93.8**	14.8	24	61.0	50 U	23.3 J	27
Polychlorinated Biphenyls (PCBs)									
Aroclor-1016 (PCB-1016)	µg/L		-	0.0051 UJ	0.10 U	-	-	0.040 UJ	0.10 U
Aroclor-1221 (PCB-1221)	µg/L		-	0.011 UJ	0.10 U	-	-	0.16 UJ	0.10 U
Aroclor-1232 (PCB-1232)	µg/L		-	0.0051 UJ	0.10 U	-	-	0.11 UJ	0.10 U
Aroclor-1242 (PCB-1242)	µg/L		-	0.0013 J	0.10 U	-	-	0.050 UJ	0.10 U
Aroclor-1248 (PCB-1248)	µg/L		-	0.0051 UJ	0.10 U	-	-	0.049 UJ	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.000104	-	**0.0051 J**	0.10 U	-	-	0.094 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	NV	-	0.0046 J	0.10 U	-	-	0.19 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L		-	-	0.10 U	-	-	-	0.10 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			GM-B-6A	GM-B-6A	GM-B-6A	GM-B-6R	GM-B-6R	GM-B-6R	GM-B-6R
Sample ID:			GW-9973-011299-GS08	G-081314-RB-GMB6A-007	GW-061124-RN-B6A	GW-9973-120198-GS09	GW-9973-011299-GS09	G-081314-RB-GMB6R-008	GW-061124-RN-B6R
Sample Date:			1/12/1999	8/13/2014	6/11/2024	12/1/1998	1/12/1999	8/13/2014	6/11/2024
Parameters	**Units**	**Criteria[1]**							
Pesticides									
4,4'-DDD	µg/L	0.0000079	-	0.0011 U	0.050 UJ	-	-	0.0052 U	0.050 UJ
4,4'-DDE	µg/L	0.00000088	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
4,4'-DDE/DDD	µg/L		0.05 U	-	-	0.05 U	0.05 U	-	-
4,4'-DDT	µg/L	0.0000012	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
Aldrin	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
alpha-BHC	µg/L	0.000048	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
alpha-Chlordane	µg/L		-	-	0.050 UJ	-	-	-	0.050 UJ
Aroclor-1016 (PCB-1016)	µg/L		1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1221 (PCB-1221)	µg/L		1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1232 (PCB-1232)	µg/L		1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1242 (PCB-1242)	µg/L		1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1248 (PCB-1248)	µg/L		1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1254 (PCB-1254)	µg/L	0.000104	1.0 U	-	-	1.0 U	1.0 U	-	-
Aroclor-1260 (PCB-1260)	µg/L	NV	1.0 U	-	-	1.0 U	1.0 U	-	-
beta-BHC	µg/L	0.0014	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
Chlordane	µg/L		0.05 U	-	-	0.05 U	0.05 U	-	-
delta-BHC	µg/L	NV	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
Dieldrin	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan I	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan II	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endosulfan sulfate	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endrin	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Endrin aldehyde	µg/L	0.035	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.032 U	0.050 UJ
Endrin ketone	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
gamma-BHC (lindane)	µg/L	0.16	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
gamma-Chlordane	µg/L	NV	-	-	0.050 UJ	-	-	-	0.050 UJ
Heptachlor	µg/L	0.00000034	0.05 U	0.0011 U	0.050 UJ	0.05 U	0.05 U	0.0052 U	0.050 UJ
Heptachlor epoxide	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Hexachlorobenzene	µg/L	0.000005	-	**0.00026 J**	-	-	-	**0.021**	-
Methoxychlor	µg/L		0.05 U	-	0.050 UJ	0.05 U	0.05 U	-	0.050 UJ
Toxaphene	µg/L		1.0 U	-	2.0 UJ	1.0 U	1.0 U	-	2.0 UJ
General Chemistry									
Cyanide (total)	µg/L	1	10 U	4.7 U	50 U	10 U	10 U	1 J	50 U

Table 4.2

Summary of Groundwater Analytical Data
1913 Marine View Drive
Tacoma, Washington

Notes:

[1]	Preliminary Cleanup Levels for groundwater established consistent with MTCA Method B surface water cleanup levels for marine water.
µg/L	micrograms per liter.
39.0	Concentration detected above the cleanup level.
-	Not applicable.
NV	No published value.
J	Estimated concentration.
J-	Estimated concentration, implied low bias.
J+	Estimated concentration, implied high bias.
U	Not detected at the associated concentration.
UJ	Not detected; associated concentration is estimated.
***	Value for Chromium VI. WQC adjusted to a lower concentration so that the excess cancer risk is one in one hundred thousand (1 x 10-5). See WAC 173-340-730(5)(b). The value for Chromium III is 243,000 (2.43E+05).

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-01	SW-01	SW-01	SW-02	SW-02	SW-02	SW-02	SW-02	SW-03	SW-03	SW-03
Sample ID:			SW-9973-112098-DG01	WS-091514-RB-SW01	MVD-032824-SS-SW01	SW-9973-112098-DG02	WS-091514-RB-FD10	WS-091514-RB-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW02	SW-9973-112098-DG03	SW-9973-112098-DG05	WS-091514-RB-SW03
Sample Date:			11/20/1998	9/15/2014	3/28/2024	11/20/1998	9/15/2014 (Duplicate)	9/15/2014	3/28/2024 (Duplicate)	3/28/2024	11/20/1998	11/20/1998 (Duplicate)	9/15/2014
Parameters	**Units**	**Criteria[1]**											
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,1,1-Trichloroethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,1,2,2-Tetrachloroethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,1,2-Trichloroethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,1-Dichloroethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,1-Dichloroethene	ug/L	4000	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
1,1-Dichloropropene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,2,3-Trichlorobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,2,3-Trichloropropane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,2,4-Trichlorobenzene	ug/L	0.037	-	2.0 U	2.0 U	-	2.0 U	2.0 U	2.0 U	2.0 U	-	-	2.0 U
1,2,4-Trimethylbenzene	ug/L	NV	-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L		-	-	10 U	-	-	-	10 U	10 U	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L		-	-	0.010 U	-	-	-	0.010 U	0.010 U	-	-	-
1,2-Dichlorobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,2-Dichloroethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,2-Dichloropropane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
1,3,5-Trimethylbenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,3-Dichlorobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,3-Dichloropropane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
1,4-Dichlorobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2,2-Dichloropropane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	NV	5.0 U	20 U	10 U	5.0 U	20 U	20 U	10 U	10 U	5.0 U	5.0 U	20 U
2-Chlorotoluene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2-Hexanone	ug/L	NV	5.0 U	20 U	10 U	5.0 U	20 U	20 U	10 U	10 U	5.0 U	5.0 U	20 U
2-Phenylbutane (sec-Butylbenzene)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
4-Chlorotoluene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	NV	5.0 U	20 U	10 U	5.0 U	20 U	20 U	10 U	10 U	5.0 U	5.0 U	20 U
Acetone	ug/L	NV	20 U	20 U	25 U	20 U	20 U	20 U	0.52 J	0.72 J	20 U	20 U	20 U
Acrylonitrile	ug/L		-	-	10 U	-	-	-	10 U	10 U	-	-	-
Benzene	ug/L	1.6	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Bromobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Bromodichloromethane	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
Bromoform	ug/L	12	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Bromomethane (Methyl bromide)	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Carbon disulfide	ug/L	NV	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Carbon tetrachloride	ug/L	0.35	**2.8 J**	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Chlorobenzene	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
Chlorobromomethane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Chloroethane	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Chloroform (Trichloromethane)	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
Chloromethane (Methyl chloride)	ug/L	NV	10 U	0.50 U	2.0 U	10 U	0.50 U	0.50 U	2.0 U	2.0 U	10 U	10 U	0.50 U
cis-1,2-Dichloroethene	ug/L	NV	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
cis-1,3-Dichloropropene	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
Cymene (p-Isopropyltoluene)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Dibromochloromethane	ug/L	2.2	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Dibromomethane	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Ethylbenzene	ug/L	21	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Hexachlorobutadiene	ug/L	0.01	-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Isopropyl benzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
m&p-Xylenes	ug/L		-	0.50 U	-	-	0.50 U	0.50 U	-	-	-	-	0.50 U
Methyl tert butyl ether (MTBE)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Methylene chloride	ug/L	100	10 U	2.0 U	5.0 U	10 U	2.0 U	2.0 U	5.0 U	5.0 U	6.2 J	10 U	2.0 U
Naphthalene	ug/L	4940	-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
N-Butylbenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
N-Propylbenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
o-Xylene	ug/L		-	0.50 U	-	-	0.50 U	0.50 U	-	-	-	-	0.50 U
Styrene	ug/L	NV	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
tert-Butylbenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Tetrachloroethene	ug/L	2.9	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Toluene	ug/L	102	5.0 U	0.50 U	2.0 U	5.0 U	0.060 J	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
trans-1,2-Dichloroethene	ug/L	1000	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
trans-1,3-Dichloropropene	ug/L		5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-
Trichloroethene	ug/L	0.7	5.0 U	0.50 U	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	5.0 U	5.0 U	0.50 U
Trichlorofluoromethane (CFC-11)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Vinyl chloride	ug/L	0.18	10 U	0.50 U	0.20 U	10 U	0.50 U	0.50 U	0.20 U	0.20 U	10 U	10 U	0.50 U
Xylenes (total)	ug/L	106	5.0 U	-	2.0 U	5.0 U	-	-	2.0 U	2.0 U	5.0 U	5.0 U	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-01	SW-01	SW-01	SW-02	SW-02	SW-02	SW-02	SW-02	SW-03	SW-03	SW-03
Sample ID:			SW-9973-112098-DG01	WS-091514-RB-SW01	MVD-032824-SS-SW01	SW-9973-112098-DG02	WS-091514-RB-FD10	WS-091514-RB-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW02	SW-9973-112098-DG03	SW-9973-112098-DG05	WS-091514-RB-SW03
Sample Date:			11/20/1998	9/15/2014	3/28/2024	11/20/1998	9/15/2014 (Duplicate)	9/15/2014	3/28/2024 (Duplicate)	3/28/2024	11/20/1998	11/20/1998 (Duplicate)	9/15/2014
Parameters	**Units**	**Criteria[1]**											
Semi-volatile Organic Compounds													
1,2,4-Trichlorobenzene	ug/L	0.037	10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
1,2-Dichlorobenzene	ug/L		6 U	-	2.0 U	6 U	-	-	2.0 U	2.0 U	6 U	6 U	-
1,3-Dichlorobenzene	ug/L		6 U	-	2.0 U	6 U	-	-	2.0 U	2.0 U	6 U	6 U	-
1,4-Dichlorobenzene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
1-Methylnaphthalene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L		10 U	-	-	10 U	-	-	-	-	10 U	10 U	-
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2,3,4,6-Tetrachlorophenol	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2,4,5-Trichlorophenol	ug/L		25 U	-	2.0 U	25 U	-	-	2.0 U	2.0 U	25 U	25 U	-
2,4,6-Trichlorophenol	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2,4-Dichlorophenol	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2,4-Dimethylphenol	ug/L	97	10 U	3.8 U	2.0 U	10 U	4.1 U	3.8 U	2.0 U	2.0 U	10 U	10 U	3.8 U
2,4-Dinitrophenol	ug/L		25 U	-	10 U	25 U	-	-	10 U	10 U	25 U	25 U	-
2,4-Dinitrotoluene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2,6-Dichlorophenol	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
2,6-Dinitrotoluene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2-Chloronaphthalene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2-Chlorophenol	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2-Methylnaphthalene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
2-Methylphenol	ug/L	NV	10 U	0.48 UJ	2.0 U	10 U	0.52 UJ	0.48 UJ	2.0 U	2.0 U	10 U	10 U	0.48 UJ
2-Nitroaniline	ug/L		25 U	-	2.0 U	25 U	-	-	2.0 U	2.0 U	25 U	25 U	-
2-Nitrophenol	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
3&4-Methylphenol	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
3,3'-Dichlorobenzidine	ug/L		20 U	-	2.0 U	20 U	-	-	2.0 U	2.0 U	20 U	20 U	-
3-Nitroaniline	ug/L		25 U	-	5.0 U	25 U	-	-	5.0 U	5.0 U	25 U	25 U	-
4,6-Dinitro-2-methylphenol	ug/L	7	25 U	1.9 U	2.0 U	25 U	2.1 U	1.9 U	2.0 U	2.0 U	25 U	25 U	1.9 U
4-Bromophenyl phenyl ether	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
4-Chloro-3-methylphenol	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
4-Chloroaniline	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
4-Chlorophenyl phenyl ether	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
4-Methylphenol	ug/L	NV	10 U	0.48 UJ	-	10 U	0.52 UJ	0.48 UJ	-	-	10 U	10 U	0.48 UJ
4-Nitroaniline	ug/L		25 U	-	2.0 U	25 U	-	-	2.0 U	2.0 U	25 U	25 U	-
4-Nitrophenol	ug/L		25 U	-	2.0 U	25 U	-	-	2.0 U	2.0 U	25 U	25 U	-
Acenaphthene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Acenaphthylene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Aniline	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Anthracene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Azobenzene	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Benzo(a)anthracene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Benzo(a)pyrene	ug/L		1 U	-	2.0 U	1 U	-	-	2.0 U	2.0 U	1 U	1 U	-
Benzo(b)fluoranthene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Benzo(g,h,i)perylene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Benzo(k)fluoranthene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Benzoic acid	ug/L		-	-	10 U	-	-	-	10 U	10 U	-	-	-
Benzyl alcohol	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
bis(2-Chloroethoxy)methane	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
bis(2-Chloroethyl)ether	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	0.046	6 U	0.95 U	**0.30 J**	6 U	1.1 U	0.95 U	2.0 U	2.0 U	6 U	6 U	0.95 U
Butyl benzylphthalate (BBP)	ug/L	0.013	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Carbazole	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Chrysene	ug/L	0.016	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Dibenz(a,h)anthracene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Dibenzofuran	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Diethyl phthalate	ug/L	200	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Dimethyl phthalate	ug/L	600	10 U	-	0.32 J	10 U	-	-	2.0 U	0.28 J	10 U	10 U	-
Di-n-butylphthalate (DBP)	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Di-n-octyl phthalate (DnOP)	ug/L	NV	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Fluoranthene	ug/L	6	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Fluorene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Hexachlorobenzene	ug/L	0.000005	1 U	-	2.0 U	1 U	-	-	2.0 U	2.0 U	1 U	1 U	-
Hexachlorobutadiene	ug/L	0.01	4 U	0.19 U	2.0 U	4 U	0.21 U	0.19 U	2.0 U	2.0 U	4 U	4 U	0.19 U
Hexachlorocyclopentadiene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Hexachloroethane	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Indeno(1,2,3-cd)pyrene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Isophorone	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Naphthalene	ug/L	4940	10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Nitrobenzene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
N-Nitrosodimethylamine	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-01	SW-01	SW-01	SW-02	SW-02	SW-02	SW-02	SW-02	SW-03	SW-03	SW-03
Sample ID:			SW-9973-112098-DG01	WS-091514-RB-SW01	MVD-032824-SS-SW01	SW-9973-112098-DG02	WS-091514-RB-FD10	WS-091514-RB-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW02	SW-9973-112098-DG03	SW-9973-112098-DG05	WS-091514-RB-SW03
Sample Date:			11/20/1998	9/15/2014	3/28/2024	11/20/1998	9/15/2014 (Duplicate)	9/15/2014	3/28/2024 (Duplicate)	3/28/2024	11/20/1998	11/20/1998 (Duplicate)	9/15/2014
Parameters	**Units**	**Criteria[1]**											
Semi-volatile Organic Compounds													
N-Nitrosodi-n-propylamine	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
N-Nitrosodiphenylamine	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Pentachlorophenol	ug/L		20 U	-	5.0 U	20 U	-	-	5.0 U	5.0 U	20 U	20 U	-
Phenanthrene	ug/L		10 U	-	2.0 U	10 U	-	-	2.0 U	2.0 U	10 U	10 U	-
Phenol	ug/L	70000	10 U	0.48 U	2.0 U	10 U	0.52 U	0.48 U	2.0 U	2.0 U	10 U	10 U	0.48 U
Pyrene	ug/L	8	10 U	0.19 U	2.0 U	10 U	0.21 U	0.19 U	2.0 U	2.0 U	10 U	10 U	0.19 U
Pyridine	ug/L		-	-	2.0 U	-	-	-	2.0 U	2.0 U	-	-	-
Semi-volatile Organic Compounds - SIM													
1-Methylnaphthalene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
2-Methylnaphthalene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Acenaphthene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Acenaphthylene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Anthracene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Benzo(a)anthracene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Benzo(a)pyrene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Benzo(b)fluoranthene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Benzo(g,h,i)perylene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Benzo(k)fluoranthene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Chrysene	ug/L	0.016	-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Dibenz(a,h)anthracene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Fluoranthene	ug/L	6	-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Fluorene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Hexachlorobenzene	ug/L	0.000005	-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Naphthalene	ug/L	4940	-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Phenanthrene	ug/L		-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Pyrene	ug/L	8	-	-	0.020 U	-	-	-	0.020 U	0.020 U	-	-	-
Metals													
Aluminum	ug/L	NV	3540	46.6	37 J	330	144 J	45.7 J	100	99	4360	4080	155
Antimony	ug/L	90	5 U	1.37	1.1	5 U	1.26 J	0.47 J	1.0 U	1.0 U	7.2	6.1	0.30
Arsenic	ug/L	5	**11.0**	3.42	2.3	**5.2**	**5.29 J**	2.21 J	1.6	1.7	**19.0**	**22.0**	1.34
Barium	ug/L	NV	27.0	10.7	11	21.0	14.2	14.4	13	13	39.0	39.0	25.5
Beryllium	ug/L	273	2 U	0.020 U	1.0 U	2 U	0.020 U	0.020 U	1.0 U	1.0 U	2 U	2 U	0.020 U
Cadmium	ug/L	7.9	5 U	0.020	1.0 U	5 U	0.083 J	0.046 J	1.0 U	1.0 U	5 U	5 U	0.034
Calcium	ug/L		8040	23600	22000	27700	24100	23700	21000	22000	10900	10800	30500
Chromium	ug/L	4.13***	**7.0**	0.62 U	0.85 J	5 U	0.78 U	0.46 U	1.2 J	0.79 J	**8.9**	**8.8**	0.39 U
Cobalt	ug/L	NV	5 U	0.091	0.15 J	5 U	0.197 J	0.091 J	0.11 J	0.11 J	5 U	5 U	0.307
Copper	ug/L	3.1	**9.9**	1.43	2.2	**13.0**	**3.18 J**	1.13 J	2.0 U	2.0 U	**29.0**	**30.0**	1.11
Iron	ug/L	NV	2980	204	230	853	592 J	314 J	320	320	4370	4330	740
Lead	ug/L	8.1	7.0	0.448	0.20 J	**9.6**	3.47 J	1.22 J	0.90 J	0.98 J	**26.0**	**27.0**	0.994
Magnesium	ug/L		3360	17200	16000	18700	17200	16200	15000	15000	5050	5080	17700
Manganese	ug/L	100	92.0	62.4	71	54.0	93.1 J	35.4 J	22	23	**180**	**186**	**276**
Mercury	ug/L	0.025	**0.2**	0.0017	0.0019	0.2 U	0.00769 J	0.00381 J	0.0031	0.0032	**0.3**	**0.2**	0.00258
Nickel	ug/L	8.2	**8.6**	0.57 U	0.80 J	8.0	1.05 J	0.80 J	0.92 J	0.93 J	**12.0**	**12.0**	1.35
Potassium	ug/L		1800	2190	2100	5000	2450	3040	2300	2400	2300	2400	3050
Selenium	ug/L	71	5 U	1.0 U	4.0 U	5 U	1.0 U	1.0 U	4.0 U	4.0 U	5 U	5 U	1.0 U
Silver	ug/L	0.91	1 U	0.020 U	1.0 U	1 U	0.007 J	0.020 U	1.0 U	1.0 U	1 U	1 U	0.020 U
Sodium	ug/L		2600	8870	8700	20000	9350	9670	9600	9800	8300	9200	11200
Thallium	ug/L	0.223	5 U	0.020 U	1.0 U	5 U	0.003 J	0.020 U	1.0 U	1.0 U	5 U	5 U	0.002 J
Vanadium	ug/L	NV	8.5	3.36	7.3	5 U	3.49	4.28	7.2	7.9	11.0	11.0	2.01
Zinc	ug/L	81	50 U	12.3	16	**95.0**	28.8 J	11.1 J	9.7	10	**139**	**137**	11.2
PCBs													
Aroclor-1016 (PCB-1016)	ug/L		-	0.0050 U	0.10 U	-	0.0050 U	0.0051 U	0.10 U	0.10 U	-	-	0.0050 U
Aroclor-1221 (PCB-1221)	ug/L		-	0.010 U	0.10 U	-	0.010 U	0.011 U	0.10 U	0.10 U	-	-	0.010 U
Aroclor-1232 (PCB-1232)	ug/L		-	0.0050 U	0.10 U	-	0.0050 U	0.0051 U	0.10 U	0.10 U	-	-	0.0050 U
Aroclor-1242 (PCB-1242)	ug/L		-	0.0016 J	0.10 U	-	0.0029 J	0.0056	0.10 U	0.10 U	-	-	0.0022 J
Aroclor-1248 (PCB-1248)	ug/L		-	0.0050 U	0.10 U	-	0.0050 U	0.0051 U	0.10 U	0.10 U	-	-	0.0050 U
Aroclor-1254 (PCB-1254)	ug/L	0.000104	-	**0.0010 J**	0.10 U	-	**0.0042 J**	**0.017 J**	0.10 U	0.10 U	-	-	**0.0024 J**
Aroclor-1260 (PCB-1260)	ug/L	NV	-	0.0020 J	0.10 U	-	0.0025 J	0.0095 J	0.10 U	0.10 U	-	-	0.0015 J
Aroclor-1268 (PCB-1268)	ug/L		-	-	0.10 U	-	-	-	0.10 U	0.10 U	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-01	SW-01	SW-01	SW-02	SW-02	SW-02	SW-02	SW-02	SW-03	SW-03	SW-03
Sample ID:			SW-9973-112098-DG01	WS-091514-RB-SW01	MVD-032824-SS-SW01	SW-9973-112098-DG02	WS-091514-RB-FD10	WS-091514-RB-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW02	SW-9973-112098-DG03	SW-9973-112098-DG05	WS-091514-RB-SW03
Sample Date:			11/20/1998	9/15/2014	3/28/2024	11/20/1998	9/15/2014 (Duplicate)	9/15/2014	3/28/2024 (Duplicate)	3/28/2024	11/20/1998	11/20/1998 (Duplicate)	9/15/2014
Parameters	**Units**	**Criteria[1]**											
Pesticides													
4,4'-DDD	ug/L	0.0000079	-	0.00099 U	0.050 U	-	0.001 U	0.0011 U	0.050 U	0.050 U	-	-	0.001 U
4,4'-DDE	ug/L	0.00000088	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
4,4'-DDE/DDD	ug/L		0.05 U	-	-	0.05 U	-	-	-	-	0.05 U	0.05 U	-
4,4'-DDT	ug/L	0.0000012	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
Aldrin	ug/L		0.05 U	-	0.050 UJ	0.05 U	-	-	0.050 UJ	0.050 UJ	0.05 U	0.05 U	-
alpha-BHC	ug/L	0.000048	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
alpha-Chlordane	ug/L		-	-	0.050 U	-	-	-	0.050 U	0.050 U	-	-	-
Aroclor-1016 (PCB-1016)	ug/L		1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1221 (PCB-1221)	ug/L		1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1232 (PCB-1232)	ug/L		1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1242 (PCB-1242)	ug/L		1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1248 (PCB-1248)	ug/L		1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1254 (PCB-1254)	ug/L	0.000104	1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
Aroclor-1260 (PCB-1260)	ug/L	NV	1.0 U	-	-	1.0 U	-	-	-	-	1.0 U	1.0 U	-
beta-BHC	ug/L	0.0014	0.05 U	0.00099 UJ	0.050 U	0.05 U	0.001 UJ	0.0011 UJ	0.050 U	0.050 U	0.05 U	0.05 U	0.001 UJ
Chlordane	ug/L		0.05 U	-	-	0.05 U	-	-	-	-	0.05 U	0.05 U	-
delta-BHC	ug/L	NV	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
Dieldrin	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Endosulfan I	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Endosulfan II	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Endosulfan sulfate	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Endrin	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Endrin aldehyde	ug/L	0.035	0.05 U	0.00099 UJ	0.050 U	0.05 U	0.001 UJ	0.0011 UJ	0.050 U	0.050 U	0.05 U	0.05 U	0.001 UJ
Endrin ketone	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
gamma-BHC (lindane)	ug/L	0.16	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
gamma-Chlordane	ug/L	NV	-	-	0.050 U	-	-	-	0.050 U	0.050 U	-	-	-
Heptachlor	ug/L	0.00000034	0.05 U	0.00099 U	0.050 U	0.05 U	0.001 U	0.0011 U	0.050 U	0.050 U	0.05 U	0.05 U	0.001 U
Heptachlor epoxide	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Hexachlorobenzene	ug/L	0.000005	-	**0.00028 J**	-	-	**0.00023 J**	0.0011 U	-	-	-	-	0.001 U
Methoxychlor	ug/L		0.05 U	-	0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.05 U	0.05 U	-
Toxaphene	ug/L		1.0 U	-	2.0 U	1.0 U	-	-	2.0 U	2.0 U	1.0 U	1.0 U	-
General Chemistry													
Cyanide (total)	ug/L	1	10 U	4.7 U	50 U	10 U	4.7 U	4.7 U	50 U	50 U	10 U	10 U	4.7 U

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-03	SW-04	SW-04	SW-05	SW-05	SW-07	SW-08	SWS-1	SWS-1	SWS-2	SWS-2
Sample ID:			MVD-032824-SS-SW03	SW-9973-112098-DG04	WS-091514-RB-SW04	WS-091514-RB-SW05	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08	SWS-1 North	SWS-1 North (Duplicate)	SWS-2 South	SWS-2 South (Duplicate)
Sample Date:			3/28/2024	11/20/1998	9/15/2014	9/15/2014	3/28/2024	3/28/2024	3/28/2024	9/26/1984	9/26/1984 (Duplicate)	9/26/1984	9/26/1984 (Duplicate)
Parameters	**Units**	**Criteria[1]**											
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1,1-Trichloroethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1,2-Trichloroethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1-Dichloroethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1-Dichloroethene	ug/L	4000	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
1,1-Dichloropropene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2,3-Trichlorobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2,3-Trichloropropane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	0.037	2.0 U	-	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2,4-Trimethylbenzene	ug/L	NV	2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L		10 U	-	-	-	10 U	10 U	10 U	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L		0.010 U	-	-	-	0.010 U	0.010 U	0.010 U	-	-	-	-
1,2-Dichlorobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2-Dichloroethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2-Dichloropropane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,3,5-Trimethylbenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,3-Dichlorobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,3-Dichloropropane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,4-Dichlorobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,2-Dichloropropane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	NV	10 U	5.0 U	20 U	20 U	10 U	10 U	10 U	-	-	-	-
2-Chlorotoluene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Hexanone	ug/L	NV	10 U	5.0 U	20 U	20 U	10 U	10 U	10 U	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Chlorotoluene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	NV	10 U	5.0 U	20 U	20 U	10 U	10 U	10 U	-	-	-	-
Acetone	ug/L	NV	0.61 J	20 U	20 U	20 U	0.61 J	0.71 J	0.54 J	-	-	-	-
Acrylonitrile	ug/L		10 U	-	-	-	10 U	10 U	10 U	-	-	-	-
Benzene	ug/L	1.6	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Bromobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Bromodichloromethane	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Bromoform	ug/L	12	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Bromomethane (Methyl bromide)	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Carbon disulfide	ug/L	NV	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Carbon tetrachloride	ug/L	0.35	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Chlorobenzene	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Chlorobromomethane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Chloroethane	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Chloroform (Trichloromethane)	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U
Chloromethane (Methyl chloride)	ug/L	NV	2.0 U	10 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
cis-1,2-Dichloroethene	ug/L	NV	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
cis-1,3-Dichloropropene	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Cymene (p-Isopropyltoluene)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Dibromochloromethane	ug/L	2.2	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Dibromomethane	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Ethylbenzene	ug/L	21	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Hexachlorobutadiene	ug/L	0.01	2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Isopropyl benzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
m&p-Xylenes	ug/L		-	-	0.50 U	0.50 U	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Methylene chloride	ug/L	100	5.0 U	10 U	2.0 U	2.0 U	5.0 U	5.0 U	5.0 U	-	-	-	-
Naphthalene	ug/L	4940	2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
N-Butylbenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
N-Propylbenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
o-Xylene	ug/L		-	-	0.50 U	0.50 U	-	-	-	-	-	-	-
Styrene	ug/L	NV	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
tert-Butylbenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Tetrachloroethene	ug/L	2.9	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U
Toluene	ug/L	102	2.0 U	5.0 U	0.50 U	0.070 J	2.0 U	2.0 U	2.0 U	-	-	-	-
trans-1,2-Dichloroethene	ug/L	1000	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
trans-1,3-Dichloropropene	ug/L		2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Trichloroethene	ug/L	0.7	2.0 U	5.0 U	0.50 U	0.50 U	2.0 U	2.0 U	2.0 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane (CFC-11)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Vinyl chloride	ug/L	0.18	0.20 U	10 U	0.50 U	0.50 U	0.20 U	0.20 U	0.20 U	-	-	-	-
Xylenes (total)	ug/L	106	2.0 U	5.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-03	SW-04	SW-04	SW-05	SW-05	SW-07	SW-08	SWS-1	SWS-1	SWS-2	SWS-2
Sample ID:			MVD-032824-SS-SW03	SW-9973-112098-DG04	WS-091514-RB-SW04	WS-091514-RB-SW05	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08	SWS-1 North	SWS-1 North (Duplicate)	SWS-2 South	SWS-2 South (Duplicate)
Sample Date:			3/28/2024	11/20/1998	9/15/2014	9/15/2014	3/28/2024	3/28/2024	3/28/2024	9/26/1984	9/26/1984 (Duplicate)	9/26/1984	9/26/1984 (Duplicate)
Parameters	**Units**	**Criteria[1]**											
Semi-volatile Organic Compounds													
1,2,4-Trichlorobenzene	ug/L	0.037	2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,2-Dichlorobenzene	ug/L		2.0 U	6 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,3-Dichlorobenzene	ug/L		2.0 U	6 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1,4-Dichlorobenzene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
1-Methylnaphthalene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L		-	10 U	-	-	-	-	-	-	-	-	-
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,3,4,6-Tetrachlorophenol	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,4,5-Trichlorophenol	ug/L		2.0 U	25 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,4,6-Trichlorophenol	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,4-Dichlorophenol	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,4-Dimethylphenol	ug/L	97	2.0 U	10 U	3.8 U	4.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-
2,4-Dinitrophenol	ug/L		10 U	25 U	-	-	10 U	10 U	10 U	-	-	-	-
2,4-Dinitrotoluene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,6-Dichlorophenol	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2,6-Dinitrotoluene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Chloronaphthalene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Chlorophenol	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Methylnaphthalene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Methylphenol	ug/L	NV	2.0 U	10 U	0.48 UJ	0.50 UJ	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Nitroaniline	ug/L		2.0 U	25 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
2-Nitrophenol	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
3&4-Methylphenol	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
3,3'-Dichlorobenzidine	ug/L		2.0 U	20 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
3-Nitroaniline	ug/L		5.0 U	25 U	-	-	5.0 U	5.0 U	5.0 U	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	7	2.0 U	25 U	1.9 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Bromophenyl phenyl ether	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Chloro-3-methylphenol	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Chloroaniline	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Methylphenol	ug/L	NV	-	10 U	0.48 UJ	0.50 UJ	-	-	-	-	-	-	-
4-Nitroaniline	ug/L		2.0 U	25 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
4-Nitrophenol	ug/L		2.0 U	25 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Acenaphthene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Acenaphthylene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Aniline	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Anthracene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Azobenzene	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzo(a)anthracene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzo(a)pyrene	ug/L		2.0 U	1 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzo(b)fluoranthene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzo(g,h,i)perylene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzo(k)fluoranthene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Benzoic acid	ug/L		10 U	-	-	-	10 U	10 U	10 U	-	-	-	-
Benzyl alcohol	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
bis(2-Chloroethyl)ether	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	0.046	2.0 U	6 U	0.95 U	1.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	0.013	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Carbazole	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Chrysene	ug/L	0.016	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Dibenz(a,h)anthracene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Dibenzofuran	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Diethyl phthalate	ug/L	200	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Dimethyl phthalate	ug/L	600	0.30 J	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	NV	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Fluoranthene	ug/L	6	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Fluorene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Hexachlorobenzene	ug/L	0.000005	2.0 U	1 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Hexachlorobutadiene	ug/L	0.01	2.0 U	4 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Hexachlorocyclopentadiene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Hexachloroethane	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Isophorone	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Naphthalene	ug/L	4940	2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Nitrobenzene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
N-Nitrosodimethylamine	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-03	SW-04	SW-04	SW-05	SW-05	SW-07	SW-08	SWS-1	SWS-1	SWS-2	SWS-2
Sample ID:			MVD-032824-SS-SW03	SW-9973-112098-DG04	WS-091514-RB-SW04	WS-091514-RB-SW05	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08	SWS-1 North	SWS-1 North (Duplicate)	SWS-2 South	SWS-2 South (Duplicate)
Sample Date:			3/28/2024	11/20/1998	9/15/2014	9/15/2014	3/28/2024	3/28/2024	3/28/2024	9/26/1984	9/26/1984 (Duplicate)	9/26/1984	9/26/1984 (Duplicate)
Parameters	**Units**	**Criteria[1]**											
Semi-volatile Organic Compounds													
N-Nitrosodi-n-propylamine	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
N-Nitrosodiphenylamine	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Pentachlorophenol	ug/L		5.0 U	20 U	-	-	5.0 U	5.0 U	5.0 U	-	-	-	-
Phenanthrene	ug/L		2.0 U	10 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Phenol	ug/L	70000	2.0 U	10 U	0.48 U	0.50 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Pyrene	ug/L	8	2.0 U	10 U	0.19 U	0.20 U	2.0 U	2.0 U	2.0 U	-	-	-	-
Pyridine	ug/L		2.0 U	-	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
Semi-volatile Organic Compounds - SIM													
1-Methylnaphthalene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
2-Methylnaphthalene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Acenaphthene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Acenaphthylene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Anthracene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Benzo(a)anthracene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Benzo(a)pyrene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Benzo(b)fluoranthene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Benzo(g,h,i)perylene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Benzo(k)fluoranthene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Chrysene	ug/L	0.016	0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Dibenz(a,h)anthracene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Fluoranthene	ug/L	6	0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Fluorene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Hexachlorobenzene	ug/L	0.000005	0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Naphthalene	ug/L	4940	0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Phenanthrene	ug/L		0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Pyrene	ug/L	8	0.020 U	-	-	-	0.020 U	0.020 U	0.020 U	-	-	-	-
Metals													
Aluminum	ug/L	NV	100	2380	200	230	99	790	130	-	-	-	-
Antimony	ug/L	90	2.6	5 U	0.30	1.30	1.4	1.0 U	1.0 U	-	-	-	-
Arsenic	ug/L	5	4.8	5 U	1.37	**6.13**	2.2	2.4	1.6	-	-	-	-
Barium	ug/L	NV	24	37.0	26.5	14.6	18	15	13	-	-	-	-
Beryllium	ug/L	273	1.0 U	2 U	0.020 U	0.020 U	0.24 J	1.0 U	1.0 U	-	-	-	-
Cadmium	ug/L	7.9	1.0 U	5 U	0.033	0.081	0.15 J	1.0 U	1.0 U	-	-	-	-
Calcium	ug/L		24000	28800	31000	24200	22000	19000	21000	-	-	-	-
Chromium	ug/L	4.13***	0.89 J	**5.5**	0.45 U	0.61 U	0.92 J	1.9 J	0.94 J	-	-	-	-
Cobalt	ug/L	NV	0.35 J	5 U	0.327	0.149	0.23 J	0.57 J	0.12 J	-	-	-	-
Copper	ug/L	3.1	2.9	**15.0**	1.34	2.77	2.7	**3.8**	2.0 U	-	-	-	-
Iron	ug/L	NV	640	3290	828	536	480	2300	330	-	-	-	-
Lead	ug/L	8.1	0.88 J	**9.6**	1.16	2.70	0.81 J	4.3	0.82 J	-	-	-	-
Magnesium	ug/L		15000	15900	17900	17300	15000	12000	15000	-	-	-	-
Manganese	ug/L	100	**120**	**258**	**265**	89.5	72	67	35	-	-	-	-
Mercury	ug/L	0.025	0.0028	**0.2**	0.00358	0.00605	0.0025	0.0028	0.0026	-	-	-	-
Nickel	ug/L	8.2	2.1	**9.1**	1.34	1.00	1.7 J	2.3	0.93 J	-	-	-	-
Potassium	ug/L		2600	4100	3100	2450	2500	1400	2300	-	-	-	-
Selenium	ug/L	71	4.0 U	5 U	1.0 U	1.0 U	4.0 U	4.0 U	4.0 U	-	-	-	-
Silver	ug/L	0.91	1.0 U	1 U	0.020 U	0.011 J	1.0 U	1.0 U	1.0 U	-	-	-	-
Sodium	ug/L		12000	15000	11300	9480	11000	9700	10000	-	-	-	-
Thallium	ug/L	0.223	1.0 U	5 U	0.020 U	0.020 U	**0.38 J**	1.0 U	1.0 U	-	-	-	-
Vanadium	ug/L	NV	6.6	6.9	2.06	3.39	6.1	8.3	7.2	-	-	-	-
Zinc	ug/L	81	51	50.0	12.2	21.3	38	13	8.2	-	-	-	-
PCBs													
Aroclor-1016 (PCB-1016)	ug/L		0.10 U	-	0.0050 U	0.0050 U	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1221 (PCB-1221)	ug/L		0.10 U	-	0.010 U	0.010 U	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1232 (PCB-1232)	ug/L		0.10 U	-	0.0050 U	0.0050 U	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1242 (PCB-1242)	ug/L		0.10 U	-	0.0026 J	0.0038 J	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1248 (PCB-1248)	ug/L		0.10 U	-	0.0050 U	0.0050 U	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1254 (PCB-1254)	ug/L	0.000104	0.10 U	-	**0.0025 J**	**0.0088 J**	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1260 (PCB-1260)	ug/L	NV	0.10 U	-	0.0022 J	0.0056 J	0.10 U	0.10 U	0.10 U	-	-	-	-
Aroclor-1268 (PCB-1268)	ug/L		0.10 U	-	-	-	0.10 U	0.10 U	0.10 U	-	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:			SW-03	SW-04	SW-04	SW-05	SW-05	SW-07	SW-08	SWS-1	SWS-1	SWS-2	SWS-2
Sample ID:			MVD-032824-SS-SW03	SW-9973-112098-DG04	WS-091514-RB-SW04	WS-091514-RB-SW05	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08	SWS-1 North	SWS-1 North (Duplicate)	SWS-2 South	SWS-2 South (Duplicate)
Sample Date:			3/28/2024	11/20/1998	9/15/2014	9/15/2014	3/28/2024	3/28/2024	3/28/2024	9/26/1984	9/26/1984 (Duplicate)	9/26/1984	9/26/1984 (Duplicate)
Parameters	**Units**	**Criteria[1]**											
Pesticides													
4,4'-DDD	ug/L	0.0000079	0.050 U	-	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
4,4'-DDE	ug/L	0.00000088	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
4,4'-DDE/DDD	ug/L		-	0.05 U	-	-	-	-	-	-	-	-	-
4,4'-DDT	ug/L	0.0000012	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
Aldrin	ug/L		0.050 UJ	0.05 U	-	-	0.050 UJ	0.050 UJ	0.050 UJ	-	-	-	-
alpha-BHC	ug/L	0.000048	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
alpha-Chlordane	ug/L		0.050 U	-	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Aroclor-1016 (PCB-1016)	ug/L		-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	ug/L		-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	ug/L		-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	ug/L		-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	ug/L		-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	ug/L	0.000104	-	1.0 U	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	ug/L	NV	-	1.0 U	-	-	-	-	-	-	-	-	-
beta-BHC	ug/L	0.0014	0.050 U	0.05 U	0.001 UJ	0.001 UJ	0.050 U	0.050 U	0.050 U	-	-	-	-
Chlordane	ug/L		-	0.05 U	-	-	-	-	-	-	-	-	-
delta-BHC	ug/L	NV	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
Dieldrin	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Endosulfan I	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Endosulfan II	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Endosulfan sulfate	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Endrin	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Endrin aldehyde	ug/L	0.035	0.050 U	0.05 U	0.001 UJ	0.001 UJ	0.050 U	0.050 U	0.050 U	-	-	-	-
Endrin ketone	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
gamma-BHC (lindane)	ug/L	0.16	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
gamma-Chlordane	ug/L	NV	0.050 U	-	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Heptachlor	ug/L	0.00000034	0.050 U	0.05 U	0.001 U	0.001 U	0.050 U	0.050 U	0.050 U	-	-	-	-
Heptachlor epoxide	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Hexachlorobenzene	ug/L	0.000005	-	-	0.001 U	**0.0003 J**	-	-	-	-	-	-	-
Methoxychlor	ug/L		0.050 U	0.05 U	-	-	0.050 U	0.050 U	0.050 U	-	-	-	-
Toxaphene	ug/L		2.0 U	1.0 U	-	-	2.0 U	2.0 U	2.0 U	-	-	-	-
General Chemistry													
Cyanide (total)	ug/L	1	50 U	10 U	4.7 U	4.7 U	50 U	50 U	50 U	-	-	-	-

Table 4.3

Summary of Surface Water Analytical Data
1913 Marine View Drive
Tacoma, Washington

Notes:

[1]	Preliminary Cleanup Levels for surface water established consistent with MTCA Method B surface water cleanup levels for marine water.
µg/L	micrograms per liter.
11.0	Concentration detected above the cleanup level.
-	Not applicable.
NV	No published value.
J	Estimated concentration.
U	Not detected at the associated concentration.
UJ	Not detected; associated concentration is estimated.
***	Value for Chromium VI. WQC adjusted to a lower concentration so that the excess cancer risk is one in one hundred thousand (1 x 10-5). See WAC 173-340-730(5)(b). The value for Chromium III is 243,000 (2.43E+05).

Location SW-04 was buried and no surface water was present during the 2024 event.
Location SW-07 and SW-08 were added for the 2024 event.

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Sediment Objective[1] a	Sediment Screening[1] b	SD-01 SED-9973-112098-DG01 11/20/1998 (0-0.5) ft BGS	SD-02 SED-9973-112098-DG02 11/20/1998 (0-0.5) ft BGS	SD-03 SED-9973-112098-DG03 11/20/1998 (0-0.5) ft BGS	SD-04 SED-9973-112098-DG04 11/20/1998 (0-0.5) ft BGS	SD-05 SE-091514-RB-SD05 9/15/2014 -	SD-06 SE-091514-RB-SD06 9/15/2014 -	SD-07 SE-091514-RB-SD07 9/15/2014 -	SD-08 SE-091514-RB-SD08 9/15/2014 -	SD-09 SE-091514-RB-SD09 9/15/2014 -	SD-10 SE-091514-RB-SD10 9/15/2014 -
Volatile Organic Compounds													
1,1,1-Trichloroethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
1,2,4-Trichlorobenzene	mg/kg	0.81	1.8	-	-	-	-	0.13 UJ	0.026 U	0.045 UJ	0.034 U	0.03 U	0.032 U
1,2-Dichloroethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg			0.005 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NV	NV	0.014 J	0.012 U	0.01 U	0.0076 U	0.081 J	0.0042 J	0.018 J	0.011 J	0.01 J	0.033
2-Hexanone	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.13 UJ	0.026 U	0.045 UJ	0.034 U	0.03 U	0.032 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.13 UJ	0.026 U	0.045 UJ	0.034 U	0.03 U	0.032 U
Acetone	mg/kg	NV	NV	0.025 J	0.046 U	0.041 U	0.031 U	0.55 J	0.038	0.15 J	0.09	0.13	0.15
Benzene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.0017 J	0.00026 J	0.0052 J	0.0012 J	0.0004 J	0.00019 J
Bromodichloromethane	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Bromoform	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 UJ	0.012 UJ	0.0085 UJ	0.0075 UJ	0.0079 UJ
Bromomethane (Methyl bromide)	mg/kg			0.019 U	0.023 U	0.02 U	0.015 U	-	-	-	-	-	-
Carbon disulfide	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.063 J	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.02
Carbon tetrachloride	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
Chlorobenzene	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Chloroethane	mg/kg			0.019 U	0.023 U	0.02 U	0.015 U	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	NV	NV	0.019 U	0.023 U	0.02 U	0.015 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
cis-1,2-Dichloroethene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
cis-1,3-Dichloropropene	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Dibromochloromethane	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
Ethylbenzene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0013 J	0.00078 J	0.0013 J	0.0075 U	0.0022 J
m&p-Xylenes	mg/kg			-	-	-	-	0.033 UJ	0.0063 U	0.0015 J	0.00036 J	0.0075 U	0.0079 U
Methylene chloride	mg/kg	NV	NV	0.019 U	0.023 U	0.02 U	0.015 U	0.065 UJ	0.013 U	0.023 UJ	0.017 U	0.015 U	0.016 U
o-Xylene	mg/kg			-	-	-	-	0.033 UJ	0.0063 U	0.0006 J	0.0085 U	0.0075 U	0.0079 U
Styrene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
Tetrachloroethene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
Toluene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.0035 J	0.00038 J	0.011 J	0.017	0.0006 J	0.013
trans-1,2-Dichloroethene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
trans-1,3-Dichloropropene	mg/kg			0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Trichloroethene	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	0.033 UJ	0.0063 U	0.0012 J	0.0085 U	0.0075 U	0.0079 U
Vinyl chloride	mg/kg	NV	NV	0.019 U	0.023 U	0.02 U	0.015 U	0.033 UJ	0.0063 U	0.012 UJ	0.0085 U	0.0075 U	0.0079 U
Xylenes (total)	mg/kg	NV	NV	0.0096 U	0.012 U	0.01 U	0.0076 U	-	-	-	-	-	-
Semi-volatile Organic Compounds													
1,2,4-Trichlorobenzene	mg/kg	0.81	1.8	0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.029	0.029	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
2,4-Dinitrophenol	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2-Chlorophenol	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
2-Methylphenol	mg/kg	0.063	0.063	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
2-Nitroaniline	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
2-Nitrophenol	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
3-Nitroaniline	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	NV	NV	1.5 U	1.8 U	1.6 U	1.2 U	6.4 U	2.2 U	2.4 U	2.4 U	2.0 U	2.4 U
4-Bromophenyl phenyl ether	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
4-Chloroaniline	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
4-Methylphenol	mg/kg	0.67	0.67	0.63 U	0.76 U	1.1 J[ab]	0.5 U	0.082 J	0.36 U	0.022 J	0.027 J	0.33 U	0.39 U

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Sediment Objective[1] a	Sediment Screening[1] b	SD-01 SED-9973-112098-DG01 11/20/1998 (0-0.5) ft BGS	SD-02 SED-9973-112098-DG02 11/20/1998 (0-0.5) ft BGS	SD-03 SED-9973-112098-DG03 11/20/1998 (0-0.5) ft BGS	SD-04 SED-9973-112098-DG04 11/20/1998 (0-0.5) ft BGS	SD-05 SE-091514-RB-SD05 9/15/2014 -	SD-06 SE-091514-RB-SD06 9/15/2014 -	SD-07 SE-091514-RB-SD07 9/15/2014 -	SD-08 SE-091514-RB-SD08 9/15/2014 -	SD-09 SE-091514-RB-SD09 9/15/2014 -	SD-10 SE-091514-RB-SD10 9/15/2014 -
Semi-volatile Organic Compounds													
4-Nitroaniline	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
4-Nitrophenol	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
Acenaphthene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Acenaphthylene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Anthracene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	47	78	0.63 U	0.46 J	0.61 J	0.5 U	1.1 U	0.36 U	1.2 U	14	0.33 U	0.39 U
Butyl benzylphthalate (BBP)	mg/kg	4.9	64	0.63 U	0.76 U	0.67 U	0.5 U	0.34 J	0.44	0.41	0.47	0.33 U	0.11 J
Carbazole	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Chrysene	mg/kg	110	460	0.63 U	0.76 U	0.67 U	0.5 U	0.40 J	0.40	0.93	1.2	0.018 J	0.11 J
Dibenz(a,h)anthracene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Dibenzofuran	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Diethyl phthalate	mg/kg	61	110	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
Dimethyl phthalate	mg/kg	53	53	0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	58	4500	0.63 U	0.76 U	0.67 U	0.5 U	0.087 J	0.36 U	0.069 J	0.40 U	0.33 U	0.39 U
Fluoranthene	mg/kg	160	1200	0.63 U	0.76 U	0.67 U	0.5 U	0.30 J	0.28 J	0.59	0.25 J	0.031 J	0.063 J
Fluorene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.38	2.3	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
Hexachlorobutadiene	mg/kg	3.9	6.2	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
Hexachlorocyclopentadiene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Hexachloroethane	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Isophorone	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Naphthalene	mg/kg	99	170	0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Nitrobenzene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Pentachlorophenol	mg/kg			1.5 U	1.8 U	1.6 U	1.2 U	-	-	-	-	-	-
Phenanthrene	mg/kg			0.63 U	0.76 U	0.67 U	0.5 U	-	-	-	-	-	-
Phenol	mg/kg	0.42	1.2	0.63 U	0.76 U	0.67 U	0.5 U	1.1 U	0.36 U	0.39 U	0.40 U	0.33 U	0.39 U
Pyrene	mg/kg	1000	1400	0.63 U	0.76 U	0.67 U	0.5 U	0.20 J	0.24 J	0.62	0.29 J	0.026 J	0.050 J
Metals													
Aluminum	mg/kg	NV	NV	9220	20300 J	28700 J	9830	18600	8560	15200	16100	10000	7780
Antimony	mg/kg	NV	NV	3.8 J	2.8 J	2.6 J	0.8 U	9.6 J	3.9 J	4.8 J	8.0 J	3.5 UJ	1.2 J
Arsenic	mg/kg	57	93	10.1	**59.9 J[a]**	55.0 J	2.8	22.5	22.7	16.8	**66.3[a]**	5.6	5.9
Barium	mg/kg	NV	NV	42.1	104 J	187 J	68.8	141	53.3	211	167	51.5	46.5
Beryllium	mg/kg	NV	NV	0.4 U	0.5 U	0.4 U	0.3 U	0.37 J	0.13 J	0.26	0.30	0.13 J	0.08 J
Cadmium	mg/kg	5.1	6.7	1.7	2.5 J	4.1 J	1.2	3.75	0.87	4.31	3.66	0.25	0.41
Calcium	mg/kg			5770	6870 J	5870 J	3530	10800 J	4040 J	4860 J	4520 J	4270 J	3720 J
Chromium	mg/kg	260	270	24.9 J	39.2 J	44.8 J	18.3 J	51.2	24.6	44.6	41.8	21.8	18.4
Cobalt	mg/kg	NV	NV	5.2	9.7 J	13.6 J	6.4	13.0	5.65	10.2	10.5	5.40	4.14
Copper	mg/kg	390	390	28.7	94.5 J	147 J	19.9	91.6	73.2	226	154	20.6	37.4
Iron	mg/kg	NV	NV	18600	26300 J	36500 J	17300	31800	17800	24400	23700	13400	12500
Lead	mg/kg	450	530	34.4	122 J	147 J	14.2	139	98.0	360	222	18.4	44.3
Magnesium	mg/kg			2830	4220 J	4580 J	2520	5200	2610	3530	4280	3580	2570
Manganese	mg/kg	NV	NV	273	885 J	1620 J	349	378	116	445	249	213	147
Mercury	mg/kg	0.41	0.59	0.2 J	0.2 J	0.2 J	0.2 U	0.335	**3.03[ab]**	**0.846[ab]**	0.342	0.034	0.099
Nickel	mg/kg	NV	NV	17.4	34.6 J	50.9 J	19.9	51.6	19.8	55.5	48.9	24.1	15.2
Potassium	mg/kg			610	1070 J	1430 J	653	1040	667	857	944	606	565
Selenium	mg/kg	NV	NV	1.0 U	1.2 U	1.0 U	0.8 U	6.4 J	2.2 J	2.9 J	2.3 J	1.4 J	1.0 J
Silver	mg/kg	6.1	6.1	0.2 U	0.2 U	0.2 J	0.2 U	2.6 U	0.2 J	1.1	0.3 J	0.2 J	0.8 U
Sodium	mg/kg			465	348 J	807 J	258	657	729	342	381	212	536
Thallium	mg/kg	NV	NV	3.8 U	4.6 U	4.1 U	3.1 U	6.5 U	1.9 U	2.0 U	2.0 U	1.8 U	2.1 U
Vanadium	mg/kg	NV	NV	49.7	62.2 J	73.3 J	35.2	70.8	43.5	43.7	50.6	32.7	35.2
Zinc	mg/kg	410	960	151	297 J	**705 J[a]**	112	**570[a]**	223	**947[a]**	**690[a]**	86.2	103

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Sediment Objective[1] a	Sediment Screening[1] b	SD-01 SED-9973-112098-DG01 11/20/1998 (0-0.5) ft BGS	SD-02 SED-9973-112098-DG02 11/20/1998 (0-0.5) ft BGS	SD-03 SED-9973-112098-DG03 11/20/1998 (0-0.5) ft BGS	SD-04 SED-9973-112098-DG04 11/20/1998 (0-0.5) ft BGS	SD-05 SE-091514-RB-SD05 9/15/2014 -	SD-06 SE-091514-RB-SD06 9/15/2014 -	SD-07 SE-091514-RB-SD07 9/15/2014 -	SD-08 SE-091514-RB-SD08 9/15/2014 -	SD-09 SE-091514-RB-SD09 9/15/2014 -	SD-10 SE-091514-RB-SD10 9/15/2014 -
PCBs													
Aroclor-1016 (PCB-1016)	mg/kg			-	-	-	-	0.053 U	0.041 U	0.020 U	0.020 U	0.017 U	0.020 U
Aroclor-1221 (PCB-1221)	mg/kg			-	-	-	-	0.11 U	0.054 U	0.040 U	0.040 U	0.034 U	0.040 U
Aroclor-1232 (PCB-1232)	mg/kg			-	-	-	-	0.053 U	0.045 U	0.020 U	0.020 U	0.017 U	0.020 U
Aroclor-1242 (PCB-1242)	mg/kg			-	-	-	-	0.065	0.041 U	0.051 J	0.013 J	0.017 U	0.0092 J
Aroclor-1248 (PCB-1248)	mg/kg			-	-	-	-	0.053 U	0.049 U	0.020 U	0.020 U	0.017 U	0.020 U
Aroclor-1254 (PCB-1254)	mg/kg	12*	65*	-	-	-	-	0.25	0.56	0.54	0.18	0.017 U	0.041
Aroclor-1260 (PCB-1260)	mg/kg	12*	65*	-	-	-	-	0.12	0.19	0.37	0.13	0.017 U	0.025
Pesticides													
4,4'-DDD	mg/kg	NV	NV	-	-	-	-	0.0025 J	0.0021 J	0.0085	0.0017 J	0.0017 U	0.002 U
4,4'-DDE	mg/kg	NV	NV	0.031 U	0.037 U	0.033 U	0.024 U	0.0053 U	0.0018 U	0.0029 U	0.002 U	0.0017 U	0.002 U
4,4'-DDE/DDD	mg/kg			0.031 U	0.037 U	0.033 U	0.024 U	-	-	-	-	-	-
4,4'-DDT	mg/kg	NV	NV	0.031 U	0.037 U	0.033 U	0.024 U	0.018 U	0.055 U	0.062 U	0.025 U	0.0017 U	0.0028 U
Aldrin	mg/kg			0.015 U	0.018 U	0.016 U	0.012 U	-	-	-	-	-	-
alpha-BHC	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	0.0053 U	0.0018 U	0.002 U	0.002 U	0.0017 U	0.002 U
alpha-Chlordane	mg/kg			0.015 U	0.018 U	0.016 U	0.012 U	-	-	-	-	-	-
Aroclor-1016 (PCB-1016)	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	12	65	0.15 U	*	*	0.12 U	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	12	65	0.15 U	0.23 J*	0.39 J*	0.12 U	-	-	-	-	-	-
beta-BHC	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	0.0053 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
delta-BHC	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	0.0053 U	0.0018 U	0.002 U	0.002 U	0.0017 U	0.002 U
Dieldrin	mg/kg			0.031 U	0.037 U	0.033 U	0.024 U	-	-	-	-	-	-
Endosulfan I	mg/kg			0.015 U	0.018 U	0.016 U	0.012 U	-	-	-	-	-	-
Endosulfan II	mg/kg			0.031 U	0.037 U	0.033 U	0.024 U	-	-	-	-	-	-
Endosulfan sulfate	mg/kg			0.031 U	0.037 U	0.033 U	0.024 U	-	-	-	-	-	-
Endrin	mg/kg			0.031 U	0.037 U	0.033 U	0.024 U	-	-	-	-	-	-
Endrin aldehyde	mg/kg	NV	NV	0.031 U	0.037 U	0.033 U	0.024 U	0.0053 U	0.0041 U	0.0041 U	0.002 U	0.0025 U	0.0025 U
gamma-BHC (lindane)	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	0.0013 J	0.0018 U	0.002 U	0.002 U	0.0017 U	0.002 U
gamma-Chlordane	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	-	-	-	-	-	-
Heptachlor	mg/kg	NV	NV	0.015 U	0.018 U	0.016 U	0.012 U	0.0053 U	0.0018 U	0.002 U	0.002 U	0.0017 U	0.002 U
Heptachlor epoxide	mg/kg			0.015 U	0.018 U	0.016 U	0.012 U	-	-	-	-	-	-
Methoxychlor	mg/kg			0.15 U	0.18 U	0.16 U	0.12 U	-	-	-	-	-	-
Toxaphene	mg/kg			0.31 U	0.37 U	0.33 U	0.24 U	-	-	-	-	-	-
General Chemistry													
Cyanide (total)	mg/kg	NV	NV	0.96 U	1.2 U	1.0 U	0.76 U	0.82 U	0.27 U	0.24 J	0.32 U	0.24 U	0.31 U

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Sample Location:				SD-11	SD-12
Sample ID:				SE-091514-RB-SD11	SE-091514-RB-SD12
Sample Date:				9/15/2014	9/15/2014
Sample Depth:				-	-
Parameters	**Units**	**Sediment Objective[1]** a	**Sediment Screening[1]** b		
Volatile Organic Compounds					
1,1,1-Trichloroethane	mg/kg			-	-
1,1,2,2-Tetrachloroethane	mg/kg			-	-
1,1,2-Trichloroethane	mg/kg			-	-
1,1-Dichloroethane	mg/kg			-	-
1,1-Dichloroethene	mg/kg	NV	NV	0.0048 U	0.0057 U
1,2,4-Trichlorobenzene	mg/kg	0.81	1.8	0.019 U	0.023 U
1,2-Dichloroethane	mg/kg			-	-
1,2-Dichloropropane	mg/kg			-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NV	NV	0.0028 J	0.0062 J
2-Hexanone	mg/kg	NV	NV	0.019 U	0.023 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NV	NV	0.019 U	0.023 U
Acetone	mg/kg	NV	NV	0.036	0.045
Benzene	mg/kg	NV	NV	0.00057 J	0.0039 J
Bromodichloromethane	mg/kg			-	-
Bromoform	mg/kg	NV	NV	0.0048 UJ	0.0057 UJ
Bromomethane (Methyl bromide)	mg/kg			-	-
Carbon disulfide	mg/kg	NV	NV	0.0048 U	0.039
Carbon tetrachloride	mg/kg	NV	NV	0.0048 U	0.0057 U
Chlorobenzene	mg/kg			-	-
Chloroethane	mg/kg			-	-
Chloroform (Trichloromethane)	mg/kg			-	-
Chloromethane (Methyl chloride)	mg/kg	NV	NV	0.0048 U	0.0057 U
cis-1,2-Dichloroethene	mg/kg	NV	NV	0.0048 U	0.0057 U
cis-1,3-Dichloropropene	mg/kg			-	-
Dibromochloromethane	mg/kg	NV	NV	0.0048 U	0.0057 U
Ethylbenzene	mg/kg	NV	NV	0.0048 U	0.0057 U
m&p-Xylenes	mg/kg			0.0048 U	0.0057 U
Methylene chloride	mg/kg	NV	NV	0.0095 U	0.012 U
o-Xylene	mg/kg			0.0048 U	0.0057 U
Styrene	mg/kg	NV	NV	0.0048 U	0.0057 U
Tetrachloroethene	mg/kg	NV	NV	0.0048 U	0.0057 U
Toluene	mg/kg	NV	NV	0.00088 J	0.0008 J
trans-1,2-Dichloroethene	mg/kg	NV	NV	0.0048 U	0.0057 U
trans-1,3-Dichloropropene	mg/kg			-	-
Trichloroethene	mg/kg	NV	NV	0.0048 U	0.00064 J
Vinyl chloride	mg/kg	NV	NV	0.0048 U	0.0057 U
Xylenes (total)	mg/kg	NV	NV	-	-
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	mg/kg	0.81	1.8	-	-
1,2-Dichlorobenzene	mg/kg			-	-
1,3-Dichlorobenzene	mg/kg			-	-
1,4-Dichlorobenzene	mg/kg			-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg			-	-
2,4,5-Trichlorophenol	mg/kg			-	-
2,4,6-Trichlorophenol	mg/kg			-	-
2,4-Dichlorophenol	mg/kg			-	-
2,4-Dimethylphenol	mg/kg	0.029	0.029	0.32 U	0.32 U
2,4-Dinitrophenol	mg/kg			-	-
2,4-Dinitrotoluene	mg/kg			-	-
2,6-Dinitrotoluene	mg/kg			-	-
2-Chloronaphthalene	mg/kg			-	-
2-Chlorophenol	mg/kg			-	-
2-Methylnaphthalene	mg/kg			-	-
2-Methylphenol	mg/kg	0.063	0.063	0.32 U	0.32 U
2-Nitroaniline	mg/kg			-	-
2-Nitrophenol	mg/kg			-	-
3,3'-Dichlorobenzidine	mg/kg			-	-
3-Nitroaniline	mg/kg			-	-
4,6-Dinitro-2-methylphenol	mg/kg	NV	NV	1.9 U	2.0 U
4-Bromophenyl phenyl ether	mg/kg			-	-
4-Chloro-3-methylphenol	mg/kg			-	-
4-Chloroaniline	mg/kg			-	-
4-Chlorophenyl phenyl ether	mg/kg			-	-
4-Methylphenol	mg/kg	0.67	0.67	0.32 U	0.32 U

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Sediment Objective[1] a	Sediment Screening[1] b	SD-11 SE-091514-RB-SD11 9/15/2014 -	SD-12 SE-091514-RB-SD12 9/15/2014 -
Semi-volatile Organic Compounds					
4-Nitroaniline	mg/kg			-	-
4-Nitrophenol	mg/kg			-	-
Acenaphthene	mg/kg			-	-
Acenaphthylene	mg/kg			-	-
Anthracene	mg/kg			-	-
Benzo(a)anthracene	mg/kg			-	-
Benzo(a)pyrene	mg/kg			-	-
Benzo(b)fluoranthene	mg/kg			-	-
Benzo(g,h,i)perylene	mg/kg			-	-
Benzo(k)fluoranthene	mg/kg			-	-
bis(2-Chloroethoxy)methane	mg/kg			-	-
bis(2-Chloroethyl)ether	mg/kg			-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	47	78	0.32 U	0.32 U
Butyl benzylphthalate (BBP)	mg/kg	4.9	64	0.32 U	0.046 J
Carbazole	mg/kg			-	-
Chrysene	mg/kg	110	460	0.32 U	0.022 J
Dibenz(a,h)anthracene	mg/kg			-	-
Dibenzofuran	mg/kg			-	-
Diethyl phthalate	mg/kg	61	110	0.32 U	0.32 U
Dimethyl phthalate	mg/kg	53	53	-	-
Di-n-butylphthalate (DBP)	mg/kg			-	-
Di-n-octyl phthalate (DnOP)	mg/kg	58	4500	0.32 U	0.32 U
Fluoranthene	mg/kg	160	1200	0.32 U	0.018 J
Fluorene	mg/kg			-	-
Hexachlorobenzene	mg/kg	0.38	2.3	0.32 U	0.32 U
Hexachlorobutadiene	mg/kg	3.9	6.2	0.32 U	0.32 U
Hexachlorocyclopentadiene	mg/kg			-	-
Hexachloroethane	mg/kg			-	-
Indeno(1,2,3-cd)pyrene	mg/kg			-	-
Isophorone	mg/kg			-	-
Naphthalene	mg/kg	99	170	-	-
Nitrobenzene	mg/kg			-	-
N-Nitrosodi-n-propylamine	mg/kg			-	-
N-Nitrosodiphenylamine	mg/kg			-	-
Pentachlorophenol	mg/kg			-	-
Phenanthrene	mg/kg			-	-
Phenol	mg/kg	0.42	1.2	0.32 U	0.32 U
Pyrene	mg/kg	1000	1400	0.32 U	0.018 J
Metals					
Aluminum	mg/kg	NV	NV	11700	8040
Antimony	mg/kg	NV	NV	3.3 UJ	4.1 UJ
Arsenic	mg/kg	57	93	3.0 J	5.9
Barium	mg/kg	NV	NV	61.5	45.2
Beryllium	mg/kg	NV	NV	0.16 J	0.11 J
Cadmium	mg/kg	5.1	6.7	0.07 J	0.23
Calcium	mg/kg			2200 J	2780 J
Chromium	mg/kg	260	270	25.8	17.6
Cobalt	mg/kg	NV	NV	5.80	5.16
Copper	mg/kg	390	390	11.9	17.1
Iron	mg/kg	NV	NV	13000	13200
Lead	mg/kg	450	530	5.0	13.1
Magnesium	mg/kg			3800	2770
Manganese	mg/kg	NV	NV	166	345
Mercury	mg/kg	0.41	0.59	0.025	0.025
Nickel	mg/kg	NV	NV	29.0	16.7
Potassium	mg/kg			537	560
Selenium	mg/kg	NV	NV	1.5 J	1.9 J
Silver	mg/kg	6.1	6.1	0.2 J	0.8 U
Sodium	mg/kg			190	187
Thallium	mg/kg	NV	NV	1.6 U	2.1 U
Vanadium	mg/kg	NV	NV	31.6	27.6
Zinc	mg/kg	410	960	31.5	139

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Parameters	Units	Sediment Objective[1] a	Sediment Screening[1] b	SD-11 SE-091514-RB-SD11 9/15/2014 -	SD-12 SE-091514-RB-SD12 9/15/2014 -
PCBs					
Aroclor-1016 (PCB-1016)	mg/kg			0.016 U	0.016 U
Aroclor-1221 (PCB-1221)	mg/kg			0.032 U	0.032 U
Aroclor-1232 (PCB-1232)	mg/kg			0.016 U	0.016 U
Aroclor-1242 (PCB-1242)	mg/kg			0.016 U	0.016 U
Aroclor-1248 (PCB-1248)	mg/kg			0.016 U	0.016 U
Aroclor-1254 (PCB-1254)	mg/kg	12*	65*	0.016 U	0.016 U
Aroclor-1260 (PCB-1260)	mg/kg	12*	65*	0.016 U	0.016 U
Pesticides					
4,4'-DDD	mg/kg	NV	NV	0.0016 U	0.0016 U
4,4'-DDE	mg/kg	NV	NV	0.0016 U	0.0016 U
4,4'-DDE/DDD	mg/kg			-	-
4,4'-DDT	mg/kg	NV	NV	0.0016 U	0.0016 U
Aldrin	mg/kg			-	-
alpha-BHC	mg/kg	NV	NV	0.0016 U	0.0016 U
alpha-Chlordane	mg/kg			-	-
Aroclor-1016 (PCB-1016)	mg/kg			-	-
Aroclor-1221 (PCB-1221)	mg/kg			-	-
Aroclor-1232 (PCB-1232)	mg/kg			-	-
Aroclor-1242 (PCB-1242)	mg/kg			-	-
Aroclor-1248 (PCB-1248)	mg/kg			-	-
Aroclor-1254 (PCB-1254)	mg/kg	12	65	-	-
Aroclor-1260 (PCB-1260)	mg/kg	12	65	-	-
beta-BHC	mg/kg	NV	NV	0.0025 U	0.0025 U
delta-BHC	mg/kg	NV	NV	0.0016 U	0.0016 U
Dieldrin	mg/kg			-	-
Endosulfan I	mg/kg			-	-
Endosulfan II	mg/kg			-	-
Endosulfan sulfate	mg/kg			-	-
Endrin	mg/kg			-	-
Endrin aldehyde	mg/kg	NV	NV	0.0025 U	0.0025 U
gamma-BHC (lindane)	mg/kg	NV	NV	0.0016 U	0.0016 U
gamma-Chlordane	mg/kg	NV	NV	-	-
Heptachlor	mg/kg	NV	NV	0.0016 U	0.0016 U
Heptachlor epoxide	mg/kg			-	-
Methoxychlor	mg/kg			-	-
Toxaphene	mg/kg			-	-
General Chemistry					
Cyanide (total)	mg/kg	NV	NV	0.25 U	0.25 U

Table 4.4

Summary of Sediment Analytical Data
1913 Marine View Drive
Tacoma, Washington

Notes:

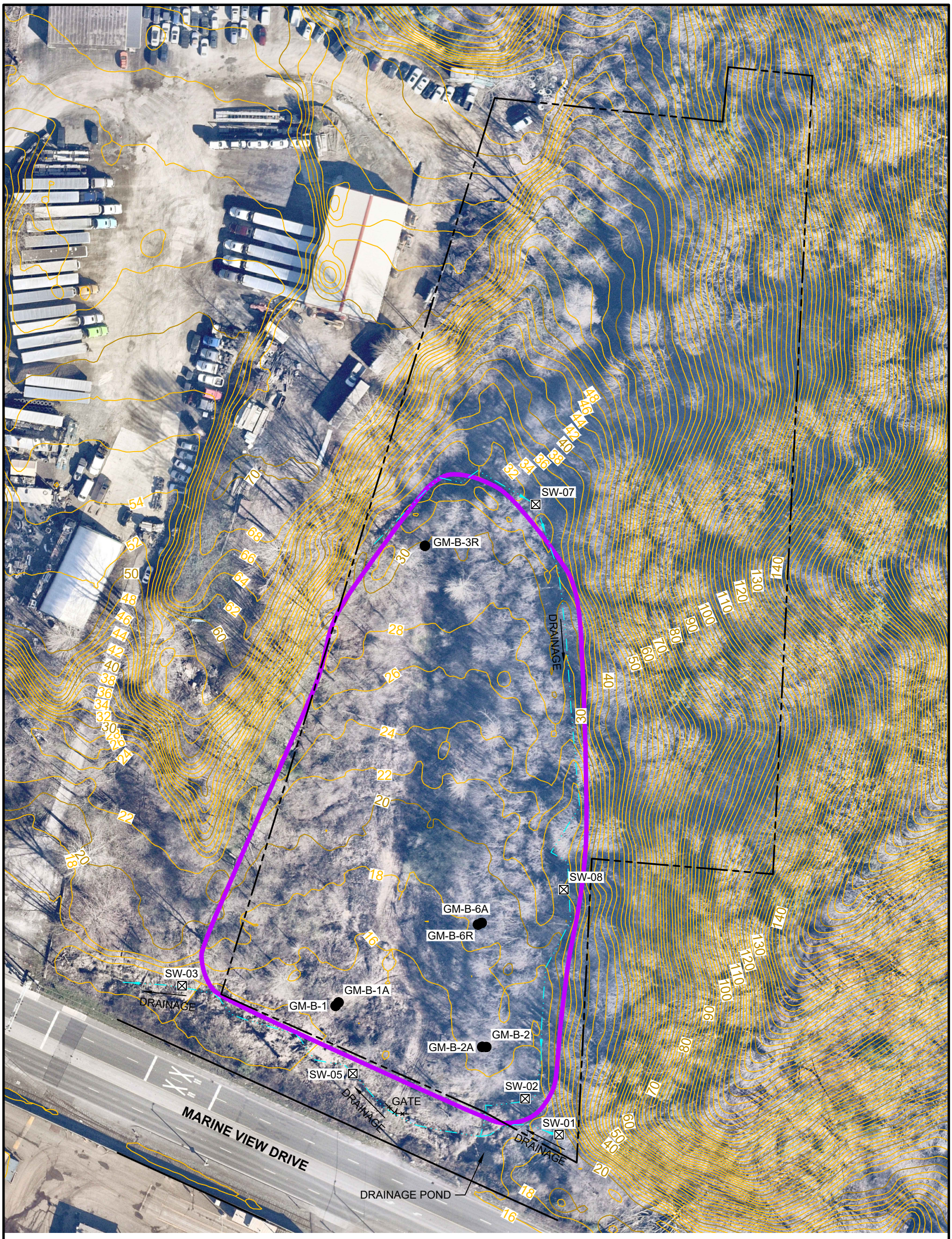
1	Preliminary Cleanup Levels for sediment established consistent with WAC 173-204-562(2) Table III Marine sediment - Chemical criteria.
a	Cleanup Objective. The sediment cleanup objectives establish a no adverse effects level, including no acute or chronic adverse effects, to the benthic community. Chemical concentrations at or below the sediment cleanup objectives correspond to sediment quality that results in no adverse effects to the benthic community.
b	Cleanup Screening Level. The cleanup screening levels establish a minor adverse effects level, including acute or chronic effects, to the benthic community. Chemical concentrations at or below the cleanup screening level, but greater than the sediment cleanup objective correspond to sediment quality that could result in minor adverse effects to the benthic community.
ft BGS	feet below ground surface.
mg/kg	milligrams per kilogram.
1.1 J[ab]	Concentration exceeds level identified by superscript.
-	Not analyzed
NV	No published value.
J	Estimated concentration
U	Not detected at the associated concentration
UJ	Not detected; associated concentration is estimated
*	Criteria is for total PCBs.

Table 4.5

Groundwater Monitoring Wells Construction Details
1913 Marine View Drive
Tacoma, Washington

Shallow Groundwater			
Well ID	**Year of Install**	**Total Depth**	**Screen Interval**
GM-B-1	1984	14	8 - 13
GM-B-2	1984	11	5 - 10
GM-B-3R	1984	12	7 - 12
GM-B-6R	1984	12	7 - 12
Deeper Groundwater			
Well ID	**Year of Install**	**Total Depth**	**Screen Interval**
GM-B-1A	1998	22	15 - 20
GM-B-2A	1998	22	15 - 20
GM-B-6A	1998	24	19 - 24

FIGURES



LEGEND

- PROPERTY LINE
- APPROXIMATE DRAINAGE SWALE
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- 20 — EXISTING MAJOR GROUND CONTOUR (10' INTERVAL)
- 18 — EXISTING MINOR GROUND CONTOUR (2' INTERVAL)
- ● MONITORING WELL LOCATION
- ⊠ SURFACE WATER SAMPLE LOCATION

NOTE:
EXISTING GROUND TOPO CREATED FROM 2020 LIDAR: PIERCE COUNTY, WA, NAVD88
OCM Partners, 2023: 2020 LIDAR: PIERCE COUNTY, WA.

N

0 80

SCALE IN FEET

IMAGERY SOURCE:
NEARMAP, DATE OF PHOTOGRAPHY
MARCH 16, 2024.

SITE PLAN 2024

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

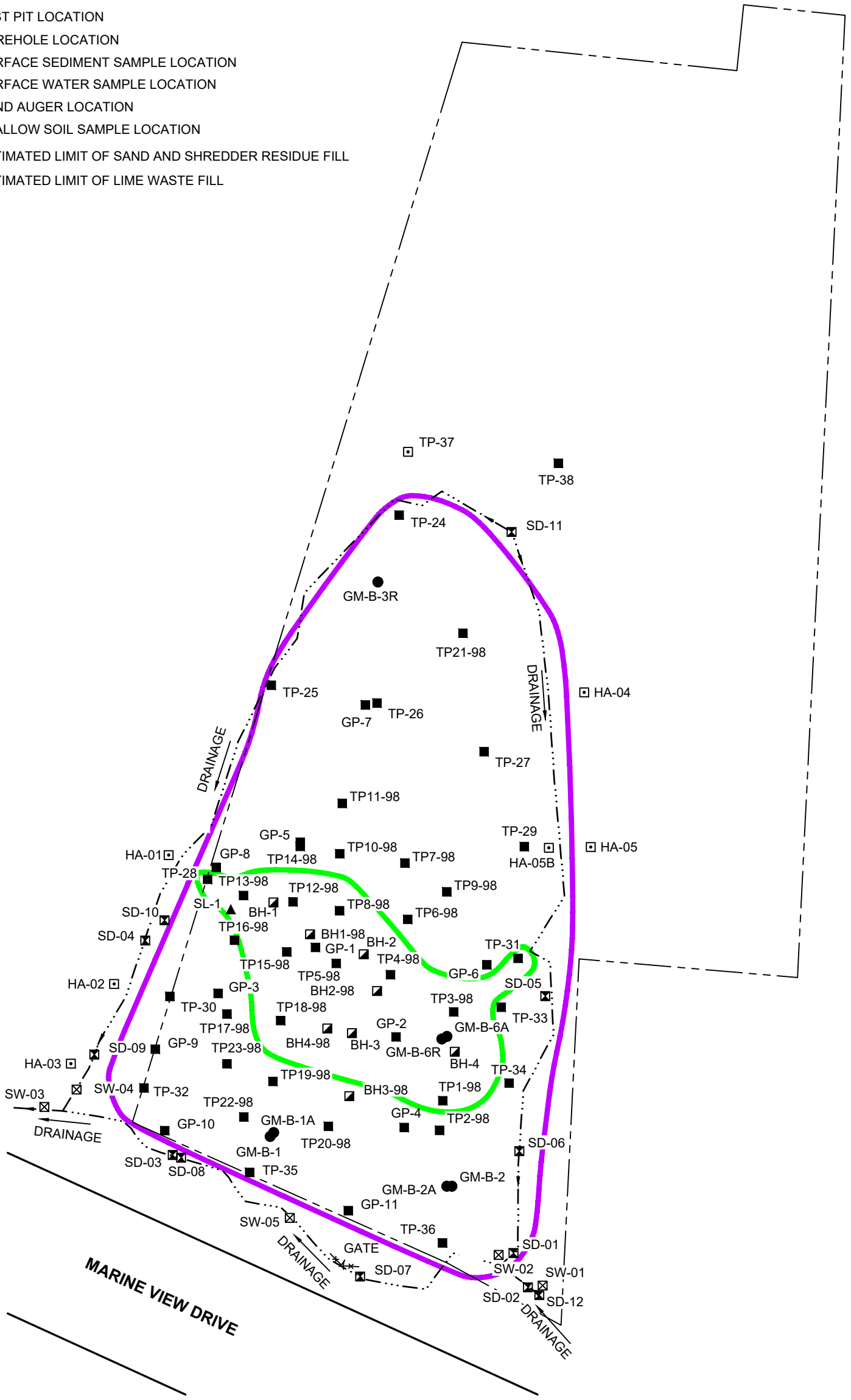
FIGURE
2.1

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G001 - Last Saved By: MJerome on 6/13/25

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- MONITORING WELL LOCATION
- TEST PIT LOCATION
- BOREHOLE LOCATION
- SURFACE SEDIMENT SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- HAND AUGER LOCATION
- SHALLOW SOIL SAMPLE LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL



0 80

SCALE IN FEET

SITE PLAN 2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

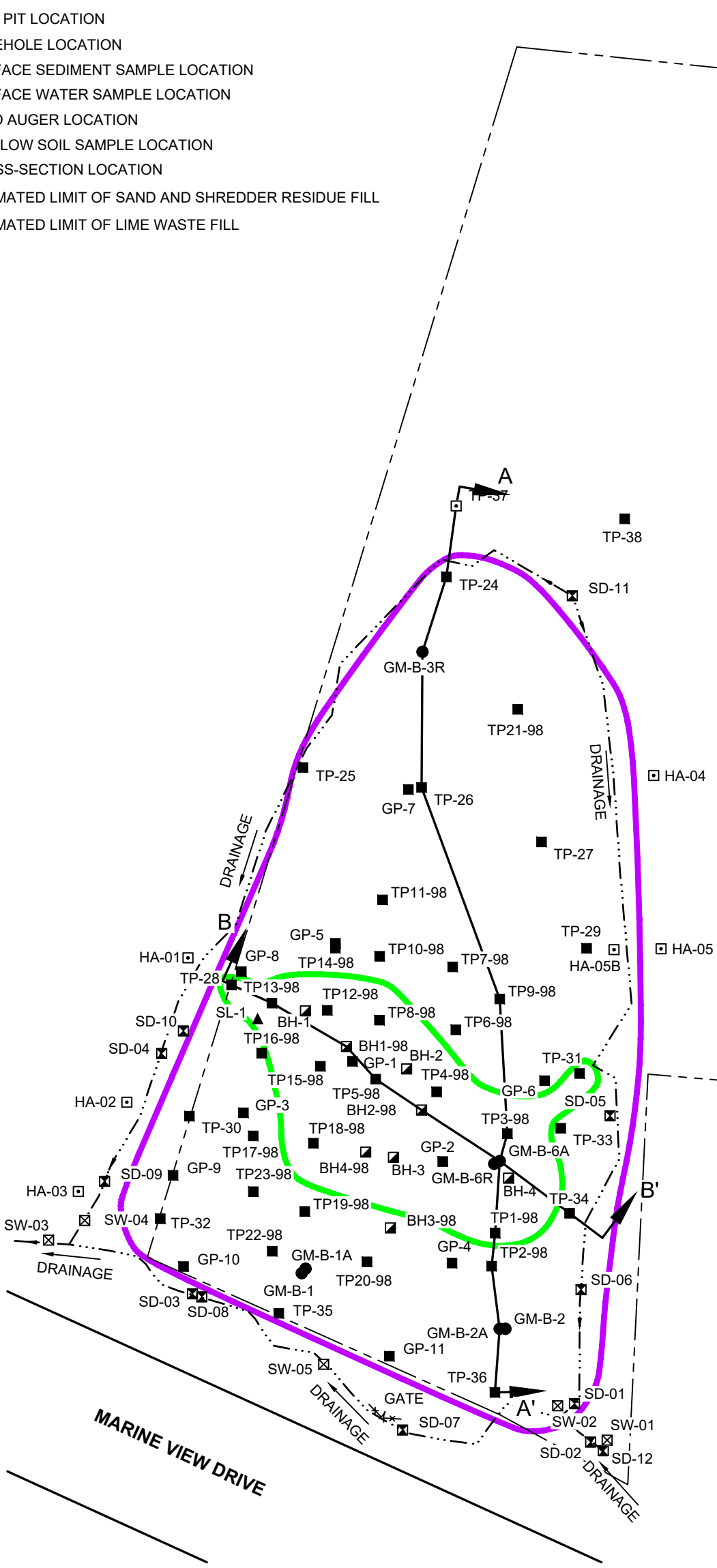
FIGURE 2.2

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G007 - Last Saved By: MJerome on 6/13/25

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- MONITORING WELL LOCATION
- TEST PIT LOCATION
- BOREHOLE LOCATION
- SURFACE SEDIMENT SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- HAND AUGER LOCATION
- SHALLOW SOIL SAMPLE LOCATION
- CROSS-SECTION LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL



0 80

SCALE IN FEET

STRATIGRAPHIC CROSS-SECTIONS - PLAN 2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 3.1

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G007 - Last Saved By: MJerome on 6/13/25

A NORTH

A' SOUTH

TP-37 TP-24 GM-B-3R TP-26 TP-9-98 TP-3-98 GM-B-6A TP1-98 TP2-98 GM-B-2A TP-36

GROUND
TOPSOIL
SAND AND SHREDDER RESIDUE FILL
NATIVE SAND
CLAYEY SILT W/PEAT
PEAT
SILTY SAND
COBBLES
SAND W/ BRICK
LIME WASTE
SILT
CLAYEY SILT W/ WIRE

ELEVATION (ft AMSL)

30
25
20
15
10
5
0
-5
-10

0 50 100 150 200 250 300 350 400 450

DISTANCE (ft)

SCALES

HORIZONTAL 1"=40'
VERTICAL 1"= 5'

STRATIGRAPHIC CROSS-SECTION A-A'
2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

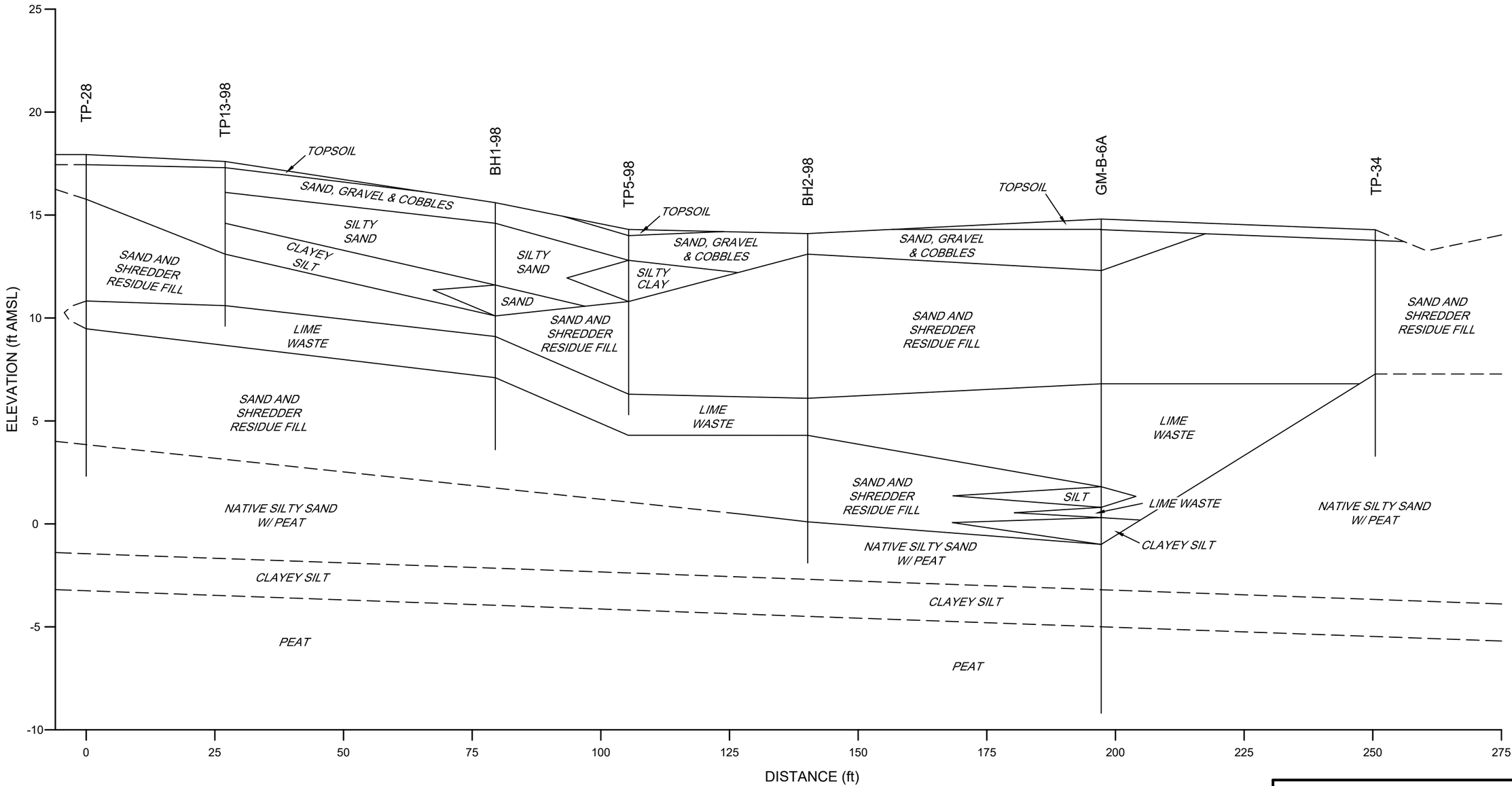
FIGURE 3.2

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G007 - Last Saved by: MJerome on 6/13/25

B
NORTHWEST

B'
SOUTHEAST



SCALES

HORIZONTAL 1"=20'
VERTICAL 1"= 5'

STRATIGRAPHIC CROSS-SECTION B-B'
2014

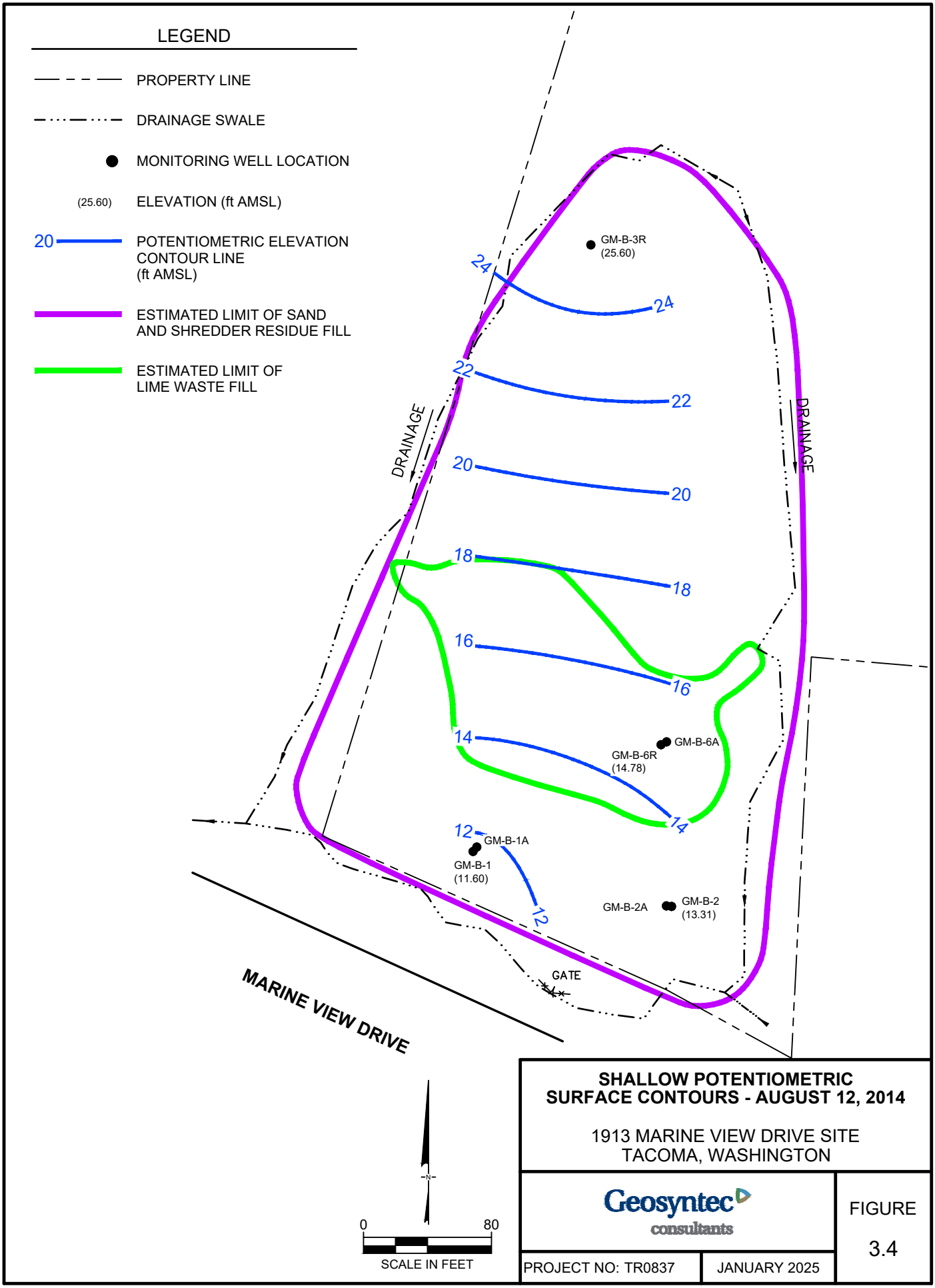
1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

PROJECT NO: TR0837 | JUNE 2025

FIGURE
3.3

C:_GEO-ACCIACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G007 - Last Saved by: MJerome on 6/13/25



SHALLOW POTENTIOMETRIC SURFACE CONTOURS - AUGUST 12, 2014

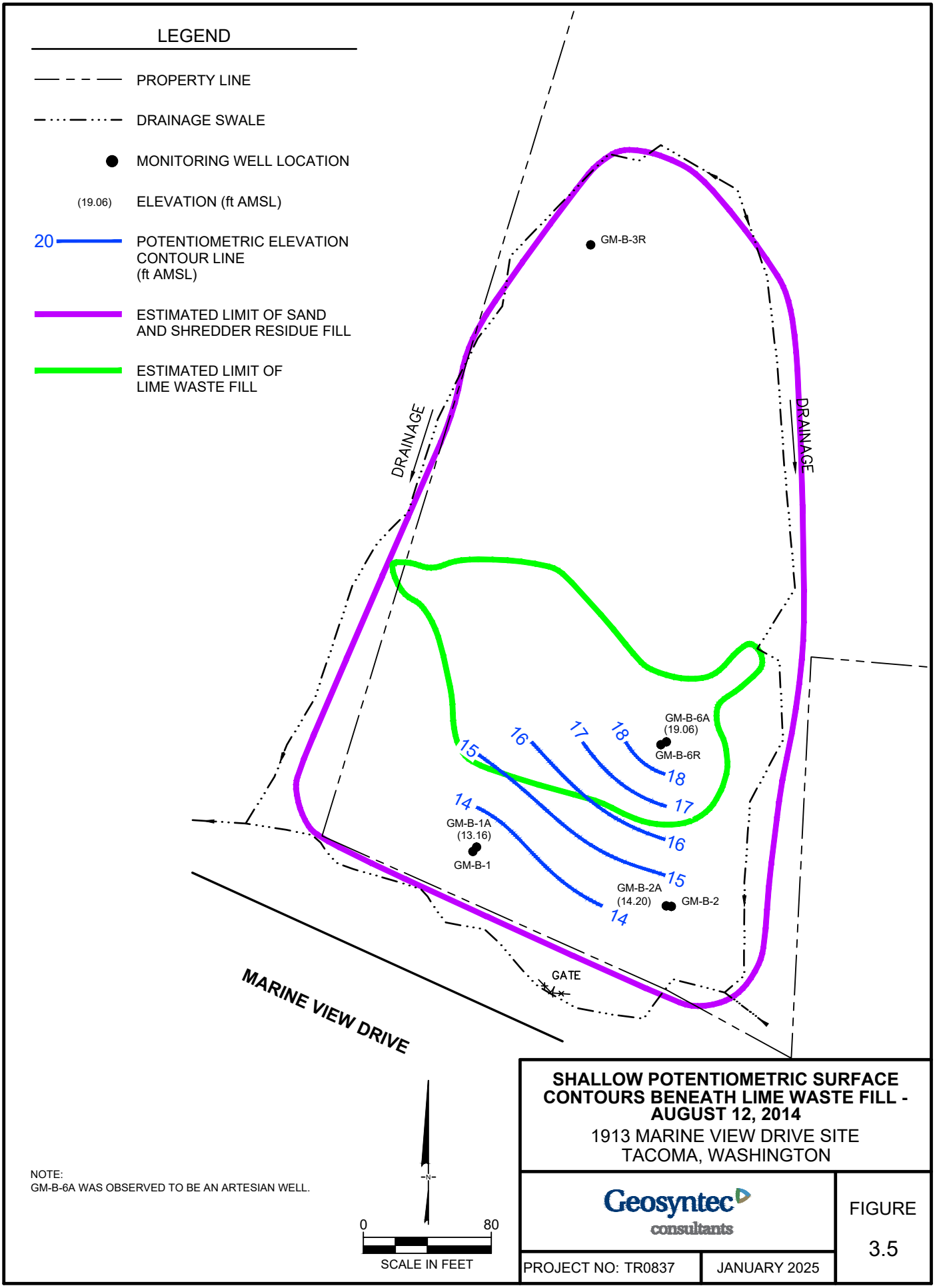
1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 3.4

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G008 - Last Saved By: MJerome on 12/10/24



NOTE:
GM-B-6A WAS OBSERVED TO BE AN ARTESIAN WELL.

SHALLOW POTENTIOMETRIC SURFACE CONTOURS BENEATH LIME WASTE FILL - AUGUST 12, 2014

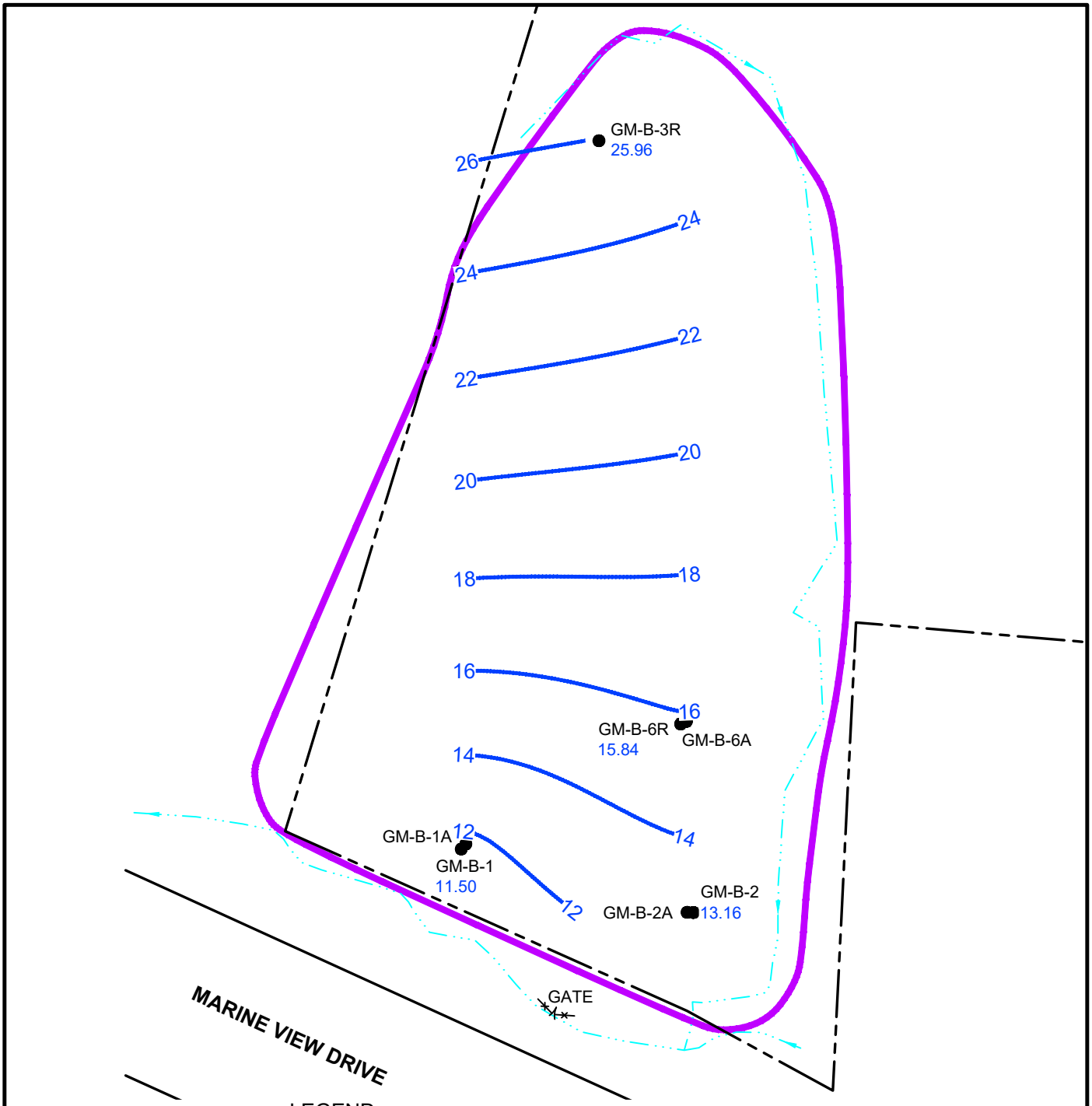
1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 3.5

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G009 - Last Saved By: MJerome on 12/9/24



LEGEND

- PROPERTY LINE
- APPROXIMATE DRAINAGE SWALE
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- MONITORING WELL LOCATION
- 20 — POTENTIOMETRIC SURFACE CONTOUR (FT.AMSL)
- 15.84 — ELEVATION (FT AMSL)

-N-

0 80

SCALE IN FEET

SHALLOW POTENTIOMETRIC SURFACE CONTOURS - JUNE 10, 2024

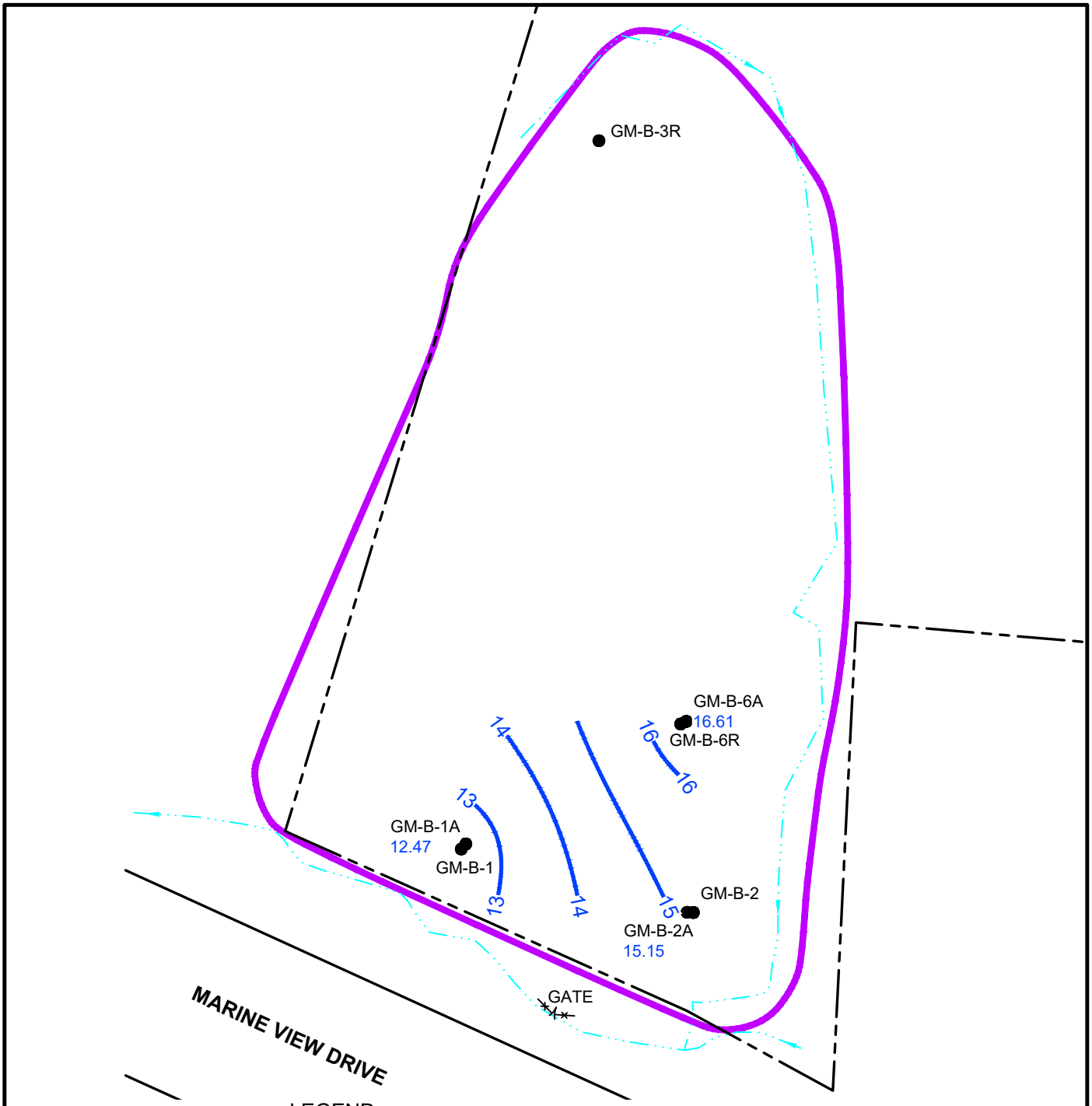
1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 3.6

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G004 - Last Saved By: MJerome on 8/7/24



SHALLOW POTENTIOMETRIC SURFACE CONTOURS BENEATH LIME WASTE FILL- JUNE 10, 2024

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 3.7

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G005 - Last Saved By: MJerome on 8/21/24

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- TEST PIT LOCATION
- HAND AUGER LOCATION
- SHALLOW SOIL SAMPLE LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL

TP-24	8/27/2014 (8.5-9) ft BGS
Lead	69.9

- SAMPLE LOCATION
- SAMPLE DATE
- SAMPLE DEPTH
- RESULT (mg/kg)
- PARAMETER
- EXCEEDANCE

Parameter	Cleanup Level (mg/kg)
Arsenic	88
Chromium	820
Lead	1000
Mercury	2

NOTE:
TP comp(A2) WAS A COMPOSITE SAMPLE FROM TEST PIT(TP) SAMPLES 1, 3, 4, 5, 8, 12, 13, 15, AND 18.

TP-37	9/15/2014 (2-2.5) ft BGS	9/15/2014 (5-5.5) ft BGS	9/15/2014 (7.5-8) ft BGS
Arsenic	2.9 J	3.7	0.9 J
Chromium	23.5	25.1	40.7
Lead	6.4	6.6	1.8
Mercury	0.026	0.026	0.009 J

TP-24	8/27/2014 (8.5-9) ft BGS
Arsenic	6.8
Chromium	18.6
Lead	69.9
Mercury	0.164

GP-7	8/22/2014 (4-4.5) ft BGS	8/22/2014 (9-9.5) ft BGS	8/22/2014 (14-14.5) ft BGS	8/22/2014 (25-25.5) ft BGS
Arsenic	4.6 J	6.3 J	4.6 J	9.0 U
Chromium	19.5	27.6	22.2	21.2
Lead	77.4	7.9	82.8	2.8
Mercury	0.207	0.027	0.183	0.010 J

TP-38	8/28/2014 (2.5-3) ft BGS	8/28/2014 (4.5-5) ft BGS	8/28/2014 (11-11.5) ft BGS
Arsenic	4.3	3.2 J	4.0
Chromium	19.4	25.2	22.7
Lead	5.5	6.6	3.6
Mercury	0.016 J	0.026	0.015 J

TP21	11/18/1998 (0-0.5) ft BGS	11/18/1998 (0.5-2) ft BGS
Arsenic	103	4.9
Chromium	849 J	25.6 J
Lead	6030	34.8
Mercury	17.6 J	0.2 J

SL-1	11/19/1998 (0.5-1) ft BGS
Arsenic	1180
Chromium	56.9 J
Lead	375
Mercury	0.1 J

GP-5	8/22/2014 (4-4.5) ft BGS	8/22/2014 (10-10.5) ft BGS	8/22/2014 (19-19.5) ft BGS	8/22/2014 (23-23.5) ft BGS
Arsenic	7.9 J	8.8/10.0	16.5 J	3.1 J
Chromium	26.5	44.3/31.9	21.5 J	28.6 J
Lead	102	680/624	2.4 J	3.3 J
Mercury	0.140	0.377 J/0.263 J	0.036 J	0.041 J

GP-3	8/21/2014 (7-7.5) ft BGS	8/21/2014 (16-16.5) ft BGS	8/21/2014 (19-19.5) ft BGS
Arsenic	3.3 J	23.4	12.1 J
Chromium	22.4	21.3	31.2 J
Lead	5.6	135	12.9 J
Mercury	0.112	1.78	0.053 J

GP-1	8/21/2014 (11-11.5) ft BGS	8/21/2014 (23-23.5) ft BGS
Arsenic	13.5/17.7	17.0 J
Chromium	60.0 J/112 J	10.3 J
Lead	1230/1610	46.7 J
Mercury	0.609 J/4.63 J	0.075 J

TP comp(A2)	11/17/1998 (1-8.5) ft BGS	11/18/1998 (1-8.5) ft BGS
Arsenic	24.7	30.7
Chromium	94.9 J	137 J
Lead	2470	2690
Mercury	1.4 J	1.7 J

TP17	11/18/1998 (3-3.5) ft BGS
Arsenic	422
Chromium	25.5 J
Lead	106
Mercury	0.1 J

GP-6	8/21/2014 (5-5.5) ft BGS	8/21/2014 (16-16.5) ft BGS	8/21/2014 (18-18.5) ft BGS
Arsenic	2.5 J	12.2 J	7.3 J
Chromium	35.9	22.9 J	21.8
Lead	175	27.5 J	4.1
Mercury	0.104	0.033 J	0.013 J

TP comp(A1)	11/19/1998 (0-0.5) ft BGS
Arsenic	28.8
Chromium	51.0 J
Lead	152
Mercury	0.5 J

GP-2	8/21/2014 (11-11.5) ft BGS	8/21/2014 (14-14.5) ft BGS	8/21/2014 (20-20.5) ft BGS
Arsenic	37.9	16.8 J	2.7 J
Chromium	198	15.4 J	25.5
Lead	2310	69.9 J	68.1
Mercury	3.09	0.088 J	0.114

TP 1-3-8	11/18/1998 (0.5-8.5) ft BGS
Arsenic	5.5
Chromium	39.1 J
Lead	353
Mercury	0.3 J

GP-4	8/21/2014 (5-5.5) ft BGS	8/21/2014 (14-14.5) ft BGS	8/21/2014 (20-20.5) ft BGS
Arsenic	16.2	9.9	18.0 J
Chromium	98.0	17.1	55.8 J
Lead	1280	16.2	11.9 J
Mercury	0.949	0.098	0.080 J

TP-37, TP-38, TP-24, TP21-98, TP-25, GP-7, TP-26, TP-27, TP11-98, GP-5, TP10-98, TP7-98, TP-29, GP-8, TP14-98, TP-28, TP13-98, TP12-98, TP9-98, SL-1, TP8-98, TP6-98, TP16-98, GP-1, TP-31, GP-6, TP15-98, TP5-98, TP4-98, GP-3, TP3-98, TP-30, TP18-98, TP-33, TP17-98, GP-2, GP-9, TP23-98, TP-34, TP19-98, TP1-98, TP-32, TP22-98, GP-4, GP-10, TP20-98, TP2-98, TP-35, GP-11, TP-36, GATE, TP-39

DRAINAGE, DRAINAGE, DRAINAGE, DRAINAGE, DRAINAGE

MARINE VIEW DRIVE

N

0 80

SCALE IN FEET

SOIL RESULTS - METALS
1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

PROJECT NO: TR0837 | JANUARY 2025

FIGURE 4.1

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G010 - Last Saved By: MJerome on 1/21/25

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- SURFACE SEDIMENT SAMPLE LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL

SD-01	11/20/1998 (0-0.5) ft BGS
Aluminum	9220
Antimony	3.8 J
Arsenic	10.1
Barium	42.1

SAMPLE LOCATION
SAMPLE DATE
SAMPLE DEPTH
RESULT (mg/kg)
PARAMETER
EXCEEDANCE

Parameter	Sediment Quality (mg/kg) (a)	Sediment Cleanup (mg/kg) (b)
Aluminum		
Antimony	NV	NV
Arsenic	57	93
Barium	NV	NV
Beryllium	NV	NV
Cadmium	5.1	6.7
Calcium		
Chromium	260	270
Cobalt	NV	NV
Copper	390	390
Iron		
Lead	450	530
Magnesium		
Manganese	NV	NV
Mercury	0.41	0.59
Nickel	NV	NV
Potassium		
Selenium	NV	NV
Silver	6.1	6.1
Sodium		
Thallium	NV	NV
Vanadium	NV	NV
Zinc	410	960

SD-04	11/20/1998 (0-0.5) ft BGS
Aluminum	9830
Antimony	0.8 U
Arsenic	2.8
Barium	68.8
Beryllium	0.3 U
Cadmium	1.2
Calcium	3530
Chromium	18.3 J
Cobalt	6.4
Copper	19.9
Iron	17300
Lead	14.2
Magnesium	2520
Manganese	349
Mercury	0.2 U
Nickel	19.9
Potassium	653
Selenium	0.8 U
Silver	0.2 U
Sodium	258
Thallium	3.1 U
Vanadium	35.2
Zinc	112

SD-10	9/15/2014 -
Aluminum	7780
Antimony	1.2 J
Arsenic	5.9
Barium	46.5
Beryllium	0.08 J
Cadmium	0.41
Calcium	3720 J
Chromium	18.4
Cobalt	4.14
Copper	37.4
Iron	12500
Lead	44.3
Magnesium	2570
Manganese	147
Mercury	0.099
Nickel	15.2
Potassium	565
Selenium	1.0 J
Silver	0.8 U
Sodium	536
Thallium	2.1 U
Vanadium	35.2
Zinc	103

SD-11	9/15/2014 -
Aluminum	11700
Antimony	3.3 UJ
Arsenic	3.0 J
Barium	61.5
Beryllium	0.16 J
Cadmium	0.07 J
Calcium	2200 J
Chromium	25.8
Cobalt	5.80
Copper	11.9
Iron	13000
Lead	5.0
Magnesium	3800
Manganese	166
Mercury	0.025
Nickel	29.0
Potassium	537
Selenium	1.5 J
Silver	0.2 J
Sodium	190
Thallium	1.6 U
Vanadium	31.6
Zinc	31.5

SD-07	9/15/2014 -
Aluminum	15200
Antimony	4.8 J
Arsenic	16.8
Barium	211
Beryllium	0.26
Cadmium	4.31
Calcium	4860 J
Chromium	44.6
Cobalt	10.2
Copper	226
Iron	24400
Lead	360
Magnesium	3530
Manganese	445
Mercury	0.846(ab)
Nickel	55.5
Potassium	857
Selenium	2.9 J
Silver	1.1
Sodium	342
Thallium	2.0 U
Vanadium	43.7
Zinc	947(a)

SD-05	9/15/2014 -
Aluminum	18600
Antimony	9.6 J
Arsenic	22.5
Barium	141
Beryllium	0.37 J
Cadmium	3.75
Calcium	10800 J
Chromium	51.2
Cobalt	13.0
Copper	91.6
Iron	31800
Lead	139
Magnesium	5200
Manganese	378
Mercury	0.335
Nickel	51.6
Potassium	1040
Selenium	6.4 J
Silver	2.6 U
Sodium	657
Thallium	6.5 U
Vanadium	70.8
Zinc	570(a)

SD-06	9/15/2014 -
Aluminum	8560
Antimony	3.9 J
Arsenic	22.7
Barium	53.3
Beryllium	0.13 J
Cadmium	0.87
Calcium	4040 J
Chromium	24.6
Cobalt	5.65
Copper	73.2
Iron	17800
Lead	98.0
Magnesium	2610
Manganese	116
Mercury	3.03(ab)
Nickel	19.8
Potassium	667
Selenium	2.2 J
Silver	0.2 J
Sodium	729
Thallium	1.9 U
Vanadium	43.5
Zinc	223

SD-09	9/15/2014 -
Aluminum	10000
Antimony	3.5 UJ
Arsenic	5.6
Barium	51.5
Beryllium	0.13 J
Cadmium	0.25
Calcium	4270 J
Chromium	21.8
Cobalt	5.40
Copper	20.6
Iron	13400
Lead	18.4
Magnesium	3580
Manganese	213
Mercury	0.034
Nickel	24.1
Potassium	606
Selenium	1.4 J
Silver	0.2 J
Sodium	212
Thallium	1.8 U
Vanadium	32.7
Zinc	86.2

SD-01	11/20/1998 (0-0.5) ft BGS
Aluminum	9220
Antimony	3.8 J
Arsenic	10.1
Barium	42.1
Beryllium	0.4 U
Cadmium	1.7
Calcium	5770
Chromium	24.9 J
Cobalt	5.2
Copper	28.7
Iron	18600
Lead	34.4
Magnesium	2830
Manganese	273
Mercury	0.2 J
Nickel	17.4
Potassium	610
Selenium	1.0 U
Silver	0.2 U
Sodium	465
Thallium	3.8 U
Vanadium	49.7
Zinc	151

SD-02	11/20/1998 (0-0.5) ft BGS
Aluminum	20300 J
Antimony	2.8 J
Arsenic	59.9 J(a)
Barium	104 J
Beryllium	0.5 U
Cadmium	2.5 J
Calcium	6870 J
Chromium	39.2 J
Cobalt	9.7 J
Copper	94.5 J
Iron	26300 J
Lead	122 J
Magnesium	4220 J
Manganese	885 J
Mercury	0.2 J
Nickel	34.6 J
Potassium	1070 J
Selenium	1.2 U
Silver	0.2 U
Sodium	348 J
Thallium	4.6 U
Vanadium	62.2 J
Zinc	297 J

SD-12	9/15/2014 -
Aluminum	8040
Antimony	4.1 UJ
Arsenic	5.9
Barium	45.2
Beryllium	0.11 J
Cadmium	0.23
Calcium	2780 J
Chromium	17.6
Cobalt	5.16
Copper	17.1
Iron	13200
Lead	13.1
Magnesium	2770
Manganese	345
Mercury	0.025
Nickel	16.7
Potassium	560
Selenium	1.9 J
Silver	0.8 U
Sodium	187
Thallium	2.1 U
Vanadium	27.6
Zinc	139

SD-03	11/20/1998 (0-0.5) ft BGS
Aluminum	28700 J
Antimony	2.6 J
Arsenic	55.0 J
Barium	187 J
Beryllium	0.4 U
Cadmium	4.1 J
Calcium	5870 J
Chromium	44.8 J
Cobalt	13.6 J
Copper	147 J
Iron	36500 J
Lead	147 J
Magnesium	4580 J
Manganese	1620 J
Mercury	0.2 J
Nickel	50.9 J
Potassium	1430 J
Selenium	1.0 U
Silver	0.2 J
Sodium	807 J
Thallium	4.1 U
Vanadium	73.3 J
Zinc	705 J(a)

SD-08	9/15/2014 -
Aluminum	16100
Antimony	8.0 J
Arsenic	66.3(a)
Barium	167
Beryllium	0.30
Cadmium	3.66
Calcium	4520 J
Chromium	41.8
Cobalt	10.5
Copper	154
Iron	23700
Lead	222
Magnesium	4280
Manganese	249
Mercury	0.342
Nickel	48.9
Potassium	944
Selenium	2.3 J
Silver	0.3 J
Sodium	381
Thallium	2.0 U
Vanadium	50.6
Zinc	690(a)

SD-01
SD-02
SD-03
SD-04
SD-05
SD-06
SD-07
SD-08
SD-09
SD-10
SD-11
SD-12

DRAINAGE
DRAINAGE
DRAINAGE
DRAINAGE
GATE
MARINE VIEW DRIVE

0 80
SCALE IN FEET

SEDIMENT RESULTS - METALS 1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 4.2

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G016 - Last Saved By: MJerome on 12/9/24

GM-B-3R	6/11/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	**6.7**
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 U
Chromium	2.8
Copper	**3.8 J**
Lead	1.6
Manganese	**1900 J-**
Nickel	**29**
Silver	1.0 U
Vinyl chloride	0.20 U
Zinc	14

GM-B-3R

GM-B-6A	6/11/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	1.8
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 U
Chromium	**7.6**
Copper	**6.4 J**
Lead	4.1
Manganese	100 J-
Nickel	4.2
Silver	1.0 U
Vinyl chloride	**0.23**
Zinc	24

GM-B-6R	6/11/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	4.4
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 UJ
Chromium	2.0 U
Copper	2.0 U
Lead	**27**
Manganese	**250 J-**
Nickel	5.6
Silver	1.0 U
Vinyl chloride	**2.6**
Zinc	27

GM-B-6A
GM-B-6R

GM-B-2	6/10/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	**15**
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	**4.3**
Chromium	2.7
Copper	**9.1 J**
Lead	**76**
Manganese	**290 J-**
Nickel	**59**
Silver	**28**
Vinyl chloride	**0.20**
Zinc	**910**

GM-B-2
GM-B-2A

GM-B-1
GM-B-1A

GATE

MARINE VIEW DRIVE

GM-B-1A	6/10/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	1.0 U
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 U
Chromium	2.0 U
Copper	2.0 U
Lead	1.0 U
Manganese	**220 J-**
Nickel	2.0 U
Silver	**34**
Vinyl chloride	0.20 U
Zinc	3.9

GM-B-1	6/10/2024
Aroclor-1254 (PCB-1254)	**0.10/0.10 U**
Arsenic	**61/60**
Benzene	**2.8/4.5**
bis(2-Ethylhexyl)phthalate (DEHP)	**13 J/2.0 UJ**
Chromium	**16/14**
Copper	**31 J/28 J**
Lead	**290/270**
Manganese	**120 J-/110 J-**
Nickel	**150/150**
Silver	1.0 U/1.0 U
Vinyl chloride	0.20 U/0.20 U
Zinc	**520/470**

GM-B-2A	6/10/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	3.1
Benzene	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 U
Chromium	2.4
Copper	2.0 U
Lead	1.3
Manganese	**400 J-**
Nickel	2.0 U
Silver	1.0 U
Vinyl chloride	0.20 U
Zinc	11

LEGEND

- PROPERTY LINE
- APPROXIMATE DRAINAGE SWALE
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- MONITORING WELL LOCATION

SAMPLE LOCATION

GM-B-3R	6/11/2024
Aroclor-1254 (PCB-1254)	0.10 U
Arsenic	**6.7**
bis(2-Ethylhexyl)phthalate (DEHP)	2.0 U
Copper	**3.8 J**
Lead	1.6
Manganese	**1900 J-**
Nickel	**29**
Vinyl chloride	0.20 U
Zinc	14

SAMPLE DATE

RESULT (µg/L)

PARAMETER

Parameter	Cleanup Level (µg/L)
Aroclor-1254 (PCB-1254)	0.000104
Arsenic	5
Benzene	1.6
bis(2-Ethylhexyl)phthalate (DEHP)	0.046
Chromium	4.13
Copper	3.1
Lead	8.1
Manganese	100
Nickel	8.2
Silver	0.91
Vinyl chloride	0.18
Zinc	81

NOTES:

CLEANUP LEVEL = PRELIMINARY CLEANUP LEVEL FOR GROUNDWATER ESTABLISHED CONSISTENT WITH MTCA METHOD B SURFACE WATER CLEANUP LEVELS

BOLD = CONCENTRATION DETECTED ABOVE THE REPORTING LIMIT

GREEN HIGHLIGHT = CONCENTRATION DETECTED ABOVE THE CLEANUP LEVEL

J = ESTIMATED CONCENTRATION

J- = ESTIMATED CONCENTRATION, IMPLIED LOW BIAS

U = NOT DETECTED AT THE ASSOCIATED CONCENTRATION

UJ = NOT DETECTED; ASSOCIATED CONCENTRATION IS ESTIMATED

ALL UNITS MICROGRAMS PER LITER (UG/L)

XX/XX = SAMPLE RESULT/DUPLICATE RESULT

N

0 80

SCALE IN FEET

GROUNDWATER ANALYTICAL RESULTS (VOCs/SVOCs/METALS/PCBs) 2024

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

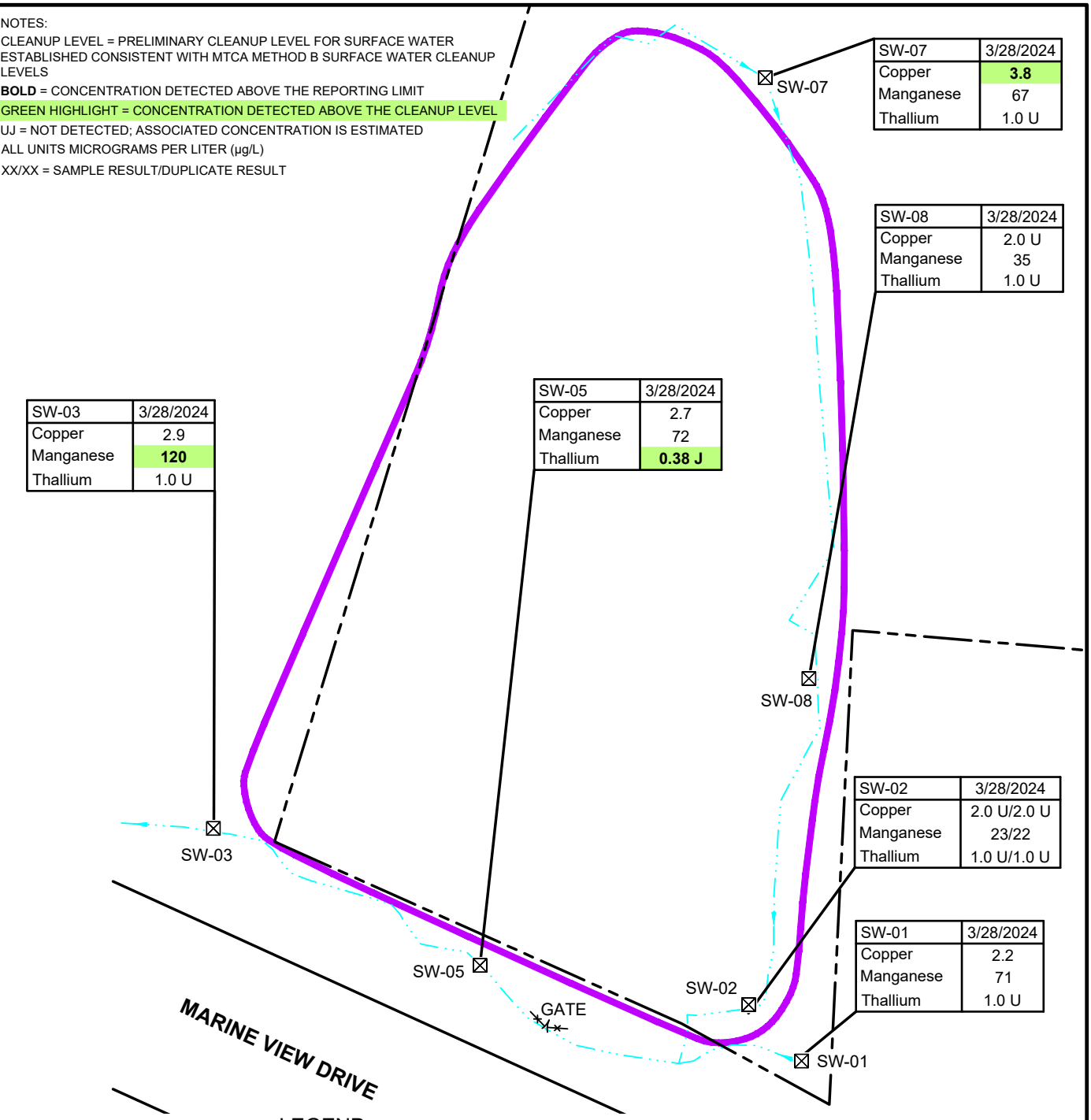
Geosyntec consultants

FIGURE 4.3

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G003 - Last Saved By: MJerome on 6/13/25

NOTES:
CLEANUP LEVEL = PRELIMINARY CLEANUP LEVEL FOR SURFACE WATER ESTABLISHED CONSISTENT WITH MTCA METHOD B SURFACE WATER CLEANUP LEVELS
BOLD = CONCENTRATION DETECTED ABOVE THE REPORTING LIMIT
GREEN HIGHLIGHT = CONCENTRATION DETECTED ABOVE THE CLEANUP LEVEL
UJ = NOT DETECTED; ASSOCIATED CONCENTRATION IS ESTIMATED
ALL UNITS MICROGRAMS PER LITER (µg/L)
XX/XX = SAMPLE RESULT/DUPLICATE RESULT



SW-07	3/28/2024
Copper	**3.8**
Manganese	67
Thallium	1.0 U

SW-08	3/28/2024
Copper	2.0 U
Manganese	35
Thallium	1.0 U

SW-05	3/28/2024
Copper	2.7
Manganese	72
Thallium	**0.38 J**

SW-03	3/28/2024
Copper	2.9
Manganese	**120**
Thallium	1.0 U

SW-02	3/28/2024
Copper	2.0 U/2.0 U
Manganese	23/22
Thallium	1.0 U/1.0 U

SW-01	3/28/2024
Copper	2.2
Manganese	71
Thallium	1.0 U

LEGEND

PROPERTY LINE
APPROXIMATE DRAINAGE SWALE
ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
SURFACE WATER SAMPLE LOCATION

Parameter	Cleanup Level (µg/L)
Copper	3.1
Manganese	100
Thallium	0.223

SW-03	3/28/2024	← SAMPLE LOCATION / SAMPLE DATE
Copper	2.9	
Manganese	**120**	← RESULT (µg/L)
Thallium	1.0 U	
		← PARAMETER

N

0 80
SCALE IN FEET

SURFACE WATER ANALYTICAL RESULTS (METALS) 2024

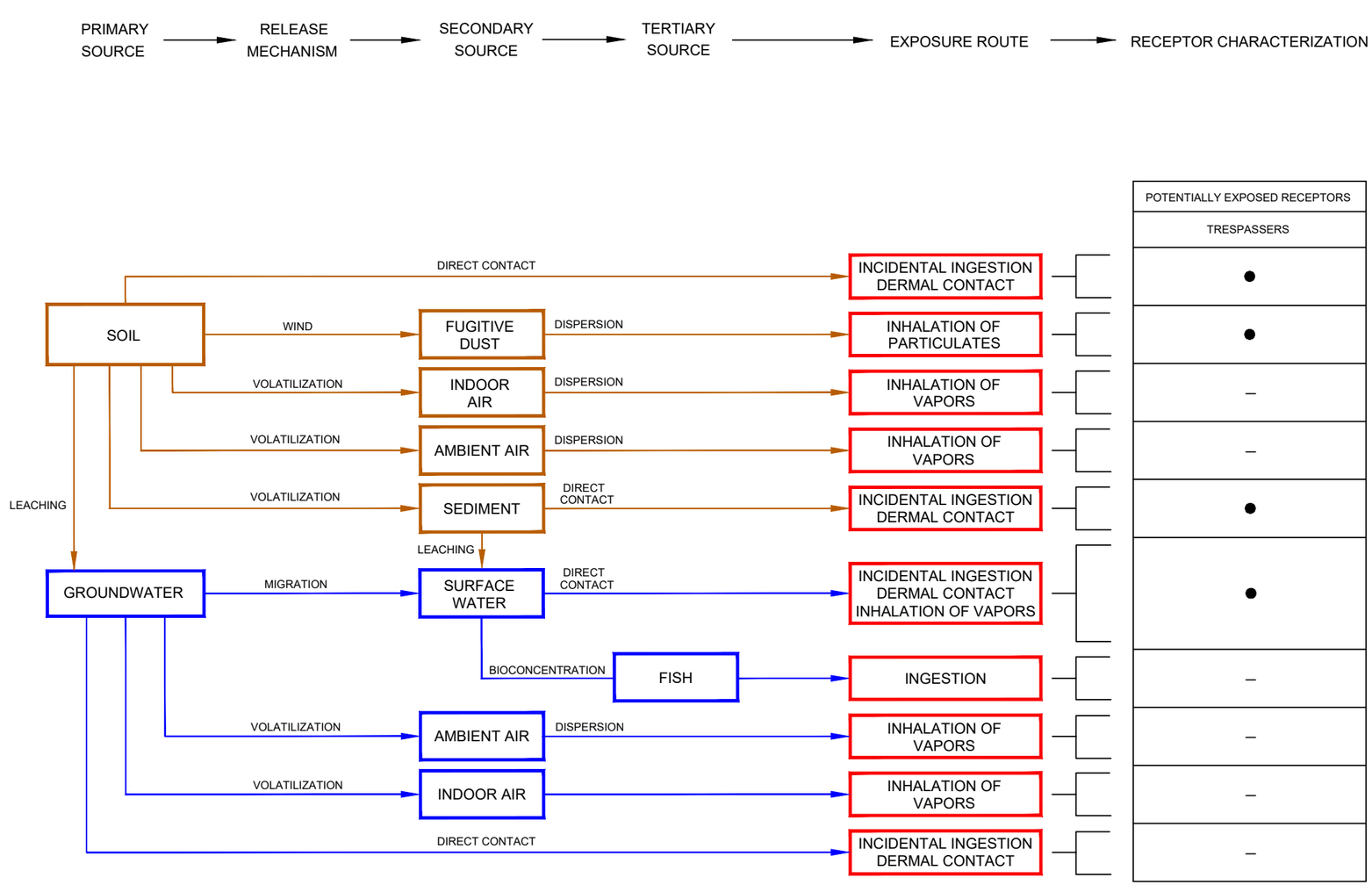
1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 4.4

PROJECT NO: TR0837 | JUNE 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G006 - Last Saved By: MJerome on 1/22/25



LEGEND

- ● POTENTIALLY COMPLETE EXPOSURE PATHWAY
- – INCOMPLETE EXPOSURE PATHWAY
- → POTENTIAL EXPOSURE PATHWAY

HUMAN HEALTH CONCEPTUAL SITE MODEL

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE 6.1

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G002 - Last Saved by: Mlerome on 1/20/25

APPENDIX A

Environmental Document List

Environmental Document List: 1913 Marine View Drive, Tacoma, Washington		
Title	**Author**	**Date**
Tacoma Off Plant Disposal Site Investigation	Conestoga-Rovers & Associates	Dec-84
1988 Sampling Memorandum, General Metals Site	Occidental Chemical Corporation	Nov-88
Review of Site Conditions and Proposed Additional Work	Conestoga-Rovers & Associates	Sep-98
Site Characterization Report,	Conestoga-Rovers & Associates	Apr-99
QA/QC Review Lime Sludge Samples,	Conestoga-Rovers & Associates	Nov-04
Remedial Investigation/Feasibility Study Work Plan	Conestoga-Rovers & Associates	Sep-13
Remedial Investigation Report	GHD	Nov-16
Supplemental Environmental Data Report	Geosyntec Consultants, Inc.	Sep-24

APPENDIX B

Property Legal Description

Exhibit B

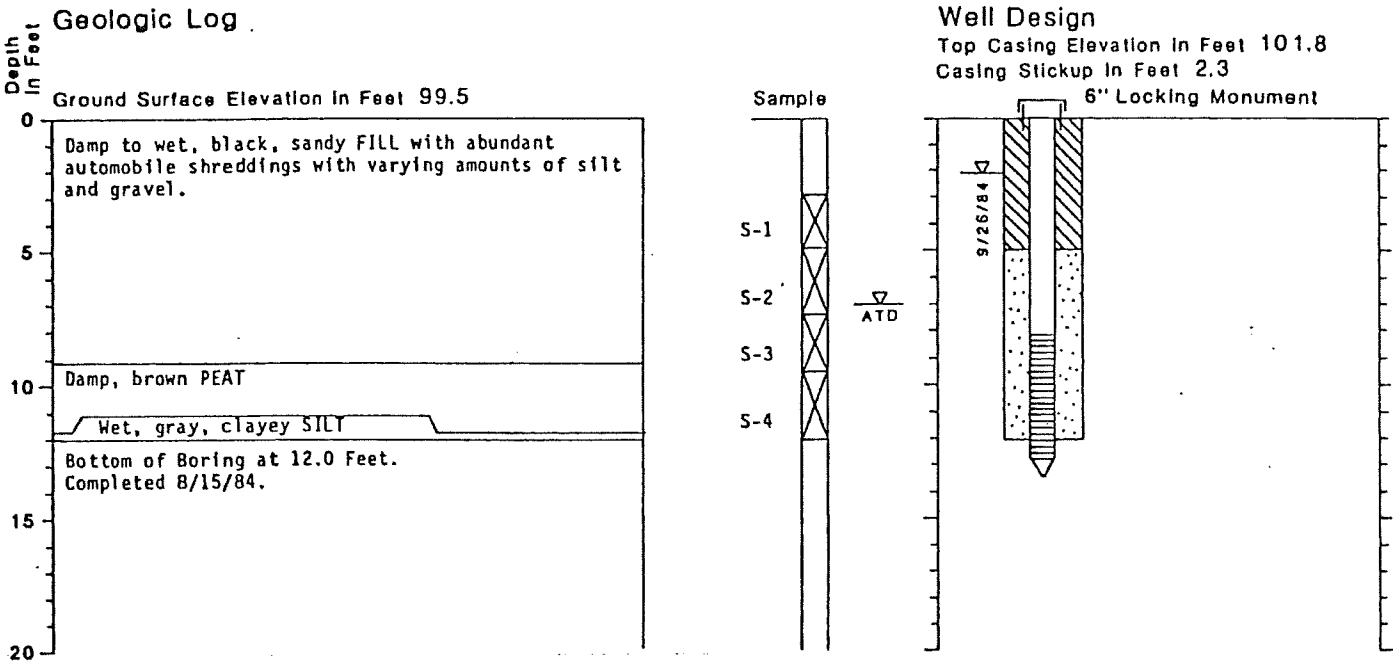
LEGAL DESCRIPTION

Section 36 Township 21 Range 03 Quarter 21 : BEG AT NE COR OF GOVT LOT 1 TH S ALG E LI SD GOVT LOT 1 660 FT TO NE COR OF S 1/2 OF NE OF NW TH N 88 DEG 14 MIN 00 SEC W ALG N LI OF SD SUBD 150 FT TH S 00 DEG 16 MIN 35 SEC E PAR/W E LI OF SD SUBD 251.08 FT TH N 64 DEG 25 MIN 55 SEC W 89.19 FT TH N 69 DEG 01 MIN 10 SEC W 235.81 FT TH NELY TO A PT ON N LI OF SD GOVT LOT 1 SD PT BEING 250 FT W OF NE COR OF SD GOVT LOT 1 TH E ALG N LI OF SD LOT 250 FT TO POB EASE OF RECORD OUT OF 2/050 SEG H 2352 BG

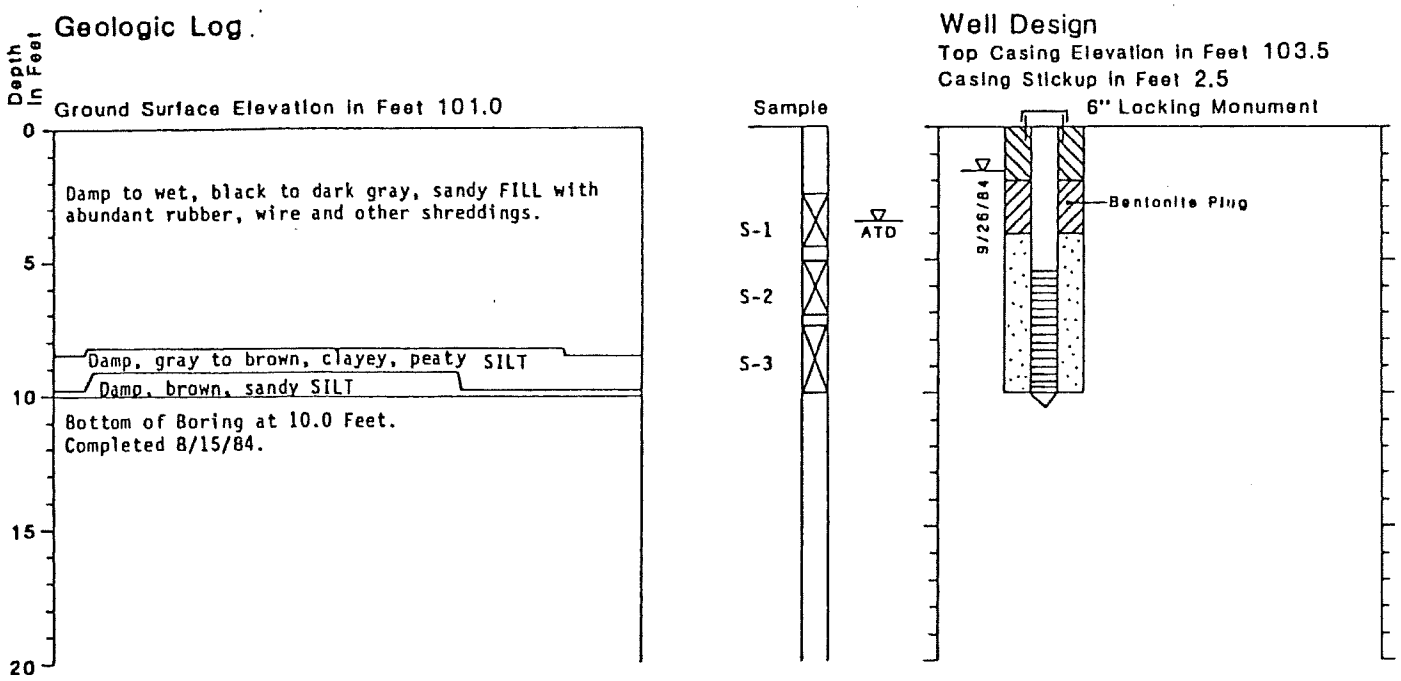
APPENDIX C

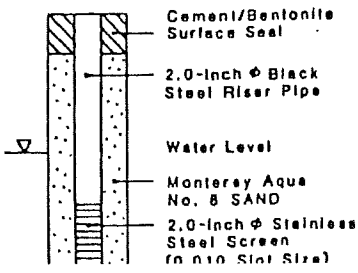
Monitoring Well Stratigraphic and Instrument Logs

Boring Log and Construction Data for Well GM-B-1



Boring Log and Construction Data for Well GM-B-2





2-inch O.D. Split Spoon Sample

* No Sample Recovery

N Standard Penetration Resistance, Blows per foot

GS Grain Size Analysis

K Permeability Test

NOTES:

1. Soil descriptions are interpretive and actual changes may be gradual.
2. Water Level is for date indicated and may vary with time of year. ATD:At Time of Drilling

J-1336-01 September 1984

HART-CROWSER & associates, inc.

Figure 3

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

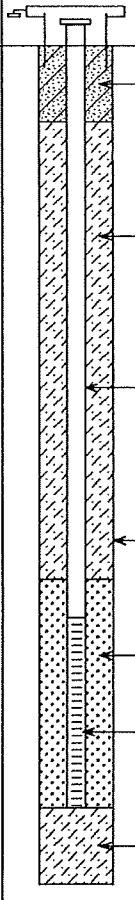
(VL-28)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: GM-B-1A
DATE COMPLETED: NOVEMBER 19, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL
	REFERENCE POINT (Top of Riser)	*13.260*
	GROUND SURFACE	*11.13*
	ML-SILT (TOPSOIL), with fine sand, trace gravel, trace clay, firm, low plasticity, brown, moist, rootlets	*10.63*
		9.63
-2.5	SM-SAND (FILL), with silt, trace to with gravel, dense, fine to coarse grained, well graded, brown, moist, rootlets	*9.13*
-5.0	SM-SAND (FILL), with to and silt, trace gravel, dense, fine to coarse grained, well graded, gray with black staining, moist, slight odour, steel and wood fragments	*5.13*
-7.5	SW-SAND (FILL), trace silt, trace gravel, very dense, fine to coarse grained, well graded, gray, moist, slight odour	
-10.0	SM-SILTY SAND (FILL), with refuse, very dense, fine to coarse grained, well graded, gray, very moist, slightly dilatant, steel, rubber, wood and wire fragments	*1.13*
	- and silt, trace clay, extremely dense, wet, dilatant @ 8.00 ft BGS	*-.87*
-12.5	ML-SANDY SILT, trace clay, trace gravel, stiff, medium plasticity, gray, very moist to wet, random areas of fiberous peat	
-15.0	ML-CLAYEY SILT, with peat, trace fine sand, firm, medium plasticity, fiberous, brown, very moist, slightly dilatant	
	- moist to very moist @ 14.00 ft BGS	
-17.5	- moist @ 16.00 ft BGS	
	- very stiff, wet @ 18.00 ft BGS	
-20.0		*-8.70*
	ML-SANDY SILT, trace clay, trace gravel, very stiff, low plasticity, gray, moist	
	- with clay, with peat, firm, medium plasticity, black, moist @ 20.00 ft BGS	*-10.87*
-22.5	END OF HOLE @ 22.00 ft BGS	
	NOTE: 1. Original GM-B-2 is installed to 12.00 ft BGS.	
-25.0		
-27.5		
-30.0		
-32.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
15.00 to 20.00 ft BGS
Length: 5.00 ft
Diameter: 2"
Slot Size: #10
Material: STAINLESS STEEL
Sand Pack:
14.00 to 20.00 ft BGS
Material: No. 10x20 Silica Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		43	
2SS		>50	
3SS		>50	
4SS		>50	
5SS		>50	
6SS		17	
7SS		8	
8SS		11	
9SS		10	
10SS		22	
11SS		11	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

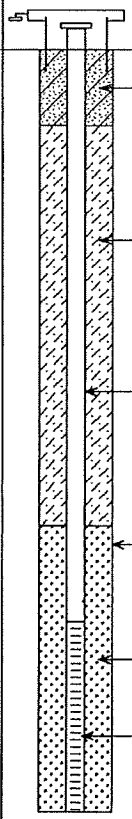
(VL-29)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: GM-B-2A
DATE COMPLETED: NOVEMBER 19, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL
	REFERENCE POINT (Top of Riser)	*15.150*
	GROUND SURFACE	*12.96*
	ML-SILT (TOPSOIL), with fine sand, trace gravel, trace clay, stiff, low plasticity, dark brown, moist, rootlets	*12.30*
-2.5	SM-SILTY SAND (FILL), trace gravel, very dense, fine to coarse grained, well graded, brown, moist, brick fragments	
	- compact, gray, very moist, slightly dilatant @ 2.00 ft BGS	*8.96*
-5.0	- with silt, black @ 3.00 ft BGS	
	ML-SILT (FILL), with sand, trace gravel, trace clay, stiff, low plasticity, dark gray, wet, dilatant, steel, rubber and wood fragments	
-7.5	- and sand, very stiff, fine to medium grained, poorly graded, black, wet, wire fragments @ 6.00 ft BGS	*4.46*
-10.0	PT-PEAT, with silt, with clay, trace fine sand, stiff, fiberous, light brown, moist to very moist	*2.96*
-12.5	ML-CLAYEY SILT, trace fine sand, stiff, medium plasticity, brown, wet, large amounts of fiberous peat	
	- and peat, firm to stiff, medium plasticity, fiberous, very moist to wet, dilatant @ 12.00 ft BGS	
-15.0	- with to trace fine sand, hard, frequent small 1/8" thick SM-SAND (SEAM), with silt, fine to coarse grained, well graded, gray, wet @ 14.00 ft BGS	
-17.5	- trace gravel, very wet, slurry like, fluid like @ 16.00 ft BGS	*-5.29*
-20.0	SM-SILTY SAND, trace gravel, dense, fine to medium grained, poorly graded, gray, moist to very moist	*-7.04*
	END OF HOLE @ 20.00 ft BGS	
-22.5		
-25.0		
-27.5		
-30.0		
-32.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
15.00 to 20.00 ft BGS
Length: 5.00 ft
Diameter: 2"
Slot Size: #10
Material: STAINLESS STEEL
Sand Pack:
12.50 to 20.00 ft BGS
Material: No. 10x20 Silica Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		58	
2SS		23	
3SS		16	
4SS		24	
5SS		15	
6SS		13	
7SS		13	
8SS		40	
9SS		40	
10SS		37	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

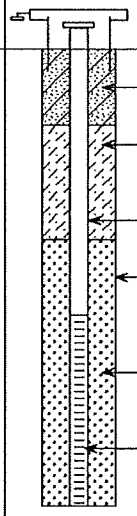
(VL-30)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: GM-B-3R
DATE COMPLETED: NOVEMBER 19, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL
	REFERENCE POINT (Top of Riser)	*28.460*
	GROUND SURFACE	*26.60*
	ML-SANDY SILT (TOPSOIL), trace gravel, trace clay, very stiff, low plasticity, brown, moist, rootlets	*26.35*
-2.5	ML-SILT (FILL), with fine sand, trace clay, trace gravel, very stiff, low plasticity, dark brown, moist, steel and rubber fragments, rootlets	*24.60*
-5.0	SM-SILTY SAND (FILL), trace gravel, compact, fine to coarse grained, well graded, gray, moist, steel and rubber fragments	*21.10*
	- very moist to wet, dilatant @ 4.00 ft BGS	
-7.5	ML/PT-CLAYEY SILT and PEAT, trace fine sand, stiff, medium plasticity, fiberous, brown, moist	
-10.0	- numerous thin 1/8" thick SM-SAND (SEAM), with silt, fine to medium grained, poorly graded, gray, wet @ 6.00 ft BGS	
	- wet, a lot of water into borehole @ 8.00 ft BGS	
-12.5	- very stiff, low plasticity, brown, moist @ 10.00 ft BGS	*14.60*
	END OF HOLE @ 12.00 ft BGS	
-15.0		
-17.5		
-20.0		
-22.5		
-25.0		
-27.5		
-30.0		
-32.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
7.00 to 12.00 ft BGS
Length: 5.00 ft
Diameter: 2"
Slot Size: #10
Material: STAINLESS STEEL
Sand Pack:
5.00 to 12.00 ft BGS
Material: No. 10x20 Silica Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		27	
2SS		24	
3SS		16	
4SS		7	
5SS		8	
6SS		22	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

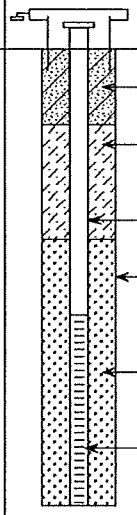
(VL-32)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLEN SPRINGS HOLDINGS
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: GM-B-6R
DATE COMPLETED: NOVEMBER 18, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL
	REFERENCE POINT (Top of Riser)	*16.200*
	GROUND SURFACE	*14.68*
	ML-SANDY SILT (TOPSOIL), trace gravel, trace clay, very stiff, low plasticity, brown, moist, rootlets	*14.43*
2.5	ML-SILT (FILL), with fine sand, trace clay, trace gravel, very stiff, low plasticity, dark brown, moist, steel and rubber fragments, rootlets	*12.68*
5.0	SM-SILTY SAND (FILL), trace gravel, compact, fine to coarse grained, well graded, gray, moist, steel and rubber fragments	*9.18*
	– very moist to wet, dilatant @ 4.00 ft BGS	
7.5	ML/PT-CLAYEY SILT and PEAT, trace fine sand, stiff, medium plasticity, fiberous, brown, moist	
10.0	– numerous thin 1/8" thick SM-SAND (SEAM), with silt, fine to medium grained, poorly graded, gray, wet @ 6.00 ft BGS	
	– wet, a lot of water into borehole @ 8.00 ft BGS	
12.5	– very stiff, low plasticity, brown, moist @ 10.00 ft BGS	*2.68*
	END OF HOLE @ 12.00 ft BGS	
15.0		
17.5		
20.0		
22.5		
25.0		
27.5		
30.0		
32.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
7.00 to 12.00 ft BGS
Length: 5.00 ft
Diameter: 2"
Slot Size: #10
Material: STAINLESS STEEL
Sand Pack:
4.00 to 12.00 ft BGS
Material: No. 10x20 Silica Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		27	
2SS		24	
3SS		16	
4SS		7	
5SS		8	
6SS		22	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

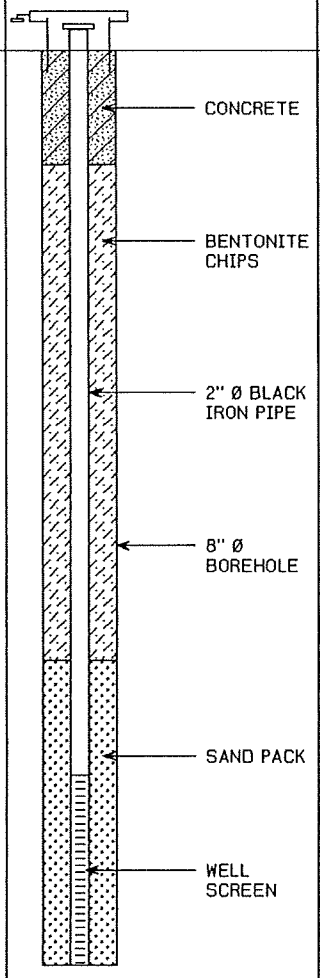
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(VL-31)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: GM-B-6A
DATE COMPLETED: NOVEMBER 18, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL
	REFERENCE POINT (Top of Riser)	*16.710*
	GROUND SURFACE	*14.84*
	ML-SILT (TOPSOIL), with fine sand, trace clay, firm, low plasticity, brown, very moist	*14.34*
2.5	SW-SAND (FILL), trace gravel, trace silt, compact, fine to coarse grained, well graded, gray, very moist to wet, slight odour	*12.34*
5.0	SM-SILTY SAND (FILL), with gravel, dense, fine to coarse grained, well graded, gray, very moist to wet, dilatant, random pieces of steel, rubber and wood - dense, wet @ 4.00 ft BGS	
7.5	- loose, wet @ 6.00 ft BGS	
	CL/ML-CLAYEY SILT (DISPOSAL SLUDGE) (FILL), trace very fine sand, very soft, medium plasticity, white with gray and beige staining, moist, strong odour	*6.84*
10.0	- firm, very wet @ 10.00 ft BGS	
	- moist @ 11.00 ft BGS	
12.5	- wet @ 12.00 BGS	
	ML-SILT (FILL), with clay, trace fine sand, firm, medium plasticity, brown, moist, strong odour, rootlets	*1.84* *.84*
15.0	CL/ML-CLAYEY SILT (DISPOSAL SLUDGE) (FILL), trace very fine sand, stiff, medium to high plasticity, light gray with brown staining, wet	*.34* *-.99*
17.5	ML-CLAYEY SILT, trace very fine sand, stiff, medium plasticity, brown, moist, slight odour, rootlets, pieces of wire	*-3.16*
20.0	SW-SAND, trace silt, fine to coarse grained, well graded, gray, very moist	*-4.91*
	- frequent 1/8" thick sand seams, frequent wood fragments, rootlets @ 16.00 ft BGS	
22.5	ML-CLAYEY SILT, trace very fine sand, firm, medium to high plasticity, dark brown, very moist, dilatant, intermixed with frequent PT-PEAT (SEAM), fiberous, reddish-brown, moist	*-9.16*
25.0	PT-PEAT, with silt, with clay, firm, low plasticity, fiberous, reddish-brown, moist	
27.5	- to trace fine sand, trace fiberous material, wet @ 20.00 ft BGS	
	- very stiff, moist @ 22.00 ft BGS	
30.0	END OF HOLE @ 24.00 ft BGS	
32.5		



MONITOR INSTALLATION

SCREEN DETAILS
Screened interval:
19.00 to 24.00 ft BGS
Length: 5.00 ft
Diameter: 2"
Slot Size: #10
Material: STAINLESS STEEL
Sand Pack:
16.00 to 24.00 ft BGS
Material: No. 10x20 Silica Sand

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		15	
2SS		>64	
3SS		39	
4SS		6	
5SS		2	
6SS		6	
7SS		5	
8SS		10	
9SS		9	
10SS		6	
11SS		12	
12SS		21	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

APPENDIX D

Test Pit and Borehole Logs

TEST PIT STRATIGRAPHIC LOG

(VL-01)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP1-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	13.65						
	ML-SANDY SILT (TOPSOIL), trace clay, low plasticity, brown, moist	*13.15*						
	SM-SAND (FILL), with silt, fine to coarse grained, well graded, black, moist	*12.15*		GS1	0.5 – 3.5			
-2.5	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, black, wet	*10.15*						
-5.0	SM-SAND (FILL), with refuse, with silt, fine to coarse grained, well graded, black, moist, rubber fragments	*7.65*		GS2	3.5 – 6.0			
-7.5	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/gray, moist, dilatant	*6.65*		GS3	6.0 – 7.0			
	BOTTOM OF TEST PIT @ 7.00 ft BGS							
-10.0	NOTE: 1. SEEPAGE @ 1.50 ft BGS. 2. SLIGHT UNDETERMINED ODOUR IN TEST PIT.							
-12.5								
-15.0								
-17.5								
-20.0								
-22.5								
-25.0								
-27.5								
-30.0								
-32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-02)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP2-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	13.16						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	12.91						
	SM/GM-SAND and GRAVEL (FILL), with silt, with cobbles, fine to coarse grained, well graded, brown, moist	12.16						
-2.5								
	SM-SAND (FILL), with silt, fine to coarse grained, well graded, black, moist	9.16						
-5.0	SM-SAND (FILL), with refuse, with silt, fine to coarse grained, well graded, black, moist, rubber, brick, metal and wood fragments							
-7.5								
	BOTTOM OF TEST PIT @ 8.66 ft BGS	4.50						
-10.0	NOTE: 1. SEEPAGE @ 8.00 ft BGS. 2. HEAVY UNDETERMINED ODOUR IN TEST PIT.							
-12.5								
-15.0								
-17.5								
-20.0								
-22.5								
-25.0								
-27.5								
-30.0								
-32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-03)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP3-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	15.41						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	*14.75*						
2.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, black, moist			GS1	0.7 - 4.0			
		11.41						
5.0	SM-SAND (FILL), with refuse, fine to coarse grained, well graded, black, moist, rubber, wood and paper fragments			GS2	4.0 - 8.0			
7.5		*7.41*						
	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/gray, moist	*6.41*		GS3	8.0 - 9.0			
10.0	BOTTOM OF TEST PIT @ 9.00 ft BGS							
	NOTE: 1. SEEPAGE @ 1.50 ft BGS. 2. SLIGHT UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-04)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP4-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	14.51						
	SM/GM-SAND and GRAVEL (FILL), fine to coarse grained, well graded, brown, moist, trace rootlets	*13.51*						
-2.5	SM/GM-SAND and GRAVEL (FILL), random cobbles, trace refuse, fine to coarse grained, well graded, black, wet, scrap metal, rubber, paper and wood fragments							
-5.0	- percentage of fill material is greater than soil @ 5.00 ft BGS			GS2	1.0 - 8.0			
-7.5		*6.51*						
	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/gray, moist	*5.51*		GS3	8.0 - 9.0			
-10.0	BOTTOM OF TEST PIT @ 9.00 ft BGS							
	NOTE: 1. SEEPAGE @ 1.00 ft BGS. 2. SLIGHT UNDETERMINED ODOUR IN TEST PIT.							
-12.5								
-15.0								
-17.5								
-20.0								
-22.5								
-25.0								
-27.5								
-30.0								
-32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-05)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP5-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	14.32						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	14.07						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, brownish gray, moist, trace oxidation	12.82						
2.5	CL-SILTY CLAY (FILL), medium plasticity, dark gray	10.82						
5.0	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, moist, rubber, metal and paper fragments			GS2	3.5 - 8.0			
7.5		6.32						
	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/white, moist	5.32		GS3	8.0 - 9.0			
10.0	BOTTOM OF TEST PIT @ 9.00 ft BGS							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-06)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP6-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	16.17						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, and rootlets	15.92						
	SM/GM-SAND and GRAVEL (FILL), with silt, fine to coarse grained, well graded, brown, moist	15.51						
2.5								
	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, black, very moist, wood and rubber fragments	12.17						
5.0	– bricks, water pouring into test pit @ 4.00 ft BGS							
7.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, dark gray to olive green, wet, twigs and branches	8.42						
	BOTTOM OF TEST PIT @ 7.75 ft BGS							
10.0								
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-07)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP7-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	18.20						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	*17.87*						
-2.5	SM-SAND (FILL), with silt, with gravel, random cobbles, fine to coarse grained, well graded, dark gray, trace rootlets and twigs - bricks @ 2.00 ft BGS							
-5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	*13.70*						
-7.5								
	BOTTOM OF TEST PIT @ 8.50 ft BGS	*9.70*						
-10.0	NOTE: 1. UNDETERMINED ODOUR IN TEST PIT.							
-12.5								
-15.0								
-17.5								
-20.0								
-22.5								
-25.0								
-27.5								
-30.0								
-32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-08)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP8-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	15.90						
	ML-SILT (TOPSOIL), with clay, trace gravel, low plasticity, brown, moist	*15.65*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*14.90*						
2.5				GS2	1.0 - 4.5			
	SM-SAND (FILL), with silt, with refuse, random cobbles, fine to coarse grained, well graded, dark gray, moist, metal, rubber, wire and wood fragments	*11.40*						
5.0								
	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, olive green, moist, rubber and wire fragments			GS1	4.5 - 8.5			
7.5								
	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/light gray, moist	*7.40* *6.90*		GS3	8.5 - 9.0			
10.0	BOTTOM OF TEST PIT @ 9.00 ft BGS							
	NOTE: 1. UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-09)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP9-98
DATE COMPLETED: NOVEMBER 17, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	17.43						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	16.93						
	SM-SAND (FILL), with silt, fine to coarse grained, well graded, brown, moist	15.93						
2.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	15.43						
5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, black, moist	12.93						
7.5	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, olive green, moist, twigs, branches, rubber and wood fragments							
10.0								
	BOTTOM OF TEST PIT @ 11.00 ft BGS	6.43						
12.5	NOTE: 1. SEEPAGE @ 4.00 ft BGS.							
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-10)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP10-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	18.06						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	*17.81*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*17.56*						
2.5								
	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, dark gray, moist, scrap metal, rubber and wood fragments	*13.56*						
5.0								
	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, olive green, moist, rubber and wood fragments							
7.5								
	ML-SILT (FILL), with clay, medium plasticity, light brown, moist	*9.56*						
10.0		*8.56*						
	BOTTOM OF TEST PIT @ 9.50 ft BGS							
	NOTE: 1. HEAVY UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-11)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP11-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	20.02						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	19.86 19.60						
2.5	SM/GM-SAND and GRAVEL (FILL), random cobbles, fine to coarse grained, well graded, brown, moist							
5.0	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, dark gray, moist, metal, wire and rubber fragments	15.02						
	ML-SANDY SILT (SEAM), with clay, low plasticity, brown, moist, rootlets	14.02						
7.5	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, olive green, moist, rubber fragments							
	BOTTOM OF TEST PIT @ 9.00 ft BGS	11.02						
10.0	NOTE: 1. SEEPAGE @ 0.42 ft BGS. 2. SEEPAGE @ 5.00 ft BGS WHERE SEAM OF SANDY SILT DOES NOT EXIST.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-12)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP12-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	16.73						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	*16.57*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*15.73*						
2.5	SM/GM-SAND and GRAVEL (FILL), wilt silt, random cobbles, fine to coarse grained, well graded, light green, moist	*15.48*						
5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, dark gray to black, moist	*12.57*		GS2	4.2 - 7.0			
7.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray to black, moist, wire, rubber, metal and paper fragments	*9.73*						
10.0	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/light gray, moist	*8.73*						
12.5	BOTTOM OF TEST PIT @ 8.00 ft BGS							
15.0	NOTE: 1. SEEPAGE @ 3.00 ft BGS.							
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-13)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP13-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	17.58						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	17.33						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	16.83						
-2.5		16.08						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	14.58						
-5.0		13.08		GS2	4.5 - 7.0			
	SM-SAND (FILL), with silt, fine to coarse grained, well graded, dark gray, moist, log							
-7.5	ML-SILT (FILL), with clay, low plasticity, light gray, moist	10.58						
	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray, moist, wood, metal, rubber and wire fragments	9.58						
-10.0	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/light gray, moist							
-12.5	BOTTOM OF TEST PIT @ 8.00 ft BGS							
	NOTE: 1. SEEPAGE @ 6.00 ft BGS.							
-15.0								
-17.5								
-20.0								
-22.5								
-25.0								
-27.5								
-30.0								
-32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-14)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP14-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	18.26						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	18.01						
		17.26						
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	16.60						
5.0	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	14.26						
7.5	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, black, moist, metal fragments							
	SM-SAND (FILL), with silt, trace refuse, fine to coarse grained, well graded, olive green, moist, wood, twigs and rubber fragments							
10.0	BOTTOM OF TEST PIT @ 9.50 ft BGS	8.76						
	NOTE: 1. UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-15)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP15-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	15.08						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	*14.75*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*14.42*						
2.5		*13.58*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	*11.58*		GS2	3.5 - 6.0			
5.0	SM-SILTY SAND (FILL), trace refuse, fine to coarse grained, well graded, dark gray, moist, wood fragments	*9.08*						
7.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray to black, moist, wire, rubber, wood and metal fragments	*8.08*						
10.0	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/light gray, moist							
	BOTTOM OF TEST PIT @ 7.00 ft BGS							
12.5	NOTE: 1. SEEPAGE @ 1.50 ft BGS. 2. SEEPAGE @ 6.00 ft BGS. 3. UNDETERMINED ODOUR IN TEST PIT.							
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊻

TEST PIT STRATIGRAPHIC LOG

(VL-16)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP16-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	15.95						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	15.70						
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	14.45 / 13.95						
5.0	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	11.45						
	SM-SILTY SAND (FILL), fine to coarse grained, well graded, dark gray, moist	9.95						
7.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray to black, moist, wire, rubber, wood and metal fragments	8.45						
10.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	6.45						
12.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray to black, moist, rubber, metal, wire and wood fragments							
	BOTTOM OF TEST PIT @ 9.50 ft BGS							
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-17)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP17-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	14.04						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	13.79						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	13.29						
2.5	- see note 2	12.54		GS5	3.0 - 3.5			
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	10.04						
5.0	SM-SILTY SAND (FILL), fine to coarse grained, well graded, dark gray to black, moist	8.54						
7.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist							
	- SM/GM-SAND and GRAVEL @ 4.50 ft BGS TO 5.00 ft BGS							
10.0	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, dark gray, moist, metal, wire, rubber and paper fragments	3.54						
12.5	BOTTOM OF TEST PIT @ 10.50 ft BGS							
	NOTE: 1. SEEPAGE @ 3.00 ft BGS UNDER COBBLES. 2. UNDETERMINED SOURCE OF COBBLE LIKE, POROUS, ORANGE TO BLACK FRAGMENTS ENCOUNTERED FROM 0.33 ft BGS TO 3.00 ft BGS ALONG EASTERN EDGE OF NORTHERN FACE. ALSO ENCOUNTERED WITHIN THIS ZONE, ENGINE AND CEMENT BLOCKS FROM A FORMER CURB (PAINTED YELLOW).							
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-18)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP18-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	13.25						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	13.00						
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	11.75						
	SM-SILTY SAND (FILL), fine to coarse grained, well graded, black, moist	10.75						
5.0	SM-SAND, with silt (FILL), fine to coarse grained, well graded, olive green, moist	9.75		GS2	3.5 - 4.5			
	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, black, moist, wire, rubber and paper fragments	8.75						
7.5	ML-SILT (LIME DISPOSAL SLUDGE) (FILL), with clay, low plasticity, beige/light gray, moist	7.75						
10.0	BOTTOM OF TEST PIT @ 5.50 ft BGS							
	NOTE: 1. HEAVY UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-19)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP19-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	12.33						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	*12.08*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	*11.33*						
2.5	SM-SILTY SAND (FILL), fine to coarse grained, well graded, black, moist	*9.08*						
5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	*7.00*						
	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, black, moist, metal, wire, rubber and paper fragments							
7.5								
10.0								
	ML-SILT (PEAT), with clay, medium plasticity, brown, moist, with rootlets	*1.33* *.83*						
12.5	BOTTOM OF TEST PIT @ 11.50 ft BGS							
	NOTE: 1. SEEPAGE @ 3.25 ft BGS. 2. SEEPAGE @ 7.00 ft BGS. 3. LARGE > 4.00 ft LONG SCRAP METAL PIECE AND ENGINE BLOCK ENCOUNTERED WITHIN TOP 3.00 ft. 4. HEAVY UNDETERMINED ODOUR IN TEST PIT.							
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-20)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP20-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	11.02						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist	*10.69*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, greenish brown, moist	*10.02*						
2.5	SM-SILTY SAND (FILL), fine to coarse grained, well graded, black, moist	*9.27*						
5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	*7.27*						
7.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, black, moist, metal, wire, rubber and paper fragments	*1.52*						
10.0	BOTTOM OF TEST PIT @ 9.50 ft BGS NOTE: 1. SEEPAGE @ 7.00 ft BGS. 2. UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-21)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP21-98
DATE COMPLETED: NOVEMBER 18, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	24.81						
	ML-SILT (TOPSOIL), with clay, trace refuse, low plasticity, brown, moist, rootlets, metal fragments	*24.15*		GS6	0.0 – 0.5			
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*23.31*		GS7	0.5 – 2.0			
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, fine to coarse grained, well graded, light green, moist	*21.81*						
5.0	BOTTOM OF TEST PIT @ 3.00 ft BGS							
7.5	NOTE: 1. SEEPAGE @ 1.16 ft BGS.							
10.0								
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-22)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP22-98
DATE COMPLETED: NOVEMBER 19, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE PID (ppm)	ANALYSIS GRAIN SIZE	ANALYSIS CHEMICAL
	GROUND SURFACE	10.92						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	*10.42*						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	*9.59*						
2.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, dark grey, moist	*8.42*						
5.0	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist	*5.76*						
7.5	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, black, moist, metal, wire, rubber and paper fragments	*1.42*						
10.0	BOTTOM OF TEST PIT @ 9.50 ft BGS NOTE: 1. HEAVY UNDETERMINED ODOUR IN TEST PIT.							
12.5								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG

(VL-23)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

TEST PIT DESIGNATION: TP23-98
DATE COMPLETED: NOVEMBER 19, 1998
TEST PIT METHOD: 490E JOHN DEERE EXCAVATOR
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	SAMPLE DESCRIPTION	ELEV. ft.AMSL	GRAPHIC LOG	SAMPLE			ANALYSIS	
				NUMBER	SAMPLE INTERVAL	PID (ppm)	GRAIN SIZE	CHEMICAL
	GROUND SURFACE	12.25						
	ML-SILT (TOPSOIL), with clay, low plasticity, brown, moist, rootlets	12.00						
		11.50						
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, brown, moist	10.75						
2.5								
	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, fine to coarse grained, well graded, green, moist	9.25						
5.0	– see note 4	7.25						
	SM-SILTY SAND (FILL), fine to coarse grained, well graded, dark gray, moist							
7.5	SM-SAND (FILL), with silt, fine to coarse grained, well graded, olive green, moist							
	SM-SAND and REFUSE (FILL), with silt, fine to coarse grained, well graded, black, moist, metal, wire, rubber and paper fragments							
10.0		1.25						
	ML-SILT (PEAT), with clay, medium plasticity, brown, moist, with rootlets	.75						
12.5	BOTTOM OF TEST PIT @ 11.50 ft BGS							
	NOTE: 1. SEEPAGE @ 3.50 ft BGS. 2. SEEPAGE @ 8.00 ft BGS. 3. STRONG UNDETERMINED ODOUR IN TEST PIT. 4. UNDETERMINED SOURCE OF COBBLE LIKE, POROUS, ORANGE TO BLACK FRAGMENTS ENCOUNTERED FROM 0.75 ft BGS TO 3.50 ft BGS ALONG EASTERN EDGE OF NORTHERN FACE (SAME UNIT AS OBSERVED IN TP17-98).								
15.0								
17.5								
20.0								
22.5								
25.0								
27.5								
30.0								
32.5								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-24
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	ML-SANDY SILT (TOPSOIL), low plasticity, light brown, moist, loose, with rootlets.	1.00				
2	SM-SILTY SAND (FILL), trace clay, fine grained, poorly graded, gray, moist, loose, with debris fragment of telephone pole, slight hydrocarbon odor.		1			
14	SM-SILTY SAND, trace clay, fine to medium grained, poorly graded, gray, wet, loose.	14.00				
16	END OF BOREHOLE @ 16.0ft BGS	16.00				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-25
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GM (TOPSOIL), trace cobble, gravel, sand and silt, brown, loose, some metal debris.	0.70				
2	GM-SILTY GRAVEL (FILL), with sand, occasional cobbles, metal debris, some silty clayey layers.					
4						
6	- Wood debris. at 6.0ft BGS					
8	- Metal debris axile. at 8.5ft BGS					
		9.50				
10	OL-SILTY SAND WITH PEAT (ORGANICS), native, loose, low plasticity, moist, dark gray.	10.50				
12	ML-SANDY SILT, low plasticity, soft, moist, dark gray.					
14						
		15.50				
16	SM-SILTY SAND, wet, light gray.	16.00				
	END OF BOREHOLE @ 16.0ft BGS					
18	Notes: Location - Large downed tree adjacent to test pit. Vegetation - Brush, and weed covered, some black berry, small trees, and ferns.					
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-26
DATE COMPLETED: August 26, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GM (TOPSOIL), gravels, sands, silts, clays, brown, dry, roots.	0.50				
	GC (FILL), cobbles, wood, metal debris, dark gray.					
	- Peat and clay, light gray/blue, moist. at 6.0ft BGS					
	- Sand lense, water entry. at 8.0ft BGS		1			
	- Large metal debris. at 13.0ft BGS					
	- Loose metal and wood debris. at 15.0ft BGS					
	END OF BOREHOLE @ 16.0ft BGS	16.00				

Notes: No lime sludge. Bottom of fill not observed. Maximum depth of excavator 16'. GP-7 noted sand and shell fragments at 20'.
Location - Adjacent to GP-7.
Vegetation: Sparse vegetation cover, black berry, bushes, weeds, and grasses.

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-27
DATE COMPLETED: August 26, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GM (FILL), metal debris, cobbles, gravel, sand, silt, roots, dry, brown.					
2	SM (FILL), occasional gravel, dark gray/black.	2.00				
4	- Saw blade. at 5.0ft BGS					
6	- Chrome bar and glass debris, tire. at 7.0ft BGS					
8						
10						
12	GC, metal debris, coarse, poorly graded, dark gray, wet, decomposition odor. - Plastic like visqueen or house wrap. at 11.5ft BGS	11.00				
14						
16	- Hole filling with water at slough. Still in fill material. at 15.0ft BGS END OF BOREHOLE @ 15.0ft BGS	15.00				
18	Notes: Location - 15' east of mark still in clearance area. Vegetation - small trees, brush, and blackberry bushes.					
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-28
DATE COMPLETED: August 26, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GC-CLAYEY GRAVELS (TOPSOIL), gravel, sand, clay, silt, roots, dry, brown, metal debris.	0.80				
2	SM-SILTY SAND (FILL), low plasticity, occasional gravel, grey, limited metal debris.					
4						
	- Wood debris. at 5.1ft BGS	5.00				
6	SM-SILTY SAND (FILL), occasional gravel, low plasticity, dark gray.					
	- Metal debris. at 7.0ft BGS					
	Lime sludge.	7.50				
8		8.50	1			
	GC (FILL), gravel, sand, silt, clay, metal, rubber, plastics, drak gray.					
10						
12						
14						
	OL-ORGANIC SILTY SAND, with peat, roots, native sand, light gray.	14.50				
	END OF BOREHOLE @ 15.5ft BGS	15.50				
16						
	Notes:					
18	Vegetation - small trees, brush, blackberries, and small ferns adjacent to location.					
	Water entry at 12'.					
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-29
DATE COMPLETED: August 28, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	SM-SILTY SAND (TOPSOIL), occasional gravel, dry, loose, metal debris, brown.					
4	SM-SILTY SAND (FILL), occasional gravel, dry, very compact, metal and wood debris, black. - Wood layer. at 4.5ft BGS - Silty clayey layer. at 5.0ft BGS	4.00				
6	ML-SANDY SILT (FILL), occasional gravel, clay, medium dense, metal debris, layered, gray/black.	6.00				
10	ML-SANDY SILT (FILL), plastic wrap garbage, black, saturated.	11.00				
12	END OF BOREHOLE @ 13.0ft BGS	13.00				
14	Notes: Vegetation - small trees and some brush. Remove blackberry bushes to gain access. Ground cover removed by trespassers. Water entry at 12'. Water coming into ~16'.					
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-30
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	ML-SANDY SILT (TOPSOIL), low plasticity, dark brown, moist, with rootlets.	0.80				
2	SM-SILTY SAND (FILL), trace medium gravel, fine to medium grained, poorly graded, brown to gray, moist, loose, with metal debris.					
4						
6						
8	- Wet. at 7.0ft BGS - Rubber debris, with gravel. at 8.5ft BGS END OF BOREHOLE @ 8.5ft BGS					
10						
12						
14						
16		16.00				
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-31
DATE COMPLETED: August 28, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
2	GM-SILTY GRAVELS & SAND (TOPSOIL), metal debris (Fill), loose, dry, brown.					
		3.00				
4	GC-SILTY CLAYEY GRAVELS & SAND (FILL), staturated below 6', metal and wood debris.					
6						
8						
10	- Hole collapsing. at 10.0ft BGS					
12						
		13.00				
14	Lime sludge, very soft.					
16		16.00				
	END OF BOREHOLE @ 16.0ft BGS					
18	Notes: Depth estimated wit bucket pushed into soft lime sludge. When pulled back sludge remained stuck to bucket. Unable to clear hole of water and soil from caving.					
20	Vegetation - many small 8" to 2" diameter Alders. Some ground cover. Remove (1) 6 inch tree.					
22	*Used wetland mats for access road.					
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-32
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SM-SILTY SAND (TOPSOIL), fine grained, poorly graded, light brown, moist, loose.	0.80				
2	SM-SILTY SAND (FILL), trace clay, fine to medium grained, poorly graded, dark brown to black, moist to wet, loose.					
4						
6	- Rubber and metal debris. at 6.0ft BGS					
8						
10						
12						
14	ML-CLAYEY SILT, trace fine sand, low to medium plasticity, light brown, moist, with fibrous peat.	14.00				
16	END OF BOREHOLE @ 15.0ft BGS	15.00				
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-33
DATE COMPLETED: August 28, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GM-SILTY SAND AND GRAVEL (TOPSOIL), metal debris, dry, brown.					
	GM-SILTY GRAVEL AND SAND (FILL), some clayey layers, metal debris.	3.00				
	- Water entry, hole caving in. at 6.0ft BGS					
	- Refusal, large obstruction, can't go deeper, to big for excavation. at 12.0ft BGS	12.00				
	END OF BOREHOLE @ 12.0ft BGS					
	Notes: Use access road to TP-31.					
	Vegetation - small Alders, some ground cover, and ferns. No tree removed.					

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-34
DATE COMPLETED: August 28, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOPSOIL (FILL), metal debris.					
	GM-GRAVEL, SANDS, AND SILT with metal debris (FILL), grey black, wet.	0.80				
	OL-ORGANIC PEAT AND SILTY CLAY, some rootlets, native.	7.00				
	SM-SILTY SAND, occasional gravel, saturated, gray, native.	8.50				
	END OF BOREHOLE @ 11.0ft BGS	11.00				

Notes:
Near stream setup silt fencing to prevent runoff to stream.

Vegetation - some ferns and Alders.

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-35
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	ML-SANDY SILT (TOPSOIL), low plasticity, brown to dark brown, moist, loose.					
	SP-GRAVELLY SAND WITH SILT (FILL), fine to medium grained, poorly graded, gray, moist to wet, loose, with metal/wood/rubber debris.	0.90				
	- Wet. at 6.0ft BGS					
	ML-CLAYEY SILT, trace fine sand, with fibrous peat, low to medium plasticity, brown, moist to wet, soft.	12.00				
	END OF BOREHOLE @ 16.0ft BGS	16.00				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-36
DATE COMPLETED: August 27, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	ML-SANDY SILT, trace clay, low plasticity, light brown, moist, loose, wit rootlets.	0.90				
2	SM-SILTY SAND (FILL), trace clay, fine to medium grained, poorly graded, gray, moist to wet, loose, wit rubber/metal/wood debris.					
4						
6						
8						
10						
12						
14						
		15.00				
16	ML-CLAYEY SILT, trace fine sand, low to medium plasticity, brown, moist, with fibrous peat material.	16.00				
	END OF BOREHOLE @ 16.0ft BGS					
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: TP-37
DATE COMPLETED: September 15, 2014
TEST PIT METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	ML-SANDY SILT (TOPSOIL), low plasticity, light brown/gray, moist, loose.	1.00				
2	SM-SILTY SAND, fine grained, poorly graded, gray, moist, loose.					
4	SP-SAND, trace silt, occasional gravel, poorly graded, gray, saturated, loose.	4.00				
6						
8	END OF BOREHOLE @ 8.0ft BGS	8.00				
10						
12						
14						
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

TEST PIT STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Contractor: IO Environmental

HOLE DESIGNATION: TP-38
DATE COMPLETED: August 28, 2014
TEST PIT METHOD: Excavator
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GC-SAND AND GRAVEL, dirty wit silts and some clay, brown, dry.	0.30				
	GM-SAND AND GRAVEL, some silt, gray, water entry at 4', some wood.		1			
	GC-SAND AND GRAVEL WITH SILT AND CLAY, brown, wet, loose, home caving in.	4.00	2			
	- Some lenses of sands and gravels. at 8.0ft BGS		3			
	END OF BOREHOLE @ 12.0ft BGS	12.00				
	Notes: North side of marsh area. Set up wetland mats. Vegetation - wetland vegetation, brush, weeds, and grasses.					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(VL-24)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: BH1-98
DATE COMPLETED: NOVEMBER 19, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	15.60					
	SM/GM-SAND and GRAVEL (FILL), with silt, extremely dense, fine to coarse grained, well graded, brown, very moist, dilatant	14.60		1SS		>50	
2.5	SM-SAND (FILL), with to and silt, trace gravel, dense, fine to coarse grained, well graded, gray, very moist, slightly dilatant		CEMENT/ BENTONITE GROUT	2SS		34	
	– occasional steel and rubber fragments @ 2.00 ft BGS	11.60		3SS		47	
5.0	SW-SAND (FILL), trace silt, dense, fine to coarse grained, well graded, gray, moist	10.10		4SS		3	
	SM-SILTY SAND (FILL), with refuse, trace gravel, dense, fine to coarse grained, well graded, gray, wet, steel and rubber fragments	9.10		5SS		12	
7.5	ML-CLAYEY SILT (LIME DISPOSAL SLUDGE) (FILL), trace fine sand, soft, high plasticity, light gray with gray and brown staining, moist	7.10		6SS		53	
10.0	ML-SILT (FILL), with fine sand, trace gravel, trace peat, stiff, low plasticity, black, wet, wire and steel fragments		8" Ø BOREHOLE				
12.5	– very dense, wire, steel and wood fragments from 10.00 ft BGS to 12.00 ft BGS	3.60					
	END OF HOLE @ 12.00 ft BGS						
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(VL-25)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: BH2-98
DATE COMPLETED: NOVEMBER 20, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	PID (ppm)
	GROUND SURFACE	14.08					
	SM/GM-SAND and GRAVEL (FILL), with silt, extremely dense, fine to coarse grained, well graded, brown, very moist, dilatant, rootlets	13.08		1SS		>80	
2.5	SM-SILTY SAND (FILL), with to trace gravel, extremely dense, fine to coarse grained, well graded, dark gray, very moist, dilatant, slight odour, steel, wire and rubber fragments		CEMENT/ BENTONITE GROUT	2SS		>50	
5.0	- wet, more refuse @ 2.00 ft BGS - moist @ 4.00 ft BGS			3SS		>50	
7.5	- compact, decrease in steel, frequent wood fragments @ 6.00 ft BGS	6.08		4SS		27	
	ML-CLAYEY SILT (LIME DISPOSAL SLUDGE) (FILL), trace fine sand, stiff, medium plasticity, light gray with brown and beige staining, moist, strong odour	4.33		5SS		13	
10.0	SM-SILTY SAND (FILL), with to trace gravel, compact, fine to medium grained, poorly graded, black, very moist to wet, slight odour, steel and wood fragments		8" Ø BOREHOLE	6SS		>50	
12.5	- very wet, slurry like, no recovery in spoon @ 12.00 ft BGS	.08		7SS		9	
15.0	SM-SILTY SAND, with peat, trace gravel, loose, fine to medium grained, poorly graded, black, wet, dilatant, slight odour	-1.92		8SS		8	
17.5	END OF HOLE @ 16.00 ft BGS						
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(VL-26)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLENN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: BH3-98
DATE COMPLETED: NOVEMBER 20, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: G. SINNETT

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	PID (ppm)
	GROUND SURFACE	11.72					
	ML-SILT (TOPSOIL), with clay, hard, low plasticity, brown, moist, rootlets	11.56		1SS		>50	
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, very dense, fine to coarse grained, well graded, black, moist - silty sand, with gravel @ 2.33 ft BGS	7.72	CEMENT/ BENTONITE GROUT	2SS		>50	
5.0	SM-SAND (FILL), with silt, dense, fine to coarse grained, well graded, black, moist, strong odour, wire and rubber fragments - very dense, wet, plastic and wood fragments @ 6.00 ft BGS			3SS		44	
7.5	- dense, wet @ 8.00 ft BGS			4SS		>50	
				5SS		40	
10.0	ML-SILT, with clay, firm, medium plasticity, brown, moist	1.72	8" Ø BOREHOLE	6SS		7	
12.5	- soft @ 12.00 ft BGS			7SS		4	
	END OF HOLE @ 14.00 ft BGS	-2.28					
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(VL-27)
Page 1 of 1

PROJECT NAME: MARINE VIEW DRIVE
PROJECT NUMBER: 09973
CLIENT: GLEnN SPRINGS HOLDINGS, INC.
LOCATION: MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: BH4-98
DATE COMPLETED: NOVEMBER 20, 1998
DRILLING METHOD: 4 ¼" ID HSA
CRA SUPERVISOR: D. GRAY / G. SINNETT

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft.AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	13.44					
	ML-SILT (TOPSOIL), with clay, hard, low plasticity, brown, moist	13.28		1SS		>50	
2.5	SM/GM-SAND and GRAVEL (FILL), with silt, random cobbles, very dense, fine to coarse grained, well graded, brown, moist	11.11	CEMENT/ BENTONITE GROUT	2SS		40	
	SM-SILTY SAND (FILL), dense, fine to coarse grained, well graded, dark gray, moist	10.11		3SS		>50	
5.0	SM-SAND (FILL), with silt, dense, fine to coarse grained, well graded, black, very moist, slight odour, wire and rubber fragments	7.44		4SS		9	
7.5	ML-SILT (LIME DISPOSAL SLUDGE), with clay, stiff, low plasticity, beige/light gray, moist, strong odour	5.44		5SS		>50	
10.0	SM-SAND (FILL), with silt, dense, fine to coarse grained, well graded, black, moist, slight odour, wire and rubber fragments		8" Ø BOREHOLE	6SS		22	
12.5	- compact @ 12.00 ft BGS	1.44					
	END OF HOLE @ 12.00 ft BGS						
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-1
DATE COMPLETED: August 21, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND (TOPSOIL), trace medium to coarse gravel, trace cobble, fine grained, poorly graded, light brown, moist, loose.	0.50						
2	SM-SAND (FILL), trace silt, fine grained, light brown, poorly graded, brown, moist, loose.			1DP		50		0.1
4	- Medium grained, compact pH = 11.5 at 4.0ft BGS							
6								
8				2DP		60		9.1
10	GP-1 9.1' lime sludge, pH = 13.5.	9.10						
12	SP-SAND (FILL), trace silt, fine to medium grained, poorly, graded, dark brown, moist to wet, loose, with metal/rubber debris.	10.50		3DP		40		0.2
14								
16	ML-SILT, trace fine sand, low plasticity, brown, moist, soft, trace rootlets.	14.60 15.00						
	SP-SAND, trace silt, fine to medium grained, poorly graded, brown, wet, loose.	15.70						
18	ML-CLAYEY SILT, with peat, low plasticity, brown, moist, hard.			4DP		60		
20	SP-SAND, fine to medium grained, poorly graded, brown to black, wet.	20.00 20.80						
22	OL-ORGANIC PEAT, low plasticity, black, moist, soft.			5DP		50		
24								
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: SECOND BOREHOLE WAS ADVANCED TO COLLECT ENOUGH MATERIAL FOR LIME SLUDGE SAMPLE							
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval) GRAIN SIZE ANALYSIS (rectangle)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-2
DATE COMPLETED: August 21, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND (TOPSOIL), trace coarse gravel, trace cobble, fine grained, poorly graded, brown, moist, loose.	0.50						
2	SM-SAND (FILL), with silt, trace medium grained, brown, moist, loose, with brick, with rootlets, with metal. pH = 8.5.			1DP		60		0.8
4								
6								
8				2DP		33		9.1
10	GP-2 9' TCLP- taken for lime sludge.	9.00						
	SM-SAND (FILL), trace silt, fine to medium grained, poorly graded, dark brown, moist to wet, loose, with wire/debris. pH = 11.65	10.00						
12	ML-CLAYEY SILT, with peat, trace fine sand, low plasticity, dark brown, moist, stiff, with wood fragments.	11.40		3DP		60		5.4
14								0.2
16								
18				4DP		40		
	OL-ORGANIC PEAT, trace fine sand, low plasticity, black, moist to wet, soft, with wood fragments.	18.50						
20	No recovery.	20.00						
22								
24								
	END OF BOREHOLE @ 25.0ft BGS	25.00						
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (3DP)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-3
DATE COMPLETED: August 21, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND (TOPSOIL), trace medium gravel, poorly graded, dark brown, moist, loose.	0.50						
2	SP-SAND (FILL), with silt, fine gravel, trace cobble, fine grained, poorly graded, light brown to gray, moist, loose.			1DP		33		0.0
4								
6	- Wet at 5.0ft BGS							
8	- With silt, trace rubber/wire/glass at 8.0ft BGS			2DP		50		9.1
10								
12				3DP		33		5.4
14		14.60						
16	ML-CLAYEY SILT, trace fine sand, low plasticity, light brown, moist, soft, with wood fragments.	15.00						
18	SP-SAND, trace silt, trace fine gravel, fine grained, poorly graded, brown to gray, moist, loose.	16.60		4DP		45		
20	OL-ORGANIC PEAT, low plasticity, brown, moist, soft, with wood fragments.							
22	END OF BOREHOLE @ 20.0ft BGS	20.00						
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-4
DATE COMPLETED: August 21, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND (TOPSOIL), trace coarse gravel, trace cobble, fine grained, poorly graded, light brown, moist, trace rootlets, loose.	0.70						
2	SM-SAND (FILL), trace silt, fine grained, poorly graded, dark brown, moist, loose, trace plastic, trace glass, trace wood fragments.			1DP		35		0.7
4								
6								
8				2DP		30		0.3
10	- Medium grained at 10.2ft BGS							
12	ML-SILT (ORGANIC), trace fine sand, low plasticity, light brown, moist, soft, with wood fragments.	10.70		3DP		35		0.1
14								
16	SM-SAND (FILL), trace silt, fine grained, poorly graded, brown, moist, trace plastic, loose.	15.00 15.40 15.90						
18	ML-SILT, trace fine sand, low plasticity, light brown, moist, soft.	16.60		4DP		60		0.0
20	SM-SAND, trace silt, fine grained, poorly graded, brown, moist, loose.							
22	OL-ORGANIC PEAT, low plasticity, dark brown to orange, moist, soft, with wood fragments.	20.00						
24	No recovery.			5DP		0		
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (4DP)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-5
DATE COMPLETED: August 22, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND (TOPSOIL), trace cobble, trace coarse gravel, fine grained, poorly graded, light brown, moist, with rootlets.	0.90						
2	ML-SILT, trace fine sand, low plasticity, light brown, moist, soft.			1DP		75		0.1
4		4.60						
6	SP-SAND (FILL), trace silt, fine to medium grained, poorly graded, black, wet, loose, trace metal. pH = 7.50.							
8	- Metal fragments at 7.0ft BGS			2DP		60		0.0
10								
12				3DP		75		0.2
14		14.20						
	GP-5 7' lime sludge, pH = 11.50.	15.00						
16	- Wood fragments at 14.8ft BGS SP-SAND (FILL), trace coarse gravel, trace silt, fine to medium grained, poorly graded, dark brown, moist, loose, with plastic fragments. pH = 10.	16.50						
18	ML-CLAYEY SILT, with peat, low plasticity, brown, moist, with wood fragments.			4DP		80		12.4
20		20.40						
22	SP-SAND, trace silt, medium to coarse grained, poorly graded, brown, moist, loose.	22.20		5DP		90		0.0
24	OL-ORGANIC PEAT, low plasticity, dark brown, moist, soft, with wood fragments.	24.30						
26	SM-SAND, with silt, fine grained, poorly graded, brown, moist, wet, loose.	25.00						
28	END OF BOREHOLE @ 25.0ft BGS							
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (oval)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-6
DATE COMPLETED: August 21, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	ML-SILTY SAND (TOPSOIL), trace rootlets, fine grained, poorly graded, dark brown to black, moist to wet, loose.	0.40						
0.7	ML-SILT, trace fine sand, low plasticity, brown to light brown, moist, soft.	0.70						
2	SM-SAND (FILL), trace silt, trace fine gravel, poorly graded, dark brown, moist, loose.			1DP		50		0.0
4								
6	- Wood fragments at 6.0ft BGS			2DP		50		0.0
8								
10	- Trace wire at 11.0ft BGS							
12				3DP		50		0.2
14								
14.4	ML-CLAYEY SILT, with peat, low plasticity, dark brown, moist to wet, soft.	14.40						
15.3		15.30						
15.7	SP-SAND, trace silt, fine grained, poorly graded, brown, moist, soft.	15.70						
16.8	OL-ORGANIC PEAT, low plasticity, dark brown to black, moist, soft.	16.80		4DP		75		0.0
18								
20	SM-SILTY SAND, trace fine gravel, fine grained, poorly graded, brown, moist, loose.							
	END OF BOREHOLE @ 20.0ft BGS	20.00						
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON
Driller: HOLT Drilling, Inc.

HOLE DESIGNATION: GP-7
DATE COMPLETED: August 22, 2014
DRILLING METHOD: Direct Push
FIELD PERSONNEL: Nate Hinsperger

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	SM-SILTY SAND (TOPSOIL), trace medium gravel, trace cobble, fine grained, poorly graded, brown, moist, trace rootlets.	0.40					
2	ML-SILT, with sand, low plasticity, brown, moist, soft.	2.20	1DP		75		0.1
4	SP-SAND (FILL), with silt, fine grained, poorly graded, dark brown, moist, loose.	5.00					
6	ML-SILT, trace fine sand, low plasticity, brown, moist, soft.	5.40					
	SP-SAND, trace silt, fine grained, poorly graded, brown, moist, loose.	6.80	2DP		50		0.0
8	ML-CLAYEY SILT, with peat, trace fine sand, low plasticity, dark brown, moist to wet, soft, with rootlets.						
10	- With sand at 9.5ft BGS - With rootlets at 10.0ft BGS	10.60					
12	SP-SAND, with silt, fine grained, poorly graded, brown to black, moist to wet, loose, trace shell material. - With wood fragments at 11.0ft BGS		3DP				0.0
14	- Trace gravel at 14.0ft BGS						
16	OL-ORGANIC PEAT, trace fine sand, low plasticity, brown, moist, with shell fragments.	16.10 16.50	4DP		50		0.1
18	SP-SAND, trace silt, fine to medium grained, poorly graded, brown, moist, loose, trace shell material.						
20	SM-SILTY SAND, with cobble, trace coarse gravel, brown, wet, loose.	20.00	5DP		33		
22							
24	- With cobble, with fine to coarse gravel at 25.0ft BGS						
26							
28	- Gray to light brown at 28.0ft BGS		6DP		75		0.0
30	END OF BOREHOLE @ 30.0ft BGS	30.00					
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (6DP)

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 7/13/15

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-01
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SM-SILTY SAND, fine grained, poorly graded, grey, moist, occasional wood, native.					
7.00	END OF BOREHOLE @ 7.0ft BGS	7.00				

Notes:
No evidence of fill material.

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 8/6/15

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-02
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	SM-SILTY SAND, fine grained, poorly graded, moist, grey.					
	SP-SAND, with silt, occasional wood, grey/green, moist, native.	5.00				
	END OF BOREHOLE @ 6.0ft BGS	6.00				
	Notes: No evidence of fill material.					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 8/6/15

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-03
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
2	SM-SILTY SAND, fine grained, poorly graded, grey, moist, native.					
4	- Peat. at 4.0ft BGS	4.00				
	END OF BOREHOLE @ 4.0ft BGS					
6	Notes: No evidence of fill material.					
8						
10						
12						
14						
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-04
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SM-SILTY SAND, fine grained, poorly graded, some clay, wood, grey, moist, native.					
6	END OF BOREHOLE @ 6.0ft BGS	6.00				
	Notes: No evidence of fill material.					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 8/6/15

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-05
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	SM-SILTY SAND, some clay, fine grained, grey, moist.					
	SM-SILTY SAND, with grave and clay, fine grained, poorly graded, grey, moist, ice contact material, native.	5.00				
	- Cobble. at 5.5ft BGS	5.50				
	END OF BOREHOLE @ 5.5ft BGS					
	Notes: No evidence of fill material.					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 8/6/15

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: MVD
PROJECT NUMBER: 009973
CLIENT: GSHI
LOCATION: 1913 MARINE VIEW DRIVE, TACOMA, WASHINGTON

HOLE DESIGNATION: HA-05B
DATE COMPLETED: December 18, 2014
DRILLING METHOD: Hand Auger
FIELD PERSONNEL: Rick Bieber

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SM-SILTY SAND, with organics and plastics, poorly graded, dark grey, moist, likely fill.					
4	END OF BOREHOLE @ 4.0ft BGS	4.00				
	Notes: Evidence of fill material, plastic and rubber.					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 009973-WI.GPJ CRA_CORP.GDT 8/6/15

APPENDIX E

Terrestrial Ecological Evaluation Form

N47°16'17.76"
500 ft
1913 Marine View Dr
W122°21'54"
© 2015 Google

Washington State Department of Ecology
Toxics Cleanup Program

Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	12
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	1
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	1
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	1
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	6

Notes for Table 749-1

[a] It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

[b] **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

> **Low:** Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

[c] Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

[Area Calculation Aid] [Aerial Photo with Area Designations] [TEE Table 749-1] [Index of Tables]

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

009973 (14) - APPE TEE Contaminant Analysis

Priority Contaminant	*Maximum Dected Concentration (mg/kg)*	*Protective TEE Concentration for Industrial or Commercial Use* (mg/kg)*
Arsenic	**1,180**	20
Barium	**1,530**	1,320
Cadmium	**94.9**	36
Chromium	**137**	135
Copper	**10,000**	550
Lead	**6,030**	220
Manganese	3,070	23,500
Mercury	4.63	9/0.7 a
Nickel	1,580	1,850
Selenium	**2.8**	0.8
Zinc	**13,900**	570
Benzo(a)pyrene	22	300
heptachlor/heptachlor epoxide(tota	**29.2**	0.6
Hexachlorobenzene	<22	31
Pentachlorophenol	0.183	11
PCB mitures (total)	**13.6**	2
4,4'-DDD	0.067	1

Notes/Abbreviations

* Protective TEE Concentration is obtained from Table 749-2 for Industrial or Commercial Site, Model Toxics Control Act Cleanup Regulation, chapter 173-340 WAC, revised November 2007.

mg/kg = milligrams per kilogram

Bold indicate the concentration is above the protective TEE concentration for industrial or commerical use.

a = the first value is for inorganic mercury and the second value is for organic mercury.

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: 1913 Marine View Drive	
Facility/Site Address: 1913 Marine View Drive, Tacoma, Washington	
Facility/Site No: 1213	VCP Project No.:

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Rick Bieber		Title: Project Manager	
Organization: Conestoga-Rovers & Associates			
Mailing address: 732 Broadway			
City: Tacoma		State: WA	Zip code: 98036
Phone: 253-573-1218	Fax: 253-573-1663	E-mail: rbieber@craworld.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2**.*

☒ No or Unknown *If you answered **"NO" or "UKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☒ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☒ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*

☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

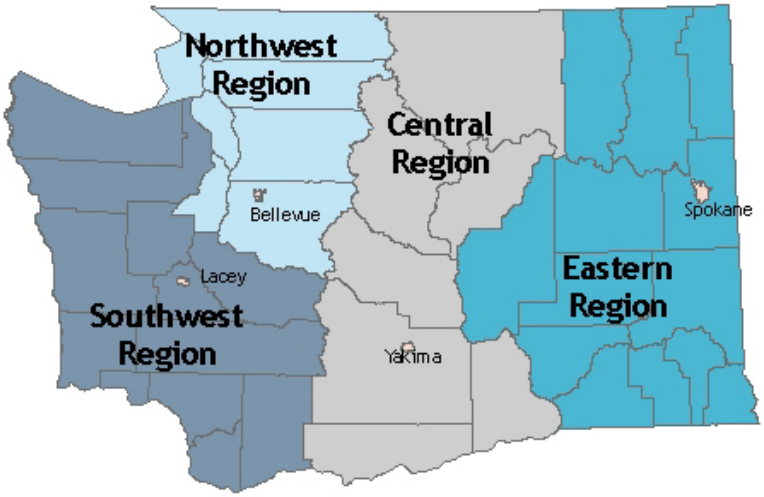
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☒ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

APPENDIX F

Summary of Previous Investigations

Appendix F Summary of Previous Investigations

September 1984 Investigation: Conestoga-Rovers & Associates (CRA) conducted an investigation in September 1984. CRA advanced eight boreholes for geologic sampling. CRA also installed four shallow groundwater monitoring wells, namely GM-B-1, GM-B-2, GM-B-3, and GM-B-6, to total depths ranging from 10 to 12 feet below ground surface (bgs). CRA collected groundwater samples from the monitoring wells as well as two surface water samples for laboratory analysis of the Target Compound List/Target Analyte List (TCL/TAL) parameters. These parameters include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals. The investigation results indicated that no VOCs were present in the groundwater monitoring wells located outside the areal extent of the lime sludge fill, lateral discharge of shallow groundwater is controlled by the surface water drainage system, and detectable concentrations of parameters associated with the lime sludge fill were not being discharged into the surface drainage system. The results of this investigation were reported in CRA's *Tacoma Off-Plant Disposal Site Investigation* report, dated December 1984.

September 1988 Investigation: Occidental Chemical Corporation (OCC) conducted an investigation in September 1988. OCC collected groundwater samples from the four previously installed groundwater monitoring wells and submitted the samples for laboratory analysis. Concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) were detected above Ecology's Model Toxics Control Act (MTCA) Method B cleanup levels. The results of this investigation were reported in OCC's *Sampling Memorandum,* Dated November 1988.

1998 and 1999 Investigation: In 1998, Ecology requested that OCC review the existing Site investigation data and current Site conditions to determine whether additional work should be considered to complete the Site evaluation. Pursuant to Ecology's request, a data review and work plan entitled, *Review of Site Conditions and Proposed Additional Work* was prepared and submitted to Ecology for review and comment in September 1998. The work plan presented the results of the previous investigations as well as a review of the data with recommendations for appropriate further investigative activities. The activities proposed in the work plan were designed to confirm the results of the earlier investigations and to determine whether there are any sources or volumes of impacted materials that were not previously identified. Comments dated September 23, 1998 were received from Ecology and responses were submitted on October 29, 1998. OCC and Ecology were in agreement on the responses to the comments and the field activities were conducted by CRA between November 18, 1998 and January 12, 1999. The results of this investigation were previously reported in March 1999 in the Site Characterization Report, Marine View Drive Site (CRA, 1999). The report confirmed the conclusions from the previous investigations with some modification of the limits of the fill. More details of the results are discussed below.

CRA inspected previous installed monitoring wells GM-B-1, GM-B-2, GM-B-3, and GM-B-6. Monitoring well GM-B-3 was not found and monitoring well GM-B-6 was damaged beyond repair. CRA therefore decommissioned monitoring well GM-B-6. CRA redeveloped the other two previous installed monitoring wells GM-B-1, GM-B-2 to ensure hydraulic communication between the monitoring wells and the aquifer.

CRA installed five new monitoring wells. Two monitoring wells GM-B-3R and GM-B-6R were installed as replacement wells for GM-B-3 and GM-B-6, respectively. Three monitoring wells GM-B-1A, GM-B-2A, and GM-B-6A were installed within approximately 5 feet of wells GM-B-1, GM-B-2, and GM-B-6R, respectively, and deeper. The Site monitoring wells were sampled during two separate events between November 30

and December 1, 1998, and January 11 and 12, 1999. All groundwater samples were analyzed for the TCL/TAL parameters.

Four surface water samples were collected from each of the drainage swales and analyzed for TCL/TAL parameters. One sediment sample composited from four sediment samples collected from each of the four swales and one discrete sediment sample collected from the southern ditch upstream of the Site were analyzed for the TCL/TAL parameters.

Seven soil samples were collected from test pits excavated across the southern portion of the Site. Test pits were excavated from approximately 9 feet bgs to a maximum depth of 11.5 feet bgs. The seven soil samples were collected at various depths. All samples were analyzed for the TCL/TAL parameters.

In addition, a composite sample of the lime sludge fill was collected and analyzed for the TCL/TAL parameters. The analytical results indicated the lime sludge fill contained primarily VOCs and various metals analytes (calcium and magnesium, etc.).

A specific analytical parameter list for lime sludge fill was developed from review of an analytical database compiled during investigations of other sites where lime sludge fill from the Tacoma Plant was present. This Specific Parameter List (SPL) was approved by Washington State Department of Ecology (Ecology) and United States Environmental Protection Agency (USEPA). The SPL includes VOCs such as PCE, TCE, trans-1,2-dichloroethene (trans-1,2-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), vinyl chloride, and methylene chloride, etc.

No lime sludge fill specific parameters were detected in the surficial soils (fill) overlying the lime sludge fill. Four of the lime sludge fill specific parameters (trans-1,2-DCE, methylene chloride, PCE and TCE) were detected in the subsurface soils (fill) within the areal extents of the lime sludge fill. These detections occurred in the soils associated with the sand and shredder residue fill and the concentrations were lower than MTCA Method B cleanup levels.

Two lime sludge fill specific parameters (methylene chloride and carbon tetrachloride) were detected in surface water. Carbon tetrachloride was detected only in the background sample and, therefore, is not due to the presence of lime sludge fill on Site. Methylene chloride was detected only in one duplicate sample at a low concentration suggesting that it is a potential laboratory artifact.

Only two monitoring wells GM-B-6A and GM-B-6R contained lime sludge fill specific parameters. Well GM-B-6R is a shallow well screened in the lime sludge fill and contained elevated concentrations of trans-1,2-DCE, cis-1,2-DCE, 1,1-DCE, PCE, TCE, and vinyl chloride. Well GM-B-6A is a deep well screened over the five-foot interval in fill above the lower permeability soils and below the lime sludge fill. The sample from well GM-B-6A contained significant lower concentrations of PCE (three orders of magnitude lower) and no detectable concentrations of other lime sludge fill specific parameters. The significant decrease in the concentration of PCE between GM-B-6R and GM-B-6A and the absence of the other lime sludge fill specific parameters in GM-B-6A demonstrates that there is very little vertical transport of chemicals out of the lime sludge fill. Well GM-B-1, GM-B-1A, GM-B-2, and GM-B-2A are all located down-gradient from the lime sludge fill, and did not contain detectable lime sludge fill specific parameters, demonstrating that there is no detectable lateral migration of chemicals in groundwater from the lime sludge fill towards the southwest. Additionally, the concentrations of PCE and TCE at GM-B-6/GM-B-6R from 1998/1999 investigation decreased significantly from 1984/1988 investigation, indicating that natural attenuation of the lime sludge fill specific parameters occurred at the Site.

October 2004 Investigation: CRA conducted an investigation in October 2004, which consisted of collecting four samples of the lime sludge fill from four separate boreholes BH-1 through BH-4 to characterize the lime sludge fill for waste disposal purposes in anticipation of evaluating remedial alternatives for the Site. The samples were analyzed for TCL/TAL parameters. There were no parameters detected in the lime sludge fill at concentrations that exceeded MTCA Method C industrial soil cleanup levels. Additionally, the four samples were analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) to characterize the lime sludge fill for potential waste disposal purposes. The results indicated the concentration of PCE in the sample from BH-4 exceeded the corresponding TCLP regulatory limit. The remaining concentrations in the sample from BH-4 and concentrations in the three samples from BH-1, BH-2, and BH-3 were below the corresponding TCLP regulatory limits. The results of this investigation were reported in CRA's *Remedial Investigation/Feasibility Study Work Plan*, dated September 2013.

2014 Investigation: CRA conducted an investigation between August and December 2014. The investigation activities included redevelopment of well GM-B-6R, collection of low-flow groundwater samples from all existing monitoring wells, advancement of seven direct-push soil borings, GP-1 through GP-7, to depths ranging from 20 to 30 feet bgs with soil sampling, excavation of 14 test pits, TP-24 through TP-36 and TP-38, and hand auger of 1 test pit, TP-37, to depths ranging from 8 to 16 feet bgs with soil sampling, collection of eight sediment samples SD-05 through SD-12, collection of five surface water samples, SW-01 through SW-05, completion of six hand auger boreholes at locations HA-01 through HA-05B to further delineate the lateral extent of the sand and shredder residue fill, and completions of slug tests in all existing monitoring wells. The results of this investigation are presented in this report.

APPENDIX G

Laboratory Analytical Results

July 3, 2024

Mr. Rick Bieber
Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

Dear Mr. Bieber,

On June 12th, 10 samples were received by our laboratory and assigned our laboratory project number EV24060108. The project was identified as your GSHDM: Tacoma Marine View Data Mgmt . The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-01
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 4:20:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	**2.8**	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-01
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 4:20:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	**3.9**	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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SAMPLE DATA RESULTS

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2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dimethylphenol	EPA-8270	**5.9**	2.0	1	UG/L	06/19/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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SAMPLE DATA RESULTS

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4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**13**	2.0	1	UG/L	06/19/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	**0.10**	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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SAMPLE DATA RESULTS

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Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	**0.054**	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**1500**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	**3.4**	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**61**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**1900**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	**4.6**	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**35000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**16**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	**6.7**	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	**31**	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**19000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**290**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**64000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**120**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**150**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**36000**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**470000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS

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SAMPLE DATA RESULTS

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Vanadium	EPA-200.8	**10**	2.0	1	UG/L	06/14/2024	EBS
Zinc	EPA-200.8	**520**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**101**	06/14/2024	DLC
Toluene-d8	EPA-8260	**101**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**107**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**33.7**	06/19/2024	DBA
Phenol-d5	EPA-8270	**25.6**	06/19/2024	DBA
Nitrobenzene-d5	EPA-8270	**69.8**	06/19/2024	DBA
2-Fluorobiphenyl	EPA-8270	**33.8**	06/19/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**81.8**	06/19/2024	DBA
Terphenyl-d14	EPA-8270	**64.8**	06/19/2024	DBA
TCMX	EPA-8082	**75.1**	06/21/2024	DBA
DCB	EPA-8082	**52.7**	06/21/2024	DBA
TCMX	EPA-8081	**78.4**	07/02/2024	DBA
DCB	EPA-8081	**67.8**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA

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CERTIFICATE OF ANALYSIS

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/17/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/17/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/17/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/17/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/17/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**630**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**27**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**45000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**8700**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**14000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**220**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**5200**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	**34**	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**13000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**5.3**	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 3:10:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B1A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**3.9**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**103**	06/14/2024	DLC
Toluene-d8	EPA-8260	**103**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**104**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**35.8**	06/17/2024	DBA
Phenol-d5	EPA-8270	**19.2**	06/17/2024	DBA
Nitrobenzene-d5	EPA-8270	**60.7**	06/17/2024	DBA
2-Fluorobiphenyl	EPA-8270	**53.0**	06/17/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**69.0**	06/17/2024	DBA
Terphenyl-d14	EPA-8270	**72.2**	06/17/2024	DBA
TCMX	EPA-8082	**78.0**	06/21/2024	DBA
DCB	EPA-8082	**88.8**	06/21/2024	DBA
TCMX	EPA-8081	**45.7**	07/02/2024	DBA
DCB	EPA-8081	**64.5**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	**0.20**	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	**10**	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	**4.1**	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	**2.5**	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	**4.6**	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dimethylphenol	EPA-8270	**9.1**	2.0	1	UG/L	06/19/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**4.3**	2.0	1	UG/L	06/19/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**280**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**15**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**2600**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	**1.3**	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**73000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**2.7**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	**8.3**	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	**9.1**	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**29000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**76**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**21000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**290**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**59**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**11000**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	**28**	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**130000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 1:25:00 PM
CLIENT SAMPLE ID	GW-061024-RN-B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**910**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**101**	06/14/2024	DLC
Toluene-d8	EPA-8260	**102**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**105**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**35.3**	06/19/2024	DBA
Phenol-d5	EPA-8270	**22.0**	06/19/2024	DBA
Nitrobenzene-d5	EPA-8270	**61.6**	06/19/2024	DBA
2-Fluorobiphenyl	EPA-8270	**29.0 SUR11**	06/19/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**79.1**	06/19/2024	DBA
Terphenyl-d14	EPA-8270	**64.3**	06/19/2024	DBA
TCMX	EPA-8082	**81.1**	06/21/2024	DBA
DCB	EPA-8082	**66.1**	06/21/2024	DBA
TCMX	EPA-8081	**103**	07/02/2024	DBA
DCB	EPA-8081	**65.3**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
SUR11 - Surrogate outside of control limits due to sporadic marginal failure. No corrective action taken.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**280**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**3.1**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**16**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**15000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**2.4**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**14000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**1.3**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**13000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**400**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**4700**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**12000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**4.9**	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 11:50:00 AM
CLIENT SAMPLE ID	GW-061024-RN-B2A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**11**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**104**	06/14/2024	DLC
Toluene-d8	EPA-8260	**102**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**101**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**33.6**	06/18/2024	DBA
Phenol-d5	EPA-8270	**18.2**	06/18/2024	DBA
Nitrobenzene-d5	EPA-8270	**54.3**	06/18/2024	DBA
2-Fluorobiphenyl	EPA-8270	**47.5**	06/18/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**57.7**	06/18/2024	DBA
Terphenyl-d14	EPA-8270	**69.7**	06/18/2024	DBA
TCMX	EPA-8082	**76.2**	06/21/2024	DBA
DCB	EPA-8082	**84.8**	06/21/2024	DBA
TCMX	EPA-8081	**50.2**	07/02/2024	DBA
DCB	EPA-8081	**54.4**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

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CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**310**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**6.7**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**62**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**34000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**2.8**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	**4.7**	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	**3.8**	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**26000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**1.6**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**25000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**1900**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**29**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**8700**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**68000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**2.5**	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 10:10:00 AM
CLIENT SAMPLE ID	GW-061124-RN-B3R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**14**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	06/14/2024	DLC
Toluene-d8	EPA-8260	**102**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**103**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**33.9**	06/18/2024	DBA
Phenol-d5	EPA-8270	**19.5**	06/18/2024	DBA
Nitrobenzene-d5	EPA-8270	**57.5**	06/18/2024	DBA
2-Fluorobiphenyl	EPA-8270	**55.0**	06/18/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**70.6**	06/18/2024	DBA
Terphenyl-d14	EPA-8270	**70.5**	06/18/2024	DBA
TCMX	EPA-8082	**68.2**	06/21/2024	DBA
DCB	EPA-8082	**70.7**	06/21/2024	DBA
TCMX	EPA-8081	**60.8**	07/02/2024	DBA
DCB	EPA-8081	**79.8**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	**0.23**	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**830**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**1.8**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**16**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**20000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**7.6**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	**6.4**	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**7300**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**4.1**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**14000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**100**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**4.2**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**4500**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**17000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**7.3**	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 2:10:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**24**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	06/14/2024	DLC
Toluene-d8	EPA-8260	**103**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**104**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**35.6**	06/18/2024	DBA
Phenol-d5	EPA-8270	**20.8**	06/18/2024	DBA
Nitrobenzene-d5	EPA-8270	**59.4**	06/18/2024	DBA
2-Fluorobiphenyl	EPA-8270	**52.8**	06/18/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**69.8**	06/18/2024	DBA
Terphenyl-d14	EPA-8270	**69.1**	06/18/2024	DBA
TCMX	EPA-8082	**92.8**	06/21/2024	DBA
DCB	EPA-8082	**107**	06/21/2024	DBA
TCMX	EPA-8081	**65.0**	07/02/2024	DBA
DCB	EPA-8081	**78.4**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	**2.6**	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	**4.5**	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dimethylphenol	EPA-8270	**2.4**	2.0	1	UG/L	06/18/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**95**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	**1.2**	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**4.4**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**89**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**59000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**17000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**27**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**29000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**250**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**5.6**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**16000**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**120000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**5.2**	2.0	1	UG/L	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:15:00 PM
CLIENT SAMPLE ID	GW-061124-RN-B6R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**27**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**101**	06/14/2024	DLC
Toluene-d8	EPA-8260	**100**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**102**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**29.2**	06/18/2024	DBA
Phenol-d5	EPA-8270	**17.4**	06/18/2024	DBA
Nitrobenzene-d5	EPA-8270	**45.3 SUR06**	06/18/2024	DBA
2-Fluorobiphenyl	EPA-8270	**44.8**	06/18/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**53.3**	06/18/2024	DBA
Terphenyl-d14	EPA-8270	**51.2 SUR06**	06/18/2024	DBA
TCMX	EPA-8082	**93.2**	06/21/2024	DBA
DCB	EPA-8082	**89.0**	06/21/2024	DBA
TCMX	EPA-8081	**82.8**	07/02/2024	DBA
DCB	EPA-8081	**56.0**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
SUR06 -One or more base/neutral surrogate recoveries were below the lower control limits. The base/neutral sample results may be biased low.

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	**4.5**	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	**2.1**	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	**6.5**	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/18/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
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		ALS SAMPLE#:	EV24060108-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/18/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/18/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/18/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	**1400**	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	**3.0**	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	**60**	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**2000**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	**4.3**	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**36000**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	**14**	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	**6.6**	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	**28**	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	**17000**	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	**270**	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**62000**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	**110**	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	**150**	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**36000**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**470000**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**11**	2.0	1	UG/L	06/14/2024	EBS

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/10/2024 12:00:00 PM
CLIENT SAMPLE ID	GW-061024-RN-DUP	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**470**	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	06/14/2024	DLC
Toluene-d8	EPA-8260	**99.1**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**107**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**14.6 SUR02**	06/18/2024	DBA
Phenol-d5	EPA-8270	**7.54**	06/18/2024	DBA
Nitrobenzene-d5	EPA-8270	**23.0 SUR02**	06/18/2024	DBA
2-Fluorobiphenyl	EPA-8270	**21.1 SUR02**	06/18/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**26.9 SUR02**	06/18/2024	DBA
Terphenyl-d14	EPA-8270	**31.0 SUR02**	06/18/2024	DBA
TCMX	EPA-8082	**70.2**	06/21/2024	DBA
DCB	EPA-8082	**44.6**	06/21/2024	DBA
TCMX	EPA-8081	**48.7**	07/02/2024	DBA
DCB	EPA-8081	**46.5**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
SUR02 -One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

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		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-09
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:45:00 PM
CLIENT SAMPLE ID	GW-061124-RN-RB	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-09
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024 3:45:00 PM
CLIENT SAMPLE ID	GW-061124-RN-RB	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Phenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Aniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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SAMPLE DATA RESULTS

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Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Isophorone	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dimethylphenol	EPA-8270	**6.5**	2.0	1	UG/L	06/19/2024	DBA
Benzoic Acid	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Naphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Acenaphthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	06/19/2024	DBA
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluorene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Azobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	06/19/2024	DBA
Phenanthrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Carbazole	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Chrysene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**22**	2.0	1	UG/L	06/19/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	06/19/2024	DBA
PCB-1016	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1221	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1232	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1242	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1248	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1254	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1260	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
PCB-1268	EPA-8082	U	0.10	1	UG/L	06/21/2024	DBA
A-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
G-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
B-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Heptachlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
D-BHC	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Aldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA

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SAMPLE DATA RESULTS

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Heptachlor Epoxide	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
alpha-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
gamma-Chlordane	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan I	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDE	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Dieldrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDD	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan II	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
4,4'-DDT	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Aldehyde	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endosulfan Sulfate	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Endrin Ketone	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Methoxychlor	EPA-8081	U	0.050	1	UG/L	07/02/2024	DBA
Toxaphene	EPA-8081	U	2.0	1	UG/L	07/02/2024	DBA
Cyanide	SM4500-CN E	U	0.050	1	MG/L	06/25/2024	MJC
Mercury	EPA-245.1	U	0.20	1	UG/L	06/14/2024	RAL
Aluminum	EPA-200.8	U	50	1	UG/L	06/14/2024	EBS
Antimony	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Arsenic	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Barium	EPA-200.8	**2.1**	1.0	1	UG/L	06/14/2024	EBS
Beryllium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Cadmium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Calcium	EPA-200.8	**62**	50	1	UG/L	06/14/2024	EBS
Chromium	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Cobalt	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Copper	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Iron	EPA-200.8	U	50	1	UG/L	06/14/2024	EBS
Lead	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Magnesium	EPA-200.8	**64**	50	1	UG/L	06/14/2024	EBS
Manganese	EPA-200.8	U	5.0	1	UG/L	06/14/2024	EBS
Nickel	EPA-200.8	U	2.0	1	UG/L	06/14/2024	EBS
Potassium	EPA-200.8	**58**	50	1	UG/L	06/14/2024	EBS
Selenium	EPA-200.8	U	4.0	1	UG/L	06/14/2024	EBS
Silver	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Sodium	EPA-200.8	**1200**	50	1	UG/L	06/14/2024	EBS
Thallium	EPA-200.8	U	1.0	1	UG/L	06/14/2024	EBS
Vanadium	EPA-200.8	**3.6**	2.0	1	UG/L	06/14/2024	EBS

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Zinc	EPA-200.8	U	2.5	1	UG/L	06/14/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**105**	06/14/2024	DLC
Toluene-d8	EPA-8260	**102**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**102**	06/14/2024	DLC
2-Fluorophenol	EPA-8270	**33.8**	06/19/2024	DBA
Phenol-d5	EPA-8270	**25.1**	06/19/2024	DBA
Nitrobenzene-d5	EPA-8270	**69.7**	06/19/2024	DBA
2-Fluorobiphenyl	EPA-8270	**30.2 SUR11**	06/19/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**80.3**	06/19/2024	DBA
Terphenyl-d14	EPA-8270	**61.4**	06/19/2024	DBA
TCMX	EPA-8082	**86.2**	06/21/2024	DBA
DCB	EPA-8082	**89.0**	06/21/2024	DBA
TCMX	EPA-8081	**50.9**	07/02/2024	DBA
DCB	EPA-8081	**65.4**	07/02/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
SUR11 - Surrogate outside of control limits due to sporadic marginal failure. No corrective action taken.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-10
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024
CLIENT SAMPLE ID	Trip Blank	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	06/14/2024	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Acetone	EPA-8260	U	25	1	UG/L	06/14/2024	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	06/14/2024	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS JOB#:	EV24060108
		ALS SAMPLE#:	EV24060108-10
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	06/12/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt	COLLECTION DATE:	6/11/2024
CLIENT SAMPLE ID	Trip Blank	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	06/14/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC
Xylenes	EPA-8260	U	2.0	1	UG/L	06/14/2024	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**103**	06/14/2024	DLC
Toluene-d8	EPA-8260	**103**	06/14/2024	DLC
4-Bromofluorobenzene	EPA-8260	**101**	06/14/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY BLANK RESULTS

MB-061324W - Batch 213466 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	06/13/2024	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Acetone	EPA-8260	U	UG/L	25	06/13/2024	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	06/13/2024	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	06/13/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
2-Butanone	EPA-8260	U	UG/L	10	06/13/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Chloroform	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Benzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	06/13/2024	DLC
Toluene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
2-Hexanone	EPA-8260	U	UG/L	10	06/13/2024	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	06/13/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY BLANK RESULTS

MB-061324W - Batch 213466 - Water by EPA-8260

Chlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Styrene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Bromoform	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	06/13/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	06/13/2024	DLC
Xylenes	EPA-8260	U	UG/L	2.0	06/13/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-061424W - Batch 213724 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Phenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Aniline	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Chlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA

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		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY BLANK RESULTS

MB-061424W - Batch 213724 - Water by EPA-8270

Benzyl Alcohol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Methylphenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Hexachloroethane	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Nitrobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Isophorone	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Nitrophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzoic Acid	EPA-8270	U	UG/L	10	06/17/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Naphthalene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
4-Chloroaniline	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2-Nitroaniline	EPA-8270	U	UG/L	2.7	06/17/2024	DBA
Acenaphthylene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Dimethylphthalate	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Acenaphthene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
3-Nitroaniline	EPA-8270	U	UG/L	7.6	06/17/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	06/17/2024	DBA
4-Nitrophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Dibenzofuran	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Diethylphthalate	EPA-8270	U	UG/L	3.1	06/17/2024	DBA
Fluorene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	06/17/2024	DBA

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CERTIFICATE OF ANALYSIS

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520 Pike St, Suite 2600
Seattle, WA 98101

CLIENT CONTACT: Rick Bieber

CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-061424W - Batch 213724 - Water by EPA-8270

4-Nitroaniline	EPA-8270	U	UG/L	6.4	06/17/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.4	06/17/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	4.9	06/17/2024	DBA
Azobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Pentachlorophenol	EPA-8270	U	UG/L	5.0	06/17/2024	DBA
Phenanthrene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Anthracene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Carbazole	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	UG/L	3.5	06/17/2024	DBA
Fluoranthene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Pyrene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Butylbenzylphthalate	EPA-8270	U	UG/L	2.2	06/17/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Chrysene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	3.2	06/17/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	06/17/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MB-061924W - Batch 213810 - Water by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1221	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1232	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1242	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1248	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1254	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1260	EPA-8082	U	UG/L	0.10	06/21/2024	DBA
PCB-1268	EPA-8082	U	UG/L	0.10	06/21/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY BLANK RESULTS

MBLK-R469960 - Batch R469960 - Water by SM4500-CN E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Cyanide	SM4500-CN E	U	MG/L	0.050	06/18/2024	MJC

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MBLK-R469961 - Batch R469961 - Water by SM4500-CN E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Cyanide	SM4500-CN E	U	MG/L	0.050	06/18/2024	MJC

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R470522 - Batch R470522 - Water by SM4500-CN E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Cyanide	SM4500-CN E	U	MG/L	0.050	06/25/2024	MJC

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R469771 - Batch R469771 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	06/14/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-061424W - Batch 213506 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Aluminum	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Antimony	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Arsenic	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Barium	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Beryllium	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Cadmium	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Calcium	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Chromium	EPA-200.8	U	UG/L	2.0	06/14/2024	EBS
Cobalt	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Copper	EPA-200.8	U	UG/L	2.0	06/14/2024	EBS
Iron	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Lead	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Magnesium	EPA-200.8	U	UG/L	50	06/14/2024	EBS

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CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY BLANK RESULTS

MB-061424W - Batch 213506 - Water by EPA-200.8

Manganese	EPA-200.8	U	UG/L	5.0	06/14/2024	EBS
Nickel	EPA-200.8	U	UG/L	2.0	06/14/2024	EBS
Potassium	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Selenium	EPA-200.8	U	UG/L	4.0	06/14/2024	EBS
Silver	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Sodium	EPA-200.8	U	UG/L	50	06/14/2024	EBS
Thallium	EPA-200.8	U	UG/L	1.0	06/14/2024	EBS
Vanadium	EPA-200.8	U	UG/L	2.0	06/14/2024	EBS
Zinc	EPA-200.8	U	UG/L	2.5	06/14/2024	EBS

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DATE: 7/3/2024
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WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 213466 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**137**			50	150	06/13/2024	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**129**	**6**		50	150	06/13/2024	DLC
Chloromethane - BS	EPA-8260	**115**			50	150	06/13/2024	DLC
Chloromethane - BSD	EPA-8260	**113**	**2**		50	150	06/13/2024	DLC
Vinyl Chloride - BS	EPA-8260	**123**			50	150	06/13/2024	DLC
Vinyl Chloride - BSD	EPA-8260	**118**	**4**		50	150	06/13/2024	DLC
Bromomethane - BS	EPA-8260	**122**			50	150	06/13/2024	DLC
Bromomethane - BSD	EPA-8260	**115**	**6**		50	150	06/13/2024	DLC
Chloroethane - BS	EPA-8260	**119**			50	150	06/13/2024	DLC
Chloroethane - BSD	EPA-8260	**113**	**5**		50	150	06/13/2024	DLC
Carbon Tetrachloride - BS	EPA-8260	**127**			50	150	06/13/2024	DLC
Carbon Tetrachloride - BSD	EPA-8260	**121**	**4**		50	150	06/13/2024	DLC
Trichlorofluoromethane - BS	EPA-8260	**128**			50	150	06/13/2024	DLC
Trichlorofluoromethane - BSD	EPA-8260	**120**	**6**		50	150	06/13/2024	DLC
Carbon Disulfide - BS	EPA-8260	**120**			50	150	06/13/2024	DLC
Carbon Disulfide - BSD	EPA-8260	**113**	**5**		50	150	06/13/2024	DLC
Acetone - BS	EPA-8260	**90.0**			50	150	06/13/2024	DLC
Acetone - BSD	EPA-8260	**93.5**	**4**		50	150	06/13/2024	DLC
1,1-Dichloroethene - BS	EPA-8260	**121**			72.5	136	06/13/2024	DLC
1,1-Dichloroethene - BSD	EPA-8260	**114**	**6**		72.5	136	06/13/2024	DLC
Methylene Chloride - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
Methylene Chloride - BSD	EPA-8260	**110**	**2**		50	150	06/13/2024	DLC
Acrylonitrile - BS	EPA-8260	**124**			50	150	06/13/2024	DLC
Acrylonitrile - BSD	EPA-8260	**118**	**5**		50	150	06/13/2024	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**109**			50	150	06/13/2024	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**109**	**0**		50	150	06/13/2024	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**123**			50	150	06/13/2024	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**117**	**5**		50	150	06/13/2024	DLC
1,1-Dichloroethane - BS	EPA-8260	**113**			50	150	06/13/2024	DLC
1,1-Dichloroethane - BSD	EPA-8260	**108**	**5**		50	150	06/13/2024	DLC
2-Butanone - BS	EPA-8260	**85.9**			50	150	06/13/2024	DLC
2-Butanone - BSD	EPA-8260	**87.2**	**1**		50	150	06/13/2024	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**116**			50	150	06/13/2024	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**112**	**4**		50	150	06/13/2024	DLC
2,2-Dichloropropane - BS	EPA-8260	**108**			50	150	06/13/2024	DLC
2,2-Dichloropropane - BSD	EPA-8260	**101**	**6**		50	150	06/13/2024	DLC
Bromochloromethane - BS	EPA-8260	**110**			50	150	06/13/2024	DLC
Bromochloromethane - BSD	EPA-8260	**107**	**3**		50	150	06/13/2024	DLC

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloroform - BS	EPA-8260	**116**			50	150	06/13/2024	DLC
Chloroform - BSD	EPA-8260	**111**	**4**		50	150	06/13/2024	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**123**			50	150	06/13/2024	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**117**	**5**		50	150	06/13/2024	DLC
1,1-Dichloropropene - BS	EPA-8260	**125**			50	150	06/13/2024	DLC
1,1-Dichloropropene - BSD	EPA-8260	**119**	**5**		50	150	06/13/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	**96.9**			50	150	06/13/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	**94.7**	**2**		50	150	06/13/2024	DLC
Benzene - BS	EPA-8260	**113**			74.7	143	06/13/2024	DLC
Benzene - BSD	EPA-8260	**109**	**4**		74.7	143	06/13/2024	DLC
Trichloroethene - BS	EPA-8260	**121**			74.4	141	06/13/2024	DLC
Trichloroethene - BSD	EPA-8260	**115**	**5**		74.4	141	06/13/2024	DLC
1,2-Dichloropropane - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
1,2-Dichloropropane - BSD	EPA-8260	**108**	**3**		50	150	06/13/2024	DLC
Dibromomethane - BS	EPA-8260	**107**			50	150	06/13/2024	DLC
Dibromomethane - BSD	EPA-8260	**105**	**2**		50	150	06/13/2024	DLC
Bromodichloromethane - BS	EPA-8260	**111**			50	150	06/13/2024	DLC
Bromodichloromethane - BSD	EPA-8260	**109**	**3**		50	150	06/13/2024	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**109**			50	150	06/13/2024	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**107**	**2**		50	150	06/13/2024	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**105**			50	150	06/13/2024	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**104**	**0**		50	150	06/13/2024	DLC
Toluene - BS	EPA-8260	**118**			71.7	139	06/13/2024	DLC
Toluene - BSD	EPA-8260	**114**	**4**		71.7	139	06/13/2024	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**108**			50	150	06/13/2024	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**105**	**2**		50	150	06/13/2024	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**104**			50	150	06/13/2024	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**103**	**1**		50	150	06/13/2024	DLC
2-Hexanone - BS	EPA-8260	**98.4**			50	150	06/13/2024	DLC
2-Hexanone - BSD	EPA-8260	**98.4**	**0**		50	150	06/13/2024	DLC
1,3-Dichloropropane - BS	EPA-8260	**104**			50	150	06/13/2024	DLC
1,3-Dichloropropane - BSD	EPA-8260	**103**	**1**		50	150	06/13/2024	DLC
Tetrachloroethylene - BS	EPA-8260	**106**			50	150	06/13/2024	DLC
Tetrachloroethylene - BSD	EPA-8260	**108**	**2**		50	150	06/13/2024	DLC
Dibromochloromethane - BS	EPA-8260	**109**			50	150	06/13/2024	DLC
Dibromochloromethane - BSD	EPA-8260	**108**	**1**		50	150	06/13/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	**104**			50	150	06/13/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	**102**	**1**		50	150	06/13/2024	DLC
Chlorobenzene - BS	EPA-8260	**115**			73	131	06/13/2024	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene - BSD	EPA-8260	**110**	**4**		73	131	06/13/2024	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**110**			50	150	06/13/2024	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**107**	**3**		50	150	06/13/2024	DLC
Ethylbenzene - BS	EPA-8260	**119**			50	150	06/13/2024	DLC
Ethylbenzene - BSD	EPA-8260	**114**	**4**		50	150	06/13/2024	DLC
Styrene - BS	EPA-8260	**122**			50	150	06/13/2024	DLC
Styrene - BSD	EPA-8260	**118**	**3**		50	150	06/13/2024	DLC
Bromoform - BS	EPA-8260	**109**			50	150	06/13/2024	DLC
Bromoform - BSD	EPA-8260	**107**	**2**		50	150	06/13/2024	DLC
Isopropylbenzene - BS	EPA-8260	**122**			50	150	06/13/2024	DLC
Isopropylbenzene - BSD	EPA-8260	**116**	**5**		50	150	06/13/2024	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**100**			50	150	06/13/2024	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**97.5**	**3**		50	150	06/13/2024	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**98.2**			50	150	06/13/2024	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**96.0**	**2**		50	150	06/13/2024	DLC
Bromobenzene - BS	EPA-8260	**113**			50	150	06/13/2024	DLC
Bromobenzene - BSD	EPA-8260	**108**	**5**		50	150	06/13/2024	DLC
N-Propyl Benzene - BS	EPA-8260	**115**			50	150	06/13/2024	DLC
N-Propyl Benzene - BSD	EPA-8260	**110**	**4**		50	150	06/13/2024	DLC
2-Chlorotoluene - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
2-Chlorotoluene - BSD	EPA-8260	**106**	**5**		50	150	06/13/2024	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**105**	**6**		50	150	06/13/2024	DLC
4-Chlorotoluene - BS	EPA-8260	**115**			50	150	06/13/2024	DLC
4-Chlorotoluene - BSD	EPA-8260	**111**	**4**		50	150	06/13/2024	DLC
T-Butyl Benzene - BS	EPA-8260	**121**			50	150	06/13/2024	DLC
T-Butyl Benzene - BSD	EPA-8260	**115**	**5**		50	150	06/13/2024	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**106**	**6**		50	150	06/13/2024	DLC
S-Butyl Benzene - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
S-Butyl Benzene - BSD	EPA-8260	**108**	**4**		50	150	06/13/2024	DLC
P-Isopropyltoluene - BS	EPA-8260	**112**			50	150	06/13/2024	DLC
P-Isopropyltoluene - BSD	EPA-8260	**108**	**4**		50	150	06/13/2024	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**116**			50	150	06/13/2024	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**113**	**3**		50	150	06/13/2024	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**114**			50	150	06/13/2024	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**112**	**2**		50	150	06/13/2024	DLC
N-Butylbenzene - BS	EPA-8260	**121**			50	150	06/13/2024	DLC
N-Butylbenzene - BSD	EPA-8260	**120**	**0**		50	150	06/13/2024	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene - BS	EPA-8260	**111**			50	150	06/13/2024	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**110**	**1**		50	150	06/13/2024	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**113**			50	150	06/13/2024	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**112**	**1**		50	150	06/13/2024	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**104**			50	150	06/13/2024	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**114**	**9**		50	150	06/13/2024	DLC
Hexachlorobutadiene - BS	EPA-8260	**124**			50	150	06/13/2024	DLC
Hexachlorobutadiene - BSD	EPA-8260	**120**	**3**		50	150	06/13/2024	DLC
Naphthalene - BS	EPA-8260	**103**			50	150	06/13/2024	DLC
Naphthalene - BSD	EPA-8260	**117**	**12**		50	150	06/13/2024	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**101**			50	150	06/13/2024	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**114**	**12**		50	150	06/13/2024	DLC
Xylenes - BS	EPA-8260	**121**			50	150	06/13/2024	DLC
Xylenes - BSD	EPA-8260	**116**	**4**		50	150	06/13/2024	DLC

ALS Test Batch ID: 213724 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**20.0**			20	150	06/17/2024	DBA
Pyridine - BSD	EPA-8270	**22.7**	**13**		20	150	06/17/2024	DBA
N-Nitrosodimethylamine - BS	EPA-8270	**39.6**			20	150	06/17/2024	DBA
N-Nitrosodimethylamine - BSD	EPA-8270	**37.6**	**5**		20	150	06/17/2024	DBA
Phenol - BS	EPA-8270	**26.9**			5	84	06/17/2024	DBA
Phenol - BSD	EPA-8270	**25.3**	**6**		5	84	06/17/2024	DBA
Aniline - BS	EPA-8270	**35.9**			20	150	06/17/2024	DBA
Aniline - BSD	EPA-8270	**36.5**	**2**		20	150	06/17/2024	DBA
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**81.1**			20	150	06/17/2024	DBA
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**77.6**	**5**		20	150	06/17/2024	DBA
2-Chlorophenol - BS	EPA-8270	**73.8**			45	111	06/17/2024	DBA
2-Chlorophenol - BSD	EPA-8270	**71.3**	**3**		45	111	06/17/2024	DBA
1,3-Dichlorobenzene - BS	EPA-8270	**66.5**			20	150	06/17/2024	DBA
1,3-Dichlorobenzene - BSD	EPA-8270	**63.9**	**4**		20	150	06/17/2024	DBA
1,4-Dichlorobenzene - BS	EPA-8270	**67.7**			27.1	114	06/17/2024	DBA
1,4-Dichlorobenzene - BSD	EPA-8270	**64.6**	**5**		27.1	114	06/17/2024	DBA
Benzyl Alcohol - BS	EPA-8270	**57.8**			20	150	06/17/2024	DBA
Benzyl Alcohol - BSD	EPA-8270	**56.2**	**3**		20	150	06/17/2024	DBA
1,2-Dichlorobenzene - BS	EPA-8270	**67.2**			20	150	06/17/2024	DBA
1,2-Dichlorobenzene - BSD	EPA-8270	**66.2**	**2**		20	150	06/17/2024	DBA
2-Methylphenol - BS	EPA-8270	**57.9**			20	150	06/17/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

CLIENT CONTACT: Rick Bieber

CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol - BSD	EPA-8270	**56.0**	**3**		20	150	06/17/2024	DBA
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**78.1**			20	150	06/17/2024	DBA
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**74.8**	**4**		20	150	06/17/2024	DBA
3&4-Methylphenol - BS	EPA-8270	**57.0**			20	150	06/17/2024	DBA
3&4-Methylphenol - BSD	EPA-8270	**56.7**	**1**		20	150	06/17/2024	DBA
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**82.6**			42.2	119	06/17/2024	DBA
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**79.1**	**4**		42.2	119	06/17/2024	DBA
Hexachloroethane - BS	EPA-8270	**64.7**			20	150	06/17/2024	DBA
Hexachloroethane - BSD	EPA-8270	**60.4**	**7**		20	150	06/17/2024	DBA
Nitrobenzene - BS	EPA-8270	**80.3**			20	150	06/17/2024	DBA
Nitrobenzene - BSD	EPA-8270	**78.1**	**3**		20	150	06/17/2024	DBA
Isophorone - BS	EPA-8270	**45.4**			20	150	06/17/2024	DBA
Isophorone - BSD	EPA-8270	**42.7**	**6**		20	150	06/17/2024	DBA
2-Nitrophenol - BS	EPA-8270	**82.9**			20	150	06/17/2024	DBA
2-Nitrophenol - BSD	EPA-8270	**81.8**	**1**		20	150	06/17/2024	DBA
2,4-Dimethylphenol - BS	EPA-8270	**93.1**			20	150	06/17/2024	DBA
2,4-Dimethylphenol - BSD	EPA-8270	**89.6**	**4**		20	150	06/17/2024	DBA
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**84.1**			20	150	06/17/2024	DBA
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**78.4**	**7**		20	150	06/17/2024	DBA
2,4-Dichlorophenol - BS	EPA-8270	**83.6**			20	150	06/17/2024	DBA
2,4-Dichlorophenol - BSD	EPA-8270	**82.1**	**2**		20	150	06/17/2024	DBA
1,2,4-Trichlorobenzene - BS	EPA-8270	**69.2**			29.4	120	06/17/2024	DBA
1,2,4-Trichlorobenzene - BSD	EPA-8270	**65.0**	**6**		29.4	120	06/17/2024	DBA
Naphthalene - BS	EPA-8270	**74.4**			20	150	06/17/2024	DBA
Naphthalene - BSD	EPA-8270	**69.4**	**7**		20	150	06/17/2024	DBA
4-Chloroaniline - BS	EPA-8270	**58.1**			20	150	06/17/2024	DBA
4-Chloroaniline - BSD	EPA-8270	**54.5**	**7**		20	150	06/17/2024	DBA
Hexachlorobutadiene - BS	EPA-8270	**66.4**			20	150	06/17/2024	DBA
Hexachlorobutadiene - BSD	EPA-8270	**61.3**	**8**		20	150	06/17/2024	DBA
4-Chloro-3-Methylphenol - BS	EPA-8270	**86.6**			44	113	06/17/2024	DBA
4-Chloro-3-Methylphenol - BSD	EPA-8270	**81.8**	**6**		44	113	06/17/2024	DBA
2-Methylnaphthalene - BS	EPA-8270	**77.7**			20	150	06/17/2024	DBA
2-Methylnaphthalene - BSD	EPA-8270	**71.8**	**8**		20	150	06/17/2024	DBA
1-Methylnaphthalene - BS	EPA-8270	**77.1**			20	150	06/17/2024	DBA
1-Methylnaphthalene - BSD	EPA-8270	**71.1**	**8**		20	150	06/17/2024	DBA
Hexachlorocyclopentadiene - BS	EPA-8270	**39.9**			20	150	06/17/2024	DBA
Hexachlorocyclopentadiene - BSD	EPA-8270	**37.4**	**6**		20	150	06/17/2024	DBA
2,4,6-Trichlorophenol - BS	EPA-8270	**79.3**			20	150	06/17/2024	DBA
2,4,6-Trichlorophenol - BSD	EPA-8270	**75.4**	**5**		20	150	06/17/2024	DBA

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ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2,4,5-Trichlorophenol - BS	EPA-8270	**91.2**			20	150	06/17/2024	DBA
2,4,5-Trichlorophenol - BSD	EPA-8270	**89.9**	**1**		20	150	06/17/2024	DBA
2-Chloronaphthalene - BS	EPA-8270	**80.6**			20	150	06/17/2024	DBA
2-Chloronaphthalene - BSD	EPA-8270	**75.3**	**7**		20	150	06/17/2024	DBA
2-Nitroaniline - BS	EPA-8270	**80.7**			20	150	06/17/2024	DBA
2-Nitroaniline - BSD	EPA-8270	**77.2**	**4**		20	150	06/17/2024	DBA
Acenaphthylene - BS	EPA-8270	**85.0**			20	150	06/17/2024	DBA
Acenaphthylene - BSD	EPA-8270	**80.5**	**5**		20	150	06/17/2024	DBA
Dimethylphthalate - BS	EPA-8270	**80.5**			20	150	06/17/2024	DBA
Dimethylphthalate - BSD	EPA-8270	**76.1**	**6**		20	150	06/17/2024	DBA
2,6-Dinitrotoluene - BS	EPA-8270	**86.6**			20	150	06/17/2024	DBA
2,6-Dinitrotoluene - BSD	EPA-8270	**82.8**	**5**		20	150	06/17/2024	DBA
Acenaphthene - BS	EPA-8270	**78.9**			41	107	06/17/2024	DBA
Acenaphthene - BSD	EPA-8270	**74.3**	**6**		41	107	06/17/2024	DBA
3-Nitroaniline - BS	EPA-8270	**76.0**			20	150	06/17/2024	DBA
3-Nitroaniline - BSD	EPA-8270	**74.6**	**2**		20	150	06/17/2024	DBA
2,4-Dinitrophenol - BS	EPA-8270	**61.2**			20	150	06/17/2024	DBA
2,4-Dinitrophenol - BSD	EPA-8270	**57.2**	**7**		20	150	06/17/2024	DBA
4-Nitrophenol - BS	EPA-8270	**21.6**			5	63	06/17/2024	DBA
4-Nitrophenol - BSD	EPA-8270	**19.9**	**8**		5	63	06/17/2024	DBA
Dibenzofuran - BS	EPA-8270	**81.8**			20	150	06/17/2024	DBA
Dibenzofuran - BSD	EPA-8270	**77.7**	**5**		20	150	06/17/2024	DBA
2,4-Dinitrotoluene - BS	EPA-8270	**87.1**			53.1	136	06/17/2024	DBA
2,4-Dinitrotoluene - BSD	EPA-8270	**85.4**	**2**		53.1	136	06/17/2024	DBA
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**79.8**			20	150	06/17/2024	DBA
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**75.4**	**6**		20	150	06/17/2024	DBA
Diethylphthalate - BS	EPA-8270	**77.3**			20	150	06/17/2024	DBA
Diethylphthalate - BSD	EPA-8270	**73.9**	**5**		20	150	06/17/2024	DBA
Fluorene - BS	EPA-8270	**80.9**			20	150	06/17/2024	DBA
Fluorene - BSD	EPA-8270	**76.9**	**5**		20	150	06/17/2024	DBA
4-Chlorophenyl-Phenylether - BS	EPA-8270	**79.7**			20	150	06/17/2024	DBA
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**76.3**	**4**		20	150	06/17/2024	DBA
4-Nitroaniline - BS	EPA-8270	**82.0**			20	150	06/17/2024	DBA
4-Nitroaniline - BSD	EPA-8270	**74.5**	**10**		20	150	06/17/2024	DBA
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**73.1**			20	150	06/17/2024	DBA
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**70.2**	**4**		20	150	06/17/2024	DBA
Azobenzene - BS	EPA-8270	**85.6**			20	150	06/17/2024	DBA
Azobenzene - BSD	EPA-8270	**79.3**	**8**		20	150	06/17/2024	DBA
4-Bromophenyl-Phenylether - BS	EPA-8270	**82.7**			20	150	06/17/2024	DBA

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CLIENT CONTACT: Rick Bieber

CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Bromophenyl-Phenylether - BSD	EPA-8270	**77.8**	**6**		20	150	06/17/2024	DBA
Hexachlorobenzene - BS	EPA-8270	**79.8**			20	150	06/17/2024	DBA
Hexachlorobenzene - BSD	EPA-8270	**75.2**	**6**		20	150	06/17/2024	DBA
Pentachlorophenol - BS	EPA-8270	**71.7**			33	124	06/17/2024	DBA
Pentachlorophenol - BSD	EPA-8270	**67.6**	**6**		33	124	06/17/2024	DBA
Phenanthrene - BS	EPA-8270	**81.2**			20	150	06/17/2024	DBA
Phenanthrene - BSD	EPA-8270	**76.8**	**6**		20	150	06/17/2024	DBA
Anthracene - BS	EPA-8270	**68.5**			20	150	06/17/2024	DBA
Anthracene - BSD	EPA-8270	**63.9**	**7**		20	150	06/17/2024	DBA
Carbazole - BS	EPA-8270	**79.3**			20	150	06/17/2024	DBA
Carbazole - BSD	EPA-8270	**76.6**	**4**		20	150	06/17/2024	DBA
Di-N-Butylphthalate - BS	EPA-8270	**85.2**			20	150	06/17/2024	DBA
Di-N-Butylphthalate - BSD	EPA-8270	**82.4**	**3**		20	150	06/17/2024	DBA
Fluoranthene - BS	EPA-8270	**80.2**			20	150	06/17/2024	DBA
Fluoranthene - BSD	EPA-8270	**78.7**	**2**		20	150	06/17/2024	DBA
Pyrene - BS	EPA-8270	**81.9**			18	136	06/17/2024	DBA
Pyrene - BSD	EPA-8270	**77.0**	**6**		18	136	06/17/2024	DBA
Butylbenzylphthalate - BS	EPA-8270	**84.0**			20	150	06/17/2024	DBA
Butylbenzylphthalate - BSD	EPA-8270	**80.5**	**4**		20	150	06/17/2024	DBA
Benzo[A]Anthracene - BS	EPA-8270	**82.2**			20	150	06/17/2024	DBA
Benzo[A]Anthracene - BSD	EPA-8270	**77.6**	**6**		20	150	06/17/2024	DBA
Chrysene - BS	EPA-8270	**83.2**			20	150	06/17/2024	DBA
Chrysene - BSD	EPA-8270	**78.5**	**6**		20	150	06/17/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**85.9**			20	150	06/17/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**80.9**	**6**		20	150	06/17/2024	DBA
Di-N-Octylphthalate - BS	EPA-8270	**82.0**			20	150	06/17/2024	DBA
Di-N-Octylphthalate - BSD	EPA-8270	**78.1**	**5**		20	150	06/17/2024	DBA
Benzo[B]Fluoranthene - BS	EPA-8270	**84.8**			20	150	06/17/2024	DBA
Benzo[B]Fluoranthene - BSD	EPA-8270	**78.8**	**7**		20	150	06/17/2024	DBA
Benzo[K]Fluoranthene - BS	EPA-8270	**85.8**			20	150	06/17/2024	DBA
Benzo[K]Fluoranthene - BSD	EPA-8270	**81.7**	**5**		20	150	06/17/2024	DBA
Benzo[A]Pyrene - BS	EPA-8270	**74.1**			20	150	06/17/2024	DBA
Benzo[A]Pyrene - BSD	EPA-8270	**69.7**	**6**		20	150	06/17/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**84.9**			20	150	06/17/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**80.0**	**6**		20	150	06/17/2024	DBA
Dibenz[A,H]Anthracene - BS	EPA-8270	**79.9**			20	150	06/17/2024	DBA
Dibenz[A,H]Anthracene - BSD	EPA-8270	**75.3**	**6**		20	150	06/17/2024	DBA
Benzo[G,H,I]Perylene - BS	EPA-8270	**76.7**			20	150	06/17/2024	DBA
Benzo[G,H,I]Perylene - BSD	EPA-8270	**71.4**	**7**		20	150	06/17/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY

ALS Test Batch ID: 213810 - Water by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**46.5**			44	152	06/21/2024	DBA
PCB-1016 - BSD	EPA-8082	**53.7**	**0**		44	152	06/21/2024	DBA
PCB-1260 - BS	EPA-8082	**78.9**			44	152	06/21/2024	DBA
PCB-1260 - BSD	EPA-8082	**79.5**	**1**		44	152	06/21/2024	DBA

ALS Test Batch ID: R469960 - Water by SM4500-CN E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Cyanide - BS	SM4500-CN E	**88.0**			82	116	06/18/2024	MJC

ALS Test Batch ID: R469961 - Water by SM4500-CN E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Cyanide - BS	SM4500-CN E	**102**			82	116	06/18/2024	MJC

ALS Test Batch ID: R470522 - Water by SM4500-CN E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Cyanide - BS	SM4500-CN E	**106**			82	116	06/25/2024	MJC

ALS Test Batch ID: R469771 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**106**			80.6	118	06/14/2024	RAL
Mercury - BSD	EPA-245.1	**108**	**2**		80.6	118	06/14/2024	RAL

ALS Test Batch ID: 213506 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aluminum - BS	EPA-200.8	**102**			80	120	06/14/2024	EBS
Aluminum - BSD	EPA-200.8	**102**	**0**		80	120	06/14/2024	EBS
Antimony - BS	EPA-200.8	**104**			88.9	114	06/14/2024	EBS
Antimony - BSD	EPA-200.8	**104**	**0**		88.9	114	06/14/2024	EBS
Arsenic - BS	EPA-200.8	**100**			89.1	110	06/14/2024	EBS
Arsenic - BSD	EPA-200.8	**101**	**1**		89.1	110	06/14/2024	EBS

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Barium - BS	EPA-200.8	**106**			88.5	108	06/14/2024	EBS
Barium - BSD	EPA-200.8	**105**	**0**		88.5	108	06/14/2024	EBS
Beryllium - BS	EPA-200.8	**101**			91.1	113	06/14/2024	EBS
Beryllium - BSD	EPA-200.8	**101**	**0**		91.1	113	06/14/2024	EBS
Cadmium - BS	EPA-200.8	**107**			89.4	110	06/14/2024	EBS
Cadmium - BSD	EPA-200.8	**106**	**1**		89.4	110	06/14/2024	EBS
Calcium - BS	EPA-200.8	**95.2**			80	120	06/14/2024	EBS
Calcium - BSD	EPA-200.8	**94.8**	**0**		80	120	06/14/2024	EBS
Chromium - BS	EPA-200.8	**98.6**			88.3	110.2	06/14/2024	EBS
Chromium - BSD	EPA-200.8	**98.0**	**1**		88.3	110.2	06/14/2024	EBS
Cobalt - BS	EPA-200.8	**103**			85.8	108	06/14/2024	EBS
Cobalt - BSD	EPA-200.8	**104**	**1**		85.8	108	06/14/2024	EBS
Copper - BS	EPA-200.8	**102**			85.4	109	06/14/2024	EBS
Copper - BSD	EPA-200.8	**102**	**0**		85.4	109	06/14/2024	EBS
Iron - BS	EPA-200.8	**103**			80	120	06/14/2024	EBS
Iron - BSD	EPA-200.8	**102**	**0**		80	120	06/14/2024	EBS
Lead - BS	EPA-200.8	**104**			87.5	107	06/14/2024	EBS
Lead - BSD	EPA-200.8	**104**	**0**		87.5	107	06/14/2024	EBS
Magnesium - BS	EPA-200.8	**104**			80	120	06/14/2024	EBS
Magnesium - BSD	EPA-200.8	**106**	**1**		80	120	06/14/2024	EBS
Manganese - BS	EPA-200.8	**111**			82.2	115	06/14/2024	EBS
Manganese - BSD	EPA-200.8	**110**	**2**		82.2	115	06/14/2024	EBS
Nickel - BS	EPA-200.8	**104**			85.4	109	06/14/2024	EBS
Nickel - BSD	EPA-200.8	**103**	**0**		85.4	109	06/14/2024	EBS
Potassium - BS	EPA-200.8	**98.5**			80	120	06/14/2024	EBS
Potassium - BSD	EPA-200.8	**98.3**	**0**		80	120	06/14/2024	EBS
Selenium - BS	EPA-200.8	**99.4**			90.2	113	06/14/2024	EBS
Selenium - BSD	EPA-200.8	**99.8**	**0**		90.2	113	06/14/2024	EBS
Silver - BS	EPA-200.8	**107**			80	120	06/14/2024	EBS
Silver - BSD	EPA-200.8	**106**	**1**		80	120	06/14/2024	EBS
Sodium - BS	EPA-200.8	**103**			80	105	06/14/2024	EBS
Sodium - BSD	EPA-200.8	**106**	**2**	SQ6	80	105	06/14/2024	EBS
Thallium - BS	EPA-200.8	**102**			88	103	06/14/2024	EBS
Thallium - BSD	EPA-200.8	**103**	**1**		88	103	06/14/2024	EBS
Vanadium - BS	EPA-200.8	**98.1**			80.1	108	06/14/2024	EBS
Vanadium - BSD	EPA-200.8	**98.1**	**0**		80.1	108	06/14/2024	EBS
Zinc - BS	EPA-200.8	**105**			88.2	111	06/14/2024	EBS
Zinc - BSD	EPA-200.8	**105**	**0**		88.2	111	06/14/2024	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

LABORATORY CONTROL SAMPLE RESULTS

SQ6 - The LCS and/or LCSD recovery were outside of control limits. However, MS/MSD recovery was within control limits. No corrective action taken.

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

ALS Test Batch ID: 213466 - Water
Parent Sample: GW-061124-RN-B3R

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - MS	EPA-8260	**118**			10.0	0	118	50	150		06/14/2024	DLC
Dichlorodifluoromethane - MSD	EPA-8260	**111**	**6**		10.0	0	111	50	150	25	06/14/2024	DLC
Chloromethane - MS	EPA-8260	**89.0**			10.0	0	89.0	50	150		06/14/2024	DLC
Chloromethane - MSD	EPA-8260	**82.7**	**7**		10.0	0	82.7	50	150	25	06/14/2024	DLC
Vinyl Chloride - MS	EPA-8260	**103**			10.0	0	103	50	150		06/14/2024	DLC
Vinyl Chloride - MSD	EPA-8260	**97.9**	**5**		10.0	0	97.9	50	150	25	06/14/2024	DLC
Bromomethane - MS	EPA-8260	**96.5**			10.0	0	96.5	50	150		06/14/2024	DLC
Bromomethane - MSD	EPA-8260	**90.4**	**7**		10.0	0	90.4	50	150	25	06/14/2024	DLC
Chloroethane - MS	EPA-8260	**98.0**			10.0	0	98.0	50	150		06/14/2024	DLC
Chloroethane - MSD	EPA-8260	**92.4**	**6**		10.0	0	92.4	50	150	25	06/14/2024	DLC
Carbon Tetrachloride - MS	EPA-8260	**107**			10.0	0	107	50	150		06/14/2024	DLC
Carbon Tetrachloride - MSD	EPA-8260	**102**	**5**		10.0	0	102	50	150	25	06/14/2024	DLC
Trichlorofluoromethane - MS	EPA-8260	**110**			10.0	0	110	50	150		06/14/2024	DLC
Trichlorofluoromethane - MSD	EPA-8260	**104**	**5**		10.0	0	104	50	150	25	06/14/2024	DLC
Carbon Disulfide - MS	EPA-8260	**99.0**			10.0	0.18	99.0	50	150		06/14/2024	DLC
Carbon Disulfide - MSD	EPA-8260	**92.9**	**6**		10.0	0.18	92.9	50	150	25	06/14/2024	DLC
Acetone - MS	EPA-8260	**89.2**			10.0	0	89.2	50	150		06/14/2024	DLC
Acetone - MSD	EPA-8260	**87.8**	**2**		10.0	0	87.8	50	150	25	06/14/2024	DLC
1,1-Dichloroethene - MS	EPA-8260	**102**			10.0	0	102	72.5	136		06/14/2024	DLC
1,1-Dichloroethene - MSD	EPA-8260	**96.1**	**6**		10.0	0	96.1	72.5	136	20.5	06/14/2024	DLC
Methylene Chloride - MS	EPA-8260	**86.1**			10.0	0	86.1	50	150		06/14/2024	DLC
Methylene Chloride - MSD	EPA-8260	**82.9**	**4**		10.0	0	82.9	50	150	25	06/14/2024	DLC
Acrylonitrile - MS	EPA-8260	**90.0**			10.0	0	90.0	50	150		06/14/2024	DLC
Acrylonitrile - MSD	EPA-8260	**84.5**	**6**		10.0	0	84.5	50	150	25	06/14/2024	DLC
Methyl T-Butyl Ether - MS	EPA-8260	**90.6**			10.0	0	90.6	50	150		06/14/2024	DLC
Methyl T-Butyl Ether - MSD	EPA-8260	**90.1**	**1**		10.0	0	90.1	50	150	25	06/14/2024	DLC
Trans-1,2-Dichloroethene - MS	EPA-8260	**98.2**			10.0	0	98.2	50	150		06/14/2024	DLC
Trans-1,2-Dichloroethene - MSD	EPA-8260	**92.7**	**6**		10.0	0	92.7	50	150	25	06/14/2024	DLC
1,1-Dichloroethane - MS	EPA-8260	**92.9**			10.0	0	92.9	50	150		06/14/2024	DLC
1,1-Dichloroethane - MSD	EPA-8260	**88.8**	**5**		10.0	0	88.8	50	150	25	06/14/2024	DLC
2-Butanone - MS	EPA-8260	**90.4**			10.0	0.37	90.4	50	150		06/14/2024	DLC
2-Butanone - MSD	EPA-8260	**73.1**	**20**		10.0	0.37	73.1	50	150	25	06/14/2024	DLC
Cis-1,2-Dichloroethene - MS	EPA-8260	**94.8**			10.0	0	94.8	50	150		06/14/2024	DLC
Cis-1,2-Dichloroethene - MSD	EPA-8260	**90.5**	**5**		10.0	0	90.5	50	150	25	06/14/2024	DLC
2,2-Dichloropropane - MS	EPA-8260	**69.7**			10.0	0	69.7	50	150		06/14/2024	DLC
2,2-Dichloropropane - MSD	EPA-8260	**64.8**	**7**		10.0	0	64.8	50	150	25	06/14/2024	DLC
Bromochloromethane - MS	EPA-8260	**92.8**			10.0	0	92.8	50	150		06/14/2024	DLC

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WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Bromochloromethane - MSD	EPA-8260	**89.1**	**4**		10.0	0	89.1	50	150	25	06/14/2024	DLC
Chloroform - MS	EPA-8260	**92.6**			10.0	0	92.6	50	150		06/14/2024	DLC
Chloroform - MSD	EPA-8260	**89.0**	**4**		10.0	0	89.0	50	150	25	06/14/2024	DLC
1,1,1-Trichloroethane - MS	EPA-8260	**101**			10.0	0	101	50	150		06/14/2024	DLC
1,1,1-Trichloroethane - MSD	EPA-8260	**96.0**	**5**		10.0	0	96.0	50	150	25	06/14/2024	DLC
1,1-Dichloropropene - MS	EPA-8260	**104**			10.0	0	104	50	150		06/14/2024	DLC
1,1-Dichloropropene - MSD	EPA-8260	**98.0**	**6**		10.0	0	98.0	50	150	25	06/14/2024	DLC
1,2-Dichloroethane - MS	EPA-8260	**85.1**			10.0	0	85.1	50	150		06/14/2024	DLC
1,2-Dichloroethane - MSD	EPA-8260	**81.9**	**4**		10.0	0	81.9	50	150	25	06/14/2024	DLC
Benzene - MS	EPA-8260	**94.1**			10.0	0	94.1	74.7	143		06/14/2024	DLC
Benzene - MSD	EPA-8260	**89.0**	**6**		10.0	0	89.0	74.7	143	20.5	06/14/2024	DLC
Trichloroethene - MS	EPA-8260	**103**			10.0	0	103	74.4	141		06/14/2024	DLC
Trichloroethene - MSD	EPA-8260	**95.7**	**7**		10.0	0	95.7	74.4	141	20.5	06/14/2024	DLC
1,2-Dichloropropane - MS	EPA-8260	**94.9**			10.0	0	94.9	50	150		06/14/2024	DLC
1,2-Dichloropropane - MSD	EPA-8260	**90.4**	**5**		10.0	0	90.4	50	150	25	06/14/2024	DLC
Dibromomethane - MS	EPA-8260	**93.4**			10.0	0	93.4	50	150		06/14/2024	DLC
Dibromomethane - MSD	EPA-8260	**89.2**	**5**		10.0	0	89.2	50	150	25	06/14/2024	DLC
Bromodichloromethane - MS	EPA-8260	**95.4**			10.0	0	95.4	50	150		06/14/2024	DLC
Bromodichloromethane - MSD	EPA-8260	**90.6**	**5**		10.0	0	90.6	50	150	25	06/14/2024	DLC
Trans-1,3-Dichloropropene - MS	EPA-8260	**85.7**			10.0	0	85.7	50	150		06/14/2024	DLC
Trans-1,3-Dichloropropene - MSD	EPA-8260	**84.3**	**2**		10.0	0	84.3	50	150	25	06/14/2024	DLC
4-Methyl-2-Pentanone - MS	EPA-8260	**94.4**			10.0	0	94.4	50	150		06/14/2024	DLC
4-Methyl-2-Pentanone - MSD	EPA-8260	**89.2**	**6**		10.0	0	89.2	50	150	25	06/14/2024	DLC
Toluene - MS	EPA-8260	**98.8**			10.0	0	98.8	71.7	139		06/14/2024	DLC
Toluene - MSD	EPA-8260	**91.4**	**8**		10.0	0	91.4	71.7	139	20.5	06/14/2024	DLC
Cis-1,3-Dichloropropene - MS	EPA-8260	**88.5**			10.0	0	88.5	50	150		06/14/2024	DLC
Cis-1,3-Dichloropropene - MSD	EPA-8260	**83.2**	**6**		10.0	0	83.2	50	150	25	06/14/2024	DLC
1,1,2-Trichloroethane - MS	EPA-8260	**87.0**			10.0	0	87.0	50	150		06/14/2024	DLC
1,1,2-Trichloroethane - MSD	EPA-8260	**87.0**	**0**		10.0	0	87.0	50	150	25	06/14/2024	DLC
2-Hexanone - MS	EPA-8260	**83.7**			10.0	0	83.7	50	150		06/14/2024	DLC
2-Hexanone - MSD	EPA-8260	**84.2**	**1**		10.0	0	84.2	50	150	25	06/14/2024	DLC
1,3-Dichloropropane - MS	EPA-8260	**87.7**			10.0	0	87.7	50	150		06/14/2024	DLC
1,3-Dichloropropane - MSD	EPA-8260	**87.2**	**1**		10.0	0	87.2	50	150	25	06/14/2024	DLC
Tetrachloroethylene - MS	EPA-8260	**80.0**			10.0	0	80.0	50	150		06/14/2024	DLC
Tetrachloroethylene - MSD	EPA-8260	**78.1**	**2**		10.0	0	78.1	50	150	25	06/14/2024	DLC
Dibromochloromethane - MS	EPA-8260	**88.7**			10.0	0	88.7	50	150		06/14/2024	DLC
Dibromochloromethane - MSD	EPA-8260	**88.3**	**0**		10.0	0	88.3	50	150	25	06/14/2024	DLC
1,2-Dibromoethane - MS	EPA-8260	**88.7**			10.0	0	88.7	50	150		06/14/2024	DLC
1,2-Dibromoethane - MSD	EPA-8260	**87.6**	**1**		10.0	0	87.6	50	150	25	06/14/2024	DLC

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MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene - MS	EPA-8260	**91.7**			10.0	0	91.7	73	131		06/14/2024	DLC
Chlorobenzene - MSD	EPA-8260	**88.7**	**3**		10.0	0	88.7	73	131	20.5	06/14/2024	DLC
1,1,1,2-Tetrachloroethane - MS	EPA-8260	**88.8**			10.0	0	88.8	50	150		06/14/2024	DLC
1,1,1,2-Tetrachloroethane - MSD	EPA-8260	**86.8**	**2**		10.0	0	86.8	50	150	25	06/14/2024	DLC
Ethylbenzene - MS	EPA-8260	**95.8**			10.0	0	95.8	50	150		06/14/2024	DLC
Ethylbenzene - MSD	EPA-8260	**92.5**	**4**		10.0	0	92.5	50	150	25	06/14/2024	DLC
Styrene - MS	EPA-8260	**86.2**			10.0	0	86.2	50	150		06/14/2024	DLC
Styrene - MSD	EPA-8260	**84.4**	**2**		10.0	0	84.4	50	150	25	06/14/2024	DLC
Bromoform - MS	EPA-8260	**88.6**			10.0	0	88.6	50	150		06/14/2024	DLC
Bromoform - MSD	EPA-8260	**87.3**	**1**		10.0	0	87.3	50	150	25	06/14/2024	DLC
Isopropylbenzene - MS	EPA-8260	**97.1**			10.0	0	97.1	50	150		06/14/2024	DLC
Isopropylbenzene - MSD	EPA-8260	**93.6**	**4**		10.0	0	93.6	50	150	25	06/14/2024	DLC
1,1,2,2-Tetrachloroethane - MS	EPA-8260	**88.1**			10.0	0	88.1	50	150		06/14/2024	DLC
1,1,2,2-Tetrachloroethane - MSD	EPA-8260	**87.8**	**0**		10.0	0	87.8	50	150	25	06/14/2024	DLC
1,2,3-Trichloropropane - MS	EPA-8260	**85.1**			10.0	0	85.1	50	150		06/14/2024	DLC
1,2,3-Trichloropropane - MSD	EPA-8260	**85.2**	**0**		10.0	0	85.2	50	150	25	06/14/2024	DLC
Bromobenzene - MS	EPA-8260	**91.3**			10.0	0	91.3	50	150		06/14/2024	DLC
Bromobenzene - MSD	EPA-8260	**91.4**	**0**		10.0	0	91.4	50	150	25	06/14/2024	DLC
N-Propyl Benzene - MS	EPA-8260	**94.0**			10.0	0	94.0	50	150		06/14/2024	DLC
N-Propyl Benzene - MSD	EPA-8260	**93.6**	**0**		10.0	0	93.6	50	150	25	06/14/2024	DLC
2-Chlorotoluene - MS	EPA-8260	**92.0**			10.0	0	92.0	50	150		06/14/2024	DLC
2-Chlorotoluene - MSD	EPA-8260	**90.3**	**2**		10.0	0	90.3	50	150	25	06/14/2024	DLC
1,3,5-Trimethylbenzene - MS	EPA-8260	**92.5**			10.0	0	92.5	50	150		06/14/2024	DLC
1,3,5-Trimethylbenzene - MSD	EPA-8260	**89.6**	**3**		10.0	0	89.6	50	150	25	06/14/2024	DLC
4-Chlorotoluene - MS	EPA-8260	**91.8**			10.0	0	91.8	50	150		06/14/2024	DLC
4-Chlorotoluene - MSD	EPA-8260	**92.0**	**0**		10.0	0	92.0	50	150	25	06/14/2024	DLC
T-Butyl Benzene - MS	EPA-8260	**101**			10.0	0	101	50	150		06/14/2024	DLC
T-Butyl Benzene - MSD	EPA-8260	**98.7**	**3**		10.0	0	98.7	50	150	25	06/14/2024	DLC
1,2,4-Trimethylbenzene - MS	EPA-8260	**93.0**			10.0	0	93.0	50	150		06/14/2024	DLC
1,2,4-Trimethylbenzene - MSD	EPA-8260	**89.6**	**4**		10.0	0	89.6	50	150	25	06/14/2024	DLC
S-Butyl Benzene - MS	EPA-8260	**93.9**			10.0	0	93.9	50	150		06/14/2024	DLC
S-Butyl Benzene - MSD	EPA-8260	**93.2**	**1**		10.0	0	93.2	50	150	25	06/14/2024	DLC
P-Isopropyltoluene - MS	EPA-8260	**92.6**			10.0	0	92.6	50	150		06/14/2024	DLC
P-Isopropyltoluene - MSD	EPA-8260	**91.7**	**1**		10.0	0	91.7	50	150	25	06/14/2024	DLC
1,3-Dichlorobenzene - MS	EPA-8260	**90.7**			10.0	0	90.7	50	150		06/14/2024	DLC
1,3-Dichlorobenzene - MSD	EPA-8260	**92.1**	**2**		10.0	0	92.1	50	150	25	06/14/2024	DLC
1,4-Dichlorobenzene - MS	EPA-8260	**87.9**			10.0	0	87.9	50	150		06/14/2024	DLC
1,4-Dichlorobenzene - MSD	EPA-8260	**91.4**	**4**		10.0	0	91.4	50	150	25	06/14/2024	DLC
N-Butylbenzene - MS	EPA-8260	**97.5**			10.0	0	97.5	50	150		06/14/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
N-Butylbenzene - MSD	EPA-8260	**101**	**4**		10.0	0	101	50	150	25	06/14/2024	DLC
1,2-Dichlorobenzene - MS	EPA-8260	**88.6**			10.0	0	88.6	50	150		06/14/2024	DLC
1,2-Dichlorobenzene - MSD	EPA-8260	**92.2**	**4**		10.0	0	92.2	50	150	25	06/14/2024	DLC
1,2-Dibromo 3-Chloropropane - MS	EPA-8260	**94.0**			10.0	0	94.0	50	150		06/14/2024	DLC
1,2-Dibromo 3-Chloropropane - MSD	EPA-8260	**97.9**	**4**		10.0	0	97.9	50	150	25	06/14/2024	DLC
1,2,4-Trichlorobenzene - MS	EPA-8260	**82.0**			10.0	0	82.0	50	150		06/14/2024	DLC
1,2,4-Trichlorobenzene - MSD	EPA-8260	**94.1**	**14**		10.0	0	94.1	50	150	25	06/14/2024	DLC
Hexachlorobutadiene - MS	EPA-8260	**96.6**			10.0	0	96.6	50	150		06/14/2024	DLC
Hexachlorobutadiene - MSD	EPA-8260	**95.3**	**1**		10.0	0	95.3	50	150	25	06/14/2024	DLC
Naphthalene - MS	EPA-8260	**84.5**			10.0	0	84.5	50	150		06/14/2024	DLC
Naphthalene - MSD	EPA-8260	**102**	**19**		10.0	0	102	50	150	25	06/14/2024	DLC
1,2,3-Trichlorobenzene - MS	EPA-8260	**82.7**			10.0	0	82.7	50	150		06/14/2024	DLC
1,2,3-Trichlorobenzene - MSD	EPA-8260	**98.9**	**18**		10.0	0	98.9	50	150	25	06/14/2024	DLC
Xylenes - MS	EPA-8260	**96.3**			30.0	0	96.3	50	150		06/14/2024	DLC
Xylenes - MSD	EPA-8260	**93.1**	**3**		30.0	0	93.1	50	150	25	06/14/2024	DLC

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: 213506 - Water

Parent Sample: **GW-061124-RN-B3R**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Aluminum - MS	EPA-200.8	**103**			12500	310	103	80	120		06/14/2024	EBS
Aluminum - MSD	EPA-200.8	**105**	**1**		12500	310	105	80	120	9.58	06/14/2024	EBS
Antimony - MS	EPA-200.8	**106**			125	0.80	106	88.9	114		06/14/2024	EBS
Antimony - MSD	EPA-200.8	**105**	**1**		125	0.80	105	88.9	114	2.29	06/14/2024	EBS
Arsenic - MS	EPA-200.8	**102**			125	6.7	102	89.1	110		06/14/2024	EBS
Arsenic - MSD	EPA-200.8	**102**	**0**		125	6.7	102	89.1	110	3.36	06/14/2024	EBS
Barium - MS	EPA-200.8	**108**			125	62	108	88.5	108		06/14/2024	EBS
Barium - MSD	EPA-200.8	**106**	**1**		125	62	106	88.5	108	3.32	06/14/2024	EBS
Beryllium - MS	EPA-200.8	**99.9**			125	0.15	99.9	91.1	113		06/14/2024	EBS
Beryllium - MSD	EPA-200.8	**99.8**	**0**		125	0.15	99.8	91.1	113	2.7	06/14/2024	EBS
Cadmium - MS	EPA-200.8	**107**			125	0.12	107	89.4	110		06/14/2024	EBS
Cadmium - MSD	EPA-200.8	**106**	**0**		125	0.12	106	89.4	110	2.7	06/14/2024	EBS
Calcium - MS	EPA-200.8	**95.8**			12500	34000	95.8	80	120		06/14/2024	EBS
Calcium - MSD	EPA-200.8	**100**	**1**		12500	34000	100	80	120	3	06/14/2024	EBS
Chromium - MS	EPA-200.8	**98.7**			125	2.8	98.7	88.3	110.2		06/14/2024	EBS
Chromium - MSD	EPA-200.8	**98.6**	**0**		125	2.8	98.6	88.3	110.2	2.97	06/14/2024	EBS
Cobalt - MS	EPA-200.8	**104**			125	4.7	104	85.8	108		06/14/2024	EBS
Cobalt - MSD	EPA-200.8	**106**	**1**		125	4.7	106	85.8	108	2.78	06/14/2024	EBS

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Copper - MS	EPA-200.8	**124**		SQ2	125	3.8	124 SQ2	85.4	109		06/14/2024	EBS
Copper - MSD	EPA-200.8	**108**	**13**		125	3.8	108	85.4	109	2.84	06/14/2024	EBS
Iron - MS	EPA-200.8	**102**			12500	26000	102	80	120		06/14/2024	EBS
Iron - MSD	EPA-200.8	**101**	**0**		12500	26000	101	80	120	3.91	06/14/2024	EBS
Lead - MS	EPA-200.8	**106**			125	1.6	106	87.5	107		06/14/2024	EBS
Lead - MSD	EPA-200.8	**105**	**1**		125	1.6	105	87.5	107	2.43	06/14/2024	EBS
Magnesium - MS	EPA-200.8	**106**			12500	25000	106	80	120		06/14/2024	EBS
Magnesium - MSD	EPA-200.8	**104**	**1**		12500	25000	104	80	120	2.85	06/14/2024	EBS
Manganese - MS	EPA-200.8	**77.4**		SQ2	125	1900	77.4 SQ2	82.2	110		06/14/2024	EBS
Manganese - MSD	EPA-200.8	**78.4**	**0**	SQ2	125	1900	78.4 SQ2	82.2	110	4.52	06/14/2024	EBS
Nickel - MS	EPA-200.8	**103**			125	29	103	85.4	109		06/14/2024	EBS
Nickel - MSD	EPA-200.8	**102**	**0**		125	29	102	85.4	109	3.2	06/14/2024	EBS
Potassium - MS	EPA-200.8	**97.3**			12500	8700	97.3	80	120		06/14/2024	EBS
Potassium - MSD	EPA-200.8	**99.8**	**1**		12500	8700	99.8	80	120	3.15	06/14/2024	EBS
Selenium - MS	EPA-200.8	**99.7**			125	0.58	99.7	90.2	113		06/14/2024	EBS
Selenium - MSD	EPA-200.8	**101**	**1**		125	0.58	101	90.2	113	4.68	06/14/2024	EBS
Silver - MS	EPA-200.8	**104**			125	0.18	104	80	120		06/14/2024	EBS
Silver - MSD	EPA-200.8	**106**	**2**		125	0.18	106	80	120	2.74	06/14/2024	EBS
Sodium - MS	EPA-200.8	**98.1**			12500	68000	98.1	80	105		06/14/2024	EBS
Sodium - MSD	EPA-200.8	**102**	**1**		12500	68000	102	80	105	3.47	06/14/2024	EBS
Thallium - MS	EPA-200.8	**102**			125	0.91	102	88	103		06/14/2024	EBS
Thallium - MSD	EPA-200.8	**102**	**0**		125	0.91	102	88	103	5.36	06/14/2024	EBS
Vanadium - MS	EPA-200.8	**100**			125	2.5	100	80.1	108		06/14/2024	EBS
Vanadium - MSD	EPA-200.8	**100**	**0**		125	2.5	100	80.1	108	3.17	06/14/2024	EBS
Zinc - MS	EPA-200.8	**103**			125	14	103	88.2	111		06/14/2024	EBS
Zinc - MSD	EPA-200.8	**102**	**0**		125	14	102	88.2	111	3.89	06/14/2024	EBS

SQ2 - Spike outside of control limits due to matrix effect.
*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: 213724 - Water

Parent Sample: **GW-061124-RN-B3R**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Pyridine - MS	EPA-8270	**21.1**			48.1	0.023	21.1	20	150		06/18/2024	DBA
Pyridine - MSD	EPA-8270	**14.7**	**36**	MS11	48.1	0.023	14.7 MS11	20	150	30	06/18/2024	DBA
N-Nitrosodimethylamine - MS	EPA-8270	**37.5**			48.1	0.0019	37.5	20	150		06/18/2024	DBA
N-Nitrosodimethylamine - MSD	EPA-8270	**38.0**	**1**		48.1	0.0019	38.0	20	150	30	06/18/2024	DBA
Phenol - MS	EPA-8270	**24.0**			48.1	0.039	24.0	5	84		06/18/2024	DBA
Phenol - MSD	EPA-8270	**24.8**	**3**		48.1	0.039	24.8	5	84	22	06/18/2024	DBA

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MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Aniline - MS	EPA-8270	**31.1**			48.1	0.025	31.1	20	150		06/18/2024	DBA
Aniline - MSD	EPA-8270	**31.0**	**0**		48.1	0.025	31.0	20	150	30	06/18/2024	DBA
Bis(2-Chloroethyl)Ether - MS	EPA-8270	**74.1**			48.1	0.019	74.1	20	150		06/18/2024	DBA
Bis(2-Chloroethyl)Ether - MSD	EPA-8270	**78.3**	**5**		48.1	0.019	78.3	20	150	30	06/18/2024	DBA
2-Chlorophenol - MS	EPA-8270	**67.2**			48.1	0.0030	67.2	45	111		06/18/2024	DBA
2-Chlorophenol - MSD	EPA-8270	**71.8**	**7**		48.1	0.0030	71.8	45	111	17	06/18/2024	DBA
1,3-Dichlorobenzene - MS	EPA-8270	**63.4**			48.1	0.013	63.4	20	150		06/18/2024	DBA
1,3-Dichlorobenzene - MSD	EPA-8270	**69.3**	**9**		48.1	0.013	69.3	20	150	30	06/18/2024	DBA
1,4-Dichlorobenzene - MS	EPA-8270	**64.7**			48.1	0.013	64.7	27.1	114		06/18/2024	DBA
1,4-Dichlorobenzene - MSD	EPA-8270	**70.8**	**9**		48.1	0.013	70.8	27.1	114	21	06/18/2024	DBA
Benzyl Alcohol - MS	EPA-8270	**54.7**			48.1	0.050	54.7	20	150		06/18/2024	DBA
Benzyl Alcohol - MSD	EPA-8270	**57.2**	**5**		48.1	0.050	57.2	20	150	30	06/18/2024	DBA
1,2-Dichlorobenzene - MS	EPA-8270	**64.6**			48.1	0	64.6	20	150		06/18/2024	DBA
1,2-Dichlorobenzene - MSD	EPA-8270	**71.4**	**10**		48.1	0	71.4	20	150	30	06/18/2024	DBA
2-Methylphenol - MS	EPA-8270	**54.6**			48.1	0.080	54.6	20	150		06/18/2024	DBA
2-Methylphenol - MSD	EPA-8270	**57.1**	**4**		48.1	0.080	57.1	20	150	30	06/18/2024	DBA
Bis(2-Chloroisopropyl)Ether - MS	EPA-8270	**72.2**			48.1	0.0038	72.2	20	150		06/18/2024	DBA
Bis(2-Chloroisopropyl)Ether - MSD	EPA-8270	**78.8**	**9**		48.1	0.0038	78.8	20	150	30	06/18/2024	DBA
3&4-Methylphenol - MS	EPA-8270	**51.8**			48.1	0.13	51.8	20	150		06/18/2024	DBA
3&4-Methylphenol - MSD	EPA-8270	**56.1**	**8**		48.1	0.13	56.1	20	150	30	06/18/2024	DBA
N-Nitroso-Di-N-Propylamine - MS	EPA-8270	**77.1**			48.1	0	77.1	42.2	119		06/18/2024	DBA
N-Nitroso-Di-N-Propylamine - MSD	EPA-8270	**84.1**	**9**		48.1	0	84.1	42.2	119	14	06/18/2024	DBA
Hexachloroethane - MS	EPA-8270	**60.7**			48.1	0	60.7	20	150		06/18/2024	DBA
Hexachloroethane - MSD	EPA-8270	**67.3**	**10**		48.1	0	67.3	20	150	30	06/18/2024	DBA
Nitrobenzene - MS	EPA-8270	**72.1**			48.1	0.056	72.1	20	150		06/18/2024	DBA
Nitrobenzene - MSD	EPA-8270	**75.6**	**5**		48.1	0.056	75.6	20	150	30	06/18/2024	DBA
Isophorone - MS	EPA-8270	**43.6**			48.1	0	43.6	20	150		06/18/2024	DBA
Isophorone - MSD	EPA-8270	**48.8**	**11**		48.1	0	48.8	20	150	30	06/18/2024	DBA
2-Nitrophenol - MS	EPA-8270	**74.4**			48.1	0.0027	74.4	20	150		06/18/2024	DBA
2-Nitrophenol - MSD	EPA-8270	**82.1**	**10**		48.1	0.0027	82.1	20	150	30	06/18/2024	DBA
2,4-Dimethylphenol - MS	EPA-8270	**92.7**			48.1	0.014	92.7	20	150		06/18/2024	DBA
2,4-Dimethylphenol - MSD	EPA-8270	**102**	**9**		48.1	0.014	102	20	150	30	06/18/2024	DBA
Bis(2-Chloroethoxy)Methane - MS	EPA-8270	**75.8**			48.1	0.013	75.8	20	150		06/18/2024	DBA
Bis(2-Chloroethoxy)Methane - MSD	EPA-8270	**81.2**	**7**		48.1	0.013	81.2	20	150	30	06/18/2024	DBA
2,4-Dichlorophenol - MS	EPA-8270	**77.1**			48.1	0	77.1	20	150		06/18/2024	DBA
2,4-Dichlorophenol - MSD	EPA-8270	**83.9**	**9**		48.1	0	83.9	20	150	30	06/18/2024	DBA
1,2,4-Trichlorobenzene - MS	EPA-8270	**63.9**			48.1	0.0046	63.9	29.4	120		06/18/2024	DBA
1,2,4-Trichlorobenzene - MSD	EPA-8270	**70.9**	**10**		48.1	0.0046	70.9	29.4	120	23	06/18/2024	DBA
Naphthalene - MS	EPA-8270	**68.0**			48.1	0.011	68.0	20	150		06/18/2024	DBA

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MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Naphthalene - MSD	EPA-8270	**74.2**	**9**		48.1	0.011	74.2	20	150	30	06/18/2024	DBA
4-Chloroaniline - MS	EPA-8270	**49.3**			48.1	0.0068	49.3	20	150		06/18/2024	DBA
4-Chloroaniline - MSD	EPA-8270	**57.1**	**15**		48.1	0.0068	57.1	20	150	30	06/18/2024	DBA
Hexachlorobutadiene - MS	EPA-8270	**61.2**			48.1	0	61.2	20	150		06/18/2024	DBA
Hexachlorobutadiene - MSD	EPA-8270	**67.1**	**9**		48.1	0	67.1	20	150	30	06/18/2024	DBA
4-Chloro-3-Methylphenol - MS	EPA-8270	**78.3**			48.1	0.014	78.3	44	113		06/18/2024	DBA
4-Chloro-3-Methylphenol - MSD	EPA-8270	**86.5**	**10**		48.1	0.014	86.5	44	113	18	06/18/2024	DBA
2-Methylnaphthalene - MS	EPA-8270	**71.7**			48.1	0.0097	71.7	20	150		06/18/2024	DBA
2-Methylnaphthalene - MSD	EPA-8270	**80.3**	**11**		48.1	0.0097	80.3	20	150	30	06/18/2024	DBA
1-Methylnaphthalene - MS	EPA-8270	**71.3**			48.1	0.010	71.3	20	150		06/18/2024	DBA
1-Methylnaphthalene - MSD	EPA-8270	**78.8**	**10**		48.1	0.010	78.8	20	150	30	06/18/2024	DBA
Hexachlorocyclopentadiene - MS	EPA-8270	**41.0**			48.1	0	41.0	20	150		06/18/2024	DBA
Hexachlorocyclopentadiene - MSD	EPA-8270	**47.2**	**14**		48.1	0	47.2	20	150	30	06/18/2024	DBA
2,4,6-Trichlorophenol - MS	EPA-8270	**73.7**			48.1	0	73.7	20	150		06/18/2024	DBA
2,4,6-Trichlorophenol - MSD	EPA-8270	**77.6**	**5**		48.1	0	77.6	20	150	30	06/18/2024	DBA
2,4,5-Trichlorophenol - MS	EPA-8270	**82.4**			48.1	0.0040	82.4	20	150		06/18/2024	DBA
2,4,5-Trichlorophenol - MSD	EPA-8270	**92.0**	**11**		48.1	0.0040	92.0	20	150	30	06/18/2024	DBA
2-Chloronaphthalene - MS	EPA-8270	**73.7**			48.1	0.0011	73.7	20	150		06/18/2024	DBA
2-Chloronaphthalene - MSD	EPA-8270	**79.9**	**8**		48.1	0.0011	79.9	20	150	30	06/18/2024	DBA
2-Nitroaniline - MS	EPA-8270	**73.4**			48.1	0.021	73.4	20	150		06/18/2024	DBA
2-Nitroaniline - MSD	EPA-8270	**78.9**	**7**		48.1	0.021	78.9	20	150	30	06/18/2024	DBA
Acenaphthylene - MS	EPA-8270	**77.0**			48.1	0.0038	77.0	20	150		06/18/2024	DBA
Acenaphthylene - MSD	EPA-8270	**84.1**	**9**		48.1	0.0038	84.1	20	150	30	06/18/2024	DBA
Dimethylphthalate - MS	EPA-8270	**73.2**			48.1	0	73.2	20	150		06/18/2024	DBA
Dimethylphthalate - MSD	EPA-8270	**79.2**	**8**		48.1	0	79.2	20	150	30	06/18/2024	DBA
2,6-Dinitrotoluene - MS	EPA-8270	**77.7**			48.1	0	77.7	20	150		06/18/2024	DBA
2,6-Dinitrotoluene - MSD	EPA-8270	**84.9**	**9**		48.1	0	84.9	20	150	30	06/18/2024	DBA
Acenaphthene - MS	EPA-8270	**72.2**			48.1	0.015	72.2	41	107		06/18/2024	DBA
Acenaphthene - MSD	EPA-8270	**78.2**	**8**		48.1	0.015	78.2	41	107	13	06/18/2024	DBA
3-Nitroaniline - MS	EPA-8270	**65.6**			48.1	0.042	65.6	20	150		06/18/2024	DBA
3-Nitroaniline - MSD	EPA-8270	**74.2**	**12**		48.1	0.042	74.2	20	150	30	06/18/2024	DBA
2,4-Dinitrophenol - MS	EPA-8270	**71.6**			48.1	0.015	71.6	20	150		06/18/2024	DBA
2,4-Dinitrophenol - MSD	EPA-8270	**75.3**	**5**		48.1	0.015	75.3	20	150	30	06/18/2024	DBA
4-Nitrophenol - MS	EPA-8270	**20.2**			48.1	0.043	20.2	5	63		06/18/2024	DBA
4-Nitrophenol - MSD	EPA-8270	**21.3**	**5**		48.1	0.043	21.3	5	63	25	06/18/2024	DBA
Dibenzofuran - MS	EPA-8270	**73.8**			48.1	0.0093	73.8	20	150		06/18/2024	DBA
Dibenzofuran - MSD	EPA-8270	**81.1**	**10**		48.1	0.0093	81.1	20	150	30	06/18/2024	DBA
2,4-Dinitrotoluene - MS	EPA-8270	**79.2**			48.1	0	79.2	53.1	136		06/18/2024	DBA
2,4-Dinitrotoluene - MSD	EPA-8270	**87.8**	**10**		48.1	0	87.8	53.1	136	18	06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
2,3,4,6-Tetrachlorophenol - MS	EPA-8270	**73.0**			48.1	0	73.0	20	150		06/18/2024	DBA
2,3,4,6-Tetrachlorophenol - MSD	EPA-8270	**78.7**	**8**		48.1	0	78.7	20	150	30	06/18/2024	DBA
Diethylphthalate - MS	EPA-8270	**70.4**			48.1	0.14	70.4	20	150		06/18/2024	DBA
Diethylphthalate - MSD	EPA-8270	**78.1**	**10**		48.1	0.14	78.1	20	150	30	06/18/2024	DBA
Fluorene - MS	EPA-8270	**73.2**			48.1	0.013	73.2	20	150		06/18/2024	DBA
Fluorene - MSD	EPA-8270	**81.8**	**11**		48.1	0.013	81.8	20	150	30	06/18/2024	DBA
4-Chlorophenyl-Phenylether - MS	EPA-8270	**73.3**			48.1	0.0046	73.3	20	150		06/18/2024	DBA
4-Chlorophenyl-Phenylether - MSD	EPA-8270	**80.8**	**10**		48.1	0.0046	80.8	20	150	30	06/18/2024	DBA
4-Nitroaniline - MS	EPA-8270	**69.5**			48.1	0.045	69.5	20	150		06/18/2024	DBA
4-Nitroaniline - MSD	EPA-8270	**75.6**	**8**		48.1	0.045	75.6	20	150	30	06/18/2024	DBA
4,6-Dinitro-2-Methylphenol - MS	EPA-8270	**72.0**			48.1	0.0063	72.0	20	150		06/18/2024	DBA
4,6-Dinitro-2-Methylphenol - MSD	EPA-8270	**76.8**	**6**		48.1	0.0063	76.8	20	150	30	06/18/2024	DBA
Azobenzene - MS	EPA-8270	**76.7**			48.1	0.015	76.7	20	150		06/18/2024	DBA
Azobenzene - MSD	EPA-8270	**81.2**	**6**		48.1	0.015	81.2	20	150	30	06/18/2024	DBA
4-Bromophenyl-Phenylether - MS	EPA-8270	**73.9**			48.1	0	73.9	20	150		06/18/2024	DBA
4-Bromophenyl-Phenylether - MSD	EPA-8270	**80.3**	**8**		48.1	0	80.3	20	150	30	06/18/2024	DBA
Hexachlorobenzene - MS	EPA-8270	**71.6**			48.1	0	71.6	20	150		06/18/2024	DBA
Hexachlorobenzene - MSD	EPA-8270	**77.1**	**7**		48.1	0	77.1	20	150	30	06/18/2024	DBA
Pentachlorophenol - MS	EPA-8270	**72.7**			48.1	0.0018	72.7	33	124		06/18/2024	DBA
Pentachlorophenol - MSD	EPA-8270	**76.8**	**5**		48.1	0.0018	76.8	33	124	30	06/18/2024	DBA
Phenanthrene - MS	EPA-8270	**72.6**			48.1	0.023	72.6	20	150		06/18/2024	DBA
Phenanthrene - MSD	EPA-8270	**79.6**	**9**		48.1	0.023	79.6	20	150	30	06/18/2024	DBA
Anthracene - MS	EPA-8270	**61.3**			48.1	0.0083	61.3	20	150		06/18/2024	DBA
Anthracene - MSD	EPA-8270	**66.8**	**9**		48.1	0.0083	66.8	20	150	30	06/18/2024	DBA
Carbazole - MS	EPA-8270	**71.4**			48.1	0.014	71.4	20	150		06/18/2024	DBA
Carbazole - MSD	EPA-8270	**79.6**	**11**		48.1	0.014	79.6	20	150	30	06/18/2024	DBA
Di-N-Butylphthalate - MS	EPA-8270	**78.4**			48.1	0.22	78.4	20	150		06/18/2024	DBA
Di-N-Butylphthalate - MSD	EPA-8270	**86.9**	**10**		48.1	0.22	86.9	20	150	30	06/18/2024	DBA
Fluoranthene - MS	EPA-8270	**73.4**			48.1	0.022	73.4	20	150		06/18/2024	DBA
Fluoranthene - MSD	EPA-8270	**81.8**	**11**		48.1	0.022	81.8	20	150	30	06/18/2024	DBA
Pyrene - MS	EPA-8270	**73.0**			48.1	0.028	73.0	18	136		06/18/2024	DBA
Pyrene - MSD	EPA-8270	**77.0**	**5**		48.1	0.028	77.0	18	136	18	06/18/2024	DBA
Butylbenzylphthalate - MS	EPA-8270	**77.9**			48.1	0.026	77.9	20	150		06/18/2024	DBA
Butylbenzylphthalate - MSD	EPA-8270	**81.5**	**5**		48.1	0.026	81.5	20	150	30	06/18/2024	DBA
Benzo[A]Anthracene - MS	EPA-8270	**74.0**			48.1	0.038	74.0	20	150		06/18/2024	DBA
Benzo[A]Anthracene - MSD	EPA-8270	**78.6**	**6**		48.1	0.038	78.6	20	150	30	06/18/2024	DBA
Chrysene - MS	EPA-8270	**73.1**			48.1	0.039	73.1	20	150		06/18/2024	DBA
Chrysene - MSD	EPA-8270	**79.1**	**8**		48.1	0.039	79.1	20	150	30	06/18/2024	DBA
Bis(2-Ethylhexyl)Phthalate - MS	EPA-8270	**77.7**			48.1	0	77.7	20	150		06/18/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
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DATE: 7/3/2024
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WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate - MSD	EPA-8270	**81.7**	**5**		48.1	0	81.7	20	150	30	06/18/2024	DBA
Di-N-Octylphthalate - MS	EPA-8270	**73.7**			48.1	0	73.7	20	150		06/18/2024	DBA
Di-N-Octylphthalate - MSD	EPA-8270	**79.5**	**8**		48.1	0	79.5	20	150	30	06/18/2024	DBA
Benzo[B]Fluoranthene - MS	EPA-8270	**72.8**			48.1	0.046	72.8	20	150		06/18/2024	DBA
Benzo[B]Fluoranthene - MSD	EPA-8270	**79.3**	**8**		48.1	0.046	79.3	20	150	30	06/18/2024	DBA
Benzo[K]Fluoranthene - MS	EPA-8270	**75.3**			48.1	0.054	75.3	20	150		06/18/2024	DBA
Benzo[K]Fluoranthene - MSD	EPA-8270	**80.3**	**6**		48.1	0.054	80.3	20	150	30	06/18/2024	DBA
Benzo[A]Pyrene - MS	EPA-8270	**65.4**			48.1	0.048	65.4	20	150		06/18/2024	DBA
Benzo[A]Pyrene - MSD	EPA-8270	**71.1**	**8**		48.1	0.048	71.1	20	150	30	06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene - MS	EPA-8270	**75.0**			48.1	0.030	75.0	20	150		06/18/2024	DBA
Indeno[1,2,3-Cd]Pyrene - MSD	EPA-8270	**83.5**	**11**		48.1	0.030	83.5	20	150	30	06/18/2024	DBA
Dibenz[A,H]Anthracene - MS	EPA-8270	**70.9**			48.1	0.057	70.9	20	150		06/18/2024	DBA
Dibenz[A,H]Anthracene - MSD	EPA-8270	**79.1**	**11**		48.1	0.057	79.1	20	150	30	06/18/2024	DBA
Benzo[G,H,I]Perylene - MS	EPA-8270	**67.5**			48.1	0.061	67.5	20	150		06/18/2024	DBA
Benzo[G,H,I]Perylene - MSD	EPA-8270	**75.9**	**12**		48.1	0.061	75.9	20	150	30	06/18/2024	DBA

MS11 - The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: 213810 - Water

Parent Sample: **GW-061124-RN-B3R**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - MS	EPA-8082	**87.1**			0.0957	0	87.1	44	120		06/21/2024	DBA
PCB-1016 - MSD	EPA-8082	**83.0**	**5**		0.0957	0	83.0	44	120	25	06/21/2024	DBA
PCB-1260 - MS	EPA-8082	**94.4**			0.0957	0	94.4	44	152		06/21/2024	DBA
PCB-1260 - MSD	EPA-8082	**91.0**	**4**		0.0957	0	91.0	44	152	25	06/21/2024	DBA

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
A-BHC - MS	EPA-8081	**87.8**			0.0478	0.00012	87.8	50	150		07/02/2024	DBA
A-BHC - MSD	EPA-8081	**101**	**14**		0.0478	0.00012	101	50	150	25	07/02/2024	DBA
G-BHC - MS	EPA-8081	**87.5**			0.0478	0	87.5	50	158		07/02/2024	DBA
G-BHC - MSD	EPA-8081	**99.7**	**13**		0.0478	0	99.7	50	158	25	07/02/2024	DBA
B-BHC - MS	EPA-8081	**83.0**			0.0478	0	83.0	50	150		07/02/2024	DBA
B-BHC - MSD	EPA-8081	**97.3**	**16**		0.0478	0	97.3	50	150	25	07/02/2024	DBA
Heptachlor - MS	EPA-8081	**85.8**			0.0478	0	85.8	50	134		07/02/2024	DBA
Heptachlor - MSD	EPA-8081	**99.3**	**15**		0.0478	0	99.3	50	134	25	07/02/2024	DBA
D-BHC - MS	EPA-8081	**86.4**			0.0478	0.000096	86.4	50	150		07/02/2024	DBA

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CERTIFICATE OF ANALYSIS

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DATE: 7/3/2024
ALS SDG#: EV24060108
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data Mgmt

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
D-BHC - MSD	EPA-8081	**97.7**	**12**		0.0478	0.000096	97.7	50	150	25	07/02/2024	DBA
Aldrin - MS	EPA-8081	**81.9**			0.0478	0	81.9	50	137		07/02/2024	DBA
Aldrin - MSD	EPA-8081	**96.7**	**17**		0.0478	0	96.7	50	137	25	07/02/2024	DBA
Heptachlor Epoxide - MS	EPA-8081	**107**			0.0478	0	107	50	150		07/02/2024	DBA
Heptachlor Epoxide - MSD	EPA-8081	**108**	**1**		0.0478	0	108	50	150	25	07/02/2024	DBA
alpha-Chlordane - MS	EPA-8081	**90.5**			0.0478	0	90.5	50	150		07/02/2024	DBA
alpha-Chlordane - MSD	EPA-8081	**101**	**11**		0.0478	0	101	50	150	25	07/02/2024	DBA
gamma-Chlordane - MS	EPA-8081	**1280**		MS14	0.0478	0	1280 MS14	50	150		07/02/2024	DBA
gamma-Chlordane - MSD	EPA-8081	**1490**	**16**	MS14	0.0478	0	1490 MS14	50	150	25	07/02/2024	DBA
Endosulfan I - MS	EPA-8081	**93.9**			0.0478	0	93.9	50	150		07/02/2024	DBA
Endosulfan I - MSD	EPA-8081	**105**	**11**		0.0478	0	105	50	150	25	07/02/2024	DBA
4,4'-DDE - MS	EPA-8081	**94.4**			0.0478	0.000058	94.4	50	150		07/02/2024	DBA
4,4'-DDE - MSD	EPA-8081	**108**	**13**		0.0478	0.000058	108	50	150	25	07/02/2024	DBA
Dieldrin - MS	EPA-8081	**94.8**			0.0478	0	94.8	50	137		07/02/2024	DBA
Dieldrin - MSD	EPA-8081	**108**	**13**		0.0478	0	108	50	137	25	07/02/2024	DBA
Endrin - MS	EPA-8081	**123**			0.0478	0.00041	123	50	134		07/02/2024	DBA
Endrin - MSD	EPA-8081	**138**	**11**	MS03	0.0478	0.00041	138 MS03	50	134	25	07/02/2024	DBA
4,4'-DDD - MS	EPA-8081	**89.8**			0.0478	0	89.8	50	150		07/02/2024	DBA
4,4'-DDD - MSD	EPA-8081	**104**	**14**		0.0478	0	104	50	150	25	07/02/2024	DBA
Endosulfan II - MS	EPA-8081	**95.9**			0.0478	0.00043	95.9	50	150		07/02/2024	DBA
Endosulfan II - MSD	EPA-8081	**109**	**13**		0.0478	0.00043	109	50	150	25	07/02/2024	DBA
4,4'-DDT - MS	EPA-8081	**99.5**			0.0478	0.00055	99.5	59	149		07/02/2024	DBA
4,4'-DDT - MSD	EPA-8081	**110**	**10**		0.0478	0.00055	110	59	149	25	07/02/2024	DBA
Endrin Aldehyde - MS	EPA-8081	**86.8**			0.0478	0	86.8	50	150		07/02/2024	DBA
Endrin Aldehyde - MSD	EPA-8081	**94.9**	**9**		0.0478	0	94.9	50	150	25	07/02/2024	DBA
Endosulfan Sulfate - MS	EPA-8081	**92.2**			0.0478	0	92.2	50	150		07/02/2024	DBA
Endosulfan Sulfate - MSD	EPA-8081	**105**	**13**		0.0478	0	105	50	150	25	07/02/2024	DBA
Endrin Ketone - MS	EPA-8081	**92.5**			0.0478	0.00063	92.5	50	150		07/02/2024	DBA
Endrin Ketone - MSD	EPA-8081	**103**	**10**		0.0478	0.00063	103	50	150	25	07/02/2024	DBA
Methoxychlor - MS	EPA-8081	**105**			0.0478	0	105	50	150		07/02/2024	DBA
Methoxychlor - MSD	EPA-8081	**117**	**11**		0.0478	0	117	50	150	25	07/02/2024	DBA

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: R469771 - Water

Parent Sample: **GW-061124-RN-B3R**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Mercury - MS	EPA-245.1	**109**			100	0	109	80.6	118		06/14/2024	RAL
Mercury - MSD	EPA-245.1	**108**	**1**		100	0	108	80.6	118	7.94	06/14/2024	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	7/3/2024
		ALS SDG#:	EV24060108
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt		

MATRIX SPIKE RESULTS

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: R469960 - Water
Parent Sample: GW-061124-RN-B3R

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Cyanide - MS	SM4500-CN E	**95.0**			100	0	95.0	80	120		06/18/2024	MJC
Cyanide - MSD	SM4500-CN E	**107**	**12**		100	0	107	80	120	25	06/18/2024	MJC

*Calc Result = (Sample Result - Parent Sample Result)

APPROVED BY

Rob Greer
Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24060108

Date 06/11/2024 Page 1 Of 1

PROJECT ID: GSHDM: Tacoma Maine View Data Mgmt
REPORT TO COMPANY: Geosyntec Consultants / GHD
PROJECT MANAGER: Rick Bieber (Geosyntec), Jeffrey Cloud (GHD)
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PHONE: (206) 496-1473 P.O. #: -
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INVOICE TO COMPANY: Glenn Springs Holdings, Inc
ATTENTION: Chem_GSH@oxy.com
ADDRESS: PO Box 2148, Houston, TX 77252-2148

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify) Total Metals EPA 200.8	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	Pesticides plus EPA 8081 Hexachlorobenzene	Cyanide SM 4500 CN	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
(**) 1. GW-061024-RN-B1	06/10/24	1620	Water	1									X			X		X						X						X	X	9	
2. GW-061024-RN-B1A	06/10/24	1510		2									X			X		X						X						X	X	9	
3. GW-061024-RN-B2	06/10/24	1325		3									X			X		X						X						X	X	9	
4. GW-061024-RN-B2A	06/10/24	1150		4									X			X		X						X						X	X	9	
(*) 5. GW-061124-RN-B3R	06/11/24	1010		5									X			X		X						X						X	X	*27	
6. GW-061124-RN-B6A	06/11/24	1410		6									X			X		X						X						X	X	9	
7. GW-061124-RN-B6R	06/11/24	1515		7									X			X		X						X						X	X	9	
8. GW-061024-RN-DUP	06/10/24	1200		8									X			X		X						X						X	X	9	
9. GW-061124-RN-RB	06/11/24	1545		9									X			X		X						X						X	X	9	
10. Trip Blank				10									X																			2	

SPECIAL INSTRUCTIONS (*) Extra volumes obtained for MS/MSD samples. (**) HCl preservatives removed from VOA containers (HCl reacted)

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature], Risi Naa, Geosyntec, 06/12/24, 1200
   Received By: AFREESE, ALS, 06/12/24 @1200
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER: Standard

Specify: SSOW ref code: ENV229-402-002-2100

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GEOSYNTEC CONSULTANTS/GHD ALS Job#: EV2406O108

Project: GSHDM: Tacoma Marine View Data Mgmt

Login Date: 6/12/24 Login Time: 1200 Login By: AV

Type of Shipping Container: Cooler ✓ Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Courier ___ Hand Delivered ___ ALS Courier ✓
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? ___ Where? ___ Custody seal date: ___ Seal name: ___	___	___	✓
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	✓	___	___
Did all bottles have labels?	✓	___	___
Did all bottle labels and tags agree with Chain of Custody?	✓	___	___
Were samples received within hold time?	✓	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	✓	___	___
Was sufficient amount of sample sent for the tests indicated?	✓	___	___
Was correct preservation added to samples?	✓	___	___
Subcontract test containers added to Subcontract Bin?	___	___	✓
Wetchem test containers marked with required Tests?	___	___	✓
Short hold time test containers delivered to analysts?	___	___	✓
Were VOA vials checked for absence of air bubbles?	✓	___	___
Bubbles present in sample #: none			
5035A kits received? # Low Kits: ___ # High Kits: ___	___	___	✓
5035A kits returned? # Low Kits: ___ # High Kits: ___			
Temperature of cooler upon receipt: 4.4/2.6/2.2 3.2/2.4°C On ice?	(2)	___	___

Explain any discrepancies:

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call:

April 16, 2024

Mr. Rick Bieber
Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

Dear Mr. Bieber,

On March 29th, 8 samples were received by our laboratory and assigned our laboratory project number EV24040001. The project was identified as your GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-01
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 7:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-TRIP BLANK	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/02/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/02/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/02/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/02/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/02/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/02/2024	DLC
Acetone	EPA-8260	ND	UT	UG/L	1	25	0.22	04/02/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/02/2024	DLC
Methylene Chloride	EPA-8260	2.2	J	UG/L	1	5.0	0.34	04/02/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/02/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/02/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/02/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/02/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/02/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/02/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/02/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/02/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/02/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/02/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/02/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/02/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/02/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/02/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/02/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/02/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/02/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/02/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/02/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/02/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/02/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/02/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/02/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/02/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/02/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/02/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-01
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 7:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-TRIP BLANK	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/02/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/02/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/02/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/02/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/02/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/02/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/02/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/02/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/02/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/02/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/02/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/02/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/02/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/02/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/02/2024	DLC

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	92.8%		5.00	4.64	71	130	04/02/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.19	80	120	04/02/2024	DLC
4-Bromofluorobenzene	EPA-8260	102%		5.00	5.12	78	120	04/02/2024	DLC

UT - Analyte analyzed for but not detected at level above the MDL.
J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/02/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/02/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/02/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/02/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/02/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/02/2024	DLC
Acetone	EPA-8260	ND	UT	UG/L	1	25	0.22	04/02/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/02/2024	DLC
Methylene Chloride	EPA-8260	**1.9**	J	UG/L	1	5.0	0.34	04/02/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/02/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/02/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/02/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/02/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/02/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/02/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/02/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/02/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/02/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/02/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/02/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/02/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/02/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/02/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/02/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/02/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/02/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/02/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/02/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/02/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/02/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/02/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/02/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/02/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/02/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/02/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/02/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/02/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/02/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/02/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/02/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/02/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/02/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/02/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/02/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/02/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/02/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/02/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/02/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/02/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/02/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/02/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/02/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/02/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00076	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00099	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/05/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/05/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.84	04/05/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/05/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/05/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.42	04/05/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/05/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.65	04/05/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.79	04/05/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/05/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.61	04/05/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/05/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA

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CLIENT SAMPLE ID	MVD-032824-SS-SW01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.95	04/05/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.50	04/05/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Dimethylphthalate	EPA-8270	**0.32**	J	UG/L	1	2.0	0.22	04/05/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.59	04/05/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.44	04/05/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.95	04/05/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/05/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/05/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.73	04/05/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.81	04/05/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/05/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/05/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.54	04/05/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/05/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/05/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/05/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**0.30**	J	UG/L	1	2.0	0.26	04/05/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/05/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.18	04/05/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00076	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0022	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00053	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00099	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00099	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00086	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00067	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00070	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00061	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00094	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00076	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00084	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.088	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**37**	J	UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**1.1**		UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**2.3**		UG/L	1	1.0	0.15	04/11/2024	RAL

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**11**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**22000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**0.85**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.15**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**2.2**		UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**230**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.20**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**16000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**71**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**0.80**	**J**	UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2100**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**8700**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**7.3**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**16**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**1.9**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	94.5%		5.00	4.73	71	130	04/02/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.22	80	120	04/02/2024	DLC
4-Bromofluorobenzene	EPA-8260	105%		5.00	5.24	78	120	04/02/2024	DLC
Terphenyl-d14	EPA-8270 SIM	51.9%		19.4	10.1	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	52.1%		38.8	20.2	29	105	04/05/2024	DBA
Phenol-d5	EPA-8270	31.2%		38.8	12.1	5	88	04/05/2024	DBA
Nitrobenzene-d5	EPA-8270	73.3%		19.4	14.2	53	125	04/05/2024	DBA
2-Fluorobiphenyl	EPA-8270	79.7%		19.4	15.5	30.3	127	04/05/2024	DBA
2,4,6-Tribromophenol	EPA-8270	119%		38.8	46.2	45	143	04/05/2024	DBA
Terphenyl-d14	EPA-8270	108%		19.4	21.0	58	132	04/05/2024	DBA
TCMX	EPA-8082	66.4%		0.0394	0.0261	5	120	04/04/2024	DBA
DCB	EPA-8082	83.7%		0.0394	0.0330	10	131	04/04/2024	DBA
TCMX	EPA-8081	68.0%		0.0394	0.0268	5	120	04/04/2024	DBA
DCB	EPA-8081	72.7%		0.0394	0.0286	10	131	04/04/2024	DBA

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CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-02
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.
UT - Analyte analyzed for but not detected at level above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.72**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00075	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00097	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0010	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0034	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/05/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.48	04/05/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.83	04/05/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/05/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/05/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/05/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/05/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/05/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/05/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.78	04/05/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/05/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.60	04/05/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.63	04/05/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA

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CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.94	04/05/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/05/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Dimethylphthalate	EPA-8270	**0.28**	J	UG/L	1	2.0	0.22	04/05/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.58	04/05/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.43	04/05/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.94	04/05/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/05/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/05/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.32	04/05/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.72	04/05/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.80	04/05/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.52	04/05/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/05/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/05/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/05/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.21	04/05/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/05/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA

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		ALS SAMPLE#:	EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/05/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.15	04/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.17	04/05/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0021	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00052	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00085	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00066	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00069	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00060	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00092	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.087	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**99**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**0.85**	J	UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**1.7**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**13**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**22000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**0.79**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.11**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**1.5**	**J**	UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**320**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.98**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**15000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**23**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**0.93**	**J**	UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2400**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**9800**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**7.9**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**10**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**3.2**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	94.7%		5.00	4.74	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.19	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	103%		5.00	5.15	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	50.4%		19.2	9.69	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	48.0%		38.5	18.4	29	105	04/05/2024	DBA
Phenol-d5	EPA-8270	27.3%		38.5	10.5	5	88	04/05/2024	DBA
Nitrobenzene-d5	EPA-8270	65.6%		19.2	12.6	53	125	04/05/2024	DBA
2-Fluorobiphenyl	EPA-8270	67.8%		19.2	13.0	30.3	127	04/05/2024	DBA
2,4,6-Tribromophenol	EPA-8270	114%		38.5	44.0	45	143	04/05/2024	DBA
Terphenyl-d14	EPA-8270	108%		19.2	20.9	58	132	04/05/2024	DBA
TCMX	EPA-8082	75.4%		0.0388	0.0293	5	120	04/04/2024	DBA
DCB	EPA-8082	86.1%		0.0388	0.0334	10	131	04/04/2024	DBA
TCMX	EPA-8081	79.5%		0.0388	0.0309	5	120	04/04/2024	DBA
DCB	EPA-8081	81.0%		0.0388	0.0315	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-03
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:00:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.
UT - Analyte analyzed for but not detected at level above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.52**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00076	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00099	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/04/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/04/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.84	04/04/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/04/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/04/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.42	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/04/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.65	04/04/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.79	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/04/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.61	04/04/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/04/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.95	04/04/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.50	04/04/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Dimethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/04/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.59	04/04/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.44	04/04/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.95	04/04/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/04/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/04/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.73	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.81	04/04/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/04/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/04/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.54	04/04/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/04/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/04/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/04/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.18	04/04/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.021	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00096	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0021	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00079	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00052	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00084	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00065	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00069	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00059	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00091	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0019	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.086	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**100**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**0.69**	J	UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**1.6**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**13**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**21000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**1.2**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.11**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**1.4**	**J**	UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**320**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.90**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**15000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**22**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**0.92**	**J**	UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2300**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**9600**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**7.2**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**9.7**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**3.1**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	95.5%		5.00	4.78	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.20	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	105%		5.00	5.23	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	50.3%		19.4	9.77	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	55.7%		38.8	21.6	29	105	04/04/2024	DBA
Phenol-d5	EPA-8270	31.4%		38.8	12.2	5	88	04/04/2024	DBA
Nitrobenzene-d5	EPA-8270	81.3%		19.4	15.8	53	125	04/04/2024	DBA
2-Fluorobiphenyl	EPA-8270	80.2%		19.4	15.6	30.3	127	04/04/2024	DBA
2,4,6-Tribromophenol	EPA-8270	115%		38.8	44.8	45	143	04/04/2024	DBA
Terphenyl-d14	EPA-8270	118%		19.4	22.9	58	132	04/04/2024	DBA
TCMX	EPA-8082	73.3%		0.0385	0.0282	5	120	04/04/2024	DBA
DCB	EPA-8082	85.7%		0.0385	0.0330	10	131	04/04/2024	DBA
TCMX	EPA-8081	75.2%		0.0385	0.0289	5	120	04/04/2024	DBA
DCB	EPA-8081	79.8%		0.0385	0.0307	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-04
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:05:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-DUP2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

UT - Analyte analyzed for but not detected at level above the MDL.
J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 9:55:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW03	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.61**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 9:55:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW03	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00076	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00099	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/05/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/05/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.84	04/05/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/05/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/05/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.42	04/05/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/05/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.65	04/05/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.79	04/05/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/05/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.61	04/05/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/05/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/05/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA

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CLIENT SAMPLE ID	MVD-032824-SS-SW03	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.95	04/05/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.50	04/05/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/05/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Dimethylphthalate	EPA-8270	**0.30**	J	UG/L	1	2.0	0.22	04/05/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.59	04/05/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.44	04/05/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.95	04/05/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/05/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/05/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/05/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/05/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.73	04/05/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.81	04/05/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/05/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/05/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/05/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.54	04/05/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/05/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/05/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/05/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/05/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/05/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/05/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/05/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/05/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/05/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.18	04/05/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0021	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00052	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00085	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00066	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00069	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00060	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00092	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.087	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**100**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**2.6**		UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**4.8**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 9:55:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW03	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**24**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**24000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**0.89**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.35**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**2.9**		UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**640**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.88**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**15000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**120**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**2.1**		UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2600**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**12000**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**6.6**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**51**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**2.8**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	95.1%		5.00	4.75	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.20	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	103%		5.00	5.14	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	50.4%		19.4	9.79	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	54.0%		38.8	21.0	29	105	04/05/2024	DBA
Phenol-d5	EPA-8270	34.3%		38.8	13.3	5	88	04/05/2024	DBA
Nitrobenzene-d5	EPA-8270	69.7%		19.4	13.5	53	125	04/05/2024	DBA
2-Fluorobiphenyl	EPA-8270	81.4%		19.4	15.8	30.3	127	04/05/2024	DBA
2,4,6-Tribromophenol	EPA-8270	118%		38.8	45.9	45	143	04/05/2024	DBA
Terphenyl-d14	EPA-8270	108%		19.4	21.0	58	132	04/05/2024	DBA
TCMX	EPA-8082	79.6%		0.0388	0.0309	5	120	04/04/2024	DBA
DCB	EPA-8082	88.8%		0.0388	0.0345	10	131	04/04/2024	DBA
TCMX	EPA-8081	67.8%		0.0388	0.0263	5	120	04/04/2024	DBA
DCB	EPA-8081	76.4%		0.0388	0.0297	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-05
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 9:55:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW03	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

UT - Analyte analyzed for but not detected at level above the MDL.
J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.61**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00077	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00099	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0036	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0021	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0027	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00060	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0010	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0030	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0048	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0023	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/04/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/04/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.85	04/04/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.45	04/04/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.47	04/04/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.43	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.69	04/04/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.66	04/04/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.39	04/04/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.39	04/04/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.80	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.62	04/04/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/04/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.39	04/04/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.32	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.97	04/04/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.50	04/04/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Dimethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.23	04/04/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.60	04/04/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.44	04/04/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.96	04/04/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/04/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.17	04/04/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.35	04/04/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.74	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.82	04/04/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.54	04/04/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.21	04/04/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/04/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.32	04/04/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.55	04/04/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/04/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.5	04/04/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA

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CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.42	04/04/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.18	04/04/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0021	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00052	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00085	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00066	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00069	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00060	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00092	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.087	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**99**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**1.4**		UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**2.2**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**18**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	**0.24**	**J**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	**0.15**	**J**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**22000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**0.92**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.23**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**2.7**		UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**480**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.81**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**15000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**72**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**1.7**	**J**	UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2500**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**11000**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	**0.38**	**J**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**6.1**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**38**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**2.5**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	95.2%		5.00	4.76	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.21	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	103%		5.00	5.14	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	51.8%		19.7	10.2	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	57.4%		39.4	22.6	29	105	04/04/2024	DBA
Phenol-d5	EPA-8270	33.8%		39.4	13.3	5	88	04/04/2024	DBA
Nitrobenzene-d5	EPA-8270	82.6%		19.7	16.3	53	125	04/04/2024	DBA
2-Fluorobiphenyl	EPA-8270	83.1%		19.7	16.4	30.3	127	04/04/2024	DBA
2,4,6-Tribromophenol	EPA-8270	125%		39.4	49.2	45	143	04/04/2024	DBA
Terphenyl-d14	EPA-8270	125%		19.7	24.6	58	132	04/04/2024	DBA
TCMX	EPA-8082	72.6%		0.0388	0.0282	5	120	04/04/2024	DBA
DCB	EPA-8082	94.4%		0.0388	0.0367	10	131	04/04/2024	DBA
TCMX	EPA-8081	69.4%		0.0388	0.0270	5	120	04/04/2024	DBA
DCB	EPA-8081	72.2%		0.0388	0.0281	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-06
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 10:15:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

UT - Analyte analyzed for but not detected at level above the MDL.
J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:30:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW07	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.71**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:30:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW07	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00075	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00097	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0010	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0034	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/04/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.48	04/04/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.83	04/04/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/04/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/04/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/04/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/04/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.78	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/04/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.60	04/04/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.63	04/04/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA

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CLIENT SAMPLE ID	MVD-032824-SS-SW07	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.94	04/04/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/04/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Dimethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/04/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.58	04/04/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.43	04/04/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.94	04/04/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/04/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/04/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.32	04/04/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.72	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.80	04/04/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.52	04/04/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/04/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/04/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.21	04/04/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/04/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA

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SAMPLE DATA RESULTS

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Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/04/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.15	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	1	2.0	0.17	04/04/2024	DBA
PCB-1016	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.00097	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0021	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00052	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	1	0.050	0.00098	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	1	0.050	0.00085	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	1	0.050	0.00081	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00066	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	1	0.050	0.00069	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	1	0.050	0.00080	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	1	0.050	0.00060	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	1	0.050	0.00092	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	1	0.050	0.00075	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	1	0.050	0.00082	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	1	2.0	0.087	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	UT	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**790**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**0.57**	J	UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**2.4**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-07
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:30:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW07	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**15**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**19000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**1.9**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.57**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**3.8**		UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**2300**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**4.3**		UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**12000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**67**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**2.3**		UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**1400**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**9700**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**8.3**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**13**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**2.8**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	95.7%		5.00	4.78	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.20	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	103%		5.00	5.16	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	51.3%		19.2	9.87	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	57.8%		38.5	22.2	29	105	04/04/2024	DBA
Phenol-d5	EPA-8270	34.8%		38.5	13.4	5	88	04/04/2024	DBA
Nitrobenzene-d5	EPA-8270	80.4%		19.2	15.5	53	125	04/04/2024	DBA
2-Fluorobiphenyl	EPA-8270	80.2%		19.2	15.4	30.3	127	04/04/2024	DBA
2,4,6-Tribromophenol	EPA-8270	119%		38.5	45.6	45	143	04/04/2024	DBA
Terphenyl-d14	EPA-8270	120%		19.2	23.1	58	132	04/04/2024	DBA
TCMX	EPA-8082	58.6%		0.0388	0.0228	5	120	04/04/2024	DBA
DCB	EPA-8082	77.8%		0.0388	0.0302	10	131	04/04/2024	DBA
TCMX	EPA-8081	69.7%		0.0388	0.0271	5	120	04/04/2024	DBA
DCB	EPA-8081	72.0%		0.0388	0.0279	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-07
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SAMPLE DATA RESULTS

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.
UT - Analyte analyzed for but not detected at level above the MDL.

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	1	0.20	0.0036	04/03/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.082	04/03/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.073	04/03/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	1	2.0	0.020	04/03/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	1	2.0	0.10	04/03/2024	DLC
Acetone	EPA-8260	**0.54**	J	UG/L	1	25	0.22	04/03/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0053	04/03/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	1	5.0	0.34	04/03/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	1	10	0.096	04/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	1	2.0	0.049	04/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.078	04/03/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.068	04/03/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	1	10	0.23	04/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.076	04/03/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.063	04/03/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	1	2.0	0.096	04/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.094	04/03/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.0012	04/03/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.0037	04/03/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	1	2.0	0.0087	04/03/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.057	04/03/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	1	2.0	0.042	04/03/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.053	04/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.091	04/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	1	10	0.18	04/03/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	1	2.0	0.055	04/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.064	04/03/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	1	10	0.11	04/03/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.081	04/03/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	1	2.0	0.037	04/03/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	1	2.0	0.077	04/03/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	1	0.010	0.0026	04/03/2024	DLC

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CLIENT SAMPLE ID	MVD-032824-SS-SW08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.089	04/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.092	04/03/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.097	04/03/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	1	2.0	0.075	04/03/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	1	2.0	0.072	04/03/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.099	04/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	1	2.0	0.048	04/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	1	2.0	0.0060	04/03/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.15	04/03/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.14	04/03/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.16	04/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	1	10	0.0085	04/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	1	2.0	0.17	04/03/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	1	2.0	0.12	04/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	1	2.0	0.13	04/03/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	1	2.0	0.086	04/03/2024	DLC
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0011	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00075	04/11/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0017	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00097	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0024	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0035	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0010	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0026	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00059	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0012	04/11/2024	DBA

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SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.00098	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0020	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0029	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0047	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0022	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0018	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0034	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	1	0.020	0.0019	04/11/2024	DBA
Pyridine	EPA-8270	ND	UT	UG/L	1	2.0	1.1	04/04/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.48	04/04/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	1	2.0	0.83	04/04/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.44	04/04/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.46	04/04/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.41	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.68	04/04/2024	DBA
Hexachloroethane	EPA-8270	ND	UT	UG/L	1	2.0	0.64	04/04/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	1	10	0.78	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.36	04/04/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.60	04/04/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.63	04/04/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.38	04/04/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.33	04/04/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA

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CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	1	2.0	0.94	04/04/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.49	04/04/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	1	2.0	0.29	04/04/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Dimethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.22	04/04/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.58	04/04/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	1	5.0	0.43	04/04/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	1	10	0.94	04/04/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/04/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	1	2.0	0.16	04/04/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	1	2.0	0.34	04/04/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	1	2.0	0.32	04/04/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	1	2.0	0.72	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	1	2.0	0.80	04/04/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.52	04/04/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	1	2.0	0.25	04/04/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	1	2.0	0.20	04/04/2024	DBA
Pentachlorophenol	EPA-8270	ND	UT	UG/L	1	5.0	1.2	04/04/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	1	2.0	0.31	04/04/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	1	2.0	0.53	04/04/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.27	04/04/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.30	04/04/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	1	2.0	0.19	04/04/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.21	04/04/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	1	2.0	1.4	04/04/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	1	2.0	0.24	04/04/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.26	04/04/2024	DBA
Di-N-Octylphthalate	EPA-8270	ND	UT	UG/L	1	2.0	0.28	04/04/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	1	2.0	0.37	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS JOB#:	EV24040001
		ALS SAMPLE#:	EV24040001-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	ND	**UT**	UG/L	1	2.0	0.41	04/04/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	**UT**	UG/L	1	2.0	0.15	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	**UT**	UG/L	1	2.0	0.19	04/04/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	**UT**	UG/L	1	2.0	0.31	04/04/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	**UT**	UG/L	1	2.0	0.17	04/04/2024	DBA
PCB-1016	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1221	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1232	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1242	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1248	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1254	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1260	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
PCB-1268	EPA-8082	ND	**UT**	UG/L	1	0.10	0.022	04/04/2024	DBA
A-BHC	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00078	04/04/2024	DBA
G-BHC	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0010	04/04/2024	DBA
B-BHC	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0022	04/04/2024	DBA
Heptachlor	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00083	04/04/2024	DBA
D-BHC	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0011	04/04/2024	DBA
Aldrin	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00054	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00083	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0010	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0010	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00088	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00083	04/04/2024	DBA
Dieldrin	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00068	04/04/2024	DBA
Endrin	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00071	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00083	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00062	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00095	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00078	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	**UT**	UG/L	1	0.050	0.00085	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0012	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	**UT**	UG/L	1	0.050	0.0020	04/04/2024	DBA
Toxaphene	EPA-8081	ND	**UT**	UG/L	1	2.0	0.089	04/04/2024	DBA
Cyanide	SM4500-CN E	ND	**UT**	MG/L	1	0.050	0.050	04/10/2024	EBS
Aluminum	EPA-200.8	**130**		UG/L	1	50	9.6	04/11/2024	RAL
Antimony	EPA-200.8	**0.50**	**J**	UG/L	1	1.0	0.11	04/11/2024	RAL
Arsenic	EPA-200.8	**1.6**		UG/L	1	1.0	0.15	04/11/2024	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
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		ALS SAMPLE#:	EV24040001-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	LIMITS RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Barium	EPA-200.8	**13**		UG/L	1	1.0	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.10	04/11/2024	RAL
Cadmium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.12	04/11/2024	RAL
Calcium	EPA-200.8	**21000**		UG/L	1	50	3.6	04/11/2024	RAL
Chromium	EPA-200.8	**0.94**	**J**	UG/L	1	2.0	0.10	04/11/2024	RAL
Cobalt	EPA-200.8	**0.12**	**J**	UG/L	1	1.0	0.080	04/11/2024	RAL
Copper	EPA-200.8	**1.3**	**J**	UG/L	1	2.0	0.27	04/11/2024	RAL
Iron	EPA-200.8	**330**		UG/L	1	50	5.8	04/11/2024	RAL
Lead	EPA-200.8	**0.82**	**J**	UG/L	1	1.0	0.090	04/11/2024	RAL
Magnesium	EPA-200.8	**15000**		UG/L	1	50	9.2	04/11/2024	RAL
Manganese	EPA-200.8	**35**		UG/L	1	4.0	0.11	04/11/2024	RAL
Nickel	EPA-200.8	**0.93**	**J**	UG/L	1	2.0	0.51	04/11/2024	RAL
Potassium	EPA-200.8	**2300**		UG/L	1	50	2.3	04/11/2024	RAL
Selenium	EPA-200.8	ND	**UT**	UG/L	1	4.0	1.1	04/11/2024	RAL
Silver	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.070	04/11/2024	RAL
Sodium	EPA-200.8	**10000**		UG/L	1	50	11	04/11/2024	RAL
Thallium	EPA-200.8	ND	**UT**	UG/L	1	1.0	0.24	04/11/2024	RAL
Vanadium	EPA-200.8	**7.2**		UG/L	1	2.0	0.34	04/11/2024	RAL
Zinc	EPA-200.8	**8.2**		UG/L	1	2.5	0.74	04/11/2024	RAL
Mercury	E1631E	**2.6**		NG/L	1	0.50	0.50	04/10/2024	CAS

SURROGATE	METHOD	RESULTS	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	96.4%		5.00	4.82	71	130	04/03/2024	DLC
Toluene-d8	EPA-8260	104%		5.00	5.18	80	120	04/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	103%		5.00	5.15	78	120	04/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	52.5%		19.2	10.1	50	147	04/11/2024	DBA
2-Fluorophenol	EPA-8270	60.3%		38.5	23.2	29	105	04/04/2024	DBA
Phenol-d5	EPA-8270	35.0%		38.5	13.5	5	88	04/04/2024	DBA
Nitrobenzene-d5	EPA-8270	86.3%		19.2	16.6	53	125	04/04/2024	DBA
2-Fluorobiphenyl	EPA-8270	88.3%		19.2	17.0	30.3	127	04/04/2024	DBA
2,4,6-Tribromophenol	EPA-8270	125%		38.5	48.0	45	143	04/04/2024	DBA
Terphenyl-d14	EPA-8270	125%		19.2	24.0	58	132	04/04/2024	DBA
TCMX	EPA-8082	86.4%		0.0400	0.0345	5	120	04/04/2024	DBA
DCB	EPA-8082	91.9%		0.0400	0.0368	10	131	04/04/2024	DBA
TCMX	EPA-8081	78.2%		0.0400	0.0313	5	120	04/04/2024	DBA
DCB	EPA-8081	78.3%		0.0400	0.0313	10	131	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE: ALS JOB#: ALS SAMPLE#:	4/16/2024 EV24040001 EV24040001-08
CLIENT CONTACT:	Rick Bieber	DATE RECEIVED:	03/29/2024
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100	COLLECTION DATE:	3/28/2024 11:45:00 AM
CLIENT SAMPLE ID	MVD-032824-SS-SW08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.
UT - Analyte analyzed for but not detected at level above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040224W2 - Batch 210177 - Water by EPA-8260 Prepared 04/02/2024 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS RL	LIMITS MDL	LIMITS PQL	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	ND	UT	UG/L	2.0	0.13	0.38	04/02/2024	DLC
Chloromethane	EPA-8260	ND	UT	UG/L	2.0	0.068	0.20	04/02/2024	DLC
Vinyl Chloride	EPA-8260	ND	UT	UG/L	0.20	0.0036	0.011	04/02/2024	DLC
Bromomethane	EPA-8260	ND	UT	UG/L	2.0	0.082	0.24	04/02/2024	DLC
Chloroethane	EPA-8260	ND	UT	UG/L	2.0	0.073	0.22	04/02/2024	DLC
Carbon Tetrachloride	EPA-8260	ND	UT	UG/L	2.0	0.020	0.058	04/02/2024	DLC
Trichlorofluoromethane	EPA-8260	ND	UT	UG/L	2.0	0.13	0.39	04/02/2024	DLC
Carbon Disulfide	EPA-8260	ND	UT	UG/L	2.0	0.10	0.31	04/02/2024	DLC
Acetone	EPA-8260	ND	UT	UG/L	25	0.22	0.66	04/02/2024	DLC
1,1-Dichloroethene	EPA-8260	ND	UT	UG/L	2.0	0.0053	0.016	04/02/2024	DLC
Methylene Chloride	EPA-8260	ND	UT	UG/L	5.0	0.34	1.0	04/02/2024	DLC
Acrylonitrile	EPA-8260	ND	UT	UG/L	10	0.096	0.29	04/02/2024	DLC
Methyl T-Butyl Ether	EPA-8260	ND	UT	UG/L	2.0	0.049	0.15	04/02/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	2.0	0.078	0.24	04/02/2024	DLC
1,1-Dichloroethane	EPA-8260	ND	UT	UG/L	2.0	0.068	0.21	04/02/2024	DLC
2-Butanone	EPA-8260	ND	UT	UG/L	10	0.23	0.68	04/02/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	ND	UT	UG/L	2.0	0.076	0.23	04/02/2024	DLC
2,2-Dichloropropane	EPA-8260	ND	UT	UG/L	2.0	0.16	0.47	04/02/2024	DLC
Bromochloromethane	EPA-8260	ND	UT	UG/L	2.0	0.063	0.19	04/02/2024	DLC
Chloroform	EPA-8260	ND	UT	UG/L	2.0	0.096	0.29	04/02/2024	DLC
1,1,1-Trichloroethane	EPA-8260	ND	UT	UG/L	2.0	0.091	0.27	04/02/2024	DLC
1,1-Dichloropropene	EPA-8260	ND	UT	UG/L	2.0	0.094	0.28	04/02/2024	DLC
1,2-Dichloroethane	EPA-8260	ND	UT	UG/L	2.0	0.0012	0.0035	04/02/2024	DLC
Benzene	EPA-8260	ND	UT	UG/L	2.0	0.0037	0.011	04/02/2024	DLC
Trichloroethene	EPA-8260	ND	UT	UG/L	2.0	0.0087	0.026	04/02/2024	DLC
1,2-Dichloropropane	EPA-8260	ND	UT	UG/L	2.0	0.057	0.17	04/02/2024	DLC
Dibromomethane	EPA-8260	ND	UT	UG/L	2.0	0.042	0.13	04/02/2024	DLC
Bromodichloromethane	EPA-8260	ND	UT	UG/L	2.0	0.053	0.16	04/02/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	2.0	0.091	0.27	04/02/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	ND	UT	UG/L	10	0.18	0.53	04/02/2024	DLC
Toluene	EPA-8260	ND	UT	UG/L	2.0	0.081	0.24	04/02/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	ND	UT	UG/L	2.0	0.055	0.17	04/02/2024	DLC
1,1,2-Trichloroethane	EPA-8260	ND	UT	UG/L	2.0	0.064	0.19	04/02/2024	DLC
2-Hexanone	EPA-8260	ND	UT	UG/L	10	0.11	0.32	04/02/2024	DLC
1,3-Dichloropropane	EPA-8260	ND	UT	UG/L	2.0	0.081	0.24	04/02/2024	DLC
Tetrachloroethylene	EPA-8260	ND	UT	UG/L	2.0	0.037	0.11	04/02/2024	DLC
Dibromochloromethane	EPA-8260	ND	UT	UG/L	2.0	0.077	0.23	04/02/2024	DLC
1,2-Dibromoethane	EPA-8260	ND	UT	UG/L	0.010	0.0026	0.0080	04/02/2024	DLC

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CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040224W2 - Batch 210177 - Water by EPA-8260 Prepared 04/02/2024 00:00

Chlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.089	0.27	04/02/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	2.0	0.092	0.28	04/02/2024	DLC
Ethylbenzene	EPA-8260	ND	UT	UG/L	2.0	0.097	0.29	04/02/2024	DLC
Styrene	EPA-8260	ND	UT	UG/L	2.0	0.075	0.22	04/02/2024	DLC
Bromoform	EPA-8260	ND	UT	UG/L	2.0	0.072	0.22	04/02/2024	DLC
Isopropylbenzene	EPA-8260	ND	UT	UG/L	2.0	0.099	0.30	04/02/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	ND	UT	UG/L	2.0	0.048	0.14	04/02/2024	DLC
1,2,3-Trichloropropane	EPA-8260	ND	UT	UG/L	2.0	0.0060	0.018	04/02/2024	DLC
Bromobenzene	EPA-8260	ND	UT	UG/L	2.0	0.13	0.38	04/02/2024	DLC
N-Propyl Benzene	EPA-8260	ND	UT	UG/L	2.0	0.15	0.46	04/02/2024	DLC
2-Chlorotoluene	EPA-8260	ND	UT	UG/L	2.0	0.15	0.44	04/02/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	ND	UT	UG/L	2.0	0.15	0.44	04/02/2024	DLC
4-Chlorotoluene	EPA-8260	ND	UT	UG/L	2.0	0.14	0.43	04/02/2024	DLC
T-Butyl Benzene	EPA-8260	ND	UT	UG/L	2.0	0.16	0.48	04/02/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	ND	UT	UG/L	2.0	0.14	0.43	04/02/2024	DLC
S-Butyl Benzene	EPA-8260	ND	UT	UG/L	2.0	0.16	0.48	04/02/2024	DLC
P-Isopropyltoluene	EPA-8260	ND	UT	UG/L	2.0	0.16	0.47	04/02/2024	DLC
1,3-Dichlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.13	0.40	04/02/2024	DLC
1,4-Dichlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.13	0.39	04/02/2024	DLC
N-Butylbenzene	EPA-8260	ND	UT	UG/L	2.0	0.16	0.48	04/02/2024	DLC
1,2-Dichlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.12	0.37	04/02/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	ND	UT	UG/L	10	0.0085	0.027	04/02/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.13	0.38	04/02/2024	DLC
Hexachlorobutadiene	EPA-8260	ND	UT	UG/L	2.0	0.17	0.50	04/02/2024	DLC
Naphthalene	EPA-8260	ND	UT	UG/L	2.0	0.12	0.36	04/02/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	ND	UT	UG/L	2.0	0.13	0.38	04/02/2024	DLC
Xylenes	EPA-8260	ND	UT	UG/L	2.0	0.086	0.26	04/02/2024	DLC

SURROGATE	METHOD	%REC	QUAL	SPIKE ADDED	RESULT	CONTROL LIMITS MIN	CONTROL LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	**93.2**		5.00	4.66	**71**	**130**	04/02/2024	DLC
Toluene-d8	EPA-8260	**103**		5.00	5.13	**80**	**120**	04/02/2024	DLC
4-Bromofluorobenzene	EPA-8260	**99.7**		5.00	4.99	**78**	**120**	04/02/2024	DLC

UT - Analyte analyzed for but not detected at level above the MDL.

MB-040124W - Batch 210414 - Water by EPA-8270 SIM Prepared 04/01/2024 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS RL	LIMITS MDL	LIMITS PQL	ANALYSIS DATE	ANALYSIS BY
Hexachlorobenzene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0012	0.0036	04/11/2024	DBA
Naphthalene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.00078	0.0024	04/11/2024	DBA

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040124W - Batch 210414 - Water by EPA-8270 SIM Prepared 04/01/2024 00:00

2-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0017	0.0052	04/11/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0010	0.0030	04/11/2024	DBA
Acenaphthylene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0025	0.0074	04/11/2024	DBA
Acenaphthene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0036	0.011	04/11/2024	DBA
Fluorene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0011	0.0033	04/11/2024	DBA
Phenanthrene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0021	0.0063	04/11/2024	DBA
Anthracene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0027	0.0082	04/11/2024	DBA
Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.00061	0.0018	04/11/2024	DBA
Pyrene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0013	0.0038	04/11/2024	DBA
Benzo[A]Anthracene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0010	0.0031	04/11/2024	DBA
Chrysene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0021	0.0062	04/11/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0030	0.0091	04/11/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0049	0.015	04/11/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0023	0.0069	04/11/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0018	0.0055	04/11/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0036	0.011	04/11/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	UT	UG/L	0.020	0.0020	0.0060	04/11/2024	DBA

						CONTROL LIMITS			
SURROGATE	METHOD	%REC	QUAL	SPIKE ADDED	RESULT	MIN	MAX	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270 SIM	**51.3**		20.0	10.3	**50**	**147**	04/11/2024	DBA

UT - Analyte analyzed for but not detected at level above the MDL.

MB-040124W - Batch 209777 - Water by EPA-8270 Prepared 04/01/2024 00:00

					LIMITS				
ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	MDL	PQL	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	ND	UT	UG/L	2.0	1.1	2.0	04/04/2024	DBA
N-Nitrosodimethylamine	EPA-8270	ND	UT	UG/L	2.0	0.50	1.5	04/04/2024	DBA
Phenol	EPA-8270	ND	UT	UG/L	2.0	0.35	1.0	04/04/2024	DBA
Aniline	EPA-8270	ND	UT	UG/L	2.0	0.86	2.0	04/04/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	ND	UT	UG/L	2.0	0.31	0.94	04/04/2024	DBA
2-Chlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.28	0.85	04/04/2024	DBA
1,3-Dichlorobenzene	EPA-8270	ND	UT	UG/L	2.0	0.46	1.4	04/04/2024	DBA
1,4-Dichlorobenzene	EPA-8270	ND	UT	UG/L	2.0	0.34	1.0	04/04/2024	DBA
Benzyl Alcohol	EPA-8270	ND	UT	UG/L	2.0	0.34	1.0	04/04/2024	DBA
1,2-Dichlorobenzene	EPA-8270	ND	UT	UG/L	2.0	0.48	1.4	04/04/2024	DBA
2-Methylphenol	EPA-8270	ND	UT	UG/L	2.0	0.43	1.3	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	ND	UT	UG/L	2.0	0.21	0.62	04/04/2024	DBA
3&4-Methylphenol	EPA-8270	ND	UT	UG/L	2.0	0.27	0.81	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	ND	UT	UG/L	2.0	0.70	2.0	04/04/2024	DBA

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WDOE ACCREDITATION: C601

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040124W - Batch 209777 - Water by EPA-8270 Prepared 04/01/2024 00:00

Hexachloroethane	EPA-8270	ND	UT	UG/L	2.0	0.67	2.0	04/04/2024	DBA
Nitrobenzene	EPA-8270	ND	UT	UG/L	2.0	0.40	1.2	04/04/2024	DBA
Isophorone	EPA-8270	ND	UT	UG/L	2.0	0.39	1.2	04/04/2024	DBA
2-Nitrophenol	EPA-8270	ND	UT	UG/L	2.0	0.38	1.1	04/04/2024	DBA
2,4-Dimethylphenol	EPA-8270	ND	UT	UG/L	2.0	0.29	0.87	04/04/2024	DBA
Benzoic Acid	EPA-8270	ND	UT	UG/L	10	0.81	2.4	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	ND	UT	UG/L	2.0	0.35	1.0	04/04/2024	DBA
2,4-Dichlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.26	0.79	04/04/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	ND	UT	UG/L	2.0	0.37	1.1	04/04/2024	DBA
Naphthalene	EPA-8270	ND	UT	UG/L	2.0	0.19	0.58	04/04/2024	DBA
4-Chloroaniline	EPA-8270	ND	UT	UG/L	2.0	0.63	1.9	04/04/2024	DBA
2,6-Dichlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.25	0.75	04/04/2024	DBA
Hexachlorobutadiene	EPA-8270	ND	UT	UG/L	2.0	0.65	2.0	04/04/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	ND	UT	UG/L	2.0	0.40	1.2	04/04/2024	DBA
2-Methylnaphthalene	EPA-8270	ND	UT	UG/L	2.0	0.34	1.0	04/04/2024	DBA
1-Methylnaphthalene	EPA-8270	ND	UT	UG/L	2.0	0.32	0.97	04/04/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	ND	UT	UG/L	2.0	0.98	2.0	04/04/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.30	0.90	04/04/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.51	1.5	04/04/2024	DBA
2-Chloronaphthalene	EPA-8270	ND	UT	UG/L	2.0	0.30	0.90	04/04/2024	DBA
2-Nitroaniline	EPA-8270	ND	UT	UG/L	2.7	0.90	2.7	04/04/2024	DBA
Acenaphthylene	EPA-8270	ND	UT	UG/L	2.0	0.27	0.80	04/04/2024	DBA
Dimethylphthalate	EPA-8270	ND	UT	UG/L	2.0	0.23	0.69	04/04/2024	DBA
2,6-Dinitrotoluene	EPA-8270	ND	UT	UG/L	2.0	0.61	1.8	04/04/2024	DBA
Acenaphthene	EPA-8270	ND	UT	UG/L	2.0	0.26	0.79	04/04/2024	DBA
3-Nitroaniline	EPA-8270	ND	UT	UG/L	7.6	2.5	7.6	04/04/2024	DBA
2,4-Dinitrophenol	EPA-8270	ND	UT	UG/L	10	0.98	2.9	04/04/2024	DBA
4-Nitrophenol	EPA-8270	ND	UT	UG/L	2.0	1.5	2.0	04/04/2024	DBA
Dibenzofuran	EPA-8270	ND	UT	UG/L	2.0	0.17	0.51	04/04/2024	DBA
2,4-Dinitrotoluene	EPA-8270	ND	UT	UG/L	2.0	0.26	0.78	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	ND	UT	UG/L	2.0	0.35	1.1	04/04/2024	DBA
Diethylphthalate	EPA-8270	ND	UT	UG/L	3.1	1.0	3.1	04/04/2024	DBA
Fluorene	EPA-8270	ND	UT	UG/L	2.0	0.34	1.0	04/04/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	ND	UT	UG/L	2.0	0.25	0.74	04/04/2024	DBA
4-Nitroaniline	EPA-8270	ND	UT	UG/L	6.4	2.1	6.4	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	ND	UT	UG/L	2.4	0.80	2.4	04/04/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	ND	UT	UG/L	4.9	1.6	4.9	04/04/2024	DBA
Azobenzene	EPA-8270	ND	UT	UG/L	2.0	0.54	1.6	04/04/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	ND	UT	UG/L	2.0	0.26	0.79	04/04/2024	DBA
Hexachlorobenzene	EPA-8270	ND	UT	UG/L	2.0	0.21	0.63	04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

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WDOE ACCREDITATION: C601

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040124W - Batch 209777 - Water by EPA-8270 Prepared 04/01/2024 00:00

Pentachlorophenol	EPA-8270	ND	UT	UG/L	5.0	1.2	3.7	04/04/2024	DBA
Phenanthrene	EPA-8270	ND	UT	UG/L	2.0	0.32	0.96	04/04/2024	DBA
Anthracene	EPA-8270	ND	UT	UG/L	2.0	0.27	0.80	04/04/2024	DBA
Carbazole	EPA-8270	ND	UT	UG/L	2.0	0.55	1.7	04/04/2024	DBA
Di-N-Butylphthalate	EPA-8270	ND	UT	UG/L	3.5	1.2	3.5	04/04/2024	DBA
Fluoranthene	EPA-8270	ND	UT	UG/L	2.0	0.31	0.93	04/04/2024	DBA
Pyrene	EPA-8270	ND	UT	UG/L	2.0	0.20	0.61	04/04/2024	DBA
Butylbenzylphthalate	EPA-8270	ND	UT	UG/L	2.2	0.72	2.2	04/04/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	ND	UT	UG/L	2.0	1.5	2.0	04/04/2024	DBA
Benzo[A]Anthracene	EPA-8270	ND	UT	UG/L	2.0	0.25	0.74	04/04/2024	DBA
Chrysene	EPA-8270	ND	UT	UG/L	2.0	0.27	0.80	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	ND	UT	UG/L	3.2	1.1	3.2	04/04/2024	DBA
Di-N-Octylphthalate	EPA-8270	**0.38 J**	J	UG/L	2.0	0.29	0.87	04/04/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	ND	UT	UG/L	2.0	0.38	1.1	04/04/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	ND	UT	UG/L	2.0	0.43	1.3	04/04/2024	DBA
Benzo[A]Pyrene	EPA-8270	ND	UT	UG/L	2.0	0.16	0.48	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	ND	UT	UG/L	2.0	0.19	0.58	04/04/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	ND	UT	UG/L	2.0	0.32	0.95	04/04/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	ND	UT	UG/L	2.0	0.18	0.54	04/04/2024	DBA

				SPIKE		CONTROL LIMITS		ANALYSIS	ANALYSIS
SURROGATE	METHOD	%REC	QUAL	ADDED	RESULT	MIN	MAX	DATE	BY
2-Fluorophenol	EPA-8270	**58.3**		40.0	23.3	**29**	**105**	04/04/2024	DBA
Phenol-d5	EPA-8270	**34.3**		40.0	13.7	**5**	**88**	04/04/2024	DBA
Nitrobenzene-d5	EPA-8270	**75.1**		20.0	15.0	**53**	**125**	04/04/2024	DBA
2-Fluorobiphenyl	EPA-8270	**66.2**		20.0	13.2	**30.3**	**127**	04/04/2024	DBA
2,4,6-Tribromophenol	EPA-8270	**102**		40.0	40.6	**45**	**143**	04/04/2024	DBA
Terphenyl-d14	EPA-8270	**111**		20.0	22.2	**58**	**132**	04/04/2024	DBA

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

UT - Analyte analyzed for but not detected at level above the MDL.

MB-040224W - Batch 209949 - Water by EPA-8082 Prepared 04/02/2024 00:00

					LIMITS			ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	MDL	PQL	DATE	BY
PCB-1016	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA
PCB-1221	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA
PCB-1232	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA
PCB-1242	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA
PCB-1248	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA
PCB-1254	EPA-8082	ND	UT	UG/L	0.10	0.022	0.067	04/04/2024	DBA

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Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY BLANK RESULTS

MB-040224W - Batch 209949 - Water by EPA-8082 Prepared 04/02/2024 00:00

PCB-1260	EPA-8082	ND	UT	UG/L		0.10	0.022	0.067	04/04/2024	DBA
PCB-1268	EPA-8082	ND	UT	UG/L		0.10	0.022	0.067	04/04/2024	DBA

						CONTROL LIMITS			
SURROGATE	METHOD	%REC	QUAL	SPIKE ADDED	RESULT	MIN	MAX	ANALYSIS DATE	ANALYSIS BY
TCMX	EPA-8082	**51.2**		0.0400	0.0205	**5**	**120**	04/04/2024	DBA
DCB	EPA-8082	**71.2**		0.0400	0.0285	**10**	**131**	04/04/2024	DBA

UT - Analyte analyzed for but not detected at level above the MDL.

MB-040224W - Batch 209949 - Water by EPA-8081 Prepared 04/02/2024 00:00

					LIMITS				
ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	MDL	PQL	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	ND	UT	UG/L	0.050	0.00078	0.0023	04/04/2024	DBA
G-BHC	EPA-8081	ND	UT	UG/L	0.050	0.0010	0.0030	04/04/2024	DBA
B-BHC	EPA-8081	ND	UT	UG/L	0.050	0.0022	0.0066	04/04/2024	DBA
Heptachlor	EPA-8081	ND	UT	UG/L	0.050	0.00083	0.0025	04/04/2024	DBA
D-BHC	EPA-8081	ND	UT	UG/L	0.050	0.0011	0.0033	04/04/2024	DBA
Aldrin	EPA-8081	ND	UT	UG/L	0.050	0.00054	0.0016	04/04/2024	DBA
Heptachlor Epoxide	EPA-8081	ND	UT	UG/L	0.050	0.00083	0.0025	04/04/2024	DBA
alpha-Chlordane	EPA-8081	ND	UT	UG/L	0.050	0.0010	0.0030	04/04/2024	DBA
gamma-Chlordane	EPA-8081	ND	UT	UG/L	0.050	0.0010	0.0030	04/04/2024	DBA
Endosulfan I	EPA-8081	ND	UT	UG/L	0.050	0.00088	0.0026	04/04/2024	DBA
4,4'-DDE	EPA-8081	ND	UT	UG/L	0.050	0.00083	0.0025	04/04/2024	DBA
Dieldrin	EPA-8081	ND	UT	UG/L	0.050	0.00068	0.0020	04/04/2024	DBA
Endrin	EPA-8081	ND	UT	UG/L	0.050	0.00071	0.0021	04/04/2024	DBA
4,4'-DDD	EPA-8081	ND	UT	UG/L	0.050	0.00083	0.0025	04/04/2024	DBA
Endosulfan II	EPA-8081	ND	UT	UG/L	0.050	0.00062	0.0019	04/04/2024	DBA
4,4'-DDT	EPA-8081	ND	UT	UG/L	0.050	0.00095	0.0028	04/04/2024	DBA
Endrin Aldehyde	EPA-8081	ND	UT	UG/L	0.050	0.00078	0.0023	04/04/2024	DBA
Endosulfan Sulfate	EPA-8081	ND	UT	UG/L	0.050	0.00085	0.0025	04/04/2024	DBA
Endrin Ketone	EPA-8081	ND	UT	UG/L	0.050	0.0012	0.0040	04/04/2024	DBA
Methoxychlor	EPA-8081	ND	UT	UG/L	0.050	0.0020	0.0060	04/04/2024	DBA
Toxaphene	EPA-8081	ND	UT	UG/L	2.0	0.089	0.27	04/04/2024	DBA

						CONTROL LIMITS			
SURROGATE	METHOD	%REC	QUAL	SPIKE ADDED	RESULT	MIN	MAX	ANALYSIS DATE	ANALYSIS BY
TCMX	EPA-8081	**44.0**		0.0400	0.0176	**5**	**120**	04/04/2024	DBA
DCB	EPA-8081	**40.2**		0.0400	0.0161	**10**	**131**	04/04/2024	DBA

UT - Analyte analyzed for but not detected at level above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT:	Geosyntec Consultants 520 Pike St, Suite 2600 Seattle, WA 98101	DATE:	4/16/2024
		ALS SDG#:	EV24040001
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Rick Bieber		
CLIENT PROJECT:	GSHDM: Tacoma Marine View Data Mgmt / SSOW: ENV229-402-D02-2100		

LABORATORY BLANK RESULTS

MBLK-R463709 - Batch R463709 - Water by SM4500-CN E Prepared 04/10/2024 15:51

ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS RL	LIMITS MDL	LIMITS PQL	ANALYSIS DATE	ANALYSIS BY
Cyanide	SM4500-CN E	ND	UT	MG/L	0.050	0.050	0.050	04/10/2024	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

MB-041024W - Batch 210281 - Water by EPA-200.8 Prepared 04/10/2024 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS RL	LIMITS MDL	LIMITS PQL	ANALYSIS DATE	ANALYSIS BY
Aluminum	EPA-200.8	ND	UT	UG/L	50	2.4	7.3	04/11/2024	RAL
Antimony	EPA-200.8	**0.17 J**	J	UG/L	1.0	0.069	0.21	04/11/2024	RAL
Arsenic	EPA-200.8	**0.11 J**	J	UG/L	1.0	0.050	0.15	04/11/2024	RAL
Barium	EPA-200.8	**0.30 J**	J	UG/L	1.0	0.075	0.22	04/11/2024	RAL
Beryllium	EPA-200.8	ND	UT	UG/L	1.0	0.076	0.23	04/11/2024	RAL
Cadmium	EPA-200.8	ND	UT	UG/L	1.0	0.040	0.12	04/11/2024	RAL
Calcium	EPA-200.8	ND	UT	UG/L	50	6.0	18	04/11/2024	RAL
Chromium	EPA-200.8	ND	UT	UG/L	2.0	0.070	0.21	04/11/2024	RAL
Cobalt	EPA-200.8	ND	UT	UG/L	1.0	0.030	0.090	04/11/2024	RAL
Copper	EPA-200.8	**0.081 J**	J	UG/L	2.0	0.030	0.090	04/11/2024	RAL
Iron	EPA-200.8	ND	UT	UG/L	50	1.1	3.3	04/11/2024	RAL
Lead	EPA-200.8	ND	UT	UG/L	1.0	0.036	0.11	04/11/2024	RAL
Magnesium	EPA-200.8	ND	UT	UG/L	50	2.9	8.7	04/11/2024	RAL
Manganese	EPA-200.8	**2.5 J**	J	UG/L	4.0	0.11	0.32	04/11/2024	RAL
Nickel	EPA-200.8	ND	UT	UG/L	2.0	0.030	0.090	04/11/2024	RAL
Potassium	EPA-200.8	ND	UT	UG/L	50	4.4	13	04/11/2024	RAL
Selenium	EPA-200.8	ND	UT	UG/L	4.0	0.13	0.40	04/11/2024	RAL
Silver	EPA-200.8	ND	UT	UG/L	1.0	0.017	0.050	04/11/2024	RAL
Sodium	EPA-200.8	**25 J**	J	UG/L	50	4.2	12	04/11/2024	RAL
Thallium	EPA-200.8	ND	UT	UG/L	1.0	0.036	0.11	04/11/2024	RAL
Vanadium	EPA-200.8	**0.36 J**	J	UG/L	2.0	0.047	0.14	04/11/2024	RAL
Zinc	EPA-200.8	ND	UT	UG/L	2.5	0.24	0.73	04/11/2024	RAL

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R464040 - Batch R464040 - Water by E1631E Prepared 04/10/2024 11:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	LIMITS RL	LIMITS MDL	LIMITS PQL	ANALYSIS DATE	ANALYSIS BY
Mercury	E1631E	ND	UT	NG/L	0.50	0.50	0.50	04/10/2024	CAS

UT - Analyte analyzed for but not detected at level above the MDL.

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 210177 - Water by EPA-8260 Prepared 04/02/2024 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**128**			10.0	128	50	150		04/02/2024	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**133**	**4**		10.0	133	50	150	25	04/02/2024	DLC
Chloromethane - BS	EPA-8260	**106**			10.0	106	50	150		04/02/2024	DLC
Chloromethane - BSD	EPA-8260	**115**	**8**		10.0	115	50	150	25	04/02/2024	DLC
Vinyl Chloride - BS	EPA-8260	**88.0**			10.0	88.0	50	150		04/02/2024	DLC
Vinyl Chloride - BSD	EPA-8260	**93.3**	**6**		10.0	93.3	50	150	25	04/02/2024	DLC
Bromomethane - BS	EPA-8260	**76.4**			10.0	76.4	50	150		04/02/2024	DLC
Bromomethane - BSD	EPA-8260	**80.9**	**6**		10.0	80.9	50	150	25	04/02/2024	DLC
Chloroethane - BS	EPA-8260	**108**			10.0	108	50	150		04/02/2024	DLC
Chloroethane - BSD	EPA-8260	**112**	**3**		10.0	112	50	150	25	04/02/2024	DLC
Carbon Tetrachloride - BS	EPA-8260	**117**			10.0	117	50	150		04/02/2024	DLC
Carbon Tetrachloride - BSD	EPA-8260	**123**	**5**		10.0	123	50	150	25	04/02/2024	DLC
Trichlorofluoromethane - BS	EPA-8260	**117**			10.0	117	50	150		04/02/2024	DLC
Trichlorofluoromethane - BSD	EPA-8260	**121**	**3**		10.0	121	50	150	25	04/02/2024	DLC
Carbon Disulfide - BS	EPA-8260	**113**			10.0	113	50	150		04/02/2024	DLC
Carbon Disulfide - BSD	EPA-8260	**120**	**5**		10.0	120	50	150	25	04/02/2024	DLC
Acetone - BS	EPA-8260	**86.8**			10.0	86.8	50	150		04/02/2024	DLC
Acetone - BSD	EPA-8260	**84.7**	**2**		10.0	84.7	50	150	25	04/02/2024	DLC
1,1-Dichloroethene - BS	EPA-8260	**106**			10.0	106	72.5	136		04/02/2024	DLC
1,1-Dichloroethene - BSD	EPA-8260	**110**	**4**		10.0	110	72.5	136	20.5	04/02/2024	DLC
Methylene Chloride - BS	EPA-8260	**122**			10.0	122	50	150		04/02/2024	DLC
Methylene Chloride - BSD	EPA-8260	**124**	**2**		10.0	124	50	150	25	04/02/2024	DLC
Acrylonitrile - BS	EPA-8260	**100**			10.0	100	50	150		04/02/2024	DLC
Acrylonitrile - BSD	EPA-8260	**105**	**5**		10.0	105	50	150	25	04/02/2024	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**102**			10.0	102	50	150		04/02/2024	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**103**	**2**		10.0	103	50	150	25	04/02/2024	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**107**			10.0	107	50	150		04/02/2024	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**112**	**5**		10.0	112	50	150	25	04/02/2024	DLC
1,1-Dichloroethane - BS	EPA-8260	**106**			10.0	106	50	150		04/02/2024	DLC
1,1-Dichloroethane - BSD	EPA-8260	**110**	**3**		10.0	110	50	150	25	04/02/2024	DLC
2-Butanone - BS	EPA-8260	**105**			10.0	105	50	150		04/02/2024	DLC
2-Butanone - BSD	EPA-8260	**103**	**2**		10.0	103	50	150	25	04/02/2024	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**109**			10.0	109	50	150		04/02/2024	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**113**	**4**		10.0	113	50	150	25	04/02/2024	DLC
2,2-Dichloropropane - BS	EPA-8260	**101**			10.0	101	50	150		04/02/2024	DLC
2,2-Dichloropropane - BSD	EPA-8260	**104**	**3**		10.0	104	50	150	25	04/02/2024	DLC
Bromochloromethane - BS	EPA-8260	**91.1**			10.0	91.1	50	150		04/02/2024	DLC
Bromochloromethane - BSD	EPA-8260	**93.1**	**2**		10.0	93.1	50	150	25	04/02/2024	DLC

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520 Pike St, Suite 2600
Seattle, WA 98101

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Chloroform - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
Chloroform - BSD	EPA-8260	**108**	**4**		10.0	108	50	150	25	04/02/2024	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**107**			10.0	107	50	150		04/02/2024	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**111**	**4**		10.0	111	50	150	25	04/02/2024	DLC
1,1-Dichloropropene - BS	EPA-8260	**111**			10.0	111	50	150		04/02/2024	DLC
1,1-Dichloropropene - BSD	EPA-8260	**116**	**4**		10.0	116	50	150	25	04/02/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	**83.5**			10.0	83.5	50	150		04/02/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	**85.5**	**2**		10.0	85.5	50	150	25	04/02/2024	DLC
Benzene - BS	EPA-8260	**106**			10.0	106	74.7	143		04/02/2024	DLC
Benzene - BSD	EPA-8260	**110**	**4**		10.0	110	74.7	143	20.5	04/02/2024	DLC
Trichloroethene - BS	EPA-8260	**99.1**			10.0	99.1	74.4	141		04/02/2024	DLC
Trichloroethene - BSD	EPA-8260	**104**	**4**		10.0	104	74.4	141	20.5	04/02/2024	DLC
1,2-Dichloropropane - BS	EPA-8260	**99.0**			10.0	99.0	50	150		04/02/2024	DLC
1,2-Dichloropropane - BSD	EPA-8260	**102**	**3**		10.0	102	50	150	25	04/02/2024	DLC
Dibromomethane - BS	EPA-8260	**98.2**			10.0	98.2	50	150		04/02/2024	DLC
Dibromomethane - BSD	EPA-8260	**100**	**2**		10.0	100	50	150	25	04/02/2024	DLC
Bromodichloromethane - BS	EPA-8260	**95.4**			10.0	95.4	50	150		04/02/2024	DLC
Bromodichloromethane - BSD	EPA-8260	**98.1**	**3**		10.0	98.1	50	150	25	04/02/2024	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**97.1**			10.0	97.1	50	150		04/02/2024	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**99.8**	**3**		10.0	99.8	50	150	25	04/02/2024	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**92.8**			10.0	92.8	50	150		04/02/2024	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**93.8**	**1**		10.0	93.8	50	150	25	04/02/2024	DLC
Toluene - BS	EPA-8260	**109**			10.0	109	71.7	139		04/02/2024	DLC
Toluene - BSD	EPA-8260	**113**	**4**		10.0	113	71.7	139	20.5	04/02/2024	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**96.4**			10.0	96.4	50	150		04/02/2024	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**99.3**	**3**		10.0	99.3	50	150	25	04/02/2024	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**97.7**			10.0	97.7	50	150		04/02/2024	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**99.3**	**2**		10.0	99.3	50	150	25	04/02/2024	DLC
2-Hexanone - BS	EPA-8260	**95.8**			10.0	95.8	50	150		04/02/2024	DLC
2-Hexanone - BSD	EPA-8260	**95.0**	**1**		10.0	95.0	50	150	25	04/02/2024	DLC
1,3-Dichloropropane - BS	EPA-8260	**99.9**			10.0	99.9	50	150		04/02/2024	DLC
1,3-Dichloropropane - BSD	EPA-8260	**102**	**2**		10.0	102	50	150	25	04/02/2024	DLC
Tetrachloroethylene - BS	EPA-8260	**135**			10.0	135	50	150		04/02/2024	DLC
Tetrachloroethylene - BSD	EPA-8260	**145**	**7**		10.0	145	50	150	25	04/02/2024	DLC
Dibromochloromethane - BS	EPA-8260	**101**			10.0	101	50	150		04/02/2024	DLC
Dibromochloromethane - BSD	EPA-8260	**104**	**3**		10.0	104	50	150	25	04/02/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	**103**			10.0	103	50	150		04/02/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	**104**	**1**		10.0	104	50	150	25	04/02/2024	DLC
Chlorobenzene - BS	EPA-8260	**104**			10.0	104	73	131		04/02/2024	DLC

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Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene - BSD	EPA-8260	**108**	**4**		10.0	108	73	131	20.5	04/02/2024	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**102**			10.0	102	50	150		04/02/2024	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**105**	**3**		10.0	105	50	150	25	04/02/2024	DLC
Ethylbenzene - BS	EPA-8260	**106**			10.0	106	50	150		04/02/2024	DLC
Ethylbenzene - BSD	EPA-8260	**110**	**4**		10.0	110	50	150	25	04/02/2024	DLC
Styrene - BS	EPA-8260	**106**			10.0	106	50	150		04/02/2024	DLC
Styrene - BSD	EPA-8260	**111**	**4**		10.0	111	50	150	25	04/02/2024	DLC
Bromoform - BS	EPA-8260	**102**			10.0	102	50	150		04/02/2024	DLC
Bromoform - BSD	EPA-8260	**105**	**2**		10.0	105	50	150	25	04/02/2024	DLC
Isopropylbenzene - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
Isopropylbenzene - BSD	EPA-8260	**109**	**4**		10.0	109	50	150	25	04/02/2024	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**105**	**1**		10.0	105	50	150	25	04/02/2024	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**106**	**2**		10.0	106	50	150	25	04/02/2024	DLC
Bromobenzene - BS	EPA-8260	**97.6**			10.0	97.6	50	150		04/02/2024	DLC
Bromobenzene - BSD	EPA-8260	**102**	**4**		10.0	102	50	150	25	04/02/2024	DLC
N-Propyl Benzene - BS	EPA-8260	**102**			10.0	102	50	150		04/02/2024	DLC
N-Propyl Benzene - BSD	EPA-8260	**107**	**5**		10.0	107	50	150	25	04/02/2024	DLC
2-Chlorotoluene - BS	EPA-8260	**98.3**			10.0	98.3	50	150		04/02/2024	DLC
2-Chlorotoluene - BSD	EPA-8260	**103**	**4**		10.0	103	50	150	25	04/02/2024	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**109**	**5**		10.0	109	50	150	25	04/02/2024	DLC
4-Chlorotoluene - BS	EPA-8260	**101**			10.0	101	50	150		04/02/2024	DLC
4-Chlorotoluene - BSD	EPA-8260	**106**	**5**		10.0	106	50	150	25	04/02/2024	DLC
T-Butyl Benzene - BS	EPA-8260	**101**			10.0	101	50	150		04/02/2024	DLC
T-Butyl Benzene - BSD	EPA-8260	**106**	**5**		10.0	106	50	150	25	04/02/2024	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**104**			10.0	104	50	150		04/02/2024	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**109**	**5**		10.0	109	50	150	25	04/02/2024	DLC
S-Butyl Benzene - BS	EPA-8260	**107**			10.0	107	50	150		04/02/2024	DLC
S-Butyl Benzene - BSD	EPA-8260	**113**	**5**		10.0	113	50	150	25	04/02/2024	DLC
P-Isopropyltoluene - BS	EPA-8260	**108**			10.0	108	50	150		04/02/2024	DLC
P-Isopropyltoluene - BSD	EPA-8260	**114**	**5**		10.0	114	50	150	25	04/02/2024	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**100**			10.0	100	50	150		04/02/2024	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**105**	**5**		10.0	105	50	150	25	04/02/2024	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**103**			10.0	103	50	150		04/02/2024	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**108**	**5**		10.0	108	50	150	25	04/02/2024	DLC
N-Butylbenzene - BS	EPA-8260	**114**			10.0	114	50	150		04/02/2024	DLC
N-Butylbenzene - BSD	EPA-8260	**121**	**6**		10.0	121	50	150	25	04/02/2024	DLC

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CERTIFICATE OF ANALYSIS

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CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene - BS	EPA-8260	**100**			10.0	100	50	150		04/02/2024	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**105**	**4**		10.0	105	50	150	25	04/02/2024	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**96.7**			10.0	96.7	50	150		04/02/2024	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**97.6**	**1**		10.0	97.6	50	150	25	04/02/2024	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**108**			10.0	108	50	150		04/02/2024	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**115**	**6**		10.0	115	50	150	25	04/02/2024	DLC
Hexachlorobutadiene - BS	EPA-8260	**113**			10.0	113	50	150		04/02/2024	DLC
Hexachlorobutadiene - BSD	EPA-8260	**120**	**6**		10.0	120	50	150	25	04/02/2024	DLC
Naphthalene - BS	EPA-8260	**106**			10.0	106	50	150		04/02/2024	DLC
Naphthalene - BSD	EPA-8260	**114**	**8**		10.0	114	50	150	25	04/02/2024	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**102**			10.0	102	50	150		04/02/2024	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**109**	**6**		10.0	109	50	150	25	04/02/2024	DLC
Xylenes - BS	EPA-8260	**107**			30.0	107	50	150		04/02/2024	DLC
Xylenes - BSD	EPA-8260	**111**	**4**		30.0	111	50	150	25	04/02/2024	DLC

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4 - BS	EPA-8260	**90.8**			5.00	4.54	71	130		04/02/2024	DLC
1,2-Dichloroethane-d4 - BSD	EPA-8260	**89.5**			5.00	4.48	71	130		04/02/2024	DLC
Toluene-d8 - BS	EPA-8260	**99.9**			5.00	4.99	80	120		04/02/2024	DLC
Toluene-d8 - BSD	EPA-8260	**99.5**			5.00	4.97	80	120		04/02/2024	DLC
4-Bromofluorobenzene - BS	EPA-8260	**95.5**			5.00	4.77	78	120		04/02/2024	DLC
4-Bromofluorobenzene - BSD	EPA-8260	**95.2**			5.00	4.76	78	120		04/02/2024	DLC

ALS Test Batch ID: 209777 - Water by EPA-8270 Prepared 04/01/2024 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**22.5**			50.0	22.5	20	150		04/04/2024	DBA
Pyridine - BSD	EPA-8270	**34.0**	**41**	SR1	50.0	34.0	20	150	30	04/04/2024	DBA
N-Nitrosodimethylamine - BS	EPA-8270	**53.9**			50.0	53.9	20	150		04/04/2024	DBA
N-Nitrosodimethylamine - BSD	EPA-8270	**51.8**	**4**		50.0	51.8	20	150	30	04/04/2024	DBA
Phenol - BS	EPA-8270	**34.5**			50.0	34.5	5	84		04/04/2024	DBA
Phenol - BSD	EPA-8270	**41.8**	**19**		50.0	41.8	5	84	22	04/04/2024	DBA
Aniline - BS	EPA-8270	**36.7**			50.0	36.7	20	150		04/04/2024	DBA
Aniline - BSD	EPA-8270	**53.1**	**36**	SR1	50.0	53.1	20	150	30	04/04/2024	DBA
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**91.3**			50.0	91.3	20	150		04/04/2024	DBA
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**105**	**14**		50.0	105	20	150	30	04/04/2024	DBA
2-Chlorophenol - BS	EPA-8270	**91.1**			50.0	91.1	45	111		04/04/2024	DBA
2-Chlorophenol - BSD	EPA-8270	**100**	**9**		50.0	100	45	111	17	04/04/2024	DBA

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
1,3-Dichlorobenzene - BS	EPA-8270	**83.2**			50.0	83.2	20	150		04/04/2024	DBA
1,3-Dichlorobenzene - BSD	EPA-8270	**79.6**	**4**		50.0	79.6	20	150	30	04/04/2024	DBA
1,4-Dichlorobenzene - BS	EPA-8270	**83.7**			50.0	83.7	27.1	114		04/04/2024	DBA
1,4-Dichlorobenzene - BSD	EPA-8270	**81.3**	**3**		50.0	81.3	27.1	114	21	04/04/2024	DBA
Benzyl Alcohol - BS	EPA-8270	**68.8**			50.0	68.8	20	150		04/04/2024	DBA
Benzyl Alcohol - BSD	EPA-8270	**99.0**	**36**	SR1	50.0	99.0	20	150	30	04/04/2024	DBA
1,2-Dichlorobenzene - BS	EPA-8270	**83.3**			50.0	83.3	20	150		04/04/2024	DBA
1,2-Dichlorobenzene - BSD	EPA-8270	**83.6**	**0**		50.0	83.6	20	150	30	04/04/2024	DBA
2-Methylphenol - BS	EPA-8270	**69.3**			50.0	69.3	20	150		04/04/2024	DBA
2-Methylphenol - BSD	EPA-8270	**99.0**	**35**	SR1	50.0	99.0	20	150	30	04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**71.2**			50.0	71.2	20	150		04/04/2024	DBA
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**87.2**	**20**		50.0	87.2	20	150	30	04/04/2024	DBA
3&4-Methylphenol - BS	EPA-8270	**68.4**			50.0	68.4	20	150		04/04/2024	DBA
3&4-Methylphenol - BSD	EPA-8270	**98.1**	**36**	SR1	50.0	98.1	20	150	30	04/04/2024	DBA
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**86.5**			50.0	86.5	42.2	119		04/04/2024	DBA
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**136**	**45**	LCS03	50.0	136	42.2	119	14	04/04/2024	DBA
Hexachloroethane - BS	EPA-8270	**78.9**			50.0	78.9	20	150		04/04/2024	DBA
Hexachloroethane - BSD	EPA-8270	**77.5**	**2**		50.0	77.5	20	150	30	04/04/2024	DBA
Nitrobenzene - BS	EPA-8270	**105**			50.0	105	20	150		04/04/2024	DBA
Nitrobenzene - BSD	EPA-8270	**104**	**1**		50.0	104	20	150	30	04/04/2024	DBA
Isophorone - BS	EPA-8270	**66.1**			50.0	66.1	20	150		04/04/2024	DBA
Isophorone - BSD	EPA-8270	**80.4**	**20**		50.0	80.4	20	150	30	04/04/2024	DBA
2-Nitrophenol - BS	EPA-8270	**94.9**			50.0	94.9	20	150		04/04/2024	DBA
2-Nitrophenol - BSD	EPA-8270	**100**	**5**		50.0	100	20	150	30	04/04/2024	DBA
2,4-Dimethylphenol - BS	EPA-8270	**107**			50.0	107	20	150		04/04/2024	DBA
2,4-Dimethylphenol - BSD	EPA-8270	**122**	**13**		50.0	122	20	150	30	04/04/2024	DBA
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**101**			50.0	101	20	150		04/04/2024	DBA
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**117**	**14**		50.0	117	20	150	30	04/04/2024	DBA
2,4-Dichlorophenol - BS	EPA-8270	**110**			50.0	110	20	150		04/04/2024	DBA
2,4-Dichlorophenol - BSD	EPA-8270	**123**	**11**		50.0	123	20	150	30	04/04/2024	DBA
1,2,4-Trichlorobenzene - BS	EPA-8270	**94.8**			50.0	94.8	29.4	120		04/04/2024	DBA
1,2,4-Trichlorobenzene - BSD	EPA-8270	**90.5**	**5**		50.0	90.5	29.4	120	23	04/04/2024	DBA
Naphthalene - BS	EPA-8270	**97.8**			50.0	97.8	20	150		04/04/2024	DBA
Naphthalene - BSD	EPA-8270	**98.0**	**0**		50.0	98.0	20	150	30	04/04/2024	DBA
4-Chloroaniline - BS	EPA-8270	**64.5**			50.0	64.5	20	150		04/04/2024	DBA
4-Chloroaniline - BSD	EPA-8270	**83.4**	**26**		50.0	83.4	20	150	30	04/04/2024	DBA
Hexachlorobutadiene - BS	EPA-8270	**85.8**			50.0	85.8	20	150		04/04/2024	DBA
Hexachlorobutadiene - BSD	EPA-8270	**73.8**	**15**		50.0	73.8	20	150	30	04/04/2024	DBA
4-Chloro-3-Methylphenol - BS	EPA-8270	**102**			50.0	102	44	113		04/04/2024	DBA

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LABORATORY CONTROL SAMPLE RESULTS

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4-Chloro-3-Methylphenol - BSD	EPA-8270	**124**	**19**	LCS03	50.0	124	44	113	18	04/04/2024	DBA
2-Methylnaphthalene - BS	EPA-8270	**102**			50.0	102	20	150		04/04/2024	DBA
2-Methylnaphthalene - BSD	EPA-8270	**119**	**15**		50.0	119	20	150	30	04/04/2024	DBA
1-Methylnaphthalene - BS	EPA-8270	**101**			50.0	101	20	150		04/04/2024	DBA
1-Methylnaphthalene - BSD	EPA-8270	**119**	**17**		50.0	119	20	150	30	04/04/2024	DBA
Hexachlorocyclopentadiene - BS	EPA-8270	**49.2**			50.0	49.2	20	150		04/04/2024	DBA
Hexachlorocyclopentadiene - BSD	EPA-8270	**46.1**	**6**		50.0	46.1	20	150	30	04/04/2024	DBA
2,4,6-Trichlorophenol - BS	EPA-8270	**101**			50.0	101	20	150		04/04/2024	DBA
2,4,6-Trichlorophenol - BSD	EPA-8270	**105**	**4**		50.0	105	20	150	30	04/04/2024	DBA
2,4,5-Trichlorophenol - BS	EPA-8270	**122**			50.0	122	20	150		04/04/2024	DBA
2,4,5-Trichlorophenol - BSD	EPA-8270	**127**	**5**		50.0	127	20	150	30	04/04/2024	DBA
2-Chloronaphthalene - BS	EPA-8270	**111**			50.0	111	20	150		04/04/2024	DBA
2-Chloronaphthalene - BSD	EPA-8270	**112**	**1**		50.0	112	20	150	30	04/04/2024	DBA
2-Nitroaniline - BS	EPA-8270	**103**			50.0	103	20	150		04/04/2024	DBA
2-Nitroaniline - BSD	EPA-8270	**109**	**5**		50.0	109	20	150	30	04/04/2024	DBA
Acenaphthylene - BS	EPA-8270	**117**			50.0	117	20	150		04/04/2024	DBA
Acenaphthylene - BSD	EPA-8270	**120**	**2**		50.0	120	20	150	30	04/04/2024	DBA
Dimethylphthalate - BS	EPA-8270	**111**			50.0	111	20	150		04/04/2024	DBA
Dimethylphthalate - BSD	EPA-8270	**118**	**6**		50.0	118	20	150	30	04/04/2024	DBA
2,6-Dinitrotoluene - BS	EPA-8270	**106**			50.0	106	20	150		04/04/2024	DBA
2,6-Dinitrotoluene - BSD	EPA-8270	**113**	**7**		50.0	113	20	150	30	04/04/2024	DBA
Acenaphthene - BS	EPA-8270	**108**		LCS03	50.0	108	41	107		04/04/2024	DBA
Acenaphthene - BSD	EPA-8270	**113**	**4**	LCS03	50.0	113	41	107	13	04/04/2024	DBA
3-Nitroaniline - BS	EPA-8270	**88.5**			50.0	88.5	20	150		04/04/2024	DBA
3-Nitroaniline - BSD	EPA-8270	**96.6**	**9**		50.0	96.6	20	150	30	04/04/2024	DBA
2,4-Dinitrophenol - BS	EPA-8270	**94.0**			50.0	94.0	20	150		04/04/2024	DBA
2,4-Dinitrophenol - BSD	EPA-8270	**110**	**15**		50.0	110	20	150	30	04/04/2024	DBA
4-Nitrophenol - BS	EPA-8270	**30.7**			50.0	30.7	5	63		04/04/2024	DBA
4-Nitrophenol - BSD	EPA-8270	**34.4**	**12**		50.0	34.4	5	63	25	04/04/2024	DBA
Dibenzofuran - BS	EPA-8270	**111**			50.0	111	20	150		04/04/2024	DBA
Dibenzofuran - BSD	EPA-8270	**118**	**6**		50.0	118	20	150	30	04/04/2024	DBA
2,4-Dinitrotoluene - BS	EPA-8270	**103**			50.0	103	53.1	136		04/04/2024	DBA
2,4-Dinitrotoluene - BSD	EPA-8270	**112**	**8**		50.0	112	53.1	136	18	04/04/2024	DBA
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**104**			50.0	104	20	150		04/04/2024	DBA
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**113**	**8**		50.0	113	20	150	30	04/04/2024	DBA
Diethylphthalate - BS	EPA-8270	**108**			50.0	108	20	150		04/04/2024	DBA
Diethylphthalate - BSD	EPA-8270	**118**	**9**		50.0	118	20	150	30	04/04/2024	DBA
Fluorene - BS	EPA-8270	**113**			50.0	113	20	150		04/04/2024	DBA
Fluorene - BSD	EPA-8270	**121**	**7**		50.0	121	20	150	30	04/04/2024	DBA

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SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
4-Chlorophenyl-Phenylether - BS	EPA-8270	**110**			50.0	110	20	150		04/04/2024	DBA
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**121**	**9**		50.0	121	20	150	30	04/04/2024	DBA
4-Nitroaniline - BS	EPA-8270	**93.2**			50.0	93.2	20	150		04/04/2024	DBA
4-Nitroaniline - BSD	EPA-8270	**102**	**9**		50.0	102	20	150	30	04/04/2024	DBA
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**110**			50.0	110	20	150		04/04/2024	DBA
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**122**	**10**		50.0	122	20	150	30	04/04/2024	DBA
Azobenzene - BS	EPA-8270	**113**			50.0	113	20	150		04/04/2024	DBA
Azobenzene - BSD	EPA-8270	**117**	**3**		50.0	117	20	150	30	04/04/2024	DBA
4-Bromophenyl-Phenylether - BS	EPA-8270	**120**			50.0	120	20	150		04/04/2024	DBA
4-Bromophenyl-Phenylether - BSD	EPA-8270	**124**	**4**		50.0	124	20	150	30	04/04/2024	DBA
Hexachlorobenzene - BS	EPA-8270	**120**			50.0	120	20	150		04/04/2024	DBA
Hexachlorobenzene - BSD	EPA-8270	**121**	**1**		50.0	121	20	150	30	04/04/2024	DBA
Pentachlorophenol - BS	EPA-8270	**99.9**			50.0	99.9	33	124		04/04/2024	DBA
Pentachlorophenol - BSD	EPA-8270	**106**	**6**		50.0	106	33	124	30	04/04/2024	DBA
Phenanthrene - BS	EPA-8270	**117**			50.0	117	20	150		04/04/2024	DBA
Phenanthrene - BSD	EPA-8270	**121**	**3**		50.0	121	20	150	30	04/04/2024	DBA
Anthracene - BS	EPA-8270	**99.9**			50.0	99.9	20	150		04/04/2024	DBA
Anthracene - BSD	EPA-8270	**103**	**3**		50.0	103	20	150	30	04/04/2024	DBA
Carbazole - BS	EPA-8270	**127**			50.0	127	20	150		04/04/2024	DBA
Carbazole - BSD	EPA-8270	**135**	**6**		50.0	135	20	150	30	04/04/2024	DBA
Di-N-Butylphthalate - BS	EPA-8270	**119**			50.0	119	20	150		04/04/2024	DBA
Di-N-Butylphthalate - BSD	EPA-8270	**129**	**8**		50.0	129	20	150	30	04/04/2024	DBA
Fluoranthene - BS	EPA-8270	**115**			50.0	115	20	150		04/04/2024	DBA
Fluoranthene - BSD	EPA-8270	**128**	**10**		50.0	128	20	150	30	04/04/2024	DBA
Pyrene - BS	EPA-8270	**120**			50.0	120	18	136		04/04/2024	DBA
Pyrene - BSD	EPA-8270	**122**	**1**		50.0	122	18	136	18	04/04/2024	DBA
Butylbenzylphthalate - BS	EPA-8270	**101**			50.0	101	20	150		04/04/2024	DBA
Butylbenzylphthalate - BSD	EPA-8270	**106**	**5**		50.0	106	20	150	30	04/04/2024	DBA
Benzo[A]Anthracene - BS	EPA-8270	**111**			50.0	111	20	150		04/04/2024	DBA
Benzo[A]Anthracene - BSD	EPA-8270	**117**	**5**		50.0	117	20	150	30	04/04/2024	DBA
Chrysene - BS	EPA-8270	**118**			50.0	118	20	150		04/04/2024	DBA
Chrysene - BSD	EPA-8270	**121**	**3**		50.0	121	20	150	30	04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**107**			50.0	107	20	150		04/04/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**113**	**5**		50.0	113	20	150	30	04/04/2024	DBA
Di-N-Octylphthalate - BS	EPA-8270	**94.2**			50.0	94.2	20	150		04/04/2024	DBA
Di-N-Octylphthalate - BSD	EPA-8270	**101**	**7**		50.0	101	20	150	30	04/04/2024	DBA
Benzo[B]Fluoranthene - BS	EPA-8270	**120**			50.0	120	20	150		04/04/2024	DBA
Benzo[B]Fluoranthene - BSD	EPA-8270	**131**	**8**		50.0	131	20	150	30	04/04/2024	DBA
Benzo[K]Fluoranthene - BS	EPA-8270	**121**			50.0	121	20	150		04/04/2024	DBA

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CERTIFICATE OF ANALYSIS

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DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene - BSD	EPA-8270	**125**	**4**		50.0	125	20	150	30	04/04/2024	DBA
Benzo[A]Pyrene - BS	EPA-8270	**101**			50.0	101	20	150		04/04/2024	DBA
Benzo[A]Pyrene - BSD	EPA-8270	**107**	**6**		50.0	107	20	150	30	04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**122**			50.0	122	20	150		04/04/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**134**	**9**		50.0	134	20	150	30	04/04/2024	DBA
Dibenz[A,H]Anthracene - BS	EPA-8270	**99.1**			50.0	99.1	20	150		04/04/2024	DBA
Dibenz[A,H]Anthracene - BSD	EPA-8270	**108**	**9**		50.0	108	20	150	30	04/04/2024	DBA
Benzo[G,H,I]Perylene - BS	EPA-8270	**112**			50.0	112	20	150		04/04/2024	DBA
Benzo[G,H,I]Perylene - BSD	EPA-8270	**122**	**9**		50.0	122	20	150	30	04/04/2024	DBA

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
2-Fluorophenol - BS	EPA-8270	**52.9**			40.0	21.2	29	105		04/04/2024	DBA
2-Fluorophenol - BSD	EPA-8270	**51.1**			40.0	20.4	29	105		04/04/2024	DBA
Phenol-d5 - BS	EPA-8270	**33.5**			40.0	13.4	5	88		04/04/2024	DBA
Phenol-d5 - BSD	EPA-8270	**39.9**			40.0	15.9	5	88		04/04/2024	DBA
Nitrobenzene-d5 - BS	EPA-8270	**103**			20.0	20.7	53	125		04/04/2024	DBA
Nitrobenzene-d5 - BSD	EPA-8270	**98.7**			20.0	19.7	53	125		04/04/2024	DBA
2-Fluorobiphenyl - BS	EPA-8270	**77.4**			20.0	15.5	30.3	127		04/04/2024	DBA
2-Fluorobiphenyl - BSD	EPA-8270	**80.8**			20.0	16.2	30.3	127		04/04/2024	DBA
2,4,6-Tribromophenol - BS	EPA-8270	**130**			40.0	52.1	45	143		04/04/2024	DBA
2,4,6-Tribromophenol - BSD	EPA-8270	**134**			40.0	53.4	45	143		04/04/2024	DBA
Terphenyl-d14 - BS	EPA-8270	**109**			20.0	21.8	58	132		04/04/2024	DBA
Terphenyl-d14 - BSD	EPA-8270	**110**			20.0	22.0	58	132		04/04/2024	DBA

LCS03 - The LCS and/or LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is required for this analyte.
SR1 - RPD outside of control limits.

ALS Test Batch ID: 209949 - Water by EPA-8082 Prepared 04/02/2024 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**72.9**			0.100	72.9	44	152		04/04/2024	DBA
PCB-1016 - BSD	EPA-8082	**61.3**	**0**		0.100	61.3	44	152	25	04/04/2024	DBA
PCB-1260 - BS	EPA-8082	**98.2**			0.100	98.2	44	152		04/04/2024	DBA
PCB-1260 - BSD	EPA-8082	**80.6**	**20**		0.100	80.6	44	152	25	04/04/2024	DBA

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
TCMX - BS	EPA-8082	**60.0**			0.0400	0.0240	5	120		04/04/2024	DBA
TCMX - BSD	EPA-8082	**52.9**			0.0400	0.0212	5	120		04/04/2024	DBA

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CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY CONTROL SAMPLE RESULTS

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
DCB - BS	EPA-8082	**81.6**			0.0400	0.0326	10	131		04/04/2024	DBA
DCB - BSD	EPA-8082	**52.7**			0.0400	0.0211	10	131		04/04/2024	DBA

ALS Test Batch ID: 209949 - Water by EPA-8081 Prepared 04/02/2024 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
A-BHC - BS	EPA-8081	**88.3**			0.0500	88.3	50	150		04/04/2024	DBA
A-BHC - BSD	EPA-8081	**76.5**	**14**		0.0500	76.5	50	150	25	04/04/2024	DBA
G-BHC - BS	EPA-8081	**92.0**			0.0500	92.0	50	158		04/04/2024	DBA
G-BHC - BSD	EPA-8081	**78.5**	**16**		0.0500	78.5	50	158	25	04/04/2024	DBA
B-BHC - BS	EPA-8081	**89.5**			0.0500	89.5	50	150		04/04/2024	DBA
B-BHC - BSD	EPA-8081	**75.2**	**17**		0.0500	75.2	50	150	25	04/04/2024	DBA
Heptachlor - BS	EPA-8081	**60.5**			0.0500	60.5	50	134		04/04/2024	DBA
Heptachlor - BSD	EPA-8081	**52.0**	**15**		0.0500	52.0	50	134	25	04/04/2024	DBA
D-BHC - BS	EPA-8081	**88.7**			0.0500	88.7	50	150		04/04/2024	DBA
D-BHC - BSD	EPA-8081	**75.2**	**17**		0.0500	75.2	50	150	25	04/04/2024	DBA
Aldrin - BS	EPA-8081	**53.9**			0.0500	53.9	50	137		04/04/2024	DBA
Aldrin - BSD	EPA-8081	**44.7**	**19**	LCS12	0.0500	44.7	50	137	25	04/04/2024	DBA
Heptachlor Epoxide - BS	EPA-8081	**92.4**			0.0500	92.4	50	150		04/04/2024	DBA
Heptachlor Epoxide - BSD	EPA-8081	**78.2**	**17**		0.0500	78.2	50	150	25	04/04/2024	DBA
alpha-Chlordane - BS	EPA-8081	**86.5**			0.0500	86.5	50	150		04/04/2024	DBA
alpha-Chlordane - BSD	EPA-8081	**72.7**	**17**		0.0500	72.7	50	150	25	04/04/2024	DBA
gamma-Chlordane - BS	EPA-8081	**87.4**			0.0500	87.4	50	150		04/04/2024	DBA
gamma-Chlordane - BSD	EPA-8081	**71.9**	**19**		0.0500	71.9	50	150	25	04/04/2024	DBA
Endosulfan I - BS	EPA-8081	**94.5**			0.0500	94.5	50	150		04/04/2024	DBA
Endosulfan I - BSD	EPA-8081	**79.7**	**17**		0.0500	79.7	50	150	25	04/04/2024	DBA
4,4'-DDE - BS	EPA-8081	**97.1**			0.0500	97.1	50	150		04/04/2024	DBA
4,4'-DDE - BSD	EPA-8081	**80.1**	**19**		0.0500	80.1	50	150	25	04/04/2024	DBA
Dieldrin - BS	EPA-8081	**91.8**			0.0500	91.8	50	137		04/04/2024	DBA
Dieldrin - BSD	EPA-8081	**75.4**	**20**		0.0500	75.4	50	137	25	04/04/2024	DBA
Endrin - BS	EPA-8081	**132**			0.0500	132	50	134		04/04/2024	DBA
Endrin - BSD	EPA-8081	**111**	**18**		0.0500	111	50	134	25	04/04/2024	DBA
4,4'-DDD - BS	EPA-8081	**103**			0.0500	103	50	150		04/04/2024	DBA
4,4'-DDD - BSD	EPA-8081	**84.6**	**20**		0.0500	84.6	50	150	25	04/04/2024	DBA
Endosulfan II - BS	EPA-8081	**95.3**			0.0500	95.3	50	150		04/04/2024	DBA
Endosulfan II - BSD	EPA-8081	**79.6**	**18**		0.0500	79.6	50	150	25	04/04/2024	DBA
4,4'-DDT - BS	EPA-8081	**96.5**			0.0500	96.5	59	149		04/04/2024	DBA
4,4'-DDT - BSD	EPA-8081	**81.7**	**17**		0.0500	81.7	59	149	25	04/04/2024	DBA
Endrin Aldehyde - BS	EPA-8081	**72.8**			0.0500	72.8	50	150		04/04/2024	DBA

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CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Endrin Aldehyde - BSD	EPA-8081	**59.8**	**20**		0.0500	59.8	50	150	25	04/04/2024	DBA
Endosulfan Sulfate - BS	EPA-8081	**93.5**			0.0500	93.5	50	150		04/04/2024	DBA
Endosulfan Sulfate - BSD	EPA-8081	**78.0**	**18**		0.0500	78.0	50	150	25	04/04/2024	DBA
Endrin Ketone - BS	EPA-8081	**97.6**			0.0500	97.6	50	150		04/04/2024	DBA
Endrin Ketone - BSD	EPA-8081	**81.2**	**18**		0.0500	81.2	50	150	25	04/04/2024	DBA
Methoxychlor - BS	EPA-8081	**102**			0.0500	102	50	150		04/04/2024	DBA
Methoxychlor - BSD	EPA-8081	**86.6**	**16**		0.0500	86.6	50	150	25	04/04/2024	DBA

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
TCMX - BS	EPA-8081	**60.6**			0.0400	0.0242	5	120		04/04/2024	DBA
TCMX - BSD	EPA-8081	**49.9**			0.0400	0.0200	5	120		04/04/2024	DBA
DCB - BS	EPA-8081	**74.1**			0.0400	0.0296	10	131		04/04/2024	DBA
DCB - BSD	EPA-8081	**42.7**			0.0400	0.0171	10	131		04/04/2024	DBA

LCS12 - LCS recovery was below the control limits. The associated results are non detect.

ALS Test Batch ID: R463709 - Water by SM4500-CN E Prepared 04/10/2024 15:51

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Cyanide - BS	SM4500-CN E	**110**			100	110	82	116		04/10/2024	EBS

ALS Test Batch ID: 210281 - Water by EPA-200.8 Prepared 04/10/2024 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	LIMITS RPD	ANALYSIS DATE	ANALYSIS BY
Aluminum - BS	EPA-200.8	**98.7**			12500	98.7	80	120		04/11/2024	RAL
Aluminum - BSD	EPA-200.8	**97.7**	**1**		12500	97.7	80	120	10	04/11/2024	RAL
Antimony - BS	EPA-200.8	**98.6**			125	98.6	88.9	114		04/11/2024	RAL
Antimony - BSD	EPA-200.8	**98.7**	**0**		125	98.7	88.9	114	10	04/11/2024	RAL
Arsenic - BS	EPA-200.8	**99.2**			125	99.2	89.1	110		04/11/2024	RAL
Arsenic - BSD	EPA-200.8	**100**	**1**		125	100	89.1	110	10	04/11/2024	RAL
Barium - BS	EPA-200.8	**102**			125	102	88.5	108		04/11/2024	RAL
Barium - BSD	EPA-200.8	**102**	**0**		125	102	88.5	108	10	04/11/2024	RAL
Beryllium - BS	EPA-200.8	**94.3**			125	94.3	91.1	113		04/11/2024	RAL
Beryllium - BSD	EPA-200.8	**100**	**6**		125	100	91.1	113	10	04/11/2024	RAL
Cadmium - BS	EPA-200.8	**101**			125	101	89.4	110		04/11/2024	RAL
Cadmium - BSD	EPA-200.8	**102**	**1**		125	102	89.4	110	10	04/11/2024	RAL
Calcium - BS	EPA-200.8	**92.8**			12500	92.8	80	120		04/11/2024	RAL
Calcium - BSD	EPA-200.8	**93.1**	**0**		12500	93.1	80	120	10	04/11/2024	RAL
Chromium - BS	EPA-200.8	**100**			125	100	88.3	110.2		04/11/2024	RAL

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Chromium - BSD	EPA-200.8	**100**	**0**		125	100	88.3	110.2	10	04/11/2024	RAL
Cobalt - BS	EPA-200.8	**103**			125	103	85.8	108		04/11/2024	RAL
Cobalt - BSD	EPA-200.8	**102**	**1**		125	102	85.8	108	10	04/11/2024	RAL
Copper - BS	EPA-200.8	**103**			125	103	85.4	109		04/11/2024	RAL
Copper - BSD	EPA-200.8	**109**	**5**		125	109	85.4	109	10	04/11/2024	RAL
Iron - BS	EPA-200.8	**101**			12500	101	80	120		04/11/2024	RAL
Iron - BSD	EPA-200.8	**101**	**0**		12500	101	80	120	10	04/11/2024	RAL
Lead - BS	EPA-200.8	**99.3**			125	99.3	87.5	107		04/11/2024	RAL
Lead - BSD	EPA-200.8	**99.2**	**0**		125	99.2	87.5	107	10	04/11/2024	RAL
Magnesium - BS	EPA-200.8	**100**			12500	100	80	120		04/11/2024	RAL
Magnesium - BSD	EPA-200.8	**99.9**	**0**		12500	99.9	80	120	10	04/11/2024	RAL
Manganese - BS	EPA-200.8	**96.6**			125	96.6	82.2	110		04/11/2024	RAL
Manganese - BSD	EPA-200.8	**96.7**	**0**		125	96.7	82.2	110	10	04/11/2024	RAL
Nickel - BS	EPA-200.8	**102**			125	102	85.4	109		04/11/2024	RAL
Nickel - BSD	EPA-200.8	**102**	**1**		125	102	85.4	109	10	04/11/2024	RAL
Potassium - BS	EPA-200.8	**99.0**			12500	99.0	80	120		04/11/2024	RAL
Potassium - BSD	EPA-200.8	**99.4**	**0**		12500	99.4	80	120	10	04/11/2024	RAL
Selenium - BS	EPA-200.8	**99.4**			125	99.4	90.2	113		04/11/2024	RAL
Selenium - BSD	EPA-200.8	**101**	**1**		125	101	90.2	113	10	04/11/2024	RAL
Silver - BS	EPA-200.8	**101**			125	101	80	120		04/11/2024	RAL
Silver - BSD	EPA-200.8	**101**	**0**		125	101	80	120	10	04/11/2024	RAL
Sodium - BS	EPA-200.8	**101**			12500	101	80	105		04/11/2024	RAL
Sodium - BSD	EPA-200.8	**100**	**1**		12500	100	80	105	10	04/11/2024	RAL
Thallium - BS	EPA-200.8	**96.4**			125	96.4	88	103		04/11/2024	RAL
Thallium - BSD	EPA-200.8	**96.8**	**0**		125	96.8	88	103	10	04/11/2024	RAL
Vanadium - BS	EPA-200.8	**98.8**			125	98.8	80.1	108		04/11/2024	RAL
Vanadium - BSD	EPA-200.8	**97.9**	**1**		125	97.9	80.1	108	10	04/11/2024	RAL
Zinc - BS	EPA-200.8	**101**			125	101	88.2	111		04/11/2024	RAL
Zinc - BSD	EPA-200.8	**102**	**1**		125	102	88.2	111	10	04/11/2024	RAL

ALS Test Batch ID: R464040 - Water by E1631E Prepared 04/10/2024 11:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	E1631E	**95.6**			5.00	95.6	77	123		04/10/2024	CAS

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Mgmt / SSOW: ENV229-402-D02-2100

MATRIX SPIKE RESULTS

ALS Test Batch ID: 210177 - Water
Parent Sample: MVD-032824-SS-SW05

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - MS	EPA-8260	**119**			10.0	0	119	50	150		04/09/2024	DLC
Dichlorodifluoromethane - MSD	EPA-8260	**127**	**7**		10.0	0	127	50	150	25	04/09/2024	DLC
Chloromethane - MS	EPA-8260	**76.4**			10.0	0	76.4	50	150		04/09/2024	DLC
Chloromethane - MSD	EPA-8260	**83.0**	**8**		10.0	0	83.0	50	150	25	04/09/2024	DLC
Vinyl Chloride - MS	EPA-8260	**98.6**			10.0	0	98.6	50	150		04/09/2024	DLC
Vinyl Chloride - MSD	EPA-8260	**108**	**9**		10.0	0	108	50	150	25	04/09/2024	DLC
Bromomethane - MS	EPA-8260	**95.2**			10.0	0	95.2	50	150		04/09/2024	DLC
Bromomethane - MSD	EPA-8260	**108**	**12**		10.0	0	108	50	150	25	04/09/2024	DLC
Chloroethane - MS	EPA-8260	**84.6**			10.0	0	84.6	50	150		04/09/2024	DLC
Chloroethane - MSD	EPA-8260	**91.1**	**7**		10.0	0	91.1	50	150	25	04/09/2024	DLC
Carbon Tetrachloride - MS	EPA-8260	**118**			10.0	0	118	50	150		04/09/2024	DLC
Carbon Tetrachloride - MSD	EPA-8260	**128**	**9**		10.0	0	128	50	150	25	04/09/2024	DLC
Trichlorofluoromethane - MS	EPA-8260	**123**			10.0	0	123	50	150		04/09/2024	DLC
Trichlorofluoromethane - MSD	EPA-8260	**132**	**7**		10.0	0	132	50	150	25	04/09/2024	DLC
Carbon Disulfide - MS	EPA-8260	**88.7**			10.0	0	88.7	50	150		04/09/2024	DLC
Carbon Disulfide - MSD	EPA-8260	**97.4**	**9**		10.0	0	97.4	50	150	25	04/09/2024	DLC
Acetone - MS	EPA-8260	**46.6**		SQ2	10.0	0.61	46.6	50	150		04/09/2024	DLC
Acetone - MSD	EPA-8260	**45.3**	**3**	SQ2	10.0	0.61	45.3	50	150	25	04/09/2024	DLC
1,1-Dichloroethene - MS	EPA-8260	**97.7**			10.0	0	97.7	72.5	136		04/09/2024	DLC
1,1-Dichloroethene - MSD	EPA-8260	**106**	**8**		10.0	0	106	72.5	136	20.5	04/09/2024	DLC
Methylene Chloride - MS	EPA-8260	**90.7**			10.0	0	90.7	50	150		04/09/2024	DLC
Methylene Chloride - MSD	EPA-8260	**99.9**	**10**		10.0	0	99.9	50	150	25	04/09/2024	DLC
Acrylonitrile - MS	EPA-8260	**93.8**			10.0	0	93.8	50	150		04/09/2024	DLC
Acrylonitrile - MSD	EPA-8260	**103**	**9**		10.0	0	103	50	150	25	04/09/2024	DLC
Methyl T-Butyl Ether - MS	EPA-8260	**92.5**			10.0	0	92.5	50	150		04/09/2024	DLC
Methyl T-Butyl Ether - MSD	EPA-8260	**101**	**9**		10.0	0	101	50	150	25	04/09/2024	DLC
Trans-1,2-Dichloroethene - MS	EPA-8260	**93.1**			10.0	0	93.1	50	150		04/09/2024	DLC
Trans-1,2-Dichloroethene - MSD	EPA-8260	**101**	**9**		10.0	0	101	50	150	25	04/09/2024	DLC
1,1-Dichloroethane - MS	EPA-8260	**85.3**			10.0	0	85.3	50	150		04/09/2024	DLC
1,1-Dichloroethane - MSD	EPA-8260	**92.6**	**8**		10.0	0	92.6	50	150	25	04/09/2024	DLC
2-Butanone - MS	EPA-8260	**57.1**			10.0	0	57.1	50	150		04/09/2024	DLC
2-Butanone - MSD	EPA-8260	**62.7**	**9**		10.0	0	62.7	50	150	25	04/09/2024	DLC
Cis-1,2-Dichloroethene - MS	EPA-8260	**89.9**			10.0	0	89.9	50	150		04/09/2024	DLC
Cis-1,2-Dichloroethene - MSD	EPA-8260	**98.0**	**9**		10.0	0	98.0	50	150	25	04/09/2024	DLC
2,2-Dichloropropane - MS	EPA-8260	**94.3**			10.0	0	94.3	50	150		04/09/2024	DLC
2,2-Dichloropropane - MSD	EPA-8260	**101**	**7**		10.0	0	101	50	150	25	04/09/2024	DLC
Bromochloromethane - MS	EPA-8260	**76.7**			10.0	0	76.7	50	150		04/09/2024	DLC

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CERTIFICATE OF ANALYSIS

CLIENT: Geosyntec Consultants
520 Pike St, Suite 2600
Seattle, WA 98101

DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Bromochloromethane - MSD	EPA-8260	**83.9**	**9**		10.0	0	83.9	50	150	25	04/09/2024	DLC
Chloroform - MS	EPA-8260	**70.7**			10.0	0	70.7	50	150		04/09/2024	DLC
Chloroform - MSD	EPA-8260	**78.9**	**11**		10.0	0	78.9	50	150	25	04/09/2024	DLC
1,1,1-Trichloroethane - MS	EPA-8260	**104**			10.0	0	104	50	150		04/09/2024	DLC
1,1,1-Trichloroethane - MSD	EPA-8260	**113**	**8**		10.0	0	113	50	150	25	04/09/2024	DLC
1,1-Dichloropropene - MS	EPA-8260	**94.4**			10.0	0	94.4	50	150		04/09/2024	DLC
1,1-Dichloropropene - MSD	EPA-8260	**104**	**9**		10.0	0	104	50	150	25	04/09/2024	DLC
1,2-Dichloroethane - MS	EPA-8260	**91.4**			10.0	0	91.4	50	150		04/09/2024	DLC
1,2-Dichloroethane - MSD	EPA-8260	**98.1**	**7**		10.0	0	98.1	50	150	25	04/09/2024	DLC
Benzene - MS	EPA-8260	**84.3**			10.0	0	84.3	74.7	143		04/09/2024	DLC
Benzene - MSD	EPA-8260	**90.7**	**7**		10.0	0	90.7	74.7	143	20.5	04/09/2024	DLC
Trichloroethene - MS	EPA-8260	**84.7**			10.0	0	84.7	74.4	141		04/09/2024	DLC
Trichloroethene - MSD	EPA-8260	**91.3**	**7**		10.0	0	91.3	74.4	141	20.5	04/09/2024	DLC
1,2-Dichloropropane - MS	EPA-8260	**77.4**			10.0	0	77.4	50	150		04/09/2024	DLC
1,2-Dichloropropane - MSD	EPA-8260	**84.1**	**8**		10.0	0	84.1	50	150	25	04/09/2024	DLC
Dibromomethane - MS	EPA-8260	**88.5**			10.0	0	88.5	50	150		04/09/2024	DLC
Dibromomethane - MSD	EPA-8260	**95.6**	**8**		10.0	0	95.6	50	150	25	04/09/2024	DLC
Bromodichloromethane - MS	EPA-8260	**90.1**			10.0	0	90.1	50	150		04/09/2024	DLC
Bromodichloromethane - MSD	EPA-8260	**97.5**	**8**		10.0	0	97.5	50	150	25	04/09/2024	DLC
Trans-1,3-Dichloropropene - MS	EPA-8260	**101**			10.0	0	101	50	150		04/09/2024	DLC
Trans-1,3-Dichloropropene - MSD	EPA-8260	**109**	**8**		10.0	0	109	50	150	25	04/09/2024	DLC
4-Methyl-2-Pentanone - MS	EPA-8260	**76.2**			10.0	0	76.2	50	150		04/09/2024	DLC
4-Methyl-2-Pentanone - MSD	EPA-8260	**83.4**	**9**		10.0	0	83.4	50	150	25	04/09/2024	DLC
Toluene - MS	EPA-8260	**96.6**			10.0	0.075	96.6	71.7	139		04/09/2024	DLC
Toluene - MSD	EPA-8260	**105**	**8**		10.0	0.075	105	71.7	139	20.5	04/09/2024	DLC
Cis-1,3-Dichloropropene - MS	EPA-8260	**82.9**			10.0	0	82.9	50	150		04/09/2024	DLC
Cis-1,3-Dichloropropene - MSD	EPA-8260	**90.2**	**8**		10.0	0	90.2	50	150	25	04/09/2024	DLC
1,1,2-Trichloroethane - MS	EPA-8260	**91.1**			10.0	0	91.1	50	150		04/09/2024	DLC
1,1,2-Trichloroethane - MSD	EPA-8260	**98.7**	**8**		10.0	0	98.7	50	150	25	04/09/2024	DLC
2-Hexanone - MS	EPA-8260	**67.1**			10.0	0	67.1	50	150		04/09/2024	DLC
2-Hexanone - MSD	EPA-8260	**73.4**	**9**		10.0	0	73.4	50	150	25	04/09/2024	DLC
1,3-Dichloropropane - MS	EPA-8260	**94.0**			10.0	0	94.0	50	150		04/09/2024	DLC
1,3-Dichloropropane - MSD	EPA-8260	**102**	**8**		10.0	0	102	50	150	25	04/09/2024	DLC
Tetrachloroethylene - MS	EPA-8260	**80.4**			10.0	0	80.4	50	150		04/09/2024	DLC
Tetrachloroethylene - MSD	EPA-8260	**86.9**	**8**		10.0	0	86.9	50	150	25	04/09/2024	DLC
Dibromochloromethane - MS	EPA-8260	**112**			10.0	0	112	50	150		04/09/2024	DLC
Dibromochloromethane - MSD	EPA-8260	**122**	**8**		10.0	0	122	50	150	25	04/09/2024	DLC
1,2-Dibromoethane - MS	EPA-8260	**104**			10.0	0	104	50	150		04/09/2024	DLC
1,2-Dibromoethane - MSD	EPA-8260	**113**	**8**		10.0	0	113	50	150	25	04/09/2024	DLC

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CERTIFICATE OF ANALYSIS

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DATE: 4/16/2024
ALS SDG#: EV24040001
WDOE ACCREDITATION: C601

CLIENT CONTACT: Rick Bieber
CLIENT PROJECT: GSHDM: Tacoma Marine View Data
Mgmt / SSOW: ENV229-402-D02-2100

MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene - MS	EPA-8260	**100**			10.0	0	100	73	131		04/09/2024	DLC
Chlorobenzene - MSD	EPA-8260	**109**	**8**		10.0	0	109	73	131	20.5	04/09/2024	DLC
1,1,1,2-Tetrachloroethane - MS	EPA-8260	**111**			10.0	0	111	50	150		04/09/2024	DLC
1,1,1,2-Tetrachloroethane - MSD	EPA-8260	**119**	**7**		10.0	0	119	50	150	25	04/09/2024	DLC
Ethylbenzene - MS	EPA-8260	**105**			10.0	0	105	50	150		04/09/2024	DLC
Ethylbenzene - MSD	EPA-8260	**113**	**8**		10.0	0	113	50	150	25	04/09/2024	DLC
Styrene - MS	EPA-8260	**107**			10.0	0	107	50	150		04/09/2024	DLC
Styrene - MSD	EPA-8260	**117**	**8**		10.0	0	117	50	150	25	04/09/2024	DLC
Bromoform - MS	EPA-8260	**120**			10.0	0	120	50	150		04/09/2024	DLC
Bromoform - MSD	EPA-8260	**130**	**8**		10.0	0	130	50	150	25	04/09/2024	DLC
Isopropylbenzene - MS	EPA-8260	**110**			10.0	0	110	50	150		04/09/2024	DLC
Isopropylbenzene - MSD	EPA-8260	**119**	**8**		10.0	0	119	50	150	25	04/09/2024	DLC
1,1,2,2-Tetrachloroethane - MS	EPA-8260	**76.6**			10.0	0	76.6	50	150		04/09/2024	DLC
1,1,2,2-Tetrachloroethane - MSD	EPA-8260	**84.8**	**10**		10.0	0	84.8	50	150	25	04/09/2024	DLC
1,2,3-Trichloropropane - MS	EPA-8260	**80.6**			10.0	0	80.6	50	150		04/09/2024	DLC
1,2,3-Trichloropropane - MSD	EPA-8260	**88.4**	**9**		10.0	0	88.4	50	150	25	04/09/2024	DLC
Bromobenzene - MS	EPA-8260	**97.3**			10.0	0	97.3	50	150		04/09/2024	DLC
Bromobenzene - MSD	EPA-8260	**107**	**10**		10.0	0	107	50	150	25	04/09/2024	DLC
N-Propyl Benzene - MS	EPA-8260	**86.5**			10.0	0	86.5	50	150		04/09/2024	DLC
N-Propyl Benzene - MSD	EPA-8260	**95.5**	**10**		10.0	0	95.5	50	150	25	04/09/2024	DLC
2-Chlorotoluene - MS	EPA-8260	**84.4**			10.0	0	84.4	50	150		04/09/2024	DLC
2-Chlorotoluene - MSD	EPA-8260	**92.9**	**10**		10.0	0	92.9	50	150	25	04/09/2024	DLC
1,3,5-Trimethylbenzene - MS	EPA-8260	**88.4**			10.0	0	88.4	50	150		04/09/2024	DLC
1,3,5-Trimethylbenzene - MSD	EPA-8260	**97.8**	**10**		10.0	0	97.8	50	150	25	04/09/2024	DLC
4-Chlorotoluene - MS	EPA-8260	**85.2**			10.0	0	85.2	50	150		04/09/2024	DLC
4-Chlorotoluene - MSD	EPA-8260	**94.2**	**10**		10.0	0	94.2	50	150	25	04/09/2024	DLC
T-Butyl Benzene - MS	EPA-8260	**99.3**			10.0	0	99.3	50	150		04/09/2024	DLC
T-Butyl Benzene - MSD	EPA-8260	**110**	**10**		10.0	0	110	50	150	25	04/09/2024	DLC
1,2,4-Trimethylbenzene - MS	EPA-8260	**88.9**			10.0	0	88.9	50	150		04/09/2024	DLC
1,2,4-Trimethylbenzene - MSD	EPA-8260	**98.3**	**10**		10.0	0	98.3	50	150	25	04/09/2024	DLC
S-Butyl Benzene - MS	EPA-8260	**90.4**			10.0	0	90.4	50	150		04/09/2024	DLC
S-Butyl Benzene - MSD	EPA-8260	**100**	**10**		10.0	0	100	50	150	25	04/09/2024	DLC
P-Isopropyltoluene - MS	EPA-8260	**94.8**			10.0	0	94.8	50	150		04/09/2024	DLC
P-Isopropyltoluene - MSD	EPA-8260	**105**	**10**		10.0	0	105	50	150	25	04/09/2024	DLC
1,3-Dichlorobenzene - MS	EPA-8260	**96.3**			10.0	0	96.3	50	150		04/09/2024	DLC
1,3-Dichlorobenzene - MSD	EPA-8260	**107**	**10**		10.0	0	107	50	150	25	04/09/2024	DLC
1,4-Dichlorobenzene - MS	EPA-8260	**96.1**			10.0	0	96.1	50	150		04/09/2024	DLC
1,4-Dichlorobenzene - MSD	EPA-8260	**107**	**11**		10.0	0	107	50	150	25	04/09/2024	DLC
N-Butylbenzene - MS	EPA-8260	**89.7**			10.0	0	89.7	50	150		04/09/2024	DLC

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MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
N-Butylbenzene - MSD	EPA-8260	**100**	**11**		10.0	0	100	50	150	25	04/09/2024	DLC
1,2-Dichlorobenzene - MS	EPA-8260	**93.0**			10.0	0	93.0	50	150		04/09/2024	DLC
1,2-Dichlorobenzene - MSD	EPA-8260	**103**	**10**		10.0	0	103	50	150	25	04/09/2024	DLC
1,2-Dibromo 3-Chloropropane - MS	EPA-8260	**82.0**			10.0	0	82.0	50	150		04/09/2024	DLC
1,2-Dibromo 3-Chloropropane - MSD	EPA-8260	**90.8**	**10**		10.0	0	90.8	50	150	25	04/09/2024	DLC
1,2,4-Trichlorobenzene - MS	EPA-8260	**91.3**			10.0	0	91.3	50	150		04/09/2024	DLC
1,2,4-Trichlorobenzene - MSD	EPA-8260	**104**	**13**		10.0	0	104	50	150	25	04/09/2024	DLC
Hexachlorobutadiene - MS	EPA-8260	**110**			10.0	0	110	50	150		04/09/2024	DLC
Hexachlorobutadiene - MSD	EPA-8260	**122**	**11**		10.0	0	122	50	150	25	04/09/2024	DLC
Naphthalene - MS	EPA-8260	**76.3**			10.0	0	76.3	50	150		04/09/2024	DLC
Naphthalene - MSD	EPA-8260	**91.6**	**18**		10.0	0	91.6	50	150	25	04/09/2024	DLC
1,2,3-Trichlorobenzene - MS	EPA-8260	**86.6**			10.0	0	86.6	50	150		04/09/2024	DLC
1,2,3-Trichlorobenzene - MSD	EPA-8260	**99.6**	**14**		10.0	0	99.6	50	150	25	04/09/2024	DLC
Xylenes - MS	EPA-8260	**106**			30.0	0	106	50	150		04/09/2024	DLC
Xylenes - MSD	EPA-8260	**115**	**8**		30.0	0	115	50	150	25	04/09/2024	DLC

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4 - MS	EPA-8260	**98.1**			5.00	0	4.90	71	130		04/09/2024	DLC
1,2-Dichloroethane-d4 - MSD	EPA-8260	**98.4**			5.00	0	4.92	71	130		04/09/2024	DLC
Toluene-d8 - MS	EPA-8260	**104**			5.00	0	5.18	80	120		04/09/2024	DLC
Toluene-d8 - MSD	EPA-8260	**104**			5.00	0	5.18	80	120		04/09/2024	DLC
4-Bromofluorobenzene - MS	EPA-8260	**81.6**			5.00	0	4.08	78	120		04/09/2024	DLC
4-Bromofluorobenzene - MSD	EPA-8260	**82.6**			5.00	0	4.13	78	120		04/09/2024	DLC

SQ2 - Spike outside of control limits due to matrix effect.

*Calc Result = (Sample Result - Parent Sample Result)

ALS Test Batch ID: R463709 - Water

Parent Sample: MVD-032824-SS-SW05

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
Cyanide - MS	SM4500-CN E	**112**			100	0	112	80	120		04/10/2024	EBS
Cyanide - MSD	SM4500-CN E	**112**	**0**		100	0	112	80	120	25	04/10/2024	EBS

*Calc Result = (Sample Result - Parent Sample Result)

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CERTIFICATE OF ANALYSIS

APPROVED BY

Rob Greer
Laboratory Director

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24040001

SSOW: ENV229-402-002-2100

Date 3/28/24 Page 1 Of 1

PROJECT ID:	GS/TOM: TACOMA MARINE VIEW DATA MGMT
REPORT TO COMPANY:	GHD / GEOSYNTEC CONSULTANTS
PROJECT MANAGER:	RICH BIEBER / JEFFREY CLEVEN
ADDRESS:	PROJECT ADDRESS - MARINE VIEW DR, TACOMA WA 98422
PHONE:	253-493-0190 P.O. #: TR0837J
E-MAIL:	RBIEBER@GEOSYNTEC.COM
INVOICE TO COMPANY:	GEOSYNTEC
ATTENTION:	RICH BIEBER
ADDRESS:	520 PIKE ST. SUITE 2600 SEATTLE, WA 98101

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270 SIM	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081 + HEXACHLORO-BENZENE	Metals-MTCA-5	RCRA-8	TAL	Pri Pol	Metals Other (Specify) SW-846-6020A/6010C	VOA	Semi-Vol	Pest	Herbs	TCLP-Metals	OTHER (Specify): CYANIDE SM4500CN-E LL	LL MERCURY	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MVD-032824-SS-TRIP BLANK	03-28-24	0700	H_2O	1									X			X		X											X	X	2	
2. MVD-032824-SS-SW01		1045		2									X			X		X											X	X	9	
3. MVD-032824-SS-SW02		1100		3									X			X		X											X	X	9	
4. MVD-032824-SS-DUP 2		1105		4									X			X		X											X	X	9	
5. MVD-032824-SS-SW03		0955		5									X			X		X											X	X	9	
6. MVD-032824-SS-SW05	3-28-24	1015	H_2O	6									X			X		X											X	X	27	
7. ~~MVD-032824-SS-SW06~~	NOT	SAMPLED	SS	3/28/24																											9	
8. MVD-032824-SS-SW07	3-28-24	1130	H_2O	7									X			X		X											X	X	9	
9. MVD-032824-SS-SW08	3-28-24	1145	H_2O	8									X			X		X											X	X	9	
10.																																

SPECIAL INSTRUCTIONS: SEE PROJECT SSOW. 4 TOTAL COOLERS (LABELLED W/ "MARINE" RICK BIEBER)

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: STEPHEN SPROTT, GEOSYNTEC, 3/29/24 (1050)
   Received By: AFREESE, ALS 03-29-24 @ 1140
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: (10 Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard 3 1 SAME DAY

OTHER: Specify: SEE PROJECT SPECIFIC SSOW ENV229-402-002-2100 FOR MARINE VIEW DR.

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GHD/Geosyntec Consul. ALS Job#: EV24040001

Project: GSHOM: Tacoma Marine View

Login Date: 3/29/24 Login Time: 1140 Login By: AV

Type of Shipping Container: Cooler ✓ Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Courier ___ Hand Delivered ___ ALS Courier ✓
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? ___ Where? ___ Custody seal date: ___ Seal name: ___	___	___	✓
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	✓	___	___
Did all bottles have labels?	✓	___	___
Did all bottle labels and tags agree with Chain of Custody?	___	✓	___
Were samples received within hold time?	✓	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	✓	___	___
Was sufficient amount of sample sent for the tests indicated?	___	✓	___
Was correct preservation added to samples?	✓	___	___
Subcontract test containers added to Subcontract Bin?	✓	___	___
Wetchem test containers marked with required Tests?	___	___	✓
Short hold time test containers delivered to analysts?	___	___	✓
Were VOA vials checked for absence of air bubbles?	✓	___	✓ AV
Bubbles present in sample #: none			
5035A kits received? # Low Kits: ___ # High Kits: ___	___	___	✓
5035A kits returned? # Low Kits: ___ # High Kits: ___			
Temperature of cooler upon receipt: 3.7°C/4.6°C 4.7°C/5.6°C On ice?	✓	___	___

Explain any discrepancies:

# of containers did not match COC

only 1 HCl VOA for 8260, Lab #5

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call:

ALS Environmental
ALS Group USA, Corp.
1317 South 13th Avenue
Kelso, WA 98626
T: +1 360 577 7222
F: +1 360 636 1068
www.alsglobal.com

September 12, 2014 Analytical Report for Service Request No: K1408631

Susan Scrocchi
Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, NY 14304

RE: Marine View Drive RI/FS/009973-D21101-403

Dear Susan:

Enclosed are the results of the samples submitted to our laboratory on August 14, 2014. For your reference, these analyses have been assigned our service request number K1408631.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/aj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request No.:**	K1408631
Project:	Marine View Drive RI/FS/ 009973-D21101-403	**Date Received:**	08/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Eleven water samples were received for analysis at ALS Environmental on 08/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Calcium, Iron, Manganese and Sodium for sample G-081314-RB-GMB3R-004 were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Organochlorine Pesticides by EPA Method 8081

Elevated Detection Limits:
The detection limit was elevated for a few analytes in most samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Matrix Spike Recovery Exceptions:
The control criteria for the matrix spike recovery of Endrin Aldehyde for sample G-081314-RB-GMB3R-04 was not applicable. The chromatogram indicated non-target matrix background components contributed to the reported matrix spike concentrations. Thus, the reported recoveries contained a high bias. Based on the magnitude of background contribution, the interference appeared to be minimal.

Approved by_____ Howard B. Holmes _____

Calibration Verification Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081B requires the use of dual column confirmation. When the Continuing Calibration Verification (CCV) criterion is met for both columns, the lower of the two sample results is generally reported. The primary evaluation criteria were not met on the confirmation column for a few analytes. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Surrogate Exceptions:
The upper control criterion was exceeded for Decachlorobiphenyl in samples G-081314-RB-GMB6R-004. No target analytes were detected in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Lab Control Sample Exceptions:
The lower control criterion was exceeded for Aroclor 1016 in Laboratory Control Sample (LCS) KWG1412023-5. The extracts in the associated preparation batch required additional cleanups due to the presence of sulfur and other non-target matrix interferences that prevented accurate identification/quantitation of the target analytes. The analysis of the LCS prior to the additional cleanups indicated that spike recovery of Aroclor 1016 was within the control criteria. The error associated with reduced recovery in the post-cleanup LCS indicated the additional cleanups may have introduced a low bias to the sample results reported for the associated target analytes (Aroclors 1016, 1221, 1232, 1242, and 1248). The data was flagged to indicate the problem. No further corrective action was taken at the request of the Project Chemist.

Elevated Detection Limits:
Sample G-081314-RB-GMB1-005 required dilution due to the presence of elevated levels of target analyte. The reporting limits were adjusted to reflect the dilution.

The detection limit was elevated for all target Aroclors in sample G-081314-RB-GMB6R-008. The chromatogram indicated the presence of Aroclor 1262 and other non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Sample Notes and Discussion:
Multiple Aroclors were identified in several field samples: Aroclor 1242, Aroclor 1254, and/or Aroclor 1260. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective. In particular, when mixtures are present, differentiating Aroclor 1242 from Aroclor 1248 can be difficult.

A review of the sample chromatograms indicated the presence of PCB patterns or matrix components that spanned the entire elution range from Aroclor 1242 through the end of Aroclor 1254/Aroclor 1260. Based on individual PCB peaks in the early portion of the chromatogram, Aroclor 1242 was identified and quantitated. Although the presence of Aroclor 1248 could not be ruled out, Aroclor 1242 appeared to be the best match based on the early eluting peaks in the PCB chromatogram. Aroclors 1254 and/or 1260 were identified based on the presence of later eluting PCB peaks in the chromatogram.

When Aroclor mixtures are present in a sample, care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors 1242, 1254, and/or 1260 is present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____ Howard B. Holmes _____

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS18\0819F005.D: Bromoform. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Vinyl Chloride for sample G-081314-RB-GMB3R-004 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was appropriate.

Elevated Detection Limits:
Sample G-081314-RB-GMB1-005 required dilution due to foaming matrix. The reporting limits were adjusted to reflect the dilution.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

Lab Control Sample Exceptions:
The advisory criterion was exceeded for Bis(2-ethylhexyl) Phthalate in Duplicate Laboratory Control Sample (DLCS) KWG1411665-6. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, this compound is not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for Hexachlorobutadiene in the replicate matrix spike analyses of sample G-081314-RB-GMB3R-004 was outside control criteria. In general, the RPD was relatively high for all spiked compounds, which indicates a low bias in the Matrix Spike (MS) and Matrix Spike Duplicate (MSD). All spike recoveries for the analyte in question were within acceptance limits in the MS, DMS, and associated Laboratory Control Sample (LCS), indicating the analytical batch was in control. No further corrective action was appropriate.

The Relative Percent Difference (RPD) for Bis(2-ethylhexyl) Phthalate in the replicate Laboratory Control Sample (LCS) analyses (KWG1411665-5 and KWG1411665-6) was outside control criteria. The data was flagged to indicate the problem. The results indicated potential contamination of the DLCS. .

Elevated Detection Limits:
The detection limits were elevated in sample G-081314-RB-GMB1-005. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored, which indicated the need to perform a dilution prior to injection into the instrument.

Sample Notes and Discussion:
The result reported for Phenol in sample G-081314-RB-GMB1-005 may contain a slight bias. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected samples. The results were flagged with "X" to indicate the issue.

The result reported for 4-Methylphenol in sample G-081314-RB-GMB6R-008 may contain a slight bias. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected samples. The results were flagged with "X" to indicate the issue.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES

Address: _____ K1408631 COC NO.: 38631

Phone: _____ Fax: _____ PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 009973-D21101-403	**Laboratory Name:** ALS Kelso	**Lab Location:** Kelso WA	**SSOW ID:** 229-402-D02-1100
Project Name: Marine View Drive RI/FS	**Lab Contact:** Howard Holmes	**Lab Quote No:**	**Cooler No:** N/A
Project Location: 1905 MVD TACOMA WA			**Carrier:** ALS
Chemistry Contact: Sue Scrocchi			**Airbill No:** ✓
Sampler(s): Rick Bieber			**Date Shipped:** 8/14/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved Amber	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other: 40 mL VOA	Total Containers/Sample	Analysis Requested (See Back of COC for Definitions)	MS/MSD Request	Comments/ Special Instructions:
1	G-081214-RB-GMB~~2A~~-001	8/12	2:35	WG	G	3	1	1		1			3	9			
2	G-081214-RB-FD-002	8/12		WG	G	3	1	1		1			3	9			Dup
3	G-081214-RB-GMB2-003	8/12	4:30	WG	G	3	1	1		1			3	9			
4	G-081314-RB-GMB3R-004	8/13	9:45	WG	G	9	3	3		3			9	27			MS/MSD
5	G-081314-RB-GMB1-005	8/13	12:35	WG	G	3	1	1		1			3	9			
6	G-081314-RB-GMB1A-006	8/13	2:15	WG	G	3	1	1		1			3	9			
7	G-081314-RB-GMB6A-007	8/13	4:10	WG	G	3	1	1		1			3	9			
8	G-081314-RB-GMB6R-008	8/13	5:25	WG	G	3	1	1		1			3	9			
9	Rinse Blank 1	8/12		WG	G	3	1	1		1			3	9			
10	Rinse Blank 2	8/13		WG	G	3	1	1		1			3	9			
11																	
12																	
13																	
14																	
15																	

SOW

SSOW

TAT Required in business days (use separate COCs for different TATs): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☒ Other: SEE SSOW

Total Number of Containers: 108

All Samples in Cooler must be on COC

Notes/ Special Requirements:

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	[signature]	CRA	8/14/14	10:20	[signature]	ALS	8-14-14	14:20
2.					[signature]	ALS	8/14/14	1400
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

PC HH

Cooler Receipt and Preservation Form

Client / Project: CRA Service Request K14 8631

Received: 8/14/14 Opened: 8/14/14 By: KO Unloaded: 8/14/14 By: KO

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
6.1	6.0	6.3	6.2	-.1	328	386031		
5.1	4.9	3.3	3.1	-.2	298			
9.1	9.4	8.4	8.7	+.3	323			
6.2	5.9	7.8	7.5	-.3	334			
8.5	8.6	10.7	10.8	+.1	349			

4. Packing material: (*Inserts*) *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y (N)
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y (N)
12. Was C12/Res negative? _ NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
G-081314-RB-GMBL-005	1-500ml	*			X	HNO3	1ml	RE/1-27-C	KO	1510
G-081314-RB-GMBLDR-008	1-500ml				X	HNO3	1ml	RE/1-27-C	KO	1510

Notes, Discrepancies, & Resolutions: * pH did not correct

PC HH

Cooler Receipt and Preservation Form

Client / Project: _____ Service Request *K14* 8631

Received: 8/14/14 Opened: 8/14/14 By: [illegible] Unloaded: 8/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
8.1	7.7	5.1	4.7	-.4	282	38631			

4. Packing material: (*Inserts*) *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y (N)*
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y (N)*
12. Was C12/Res negative? _ NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: * See page 1

ALS Group USA, Corp.
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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/14 - 08/13/14
Sample Matrix:	Water	**Date Received:**	08/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
G-081214-RB-GMB2A-001	K1408631-001	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081214-RB-FD-002	K1408631-002	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081214-RB-GMB2-003	K1408631-003	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081314-RB-GMB3R-004	K1408631-004	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081314-RB-GMB1-005	K1408631-005	**0.0045**	**J**	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081314-RB-GMB1A-006	K1408631-006	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
G-081314-RB-GMB6A-007	K1408631-007	ND	U	0.0047	0.0009	1	08/22/14 10:30	8/22/14	
G-081314-RB-GMB6R-008	K1408631-008	**0.001**	**J**	0.0047	0.0009	1	08/22/14 10:30	8/22/14	
Rinse Blank1	K1408631-009	ND	U	0.0047	0.0009	1	08/22/14 10:30	8/22/14	
Rinse Blank2	K1408631-010	ND	U	0.0047	0.0009	1	08/22/14 10:30	8/22/14	
Method Blank	K1408631-MB1	ND	U	0.0047	0.0009	1	08/20/14 09:00	8/20/14	
Method Blank	K1408631-MB2	ND	U	0.0047	0.0009	1	08/22/14 10:30	8/22/14	
Method Blank	K1408631-MB3	ND	U	0.0047	0.0009	1	08/22/14 10:30	8/22/14	

ALS Group USA, Corp.

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/14
Sample Matrix:	Water	**Date Received:**	08/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Replicate Sample Summary

Cyanide, Total

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
G-081314-RB-GMB3R-004	K1408631-004DUP	0.0047	0.0009	ND U	ND U	NC	NC	20	08/20/14
G-081314-RB-GMB6A-007	K1408631-007DUP	0.0047	0.0009	ND U	ND U	NC	NC	20	08/22/14

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/14
Sample Matrix:	Water	**Date Received:**	08/14/14
		Date Analyzed:	08/20/14
		Date Extracted:	08/20/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	mg/L
Lab Code:	K1408631-004	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike			**Duplicate Matrix Spike**					
		K1408631-004MS			K1408631-004DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.0975	0.100	98	0.0925	0.100	92	23-148	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/14
Sample Matrix:	Water	**Date Received:**	08/14/14
		Date Analyzed:	08/22/14
		Date Extracted:	08/22/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	G-081314-RB-GMB6A-007	**Units:**	mg/L
Lab Code:	K1408631-007	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike			**Duplicate Matrix Spike**					
		K1408631-007MS			K1408631-007DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.0830	0.100	83	0.0835	0.100	84	23-148	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Analyzed:**	08/20/14
Sample Matrix:	Water	**Date Extracted:**	08/20/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	407549

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1408631-LCS1	0.164	0.150	109	84-115

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Analyzed:**	08/22/14
Sample Matrix:	Water	**Date Extracted:**	08/22/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	408015

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1408631-LCS2	0.153	0.150	102	84-115
Lab Control Sample	K1408631-LCS3	0.134	0.150	89	84-115

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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12-13/14
Sample Matrix:	Water	**Date Received:**	08/14/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
G-081214-RB-GMB2A-001	K1408631-001	0.5	0.06	1	08/18/14	08/19/14	4.07	
G-081214-RB-FD-002	K1408631-002	0.5	0.06	1	08/18/14	08/19/14	3.26	
G-081214-RB-GMB2-003	K1408631-003	1.0	0.12	2	08/18/14	08/19/14	16.6	
G-081314-RB-GMB3R-004	K1408631-004	0.5	0.06	1	08/18/14	08/19/14	10.1	
G-081314-RB-GMB1-005	K1408631-005	2.5	0.3	5	08/18/14	08/19/14	89.4	
G-081314-RB-GMB1A-006	K1408631-006	0.5	0.06	1	08/18/14	08/19/14	1.62	
G-081314-RB-GMB6A-007	K1408631-007	0.5	0.06	1	08/18/14	08/19/14	2.43	
G-081314-RB-GMB6R-008	K1408631-008	0.5	0.06	1	08/18/14	08/19/14	26.7	
Rinse Blank1	K1408631-009	0.5	0.06	1	08/18/14	08/19/14	0.28	J
Rinse Blank2	K1408631-010	0.5	0.06	1	08/18/14	08/19/14	0.24	J
Method Blank 1	K1408631-MB1	0.5	0.06	1	08/18/14	08/19/14	ND	
Method Blank 2	K1408631-MB2	0.5	0.06	1	08/18/14	08/19/14	0.24	J
Method Blank 3	K1408631-MB3	0.5	0.06	1	08/18/14	08/19/14	0.10	J

ALS Group USA, Corp.
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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/14
Sample Matrix:	Water	**Date Received:**	08/14/14
		Date Extracted:	08/18/14
		Date Analyzed:	08/19/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	G-081314-RB-GMB3R-004	Units:	ng/L
Lab Code:	K1408631-004MS, K1408631-004MSD	Basis:	NA
Test Notes:			

				Spike Level		Sample	Spike Result		Percent Recovery				
Analyte	**Prep Method**	**Analysis Method**	**MRL**	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**ALS Acceptance Limits**	**Relative Percent Difference**	**Result Notes**
Mercury	METHOD	1631E	0.5	50	50	10.1	53.9	50.4	88	81	71-125	7	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/19/14

Ongoing Precision and Recovery (OPR) Sample Summary

Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.44	109	77-123	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/19/14

Ongoing Precision and Recovery (OPR) Sample Summary

Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.52	110	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/19/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.54	111	77-123	

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/12/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: G-081214-RB-GMB2A-001 **Lab Code:** K1408631-001

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	1330		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.116		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	3.4		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	17.9		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.055		
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.142		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	13800		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	7.22		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.895		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	6.35		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	16800		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	7.42		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	11300		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	366		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	4.04		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	3110		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.4	J	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.016	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	9420		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.007	J	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	6.51		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	42.1		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/12/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **G-081214-RB-FD-002** **Lab Code:** **K1408631-002**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	1370		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.120		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	3.5		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	18.4		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.058		
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.168		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	13900		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	7.83		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.957		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	6.64		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	17300		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	8.10		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	11400		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	375		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	4.45		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	3190		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.012	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	9520		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.008	J	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	7.08		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	46.7		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/12/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **G-081214-RB-GMB2-003** **Lab Code:** **K1408631-003**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	148		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.374		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	9.5		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	2430		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.028		
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.724		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	81300		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	2.38		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	5.64		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	6.17		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	44900		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	42.8		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	28300		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	228		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	43.5		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	17300		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	4.5		
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.026		
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	185000		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	1.37		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	348		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/13/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: G-081314-RB-GMB3R-004 **Lab Code:** K1408631-004

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	730		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.402		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	4.7		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	79.3		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.034		
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.068		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	45100		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	2.82		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.998		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	5.06		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	32700		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	3.15		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	32900		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	2010		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	3.62		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	11400		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	1.1		
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.022		
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	98300		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	3.10		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	21.7		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-D21101-403
Project Name: Marine View Drive RI/FS
Matrix: WATER

Service Request: K1408631
Date Collected: 08/13/14
Date Received: 08/14/14
Units: ug/L
Basis: NA

Sample Name: G-081314-RB-GMB1-005 **Lab Code:** K1408631-005

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	2130		
Antimony	6020A	0.100	0.010	1.0	08/15/14	08/26/14	3.03		
Arsenic	6020A	1.0	0.2	1.0	08/15/14	08/26/14	50.7		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	1530		
Beryllium	6020A	0.040	0.012	1.0	08/15/14	08/26/14	0.226		
Cadmium	6020A	0.040	0.010	1.0	08/15/14	08/26/14	4.85		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	28000		
Chromium	6020A	0.40	0.04	1.0	08/15/14	08/26/14	19.5		
Cobalt	6020A	0.040	0.012	1.0	08/15/14	08/26/14	6.05		
Copper	6020A	0.20	0.04	1.0	08/15/14	08/26/14	33.7		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	39000		
Lead	6020A	0.040	0.010	1.0	08/15/14	08/26/14	253		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	53900		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	164		
Nickel	6020A	0.40	0.04	1.0	08/15/14	08/26/14	119		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	38000		
Selenium	6020A	2.0	0.6	1.0	08/15/14	08/26/14	16.4		
Silver	6020A	0.040	0.008	1.0	08/15/14	08/26/14	0.051		
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	401000		
Thallium	6020A	0.040	0.010	1.0	08/15/14	08/26/14	0.026	J	
Vanadium	6020A	0.40	0.06	1.0	08/15/14	08/26/14	45.2		
Zinc	6020A	1.0	0.4	1.0	08/15/14	08/26/14	441		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/13/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: G-081314-RB-GMB1A-006 **Lab Code:** K1408631-006

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	2000		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.034	J	
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	0.4	J	
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	33.9		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.058		
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.016	J	
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	42900		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	2.91		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	1.15		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	5.77		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	18200		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.744		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	13900		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	219		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	3.49		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	5050		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.010	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	14300		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.007	J	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	7.57		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	20.4		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/13/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **G-081314-RB-GMB6A-007** **Lab Code:** **K1408631-007**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	585		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.062		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	0.4	J	
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	10.1		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.019	J	
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.050		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	19300		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	2.19		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.316		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	2.12		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	4040		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	2.46		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	12600		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	77.6		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	1.48		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	4150		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.004	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	14200		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	2.73		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	14.8		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/13/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: G-081314-RB-GMB6R-008 **Lab Code:** K1408631-008

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	34.5		
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	2.37		
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	9.3		
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	711		
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.013	J	
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	1.07		
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	86700		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	1.21		
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	1.22		
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	3.57		
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	2840		
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	70.0		
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	38400		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	102		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	20.1		
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	22900		
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	2.3		
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.004	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	199000		
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	1.59		
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	23.3		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/12/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **Rinse Blank1** **Lab Code:** **K1408631-009**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	4.0	U	
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.005	U	
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	0.1	U	
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	0.6	U	
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.006	U	
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	32.5		
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.16	J	
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.006	U	
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	0.04	J	
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	12.2	J	
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.011	J	
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	13.3		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	0.2	J	
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.08	J	
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	60.0	U	
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.004	U	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	89.3	J	
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	0.04	J	
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	0.5		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1408631
Project No.:	009973-D21101-403	**Date Collected:**	08/13/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **Rinse Blank2** **Lab Code:** **K1408631-010**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	4.0	U	
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.005	U	
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	0.1	U	
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	0.6	U	
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.006	U	
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	16.6	J	
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.12	J	
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.006	U	
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	0.02	J	
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	7.4	J	
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.008	J	
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	7.4		
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	2.2		
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.04	J	
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	60.0	U	
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.004	U	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	31.5	J	
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	0.03	J	
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	0.6		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1408631
Project No.: 009973-D21101-403
Date Collected:
Project Name: Marine View Drive RI/FS
Date Received:
Matrix: WATER
Units: ug/L
Basis: NA

Sample Name: Method Blank
Lab Code: K1408631-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	10.0	4.0	1.0	08/15/14	08/19/14	4.0	J	
Antimony	6020A	0.050	0.005	1.0	08/15/14	08/26/14	0.005	U	
Arsenic	6020A	0.5	0.1	1.0	08/15/14	08/26/14	0.1	U	
Barium	6010C	4.0	0.6	1.0	08/15/14	08/19/14	0.6	U	
Beryllium	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.006	U	
Cadmium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Calcium	6010C	20.0	0.9	1.0	08/15/14	08/19/14	1.4	J	
Chromium	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.03	J	
Cobalt	6020A	0.020	0.006	1.0	08/15/14	08/26/14	0.008	J	
Copper	6020A	0.10	0.02	1.0	08/15/14	08/26/14	0.02	U	
Iron	6010C	20.0	3.0	1.0	08/15/14	08/19/14	3.0	U	
Lead	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.006	J	
Magnesium	6010C	5.0	0.3	1.0	08/15/14	08/19/14	0.3	J	
Manganese	6010C	1.0	0.1	1.0	08/15/14	08/19/14	0.1	U	
Nickel	6020A	0.20	0.02	1.0	08/15/14	08/26/14	0.02	U	
Potassium	6010C	200	60.0	1.0	08/15/14	08/19/14	60.0	U	
Selenium	6020A	1.0	0.3	1.0	08/15/14	08/26/14	0.3	U	
Silver	6020A	0.020	0.004	1.0	08/15/14	08/26/14	0.007	J	
Sodium	6010C	200	20.0	1.0	08/15/14	08/19/14	20.0	U	
Thallium	6020A	0.020	0.005	1.0	08/15/14	08/26/14	0.005	U	
Vanadium	6020A	0.20	0.03	1.0	08/15/14	08/26/14	0.03	U	
Zinc	6020A	0.5	0.2	1.0	08/15/14	08/26/14	0.2	U	

Comments:

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1408631

Project No.: 009973-D21101-403 **Units:** UG/L

Project Name: Marine View Drive RI/FS **Basis:** NA

Matrix: WATER

Sample Name: G-081314-RB-GMB3R-004S **Lab Code:** K1408631-004S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	75 - 125	2850		730		2000.00	106.0		6010C
Antimony	75 - 125	48.5		0.402		50.00	96.2		6020A
Arsenic	75 - 125	52.6		4.7		50.00	95.8		6020A
Barium	75 - 125	1070		79.3		1000.00	99.1		6010C
Beryllium	75 - 125	2.50		0.034		2.50	98.6		6020A
Cadmium	75 - 125	24.6		0.068		25.00	98.1		6020A
Calcium		55400		45100		10000.00	103.0		6010C
Chromium	75 - 125	13.0		2.82		10.00	101.8		6020A
Cobalt	75 - 125	25.7		0.998		25.00	98.8		6020A
Copper	75 - 125	17.1		5.06		12.50	96.3		6020A
Iron		33900		32700		1000.00	120.0		6010C
Lead	75 - 125	51.3		3.15		50.00	96.3		6020A
Magnesium	75 - 125	42000		32900		10000.00	91.0		6010C
Manganese		2520		2010		500.00	102.0		6010C
Nickel	75 - 125	27.7		3.62		25.00	96.3		6020A
Potassium	75 - 125	21100		11400		10000.00	97.0		6010C
Selenium	75 - 125	47.2		1.1		50.00	92.2		6020A
Silver	75 - 125	11.9		0.022		12.50	95.0		6020A
Sodium		106000		98300		10000.00	77.0		6010C
Thallium	75 - 125	49.8		0.005	U	50.00	99.6		6020A
Vanadium	75 - 125	29.0		3.10		25.00	103.6		6020A
Zinc	75 - 125	45.5		21.7		25.00	95.2		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1408631

Project No.: 009973-D21101-403 **Units:** UG/L

Project Name: Marine View Drive RI/FS **Basis:** NA

Matrix: WATER

Sample Name: G-081314-RB-GMB3R-004D **Lab Code:** K1408631-004D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	730		701		4.1		6010C
Antimony	20	0.402		0.414		2.9		6020A
Arsenic	20	4.7		4.7		0.0		6020A
Barium	20	79.3		77.8		1.9		6010C
Beryllium		0.034		0.035		2.9		6020A
Cadmium		0.068		0.071		4.3		6020A
Calcium	20	45100		44200		2.0		6010C
Chromium	20	2.82		2.79		1.1		6020A
Cobalt	20	0.998		1.00		0.2		6020A
Copper	20	5.06		5.17		2.2		6020A
Iron	20	32700		31800		2.8		6010C
Lead	20	3.15		3.20		1.6		6020A
Magnesium	20	32900		31600		4.0		6010C
Manganese	20	2010		2010		0.0		6010C
Nickel	20	3.62		3.78		4.3		6020A
Potassium	20	11400		10900		4.5		6010C
Selenium		1.1		1.2		8.7		6020A
Silver		0.022		0.027		20.4		6020A
Sodium	20	98300		94600		3.8		6010C
Thallium		0.005	U	0.005	U			6020A
Vanadium	20	3.10		3.14		1.3		6020A
Zinc	20	21.7		22.1		1.8		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1408631

Project No.: 009973-D21101-403

Project Name: Marine View Drive RI/FS

Aqueous LCS Source: **ALS MIXED** **Solid LCS Source:**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	5000	5520	110.4					
Antimony	50	49.6	99.2					
Arsenic	50	49.3	98.6					
Barium	5000	4830	96.6					
Beryllium	2.5	2.60	104.0					
Cadmium	25	25.1	100.4					
Calcium	12500	12000	96.0					
Chromium	10	10.2	102.0					
Cobalt	25	25.1	100.4					
Copper	12.5	12.7	101.6					
Iron	2500	2470	98.8					
Lead	50	50.2	100.4					
Magnesium	12500	12600	100.8					
Manganese	1250	1190	95.2					
Nickel	25	24.9	99.6					
Potassium	12500	12300	98.4					
Selenium	50	49.5	99.0					
Silver	12.5	12.5	100.0					
Sodium	12500	12100	96.8					
Thallium	50	51.6	103.2					
Vanadium	25	23.9	95.6					
Zinc	25	25.1	100.4					

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081214-RB-GMB2A-001	**Units:**	ng/L
Lab Code:	K1408631-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.1	0.20	1	08/15/14	08/28/14	KWG1412024	
Hexachlorobenzene	ND	Ui	1.1	0.34	1	08/15/14	08/28/14	KWG1412024	
beta-BHC	ND	U	1.1	0.48	1	08/15/14	08/28/14	KWG1412024	
gamma-BHC (Lindane)	ND	U	1.1	0.23	1	08/15/14	08/28/14	KWG1412024	
delta-BHC	ND	U	1.1	0.21	1	08/15/14	08/28/14	KWG1412024	
Heptachlor	ND	U	1.1	0.14	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDE	ND	Ui	1.1	0.28	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDD	ND	Ui	3.0	3.0	1	08/15/14	08/28/14	KWG1412024	
Endrin Aldehyde	ND	Ui	2.2	2.2	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.1	0.31	1	08/15/14	08/28/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	78	20-106	08/28/14	Acceptable
Decachlorobiphenyl	94	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081214-RB-FD-002	**Units:**	ng/L
Lab Code:	K1408631-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	08/15/14	08/28/14	KWG1412024	
Hexachlorobenzene	ND	U	1.0	0.20	1	08/15/14	08/28/14	KWG1412024	
beta-BHC	ND	U	1.0	0.47	1	08/15/14	08/28/14	KWG1412024	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	08/15/14	08/28/14	KWG1412024	
delta-BHC	ND	U	1.0	0.20	1	08/15/14	08/28/14	KWG1412024	
Heptachlor	ND	Ui	1.0	0.41	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDE	ND	Ui	1.0	0.31	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDD	ND	Ui	2.8	2.8	1	08/15/14	08/28/14	KWG1412024	
Endrin Aldehyde	ND	Ui	1.8	1.8	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.0	0.30	1	08/15/14	08/28/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	72	20-106	08/28/14	Acceptable
Decachlorobiphenyl	73	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081214-RB-GMB2-003	**Units:**	ng/L
Lab Code:	K1408631-003	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	5.0	2.2	5	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	Ui	6.5	6.5	5	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	Ui	5.0	2.7	5	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	Ui	5.0	3.1	5	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	Ui	5.0	2.2	5	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	5.0	2.7	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	5.0	0.55	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	5.0	1.4	5	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	U	5.0	1.1	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDT	ND	U	5.0	1.5	5	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	45	20-106	08/29/14	Acceptable
Decachlorobiphenyl	54	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ng/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.0	0.33	1	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	Ui	1.0	0.39	1	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	1.0	0.47	1	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	Ui	1.0	0.32	1	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	1.0	0.20	1	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	1.0	0.14	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	Ui	1.0	0.16	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	1.0	0.28	1	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	UiE	27	27	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.0	0.30	1	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	90	20-106	08/29/14	Acceptable
Decachlorobiphenyl	56	19-127	08/27/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB1-005	**Units:**	ng/L
Lab Code:	K1408631-005	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	5.1	1.6	5	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	Ui	19	19	5	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	5.1	2.4	5	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	Ui	5.6	5.6	5	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	Ui	17	17	5	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	16	16	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	5.1	0.56	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	Ui	9.4	9.4	5	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	Ui	9.2	9.2	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDT	ND	U	5.1	1.6	5	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	40	20-106	08/29/14	Acceptable
Decachlorobiphenyl	96	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB1A-006	**Units:**	ng/L
Lab Code:	K1408631-006	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	U	1.0	0.20	1	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	1.0	0.47	1	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	Ui	1.0	0.45	1	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	1.0	0.20	1	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	1.0	0.71	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	1.0	0.11	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	1.0	0.28	1	08/15/14	08/29/14	KWG1412024	*
Endrin Aldehyde	ND	U	1.0	0.22	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.0	0.30	1	08/15/14	08/29/14	KWG1412024	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	76	20-106	08/29/14	Acceptable
Decachlorobiphenyl	40	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB6A-007	**Units:**	ng/L
Lab Code:	K1408631-007	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.1	0.20	1	08/15/14	08/28/14	KWG1412024	
Hexachlorobenzene	**0.26**	J	1.1	0.21	1	08/15/14	08/28/14	KWG1412024	
beta-BHC	ND	U	1.1	0.48	1	08/15/14	08/28/14	KWG1412024	
gamma-BHC (Lindane)	ND	U	1.1	0.23	1	08/15/14	08/28/14	KWG1412024	
delta-BHC	ND	U	1.1	0.21	1	08/15/14	08/28/14	KWG1412024	
Heptachlor	ND	Ui	1.1	0.15	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDE	ND	U	1.1	0.12	1	08/15/14	08/28/14	KWG1412024	
4,4'-DDD	ND	Ui	1.1	1.1	1	08/15/14	08/28/14	KWG1412024	
Endrin Aldehyde	ND	U	1.1	0.23	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.1	0.31	1	08/15/14	08/28/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	71	20-106	08/28/14	Acceptable
Decachlorobiphenyl	62	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB6R-008	**Units:**	ng/L
Lab Code:	K1408631-008	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	5.2	0.98	5	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	**21**	D	5.2	1.1	5	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	Ui	5.2	3.3	5	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	Ui	5.2	4.6	5	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	5.2	1.1	5	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	5.2	1.3	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	Ui	5.2	2.5	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	5.2	1.5	5	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	Ui	32	32	5	08/15/14	08/29/14	KWG1412024	
4,4'-DDT	ND	U	5.2	1.6	5	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	60	20-106	08/29/14	Acceptable
Decachlorobiphenyl	131	19-127	08/27/14	Outside Control Limits

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	Rinse Blank1	**Units:**	ng/L
Lab Code:	K1408631-009	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.1	0.28	1	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	U	1.1	0.21	1	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	1.1	0.48	1	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	**0.97**	JP	1.1	0.23	1	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	1.1	0.21	1	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	1.1	0.69	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	1.1	0.12	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	1.1	0.29	1	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	U	1.1	0.23	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.1	0.31	1	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	70	20-106	08/29/14	Acceptable
Decachlorobiphenyl	57	19-127	08/27/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Organochlorine Pesticides

Sample Name:	Rinse Blank2	**Units:**	ng/L
Lab Code:	K1408631-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.1	0.35	1	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	U	1.1	0.21	1	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	1.1	0.48	1	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	**0.99**	JP	1.1	0.23	1	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	1.1	0.21	1	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	Ui	1.1	0.48	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	1.1	0.12	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	1.1	0.29	1	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	U	1.1	0.23	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.1	0.31	1	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	73	20-106	08/29/14	Acceptable
Decachlorobiphenyl	61	19-127	08/27/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KWG1412024-4	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	08/15/14	08/29/14	KWG1412024	
Hexachlorobenzene	ND	U	1.0	0.20	1	08/15/14	08/29/14	KWG1412024	
beta-BHC	ND	U	1.0	0.47	1	08/15/14	08/29/14	KWG1412024	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	08/15/14	08/29/14	KWG1412024	
delta-BHC	ND	U	1.0	0.20	1	08/15/14	08/29/14	KWG1412024	
Heptachlor	ND	U	1.0	0.13	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDE	ND	U	1.0	0.11	1	08/15/14	08/29/14	KWG1412024	
4,4'-DDD	ND	U	1.0	0.28	1	08/15/14	08/29/14	KWG1412024	
Endrin Aldehyde	ND	U	1.0	0.22	1	08/15/14	08/27/14	KWG1412024	
4,4'-DDT	ND	U	1.0	0.30	1	08/15/14	08/29/14	KWG1412024	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	80	20-106	08/29/14	Acceptable
Decachlorobiphenyl	64	19-127	08/27/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora
Service Request: K1408631
Project: Marine View Drive RI/FS/009973-D21101-403
Sample Matrix: Water

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3535A
Analysis Method: 8081B
Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	
G-081214-RB-GMB2A-001	K1408631-001	78	94	
G-081214-RB-FD-002	K1408631-002	72	73	
G-081214-RB-GMB2-003	K1408631-003	45 D	54	
G-081314-RB-GMB3R-004	K1408631-004	90	56	
G-081314-RB-GMB1-005	K1408631-005	40 D	96	
G-081314-RB-GMB1A-006	K1408631-006	76	40	
G-081314-RB-GMB6A-007	K1408631-007	71	62	
G-081314-RB-GMB6R-008	K1408631-008	60 D	131	*
Rinse Blank1	K1408631-009	70	57	
Rinse Blank2	K1408631-010	73	61	
Method Blank	KWG1412024-4	80	64	
G-081314-RB-GMB3R-004MS	KWG1412024-1	69 D	57	
G-081314-RB-GMB3R-004DMS	KWG1412024-2	82 D	61	
Lab Control Sample	KWG1412024-3	70	56	

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	20-106
Sur2	=	Decachlorobiphenyl	19-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/15/2014
Sample Matrix:	Water	**Date Analyzed:**	08/27/2014 - 08/28/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ng/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1412024

		G-081314-RB-GMB3R-004 MS KWG1412024-1 Matrix Spike			G-081314-RB-GMB3R-004 DMS KWG1412024-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
alpha-BHC	ND	10.3	9.90	104	10.6	10.3	103	31-123	3	30
Hexachlorobenzene	ND	8.42	9.90	85	8.20	10.3	80	10-131	3	30
beta-BHC	ND	7.97	9.90	81	8.55	10.3	83	31-118	7	30
gamma-BHC (Lindane)	ND	9.51	9.90	96	10.1	10.3	98	31-123	6	30
delta-BHC	ND	8.56	9.90	87	8.91	10.3	86	40-129	4	30
Heptachlor	ND	10.1	9.90	102	10.4	10.3	101	23-124	3	30
4,4'-DDE	ND	9.61	9.90	97	9.80	10.3	95	24-129	2	30
4,4'-DDD	ND	7.76	9.90	78	8.21	10.3	80	29-125	6	30
Endrin Aldehyde	27	17.6	9.90	178 #	14.6	10.3	141 #	10-108	19	30
4,4'-DDT	ND	9.66	9.90	98	11.0	10.3	107	28-139	13	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/15/2014
Sample Matrix:	Water	**Date Analyzed:**	08/27/2014 - 08/29/2014

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3535A	**Units:**	ng/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412024

Lab Control Sample
KWG1412024-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
alpha-BHC	9.00	10.0	90	36-122
Hexachlorobenzene	7.31	10.0	73	31-95
beta-BHC	8.68	10.0	87	42-125
gamma-BHC (Lindane)	8.91	10.0	89	44-117
delta-BHC	8.96	10.0	90	48-123
Heptachlor	8.09	10.0	81	40-115
4,4'-DDE	7.62	10.0	76	41-116
4,4'-DDD	7.40	10.0	74	33-132
Endrin Aldehyde	7.42	10.0	74	27-104
4,4'-DDT	7.24	10.0	72	42-143

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081214-RB-GMB2A-001	**Units:**	ug/L
Lab Code:	K1408631-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.011	0.0025	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.0052**		0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.029**		0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.026**		0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	131	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081214-RB-FD-002	**Units:**	ug/L
Lab Code:	K1408631-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.010	0.0024	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.0045**	J	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.027**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.022**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	121	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081214-RB-GMB2-003	**Units:**	ug/L
Lab Code:	K1408631-003	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.010	0.0024	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.029**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.037**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.028**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	119	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.010	0.0024	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.0019**	J	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.013**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.035**		0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	105	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB1-005	**Units:**	ug/L
Lab Code:	K1408631-005	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.051	0.013	5	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.080**	D	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.67**	D	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.13**	D	0.026	0.0049	5	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	110	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB1A-006	**Units:**	ug/L
Lab Code:	K1408631-006	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.010	0.0024	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.0017**	J	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.0021**	J	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	106	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB6A-007	**Units:**	ug/L
Lab Code:	K1408631-007	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.011	0.0025	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	**0.0013**	JP	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	**0.0051**	J	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	**0.0046**	J	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	107	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB6R-008	**Units:**	ug/L
Lab Code:	K1408631-008	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.040	0.040	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	Ui	0.16	0.16	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	Ui	0.11	0.11	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	ND	Ui	0.050	0.050	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	Ui	0.049	0.049	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	ND	Ui	0.094	0.094	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	ND	Ui	0.19	0.19	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	119	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	Rinse Blank1	**Units:**	ug/L
Lab Code:	K1408631-009	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.011	0.0025	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	98	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	Rinse Blank2	**Units:**	ug/L
Lab Code:	K1408631-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.011	0.0025	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	ND	U	0.0051	0.00097	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	106	39-140	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1412023-6	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	*
Aroclor 1221	ND	U	0.010	0.0024	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1232	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1242	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1248	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1254	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	
Aroclor 1260	ND	U	0.0050	0.00096	1	08/15/14	09/10/14	KWG1412023	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	104	39-140	09/10/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1408631
Project: Marine View Drive RI/FS/009973-D21101-403
Sample Matrix: Water

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
G-081214-RB-GMB2A-001	K1408631-001	131
G-081214-RB-FD-002	K1408631-002	121
G-081214-RB-GMB2-003	K1408631-003	119
G-081314-RB-GMB3R-004	K1408631-004	105
G-081314-RB-GMB1-005	K1408631-005	110 D
G-081314-RB-GMB1A-006	K1408631-006	106
G-081314-RB-GMB6A-007	K1408631-007	107
G-081314-RB-GMB6R-008	K1408631-008	119
Rinse Blank1	K1408631-009	98
Rinse Blank2	K1408631-010	106
Method Blank	KWG1412023-6	104
G-081314-RB-GMB3R-004MS	KWG1412023-1	99
G-081314-RB-GMB3R-004DMS	KWG1412023-2	104
Lab Control Sample	KWG1412023-5	104

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 39-140

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/15/2014
Sample Matrix:	Water	**Date Analyzed:**	09/10/2014

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1412023

		G-081314-RB-GMB3R-004 MS KWG1412023-1 Matrix Spike			G-081314-RB-GMB3R-004 DMS KWG1412023-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	0.106	0.200	53	0.116	0.202	58	39-128	9	30
Aroclor 1260	0.035	0.230	0.200	98	0.225	0.202	94	39-128	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/15/2014
Sample Matrix:	Water	**Date Analyzed:**	09/10/2014

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8082A	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412023

Lab Control Sample
KWG1412023-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec		%Rec Limits
Aroclor 1016	0.0967	0.200	48	*	60-103
Aroclor 1260	0.186	0.200	93		60-103

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081214-RB-GMB2A-001	**Units:**	ug/L
Lab Code:	K1408631-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411670	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411670	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411670	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411670	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411670	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411670	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411670	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411670	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411670	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411670	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411670	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411670	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411670	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411670	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411670	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411670	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411670	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411670	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411670	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411670	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411670	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411670	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411670	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	73-122	08/18/14	Acceptable
Toluene-d8	96	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/18/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081214-RB-FD-002	**Units:**	ug/L
Lab Code:	K1408631-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411670	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411670	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411670	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411670	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411670	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411670	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411670	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411670	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411670	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411670	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411670	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411670	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411670	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411670	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411670	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411670	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411670	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411670	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411670	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411670	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411670	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411670	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411670	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	08/18/14	Acceptable
Toluene-d8	96	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	88	68-117	08/18/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081214-RB-GMB2-003	**Units:**	ug/L
Lab Code:	K1408631-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411670	
Vinyl Chloride	**0.25**	J	0.50	0.075	1	08/18/14	08/18/14	KWG1411670	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411670	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411670	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411670	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411670	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411670	
cis-1,2-Dichloroethene	**0.20**	J	0.50	0.067	1	08/18/14	08/18/14	KWG1411670	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411670	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411670	
Benzene	**2.1**		0.50	0.062	1	08/18/14	08/18/14	KWG1411670	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411670	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411670	
Toluene	**9.8**		0.50	0.054	1	08/18/14	08/18/14	KWG1411670	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411670	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411670	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411670	
Ethylbenzene	**3.1**		0.50	0.050	1	08/18/14	08/18/14	KWG1411670	
m,p-Xylenes	**1.3**		0.50	0.11	1	08/18/14	08/18/14	KWG1411670	
o-Xylene	**0.83**		0.50	0.074	1	08/18/14	08/18/14	KWG1411670	
Styrene	**0.67**		0.50	0.089	1	08/18/14	08/18/14	KWG1411670	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411670	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411670	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	73-122	08/18/14	Acceptable
Toluene-d8	96	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	91	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	90	73-122	08/18/14	Acceptable
Toluene-d8	96	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	91	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB1-005	**Units:**	ug/L
Lab Code:	K1408631-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	2.5	0.34	5	08/19/14	08/20/14	KWG1411728	
Vinyl Chloride	ND	U	2.5	0.38	5	08/19/14	08/20/14	KWG1411728	
1,1-Dichloroethene	ND	U	2.5	0.40	5	08/19/14	08/20/14	KWG1411728	
Acetone	ND	U	100	17	5	08/19/14	08/20/14	KWG1411728	
Carbon Disulfide	ND	U	2.5	0.35	5	08/19/14	08/20/14	KWG1411728	
Methylene Chloride	**2.3**	JD	10	0.50	5	08/19/14	08/20/14	KWG1411728	
trans-1,2-Dichloroethene	ND	U	2.5	0.36	5	08/19/14	08/20/14	KWG1411728	
cis-1,2-Dichloroethene	ND	U	2.5	0.34	5	08/19/14	08/20/14	KWG1411728	
2-Butanone (MEK)	ND	U	100	9.5	5	08/19/14	08/20/14	KWG1411728	
Carbon Tetrachloride	ND	U	2.5	0.48	5	08/19/14	08/20/14	KWG1411728	
Benzene	**5.5**	D	2.5	0.31	5	08/19/14	08/20/14	KWG1411728	
Trichloroethene (TCE)	ND	U	2.5	0.50	5	08/19/14	08/20/14	KWG1411728	
4-Methyl-2-pentanone (MIBK)	ND	U	100	13	5	08/19/14	08/20/14	KWG1411728	
Toluene	**0.85**	JD	2.5	0.27	5	08/19/14	08/20/14	KWG1411728	
Tetrachloroethene (PCE)	ND	U	2.5	0.50	5	08/19/14	08/20/14	KWG1411728	
2-Hexanone	ND	U	100	14	5	08/19/14	08/20/14	KWG1411728	
Dibromochloromethane	ND	U	2.5	0.70	5	08/19/14	08/20/14	KWG1411728	
Ethylbenzene	**0.25**	JD	2.5	0.25	5	08/19/14	08/20/14	KWG1411728	
m,p-Xylenes	**2.6**	D	2.5	0.55	5	08/19/14	08/20/14	KWG1411728	
o-Xylene	**3.5**	D	2.5	0.37	5	08/19/14	08/20/14	KWG1411728	
Styrene	ND	U	2.5	0.45	5	08/19/14	08/20/14	KWG1411728	
Bromoform	ND	U	2.5	0.80	5	08/19/14	08/20/14	KWG1411728	
1,2,4-Trichlorobenzene	ND	U	10	0.48	5	08/19/14	08/20/14	KWG1411728	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	73-122	08/20/14	Acceptable
Toluene-d8	95	65-144	08/20/14	Acceptable
4-Bromofluorobenzene	93	68-117	08/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB1A-006	**Units:**	ug/L
Lab Code:	K1408631-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	08/18/14	Acceptable
Toluene-d8	95	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	88	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB6A-007	**Units:**	ug/L
Lab Code:	K1408631-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	**0.31**	J	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	**0.25**	J	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	08/18/14	Acceptable
Toluene-d8	96	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	90	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB6R-008	**Units:**	ug/L
Lab Code:	K1408631-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	**15**		0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	**2.2**		0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	**28**		20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	**0.19**	J	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	ND	U	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	**57**		0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	**100**	D	5.0	0.67	10	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	**22**		20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	**4.4**		0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	**270**	D	5.0	1.0	10	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	**8.2**		0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	**260**	D	5.0	0.99	10	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	**2.7**		0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	**3.0**		0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	**1.9**		0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	**4.0**		0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	**0.14**	J	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	08/18/14	Acceptable
Toluene-d8	95	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	94	68-117	08/18/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	Rinse Blank1	**Units:**	ug/L
Lab Code:	K1408631-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411670	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411670	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411670	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411670	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411670	
Methylene Chloride	**0.10**	J	2.0	0.10	1	08/18/14	08/18/14	KWG1411670	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411670	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411670	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411670	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411670	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411670	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411670	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411670	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411670	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411670	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411670	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411670	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411670	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411670	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411670	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411670	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411670	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411670	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	73-122	08/18/14	Acceptable
Toluene-d8	97	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	Rinse Blank2	**Units:**	ug/L
Lab Code:	K1408631-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	**0.16**	J	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	73-122	08/18/14	Acceptable
Toluene-d8	95	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1408631-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	**0.14**	J	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	89	73-122	08/18/14	Acceptable
Toluene-d8	95	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411664-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411664	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411664	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411664	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411664	
Carbon Disulfide	ND	U	0.50	0.069	1	08/18/14	08/18/14	KWG1411664	
Methylene Chloride	**0.34**	J	2.0	0.10	1	08/18/14	08/18/14	KWG1411664	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411664	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411664	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411664	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411664	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411664	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411664	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411664	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411664	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411664	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411664	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411664	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411664	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411664	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411664	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411664	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411664	
1,2,4-Trichlorobenzene	**0.12**	J	2.0	0.096	1	08/18/14	08/18/14	KWG1411664	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	08/18/14	Acceptable
Toluene-d8	95	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	92	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411670-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/18/14	08/18/14	KWG1411670	
Vinyl Chloride	ND	U	0.50	0.075	1	08/18/14	08/18/14	KWG1411670	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/18/14	08/18/14	KWG1411670	
Acetone	ND	U	20	3.3	1	08/18/14	08/18/14	KWG1411670	
Carbon Disulfide	**0.070**	J	0.50	0.069	1	08/18/14	08/18/14	KWG1411670	
Methylene Chloride	**0.28**	J	2.0	0.10	1	08/18/14	08/18/14	KWG1411670	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/18/14	08/18/14	KWG1411670	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/18/14	08/18/14	KWG1411670	
2-Butanone (MEK)	ND	U	20	1.9	1	08/18/14	08/18/14	KWG1411670	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/18/14	08/18/14	KWG1411670	
Benzene	ND	U	0.50	0.062	1	08/18/14	08/18/14	KWG1411670	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/18/14	08/18/14	KWG1411670	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/18/14	08/18/14	KWG1411670	
Toluene	ND	U	0.50	0.054	1	08/18/14	08/18/14	KWG1411670	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/18/14	08/18/14	KWG1411670	
2-Hexanone	ND	U	20	2.7	1	08/18/14	08/18/14	KWG1411670	
Dibromochloromethane	ND	U	0.50	0.14	1	08/18/14	08/18/14	KWG1411670	
Ethylbenzene	ND	U	0.50	0.050	1	08/18/14	08/18/14	KWG1411670	
m,p-Xylenes	ND	U	0.50	0.11	1	08/18/14	08/18/14	KWG1411670	
o-Xylene	ND	U	0.50	0.074	1	08/18/14	08/18/14	KWG1411670	
Styrene	ND	U	0.50	0.089	1	08/18/14	08/18/14	KWG1411670	
Bromoform	ND	U	0.50	0.16	1	08/18/14	08/18/14	KWG1411670	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/18/14	08/18/14	KWG1411670	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	73-122	08/18/14	Acceptable
Toluene-d8	98	65-144	08/18/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/18/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411728-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	08/19/14	08/19/14	KWG1411728	
Vinyl Chloride	ND	U	0.50	0.075	1	08/19/14	08/19/14	KWG1411728	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/19/14	08/19/14	KWG1411728	
Acetone	ND	U	20	3.3	1	08/19/14	08/19/14	KWG1411728	
Carbon Disulfide	ND	U	0.50	0.069	1	08/19/14	08/19/14	KWG1411728	
Methylene Chloride	**0.42**	J	2.0	0.10	1	08/19/14	08/19/14	KWG1411728	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/19/14	08/19/14	KWG1411728	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/19/14	08/19/14	KWG1411728	
2-Butanone (MEK)	ND	U	20	1.9	1	08/19/14	08/19/14	KWG1411728	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/19/14	08/19/14	KWG1411728	
Benzene	ND	U	0.50	0.062	1	08/19/14	08/19/14	KWG1411728	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/19/14	08/19/14	KWG1411728	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/19/14	08/19/14	KWG1411728	
Toluene	ND	U	0.50	0.054	1	08/19/14	08/19/14	KWG1411728	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/19/14	08/19/14	KWG1411728	
2-Hexanone	ND	U	20	2.7	1	08/19/14	08/19/14	KWG1411728	
Dibromochloromethane	ND	U	0.50	0.14	1	08/19/14	08/19/14	KWG1411728	
Ethylbenzene	ND	U	0.50	0.050	1	08/19/14	08/19/14	KWG1411728	
m,p-Xylenes	ND	U	0.50	0.11	1	08/19/14	08/19/14	KWG1411728	
o-Xylene	ND	U	0.50	0.074	1	08/19/14	08/19/14	KWG1411728	
Styrene	ND	U	0.50	0.089	1	08/19/14	08/19/14	KWG1411728	
Bromoform	ND	U	0.50	0.16	1	08/19/14	08/19/14	KWG1411728	*
1,2,4-Trichlorobenzene	**0.10**	J	2.0	0.096	1	08/19/14	08/19/14	KWG1411728	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	73-122	08/19/14	Acceptable
Toluene-d8	95	65-144	08/19/14	Acceptable
4-Bromofluorobenzene	89	68-117	08/19/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1408631
Project: Marine View Drive RI/FS/009973-D21101-403
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
G-081214-RB-GMB2A-001	K1408631-001	99	96	89
G-081214-RB-FD-002	K1408631-002	104	96	88
G-081214-RB-GMB2-003	K1408631-003	98	96	91
G-081314-RB-GMB3R-004	K1408631-004	90	96	91
G-081314-RB-GMB1-005	K1408631-005	91	95	93
G-081314-RB-GMB1A-006	K1408631-006	92	95	88
G-081314-RB-GMB6A-007	K1408631-007	92	96	90
G-081314-RB-GMB6R-008	K1408631-008	92	95	94
Rinse Blank1	K1408631-009	102	97	89
Rinse Blank2	K1408631-010	94	95	89
Trip Blank	K1408631-011	89	95	89
Method Blank	KWG1411664-3	87	95	92
Method Blank	KWG1411670-4	101	98	89
Method Blank	KWG1411728-3	93	95	89
G-081314-RB-GMB3R-004MS	KWG1411664-4	98	98	96
G-081314-RB-GMB3R-004DMS	KWG1411664-5	93	97	97
Lab Control Sample	KWG1411664-1	92	97	97
Duplicate Lab Control Sample	KWG1411664-2	98	98	98
Lab Control Sample	KWG1411670-3	101	101	95
Lab Control Sample	KWG1411728-1	97	97	96
Duplicate Lab Control Sample	KWG1411728-2	98	97	98

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/18/2014
Sample Matrix:	Water	**Date Analyzed:**	08/18/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1411664

		G-081314-RB-GMB3R-004 MS KWG1411664-4 Matrix Spike			G-081314-RB-GMB3R-004 DMS KWG1411664-5 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	13.8	10.0	138 *	13.6	10.0	136	49-136	2	30
1,1-Dichloroethene	ND	14.2	10.0	142	13.9	10.0	139	59-171	2	30
Carbon Tetrachloride	ND	12.3	10.0	123	12.1	10.0	121	53-161	1	30
Benzene	ND	13.2	10.0	132	13.2	10.0	132	63-144	0	30
Trichloroethene (TCE)	ND	12.1	10.0	121	12.4	10.0	124	53-139	2	30
Toluene	ND	12.5	10.0	125	12.7	10.0	127	71-136	2	30
2-Hexanone	ND	47.3	50.0	95	56.4	50.0	113	53-132	18	30
Ethylbenzene	ND	12.3	10.0	123	12.6	10.0	126	66-136	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/18/2014
Sample Matrix:	Water	**Date Analyzed:**	08/18/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411664

	Lab Control Sample KWG1411664-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411664-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	10.8	10.0	108	10.7	10.0	107	34-130	1	30
Vinyl Chloride	11.5	10.0	115	11.6	10.0	116	55-123	0	30
1,1-Dichloroethene	11.8	10.0	118	11.6	10.0	116	66-129	2	30
Acetone	56.2	50.0	112	55.3	50.0	111	68-135	2	30
Carbon Disulfide	21.5	20.0	107	21.0	20.0	105	46-144	2	30
Methylene Chloride	11.5	10.0	115	11.3	10.0	113	71-122	1	30
trans-1,2-Dichloroethene	12.1	10.0	121	11.9	10.0	119	67-125	1	30
cis-1,2-Dichloroethene	11.2	10.0	112	11.4	10.0	114	71-118	2	30
2-Butanone (MEK)	53.4	50.0	107	51.5	50.0	103	71-149	4	30
Carbon Tetrachloride	10.2	10.0	102	10.4	10.0	104	55-140	2	30
Benzene	11.8	10.0	118	11.7	10.0	117	69-124	1	30
Trichloroethene (TCE)	10.6	10.0	106	10.6	10.0	106	67-128	0	30
4-Methyl-2-pentanone (MIBK)	57.4	50.0	115	58.4	50.0	117	64-134	2	30
Toluene	10.9	10.0	109	11.2	10.0	112	69-124	2	30
Tetrachloroethene (PCE)	11.0	10.0	110	10.6	10.0	106	62-126	4	30
2-Hexanone	51.6	50.0	103	54.5	50.0	109	59-131	6	30
Dibromochloromethane	10.3	10.0	103	10.1	10.0	101	67-126	2	30
Ethylbenzene	11.1	10.0	111	10.9	10.0	109	67-121	2	30
m,p-Xylenes	22.2	20.0	111	21.8	20.0	109	69-121	2	30
o-Xylene	10.7	10.0	107	10.8	10.0	108	71-119	1	30
Styrene	10.8	10.0	108	10.5	10.0	105	74-121	3	30
Bromoform	8.67	10.0	87	8.49	10.0	85	52-144	2	30
1,2,4-Trichlorobenzene	10.5	10.0	105	10.5	10.0	105	58-126	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/18/2014
Sample Matrix:	Water	**Date Analyzed:**	08/18/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411670

Lab Control Sample
KWG1411670-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Chloromethane	8.31	10.0	83	34-130
Vinyl Chloride	9.38	10.0	94	55-123
1,1-Dichloroethene	9.00	10.0	90	66-129
Acetone	55.7	50.0	111	68-135
Carbon Disulfide	17.2	20.0	86	46-144
Methylene Chloride	8.41	10.0	84	71-122
trans-1,2-Dichloroethene	8.91	10.0	89	67-125
cis-1,2-Dichloroethene	8.46	10.0	85	71-118
2-Butanone (MEK)	46.2	50.0	92	71-149
Carbon Tetrachloride	8.71	10.0	87	55-140
Benzene	8.70	10.0	87	69-124
Trichloroethene (TCE)	8.68	10.0	87	67-128
4-Methyl-2-pentanone (MIBK)	43.1	50.0	86	64-134
Toluene	8.38	10.0	84	69-124
Tetrachloroethene (PCE)	8.50	10.0	85	62-126
2-Hexanone	41.5	50.0	83	59-131
Dibromochloromethane	7.53	10.0	75	67-126
Ethylbenzene	8.08	10.0	81	67-121
m,p-Xylenes	16.2	20.0	81	69-121
o-Xylene	7.86	10.0	79	71-119
Styrene	7.45	10.0	75	74-121
Bromoform	7.14	10.0	71	52-144
1,2,4-Trichlorobenzene	7.68	10.0	77	58-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/19/2014
Sample Matrix:	Water	**Date Analyzed:**	08/19/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411728

	Lab Control Sample KWG1411728-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411728-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	10.6	10.0	106	10.4	10.0	104	34-130	2	30
Vinyl Chloride	11.1	10.0	111	10.3	10.0	103	55-123	8	30
1,1-Dichloroethene	11.2	10.0	112	10.9	10.0	109	66-129	3	30
Acetone	51.8	50.0	104	53.6	50.0	107	68-135	3	30
Carbon Disulfide	20.0	20.0	100	19.3	20.0	96	46-144	4	30
Methylene Chloride	11.6	10.0	116	11.5	10.0	115	71-122	1	30
trans-1,2-Dichloroethene	11.4	10.0	114	10.9	10.0	109	67-125	5	30
cis-1,2-Dichloroethene	10.8	10.0	108	10.6	10.0	106	71-118	1	30
2-Butanone (MEK)	47.6	50.0	95	47.8	50.0	96	71-149	0	30
Carbon Tetrachloride	9.71	10.0	97	9.56	10.0	96	55-140	2	30
Benzene	11.1	10.0	111	11.4	10.0	114	69-124	2	30
Trichloroethene (TCE)	10.4	10.0	104	10.4	10.0	104	67-128	0	30
4-Methyl-2-pentanone (MIBK)	51.4	50.0	103	53.2	50.0	106	64-134	3	30
Toluene	10.7	10.0	107	10.6	10.0	106	69-124	1	30
Tetrachloroethene (PCE)	10.0	10.0	100	10.1	10.0	101	62-126	1	30
2-Hexanone	49.1	50.0	98	50.4	50.0	101	59-131	3	30
Dibromochloromethane	9.47	10.0	95	9.55	10.0	96	67-126	1	30
Ethylbenzene	10.5	10.0	105	10.4	10.0	104	67-121	1	30
m,p-Xylenes	21.2	20.0	106	20.9	20.0	105	69-121	1	30
o-Xylene	10.4	10.0	104	10.1	10.0	101	71-119	2	30
Styrene	10.6	10.0	106	10.6	10.0	106	74-121	1	30
Bromoform	7.62	10.0	76	7.82	10.0	78	52-144	3	30
1,2,4-Trichlorobenzene	9.28	10.0	93	9.41	10.0	94	58-126	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081214-RB-GMB2A-001	**Units:**	ug/L
Lab Code:	K1408631-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	08/18/14	09/02/14	KWG1411665	
2-Methylphenol	ND	U	0.48	0.11	1	08/18/14	09/02/14	KWG1411665	
4-Methylphenol†	ND	U	0.48	0.12	1	08/18/14	09/02/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	08/18/14	09/02/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.19	0.027	1	08/18/14	09/02/14	KWG1411665	
Diethyl Phthalate	**0.064**	J	0.19	0.015	1	08/18/14	09/02/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	08/18/14	09/02/14	KWG1411665	
Fluoranthene	**0.039**	J	0.19	0.020	1	08/18/14	09/02/14	KWG1411665	
Pyrene	ND	U	0.19	0.019	1	08/18/14	09/02/14	KWG1411665	
Butyl Benzyl Phthalate	**0.13**	J	0.19	0.021	1	08/18/14	09/02/14	KWG1411665	
Chrysene	ND	U	0.19	0.028	1	08/18/14	09/02/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**6.6**		0.95	0.13	1	08/18/14	09/02/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	08/18/14	09/02/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	58	23-106	09/02/14	Acceptable
Nitrobenzene-d5	54	26-110	09/02/14	Acceptable
2-Fluorobiphenyl	59	31-94	09/02/14	Acceptable
Terphenyl-d14	74	40-127	09/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081214-RB-FD-002	**Units:**	ug/L
Lab Code:	K1408631-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	08/18/14	09/02/14	KWG1411665	
2-Methylphenol	ND	U	0.48	0.11	1	08/18/14	09/02/14	KWG1411665	
4-Methylphenol†	ND	U	0.48	0.12	1	08/18/14	09/02/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	08/18/14	09/02/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.19	0.027	1	08/18/14	09/02/14	KWG1411665	
Diethyl Phthalate	**0.047**	J	0.19	0.015	1	08/18/14	09/02/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	08/18/14	09/02/14	KWG1411665	
Fluoranthene	**0.028**	J	0.19	0.020	1	08/18/14	09/02/14	KWG1411665	
Pyrene	**0.029**	J	0.19	0.019	1	08/18/14	09/02/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	08/18/14	09/02/14	KWG1411665	
Chrysene	ND	U	0.19	0.028	1	08/18/14	09/02/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**5.3**		0.95	0.13	1	08/18/14	09/02/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	08/18/14	09/02/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	63	23-106	09/02/14	Acceptable
Nitrobenzene-d5	57	26-110	09/02/14	Acceptable
2-Fluorobiphenyl	56	31-94	09/02/14	Acceptable
Terphenyl-d14	75	40-127	09/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081214-RB-GMB2-003	**Units:**	ug/L
Lab Code:	K1408631-003	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	08/18/14	09/02/14	KWG1411665	
2-Methylphenol	**0.60**		0.48	0.11	1	08/18/14	09/02/14	KWG1411665	
4-Methylphenol†	ND	U	0.48	0.12	1	08/18/14	09/02/14	KWG1411665	
2,4-Dimethylphenol	**12**		3.8	2.2	1	08/18/14	09/02/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.19	0.027	1	08/18/14	09/02/14	KWG1411665	
Diethyl Phthalate	**0.63**	JD	0.95	0.075	5	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	9.5	0.13	5	08/18/14	09/10/14	KWG1411665	
Fluoranthene	**0.16**	J	0.19	0.020	1	08/18/14	09/02/14	KWG1411665	*
Pyrene	**0.19**	J	0.19	0.019	1	08/18/14	09/02/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	08/18/14	09/02/14	KWG1411665	
Chrysene	ND	U	0.19	0.028	1	08/18/14	09/02/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**1.9**		0.95	0.13	1	08/18/14	09/02/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	08/18/14	09/02/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	67	23-106	09/02/14	Acceptable
Nitrobenzene-d5	68	26-110	09/02/14	Acceptable
2-Fluorobiphenyl	77	31-94	09/10/14	Acceptable
Terphenyl-d14	79	40-127	09/02/14	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.50	0.063	1	08/18/14	09/02/14	KWG1411665	
2-Methylphenol	ND	U	0.50	0.11	1	08/18/14	09/02/14	KWG1411665	
4-Methylphenol†	ND	U	0.50	0.12	1	08/18/14	09/02/14	KWG1411665	
2,4-Dimethylphenol	ND	U	4.0	2.2	1	08/18/14	09/02/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.20	0.027	1	08/18/14	09/02/14	KWG1411665	
Diethyl Phthalate	ND	U	0.20	0.015	1	08/18/14	09/02/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/02/14	KWG1411665	
Fluoranthene	ND	U	0.20	0.020	1	08/18/14	09/02/14	KWG1411665	
Pyrene	ND	U	0.20	0.019	1	08/18/14	09/02/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.20	0.021	1	08/18/14	09/02/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/02/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**0.32**	J	1.0	0.13	1	08/18/14	09/02/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	08/18/14	09/02/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	70	23-106	09/02/14	Acceptable
Nitrobenzene-d5	63	26-110	09/02/14	Acceptable
2-Fluorobiphenyl	65	31-94	09/02/14	Acceptable
Terphenyl-d14	73	40-127	09/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB1-005	**Units:**	ug/L
Lab Code:	K1408631-005	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**0.96**	JDX	2.5	0.32	5	08/18/14	09/10/14	KWG1411665	
2-Methylphenol	ND	U	2.5	0.55	5	08/18/14	09/10/14	KWG1411665	
4-Methylphenol†	**1.4**	JD	2.5	0.60	5	08/18/14	09/10/14	KWG1411665	
2,4-Dimethylphenol	ND	U	20	11	5	08/18/14	09/10/14	KWG1411665	
Hexachlorobutadiene	ND	U	1.0	0.14	5	08/18/14	09/10/14	KWG1411665	
Diethyl Phthalate	**1.8**	D	1.0	0.075	5	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	10	0.13	5	08/18/14	09/10/14	KWG1411665	
Fluoranthene	**0.14**	JD	1.0	0.10	5	08/18/14	09/10/14	KWG1411665	
Pyrene	**0.32**	JD	1.0	0.095	5	08/18/14	09/10/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	1.0	0.11	5	08/18/14	09/10/14	KWG1411665	
Chrysene	ND	U	1.0	0.14	5	08/18/14	09/10/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**4.1**	JD	5.0	0.65	5	08/18/14	09/10/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	1.0	0.17	5	08/18/14	09/10/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	86	23-106	09/10/14	Acceptable
Nitrobenzene-d5	81	26-110	09/10/14	Acceptable
2-Fluorobiphenyl	62	31-94	09/10/14	Acceptable
Terphenyl-d14	46	40-127	09/10/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB1A-006	**Units:**	ug/L
Lab Code:	K1408631-006	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.49	0.063	1	08/18/14	09/03/14	KWG1411665	
2-Methylphenol	ND	U	0.49	0.11	1	08/18/14	09/03/14	KWG1411665	
4-Methylphenol†	ND	U	0.49	0.12	1	08/18/14	09/03/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.9	2.2	1	08/18/14	09/03/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.20	0.027	1	08/18/14	09/03/14	KWG1411665	
Diethyl Phthalate	ND	U	0.20	0.015	1	08/18/14	09/03/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/03/14	KWG1411665	
Fluoranthene	ND	U	0.20	0.020	1	08/18/14	09/03/14	KWG1411665	
Pyrene	ND	U	0.20	0.019	1	08/18/14	09/03/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.20	0.021	1	08/18/14	09/03/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/03/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**0.96**	J	0.97	0.13	1	08/18/14	09/03/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	08/18/14	09/03/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	75	23-106	09/03/14	Acceptable
Nitrobenzene-d5	66	26-110	09/03/14	Acceptable
2-Fluorobiphenyl	71	31-94	09/03/14	Acceptable
Terphenyl-d14	85	40-127	09/03/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB6A-007	**Units:**	ug/L
Lab Code:	K1408631-007	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.49	0.063	1	08/18/14	09/10/14	KWG1411665	
2-Methylphenol	ND	U	0.49	0.11	1	08/18/14	09/10/14	KWG1411665	
4-Methylphenol†	ND	U	0.49	0.12	1	08/18/14	09/10/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.9	2.2	1	08/18/14	09/10/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.20	0.027	1	08/18/14	09/10/14	KWG1411665	
Diethyl Phthalate	**0.071**	J	0.20	0.015	1	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/10/14	KWG1411665	
Fluoranthene	**0.023**	J	0.20	0.020	1	08/18/14	09/10/14	KWG1411665	
Pyrene	ND	U	0.20	0.019	1	08/18/14	09/10/14	KWG1411665	
Butyl Benzyl Phthalate	**0.091**	J	0.20	0.021	1	08/18/14	09/10/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/10/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**2.0**		0.97	0.13	1	08/18/14	09/10/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	08/18/14	09/10/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	65	23-106	09/10/14	Acceptable
Nitrobenzene-d5	62	26-110	09/10/14	Acceptable
2-Fluorobiphenyl	60	31-94	09/10/14	Acceptable
Terphenyl-d14	82	40-127	09/10/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB6R-008	**Units:**	ug/L
Lab Code:	K1408631-008	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**6.0**		0.50	0.063	1	08/18/14	09/11/14	KWG1411665	
2-Methylphenol	**2.3**		0.50	0.11	1	08/18/14	09/10/14	KWG1411665	
4-Methylphenol†	**16**	X	0.50	0.12	1	08/18/14	09/10/14	KWG1411665	
2,4-Dimethylphenol	**7.7**		4.0	2.2	1	08/18/14	09/11/14	KWG1411665	
Hexachlorobutadiene	**4.0**		0.20	0.027	1	08/18/14	09/10/14	KWG1411665	
Diethyl Phthalate	**2.0**		0.20	0.015	1	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/10/14	KWG1411665	
Fluoranthene	**0.062**	J	0.20	0.020	1	08/18/14	09/10/14	KWG1411665	
Pyrene	**0.061**	J	0.20	0.019	1	08/18/14	09/10/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.20	0.021	1	08/18/14	09/10/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/10/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**3.9**		1.0	0.13	1	08/18/14	09/10/14	KWG1411665	*
Di-n-octyl Phthalate	**0.17**	J	0.20	0.033	1	08/18/14	09/10/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	84	23-106	09/10/14	Acceptable
Nitrobenzene-d5	87	26-110	09/10/14	Acceptable
2-Fluorobiphenyl	75	31-94	09/10/14	Acceptable
Terphenyl-d14	62	40-127	09/10/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/12/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Rinse Blank1	**Units:**	ug/L
Lab Code:	K1408631-009	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.49	0.063	1	08/18/14	09/10/14	KWG1411665	
2-Methylphenol	ND	U	0.49	0.11	1	08/18/14	09/10/14	KWG1411665	
4-Methylphenol†	ND	U	0.49	0.12	1	08/18/14	09/10/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.9	2.2	1	08/18/14	09/10/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.20	0.027	1	08/18/14	09/10/14	KWG1411665	
Diethyl Phthalate	**0.24**		0.20	0.015	1	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/10/14	KWG1411665	
Fluoranthene	ND	U	0.20	0.020	1	08/18/14	09/10/14	KWG1411665	
Pyrene	ND	U	0.20	0.019	1	08/18/14	09/10/14	KWG1411665	
Butyl Benzyl Phthalate	**0.054**	J	0.20	0.021	1	08/18/14	09/10/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/10/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**0.20**	J	0.97	0.13	1	08/18/14	09/10/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	08/18/14	09/10/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	74	23-106	09/10/14	Acceptable
Nitrobenzene-d5	74	26-110	09/10/14	Acceptable
2-Fluorobiphenyl	67	31-94	09/10/14	Acceptable
Terphenyl-d14	80	40-127	09/10/14	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	08/13/2014
Sample Matrix:	Water	**Date Received:**	08/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Rinse Blank2	**Units:**	ug/L
Lab Code:	K1408631-010	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**0.064**	J	0.49	0.063	1	08/18/14	09/10/14	KWG1411665	
2-Methylphenol	ND	U	0.49	0.11	1	08/18/14	09/10/14	KWG1411665	
4-Methylphenol†	ND	U	0.49	0.12	1	08/18/14	09/10/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.9	2.2	1	08/18/14	09/10/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.20	0.027	1	08/18/14	09/10/14	KWG1411665	
Diethyl Phthalate	**0.22**		0.20	0.015	1	08/18/14	09/10/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	08/18/14	09/10/14	KWG1411665	
Fluoranthene	ND	U	0.20	0.020	1	08/18/14	09/10/14	KWG1411665	
Pyrene	ND	U	0.20	0.019	1	08/18/14	09/10/14	KWG1411665	
Butyl Benzyl Phthalate	**0.042**	J	0.20	0.021	1	08/18/14	09/10/14	KWG1411665	
Chrysene	ND	U	0.20	0.028	1	08/18/14	09/10/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	**0.15**	J	0.97	0.13	1	08/18/14	09/10/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	08/18/14	09/10/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	70	23-106	09/10/14	Acceptable
Nitrobenzene-d5	66	26-110	09/10/14	Acceptable
2-Fluorobiphenyl	59	31-94	09/10/14	Acceptable
Terphenyl-d14	82	40-127	09/10/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411665-7	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	08/18/14	09/02/14	KWG1411665	
2-Methylphenol	ND	U	0.48	0.11	1	08/18/14	09/02/14	KWG1411665	
4-Methylphenol†	ND	U	0.48	0.12	1	08/18/14	09/02/14	KWG1411665	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	08/18/14	09/02/14	KWG1411665	
Hexachlorobutadiene	ND	U	0.19	0.027	1	08/18/14	09/02/14	KWG1411665	
Diethyl Phthalate	**0.018**	J	0.19	0.015	1	08/18/14	09/02/14	KWG1411665	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	08/18/14	09/02/14	KWG1411665	
Fluoranthene	ND	U	0.19	0.020	1	08/18/14	09/02/14	KWG1411665	
Pyrene	ND	U	0.19	0.019	1	08/18/14	09/02/14	KWG1411665	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	08/18/14	09/02/14	KWG1411665	
Chrysene	ND	U	0.19	0.028	1	08/18/14	09/02/14	KWG1411665	
Bis(2-ethylhexyl) Phthalate	ND	U	0.95	0.13	1	08/18/14	09/02/14	KWG1411665	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	08/18/14	09/02/14	KWG1411665	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	89	23-106	09/02/14	Acceptable
Nitrobenzene-d5	93	26-110	09/02/14	Acceptable
2-Fluorobiphenyl	79	31-94	09/02/14	Acceptable
Terphenyl-d14	90	40-127	09/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1408631
Project: Marine View Drive RI/FS/009973-D21101-403
Sample Matrix: Water

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
G-081214-RB-GMB2A-001	K1408631-001	58	54	59	74
G-081214-RB-FD-002	K1408631-002	63	57	56	75
G-081214-RB-GMB2-003	K1408631-003	67	68	77 D	79
G-081314-RB-GMB3R-004	K1408631-004	70	63	65	73
G-081314-RB-GMB1-005	K1408631-005	86 D	81 D	62 D	46 D
G-081314-RB-GMB1A-006	K1408631-006	75	66	71	85
G-081314-RB-GMB6A-007	K1408631-007	65	62	60	82
G-081314-RB-GMB6R-008	K1408631-008	84	87	75	62
Rinse Blank1	K1408631-009	74	74	67	80
Rinse Blank2	K1408631-010	70	66	59	82
Method Blank	KWG1411665-7	89	93	79	90
G-081314-RB-GMB3R-004MS	KWG1411665-3	76	64	59	62
G-081314-RB-GMB3R-004DMS	KWG1411665-4	75	72	69	64
Lab Control Sample	KWG1411665-5	83	73	75	84
Duplicate Lab Control Sample	KWG1411665-6	72	70	62	85

Surrogate Recovery Control Limits (%)

Sur1	= Phenol-d6	23-106
Sur2	= Nitrobenzene-d5	26-110
Sur3	= 2-Fluorobiphenyl	31-94
Sur4	= Terphenyl-d14	40-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/18/2014
Sample Matrix:	Water	**Date Analyzed:**	09/02/2014

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	G-081314-RB-GMB3R-004	**Units:**	ug/L
Lab Code:	K1408631-004	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1411665

		G-081314-RB-GMB3R-004 MS KWG1411665-3 Matrix Spike			G-081314-RB-GMB3R-004 DMS KWG1411665-4 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	ND	4.20	5.00	84	4.07	5.00	81	24-123	3	30
2-Methylphenol	ND	4.29	5.00	86	4.07	5.00	81	10-115	5	30
4-Methylphenol	ND	4.25	5.00	85	4.16	5.00	83	10-118	2	30
2,4-Dimethylphenol	ND	13.2	15.0	88	13.6	15.0	91	10-124	3	30
Hexachlorobutadiene	ND	0.968	5.00	19	1.35	5.00	27	10-74	33 *	30
Diethyl Phthalate	ND	4.18	5.00	84	4.23	5.00	85	53-113	1	30
2-Methyl-4,6-dinitrophenol	ND	4.26	5.00	85	4.30	5.00	86	41-113	1	30
Fluoranthene	ND	4.18	5.00	84	4.46	5.00	89	53-107	7	30
Pyrene	ND	4.24	5.00	85	4.32	5.00	86	51-109	2	30
Butyl Benzyl Phthalate	ND	4.39	5.00	88	4.53	5.00	91	57-118	3	30
Chrysene	ND	4.04	5.00	81	4.14	5.00	83	57-108	3	30
Bis(2-ethylhexyl) Phthalate	0.32	5.21	5.00	98	5.62	5.00	106	42-133	8	30
Di-n-octyl Phthalate	ND	4.51	5.00	90	3.94	5.00	79	56-112	14	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1408631
Project:	Marine View Drive RI/FS/009973-D21101-403	**Date Extracted:**	08/18/2014
Sample Matrix:	Water	**Date Analyzed:**	09/02/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	8270D	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411665

	Lab Control Sample KWG1411665-5 Lab Control Spike			Duplicate Lab Control Sample KWG1411665-6 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	4.64	5.00	93	4.27	5.00	85	50-112	8	30
2-Methylphenol	4.14	5.00	83	3.38	5.00	68	20-118	20	30
4-Methylphenol	3.99	5.00	80	3.83	5.00	77	19-121	4	30
2,4-Dimethylphenol	14.2	15.0	95	14.0	15.0	94	10-128	1	30
Hexachlorobutadiene	1.39	5.00	28	1.22	5.00	24	10-85	13	30
Diethyl Phthalate	4.22	5.00	84	3.78	5.00	76	56-112	11	30
2-Methyl-4,6-dinitrophenol	3.46	5.00	69	2.95	5.00	59	38-109	16	30
Fluoranthene	4.49	5.00	90	4.46	5.00	89	56-110	1	30
Pyrene	4.26	5.00	85	4.31	5.00	86	59-109	1	30
Butyl Benzyl Phthalate	4.81	5.00	96	4.57	5.00	91	62-112	5	30
Chrysene	4.38	5.00	88	4.37	5.00	87	61-107	0	30
Bis(2-ethylhexyl) Phthalate	4.82	5.00	96	10.8	5.00	215 *	61-118	76 *	30
Di-n-octyl Phthalate	4.31	5.00	86	4.38	5.00	88	60-110	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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September 19, 2014 Analytical Report for Service Request No: K1409260

Susan Scrocchi
Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, NY 14304

RE: Marine View Drive RI/FS/009973-D21101

Dear Susan:

Enclosed are the results of the samples submitted to our laboratory on August 29, 2014. For your reference, these analyses have been assigned our service request number K1409260.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/aj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request No.:**	K1409260
Project:	Marine View Driver RI/FS/ 009973-D21101	**Date Received:**	08/29/14
Sample Matrix:	Soil and Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Five soil and one water sample was received for analysis at ALS Environmental on 08/29/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

TCLP Metals

No anomalies associated with the analysis of these samples were observed.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike and matrix spike duplicate recoveries of Aluminum, Iron and Magnesium for sample S-082814-RB-TP38-2.5 were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike and matrix spike duplicate recoveries of Antimony for sample S-082814-RB-TP38-2.5 was below the Method control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

The matrix spike recovery of Calcium for sample S-082814-RB-TP38-2.5 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by_ Howard B. Holmes _____

Organochlorine Pesticides by EPA Method 8081

Second Source Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081 requires the use of dual column confirmation. When the Initial Calibration Verification (ICV) criteria are met for both columns, the lower of the two sample results is generally reported. The data quality was not affected. No further corrective action was necessary.

Calibration Verification Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081 requires the use of dual column confirmation. When the Continuing Calibration Verification (CCV) criterion is met for both columns, the lower of the two sample results is generally reported. The primary evaluation criteria were not met on the confirmation column for a few analytes. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Elevated Detection Limits:
The detection limit was elevated for several analytes in sample S-082714-NH-TP24-8.5. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Matrix Spike Recovery Exceptions:
The control criteria for the matrix spike recovery of beta-BHC and 4,4'-DDT for sample S-082714-NH-TP24-8.5 were not applicable. The chromatogram indicated non-target matrix background components contributed to the reported matrix spike concentrations. Thus, the reported recoveries contained a high bias. Based on the magnitude of background contribution, the interference appeared to be minimal.

No other anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Sample Notes and Discussion:
Three Aroclors were identified in S-082714-NH-TP24-8.5: Aroclor 1242, Aroclor 1254, and Aroclor 1260. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective. In particular, when mixtures are present, differentiating Aroclor 1242 from Aroclor 1248 can be difficult.

A review of the sample chromatograms indicated the presence of PCB patterns that spanned the entire elution range from Aroclor 1242 through the end of Aroclor 1260. Based on individual PCB peaks in the early portion of the chromatogram, Aroclor 1242 was identified and quantitated. Aroclor 1260 was identified based on the presence of late eluting PCB peaks in the chromatogram. The remainder of the PCB pattern was identified as Aroclor 1254 because PCB peak height in the middle of the chromatogram was larger than could be attributed to either Aroclor 1242, Aroclor 1248, or Aroclor 1260.

When Aroclor mixtures are present in a sample, care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors 1242, 1254 and 1260 are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved.

No other anomalies associated with the analysis of these samples were observed.

TCLP Volatiles by EPA Method 1311/8260

No anomalies associated with the analysis of these samples were observed.

Approved by__ Howard B. Holmes _____

Volatile Organic Compounds by EPA Method 8260

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

No anomalies associated with the analysis of these samples were observed.

TCLP Semivolatiles by EPA Method 1311/8270

No anomalies associated with the analysis of these samples were observed.

Approved by_ Howard B. Holmes _____

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES

Address: _____

Phone: _____ Fax: _____

K1409260

COC NO.: 37430

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 009973-D2110.1	**Laboratory Name:** ALS	**Lab Location:** Kelso WA	**SSOW ID:** 229-402-D02-1100
Project Name: MARINE VIEW DRIVE RI/FS	**Lab Contact:** Howard Holmes	**Lab Quote No:**	**Cooler No:**
Project Location: 1913 MARINE VIEW DRIVE TACOMA			**Carrier:** ALS
Chemistry Contact: Sue Scrudhi			**Airbill No:** N/A
Sampler(s): NH & RB			**Date Shipped:** 8/29/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	TCLP RCRA 8	SVOC	VOC	Ignitability	Corrosivity	Metals	PCB/Pest	Cyanide			MS/MSD Request	Comments/ Special Instructions:
1	S-082614-RB-TP28-8	8/26	15:10	S	G	X						X		2	X	X	X	X	X							
2	S-082714-NH-TP24-8.5	8/27	12:30	S	G	X						X		2	X	X	X			X	X	X				NO TCLP BECAUSE RB
3	S-082814-RB-TP38-2.5	8/28	9:55	S	G	X								1						X		X				
4	S-082814-RB-TP38-4.5	8/28	10:05	S	G	X								1						X		X				
5	S-082814-RB-TP39-11.0	8/28	10:15	S	G	X								1						X		X				
6																										
7																										
8																										
9																										
10																										
11																										
12																										
13																										
14																										
15																										

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers:

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	CRA	8/29	10:30	1.	ALS	8.29.14	1025
2.	ALS	8-29-14	1240	2.	ALS	8-29-14	1240
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

PC HA

Cooler Receipt and Preservation Form

Client / Project: CRA Service Request K14 09260

Received: 8-29-14 Opened: 8-29-14 By: GH Unloaded: 8-29-14 By: GH

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* (*Courier*) *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
-0.3	-0.1	6.1	6.3	+0.2	308	37430		

4. Packing material: (*Inserts*) *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) (N) SX
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: Rec'd H20 Trip Blank not listed on COC

Page _____ *of* _____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Flash Point

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
S-082614-RB-TP28-8	K1409260-001	**>110**	-	-	1	09/11/14 18:00	
Method Blank	K1409260-MB	**>110**	-	-	1	09/11/14 18:00	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
		Date Analyzed:	09/11/14

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	S-082614-RB-TP28-8	**Units:**	deg C
Lab Code:	K1409260-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1409260-001DUP Result	Average	RPD	RPD Limit
Flash Point	1020A Modified	-	-	>110	>110	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Analyzed:**	09/11/14
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	411064

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1409260-LCS	27.0	27.0	100	85-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/14 - 08/28/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
S-082714-NH-TP24-8.5	K1409260-002	**82.2**	-	-	1	09/02/14 12:16	
S-082814-RB-TP38-2.5	K1409260-003	**89.1**	-	-	1	09/02/14 12:16	
S-082814-RB-TP38-4.5	K1409260-004	**85.7**	-	-	1	09/02/14 12:16	
S-082814-RB-TP38-11.0	K1409260-005	**84.0**	-	-	1	09/02/14 12:16	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/28/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
		Date Analyzed:	09/02/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	S-082814-RB-TP38-11.0	**Units:**	Percent
Lab Code:	K1409260-005	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1409260-005DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	-	84.0	84.2	84.1	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/14 - 08/28/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
S-082714-NH-TP24-8.5	K1409260-002	ND U	0.23	0.07	1	09/04/14 11:32	9/4/14	
S-082814-RB-TP38-2.5	K1409260-003	ND U	0.21	0.07	1	09/04/14 11:32	9/4/14	
S-082814-RB-TP38-4.5	K1409260-004	ND U	0.21	0.07	1	09/04/14 11:32	9/4/14	
S-082814-RB-TP38-11.0	K1409260-005	ND U	0.22	0.07	1	09/04/14 11:32	9/4/14	
Method Blank	K1409260-MB	ND U	0.20	0.06	1	09/04/14 11:32	9/4/14	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	09/04/14

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1409173-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1409173-001DUP Result	Average	RPD	RPD Limit
Cyanide, Total	9012B	0.46	0.14	4.08	4.14	4.11	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	N/A
		Date Analyzed:	09/4/14
		Date Extracted:	09/4/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1409173-001	**Basis:**	Dry
Analysis Method:	9012B		
Prep Method:	Method		

		Matrix Spike K1409173-001MS			**Duplicate Matrix Spike** K1409173-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	4.08	7.2	2.3	137	7.1	2.3	133	10-171	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Analyzed:**	09/04/14
Sample Matrix:	Soil	**Date Extracted:**	09/04/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	409914

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1409260-LCS	93.3	109	86	62-128

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/14
Sample Matrix:	Soil	**Date Received:**	08/29/14
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received

pH

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
S-082614-RB-TP28-8	K1409260-001	**12.5**	-	-	1	09/08/14 18:51	H

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary

pH

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1408989-027DUP	-	-	12.4	12.4	12.4	<1	20	09/08/14
Batch QC	K1409173-005DUP	-	-	7.48	7.47	7.48	<1	20	09/08/14

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Analyzed:**	09/08/14
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
pH

Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	410432

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1409260-LCS	5.41	5.38	101	85-115

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409260
Project No.:	009973-D21101	**Date Collected:**	08/26/14
Project Name:	Marine View Drive RI/FS	**Date Received:**	08/29/14
Matrix:	TCLP	**Units:**	mg/L
		Basis:	NA

Sample Name: **S-082614-RB-TP28-8** **Lab Code:** **K1409260-001**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	0.05	0.03	5.0	09/03/14	09/08/14	0.03	U	
Barium	6010C	1.00	0.45	5.0	09/03/14	09/08/14	0.45	U	
Cadmium	6010C	0.050	0.001	5.0	09/03/14	09/08/14	0.001	U	
Chromium	6010C	0.05	0.01	5.0	09/03/14	09/08/14	0.01	U	
Lead	6010C	0.05	0.02	5.0	09/03/14	09/08/14	0.15		
Mercury	7470A	0.0010	0.0001	1.0	09/03/14	09/03/14	0.0001	U	
Selenium	6010C	0.20	0.02	5.0	09/03/14	09/08/14	0.02	U	
Silver	6010C	0.10	0.04	5.0	09/03/14	09/08/14	0.04	U	

Comments:

TCLP Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Date Collected:**

Project Name: Marine View Drive RI/FS **Date Received:**

Matrix: TCLP **Units:** mg/L

Basis: NA

Sample Name: Method Blank **Lab Code:** K1409260-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6010C	0.05	0.03	5.0	09/03/14	09/08/14	0.03	U	
Barium	6010C	1.00	0.45	5.0	09/03/14	09/08/14	0.45	U	
Cadmium	6010C	0.050	0.001	5.0	09/03/14	09/08/14	0.001	U	
Chromium	6010C	0.05	0.01	5.0	09/03/14	09/08/14	0.01	U	
Lead	6010C	0.05	0.02	5.0	09/03/14	09/08/14	0.02	U	
Mercury	7470A	0.0010	0.0001	1.0	09/03/14	09/03/14	0.0001	U	
Selenium	6010C	0.20	0.02	5.0	09/03/14	09/08/14	0.02	U	
Silver	6010C	0.10	0.04	5.0	09/03/14	09/08/14	0.04	U	

Comments:

TCLP Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/L

Project Name: Marine View Drive RI/FS **Basis:** NA

Matrix: TCLP

Sample Name: S-082614-RB-TP28-8S **Lab Code:** K1409260-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	75 - 125	4.93		0.03	U	5.00	98.6		6010C
Barium	75 - 125	10.6		0.45	U	10.00	106.0		6010C
Cadmium	75 - 125	0.942		0.001	U	1.00	94.2		6010C
Chromium	75 - 125	4.89		0.01	U	5.00	97.8		6010C
Lead	75 - 125	4.82		0.15		5.00	93.4		6010C
Mercury	75 - 125	0.0053		0.0001	U	0.005	106.0		7470A
Selenium	75 - 125	0.89		0.02	U	1.00	89.0		6010C
Silver	75 - 125	0.90		0.04	U	1.00	90.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

TCLP Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/L

Project Name: Marine View Drive RI/FS **Basis:** NA

Matrix: TCLP

Sample Name: **S-082614-RB-TP28-8D** **Lab Code:** **K1409260-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic		0.03	U	0.03	U			6010C
Barium		0.45	U	0.45	U			6010C
Cadmium		0.001	U	0.001	U			6010C
Chromium		0.01	U	0.01	U			6010C
Lead		0.15		0.15		0.0		6010C
Mercury		0.0001	U	0.0001	U			7470A
Selenium		0.02	U	0.02	U			6010C
Silver		0.04	U	0.04	U			6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

TCLP Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101

Project Name: Marine View Drive RI/FS

Aqueous LCS Source: **ALS MIXED** **Solid LCS Source:**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	5	5.15	103.0					
Barium	10	10.6	106.0					
Cadmium	1	0.994	99.4					
Chromium	5	5.05	101.0					
Lead	5	5.10	102.0					
Mercury	.005	0.0047	94.0					
Selenium	1	0.99	99.0					
Silver	1	1.03	103.0					

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409260
Project No.: 009973-D21101
Date Collected: 08/27/14
Project Name: Marine View Drive RI/FS
Date Received: 08/29/14
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: S-082714-NH-TP24-8.5
Lab Code: K1409260-002

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	0.4	2.0	09/03/14	09/04/14	8080		
Antimony	6010C	3.6	0.4	2.0	09/03/14	09/04/14	1.6	J	N
Arsenic	6010C	3.6	0.7	2.0	09/03/14	09/04/14	6.8		
Barium	6010C	0.72	0.27	2.0	09/03/14	09/04/14	51.6		
Beryllium	6010C	0.18	0.02	2.0	09/03/14	09/04/14	0.12	J	
Cadmium	6010C	0.18	0.04	2.0	09/03/14	09/04/14	0.95		
Calcium	6010C	3.6	0.8	2.0	09/03/14	09/04/14	2790		N
Chromium	6010C	0.7	0.1	2.0	09/03/14	09/04/14	18.6		
Cobalt	6010C	0.36	0.09	2.0	09/03/14	09/04/14	6.74		
Copper	6010C	0.7	0.3	2.0	09/03/14	09/04/14	53.1		
Iron	6010C	3.6	1.8	2.0	09/03/14	09/04/14	14900		
Lead	6010C	1.8	0.4	2.0	09/03/14	09/04/14	69.9		
Magnesium	6010C	1.79	0.18	2.0	09/03/14	09/04/14	3300		
Manganese	6010C	0.18	0.02	2.0	09/03/14	09/04/14	244		
Mercury	7471B	0.022	0.002	1.0	09/09/14	09/10/14	0.164		
Nickel	6010C	0.72	0.09	2.0	09/03/14	09/04/14	18.1		
Potassium	6010C	35.8	8.1	2.0	09/03/14	09/04/14	960		
Selenium	6010C	3.6	0.8	2.0	09/03/14	09/04/14	1.2	J	
Silver	6010C	0.7	0.2	2.0	09/03/14	09/04/14	0.2	U	
Sodium	6010C	71.6	3.6	2.0	09/03/14	09/04/14	546		
Thallium	6010C	3.6	0.5	2.0	09/03/14	09/04/14	0.5	U	
Vanadium	6010C	0.7	0.2	2.0	09/03/14	09/04/14	37.3		
Zinc	6010C	0.9	0.2	2.0	09/03/14	09/04/14	248		

% Solids: 82.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409260
Project No.: 009973-D21101
Date Collected: 08/28/14
Project Name: Marine View Drive RI/FS
Date Received: 08/29/14
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: S-082814-RB-TP38-2.5
Lab Code: K1409260-003

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	0.5	2.0	09/03/14	09/04/14	9810		
Antimony	6010C	3.6	0.4	2.0	09/03/14	09/04/14	0.4	U	N
Arsenic	6010C	3.6	0.7	2.0	09/03/14	09/04/14	4.3		
Barium	6010C	0.72	0.27	2.0	09/03/14	09/04/14	52.2		
Beryllium	6010C	0.18	0.02	2.0	09/03/14	09/04/14	0.14	J	
Cadmium	6010C	0.18	0.04	2.0	09/03/14	09/04/14	0.04	U	
Calcium	6010C	3.6	0.8	2.0	09/03/14	09/04/14	2010		N
Chromium	6010C	0.7	0.1	2.0	09/03/14	09/04/14	19.4		
Cobalt	6010C	0.36	0.09	2.0	09/03/14	09/04/14	5.25		
Copper	6010C	0.7	0.3	2.0	09/03/14	09/04/14	12.0		
Iron	6010C	3.6	1.8	2.0	09/03/14	09/04/14	13000		
Lead	6010C	1.8	0.4	2.0	09/03/14	09/04/14	5.5		
Magnesium	6010C	1.81	0.18	2.0	09/03/14	09/04/14	3640		
Manganese	6010C	0.18	0.02	2.0	09/03/14	09/04/14	258		
Mercury	7471B	0.020	0.002	1.0	09/09/14	09/10/14	0.016	J	
Nickel	6010C	0.72	0.09	2.0	09/03/14	09/04/14	24.4		
Potassium	6010C	36.2	8.2	2.0	09/03/14	09/04/14	455		
Selenium	6010C	3.6	0.8	2.0	09/03/14	09/04/14	0.8	U	
Silver	6010C	0.7	0.2	2.0	09/03/14	09/04/14	0.2	U	
Sodium	6010C	72.4	3.6	2.0	09/03/14	09/04/14	81.1		
Thallium	6010C	3.6	0.5	2.0	09/03/14	09/04/14	0.5	U	
Vanadium	6010C	0.7	0.2	2.0	09/03/14	09/04/14	31.9		
Zinc	6010C	0.9	0.2	2.0	09/03/14	09/04/14	29.1		

% Solids: 89.1

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409260
Project No.: 009973-D21101
Date Collected: 08/28/14
Project Name: Marine View Drive RI/FS
Date Received: 08/29/14
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: S-082814-RB-TP38-4.5
Lab Code: K1409260-004

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	0.5	2.0	09/03/14	09/04/14	12100		
Antimony	6010C	3.7	0.4	2.0	09/03/14	09/04/14	0.4	U	N
Arsenic	6010C	3.7	0.7	2.0	09/03/14	09/04/14	3.2	J	
Barium	6010C	0.74	0.28	2.0	09/03/14	09/04/14	50.5		
Beryllium	6010C	0.18	0.02	2.0	09/03/14	09/04/14	0.16	J	
Cadmium	6010C	0.18	0.04	2.0	09/03/14	09/04/14	0.04	U	
Calcium	6010C	3.7	0.8	2.0	09/03/14	09/04/14	2250		N
Chromium	6010C	0.7	0.1	2.0	09/03/14	09/04/14	25.2		
Cobalt	6010C	0.37	0.09	2.0	09/03/14	09/04/14	7.22		
Copper	6010C	0.7	0.3	2.0	09/03/14	09/04/14	15.0		
Iron	6010C	3.7	1.8	2.0	09/03/14	09/04/14	14600		
Lead	6010C	1.8	0.4	2.0	09/03/14	09/04/14	6.6		
Magnesium	6010C	1.84	0.18	2.0	09/03/14	09/04/14	4770		
Manganese	6010C	0.18	0.02	2.0	09/03/14	09/04/14	175		
Mercury	7471B	0.022	0.002	1.0	09/09/14	09/10/14	0.026		
Nickel	6010C	0.74	0.09	2.0	09/03/14	09/04/14	32.5		
Potassium	6010C	36.8	8.3	2.0	09/03/14	09/04/14	501		
Selenium	6010C	3.7	0.8	2.0	09/03/14	09/04/14	1.2	J	
Silver	6010C	0.7	0.2	2.0	09/03/14	09/04/14	0.2	U	
Sodium	6010C	73.5	3.7	2.0	09/03/14	09/04/14	99.0		
Thallium	6010C	3.7	0.6	2.0	09/03/14	09/04/14	0.6	U	
Vanadium	6010C	0.7	0.2	2.0	09/03/14	09/04/14	35.2		
Zinc	6010C	0.9	0.2	2.0	09/03/14	09/04/14	35.8		

% Solids: 85.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409260
Project No.: 009973-D21101
Date Collected: 08/28/14
Project Name: Marine View Drive RI/FS
Date Received: 08/29/14
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: S-082814-RB-TP38-11.0
Lab Code: K1409260-005

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.7	0.4	2.0	09/03/14	09/04/14	11000		
Antimony	6010C	3.5	0.3	2.0	09/03/14	09/04/14	0.3	U	N
Arsenic	6010C	3.5	0.7	2.0	09/03/14	09/04/14	4.0		
Barium	6010C	0.69	0.26	2.0	09/03/14	09/04/14	50.2		
Beryllium	6010C	0.17	0.02	2.0	09/03/14	09/04/14	0.16	J	
Cadmium	6010C	0.17	0.04	2.0	09/03/14	09/04/14	0.04	U	
Calcium	6010C	3.5	0.8	2.0	09/03/14	09/04/14	1970		N
Chromium	6010C	0.7	0.1	2.0	09/03/14	09/04/14	22.7		
Cobalt	6010C	0.35	0.09	2.0	09/03/14	09/04/14	5.21		
Copper	6010C	0.7	0.3	2.0	09/03/14	09/04/14	11.4		
Iron	6010C	3.5	1.7	2.0	09/03/14	09/04/14	12900		
Lead	6010C	1.7	0.3	2.0	09/03/14	09/04/14	3.6		
Magnesium	6010C	1.73	0.17	2.0	09/03/14	09/04/14	3620		
Manganese	6010C	0.17	0.02	2.0	09/03/14	09/04/14	201		
Mercury	7471B	0.019	0.002	1.0	09/09/14	09/10/14	0.015	J	
Nickel	6010C	0.69	0.09	2.0	09/03/14	09/04/14	20.7		
Potassium	6010C	34.5	7.8	2.0	09/03/14	09/04/14	602		
Selenium	6010C	3.5	0.8	2.0	09/03/14	09/04/14	1.1	J	
Silver	6010C	0.7	0.2	2.0	09/03/14	09/04/14	0.2	U	
Sodium	6010C	69.0	3.5	2.0	09/03/14	09/04/14	101		
Thallium	6010C	3.5	0.5	2.0	09/03/14	09/04/14	0.5	U	
Vanadium	6010C	0.7	0.2	2.0	09/03/14	09/04/14	36.3		
Zinc	6010C	0.9	0.2	2.0	09/03/14	09/04/14	23.7		

% Solids: 84.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409260
Project No.: 009973-D21101
Date Collected:
Project Name: Marine View Drive RI/FS
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1409260-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	2.0	0.5	2.0	09/03/14	09/04/14	0.6	J	
Antimony	6010C	4.0	0.4	2.0	09/03/14	09/04/14	0.4	U	N
Arsenic	6010C	4.0	0.8	2.0	09/03/14	09/04/14	0.8	U	
Barium	6010C	0.80	0.30	2.0	09/03/14	09/04/14	0.30	U	
Beryllium	6010C	0.20	0.02	2.0	09/03/14	09/04/14	0.02	U	
Cadmium	6010C	0.20	0.04	2.0	09/03/14	09/04/14	0.04	U	
Calcium	6010C	4.0	0.9	2.0	09/03/14	09/04/14	0.9	U	
Chromium	6010C	0.8	0.1	2.0	09/03/14	09/04/14	0.1	U	
Cobalt	6010C	0.40	0.10	2.0	09/03/14	09/04/14	0.10	U	
Copper	6010C	0.8	0.3	2.0	09/03/14	09/04/14	0.3	U	
Iron	6010C	4.0	2.0	2.0	09/03/14	09/04/14	2.0	U	
Lead	6010C	2.0	0.4	2.0	09/03/14	09/04/14	0.4	U	
Magnesium	6010C	2.00	0.20	2.0	09/03/14	09/04/14	0.22	J	
Manganese	6010C	0.20	0.02	2.0	09/03/14	09/04/14	0.02	J	
Mercury	7471B	0.018	0.002	1.0	09/09/14	09/10/14	0.002	U	
Nickel	6010C	0.80	0.10	2.0	09/03/14	09/04/14	0.10	U	
Potassium	6010C	40.0	9.0	2.0	09/03/14	09/04/14	9.0	U	
Selenium	6010C	4.0	0.9	2.0	09/03/14	09/04/14	0.9	U	
Silver	6010C	0.8	0.2	2.0	09/03/14	09/04/14	0.2	U	
Sodium	6010C	80.0	4.0	2.0	09/03/14	09/04/14	4.0	U	
Thallium	6010C	4.0	0.6	2.0	09/03/14	09/04/14	0.6	U	
Vanadium	6010C	0.8	0.2	2.0	09/03/14	09/04/14	0.2	U	
Zinc	6010C	1.0	0.2	2.0	09/03/14	09/04/14	0.2	J	

% Solids: 100.0

Comments:

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/KG

Project Name: Marine View Drive RI/FS **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: S-082814-RB-TP38-2.5S **Lab Code:** K1409260-003S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum		10300		9810		330.00	148.5		6010C
Antimony	75 - 125	43.0		0.4	U	82.00	52.4	N	6010C
Arsenic	75 - 125	86.9		4.3		82.00	100.7		6010C
Barium	75 - 125	225		52.2		160.00	108.0		6010C
Beryllium	75 - 125	8.36		0.14	J	8.20	100.2		6010C
Cadmium	75 - 125	8.11		0.04	U	8.20	98.9		6010C
Calcium	75 - 125	3090		2010		820.00	131.7	N	6010C
Chromium	75 - 125	56.2		19.4		33.00	111.5		6010C
Cobalt	75 - 125	88.0		5.25		82.00	100.9		6010C
Copper	75 - 125	55.2		12.0		41.00	105.4		6010C
Iron		12100		13000		160.00	-562.5		6010C
Lead	75 - 125	87.8		5.5		82.00	100.4		6010C
Magnesium		4430		3640		820.00	96.3		6010C
Manganese	75 - 125	333		258		82.00	91.5		6010C
Nickel	75 - 125	105		24.4		82.00	98.3		6010C
Potassium	75 - 125	1310		455		820.00	104.3		6010C
Selenium	75 - 125	72.9		0.8	U	82.00	88.9		6010C
Silver	75 - 125	8.3		0.2	U	8.20	101.2		6010C
Sodium	75 - 125	978		81.1		820.00	109.4		6010C
Thallium	75 - 125	79.3		0.5	U	82.00	96.7		6010C
Vanadium	75 - 125	113		31.9		82.00	98.9		6010C
Zinc	75 - 125	109		29.1		82.00	97.4		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/KG

Project Name: Marine View Drive RI/FS **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: S-082814-RB-TP38-2.5SD **Lab Code:** K1409260-003SD

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum		10500		9810		360.00	191.7		6010C
Antimony	75 - 125	46.4		0.4	U	91.00	51.0	N	6010C
Arsenic	75 - 125	93.8		4.3		91.00	98.4		6010C
Barium	75 - 125	243		52.2		180.00	106.0		6010C
Beryllium	75 - 125	8.99		0.14	J	9.00	98.3		6010C
Cadmium	75 - 125	8.82		0.04	U	9.00	98.0		6010C
Calcium	75 - 125	2970		2010		910.00	105.5		6010C
Chromium	75 - 125	59.3		19.4		36.00	110.8		6010C
Cobalt	75 - 125	95.6		5.25		91.00	99.3		6010C
Copper	75 - 125	59.1		12.0		45.00	104.7		6010C
Iron		13400		13000		180.00	222.2		6010C
Lead	75 - 125	94.9		5.5		91.00	98.2		6010C
Magnesium		4840		3640		910.00	131.9		6010C
Manganese	75 - 125	341		258		91.00	91.2		6010C
Nickel	75 - 125	118		24.4		91.00	102.9		6010C
Potassium	75 - 125	1480		455		910.00	112.6		6010C
Selenium	75 - 125	79.7		0.8	U	91.00	87.6		6010C
Silver	75 - 125	8.9		0.2	U	9.00	98.9		6010C
Sodium	75 - 125	1030		81.1		910.00	104.3		6010C
Thallium	75 - 125	86.2		0.5	U	91.00	94.7		6010C
Vanadium	75 - 125	124		31.9		91.00	101.2		6010C
Zinc	75 - 125	116		29.1		91.00	95.5		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409260
Project No.:	009973-D21101	**Units:**	MG/KG
Project Name:	Marine View Drive RI/FS	**Basis:**	DRY
Matrix:	SEDIMENT	**% Solids:**	70.4

Sample Name: Batch QC1S **Lab Code:** K1409547-007S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.598		0.036		0.56	100.4		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/KG

Project Name: Marine View Drive RI/FS **Basis:** DRY

Matrix: SOIL **% Solids:** 89.1

Sample Name: **S-082814-RB-TP38-2.5SD** **Lab Code:** **K1409260-003SD**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	10300		10500		1.9		6010C
Antimony	20	43.0		46.4		7.6		6010C
Arsenic	20	86.9		93.8		7.6		6010C
Barium	20	225		243		7.7		6010C
Beryllium	20	8.36		8.99		7.3		6010C
Cadmium	20	8.11		8.82		8.4		6010C
Calcium	20	3090		2970		4.0		6010C
Chromium	20	56.2		59.3		5.4		6010C
Cobalt	20	88.0		95.6		8.3		6010C
Copper	20	55.2		59.1		6.8		6010C
Iron	20	12100		13400		10.2		6010C
Lead	20	87.8		94.9		7.8		6010C
Magnesium	20	4430		4840		8.8		6010C
Manganese	20	333		341		2.4		6010C
Nickel	20	105		118		11.7		6010C
Potassium	20	1310		1480		12.2		6010C
Selenium	20	72.9		79.7		8.9		6010C
Silver	20	8.3		8.9		7.0		6010C
Sodium	20	978		1030		5.2		6010C
Thallium	20	79.3		86.2		8.3		6010C
Vanadium	20	113		124		9.3		6010C
Zinc	20	109		116		6.2		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101 **Units:** MG/KG

Project Name: Marine View Drive RI/FS **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 70.4

Sample Name: **Batch QC1D** **Lab Code:** **K1409547-007D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.036		0.048		28.6		7471B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409260

Project No.: 009973-D21101

Project Name: Marine View Drive RI/FS

Aqueous LCS Source: **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				8840	6060		42 158	68.6
Antimony				88.2	69.8		26 289	79.1
Arsenic				99.6	105		69 131	105.4
Barium				310	317		74 126	102.3
Beryllium				72.3	73.4		74 126	101.5
Cadmium				182	181		74 126	99.5
Calcium				6790	6860		74 126	101.0
Chromium				136	139		70 130	102.2
Cobalt				128	130		74 125	101.6
Copper				102	108		74 126	105.9
Iron				12600	10100		31 168	80.2
Lead				115	113		72 129	98.3
Magnesium				3010	2820		66 134	93.7
Manganese				323	325		75 125	100.6
Mercury				19.9	19.5		51 148	98.0
Nickel				153	154		73 126	100.7
Potassium				2840	2600		62 138	91.5
Selenium				150	140		67 133	93.3
Silver				40.4	41.8		66 134	103.5
Sodium				2760	2930		66 134	106.2
Thallium				174	174		69 132	100.0
Vanadium				97.6	99.1		77 123	101.5
Zinc				161	151		81 119	93.8

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014

Organochlorine Pesticides

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	ug/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.6	0.35	1	09/03/14	09/10/14	KWG1412477	
beta-BHC	ND	Ui	2.6	2.6	1	09/03/14	09/10/14	KWG1412477	
gamma-BHC (Lindane)	ND	Ui	1.6	0.54	1	09/03/14	09/10/14	KWG1412477	
delta-BHC	ND	Ui	1.6	0.84	1	09/03/14	09/10/14	KWG1412477	
Heptachlor	ND	U	1.6	0.83	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDE	ND	U	1.6	1.6	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDD	**2.1**		1.6	1.0	1	09/03/14	09/10/14	KWG1412477	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDT	ND	Ui	36	36	1	09/03/14	09/10/14	KWG1412477	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	54	21-112	09/10/14	Acceptable
Decachlorobiphenyl	63	15-130	09/10/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1412477-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.3	0.35	1	09/03/14	09/10/14	KWG1412477	
beta-BHC	ND	U	2.5	0.50	1	09/03/14	09/10/14	KWG1412477	
gamma-BHC (Lindane)	ND	U	1.3	0.45	1	09/03/14	09/10/14	KWG1412477	
delta-BHC	ND	U	1.3	0.37	1	09/03/14	09/10/14	KWG1412477	
Heptachlor	ND	U	1.3	0.83	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDE	ND	U	1.6	1.6	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDD	ND	U	1.3	1.0	1	09/03/14	09/10/14	KWG1412477	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/03/14	09/10/14	KWG1412477	
4,4'-DDT	ND	U	1.3	0.85	1	09/03/14	09/10/14	KWG1412477	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	57	21-112	09/10/14	Acceptable
Decachlorobiphenyl	67	15-130	09/10/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora
Service Request: K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3541
Analysis Method: 8081B
Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2
S-082714-NH-TP24-8.5	K1409260-002	54	63
Method Blank	KWG1412477-4	57	67
S-082714-NH-TP24-8.5MS	KWG1412477-1	53	61
S-082714-NH-TP24-8.5DMS	KWG1412477-2	50	59
Lab Control Sample	KWG1412477-3	54	61

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	21-112
Sur2	=	Decachlorobiphenyl	15-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/10/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	ug/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1412477

		S-082714-NH-TP24-8.5MS KWG1412477-1 Matrix Spike			S-082714-NH-TP24-8.5DMS KWG1412477-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
alpha-BHC	ND	35.0	60.6	58	34.2	60.4	57	23-133	2	40
beta-BHC	ND	39.6	60.6	65 #	39.0	60.4	65 #	22-142	1	40
gamma-BHC (Lindane)	ND	37.1	60.6	61	36.3	60.4	60	26-135	2	40
delta-BHC	ND	39.1	60.6	65	37.9	60.4	63	25-148	3	40
Heptachlor	ND	38.1	60.6	63	37.3	60.4	62	21-136	2	40
4,4'-DDE	ND	36.0	60.6	60	35.6	60.4	59	22-142	1	40
4,4'-DDD	2.1	39.2	60.6	61	36.4	60.4	57	19-143	7	40
Endrin Aldehyde	ND	47.4	60.6	78	47.0	60.4	78	10-129	1	40
4,4'-DDT	ND	77.6	60.6	128 #	76.9	60.4	127 #	19-154	1	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/10/2014

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8081B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1412477

Lab Control Sample
KWG1412477-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
alpha-BHC	65.5	100	66	36-139
beta-BHC	62.5	100	62	38-142
gamma-BHC (Lindane)	66.0	100	66	40-142
delta-BHC	71.6	100	72	48-145
Heptachlor	64.3	100	64	39-135
4,4'-DDE	65.7	100	66	46-141
4,4'-DDD	68.1	100	68	46-146
Endrin Aldehyde	70.4	100	70	32-132
4,4'-DDT	79.1	100	79	46-151

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Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	mg/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1221	ND	U	0.031	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1232	ND	U	0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1242	**0.19**		0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1248	ND	U	0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1254	**0.30**		0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1260	**0.15**		0.016	0.0085	1	09/03/14	09/17/14	KWG1412476	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	59	43-148	09/17/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1412476-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1221	ND	U	0.025	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1232	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1242	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1248	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1254	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	
Aroclor 1260	ND	U	0.013	0.0085	1	09/03/14	09/17/14	KWG1412476	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	55	43-148	09/17/14	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
S-082714-NH-TP24-8.5	K1409260-002	59
Method Blank	KWG1412476-4	55
S-082714-NH-TP24-8.5MS	KWG1412476-1	67
S-082714-NH-TP24-8.5DMS	KWG1412476-2	65
Lab Control Sample	KWG1412476-3	56

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 43-148

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/17/2014 - 09/18/2014

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	mg/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1412476

		S-082714-NH-TP24-8.5MS KWG1412476-1 Matrix Spike			S-082714-NH-TP24-8.5DMS KWG1412476-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	0.470	0.600	78	0.449	0.602	74	23-145	5	40
Aroclor 1260	0.15	0.514	0.600	61	0.480	0.602	55	24-148	7	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/17/2014

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1412476

Lab Control Sample
KWG1412476-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	0.498	1.00	50	42-122
Aroclor 1260	0.530	1.00	53	50-124

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014
		Date Prepared:	09/03/2014

Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction
Volatile Organic Compounds

Sample Name:	S-082614-RB-TP28-8	**Units:**	mg/L
Lab Code:	K1409260-001	**Basis:**	NA
Preparation Method:	EPA 1311ZHE	**Level:**	Low
Extraction Method:	EPA 5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	09/05/14	09/05/14	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	09/05/14	09/05/14	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	09/05/14	09/05/14	
Chloroform	ND	U	0.20	0.029	6	1	09/05/14	09/05/14	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	09/05/14	09/05/14	
Benzene	ND	U	0.20	0.025	0.5	1	09/05/14	09/05/14	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	09/05/14	09/05/14	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	09/05/14	09/05/14	
Tetrachloroethene (PCE)	**0.064**	J	0.20	0.040	0.7	1	09/05/14	09/05/14	
Chlorobenzene	ND	U	0.20	0.044	100	1	09/05/14	09/05/14	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	09/05/14	09/05/14	

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	103	73-122	Acceptable
Toluene-d8	99	65-144	Acceptable
4-Bromofluorobenzene	86	68-117	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	09/03/2014

Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction
Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1412347-5	**Basis:**	NA
Preparation Method:	EPA 1311ZHE	**Level:**	Low
Extraction Method:	EPA 5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	09/05/14	09/05/14	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	09/05/14	09/05/14	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	09/05/14	09/05/14	
Chloroform	ND	U	0.20	0.029	6	1	09/05/14	09/05/14	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	09/05/14	09/05/14	
Benzene	ND	U	0.20	0.025	0.5	1	09/05/14	09/05/14	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	09/05/14	09/05/14	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	09/05/14	09/05/14	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	09/05/14	09/05/14	
Chlorobenzene	ND	U	0.20	0.044	100	1	09/05/14	09/05/14	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	09/05/14	09/05/14	

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	103	73-122	Acceptable
Toluene-d8	99	65-144	Acceptable
4-Bromofluorobenzene	88	68-117	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction
Volatile Organic Compounds

Preparation Method: EPA 1311ZHE **Units:** Percent
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260C

Sample Name	Lab Code	Sur1	Sur2	Sur3
S-082614-RB-TP28-8	K1409260-001	103	99	86
Method Blank	KWG1412347-5	103	99	88
S-082614-RB-TP28-8MS	KWG1412347-7	106	105	93
Lab Control Sample	KWG1412347-3	104	106	93

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Prepared:**	09/03/2014
Sample Matrix:	Soil	**Date Extracted:**	9/5/2014
		Date Analyzed:	09/05/2014

Matrix Spike Summary
Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction
Volatile Organic Compounds

Sample Name:	S-082614-RB-TP28-8	**Units:**	mg/L
Lab Code:	K1409260-001	**Basis:**	NA
Preparation Method:	EPA 1311ZHE	**Level:**	Low
Extraction Method:	EPA 5030B	**Extraction Lot:**	KWG1412347
Analysis Method:	8260C		

S-082614-RB-TP28-8MS
KWG1412347-7
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	ND	4.24	4.00	106	49-136
1,1-Dichloroethene	ND	4.80	4.00	120	59-171
2-Butanone (MEK)	ND	25.2	20.0	126	65-147
Chloroform	ND	4.50	4.00	113	64-133
Carbon Tetrachloride	ND	4.18	4.00	105	53-161
Benzene	ND	4.69	4.00	117	63-144
1,2-Dichloroethane (EDC)	ND	4.70	4.00	118	56-141
Trichloroethene (TCE)	ND	4.13	4.00	103	53-139
Tetrachloroethene (PCE)	0.064	3.96	4.00	98	61-131
Chlorobenzene	ND	3.88	4.00	97	69-126
1,4-Dichlorobenzene	ND	3.88	4.00	97	72-121

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Prepared:**	09/ 3/2014
Sample Matrix:	Soil	**Date Extracted:**	09/05/2014
		Date Analyzed:	09/05/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 1311ZHE/EPA 5030B	**Units:**	mg/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412347

Lab Control Sample
KWG1412347-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	4.67	4.00	117	55-123
1,1-Dichloroethene	4.90	4.00	122	66-129
2-Butanone (MEK)	20.8	20.0	104	71-149
Chloroform	4.54	4.00	114	70-129
Carbon Tetrachloride	4.57	4.00	114	55-140
Benzene	4.78	4.00	120	69-124
1,2-Dichloroethane (EDC)	4.54	4.00	114	56-142
Trichloroethene (TCE)	4.48	4.00	112	67-128
Tetrachloroethene (PCE)	4.18	4.00	104	62-126
Chlorobenzene	4.01	4.00	100	72-116
1,4-Dichlorobenzene	3.93	4.00	98	73-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/2014
Sample Matrix:	Water	**Date Received:**	08/29/2014

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1409260-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/03/14	09/03/14	KWG1412283	
Vinyl Chloride	ND	U	0.50	0.075	1	09/03/14	09/03/14	KWG1412283	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/03/14	09/03/14	KWG1412283	
Acetone	ND	U	20	3.3	1	09/03/14	09/03/14	KWG1412283	
Carbon Disulfide	ND	U	0.50	0.069	1	09/03/14	09/03/14	KWG1412283	
Methylene Chloride	**0.20**	J	2.0	0.10	1	09/03/14	09/03/14	KWG1412283	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/03/14	09/03/14	KWG1412283	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/03/14	09/03/14	KWG1412283	
2-Butanone (MEK)	ND	U	20	1.9	1	09/03/14	09/03/14	KWG1412283	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/03/14	09/03/14	KWG1412283	
Benzene	ND	U	0.50	0.062	1	09/03/14	09/03/14	KWG1412283	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/03/14	09/03/14	KWG1412283	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/03/14	09/03/14	KWG1412283	
Toluene	ND	U	0.50	0.054	1	09/03/14	09/03/14	KWG1412283	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/03/14	09/03/14	KWG1412283	
2-Hexanone	ND	U	20	2.7	1	09/03/14	09/03/14	KWG1412283	
Dibromochloromethane	ND	U	0.50	0.14	1	09/03/14	09/03/14	KWG1412283	
Ethylbenzene	ND	U	0.50	0.050	1	09/03/14	09/03/14	KWG1412283	
m,p-Xylenes	ND	U	0.50	0.11	1	09/03/14	09/03/14	KWG1412283	
o-Xylene	ND	U	0.50	0.074	1	09/03/14	09/03/14	KWG1412283	
Styrene	ND	U	0.50	0.089	1	09/03/14	09/03/14	KWG1412283	
Bromoform	ND	U	0.50	0.16	1	09/03/14	09/03/14	KWG1412283	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/03/14	09/03/14	KWG1412283	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	106	73-122	09/03/14	Acceptable
Toluene-d8	100	65-144	09/03/14	Acceptable
4-Bromofluorobenzene	84	68-117	09/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1412283-5	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/03/14	09/03/14	KWG1412283	
Vinyl Chloride	ND	U	0.50	0.075	1	09/03/14	09/03/14	KWG1412283	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/03/14	09/03/14	KWG1412283	
Acetone	ND	U	20	3.3	1	09/03/14	09/03/14	KWG1412283	
Carbon Disulfide	**0.070**	J	0.50	0.069	1	09/03/14	09/03/14	KWG1412283	
Methylene Chloride	**0.22**	J	2.0	0.10	1	09/03/14	09/03/14	KWG1412283	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/03/14	09/03/14	KWG1412283	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/03/14	09/03/14	KWG1412283	
2-Butanone (MEK)	ND	U	20	1.9	1	09/03/14	09/03/14	KWG1412283	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/03/14	09/03/14	KWG1412283	
Benzene	ND	U	0.50	0.062	1	09/03/14	09/03/14	KWG1412283	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/03/14	09/03/14	KWG1412283	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/03/14	09/03/14	KWG1412283	
Toluene	ND	U	0.50	0.054	1	09/03/14	09/03/14	KWG1412283	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/03/14	09/03/14	KWG1412283	
2-Hexanone	ND	U	20	2.7	1	09/03/14	09/03/14	KWG1412283	
Dibromochloromethane	ND	U	0.50	0.14	1	09/03/14	09/03/14	KWG1412283	
Ethylbenzene	ND	U	0.50	0.050	1	09/03/14	09/03/14	KWG1412283	
m,p-Xylenes	ND	U	0.50	0.11	1	09/03/14	09/03/14	KWG1412283	
o-Xylene	ND	U	0.50	0.074	1	09/03/14	09/03/14	KWG1412283	
Styrene	ND	U	0.50	0.089	1	09/03/14	09/03/14	KWG1412283	
Bromoform	ND	U	0.50	0.16	1	09/03/14	09/03/14	KWG1412283	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/03/14	09/03/14	KWG1412283	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	73-122	09/03/14	Acceptable
Toluene-d8	100	65-144	09/03/14	Acceptable
4-Bromofluorobenzene	91	68-117	09/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014

Volatile Organic Compounds

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	mg/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 5035A/5030B	**Level:**	Med
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.070	0.0095	1	09/03/14	09/03/14	KWG1412260	
Vinyl Chloride	ND	U	0.070	0.011	1	09/03/14	09/03/14	KWG1412260	
1,1-Dichloroethene	ND	U	0.070	0.012	1	09/03/14	09/03/14	KWG1412260	
Acetone	ND	U	2.8	0.47	1	09/03/14	09/03/14	KWG1412260	
Carbon Disulfide	**0.015**	J	0.070	0.0097	1	09/03/14	09/03/14	KWG1412260	
Methylene Chloride	**0.049**	J	0.28	0.014	1	09/03/14	09/03/14	KWG1412260	
trans-1,2-Dichloroethene	ND	U	0.070	0.011	1	09/03/14	09/03/14	KWG1412260	
cis-1,2-Dichloroethene	ND	U	0.070	0.0094	1	09/03/14	09/03/14	KWG1412260	
2-Butanone (MEK)	ND	U	2.8	0.27	1	09/03/14	09/03/14	KWG1412260	
Carbon Tetrachloride	ND	U	0.070	0.014	1	09/03/14	09/03/14	KWG1412260	
Benzene	ND	U	0.070	0.0087	1	09/03/14	09/03/14	KWG1412260	
Trichloroethene (TCE)	ND	U	0.070	0.014	1	09/03/14	09/03/14	KWG1412260	
4-Methyl-2-pentanone (MIBK)	ND	U	2.8	0.37	1	09/03/14	09/03/14	KWG1412260	
Toluene	**0.011**	J	0.070	0.0076	1	09/03/14	09/03/14	KWG1412260	
Tetrachloroethene (PCE)	ND	U	0.070	0.014	1	09/03/14	09/03/14	KWG1412260	
2-Hexanone	ND	U	2.8	0.38	1	09/03/14	09/03/14	KWG1412260	
Dibromochloromethane	ND	U	0.070	0.020	1	09/03/14	09/03/14	KWG1412260	
Ethylbenzene	ND	U	0.070	0.0070	1	09/03/14	09/03/14	KWG1412260	
m,p-Xylenes	ND	U	0.070	0.016	1	09/03/14	09/03/14	KWG1412260	
o-Xylene	ND	U	0.070	0.011	1	09/03/14	09/03/14	KWG1412260	
Styrene	ND	U	0.070	0.013	1	09/03/14	09/03/14	KWG1412260	
Bromoform	ND	U	0.070	0.023	1	09/03/14	09/03/14	KWG1412260	
1,2,4-Trichlorobenzene	**0.034**	J	0.28	0.014	1	09/03/14	09/03/14	KWG1412260	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	78	55-132	09/03/14	Acceptable
Toluene-d8	95	81-124	09/03/14	Acceptable
4-Bromofluorobenzene	85	64-132	09/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1412260-3	**Basis:**	Dry
Extraction Method:	EPA 5035A/5030B	**Level:**	Med
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.050	0.0068	1	09/03/14	09/03/14	KWG1412260	
Vinyl Chloride	ND	U	0.050	0.0075	1	09/03/14	09/03/14	KWG1412260	
1,1-Dichloroethene	ND	U	0.050	0.0080	1	09/03/14	09/03/14	KWG1412260	
Acetone	ND	U	2.0	0.33	1	09/03/14	09/03/14	KWG1412260	
Carbon Disulfide	ND	U	0.050	0.0069	1	09/03/14	09/03/14	KWG1412260	
Methylene Chloride	**0.060**	J	0.20	0.010	1	09/03/14	09/03/14	KWG1412260	
trans-1,2-Dichloroethene	ND	U	0.050	0.0072	1	09/03/14	09/03/14	KWG1412260	
cis-1,2-Dichloroethene	ND	U	0.050	0.0067	1	09/03/14	09/03/14	KWG1412260	
2-Butanone (MEK)	ND	U	2.0	0.19	1	09/03/14	09/03/14	KWG1412260	
Carbon Tetrachloride	ND	U	0.050	0.0096	1	09/03/14	09/03/14	KWG1412260	
Benzene	ND	U	0.050	0.0062	1	09/03/14	09/03/14	KWG1412260	
Trichloroethene (TCE)	ND	U	0.050	0.010	1	09/03/14	09/03/14	KWG1412260	
4-Methyl-2-pentanone (MIBK)	ND	U	2.0	0.26	1	09/03/14	09/03/14	KWG1412260	
Toluene	ND	U	0.050	0.0054	1	09/03/14	09/03/14	KWG1412260	
Tetrachloroethene (PCE)	ND	U	0.050	0.0099	1	09/03/14	09/03/14	KWG1412260	
2-Hexanone	ND	U	2.0	0.27	1	09/03/14	09/03/14	KWG1412260	
Dibromochloromethane	ND	U	0.050	0.014	1	09/03/14	09/03/14	KWG1412260	
Ethylbenzene	ND	U	0.050	0.0050	1	09/03/14	09/03/14	KWG1412260	
m,p-Xylenes	ND	U	0.050	0.011	1	09/03/14	09/03/14	KWG1412260	
o-Xylene	ND	U	0.050	0.0074	1	09/03/14	09/03/14	KWG1412260	
Styrene	ND	U	0.050	0.0089	1	09/03/14	09/03/14	KWG1412260	
Bromoform	ND	U	0.050	0.016	1	09/03/14	09/03/14	KWG1412260	
1,2,4-Trichlorobenzene	ND	U	0.20	0.0096	1	09/03/14	09/03/14	KWG1412260	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	55-132	09/03/14	Acceptable
Toluene-d8	93	81-124	09/03/14	Acceptable
4-Bromofluorobenzene	87	64-132	09/03/14	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1408916-001	105	98	86
Trip Blank	K1409260-006	106	100	84
Method Blank	KWG1412283-5	108	100	91
Batch QCMS	KWG1412283-1	102	104	94
Batch QCDMS	KWG1412283-2	109	104	99
Lab Control Sample	KWG1412283-3	100	96	94

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5035A/5030B **Units:** Percent
Analysis Method: 8260C **Level:** Med

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1409136-008	86	93	118
S-082714-NH-TP24-8.5	K1409260-002	78	95	85
Method Blank	KWG1412260-3	96	93	87
Batch QCMS	KWG1412260-4	95	99	122
Batch QCDMS	KWG1412260-5	96	100	121
Lab Control Sample	KWG1412260-1	99	99	93
Duplicate Lab Control Sample	KWG1412260-2	96	98	96

Surrogate Recovery Control Limits (%)

Sur1	= Dibromofluoromethane	55-132
Sur2	= Toluene-d8	81-124
Sur3	= 4-Bromofluorobenzene	64-132

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Water	**Date Analyzed:**	09/03/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1408916-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412283

		Batch QCMS KWG1412283-1 Matrix Spike			Batch QCDMS KWG1412283-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	7.99	10.0	80	7.56	10.0	76	49-136	6	30
1,1-Dichloroethene	ND	8.32	10.0	83	9.02	10.0	90	59-171	8	30
Carbon Tetrachloride	ND	8.30	10.0	83	7.88	10.0	79	53-161	5	30
Benzene	ND	9.64	10.0	96	9.37	10.0	94	63-144	3	30
Trichloroethene (TCE)	ND	8.77	10.0	88	7.99	10.0	80	53-139	9	30
Toluene	ND	9.18	10.0	92	8.31	10.0	83	71-136	10	30
2-Hexanone	ND	43.2	50.0	86	48.1	50.0	96	53-132	11	30
Ethylbenzene	ND	8.08	10.0	81	7.01	10.0	70	66-136	14	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/03/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1409136-008	**Basis:**	Dry
Extraction Method:	EPA 5035A/5030B	**Level:**	Med
Analysis Method:	8260C	**Extraction Lot:**	KWG1412260

		Batch QCMS KWG1412260-4 Matrix Spike			Batch QCDMS KWG1412260-5 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	0.525	0.510	103	0.527	0.510	103	49-127	0	40
1,1-Dichloroethene	ND	0.586	0.510	115	0.612	0.510	120	61-132	4	40
Carbon Tetrachloride	ND	0.471	0.510	92	0.472	0.510	93	56-124	0	40
Benzene	ND	0.615	0.510	121	0.610	0.510	120	66-123	1	40
Trichloroethene (TCE)	ND	0.543	0.510	106	0.548	0.510	107	62-119	1	40
Toluene	ND	0.593	0.510	116	0.578	0.510	113	67-123	3	40
2-Hexanone	ND	2.57	2.55	101	2.59	2.55	102	58-118	1	40
Ethylbenzene	ND	0.545	0.510	107	0.545	0.510	107	68-121	0	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Water	**Date Analyzed:**	09/03/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412283

Lab Control Sample
KWG1412283-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Chloromethane	7.52	10.0	75	34-130
Vinyl Chloride	8.52	10.0	85	55-123
1,1-Dichloroethene	9.37	10.0	94	66-129
Acetone	67.6	50.0	135	68-135
Carbon Disulfide	19.6	20.0	98	46-144
Methylene Chloride	8.48	10.0	85	71-122
trans-1,2-Dichloroethene	9.54	10.0	95	67-125
cis-1,2-Dichloroethene	8.92	10.0	89	71-118
2-Butanone (MEK)	57.5	50.0	115	71-149
Carbon Tetrachloride	8.47	10.0	85	55-140
Benzene	9.28	10.0	93	69-124
Trichloroethene (TCE)	8.85	10.0	89	67-128
4-Methyl-2-pentanone (MIBK)	51.3	50.0	103	64-134
Toluene	8.23	10.0	82	69-124
Tetrachloroethene (PCE)	7.89	10.0	79	62-126
2-Hexanone	50.5	50.0	101	59-131
Dibromochloromethane	7.71	10.0	77	67-126
Ethylbenzene	7.80	10.0	78	67-121
m,p-Xylenes	16.2	20.0	81	69-121
o-Xylene	7.71	10.0	77	71-119
Styrene	7.76	10.0	78	74-121
Bromoform	7.86	10.0	79	52-144
1,2,4-Trichlorobenzene	7.57	10.0	76	58-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/03/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/03/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5035A/5030B	**Units:**	mg/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Med
		Extraction Lot:	KWG1412260

	Lab Control Sample KWG1412260-1 Lab Control Spike			Duplicate Lab Control Sample KWG1412260-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	0.862	1.00	86	0.851	1.00	85	50-121	1	40
Vinyl Chloride	1.05	1.00	105	1.06	1.00	106	53-125	1	40
1,1-Dichloroethene	1.19	1.00	119	1.18	1.00	118	67-141	1	40
Acetone	5.57	5.00	111	5.29	5.00	106	47-142	5	40
Carbon Disulfide	2.19	2.00	110	2.15	2.00	108	48-140	2	40
Methylene Chloride	1.03	1.00	103	1.01	1.00	101	69-121	2	40
trans-1,2-Dichloroethene	1.13	1.00	113	1.16	1.00	116	76-128	3	40
cis-1,2-Dichloroethene	1.08	1.00	108	1.09	1.00	109	77-124	1	40
2-Butanone (MEK)	5.54	5.00	111	5.00	5.00	100	65-139	10	40
Carbon Tetrachloride	1.00	1.00	100	1.02	1.00	102	72-140	2	40
Benzene	1.16	1.00	116	1.16	1.00	116	70-134	0	40
Trichloroethene (TCE)	1.07	1.00	107	1.06	1.00	106	69-126	1	40
4-Methyl-2-pentanone (MIBK)	5.58	5.00	112	5.27	5.00	105	73-126	6	40
Toluene	1.08	1.00	108	1.07	1.00	107	74-118	1	40
Tetrachloroethene (PCE)	1.04	1.00	104	1.10	1.00	110	65-126	6	40
2-Hexanone	5.23	5.00	105	5.08	5.00	102	54-123	3	40
Dibromochloromethane	1.00	1.00	100	1.01	1.00	101	64-126	0	40
Ethylbenzene	1.02	1.00	102	1.07	1.00	107	72-121	5	40
m,p-Xylenes	2.11	2.00	106	2.16	2.00	108	74-124	2	40
o-Xylene	1.01	1.00	101	1.06	1.00	106	73-123	5	40
Styrene	1.02	1.00	102	1.06	1.00	106	77-122	3	40
Bromoform	0.857	1.00	86	0.837	1.00	84	54-141	2	40
1,2,4-Trichlorobenzene	0.996	1.00	100	0.990	1.00	99	55-134	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/27/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	mg/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.31	0.019	1	09/02/14	09/09/14	KWG1412191	
2-Methylphenol	ND	U	0.31	0.017	1	09/02/14	09/09/14	KWG1412191	
4-Methylphenol†	ND	U	0.31	0.017	1	09/02/14	09/09/14	KWG1412191	
2,4-Dimethylphenol	ND	U	0.31	0.015	1	09/02/14	09/09/14	KWG1412191	
Hexachlorobutadiene	ND	U	0.31	0.014	1	09/02/14	09/09/14	KWG1412191	
Diethyl Phthalate	ND	U	0.31	0.014	1	09/02/14	09/09/14	KWG1412191	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.14	1	09/02/14	09/09/14	KWG1412191	
Hexachlorobenzene	ND	U	0.31	0.015	1	09/02/14	09/09/14	KWG1412191	
Fluoranthene	**0.19**	J	0.31	0.011	1	09/02/14	09/09/14	KWG1412191	
Pyrene	**0.29**	J	0.31	0.014	1	09/02/14	09/09/14	KWG1412191	
Butyl Benzyl Phthalate	**0.17**	J	0.31	0.016	1	09/02/14	09/09/14	KWG1412191	
Chrysene	**0.13**	J	0.31	0.012	1	09/02/14	09/09/14	KWG1412191	
Bis(2-ethylhexyl) Phthalate	**1.4**		0.31	0.019	1	09/02/14	09/09/14	KWG1412191	
Di-n-octyl Phthalate	**0.044**	J	0.31	0.024	1	09/02/14	09/09/14	KWG1412191	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	54	26-106	09/09/14	Acceptable
Nitrobenzene-d5	56	29-116	09/09/14	Acceptable
2-Fluorobiphenyl	65	32-104	09/09/14	Acceptable
2,4,6-Tribromophenol	67	20-123	09/09/14	Acceptable
Terphenyl-d14	73	37-133	09/09/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1412191-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.25	0.019	1	09/02/14	09/09/14	KWG1412191	
2-Methylphenol	ND	U	0.25	0.017	1	09/02/14	09/09/14	KWG1412191	
4-Methylphenol†	ND	U	0.25	0.017	1	09/02/14	09/09/14	KWG1412191	
2,4-Dimethylphenol	ND	U	0.25	0.015	1	09/02/14	09/09/14	KWG1412191	
Hexachlorobutadiene	ND	U	0.25	0.014	1	09/02/14	09/09/14	KWG1412191	
Diethyl Phthalate	ND	U	0.25	0.014	1	09/02/14	09/09/14	KWG1412191	
2-Methyl-4,6-dinitrophenol	ND	U	1.5	0.14	1	09/02/14	09/09/14	KWG1412191	
Hexachlorobenzene	ND	U	0.25	0.015	1	09/02/14	09/09/14	KWG1412191	
Fluoranthene	ND	U	0.25	0.011	1	09/02/14	09/09/14	KWG1412191	
Pyrene	ND	U	0.25	0.014	1	09/02/14	09/09/14	KWG1412191	
Butyl Benzyl Phthalate	ND	U	0.25	0.016	1	09/02/14	09/09/14	KWG1412191	
Chrysene	ND	U	0.25	0.012	1	09/02/14	09/09/14	KWG1412191	
Bis(2-ethylhexyl) Phthalate	ND	U	0.25	0.019	1	09/02/14	09/09/14	KWG1412191	
Di-n-octyl Phthalate	ND	U	0.25	0.024	1	09/02/14	09/09/14	KWG1412191	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	40	26-106	09/09/14	Acceptable
Nitrobenzene-d5	42	29-116	09/09/14	Acceptable
2-Fluorobiphenyl	40	32-104	09/09/14	Acceptable
2,4,6-Tribromophenol	34	20-123	09/09/14	Acceptable
Terphenyl-d14	61	37-133	09/09/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5
S-082714-NH-TP24-8.5	K1409260-002	54	56	65	67	73
Method Blank	KWG1412191-5	40	42	40	34	61
S-082714-NH-TP24-8.5MS	KWG1412191-1	62	66	73	74	80
S-082714-NH-TP24-8.5DMS	KWG1412191-2	55	58	69	73	77
Lab Control Sample	KWG1412191-3	46	49	55	66	64
Duplicate Lab Control Sample	KWG1412191-4	49	56	57	61	70

Surrogate Recovery Control Limits (%)

Sur1 =	Phenol-d6	26-106	Sur5 =	Terphenyl-d14	37-133
Sur2 =	Nitrobenzene-d5	29-116			
Sur3 =	2-Fluorobiphenyl	32-104			
Sur4 =	2,4,6-Tribromophenol	20-123			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/02/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/09/2014

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-082714-NH-TP24-8.5	**Units:**	mg/Kg
Lab Code:	K1409260-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412191

		S-082714-NH-TP24-8.5MS KWG1412191-1 Matrix Spike			S-082714-NH-TP24-8.5DMS KWG1412191-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	ND	2.19	3.02	72	1.73	3.04	57	18-106	24	40
2-Methylphenol	ND	2.21	3.02	73	1.68	3.04	55	14-103	27	40
4-Methylphenol	ND	2.19	3.02	73	1.75	3.04	58	26-97	22	40
2,4-Dimethylphenol	ND	1.92	3.02	63	1.28	3.04	42	10-117	40	40
Hexachlorobutadiene	ND	2.43	3.02	81	1.98	3.04	65	27-107	21	40
Diethyl Phthalate	ND	2.71	3.02	90	2.28	3.04	75	23-131	17	40
2-Methyl-4,6-dinitrophenol	ND	3.01	3.02	100	2.46	3.04	81	10-138	20	40
Hexachlorobenzene	ND	2.80	3.02	93	2.56	3.04	84	37-119	9	40
Fluoranthene	0.19	2.76	3.02	85	2.77	3.04	85	34-142	0	40
Pyrene	0.29	2.85	3.02	85	2.69	3.04	79	26-130	6	40
Butyl Benzyl Phthalate	0.17	2.56	3.02	79	2.23	3.04	68	36-129	14	40
Chrysene	0.13	2.83	3.02	90	2.48	3.04	77	33-121	13	40
Bis(2-ethylhexyl) Phthalate	1.4	3.45	3.02	69	3.09	3.04	57	35-126	11	40
Di-n-octyl Phthalate	0.044	2.26	3.02	73	1.97	3.04	63	36-136	14	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Extracted:**	09/02/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/09/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1412191

	Lab Control Sample KWG1412191-3 Lab Control Spike			Duplicate Lab Control Sample KWG1412191-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	1.69	3.33	51	1.84	3.33	55	40-87	8	40
2-Methylphenol	1.77	3.33	53	1.98	3.33	59	44-96	11	40
4-Methylphenol	1.84	3.33	55	2.12	3.33	64	38-94	14	40
2,4-Dimethylphenol	1.83	3.33	55	2.15	3.33	64	29-93	16	40
Hexachlorobutadiene	2.02	3.33	61	2.21	3.33	66	42-99	9	40
Diethyl Phthalate	1.71	3.33	51	2.34	3.33	70	45-121	31	40
2-Methyl-4,6-dinitrophenol	2.09	3.33	63	2.81	3.33	84	41-119	29	40
Hexachlorobenzene	2.69	3.33	81	2.72	3.33	82	50-109	1	40
Fluoranthene	2.32	3.33	70	2.99	3.33	90	47-117	25	40
Pyrene	2.21	3.33	66	2.76	3.33	83	53-124	22	40
Butyl Benzyl Phthalate	2.56	3.33	77	2.87	3.33	86	53-114	11	40
Chrysene	2.50	3.33	75	2.75	3.33	82	53-109	9	40
Bis(2-ethylhexyl) Phthalate	2.52	3.33	76	2.71	3.33	81	51-115	7	40
Di-n-octyl Phthalate	2.23	3.33	67	2.53	3.33	76	51-121	13	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	08/26/2014
Sample Matrix:	Soil	**Date Received:**	08/29/2014
		Date Prepared:	09/08/2014

Toxicity Characteristic Leaching Procedure (TCLP)
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-082614-RB-TP28-8	**Units:**	mg/L
Lab Code:	K1409260-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3510C		
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Pyridine	ND	U	0.50	0.25	5	1	09/10/14	09/10/14	
2-Methylphenol	ND	U	0.10	0.0086	200	1	09/10/14	09/10/14	
Hexachloroethane	ND	U	0.10	0.0048	3	1	09/10/14	09/10/14	
4-Methylphenol†	ND	U	0.10	0.0047	200	1	09/10/14	09/10/14	
Nitrobenzene	ND	U	0.10	0.0079	2	1	09/10/14	09/10/14	
Hexachlorobutadiene	**0.29**		0.10	0.0064	0.5	1	09/10/14	09/10/14	
2,4,6-Trichlorophenol	ND	U	0.10	0.0069	2	1	09/10/14	09/10/14	
2,4,5-Trichlorophenol	ND	U	0.10	0.0087	400	1	09/10/14	09/10/14	
2,4-Dinitrotoluene	ND	U	0.10	0.013	0.13	1	09/10/14	09/10/14	
Hexachlorobenzene	ND	U	0.10	0.0094	0.13	1	09/10/14	09/10/14	
Pentachlorophenol	ND	U	0.25	0.011	100	1	09/10/14	09/10/14	

Surrogate Name	%Rec	Control Limits	Note
2-Fluorophenol	65	45-105	Acceptable
Phenol-d6	58	35-105	Acceptable
Nitrobenzene-d5	67	45-122	Acceptable
2-Fluorobiphenyl	71	44-114	Acceptable
2,4,6-Tribromophenol	74	52-122	Acceptable
Terphenyl-d14	96	50-145	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	09/08/2014

Toxicity Characteristic Leaching Procedure (TCLP)
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1412460-3	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3510C		
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Pyridine	ND	U	0.50	0.25	5	1	09/10/14	09/10/14	
2-Methylphenol	ND	U	0.10	0.0086	200	1	09/10/14	09/10/14	
Hexachloroethane	ND	U	0.10	0.0048	3	1	09/10/14	09/10/14	
4-Methylphenol†	ND	U	0.10	0.0047	200	1	09/10/14	09/10/14	
Nitrobenzene	ND	U	0.10	0.0079	2	1	09/10/14	09/10/14	
Hexachlorobutadiene	ND	U	0.10	0.0064	0.5	1	09/10/14	09/10/14	
2,4,6-Trichlorophenol	ND	U	0.10	0.0069	2	1	09/10/14	09/10/14	
2,4,5-Trichlorophenol	ND	U	0.10	0.0087	400	1	09/10/14	09/10/14	
2,4-Dinitrotoluene	ND	U	0.10	0.013	0.13	1	09/10/14	09/10/14	
Hexachlorobenzene	ND	U	0.10	0.0094	0.13	1	09/10/14	09/10/14	
Pentachlorophenol	ND	U	0.25	0.011	100	1	09/10/14	09/10/14	

Surrogate Name	%Rec	Control Limits	Note
2-Fluorophenol	72	45-105	Acceptable
Phenol-d6	66	35-105	Acceptable
Nitrobenzene-d5	81	45-122	Acceptable
2-Fluorobiphenyl	78	44-114	Acceptable
2,4,6-Tribromophenol	76	52-122	Acceptable
Terphenyl-d14	101	50-145	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409260
Project: Marine View Drive RI/FS/009973-D21101
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Semi-Volatile Organic Compounds by GC/MS

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 3510C **Level:** Low
Analysis Method: 8270D

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6
S-082614-RB-TP28-8	K1409260-001	65	58	67	71	74	96
Method Blank	KWG1412460-3	72	66	81	78	76	101
S-082614-RB-TP28-8MS	KWG1412460-1	81	69	82	86	91	96
Lab Control Sample	KWG1412460-2	71	62	76	85	87	91

Surrogate Recovery Control Limits (%)

Sur1 = 2-Fluorophenol	45-105	Sur5 = 2,4,6-Tribromophenol	52-122
Sur2 = Phenol-d6	35-105	Sur6 = Terphenyl-d14	50-145
Sur3 = Nitrobenzene-d5	45-122		
Sur4 = 2-Fluorobiphenyl	44-114		

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Prepared:**	09/08/2014
Sample Matrix:	Soil	**Date Extracted:**	9/10/2014
		Date Analyzed:	09/10/2014

Matrix Spike Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	S-082614-RB-TP28-8	**Units:**	mg/L
Lab Code:	K1409260-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3510C	**Extraction Lot:**	KWG1412460
Analysis Method:	8270D		

S-082614-RB-TP28-8MS
KWG1412460-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Pyridine	ND	1.88	2.00	94	10-113
2-Methylphenol	ND	0.895	1.00	90	49-109
Hexachloroethane	ND	0.855	1.00	85	35-106
4-Methylphenol	ND	0.886	1.00	89	39-112
Nitrobenzene	ND	0.900	1.00	90	45-117
Hexachlorobutadiene	0.29	1.30	1.00	101	38-112
2,4,6-Trichlorophenol	ND	1.08	1.00	108	58-113
2,4,5-Trichlorophenol	ND	1.02	1.00	102	53-115
2,4-Dinitrotoluene	ND	0.946	1.00	95	61-113
Hexachlorobenzene	ND	1.08	1.00	108	57-114
Pentachlorophenol	ND	0.940	1.00	94	57-128

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409260
Project:	Marine View Drive RI/FS/009973-D21101	**Date Prepared:**	09/ 8/2014
Sample Matrix:	Soil	**Date Extracted:**	09/10/2014
		Date Analyzed:	09/10/2014

Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 1311/EPA 3510C	**Units:**	mg/L
Analysis Method:	8270D	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412460

Lab Control Sample
KWG1412460-2
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Pyridine	1.40	2.00	70	10-117
2-Methylphenol	0.812	1.00	81	51-104
Hexachloroethane	0.738	1.00	74	41-97
4-Methylphenol	0.788	1.00	79	53-101
Nitrobenzene	0.791	1.00	79	50-107
Hexachlorobutadiene	0.909	1.00	91	45-98
2,4,6-Trichlorophenol	1.01	1.00	101	64-108
2,4,5-Trichlorophenol	0.964	1.00	96	63-107
2,4-Dinitrotoluene	0.921	1.00	92	55-121
Hexachlorobenzene	1.08	1.00	108	59-113
Pentachlorophenol	0.754	1.00	75	52-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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October 14, 2014 Analytical Report for Service Request No: K1409921

Susan Scrocchi
Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, NY 14304

RE: Marine View Drive RI/FS/009973-021101

Dear Susan:

Enclosed are the results of the samples submitted to our laboratory on September 16, 2014. For your reference, these analyses have been assigned our service request number K1409921.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/aj

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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ALS ENVIRONMENTAL

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request No.:**	K1409921
Project:	Marine View Drive RI/FS/ 009973-021101	**Date Received:**	09/16/14
Sample Matrix:	Soil, Sediment, and Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Nineteen samples were received for analysis at ALS Environmental on 09/16/14. The samples were received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals (Sediment/Soil)

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Aluminum, Iron, and Magnesium for sample SO-091514-RB-TP-37-2 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for sample SO-091514-RB-TP-37-2 was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

The matrix spike recovery of Calcium for sample SO-091514-RB-TP-37-2 was outside control criteria The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by_ Howard B. Holmes _____

Total Metals (Water)

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Manganese, Calcium, Magnesium, Potassium, and Sodium for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Organochlorine Pesticides by EPA Method 8081

Second Source Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081 requires the use of dual column confirmation. When the Initial Calibration Verification (ICV) criteria are met for both columns, the lower of the two sample results is generally reported. The criteria were not met for Endrin Aldehyde in CAL 13214. The data quality was not affected. No further corrective action was necessary.

Elevated Detection Limits:
The detection limit was elevated for at least one analyte in a few samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Sample Confirmation Notes:
The confirmation comparison criteria of 40% difference for 4,4'-DDD was exceeded in sample SE-091514-RB-SD0. The lower of the two values was reported when no evidence of a matrix interference was observed.

Sample Notes and Discussion:
Organochlorine Pesticides (O-C Pesticides) determined by EPA Method 8081B or equivalent gas chromatography-electron capture detector (GC/ECD) procedures are subject to interference from polychlorinated biphenyls (PCBs). The interference stems from the inability of the GC/ECD to differentiate selected PCB congeners from certain O-C Pesticides. This method limitation can result in false positive detections and/or high bias to pesticide values.

The magnitude of the interference is directly proportional to the concentration of PCBs in the sample. In addition, the affect on selected O-C Pesticides is complicated by the type PCB Aroclor(s) present in the sample. The presence of multiple Aroclors can result in contribution to the apparent concentration of O-C Pesticides by PCB congeners common to two or more Aroclors.

Some field samples in this delivery group contained PCB Aroclors at concentrations high enough to impact the O-C Pesticide results. Note that the results for the O-C Pesticides were reported as per the protocol defined in SW-846 regarding dual column confirmation. In some instances, certain PCB congeners were suspected of being detected on both columns simultaneously within the retention time window of the target pesticide. When the resulting chromatographic peaks met the criteria of a detection as defined in the method, the values were reported.

Results for 4,4-DDT have contribution from confirmed PCB interferences on both columns within the established retention time window, resulting in reported values with a significant high bias.

No other anomalies associated with the analysis of these samples were observed.

Approved by Howard B. Holmes

Organochlorine Pesticides by EPA Method 8081-ULL

Calibration Verification Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081 requires the use of dual column confirmation. When the Continuing Calibration Verification (CCV) criterion is met for both columns, the lower of the two sample results is generally reported. The primary evaluation criteria were not met on the confirmation column for Decachlorobiphenyl. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

The upper control criterion was exceeded for a few analytes in Continuing Calibration Verification (CCV) KWG1413270-3. The field samples analyzed in this sequence did not contain the analytes in question above the reporting limit. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Elevated Detection Limits:
The detection limit is elevated for alpha-BHC in sample Method Blank KWG1413165-5. The chromatogram indicated the presence of non-target background components, which were apparently introduced as laboratory artifacts. The contamination prevented adequate resolution of the target compounds at the detection limit. Note the level of background was relatively low compared to the detection limit, so the affect on the results was minimal. The results are flagged to indicate the problem.

The detection limit was elevated for at least a couple analytes in some field samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Matrix Spike Recovery Exceptions:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Lab Control Sample Exceptions:
The upper control criterion was exceeded for Aroclor 1260 in Laboratory Control Sample (LCS) KWG1413166-1 and Duplicate Laboratory Control Sample (DLCS) KWG1413166-2. The associated target Aroclors (Aroclor 1254 and Aroclor 1260) were detected above the Method Reporting Limit (MRL) in associated samples WS-091514-RB-SW05 and WS-091514-RB-SW02. The error associated with elevated recovery indicated a potential high bias to the results reported for these Aroclors in the associated samples. Insufficient sample volume was available to perform a re-extraction and re-analysis of the affected samples. The results were flagged to indicate the problem. No further corrective action was feasible.

Sample Confirmation Notes:
The confirmation comparison criterion of 40% difference was exceeded for Aroclor 1242 in sample SE-091514-RB-SD07. The lower of the two values was reported when there was an apparent interference on the alternate column that produced the higher value.

Elevated Detection Limits:
The detection limit was elevated for Aroclors 1016, 1221, 1232, 1242, and 1248 in sample SE-091514-RB-SD06. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Approved by___ Howard B. Holmes ____

Sample Notes and Discussion:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD) for extraction lot KWG1413166. A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for this extraction batch.

Three Aroclors were identified in several field samples: Aroclor 1242, Aroclor 1254, and Aroclor 1260. When mixtures of PCB Aroclors are present in a sample, correct identification and quantitative analysis of the individual Aroclors can be subjective. In particular, when mixtures are present, differentiating Aroclor 1242 from Aroclor 1248 can be difficult.

A review of the sample chromatograms indicated the presence of PCB patterns or matrix components that spanned the entire elution range from Aroclor 1242 through the end of Aroclor 1260. Based on individual PCB peaks in the early portion of the chromatogram, Aroclor 1242 was identified and quantitated. Although the presence of Aroclor 1248 could not be ruled out, Aroclor 1242 appeared to be the best match based on the early eluting peaks in the PCB chromatogram. Aroclors 1254 and 1260 were identified based on the presence of later eluting PCB peaks in the chromatogram.

When Aroclor mixtures are present in a sample, care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors 1242, 1254, and/or 1260 is present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS24\0919F004.D: Chloromethane and Vinyl Choloride. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Surrogate Exceptions:
The control criteria were exceeded for 4-Bromofluorobenzene in samples SE-091514-RB-SD07 and SE-091514-RB-SD05 due to matrix interference. A re-analysis was performed, but produced similar results. The results of the original analysis were reported. No further corrective action was required.

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Trichloroethene for sample Batch QC were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

Elevated Detection Limits:
The detection limits for various samples were elevated due to less than optimal sample mass extracted for analysis. The samples contained low percent solids which prevented extraction of the sample mass necessary to achieve target detection limits.

No other anomalies associated with the analysis of these samples were observed.

Approved by_ Howard B. Holmes _____

Semivolatile Organic Compounds by EPA Method 8270-LL

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS06\0925F003.D: 2-Methylphenol, Nitrobenzene-d5. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The CCV met these criteria with the exception listed below. No further corrective action was taken.

The upper control criterion was exceeded for 4-Methylphenol in Continuing Calibration Verification (CCV) MS06-0925F003.D. The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method Blank Exceptions:
The Method Blank KWG1412928-3 contained low levels of Bis(2-ethylhexyl) phthalate above the Method Reporting Limit (MRL). In accordance with ALS QA/QC policy, all sample results less than twenty times the level found in the Method Blank were flagged as estimated. The samples were not re-extracted and re-analyzed because insufficient sample remained for additional testing.

Lab Control Sample Exceptions:
The upper control criterion was exceeded for Bis(2-ethylhexyl) phthalate in Duplicate Laboratory Control Sample (DLCS) KWG1412928-2. The problem indicated a potential bias for results reported from this analytical batch. Sample RINSE BLANK 9-15 had detections for the analyte in question at levels greater than the MRL. Reanalysis was not performed because insufficient sample remained for additional testing. The data was flagged to indicate the problem.

Sample Notes and Discussion:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Approved by__ Howard B. Holmes _____

Chain of Custody

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CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD K1409921

COC NO.: 38642

PAGE 1 OF 2

Address: _____

Phone: _____ Fax: _____

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 009973-D21101	**Laboratory Name:** ALS	**Lab Location:** Kelso WA	**SSOW ID:** 229402-D02-1100
Project Name: MARINE VIEW DRIVE RI/FS	**Lab Contact:** Howard Holmes	**Lab Quote No:**	**Cooler No:**
Project Location: 1913 MARINE VIEW DRIVE TACOMA			**Carrier:** MC O
Chemistry Contact: Sue Scrudato			**Airbill No:**
Sampler(s): RB			**Date Shipped:** 9/16/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Soil 8oz Unpreserved Water VOA	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	TCLP 6 Metals 3x5-g, 1x25-g	Other: 1 Q Amber	Total Containers/Sample	Analysis Requested (See Back of COC for Definitions): SEE SSOW	MS/MSD Request	Comments/ Special Instructions:
1	SO-091514-RB-TP37-2'	9/15	11:55	SO	G	X						X		2			
2	SO-091514-RB-TP37-5	9/15	12:05	SO	G	X						X		2			
3	SO-091514-RB-TP37-7.5	9/15	12:10	SO	G	X						X		2			
4	SE-091514-RB-SD11	9/15	12:20	SE	G	X						X		3			
5	SE-091514-RB-SD10	9/15	12:30	SE	G	X						X		3			
6	SE-091514-RB-SD09	9/15	13:05	SE	G	X						X		3			
7	SE-091514-RB-SD08	9/15	13:20	SE	G	X						X		3			
8	SE-091514-RB-SD07	9/15	13:45	SE	G	X						X		3			
9	SE-091514-RB-SD06	9/15	14:05	SE	G	X						X		3			
10	SE-091514-RB-SD05	9/15	14:25	SE	G	X						X		3			
11	SE-091514-RB-SD12	9/15	14:40	SE	G	X						X		3			
12	WS-091514-RB-SW03	9/15	15:00	WS	G	X	X	X		X			X	7			
13	WS-091514-RB-SW04	9/15	15:20	WS	G	X	X	X		X			X	7			
14	WS-091514-RB-SW05	9/15	15:40	WS	G	X	X	X		X			X	7			
15	WS-091514-RB-SW02	9/15	15:55	WS	G	X	X	X		X			X	7			

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers:

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	CRA	9/16	9:30	1.	ALS	9/16/14	1200
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES

K1409421

COC NO.: 38641

PAGE 2 OF 2

Address: _____

Phone: _____ Fax: _____

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 009973-P2101	**Laboratory Name:** ALS	**Lab Location:** Kelso WA	**SSOW ID:** 229-402-D02-1100
Project Name: MW D R1/FS	**Lab Contact:** Hannah Holmes	**Lab Quote No:**	**Cooler No:**
Project Location: 1913 MacInnes DR Tacoma WA			**Carrier:** NCD
Chemistry Contact: Sue Schraeli			**Airbill No:**
Sampler(s): RB			**Date Shipped:** 9/16/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved VOA	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other: 2 Amber	Total Containers/Sample	Analysis Requested (See Back of COC for Definitions)	MS/MSD Request	Comments/ Special Instructions:
1	WS-091514-RB-SW[illegible]01	9/15	16:15	WS	G	X	X	X		X			X	7			
2	~~[illegible]~~	~~9/15~~	~~[illegible]~~	~~SE~~	~~G~~	X						X		3			
3	WS-091514-RB-FD1D	9/15		WS	G	X	X	X		X			X	7			
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers:

All Samples in Cooler must be on COC

Notes/ Special Requirements:

	Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	[signature]	CRA	9/16	9:50	[signature]	ALS	9/16/14	12a
2.								
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

PC 12

Cooler Receipt and Preservation Form

Client / Project: CRA Service Request K14 09921

Received: 9/16/14 Opened: 9/16/14 By: [illegible] Unloaded: 9/16/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* (Courier) *Hand Delivered* Mc Dez.
2. Samples were received in: (circle) (Cooler) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
4.7	4.4	3.8	3.5	-	-0.3	335	38641, 38642	
2.7	2.6	4.2	4.1	-	-0.1	316		
0.0	-0.1	2.5	2.4	-	-0.1	325		

4. Packing material: (Inserts) *Baggies* *Bubble Wrap* *Gel Packs* (Wet Ice) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) (N)
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
12. Was C12/Res negative? _ NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

Rec'd Sample not on COC: Rinse Blank 9-15 9/15/14 1325 → same bottles as other waters.

Rec'd 2 trip blanks not on COC.

General Chemistry

ALS Environmental—Kelso Laboratory
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Soil	**Date Received:**	09/16/14
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SO-091514-RB-TP37-2	K1409921-001	**79.8**	-	-	1	10/02/14 14:12	
SO-091514-RB-TP37-5	K1409921-002	**80.8**	-	-	1	10/02/14 14:12	
SO-091514-RB-TP37-7.5	K1409921-003	**81.6**	-	-	1	10/02/14 14:12	

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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Sediment	**Date Received:**	09/16/14
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SE-091514-RB-SD11	K1409921-004	**78.5**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD10	K1409921-005	**63.0**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD09	K1409921-006	**74.6**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD08	K1409921-007	**62.6**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD07	K1409921-008	**63.7**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD06	K1409921-009	**69.4**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD05	K1409921-010	**23.6**	-	-	1	10/02/14 14:12	
SE-091514-RB-SD12	K1409921-011	**77.9**	-	-	1	10/02/14 14:12	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary

Solids, Total

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1409908-001DUP	-	-	31.4	31.0	31.2	1	20	10/02/14
Batch QC	K1410358-001DUP	-	-	87.1	87.0	87.1	<1	20	10/02/14

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Soil	**Date Received:**	09/16/14
Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
SO-091514-RB-TP37-2	K1409921-001	ND U	0.25	0.08	1	09/22/14 13:02	9/22/14	
SO-091514-RB-TP37-5	K1409921-002	ND U	0.24	0.08	1	09/22/14 13:02	9/22/14	
SO-091514-RB-TP37-7.5	K1409921-003	ND U	0.24	0.08	1	09/22/14 13:02	9/22/14	

ALS Group USA, Corp.
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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Sediment	**Date Received:**	09/16/14
Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
SE-091514-RB-SD11	K1409921-004	ND U	0.25	0.08	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD10	K1409921-005	ND U	0.31	0.10	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD09	K1409921-006	ND U	0.24	0.08	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD08	K1409921-007	ND U	0.32	0.10	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD07	K1409921-008	**0.24 J**	0.28	0.09	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD06	K1409921-009	ND U	0.27	0.09	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD05	K1409921-010	ND U	0.82	0.25	1	09/22/14 13:02	9/22/14	
SE-091514-RB-SD12	K1409921-011	ND U	0.25	0.08	1	09/22/14 13:02	9/22/14	
Method Blank	K1409921-MB2	ND U	0.20	0.06	1	09/22/14 13:02	9/22/14	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
		Date Analyzed:	09/22/14

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1409625-001	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1409625-001DUP Result	Average	RPD	RPD Limit
Cyanide, Total	9012B	0.45	0.14	5.43	5.46	5.45	<1	20

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	N/A
Sample Matrix:	Sediment	**Date Received:**	N/A
		Date Analyzed:	09/22/14
		Date Extracted:	09/22/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1409625-001	**Basis:**	Dry
Analysis Method:	9012B		
Prep Method:	Method		

		Matrix Spike K1409625-001MS			Duplicate Matrix Spike K1409625-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	5.43	6.46	2.24	46	6.42	2.23	44	10-171	4	20

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/22/14
Sample Matrix:	Sediment	**Date Extracted:**	09/22/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	412495

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1409921-LCS1	95.8	109	88	62-128

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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Water	**Date Received:**	09/16/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
WS-091514-RB-SW03	K1409921-012	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
WS-091514-RB-SW04	K1409921-013	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
WS-091514-RB-SW05	K1409921-014	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
WS-091514-RB-SW02	K1409921-015	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
WS-091514-RB-SW01	K1409921-016	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
WS-091514-RB-FD10	K1409921-017	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
RINSE BLANK 9-15	K1409921-018	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	
Method Blank	K1409921-MB1	ND U	0.0047	0.0009	1	09/23/14 13:44	9/23/14	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	09/23/14

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1411752-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1411752-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	09/23/14
		Date Extracted:	09/23/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1411752-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1411752-03MS			**Duplicate Matrix Spike** KQ1411752-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.0765	0.100	76	0.0770	0.100	77	23-148	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/23/14
Sample Matrix:	Water	**Date Extracted:**	09/23/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	412718

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1409921-LCS2	0.140	0.150	93	84-115

Mercury

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Analytical Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Water	**Date Received:**	09/16/14

Mercury, Total

Prep Method: METHOD
Analysis Method: 1631E
Test Notes:

Units: ng/L
Basis: NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
WS-091514-RB-SW03	K1409921-012	0.5	0.06	1	09/22/14	09/23/14	2.58	
WS-091514-RB-SW04	K1409921-013	0.5	0.06	1	09/22/14	09/23/14	3.58	
WS-091514-RB-SW05	K1409921-014	0.5	0.06	1	09/22/14	09/23/14	6.05	
WS-091514-RB-SW02	K1409921-015	0.5	0.06	1	09/22/14	09/23/14	3.81	
WS-091514-RB-SW01	K1409921-016	0.5	0.06	1	09/22/14	09/23/14	1.70	
WS-091514-RB-FD10	K1409921-017	0.5	0.06	1	09/22/14	09/23/14	7.69	
RINSE BLANK 9-15	K1409921-018	0.5	0.06	1	09/22/14	09/23/14	0.11	J
Method Blank 1	K1409921-MB1	0.5	0.06	1	09/22/14	09/23/14	ND	
Method Blank 2	K1409921-MB2	0.5	0.06	1	09/22/14	09/23/14	ND	
Method Blank 3	K1409921-MB3	0.5	0.06	1	09/22/14	09/23/14	ND	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/14
Sample Matrix:	Water	**Date Received:**	09/16/14
		Date Extracted:	09/22/14
		Date Analyzed:	09/23/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	WS-091514-RB-SW03	Units:	ng/L
Lab Code:	K1409921-012MS, K1409921-012MSD	Basis:	NA
Test Notes:			

				Spike Level		Sample	Spike Result		Percent Recovery				
Analyte	**Prep Method**	**Analysis Method**	**MRL**	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**ALS Acceptance Limits**	**Relative Percent Difference**	**Result Notes**
Mercury	METHOD	1631E	0.5	50	50	2.58	47.8	46.9	90	89	71-125	2	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	09/23/14

Ongoing Precision and Recovery (OPR) Sample Summary

Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.08	102	77-123	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	09/23/14

Ongoing Precision and Recovery (OPR) Sample Summary

Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L

Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.09	102	77-123	

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QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	09/23/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.12	102	77-123	

Metals

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Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SOIL

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SO-091514-RB-TP37-2
Lab Code: K1409921-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.6	2.0	09/23/14	09/23/14	10900		
Antimony	6010C	3.2	2.0	09/23/14	09/23/14	3.2	U	N
Arsenic	6010C	3.2	2.0	09/23/14	09/23/14	2.9	J	
Barium	6010C	0.63	2.0	09/23/14	09/23/14	52.6		
Beryllium	6010C	0.16	2.0	09/23/14	09/23/14	0.18		
Cadmium	6010C	0.16	2.0	09/23/14	09/23/14	0.08	J	
Calcium	6010C	3.2	2.0	09/23/14	09/23/14	2420		N
Chromium	6010C	0.6	2.0	09/23/14	09/23/14	23.5		
Cobalt	6010C	0.32	2.0	09/23/14	09/23/14	5.00		
Copper	6010C	0.6	2.0	09/23/14	09/23/14	12.0		
Iron	6010C	3.2	2.0	09/23/14	09/23/14	13100		
Lead	6010C	1.6	2.0	09/23/14	09/23/14	6.4		
Magnesium	6010C	1.58	2.0	09/23/14	09/23/14	3260		
Manganese	6010C	0.16	2.0	09/23/14	09/23/14	189		
Mercury	7471B	0.022	1.0	09/18/14	09/19/14	0.026		
Nickel	6010C	0.63	2.0	09/23/14	09/23/14	22.4		
Potassium	6010C	31.5	2.0	09/23/14	09/23/14	516		
Selenium	6010C	3.2	2.0	09/23/14	09/23/14	1.2	J	
Silver	6010C	0.6	2.0	09/23/14	09/23/14	0.2	J	
Sodium	6010C	31.5	2.0	09/23/14	09/23/14	162		
Thallium	6010C	1.6	2.0	09/23/14	09/23/14	1.6	U	
Vanadium	6010C	0.6	2.0	09/23/14	09/23/14	32.8		
Zinc	6010C	0.8	2.0	09/23/14	09/23/14	30.7		

% Solids: 79.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SOIL

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SO-091514-RB-TP37-5
Lab Code: K1409921-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	2.0	09/23/14	09/23/14	10700		
Antimony	6010C	3.6	2.0	09/23/14	09/23/14	3.6	U	N
Arsenic	6010C	3.6	2.0	09/23/14	09/23/14	3.7		
Barium	6010C	0.72	2.0	09/23/14	09/23/14	56.8		
Beryllium	6010C	0.18	2.0	09/23/14	09/23/14	0.18	J	
Cadmium	6010C	0.18	2.0	09/23/14	09/23/14	0.07	J	
Calcium	6010C	3.6	2.0	09/23/14	09/23/14	2430		N
Chromium	6010C	0.7	2.0	09/23/14	09/23/14	25.1		
Cobalt	6010C	0.36	2.0	09/23/14	09/23/14	4.88		
Copper	6010C	0.7	2.0	09/23/14	09/23/14	11.8		
Iron	6010C	3.6	2.0	09/23/14	09/23/14	13100		
Lead	6010C	1.8	2.0	09/23/14	09/23/14	6.6		
Magnesium	6010C	1.81	2.0	09/23/14	09/23/14	3170		
Manganese	6010C	0.18	2.0	09/23/14	09/23/14	263		
Mercury	7471B	0.022	1.0	09/18/14	09/19/14	0.026		
Nickel	6010C	0.72	2.0	09/23/14	09/23/14	22.3		
Potassium	6010C	36.1	2.0	09/23/14	09/23/14	606		
Selenium	6010C	3.6	2.0	09/23/14	09/23/14	1.7	J	
Silver	6010C	0.7	2.0	09/23/14	09/23/14	0.7	U	
Sodium	6010C	36.1	2.0	09/23/14	09/23/14	167		
Thallium	6010C	1.8	2.0	09/23/14	09/23/14	1.8	U	
Vanadium	6010C	0.7	2.0	09/23/14	09/23/14	30.9		
Zinc	6010C	0.9	2.0	09/23/14	09/23/14	30.9		

% Solids: 80.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SOIL

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SO-091514-RB-TP37-7.5
Lab Code: K1409921-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	2.0	09/23/14	09/23/14	9930		
Antimony	6010C	3.5	2.0	09/23/14	09/23/14	3.5	U	N
Arsenic	6010C	3.5	2.0	09/23/14	09/23/14	0.9	J	
Barium	6010C	0.70	2.0	09/23/14	09/23/14	45.8		
Beryllium	6010C	0.18	2.0	09/23/14	09/23/14	0.20		
Cadmium	6010C	0.18	2.0	09/23/14	09/23/14	0.04	J	
Calcium	6010C	3.5	2.0	09/23/14	09/23/14	2250		N
Chromium	6010C	0.7	2.0	09/23/14	09/23/14	40.7		
Cobalt	6010C	0.35	2.0	09/23/14	09/23/14	3.89		
Copper	6010C	0.7	2.0	09/23/14	09/23/14	8.6		
Iron	6010C	3.5	2.0	09/23/14	09/23/14	9990		
Lead	6010C	1.8	2.0	09/23/14	09/23/14	1.8		
Magnesium	6010C	1.75	2.0	09/23/14	09/23/14	2840		
Manganese	6010C	0.18	2.0	09/23/14	09/23/14	91.7		
Mercury	7471B	0.021	1.0	09/18/14	09/19/14	0.009	J	
Nickel	6010C	0.70	2.0	09/23/14	09/23/14	19.1		
Potassium	6010C	35.0	2.0	09/23/14	09/23/14	687		
Selenium	6010C	3.5	2.0	09/23/14	09/23/14	1.6	J	
Silver	6010C	0.7	2.0	09/23/14	09/23/14	0.7	U	
Sodium	6010C	35.0	2.0	09/23/14	09/23/14	141		
Thallium	6010C	1.8	2.0	09/23/14	09/23/14	1.8	U	
Vanadium	6010C	0.7	2.0	09/23/14	09/23/14	45.6		
Zinc	6010C	0.9	2.0	09/23/14	09/23/14	23.9		

% Solids: 81.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD11 **Lab Code:** K1409921-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.6	2.0	09/23/14	09/23/14	11700		
Antimony	6010C	3.3	2.0	09/23/14	09/23/14	3.3	U	N
Arsenic	6010C	3.3	2.0	09/23/14	09/23/14	3.0	J	
Barium	6010C	0.66	2.0	09/23/14	09/23/14	61.5		
Beryllium	6010C	0.16	2.0	09/23/14	09/23/14	0.16	J	
Cadmium	6010C	0.16	2.0	09/23/14	09/23/14	0.07	J	
Calcium	6010C	3.3	2.0	09/23/14	09/23/14	2200		N
Chromium	6010C	0.7	2.0	09/23/14	09/23/14	25.8		
Cobalt	6010C	0.33	2.0	09/23/14	09/23/14	5.80		
Copper	6010C	0.7	2.0	09/23/14	09/23/14	11.9		
Iron	6010C	3.3	2.0	09/23/14	09/23/14	13000		
Lead	6010C	1.6	2.0	09/23/14	09/23/14	5.0		
Magnesium	6010C	1.64	2.0	09/23/14	09/23/14	3800		
Manganese	6010C	0.16	2.0	09/23/14	09/23/14	166		
Mercury	7471B	0.023	1.0	09/18/14	09/19/14	0.025		
Nickel	6010C	0.66	2.0	09/23/14	09/23/14	29.0		
Potassium	6010C	32.9	2.0	09/23/14	09/23/14	537		
Selenium	6010C	3.3	2.0	09/23/14	09/23/14	1.5	J	
Silver	6010C	0.7	2.0	09/23/14	09/23/14	0.2	J	
Sodium	6010C	32.9	2.0	09/23/14	09/23/14	190		
Thallium	6010C	1.6	2.0	09/23/14	09/23/14	1.6	U	
Vanadium	6010C	0.7	2.0	09/23/14	09/23/14	31.6		
Zinc	6010C	0.8	2.0	09/23/14	09/23/14	31.5		

% Solids: 78.5

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD10 **Lab Code:** K1409921-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	2.1	2.0	09/23/14	09/23/14	7780		
Antimony	6010C	4.1	2.0	09/23/14	09/23/14	1.2	J	N
Arsenic	6010C	4.1	2.0	09/23/14	09/23/14	5.9		
Barium	6010C	0.82	2.0	09/23/14	09/23/14	46.5		
Beryllium	6010C	0.21	2.0	09/23/14	09/23/14	0.08	J	
Cadmium	6010C	0.20	2.0	09/23/14	09/23/14	0.41		
Calcium	6010C	4.1	2.0	09/23/14	09/23/14	3720		N
Chromium	6010C	0.8	2.0	09/23/14	09/23/14	18.4		
Cobalt	6010C	0.41	2.0	09/23/14	09/23/14	4.14		
Copper	6010C	0.8	2.0	09/23/14	09/23/14	37.4		
Iron	6010C	4.1	2.0	09/23/14	09/23/14	12500		
Lead	6010C	2.1	2.0	09/23/14	09/23/14	44.3		
Magnesium	6010C	2.05	2.0	09/23/14	09/23/14	2570		
Manganese	6010C	0.21	2.0	09/23/14	09/23/14	147		
Mercury	7471B	0.029	1.0	09/18/14	09/19/14	0.099		
Nickel	6010C	0.82	2.0	09/23/14	09/23/14	15.2		
Potassium	6010C	41.0	2.0	09/23/14	09/23/14	565		
Selenium	6010C	4.1	2.0	09/23/14	09/23/14	1.0	J	
Silver	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Sodium	6010C	41.0	2.0	09/23/14	09/23/14	536		
Thallium	6010C	2.1	2.0	09/23/14	09/23/14	2.1	U	
Vanadium	6010C	0.8	2.0	09/23/14	09/23/14	35.2		
Zinc	6010C	1.0	2.0	09/23/14	09/23/14	103		

% Solids: 63.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD09 **Lab Code:** K1409921-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.8	2.0	09/23/14	09/23/14	10000		
Antimony	6010C	3.5	2.0	09/23/14	09/23/14	3.5	U	N
Arsenic	6010C	3.5	2.0	09/23/14	09/23/14	5.6		
Barium	6010C	0.71	2.0	09/23/14	09/23/14	51.5		
Beryllium	6010C	0.18	2.0	09/23/14	09/23/14	0.13	J	
Cadmium	6010C	0.18	2.0	09/23/14	09/23/14	0.25		
Calcium	6010C	3.5	2.0	09/23/14	09/23/14	4270		N
Chromium	6010C	0.7	2.0	09/23/14	09/23/14	21.8		
Cobalt	6010C	0.35	2.0	09/23/14	09/23/14	5.40		
Copper	6010C	0.7	2.0	09/23/14	09/23/14	20.6		
Iron	6010C	3.5	2.0	09/23/14	09/23/14	13400		
Lead	6010C	1.8	2.0	09/23/14	09/23/14	18.4		
Magnesium	6010C	1.76	2.0	09/23/14	09/23/14	3580		
Manganese	6010C	0.18	2.0	09/23/14	09/23/14	213		
Mercury	7471B	0.021	1.0	09/18/14	09/19/14	0.034		
Nickel	6010C	0.71	2.0	09/23/14	09/23/14	24.1		
Potassium	6010C	35.3	2.0	09/23/14	09/23/14	606		
Selenium	6010C	3.5	2.0	09/23/14	09/23/14	1.4	J	
Silver	6010C	0.7	2.0	09/23/14	09/23/14	0.2	J	
Sodium	6010C	35.3	2.0	09/23/14	09/23/14	212		
Thallium	6010C	1.8	2.0	09/23/14	09/23/14	1.8	U	
Vanadium	6010C	0.7	2.0	09/23/14	09/23/14	32.7		
Zinc	6010C	0.9	2.0	09/23/14	09/23/14	86.2		

% Solids: 74.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD08 **Lab Code:** K1409921-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	2.0	2.0	09/23/14	09/23/14	16100		
Antimony	6010C	4.0	2.0	09/23/14	09/23/14	8.0		N
Arsenic	6010C	4.0	2.0	09/23/14	09/23/14	66.3		
Barium	6010C	0.80	2.0	09/23/14	09/23/14	167		
Beryllium	6010C	0.20	2.0	09/23/14	09/23/14	0.30		
Cadmium	6010C	0.20	2.0	09/23/14	09/23/14	3.66		
Calcium	6010C	4.0	2.0	09/23/14	09/23/14	4520		N
Chromium	6010C	0.8	2.0	09/23/14	09/23/14	41.8		
Cobalt	6010C	0.40	2.0	09/23/14	09/23/14	10.5		
Copper	6010C	0.8	2.0	09/23/14	09/23/14	154		
Iron	6010C	4.0	2.0	09/23/14	09/23/14	23700		
Lead	6010C	2.0	2.0	09/23/14	09/23/14	222		
Magnesium	6010C	2.01	2.0	09/23/14	09/23/14	4280		
Manganese	6010C	0.20	2.0	09/23/14	09/23/14	249		
Mercury	7471B	0.029	1.0	09/18/14	09/19/14	0.342		
Nickel	6010C	0.80	2.0	09/23/14	09/23/14	48.9		
Potassium	6010C	40.2	2.0	09/23/14	09/23/14	944		
Selenium	6010C	4.0	2.0	09/23/14	09/23/14	2.3	J	
Silver	6010C	0.8	2.0	09/23/14	09/23/14	0.3	J	
Sodium	6010C	40.2	2.0	09/23/14	09/23/14	381		
Thallium	6010C	2.0	2.0	09/23/14	09/23/14	2.0	U	
Vanadium	6010C	0.8	2.0	09/23/14	09/23/14	50.6		
Zinc	6010C	1.0	2.0	09/23/14	09/23/14	690		

% Solids: 62.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD07 **Lab Code:** K1409921-008

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	2.0	2.0	09/23/14	09/23/14	15200		
Antimony	6010C	4.1	2.0	09/23/14	09/23/14	4.8		N
Arsenic	6010C	4.1	2.0	09/23/14	09/23/14	16.8		
Barium	6010C	0.81	2.0	09/23/14	09/23/14	211		
Beryllium	6010C	0.20	2.0	09/23/14	09/23/14	0.26		
Cadmium	6010C	0.20	2.0	09/23/14	09/23/14	4.31		
Calcium	6010C	4.1	2.0	09/23/14	09/23/14	4860		N
Chromium	6010C	0.8	2.0	09/23/14	09/23/14	44.6		
Cobalt	6010C	0.41	2.0	09/23/14	09/23/14	10.2		
Copper	6010C	0.8	2.0	09/23/14	09/23/14	226		
Iron	6010C	4.1	2.0	09/23/14	09/23/14	24400		
Lead	6010C	2.0	2.0	09/23/14	09/23/14	360		
Magnesium	6010C	2.03	2.0	09/23/14	09/23/14	3530		
Manganese	6010C	0.20	2.0	09/23/14	09/23/14	445		
Mercury	7471B	0.028	1.0	09/18/14	09/19/14	0.846		
Nickel	6010C	0.81	2.0	09/23/14	09/23/14	55.5		
Potassium	6010C	40.5	2.0	09/23/14	09/23/14	857		
Selenium	6010C	4.1	2.0	09/23/14	09/23/14	2.9	J	
Silver	6010C	0.8	2.0	09/23/14	09/23/14	1.1		
Sodium	6010C	40.5	2.0	09/23/14	09/23/14	342		
Thallium	6010C	2.0	2.0	09/23/14	09/23/14	2.0	U	
Vanadium	6010C	0.8	2.0	09/23/14	09/23/14	43.7		
Zinc	6010C	1.0	2.0	09/23/14	09/23/14	947		

% Solids: 63.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD06 **Lab Code:** K1409921-009

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.9	2.0	09/23/14	09/23/14	8560		
Antimony	6010C	3.7	2.0	09/23/14	09/23/14	3.9		N
Arsenic	6010C	3.7	2.0	09/23/14	09/23/14	22.7		
Barium	6010C	0.74	2.0	09/23/14	09/23/14	53.3		
Beryllium	6010C	0.19	2.0	09/23/14	09/23/14	0.13	J	
Cadmium	6010C	0.18	2.0	09/23/14	09/23/14	0.87		
Calcium	6010C	3.7	2.0	09/23/14	09/23/14	4040		N
Chromium	6010C	0.7	2.0	09/23/14	09/23/14	24.6		
Cobalt	6010C	0.37	2.0	09/23/14	09/23/14	5.65		
Copper	6010C	0.7	2.0	09/23/14	09/23/14	73.2		
Iron	6010C	3.7	2.0	09/23/14	09/23/14	17800		
Lead	6010C	1.9	2.0	09/23/14	09/23/14	98.0		
Magnesium	6010C	1.85	2.0	09/23/14	09/23/14	2610		
Manganese	6010C	0.19	2.0	09/23/14	09/23/14	116		
Mercury	7471B	0.110	5.0	09/18/14	09/19/14	3.03		
Nickel	6010C	0.74	2.0	09/23/14	09/23/14	19.8		
Potassium	6010C	36.9	2.0	09/23/14	09/23/14	667		
Selenium	6010C	3.7	2.0	09/23/14	09/23/14	2.2	J	
Silver	6010C	0.7	2.0	09/23/14	09/23/14	0.2	J	
Sodium	6010C	36.9	2.0	09/23/14	09/23/14	729		
Thallium	6010C	1.9	2.0	09/23/14	09/23/14	1.9	U	
Vanadium	6010C	0.7	2.0	09/23/14	09/23/14	43.5		
Zinc	6010C	0.9	2.0	09/23/14	09/23/14	223		

% Solids: 69.4

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD05 **Lab Code:** K1409921-010

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	6.5	2.0	09/23/14	09/23/14	18600		
Antimony	6010C	12.9	2.0	09/23/14	09/23/14	9.6	J	N
Arsenic	6010C	12.9	2.0	09/23/14	09/23/14	22.5		
Barium	6010C	2.59	2.0	09/23/14	09/23/14	141		
Beryllium	6010C	0.65	2.0	09/23/14	09/23/14	0.37	J	
Cadmium	6010C	0.65	2.0	09/23/14	09/23/14	3.75		
Calcium	6010C	12.9	2.0	09/23/14	09/23/14	10800		N
Chromium	6010C	2.6	2.0	09/23/14	09/23/14	51.2		
Cobalt	6010C	1.29	2.0	09/23/14	09/23/14	13.0		
Copper	6010C	2.6	2.0	09/23/14	09/23/14	91.6		
Iron	6010C	12.9	2.0	09/23/14	09/23/14	31800		
Lead	6010C	6.5	2.0	09/23/14	09/23/14	139		
Magnesium	6010C	6.47	2.0	09/23/14	09/23/14	5200		
Manganese	6010C	0.65	2.0	09/23/14	09/23/14	378		
Mercury	7471B	0.065	1.0	09/18/14	09/19/14	0.335		
Nickel	6010C	2.59	2.0	09/23/14	09/23/14	51.6		
Potassium	6010C	129	2.0	09/23/14	09/23/14	1040		
Selenium	6010C	12.9	2.0	09/23/14	09/23/14	6.4	J	
Silver	6010C	2.6	2.0	09/23/14	09/23/14	2.6	U	
Sodium	6010C	129	2.0	09/23/14	09/23/14	657		
Thallium	6010C	6.5	2.0	09/23/14	09/23/14	6.5	U	
Vanadium	6010C	2.6	2.0	09/23/14	09/23/14	70.8		
Zinc	6010C	3.2	2.0	09/23/14	09/23/14	570		

% Solids: 23.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: SEDIMENT

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: mg/Kg
Basis: DRY

Sample Name: SE-091514-RB-SD12
Lab Code: K1409921-011

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	2.1	2.0	09/23/14	09/23/14	8040		
Antimony	6010C	4.1	2.0	09/23/14	09/23/14	4.1	U	N
Arsenic	6010C	4.1	2.0	09/23/14	09/23/14	5.9		
Barium	6010C	0.83	2.0	09/23/14	09/23/14	45.2		
Beryllium	6010C	0.21	2.0	09/23/14	09/23/14	0.11	J	
Cadmium	6010C	0.21	2.0	09/23/14	09/23/14	0.23		
Calcium	6010C	4.1	2.0	09/23/14	09/23/14	2780		N
Chromium	6010C	0.8	2.0	09/23/14	09/23/14	17.6		
Cobalt	6010C	0.41	2.0	09/23/14	09/23/14	5.16		
Copper	6010C	0.8	2.0	09/23/14	09/23/14	17.1		
Iron	6010C	4.1	2.0	09/23/14	09/23/14	13200		
Lead	6010C	2.1	2.0	09/23/14	09/23/14	13.1		
Magnesium	6010C	2.07	2.0	09/23/14	09/23/14	2770		
Manganese	6010C	0.21	2.0	09/23/14	09/23/14	345		
Mercury	7471B	0.018	1.0	09/18/14	09/19/14	0.025		
Nickel	6010C	0.83	2.0	09/23/14	09/23/14	16.7		
Potassium	6010C	41.4	2.0	09/23/14	09/23/14	560		
Selenium	6010C	4.1	2.0	09/23/14	09/23/14	1.9	J	
Silver	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Sodium	6010C	41.4	2.0	09/23/14	09/23/14	187		
Thallium	6010C	2.1	2.0	09/23/14	09/23/14	2.1	U	
Vanadium	6010C	0.8	2.0	09/23/14	09/23/14	27.6		
Zinc	6010C	1.0	2.0	09/23/14	09/23/14	139		

% Solids: 77.9

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409921
Project No.: 009973-021101
Date Collected:
Project Name: Marine View Drive RS/FS
Date Received:
Matrix: SEDIMENT
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1409921-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6010C	1.9	2.0	09/23/14	09/23/14	1.8	J	
Antimony	6010C	3.9	2.0	09/23/14	09/23/14	3.9	U	N
Arsenic	6010C	3.9	2.0	09/23/14	09/23/14	3.9	U	
Barium	6010C	0.77	2.0	09/23/14	09/23/14	0.77	U	
Beryllium	6010C	0.19	2.0	09/23/14	09/23/14	0.19	U	
Cadmium	6010C	0.19	2.0	09/23/14	09/23/14	0.19	U	
Calcium	6010C	3.9	2.0	09/23/14	09/23/14	4.1		
Chromium	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Cobalt	6010C	0.39	2.0	09/23/14	09/23/14	0.39	U	
Copper	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Iron	6010C	3.9	2.0	09/23/14	09/23/14	3.9	U	
Lead	6010C	1.9	2.0	09/23/14	09/23/14	1.9	U	
Magnesium	6010C	1.92	2.0	09/23/14	09/23/14	0.54	J	
Manganese	6010C	0.19	2.0	09/23/14	09/23/14	0.04	J	
Mercury	7471B	0.018	1.0	09/18/14	09/19/14	0.018	U	
Nickel	6010C	0.77	2.0	09/23/14	09/23/14	0.77	U	
Potassium	6010C	38.5	2.0	09/23/14	09/23/14	38.5	U	
Selenium	6010C	3.9	2.0	09/23/14	09/23/14	3.9	U	
Silver	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Sodium	6010C	38.5	2.0	09/23/14	09/23/14	38.5	U	
Thallium	6010C	1.9	2.0	09/23/14	09/23/14	1.9	U	
Vanadium	6010C	0.8	2.0	09/23/14	09/23/14	0.8	U	
Zinc	6010C	1.0	2.0	09/23/14	09/23/14	0.4	J	

% Solids: 100.0

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum	1000	969	97	250	253	101	251	100	6010C
Aluminum	5000	4977	100	10000	9891	99	10050	100	6010C
Antimony	2500	2365	95	250	249	100	249	100	6010C
Arsenic	2500	2466	99	1000	1004	100	1014	101	6010C
Barium	5000	4995	100	10000	10060	101	10060	101	6010C
Beryllium	125	122	98	250	248	99	248	99	6010C
Cadmium	1250	1203	96	250	252	101	247	99	6010C
Calcium	5000	4784	96	500	488	98	480	96	6010C
Calcium	12500	12310	98	10000	10050	100	10130	101	6010C
Chromium	500	489	98	250	250	100	243	97	6010C
Cobalt	1250	1203	96	250	250	100	248	99	6010C
Copper	625	610	98	250	251	100	250	100	6010C
Iron	2500	2442	98	10000	9972	100	10150	102	6010C
Lead	2500	2358	94	250	252	101	246	98	6010C
Magnesium	5000	4837	97	250	246	98	245	98	6010C
Magnesium	12500	12330	99	10000	9895	99	9963	100	6010C
Manganese	1250	1216	97	250	247	99	244	98	6010C
Mercury	5.00	5.04	101	5.00	5.10	102	5.10	102	7471B
Nickel	1250	1190	95	250	251	100	247	99	6010C
Potassium	12500	12490	100	10000	10060	101	10060	101	6010C
Selenium	2500	2328	93	250	251	100	250	100	6010C
Silver	625	592	95	250	250	100	248	99	6010C
Sodium	12500	12550	100	10000	10020	100	10130	101	6010C
Thallium	2500	2389	96	250	250	100	250	100	6010C
Vanadium	1250	1229	98	250	247	99	243	97	6010C
Zinc	1250	1208	97	250	251	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	Method
Aluminum				10000	9857	99	9795	98	6010C
Aluminum				250	258	103	259	104	6010C
Antimony				250	249	100	249	100	6010C
Arsenic				1000	997	100	1004	100	6010C
Barium				10000	10080	101	10070	101	6010C
Beryllium				250	246	98	247	99	6010C
Cadmium				250	254	102	254	102	6010C
Calcium				10000	10040	100	10040	100	6010C
Calcium				500	490	98	494	99	6010C
Chromium				250	251	100	251	100	6010C
Cobalt				250	253	101	255	102	6010C
Copper				250	250	100	250	100	6010C
Iron				10000	9939	99	9954	100	6010C
Lead				250	253	101	253	101	6010C
Magnesium				10000	9797	98	9782	98	6010C
Magnesium				250	249	100	252	101	6010C
Manganese				250	248	99	250	100	6010C
Mercury				5.00	5.26	105	5.12	102	7471B
Nickel				250	252	101	254	102	6010C
Potassium				10000	9991	100	9942	99	6010C
Selenium				250	250	100	250	100	6010C
Silver				250	247	99	246	98	6010C
Sodium				10000	9965	100	9949	99	6010C
Thallium				250	254	102	256	102	6010C
Vanadium				250	248	99	250	100	6010C
Zinc				250	253	101	255	102	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				10000	9793	98	10070	101	6010C
Aluminum				250	253	101	253	101	6010C
Antimony				250	247	99	250	100	6010C
Arsenic				1000	997	100	1002	100	6010C
Barium				10000	10200	102	10000	100	6010C
Beryllium				250	246	98	248	99	6010C
Cadmium				250	247	99	248	99	6010C
Calcium				10000	10130	101	10010	100	6010C
Calcium				500	477	95	483	97	6010C
Chromium				250	242	97	245	98	6010C
Cobalt				250	249	100	249	100	6010C
Copper				250	250	100	250	100	6010C
Iron				10000	9977	100	9953	100	6010C
Lead				250	246	98	245	98	6010C
Magnesium				10000	9605	96	9839	98	6010C
Magnesium				250	245	98	244	98	6010C
Manganese				250	241	96	245	98	6010C
Mercury				5.00	5.06	101			7471B
Nickel				250	247	99	248	99	6010C
Potassium				10000	9885	99	9971	100	6010C
Selenium				250	247	99	247	99	6010C
Silver				250	245	98	248	99	6010C
Sodium				10000	9814	98	10050	100	6010C
Thallium				250	251	100	251	100	6010C
Vanadium				250	240	96	245	98	6010C
Zinc				250	249	100	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				10000	9877	99	9818	98	6010C
Aluminum				250	256	102	254	102	6010C
Antimony				250	250	100	246	98	6010C
Arsenic				1000	1006	101	985	98	6010C
Barium				10000	10010	100	9838	98	6010C
Beryllium				250	250	100	245	98	6010C
Cadmium				250	251	100	247	99	6010C
Calcium				10000	10010	100	9840	98	6010C
Calcium				500	489	98	511	102	6010C
Chromium				250	248	99	244	98	6010C
Cobalt				250	252	101	250	100	6010C
Copper				250	251	100	249	100	6010C
Iron				10000	9948	99	9700	97	6010C
Lead				250	250	100	247	99	6010C
Magnesium				10000	9787	98	9596	96	6010C
Magnesium				250	248	99	262	105	6010C
Manganese				250	249	100	242	97	6010C
Nickel				250	251	100	247	99	6010C
Potassium				10000	10030	100	9803	98	6010C
Selenium				250	250	100	250	100	6010C
Silver				250	249	100	244	98	6010C
Sodium				10000	9996	100	9824	98	6010C
Thallium				250	252	101	254	102	6010C
Vanadium				250	248	99	243	97	6010C
Zinc				250	252	101	250	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				10000	9959	100	9985	100	6010C
Aluminum				250	254	102	258	103	6010C
Antimony				250	245	98	246	98	6010C
Arsenic				1000	991	99	996	100	6010C
Barium				10000	10030	100	10270	103	6010C
Beryllium				250	247	99	245	98	6010C
Cadmium				250	248	99	252	101	6010C
Calcium				10000	9972	100	10160	102	6010C
Calcium				500	485	97	490	98	6010C
Chromium				250	246	98	250	100	6010C
Cobalt				250	251	100	252	101	6010C
Copper				250	249	100	246	98	6010C
Iron				10000	9915	99	10170	102	6010C
Lead				250	247	99	251	100	6010C
Magnesium				10000	9706	97	9720	97	6010C
Magnesium				250	245	98	247	99	6010C
Manganese				250	246	98	248	99	6010C
Nickel				250	249	100	251	100	6010C
Potassium				10000	9853	99	9786	98	6010C
Selenium				250	249	100	248	99	6010C
Silver				250	247	99	245	98	6010C
Sodium				10000	9888	99	9912	99	6010C
Thallium				250	254	102	254	102	6010C
Vanadium				250	246	98	249	100	6010C
Zinc				250	250	100	251	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				10000	10020	100	10000	100	6010C
Aluminum				250	256	102	258	103	6010C
Antimony				250	249	100	245	98	6010C
Arsenic				1000	997	100	999	100	6010C
Barium				10000	10020	100	10230	102	6010C
Beryllium				250	247	99	244	98	6010C
Cadmium				250	249	100	252	101	6010C
Calcium				10000	9992	100	10130	101	6010C
Calcium				500	487	97	489	98	6010C
Chromium				250	248	99	250	100	6010C
Cobalt				250	250	100	250	100	6010C
Copper				250	249	100	247	99	6010C
Iron				10000	10020	100	10180	102	6010C
Lead				250	249	100	250	100	6010C
Magnesium				10000	9745	97	9744	97	6010C
Magnesium				250	245	98	246	98	6010C
Manganese				250	247	99	248	99	6010C
Nickel				250	249	100	251	100	6010C
Potassium				10000	9943	99	9859	99	6010C
Selenium				250	251	100	248	99	6010C
Silver				250	249	100	248	99	6010C
Sodium				10000	9947	99	9954	100	6010C
Thallium				250	252	101	251	100	6010C
Vanadium				250	248	99	249	100	6010C
Zinc				250	249	100	249	100	6010C

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				10000	10240	102	9847	98	6010C
Aluminum				250	254	102	258	103	6010C
Antimony				250	250	100	247	99	6010C
Arsenic				1000	1011	101	999	100	6010C
Barium				10000	10200	102	10200	102	6010C
Beryllium				250	247	99	243	97	6010C
Cadmium				250	250	100	254	102	6010C
Calcium				10000	10030	100	9966	100	6010C
Calcium				500	488	98	489	98	6010C
Chromium				250	251	100	253	101	6010C
Cobalt				250	247	99	250	100	6010C
Copper				250	249	100	247	99	6010C
Iron				10000	10270	103	10070	101	6010C
Lead				250	249	100	254	102	6010C
Magnesium				10000	10020	100	9733	97	6010C
Magnesium				250	242	97	244	98	6010C
Manganese				250	249	100	249	100	6010C
Nickel				250	249	100	251	100	6010C
Potassium				10000	10080	101	9960	100	6010C
Selenium				250	251	100	248	99	6010C
Silver				250	253	101	249	100	6010C
Sodium				10000	10310	103	10010	100	6010C
Thallium				250	247	99	251	100	6010C
Vanadium				250	249	100	250	100	6010C
Zinc				250	246	98	248	99	6010C

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Aluminum	10.3	10.0	103	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Antimony	18.7	20.0	94	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Barium	4.3	4.0	108	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Beryllium	0.97	1.0	97	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Cadmium	1.10	1.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Calcium	19.9	20.0	100	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Chromium	3.8	4.0	95	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Cobalt	2.30	2.0	115	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Copper	4.40	4.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Lead	8.7	10.0	87	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Magnesium	5.0	5.0	100	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Manganese	1.10	1.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Nickel	4.0	4.0	100	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Potassium	205.0	200.0	102	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Selenium	22.0	20.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Silver	4.4	4.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Sodium	219.0	200.0	110	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Thallium	9.8	10.0	98	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Vanadium	4.3	4.0	108	70.0 - 130.0	P	09/23/14	08:57	092314AICP
	Zinc	4.3	4.0	108	70.0 - 130.0	P	09/23/14	08:57	092314AICP
LLICV1									
	Arsenic	12.4	10.0	124	70.0 - 130.0	P	09/23/14	08:59	092314AICP
	Iron	21.5	20.0	108	70.0 - 130.0	P	09/23/14	08:59	092314AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV1									
	Aluminum	10.8	10.0	108	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Antimony	22.2	20.0	111	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Arsenic	12.8	10.0	128	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Barium	4.3	4.0	108	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Beryllium	0.92	1.0	92	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Cadmium	1.10	1.0	110	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Calcium	20.8	20.0	104	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Chromium	4.0	4.0	100	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Cobalt	2.40	2.0	120	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Copper	4.20	4.0	105	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Iron	24.2	20.0	121	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Lead	8.6	10.0	86	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Magnesium	5.4	5.0	108	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Manganese	1.00	1.0	100	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Nickel	4.2	4.0	105	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Potassium	232.8	200.0	116	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Selenium	19.8	20.0	99	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Silver	4.3	4.0	108	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Sodium	217.1	200.0	109	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Thallium	9.2	10.0	92	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Vanadium	4.5	4.0	112	70.0 - 130.0	P	09/23/14	10:17	092314AICP
	Zinc	4.5	4.0	112	70.0 - 130.0	P	09/23/14	10:17	092314AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV2									
	Aluminum	11.0	10.0	110	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Antimony	21.8	20.0	109	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Arsenic	12.0	10.0	120	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Barium	4.2	4.0	105	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Beryllium	0.96	1.0	96	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Cadmium	1.00	1.0	100	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Calcium	20.5	20.0	102	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Chromium	4.5	4.0	112	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Cobalt	2.30	2.0	115	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Copper	4.00	4.0	100	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Iron	24.5	20.0	122	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Lead	9.4	10.0	94	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Magnesium	5.3	5.0	106	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Manganese	1.00	1.0	100	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Nickel	4.5	4.0	112	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Potassium	211.6	200.0	106	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Selenium	23.4	20.0	117	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Silver	4.2	4.0	105	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Sodium	218.1	200.0	109	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Thallium	9.0	10.0	90	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Vanadium	4.5	4.0	112	70.0 - 130.0	P	09/23/14	11:52	092314AICP
	Zinc	4.5	4.0	112	70.0 - 130.0	P	09/23/14	11:52	092314AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV3									
	Aluminum	11.0	10.0	110	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Antimony	23.1	20.0	116	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Arsenic	10.5	10.0	105	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Barium	3.8	4.0	95	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Beryllium	0.95	1.0	95	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Cadmium	1.10	1.0	110	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Calcium	21.7	20.0	108	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Chromium	4.2	4.0	105	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Cobalt	2.30	2.0	115	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Copper	4.20	4.0	105	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Iron	23.5	20.0	118	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Lead	8.3	10.0	83	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Magnesium	5.3	5.0	106	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Manganese	1.10	1.0	110	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Nickel	4.3	4.0	108	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Potassium	175.4	200.0	88	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Selenium	21.7	20.0	108	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Silver	4.7	4.0	118	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Sodium	219.6	200.0	110	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Thallium	9.2	10.0	92	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Vanadium	4.7	4.0	118	70.0 - 130.0	P	09/23/14	12:59	092314AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	09/23/14	12:59	092314AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV4									
	Aluminum	10.6	10.0	106	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Antimony	15.5	20.0	78	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Arsenic	11.6	10.0	116	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Barium	4.1	4.0	102	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Beryllium	0.95	1.0	95	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Cadmium	1.00	1.0	100	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Calcium	21.4	20.0	107	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Chromium	4.1	4.0	102	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Cobalt	2.30	2.0	115	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Copper	4.20	4.0	105	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Iron	25.7	20.0	128	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Lead	8.9	10.0	89	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Magnesium	5.1	5.0	102	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Manganese	1.10	1.0	110	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Nickel	4.2	4.0	105	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Potassium	199.9	200.0	100	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Selenium	22.3	20.0	112	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Silver	4.4	4.0	110	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Sodium	230.7	200.0	115	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Thallium	9.3	10.0	93	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Vanadium	4.8	4.0	120	70.0 - 130.0	P	09/23/14	16:51	092314AICP
	Zinc	4.2	4.0	105	70.0 - 130.0	P	09/23/14	16:51	092314AICP

Metals

- 2b -

CRDL STANDARD FOR AA AND ICP

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury				0.20	0.211	106		

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum	2.5	U	2.5	U	2.5	U	2.5	U	6010C
Antimony	2.0	U	-2.3	J	2.0	U	2.0	U	6010C
Arsenic	4.0	U	4.0	U	4.0	U	4.0	U	6010C
Barium	1.50	U	1.50	U	1.50	U	1.50	U	6010C
Beryllium	0.10	U	0.10	U	-0.11	J	0.10	U	6010C
Cadmium	0.20	U	0.20	U	0.20	U	0.20	U	6010C
Calcium	4.5	U	4.5	U	4.5	U	4.5	U	6010C
Chromium	0.5	U	0.5	U	0.5	U	0.5	U	6010C
Cobalt	0.5	U	0.5	U	0.5	U	0.5	U	6010C
Copper	1.5	U	1.5	U	1.5	U	1.5	U	6010C
Iron	10.0	U	10.0	U	10.0	U	10.0	U	6010C
Lead	2.0	U	2.0	U	-2.2	J	2.0	U	6010C
Magnesium	1.00	U	1.00	U	1.00	U	1.00	U	6010C
Manganese	0.10	J	0.10	J	0.10	J	0.20	J	6010C
Mercury	0.020	U	0.020	U	0.020	U	-0.021	J	7471B
Nickel	0.50	U	0.50	U	0.50	U	0.50	U	6010C
Potassium	45	U	45	U	45	U	45	U	6010C
Selenium	4.5	U	4.5	U	4.5	U	4.5	U	6010C
Silver	1.0	U	1.0	U	1.0	U	1.0	U	6010C
Sodium	20.0	U	20.0	U	20.0	U	20.0	U	6010C
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	6010C
Vanadium	1.0	U	1.0	U	1.0	U	1.0	U	6010C
Zinc	1.00	U	1.00	U	1.00	U	1.00	U	6010C

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			2.5	U	2.5	U	2.5	U	6010C
Antimony			-2.3	J	-2.1	J	2.0	U	6010C
Arsenic			4.0	U	4.0	U	4.0	U	6010C
Barium			1.50	U	1.50	U	1.50	U	6010C
Beryllium			0.10	U	0.10	U	0.10	U	6010C
Cadmium			0.20	U	0.20	U	0.20	U	6010C
Calcium			4.5	U	4.5	U	4.5	U	6010C
Chromium			0.5	U	0.5	U	0.5	U	6010C
Cobalt			0.5	U	0.5	U	0.5	U	6010C
Copper			1.5	U	1.5	U	1.5	U	6010C
Iron			10.0	U	10.0	U	10.0	U	6010C
Lead			2.0	U	2.0	U	2.0	U	6010C
Magnesium			1.00	U	1.00	U	1.00	U	6010C
Manganese			0.10	J	0.10	J	0.10	J	6010C
Mercury			0.020	U	0.020	U			7471B
Nickel			0.50	U	0.50	U	0.50	U	6010C
Potassium			45	U	45	U	45	U	6010C
Selenium			4.5	U	4.5	U	4.5	U	6010C
Silver			1.0	U	1.0	U	1.0	U	6010C
Sodium			20.0	U	20.0	U	20.0	U	6010C
Thallium			3.0	U	3.0	U	3.0	U	6010C
Vanadium			1.0	U	1.0	U	1.0	U	6010C
Zinc			1.00	U	1.00	U	1.00	U	6010C

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			2.5	U	2.5	U	2.5	U	6010C
Antimony			2.0	U	2.0	U	2.0	U	6010C
Arsenic			4.0	U	4.0	U	4.0	U	6010C
Barium			1.50	U	1.50	U	1.50	U	6010C
Beryllium			-0.13	J	-0.10	J	0.10	U	6010C
Cadmium			0.20	J	0.20	U	0.20	U	6010C
Calcium			4.5	U	4.5	U	4.5	U	6010C
Chromium			0.5	U	0.5	U	0.5	U	6010C
Cobalt			0.5	U	0.5	U	0.5	U	6010C
Copper			1.5	U	1.5	U	1.5	U	6010C
Iron			10.0	U	10.0	U	10.0	U	6010C
Lead			2.0	U	2.0	U	2.0	U	6010C
Magnesium			1.00	U	1.00	U	1.00	U	6010C
Manganese			0.10	J	0.10	J	0.10	J	6010C
Nickel			0.50	U	0.50	U	0.50	U	6010C
Potassium			45	U	45	U	45	U	6010C
Selenium			4.5	U	4.5	U	4.5	U	6010C
Silver			1.0	U	1.0	U	1.0	U	6010C
Sodium			20.0	U	20.0	U	20.0	U	6010C
Thallium			3.0	U	3.0	U	3.0	U	6010C
Vanadium			1.0	U	1.0	U	1.0	U	6010C
Zinc			1.00	U	1.00	U	1.00	U	6010C

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			2.5	U	2.5	U	2.5	U	6010C
Antimony			2.0	U	2.0	U	-3.3	J	6010C
Arsenic			4.0	U	4.0	U	4.0	U	6010C
Barium			1.50	U	1.50	U	1.50	U	6010C
Beryllium			0.10	U	0.10	U	-0.15	J	6010C
Cadmium			0.20	U	0.20	U	0.20	U	6010C
Calcium			4.5	U	4.5	U	4.5	U	6010C
Chromium			0.5	U	0.5	U	0.5	U	6010C
Cobalt			0.5	U	0.5	U	0.5	U	6010C
Copper			1.5	U	1.5	U	1.5	U	6010C
Iron			10.0	U	10.0	U	10.0	U	6010C
Lead			2.0	U	2.0	U	2.0	U	6010C
Magnesium			1.00	U	1.00	U	1.00	U	6010C
Manganese			0.10	J	0.10	J	0.10	U	6010C
Nickel			0.50	U	0.50	U	0.50	U	6010C
Potassium			45	U	45	U	45	U	6010C
Selenium			4.5	U	4.5	U	4.5	U	6010C
Silver			1.0	U	1.0	U	1.0	U	6010C
Sodium			20.0	U	20.0	U	20.0	U	6010C
Thallium			3.0	U	3.0	U	3.0	U	6010C
Vanadium			1.0	U	1.0	U	1.0	U	6010C
Zinc			1.00	U	1.00	U	1.00	U	6010C

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			2.5	U	2.5	U			6010C
Antimony			2.0	U	2.0	U			6010C
Arsenic			4.0	U	4.0	U			6010C
Barium			1.50	U	1.50	U			6010C
Beryllium			-0.11	J	0.10	U			6010C
Cadmium			0.20	U	0.20	U			6010C
Calcium			4.5	U	4.5	U			6010C
Chromium			0.5	U	0.5	U			6010C
Cobalt			0.5	U	0.5	U			6010C
Copper			1.5	U	1.5	U			6010C
Iron			10.0	U	10.0	U			6010C
Lead			2.0	U	-2.7	J			6010C
Magnesium			1.00	U	1.00	U			6010C
Manganese			0.10	U	0.10	J			6010C
Nickel			0.50	U	0.50	U			6010C
Potassium			45	U	45	U			6010C
Selenium			4.5	U	4.5	U			6010C
Silver			1.0	U	1.0	U			6010C
Sodium			20.0	U	24.6	J			6010C
Thallium			3.0	U	3.0	U			6010C
Vanadium			1.0	U	1.0	U			6010C
Zinc			1.00	U	1.00	U			6010C

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03** **ICS Source:** **Inorganic Ventures**

Concentration Units): **ug/L**

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	500000	437300	435800	87			
Antimony		1000	5	870	87			
Arsenic			7	5				
Barium		500	0	511	102			
Beryllium		500	0	473	95			
Cadmium		1000	-1	902	90			
Calcium	500000	500000	472300	469000	94			
Chromium		500	2	494	99			
Cobalt		500	-1	448	90			
Copper		500	-1	451	90			
Iron	200000	200000	185500	185500	93			
Lead		1000	-7	866	87			
Magnesium	500000	500000	349600	347300	69			
Manganese		500	-1	478	96			
Nickel		1000	4	881	88			
Potassium			-50	-77				
Selenium			20	24				
Silver		1000	0	905	90			
Sodium			23	24				
Thallium			-1	1				
Vanadium		500	4	512	102			
Zinc		1000	1	897	90			

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** MG/KG

Project Name: Marine View Drive RS/FS **Basis:** DRY

Matrix: SOLID **% Solids:** 100.0

Sample Name: Batch QC1S **Lab Code:** K1409582-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.449		0.042		0.47	86.6		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** MG/KG

Project Name: Marine View Drive RS/FS **Basis:** DRY

Matrix: SOIL **% Solids:** 79.8

Sample Name: SO-091514-RB-TP37-2S **Lab Code:** K1409921-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum		10300		10900		321.32	-186.7		6010C
Antimony	75 - 125	52.3		0.3	U	80.33	65.1	N	6010C
Arsenic	75 - 125	78.2		2.9	J	80.33	93.7		6010C
Barium	75 - 125	211		52.6		160.66	98.6		6010C
Beryllium	75 - 125	7.66		0.18		8.03	93.2		6010C
Cadmium	75 - 125	7.44		0.08	J	8.03	91.7		6010C
Calcium	75 - 125	2870		2420		803.29	56.0	N	6010C
Chromium	75 - 125	52.5		23.5		32.13	90.3		6010C
Cobalt	75 - 125	78.7		5.00		80.33	91.7		6010C
Copper	75 - 125	49.5		12.0		40.16	93.4		6010C
Iron		12000		13100		160.66	-684.7		6010C
Lead	75 - 125	78.9		6.4		80.33	90.3		6010C
Magnesium		3590		3260		803.29	41.1		6010C
Manganese	75 - 125	267		189		80.33	97.1		6010C
Nickel	75 - 125	93.9		22.4		80.33	89.0		6010C
Potassium	75 - 125	1300		516		803.29	97.6		6010C
Selenium	75 - 125	69.2		1.2	J	80.33	84.7		6010C
Silver	75 - 125	7.5		0.2	J	8.03	90.9		6010C
Sodium	75 - 125	985		162		803.29	102.5		6010C
Thallium	75 - 125	71.3		0.5	U	80.33	88.8		6010C
Vanadium	75 - 125	106		32.8		80.33	91.1		6010C
Zinc	75 - 125	103		30.7		80.33	90.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** DRY

Matrix: WATER

Sample Name: **SO-091514-RB-TP37-2A** **Lab Code:** **K1409921-001A**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	80 - 120	4459.0		2.0		5000	89		6010C
Arsenic	80 - 120	2331.0		18.2		2500	93		6010C
Barium	80 - 120	5208.0		333.9		5000	97		6010C
Beryllium	80 - 120	116.38		1.12		125	92		6010C
Cadmium	80 - 120	1134.00		0.50		1250	91		6010C
Calcium	80 - 120	27570.0		15370.0		12500	98		6010C
Chromium	80 - 120	632.0		149.2		500	97		6010C
Cobalt	80 - 120	1177.00		31.70		1250	92		6010C
Copper	80 - 120	668.9		75.9		625	95		6010C
Lead	80 - 120	2256.0		40.5		2500	89		6010C
Magnesium	80 - 120	32180.0		20660.0		12500	92		6010C
Manganese	80 - 120	2374.00		1199.00		1250	94		6010C
Nickel	80 - 120	1273.00		142.30		1250	90		6010C
Potassium	80 - 120	15230.0		3275.0		12500	96		6010C
Selenium	80 - 120	2111.0		7.3		2500	84		6010C
Silver	80 - 120	560.2		1.0		625	89		6010C
Sodium	80 - 120	13050.0		1029.0		12500	96		6010C
Thallium	80 - 120	2179.0		3.0		2500	87		6010C
Vanadium	80 - 120	1411.00		207.80		1250	96		6010C
Zinc	80 - 120	1338.00		195.00		1250	91		6010C

Metals

- 6 -

DUPLICATES

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Units:**	MG/KG
Project Name:	Marine View Drive RS/FS	**Basis:**	DRY
Matrix:	SOLID	**% Solids:**	100.0

Sample Name: **Batch QC1D** **Lab Code:** **K1409582-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		**0.042**		**0.018**	**J**	**80.0**		**7471B**

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** MG/KG

Project Name: Marine View Drive RS/FS **Basis:** DRY

Matrix: SOIL **% Solids:** 79.8

Sample Name: **SO-091514-RB-TP37-2D** **Lab Code:** **K1409921-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	10900		10500		3.7		6010C
Antimony		0.3	U	0.3	U			6010C
Arsenic		2.9	J	2.6	J	10.9		6010C
Barium	20	52.6		51.9		1.3		6010C
Beryllium		0.18		0.16		11.8		6010C
Cadmium		0.08	J	0.10	J	22.2		6010C
Calcium	20	2420		2140		12.3		6010C
Chromium	20	23.5		22.1		6.1		6010C
Cobalt	20	5.00		4.70		6.2		6010C
Copper	20	12.0		10.9		9.6		6010C
Iron	20	13100		12100		7.9		6010C
Lead		6.4		6.2		3.2		6010C
Magnesium	20	3260		3030		7.3		6010C
Manganese	20	189		177		6.6		6010C
Nickel	20	22.4		21.3		5.0		6010C
Potassium	20	516		487		5.8		6010C
Selenium		1.2	J	1.7	J	34.5		6010C
Silver		0.2	J	0.2	U	200.0		6010C
Sodium	20	162		166		2.4		6010C
Thallium		0.5	U	0.5	U			6010C
Vanadium	20	32.8		30.0		8.9		6010C
Zinc	20	30.7		29.0		5.7		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Aqueous LCS Source: **ALS MIXED** **Solid LCS Source:** **ERA D080-540**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C Limits		%R
Aluminum				8840	7560	42	158	85.5
Antimony				88.2	89.6	26	289	101.6
Arsenic				99.6	101	69	131	101.4
Barium				310	301	74	126	97.1
Beryllium				72.3	71.3	74	126	98.6
Cadmium				182	167	74	126	91.8
Calcium				6790	6570	74	126	96.8
Chromium				136	133	70	130	97.8
Cobalt				128	122	74	125	95.3
Copper				102	101	74	126	99.0
Iron				12600	11500	31	168	91.3
Lead				115	106	72	129	92.2
Magnesium				3010	2840	66	134	94.4
Manganese				323	319	75	125	98.8
Mercury	5	4.90	98.0	19.9	20.0	51	148	100.5
Nickel				153	143	73	126	93.5
Potassium				2840	2790	62	138	98.2
Selenium				150	138	67	133	92.0
Silver				40.4	38.9	66	134	96.3
Sodium				2760	2850	66	134	103.3
Thallium				174	166	69	132	95.4
Vanadium				97.6	97.3	77	123	99.7
Zinc				161	150	81	119	93.2

Metals

- 10 -

DETECTION LIMITS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.7		0.20	0.02	CV

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Aluminum	167.0		10.0	2.5	P
Antimony	206.8		20.0	2.0	P
Arsenic	189.0		20.0	4.0	P
Barium	455.4		4.0	1.5	P
Beryllium	234.8		1.00	0.10	P
Cadmium	226.5		1.00	0.20	P
Calcium	393.3		20.0	4.5	P
Chromium	267.7		4.0	0.5	P
Cobalt	230.7		2.00	0.5	P
Copper	327.3		4.0	1.5	P
Iron	259.9		20.0	10.0	P
Lead	220.3		10.0	2.0	P
Magnesium	279.5		10.0	1.0	P
Manganese	257.6		1.0	0.1	P
Nickel	221.6		4.00	0.50	P
Potassium	766.5		200	45.0	P
Selenium	196.0		20.0	4.5	P
Silver	328.1		4.0	1.0	P
Sodium	589.5		200	20.0	P
Thallium	190.8		10.0	3.0	P
Vanadium	292.4		4.0	1.0	P
Zinc	206.2		5.0	1.0	P

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000870	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0007390	0.0000000	0.0000000
Arsenic	189.042	0.0000240	0.0000000	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000090	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006460	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000770	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000150	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000790	0.0000000	0.0000000	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000120	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	-0.0007930	0.0000000	0.0007140	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000110	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0001300	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0001460	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	-0.0011120
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0006290	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0033630	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000230	0.0000350	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001050	0.0000000	0.0000000	0.0000000
Cobalt	228.616	-0.0006470	0.0000000	0.0000000	0.0001570	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002630	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0003030
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0001480	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0002060	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0014450	0.0000000	0.0000000	0.0042120
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0009280	0.0002900	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000300	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0061560	-0.0000460

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0009290

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Sb	Si
Aluminum	394.401	0.0000000	0.0003130	0.0000276	0.0000000	0.0000000
Antimony	217.581	-0.0007900	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002450	0.0018300	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000590	-0.0003920	-0.0000180	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0014770	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000340	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0002530	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0015320	0.0001120	0.0000000	-0.0000080
Copper	327.396	0.0000000	-0.0002580	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0007330	0.0002150	0.0000000	0.0001390
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	-0.0003470	0.0000110
Phosphorus	214.914	-0.0006770	0.0092840	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0004240	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0091950	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001450	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	-0.0006420	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0001020	0.0000000	0.0000000
Vanadium	292.402	-0.0009140	-0.0000960	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	0.0000000	-0.0001360	0.0060110	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ti	V			
Aluminum	394.401	0.0000000	0.0000000			
Antimony	217.581	0.0000000	0.0000000			
Arsenic	189.042	0.0000000	0.0000000			
Barium	455.403	0.0000000	0.0000000			
Beryllium	234.861	0.0000000	0.0000000			
Boron	249.678	0.0000000	0.0000000			
Cadmium	226.502	0.0000000	0.0000000			
Calcium	393.366	0.0000000	0.0000000			
Chromium	267.716	0.0000000	0.0000000			
Cobalt	228.616	0.0026270	0.0000000			
Copper	327.396	0.0000000	0.0000000			
Iron	259.94	0.0000000	0.0000000			
Lead	220.353	0.0000000	0.0000000			
Lithium	670.784	0.0000000	0.0000000			
Magnesium	285.213	0.0000000	0.0000000			
Manganese	257.61	0.0000000	0.0000000			
Molybdenum	202.03	0.0000000	0.0000000			
Nickel	231.604	0.0000000	0.0000000			
Phosphorus	214.914	0.0000000	0.0000000			
Potassium	766.491	0.0000000	0.0000000			
Selenium	196.0	0.0000000	0.0000000			
Silicon	251.611	0.0000000	0.0000000			
Silver	328.068	0.0000000	0.0000000			
Sodium	589.592	0.0000000	0.0000000			
Strontium	407.771	0.0000000	0.0000000			
Thallium	190.856	0.0000000	0.0000000			
Tin	189.989	0.0000000	0.0000000			
Titanium	336.121	0.0000000	0.0000000			
Vanadium	292.402	0.0005410	0.0000000			

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Zinc	213.856	-0.0005770	0.0000000			

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-03**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Aluminum	15.000	270000	6010C
Antimony	15.000	90000	6010C
Arsenic	15.000	90000	6010C
Barium	15.000	45000	6010C
Beryllium	15.000	9000	6010C
Cadmium	15.000	22500	6010C
Calcium	15.000	900000	6010C
Chromium	15.000	45000	6010C
Cobalt	15.000	22500	6010C
Copper	15.000	90000	6010C
Iron	15.000	360000	6010C
Lead	15.000	22500	6010C
Magnesium	15.000	90000	6010C
Manganese	15.000	9000	6010C
Nickel	15.000	22500	6010C
Potassium	15.000	900000	6010C
Selenium	15.000	45000	6010C
Silver	15.000	1800	6010C
Sodium	15.000	900000	6010C
Thallium	15.000	45000	6010C
Vanadium	15.000	45000	6010C
Zinc	15.000	18000	6010C

Comments:

Metals

-13-

PREPARATION LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Method: CV

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1409582-001D	09/18/14	0.5410	50.0
K1409582-001S	09/18/14	0.5350	50.0
K1409921-001	09/18/14	0.57	50.0
K1409921-002	09/18/14	0.56	50.0
K1409921-003	09/18/14	0.57	50.0
K1409921-004	09/18/14	0.55	50.0
K1409921-005	09/18/14	0.54	50.0
K1409921-006	09/18/14	0.64	50.0
K1409921-007	09/18/14	0.56	50.0
K1409921-008	09/18/14	0.55	50.0
K1409921-009	09/18/14	0.65	50.0
K1409921-010	09/18/14	0.65	50.0
K1409921-011	09/18/14	0.73	50.0
K1409921-MB	09/18/14	0.55	50.0
LCSS	09/18/14	0.25	50.0
LCSW	09/18/14	20.0	20.0

Metals

-13-

PREPARATION LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1409921-001	09/23/14	1.59	100.0
K1409921-001D	09/23/14	1.58	100.0
K1409921-001S	09/23/14	1.56	100.0
K1409921-002	09/23/14	1.37	100.0
K1409921-003	09/23/14	1.40	100.0
K1409921-004	09/23/14	1.55	100.0
K1409921-005	09/23/14	1.55	100.0
K1409921-006	09/23/14	1.52	100.0
K1409921-007	09/23/14	1.59	100.0
K1409921-008	09/23/14	1.55	100.0
K1409921-009	09/23/14	1.56	100.0
K1409921-010	09/23/14	1.31	100.0
K1409921-011	09/23/14	1.24	100.0
K1409921-MB	09/23/14	1.04	100.0
LCSS	09/23/14	1.00	100.0

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 091914B HG2

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 09/19/14 **End Date:** 09/19/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Calibration Blank	1.0	09:21																X								
Standard #1	1.0	09:22																X								
Standard #2	1.0	09:24																X								
Standard #3	1.0	09:26																X								
Standard #4	1.0	09:27																X								
Standard #5	1.0	09:29																X								
ICV1	1.0	09:31																X								
ICB1	1.0	09:32																X								
CRDL1	1.0	09:34																X								
CCV1	1.0	09:35																X								
CCB1	1.0	09:37																X								
K1409921-MB	1.0	09:39																X								
LCSW	1.0	09:40																X								
LCSS	50.0	09:42																X								
ZZZZZZ	1.0	09:43																								
ZZZZZZ	1.0	09:45																								
ZZZZZZ	1.0	09:47																								
ZZZZZZ	1.0	09:48																								
ZZZZZZ	1.0	09:50																								
K1409582-001D	1.0	09:52																X								
K1409582-001S	1.0	09:53																X								
CCV2	1.0	09:55																X								
CCB2	1.0	09:56																X								
ZZZZZZ	1.0	09:58																								
ZZZZZZ	1.0	10:11																								
ZZZZZZ	1.0	10:14																								
ZZZZZZ	1.0	10:16																								
ZZZZZZ	1.0	10:19																								
ZZZZZZ	1.0	10:22																								
ZZZZZZ	1.0	10:24																								
K1409921-001	1.0	10:26																X								
K1409921-002	1.0	10:27																X								

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 091914B HG2

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 09/19/14 **End Date:** 09/19/14

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
K1409921-003	1.0	10:29																X												
CCV3	1.0	10:30																X												
CCB3	1.0	10:32																X												
K1409921-004	1.0	10:34																X												
K1409921-005	1.0	10:35																X												
K1409921-006	1.0	10:37																X												
K1409921-007	1.0	10:39																X												
K1409921-008	1.0	10:40																X												
ZZZZZZ	1.0	10:42																												
K1409921-010	1.0	10:45																X												
K1409921-011	1.0	10:47																X												
ZZZZZZ	1.0	10:53																												
ZZZZZZ	1.0	10:55																												
CCV4	1.0	10:57																X												
CCB4	1.0	10:58																X												
ZZZZZZ	1.0	11:00																												
ZZZZZZ	1.0	11:01																												
K1409921-009	5.0	11:03																X												
K1409921-008L	5.0	11:05																X												
CCV5	1.0	11:06																X												
CCB5	1.0	11:08																X												

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	08:40		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
STD A	1.0	08:43		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
STD B	1.0	08:45		X		X	X			X				X		X				X			X				
ICV1	1.0	08:48		X						X						X											
ICV1	1.0	08:50		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	08:52																									
ICB1	1.0	08:55		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
LLICV1	1.0	08:57		X	X		X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	
LLICV1	1.0	08:59				X								X													
ZZZZZZ	1.0	09:02																									
ZZZZZZ	1.0	09:05																									
CCV1	1.0	09:08		X		X	X			X				X		X				X			X				
CCV1	1.0	09:14		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
CCB1	1.0	09:19		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSA	1.0	09:22		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1.0	09:25		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	09:29																									
ZZZZZZ	1.0	09:49																									
ZZZZZZ	1.0	09:51																									
ZZZZZZ	1.0	09:53																									
ZZZZZZ	5.0	09:56																									
ZZZZZZ	1.0	09:58																									
ZZZZZZ	1.0	10:01																									
ZZZZZZ	1.0	10:03																									
ZZZZZZ	1.0	10:05																									
ZZZZZZ	1.0	10:08																									
CCV2	1.0	10:10		X		X	X			X				X		X				X			X				
CCV2	1.0	10:13		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
CCB2	1.0	10:15		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
LLCCV1	1.0	10:17		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	10:20																									
ZZZZZZ	1.0	10:22																									

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	10:25																										
ZZZZZZ	1.0	10:28																										
ZZZZZZ	1.0	10:30																										
ZZZZZZ	5.0	10:33																										
ZZZZZZ	1.0	10:35																										
ZZZZZZ	1.0	10:37																										
ZZZZZZ	1.0	10:40																										
CCV3	1.0	10:42		X		X	X			X				X		X				X			X					
CCV3	1.0	10:45		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB3	1.0	10:47		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	10:49																										
ZZZZZZ	1.0	10:52																										
ZZZZZZ	1.0	10:54																										
ZZZZZZ	1.0	10:56																										
ZZZZZZ	1.0	10:59																										
ZZZZZZ	1.0	11:01																										
ZZZZZZ	1.0	11:04																										
ZZZZZZ	1.0	11:06																										
ZZZZZZ	1.0	11:08																										
ZZZZZZ	1.0	11:11																										
CCV4	1.0	11:13		X		X	X			X				X		X				X			X					
CCV4	1.0	11:16		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB4	1.0	11:18		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	11:20																										
ZZZZZZ	1.0	11:23																										
ZZZZZZ	1.0	11:25																										
ZZZZZZ	1.0	11:27																										
ZZZZZZ	1.0	11:30																										
ZZZZZZ	1.0	11:32																										
ZZZZZZ	1.0	11:35																										
ZZZZZZ	1.0	11:37																										
ZZZZZZ	1.0	11:40																										

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	11:42																										
CCV5	1.0	11:45		X		X	X			X				X		X				X			X					
CCV5	1.0	11:47		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB5	1.0	11:50		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
LLCCV2	1.0	11:52		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	11:55																										
ZZZZZZ	1.0	11:57																										
ZZZZZZ	1.0	12:00																										
ZZZZZZ	1.0	12:02																										
ZZZZZZ	5.0	12:04																										
ZZZZZZ	1.0	12:07																										
ZZZZZZ	1.0	12:09																										
ZZZZZZ	1.0	12:11																										
ZZZZZZ	1.0	12:14																										
ZZZZZZ	1.0	12:16																										
ZZZZZZ	1.0	12:18																										
CCV6	1.0	12:21		X		X	X			X				X		X				X			X					
CCV6	1.0	12:23		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB6	1.0	12:26		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	12:28																										
ZZZZZZ	1.0	12:30																										
ZZZZZZ	1.0	12:33																										
ZZZZZZ	1.0	12:35																										
ZZZZZZ	1.0	12:38																										
ZZZZZZ	1.0	12:40																										
ZZZZZZ	1.0	12:43																										
ZZZZZZ	1.0	12:45																										
ZZZZZZ	1.0	12:47																										
ZZZZZZ	1.0	12:50																										
CCV7	1.0	12:52		X		X	X			X				X		X				X			X					
CCV7	1.0	12:55		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB7	1.0	12:57		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		

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Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
LLCCV3	1.0	12:59		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	13:02																										
ZZZZZZ	1.0	13:05																										
ZZZZZZ	1.0	13:07																										
ZZZZZZ	1.0	13:10																										
ZZZZZZ	1.0	13:12																										
ZZZZZZ	1.0	13:15																										
ZZZZZZ	1.0	13:17																										
ZZZZZZ	1.0	13:20																										
ZZZZZZ	1.0	13:22																										
ZZZZZZ	1.0	13:24																										
ZZZZZZ	1.0	13:27																										
CCV8	1.0	13:29		X		X	X			X				X		X				X			X					
CCV8	1.0	13:32		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB8	1.0	13:34		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	13:36																										
ZZZZZZ	1.0	13:39																										
ZZZZZZ	1.0	13:41																										
ZZZZZZ	1.0	13:44																										
ZZZZZZ	1.0	13:46																										
ZZZZZZ	1.0	13:48																										
ZZZZZZ	1.0	13:51																										
ZZZZZZ	1.0	13:53																										
ZZZZZZ	1.0	13:55																										
ZZZZZZ	1.0	13:58																										
CCV9	1.0	14:00		X		X	X			X				X		X				X			X					
CCV9	1.0	14:03		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB9	1.0	14:05		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	14:08																										
ZZZZZZ	1.0	14:10																										
ZZZZZZ	1.0	14:12																										
ZZZZZZ	1.0	14:15																										

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	14:17																										
ZZZZZZ	1.0	14:20																										
ZZZZZZ	1.0	14:22																										
ZZZZZZ	1.0	14:25																										
ZZZZZZ	1.0	14:27																										
ZZZZZZ	1.0	14:30																										
CCV10	1.0	14:32		X		X	X			X				X		X				X			X					
CCV10	1.0	14:35		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB10	1.0	14:37		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	2.0	14:49																										
LCSS	2.0	14:51		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-MB	2.0	14:55		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-001	2.0	14:57		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-001D	2.0	15:00		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-001S	2.0	15:02		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-001A	1.0	15:05			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X		
K1409921-002	2.0	15:07		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-003	2.0	15:10		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-004	2.0	15:12		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
CCV11	1.0	15:15		X		X	X			X				X		X				X			X					
CCV11	1.0	15:17		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X		
CCB11	1.0	15:19		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-005	2.0	15:22		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-006	2.0	15:24		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-007	2.0	15:27		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-008	2.0	15:29		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-009	2.0	15:32		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-010	2.0	15:34		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
K1409921-011	2.0	15:36		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
ZZZZZZ	1.0	15:39																										
ZZZZZZ	1.0	15:41																										
ZZZZZZ	1.0	15:47																										

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092314AICP03

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 09/23/14 **End Date:** 09/23/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV12	1.0	15:49		X		X	X			X				X		X				X			X				
CCV12	1.0	15:52		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
CCB12	1.0	15:54		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	15:57																										
ZZZZZZ	1.0	15:59																										
ZZZZZZ	1.0	16:02																										
ZZZZZZ	1.0	16:04																										
ZZZZZZ	1.0	16:14																										
ZZZZZZ	1.0	16:17																										
ZZZZZZ	1.0	16:19																										
ZZZZZZ	1.0	16:22																										
ZZZZZZ	1.0	16:24																										
ZZZZZZ	1.0	16:26																										
CCV13	1.0	16:29		X		X	X			X				X		X				X			X				
CCV13	1.0	16:31		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
CCB13	1.0	16:33		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	16:36																										
ZZZZZZ	1.0	16:38																										
CCV14	1.0	16:41		X		X	X			X				X		X				X			X				
CCV14	1.0	16:44		X	X			X	X	X	X	X	X		X	X	X		X		X	X		X	X	X	
CCB14	1.0	16:46		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.0	16:48																										
LLCCV4	1.0	16:51		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **WS-091514-RB-SW03** **Lab Code:** **K1409921-012**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/01/14	155		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/01/14	0.30		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/01/14	1.34		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/01/14	25.5		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/01/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.034		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	30500		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/01/14	0.39		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/01/14	0.307		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/01/14	1.11		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	740		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.994		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	17700		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/01/14	276		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/01/14	1.35		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	3050		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/01/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	11200		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.002	J	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/01/14	2.01		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/01/14	11.2		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **WS-091514-RB-SW04** **Lab Code:** **K1409921-013**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/01/14	200		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/01/14	0.30		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/01/14	1.37		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/01/14	26.5		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/01/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.033		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	31000		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/01/14	0.45		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/01/14	0.327		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/01/14	1.34		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	828		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/01/14	1.16		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	17900		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/01/14	265		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/01/14	1.34		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	3100		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/01/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	11300		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/01/14	2.06		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/01/14	12.2		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **WS-091514-RB-SW05** **Lab Code:** **K1409921-014**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/01/14	230		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/01/14	1.30		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/01/14	6.13		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/01/14	14.6		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/01/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.081		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	24200		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/01/14	0.61		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/01/14	0.149		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/01/14	2.77		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	536		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/01/14	2.70		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	17300		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/01/14	89.5		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/01/14	1.00		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	2450		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/01/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.011	J	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	9480		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/01/14	3.39		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/01/14	21.3		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **WS-091514-RB-SW02** **Lab Code:** **K1409921-015**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/02/14	45.7		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/02/14	0.47		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/02/14	2.21		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/02/14	14.4		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/02/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.046		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	23700		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/02/14	0.46		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/02/14	0.091		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/02/14	1.13		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	314		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/02/14	1.22		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	16200		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/02/14	35.4		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/02/14	0.80		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	3040		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/02/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	9670		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/02/14	4.28		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/02/14	11.1		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Project No.: 009973-021101
Project Name: Marine View Drive RS/FS
Matrix: WATER

Service Request: K1409921
Date Collected: 09/15/14
Date Received: 09/16/14
Units: ug/L
Basis: NA

Sample Name: WS-091514-RB-SW01 **Lab Code:** K1409921-016

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/02/14	46.6		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/02/14	1.37		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/02/14	3.42		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/02/14	10.7		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/02/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.020		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	23600		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/02/14	0.62		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/02/14	0.091		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/02/14	1.43		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	204		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.448		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	17200		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/02/14	62.4		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/02/14	0.57		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	2190		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/02/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	8870		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/02/14	3.36		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/02/14	12.3		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **WS-091514-RB-FD10** **Lab Code:** **K1409921-017**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/02/14	144		
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/02/14	1.26		
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/02/14	5.29		
Barium	6020A	0.05	0.01	1.0	09/19/14	10/02/14	14.2		
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/02/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.083		
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	24100		
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/02/14	0.78		
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/02/14	0.197		
Copper	6020A	0.10	0.03	1.0	09/19/14	10/02/14	3.18		
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	592		
Lead	6020A	0.020	0.002	1.0	09/19/14	10/02/14	3.47		
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	17200		
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/02/14	93.1		
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/02/14	1.05		
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	2450		
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/02/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.007	J	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	9350		
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.003	J	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/02/14	3.49		
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/02/14	28.8		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Conestoga-Rovers & Associates, I	**Service Request:**	K1409921
Project No.:	009973-021101	**Date Collected:**	09/15/14
Project Name:	Marine View Drive RS/FS	**Date Received:**	09/16/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **RINSE BLANK 9-15** **Lab Code:** **K1409921-018**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/02/14	0.7	J	
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/02/14	0.01	U	
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/02/14	0.05	U	
Barium	6020A	0.05	0.01	1.0	09/19/14	10/02/14	0.01	J	
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/02/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.005	U	
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	8.2	J	
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/02/14	0.17	J	
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/02/14	0.006	U	
Copper	6020A	0.10	0.03	1.0	09/19/14	10/02/14	0.03	U	
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	3.0	U	
Lead	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.002	U	
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	4.0	J	
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/02/14	0.03	J	
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/02/14	0.15	J	
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	50.0	U	
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/02/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/02/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	58.9	J	
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/02/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/02/14	0.05	U	
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/02/14	0.47	J	

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Conestoga-Rovers & Associates, I
Service Request: K1409921
Project No.: 009973-021101
Date Collected:
Project Name: Marine View Drive RS/FS
Date Received:
Matrix: WATER
Units: ug/L
Basis: NA

Sample Name: Method Blank
Lab Code: K1409921-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	6020A	2.0	0.2	1.0	09/19/14	10/01/14	0.2	J	
Antimony	6020A	0.05	0.01	1.0	09/19/14	10/01/14	0.01	U	
Arsenic	6020A	0.50	0.05	1.0	09/19/14	10/01/14	0.05	U	
Barium	6020A	0.05	0.01	1.0	09/19/14	10/01/14	0.01	U	
Beryllium	6020A	0.020	0.008	1.0	09/19/14	10/01/14	0.008	U	
Cadmium	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.005	U	
Calcium	6010C	20.0	0.6	1.0	09/19/14	09/20/14	5.3	J	
Chromium	6020A	0.20	0.02	1.0	09/19/14	10/01/14	0.02	U	
Cobalt	6020A	0.020	0.006	1.0	09/19/14	10/01/14	0.006	U	
Copper	6020A	0.10	0.03	1.0	09/19/14	10/01/14	0.03	U	
Iron	6010C	20.0	3.0	1.0	09/19/14	09/20/14	3.0	U	
Lead	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.002	U	
Magnesium	6010C	10.0	0.2	1.0	09/19/14	09/20/14	1.2	J	
Manganese	6020A	0.05	0.01	1.0	09/19/14	10/01/14	0.01	U	
Nickel	6020A	0.20	0.04	1.0	09/19/14	10/01/14	0.04	U	
Potassium	6010C	200	50.0	1.0	09/19/14	09/20/14	50.0	U	
Selenium	6020A	1.0	0.4	1.0	09/19/14	10/01/14	0.4	U	
Silver	6020A	0.020	0.005	1.0	09/19/14	10/01/14	0.005	U	
Sodium	6010C	200	20.0	1.0	09/19/14	09/20/14	20.0	U	
Thallium	6020A	0.020	0.002	1.0	09/19/14	10/01/14	0.002	U	
Vanadium	6020A	0.20	0.05	1.0	09/19/14	10/01/14	0.05	U	
Zinc	6020A	0.50	0.09	1.0	09/19/14	10/01/14	0.10	J	

Comments:

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum	100.0	101.3	101	25.0	24.3	97	24.7	99	6020A
Antimony	25.0	25.7	103	25.0	24.9	100	24.7	99	6020A
Arsenic	25.0	26.5	106	25.0	25.1	100	25.1	100	6020A
Barium	100.0	99.8	100	25.0	25.2	101	25.3	101	6020A
Beryllium	2.5	2.5	100	25.0	23.9	96	24.2	97	6020A
Cadmium	12.5	12.7	102	25.0	24.3	97	24.8	99	6020A
Calcium	5000	4815	96	500	490	98	490	98	6010C
Calcium	12500	12670	101	10000	9969	100	9893	99	6010C
Chromium	10.0	10.0	100	25.0	24.8	99	24.6	98	6020A
Cobalt	25.0	25.1	100	25.0	24.6	98	25.1	100	6020A
Copper	12.5	12.6	101	25.0	25.3	101	25.2	101	6020A
Iron	2500	2512	100	10000	10020	100	9964	100	6010C
Lead	25.0	25.0	100	25.0	25.3	101	25.5	102	6020A
Magnesium	5000	4872	97	250	247	99	248	99	6010C
Magnesium	12500	12560	100	10000	10060	101	10060	101	6010C
Manganese	25.0	26.0	104	25.0	25.3	101	25.3	101	6020A
Nickel	25.0	24.5	98	25.0	24.7	99	24.6	98	6020A
Potassium	12500	12350	99	10000	9882	99	9947	99	6010C
Selenium	25.0	27.2	109	25.0	24.4	98	25.1	100	6020A
Silver	12.5	12.1	97	25.0	25.4	102	25.0	100	6020A
Sodium	12500	12500	100	10000	9930	99	9931	99	6010C
Thallium	25.0	26.3	105	25.0	25.1	100	25.2	101	6020A
Vanadium	25.0	24.8	99	25.0	25.3	101	25.1	100	6020A
Zinc	25.0	26.5	106	25.0	25.2	101	24.6	98	6020A

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				25.0	24.6	98	25.3	101	6020A
Antimony				25.0	24.7	99	25.2	101	6020A
Arsenic				25.0	25.7	103	25.1	100	6020A
Barium				25.0	25.0	100	25.2	101	6020A
Beryllium				25.0	24.2	97	24.6	98	6020A
Cadmium				25.0	24.9	100	24.7	99	6020A
Calcium				10000	10070	101	9939	99	6010C
Calcium				500	487	97	492	98	6010C
Chromium				25.0	24.3	97	24.5	98	6020A
Cobalt				25.0	24.6	98	24.4	98	6020A
Copper				25.0	24.7	99	24.9	100	6020A
Iron				10000	10060	101	9964	100	6010C
Lead				25.0	25.7	103	25.5	102	6020A
Magnesium				10000	10100	101	10050	100	6010C
Magnesium				250	247	99	249	100	6010C
Manganese				25.0	25.6	102	26.1	104	6020A
Nickel				25.0	24.8	99	24.5	98	6020A
Potassium				10000	9916	99	9941	99	6010C
Selenium				25.0	24.6	98	24.4	98	6020A
Silver				25.0	25.3	101	25.2	101	6020A
Sodium				10000	9937	99	9948	99	6010C
Thallium				25.0	25.7	103	25.2	101	6020A
Vanadium				25.0	25.2	101	24.5	98	6020A
Zinc				25.0	24.6	98	25.3	101	6020A

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				25.0	24.4	98	25.6	102	6020A
Antimony				25.0	25.3	101	25.5	102	6020A
Arsenic				25.0	25.0	100	25.2	101	6020A
Barium				25.0	25.6	102	25.5	102	6020A
Beryllium				25.0	23.9	96	24.6	98	6020A
Cadmium				25.0	24.6	98	24.9	100	6020A
Calcium				10000	10030	100	9705	97	6010C
Calcium				500	495	99	493	99	6010C
Chromium				25.0	24.9	100	25.0	100	6020A
Cobalt				25.0	24.9	100	24.9	100	6020A
Copper				25.0	25.2	101	25.4	102	6020A
Iron				10000	9988	100	9624	96	6010C
Lead				25.0	25.4	102	25.7	103	6020A
Magnesium				10000	10030	100	9831	98	6010C
Magnesium				250	247	99	244	98	6010C
Manganese				25.0	25.9	104	25.5	102	6020A
Nickel				25.0	24.9	100	24.7	99	6020A
Potassium				10000	10100	101	9894	99	6010C
Selenium				25.0	23.8	95	24.2	97	6020A
Silver				25.0	25.3	101	25.1	100	6020A
Sodium				10000	10140	101	9961	100	6010C
Thallium				25.0	25.2	101	25.3	101	6020A
Vanadium				25.0	25.5	102	25.6	102	6020A
Zinc				25.0	26.0	104	24.9	100	6020A

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				25.0	25.5	102	25.3	101	6020A
Antimony				25.0	25.6	102	25.5	102	6020A
Arsenic				25.0	24.5	98	25.1	100	6020A
Barium				25.0	24.7	99	25.3	101	6020A
Beryllium				25.0	24.6	98	24.2	97	6020A
Cadmium				25.0	24.4	98	24.6	98	6020A
Chromium				25.0	24.1	96	24.3	97	6020A
Cobalt				25.0	24.4	98	25.0	100	6020A
Copper				25.0	24.3	97	24.7	99	6020A
Lead				25.0	25.2	101	25.7	103	6020A
Manganese				25.0	25.7	103	25.7	103	6020A
Nickel				25.0	24.7	99	24.9	100	6020A
Selenium				25.0	24.1	96	24.7	99	6020A
Silver				25.0	24.9	100	25.0	100	6020A
Thallium				25.0	24.9	100	25.4	102	6020A
Vanadium				25.0	24.1	96	24.5	98	6020A
Zinc				25.0	25.2	101	24.7	99	6020A

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICV Source: Inorganic Ventures **CCV Source:** ALS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Aluminum				25.0	23.9	96			6020A
Antimony				25.0	25.0	100			6020A
Arsenic				25.0	25.5	102			6020A
Barium				25.0	25.6	102			6020A
Beryllium				25.0	23.9	96			6020A
Cadmium				25.0	24.6	98			6020A
Chromium				25.0	24.7	99			6020A
Cobalt				25.0	24.6	98			6020A
Copper				25.0	24.6	98			6020A
Lead				25.0	25.8	103			6020A
Manganese				25.0	25.3	101			6020A
Nickel				25.0	24.6	98			6020A
Selenium				25.0	24.7	99			6020A
Silver				25.0	25.7	103			6020A
Thallium				25.0	25.5	102			6020A
Vanadium				25.0	24.6	98			6020A
Zinc				25.0	25.7	103			6020A

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV1									
	Calcium	17.5	20.0	88	70.0 - 130.0	P	09/20/14	10:54	092014AICP
	Iron	17.9	20.0	90	70.0 - 130.0	P	09/20/14	10:54	092014AICP
	Magnesium	4.2	5.0	84	70.0 - 130.0	P	09/20/14	10:54	092014AICP
	Potassium	186.7	200.0	93	70.0 - 130.0	P	09/20/14	10:54	092014AICP
	Sodium	192.9	200.0	96	70.0 - 130.0	P	09/20/14	10:54	092014AICP
LLCCV1									
	Calcium	19.7	20.0	98	70.0 - 130.0	P	09/20/14	13:11	092014AICP
	Iron	23.3	20.0	116	70.0 - 130.0	P	09/20/14	13:11	092014AICP
	Magnesium	6.1	5.0	122	70.0 - 130.0	P	09/20/14	13:11	092014AICP
	Potassium	184.2	200.0	92	70.0 - 130.0	P	09/20/14	13:11	092014AICP
	Sodium	206.7	200.0	103	70.0 - 130.0	P	09/20/14	13:11	092014AICP
LLCCV2									
	Calcium	19.9	20.0	100	70.0 - 130.0	P	09/20/14	14:22	092014AICP
	Iron	16.1	20.0	80	70.0 - 130.0	P	09/20/14	14:22	092014AICP
	Potassium	177.6	200.0	89	70.0 - 130.0	P	09/20/14	14:22	092014AICP
	Sodium	245.3	200.0	123	70.0 - 130.0	P	09/20/14	14:22	092014AICP
LLCCV2									
	Magnesium	11.7	10.0	117	70.0 - 130.0	P	09/20/14	14:27	092014AICP

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICVW1									
	Aluminum	1.972	2.000	99	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Antimony	0.057	0.050	114	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Arsenic	0.520	0.500	104	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Barium	0.052	0.050	104	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Beryllium	0.016	0.020	80	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Cadmium	0.022	0.020	110	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Chromium	0.216	0.200	108	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Cobalt	0.023	0.020	115	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Copper	0.107	0.100	107	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Lead	0.021	0.020	105	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Manganese	0.059	0.050	118	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Nickel	0.205	0.200	102	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Selenium	1.087	1.000	109	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Silver	0.023	0.020	115	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Thallium	0.023	0.020	115	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Vanadium	0.196	0.200	98	70.0 - 130.0	MS	10/01/14	16:55	100114d
	Zinc	0.471	0.500	94	70.0 - 130.0	MS	10/01/14	16:55	100114d
LLCCVW1									
	Aluminum	1.959	2.000	98	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Antimony	0.052	0.050	104	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Arsenic	0.507	0.500	101	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Barium	0.044	0.050	88	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Beryllium	0.020	0.020	100	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Cadmium	0.019	0.020	95	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Chromium	0.202	0.200	101	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Cobalt	0.018	0.020	90	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Copper	0.102	0.100	102	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Lead	0.020	0.020	100	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Manganese	0.056	0.050	112	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Nickel	0.203	0.200	102	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Selenium	0.985	1.000	98	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Silver	0.021	0.020	105	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Thallium	0.021	0.020	105	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Vanadium	0.188	0.200	94	70.0 - 130.0	MS	10/01/14	19:08	100114d
	Zinc	0.566	0.500	113	70.0 - 130.0	MS	10/01/14	19:08	100114d

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCVW2									
	Aluminum	1.992	2.000	100	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Antimony	0.058	0.050	116	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Arsenic	0.497	0.500	99	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Barium	0.051	0.050	102	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Beryllium	0.022	0.020	110	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Cadmium	0.014	0.020	70	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Chromium	0.184	0.200	92	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Cobalt	0.022	0.020	110	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Copper	0.114	0.100	114	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Lead	0.020	0.020	100	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Manganese	0.047	0.050	94	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Nickel	0.190	0.200	95	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Selenium	1.077	1.000	108	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Silver	0.020	0.020	100	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Thallium	0.023	0.020	115	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Vanadium	0.217	0.200	108	70.0 - 130.0	MS	10/01/14	21:26	100114d
	Zinc	0.402	0.500	80	70.0 - 130.0	MS	10/01/14	21:26	100114d

Metals

- 2a -

LOW LEVEL INITIAL CALIBRATION AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Client: Conestoga-Rovers & Associates, Incorporated **SDG No.:** K1409921
Contract: 009973-021101 **Lab Code:** ALSK **Case No.:** **SAS No.:**

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: ALS MIXED

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCVW3									
	Aluminum	2.021	2.000	101	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Antimony	0.055	0.050	110	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Arsenic	0.508	0.500	102	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Barium	0.054	0.050	108	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Beryllium	0.019	0.020	95	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Cadmium	0.022	0.020	110	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Chromium	0.179	0.200	90	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Cobalt	0.024	0.020	120	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Copper	0.099	0.100	99	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Lead	0.021	0.020	105	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Manganese	0.044	0.050	88	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Nickel	0.205	0.200	102	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Selenium	0.935	1.000	94	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Silver	0.022	0.020	110	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Thallium	0.021	0.020	105	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Vanadium	0.211	0.200	106	70.0 - 130.0	MS	10/01/14	23:50	100114d
	Zinc	0.491	0.500	98	70.0 - 130.0	MS	10/01/14	23:50	100114d
LLCCVW4									
	Aluminum	1.870	2.000	94	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Antimony	0.057	0.050	114	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Arsenic	0.556	0.500	111	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Barium	0.047	0.050	94	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Beryllium	0.019	0.020	95	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Cadmium	0.018	0.020	90	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Chromium	0.217	0.200	108	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Cobalt	0.017	0.020	85	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Copper	0.102	0.100	102	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Lead	0.021	0.020	105	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Manganese	0.042	0.050	84	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Nickel	0.177	0.200	88	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Selenium	1.150	1.000	115	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Silver	0.020	0.020	100	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Thallium	0.021	0.020	105	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Vanadium	0.170	0.200	85	70.0 - 130.0	MS	10/02/14	02:07	100114d
	Zinc	0.559	0.500	112	70.0 - 130.0	MS	10/02/14	02:07	100114d

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum	0.2	U	0.2	U	0.2	U	0.2	U	6020A
Antimony	0.01	U	0.01	U	0.01	U	0.01	U	6020A
Arsenic	0.05	U	0.05	U	0.05	U	0.05	U	6020A
Barium	0.01	U	0.01	U	0.01	U	0.01	U	6020A
Beryllium	0.008	U	0.008	U	0.008	U	0.008	U	6020A
Cadmium	0.005	U	0.005	U	0.005	U	0.005	U	6020A
Calcium	0.6	U	0.6	U	1.0	J	1.3	J	6010C
Chromium	0.02	U	0.02	U	0.02	U	0.02	U	6020A
Cobalt	0.006	U	0.006	U	0.006	U	0.006	U	6020A
Copper	0.03	U	0.03	U	0.03	U	0.03	U	6020A
Iron	3.0	U	3.0	U	3.0	U	3.0	U	6010C
Lead	0.002	U	0.004	J	0.002	U	0.002	U	6020A
Magnesium	0.2	U	0.2	U	0.9	J	1.2	J	6010C
Manganese	0.01	U	0.01	J	0.01	U	0.01	U	6020A
Nickel	0.04	U	0.04	U	0.04	U	0.04	U	6020A
Potassium	50.0	U	50.0	U	50.0	U	50.0	U	6010C
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	6020A
Silver	0.005	U	0.005	U	0.005	U	0.005	U	6020A
Sodium	22.1	J	20.0	U	20.0	U	20.0	U	6010C
Thallium	0.002	U	0.003	J	0.002	U	0.002	U	6020A
Vanadium	0.050	U	0.050	U	0.050	U	0.050	U	6020A
Zinc	0.09	U	0.09	U	0.09	U	0.09	U	6020A

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			0.2	U	0.2	U	0.2	U	6020A
Antimony			0.01	U	0.01	U	0.01	U	6020A
Arsenic			0.05	U	0.05	U	0.05	U	6020A
Barium			0.01	U	0.01	U	0.01	U	6020A
Beryllium			0.008	U	0.008	U	0.008	U	6020A
Cadmium			0.005	U	0.005	U	0.005	U	6020A
Calcium			1.4	J	2.5	J	3.4	J	6010C
Chromium			0.02	U	0.02	U	0.02	U	6020A
Cobalt			0.006	U	0.006	U	0.007	J	6020A
Copper			0.03	U	0.03	U	0.03	U	6020A
Iron			3.0	U	3.0	U	3.0	U	6010C
Lead			0.002	J	0.002	U	0.002	U	6020A
Magnesium			1.1	J	3.8	J	4.5	J	6010C
Manganese			0.01	U	0.01	U	0.01	U	6020A
Nickel			0.04	U	0.04	U	0.04	U	6020A
Potassium			50.0	U	50.0	U	50.0	U	6010C
Selenium			0.4	U	0.4	U	0.4	U	6020A
Silver			0.005	U	0.005	U	0.005	J	6020A
Sodium			20.0	U	69.0	J	62.0	J	6010C
Thallium			0.004	J	0.002	U	0.002	U	6020A
Vanadium			0.050	U	0.050	U	0.050	U	6020A
Zinc			0.09	U	0.09	U	0.09	U	6020A

Metals

- 3 -

BLANKS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			0.2	U	0.2	U	0.2	U	6020A
Antimony			0.01	U	0.01	U	0.01	U	6020A
Arsenic			0.05	U	0.05	U	0.05	U	6020A
Barium			0.01	U	0.01	U	0.01	U	6020A
Beryllium			0.008	U	0.008	U	0.008	U	6020A
Cadmium			0.005	U	0.005	U	0.005	U	6020A
Chromium			0.02	U	0.02	U	0.02	U	6020A
Cobalt			0.006	U	0.006	U	0.006	U	6020A
Copper			0.03	U	0.03	U	0.03	U	6020A
Lead			0.002	U	0.002	U	0.002	U	6020A
Manganese			0.01	U	0.01	U	-0.01	J	6020A
Nickel			0.04	U	0.04	U	0.04	U	6020A
Selenium			0.4	U	0.4	U	0.4	U	6020A
Silver			0.005	U	0.005	U	0.005	U	6020A
Thallium			0.002	U	0.002	U	0.002	U	6020A
Vanadium			0.050	U	0.050	U	0.050	U	6020A
Zinc			0.09	U	0.09	U	0.09	U	6020A

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-MS-04** **ICS Source:** **Inorganic Ventures**

Concentration Units): **ug/L**

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	0.0		19411.0	20630.0				
Antimony	0.0		0.3	0.3				
Arsenic	0.0	25.0	0.1	25.5	102			
Barium	0.0		0.2	0.2				
Beryllium	0.0		0.0	0.0				
Cadmium	0.0	25.0	0.1	22.2	89			
Chromium	0.0	50.0	0.2	49.7	99			
Cobalt	0.0	50.0	0.2	48.4	97			
Copper	0.0	50.0	0.3	45.1	90			
Lead	0.0		0.1	0.1				
Manganese	0.0	50.0	1.4	52.0	104			
Nickel	0.0	50.0	0.3	46.3	93			
Selenium	0.0	25.0	0.1	23.7	95			
Silver	0.0	12.5	0.0	11.6	93			
Thallium	0.0		0.0	0.0				
Vanadium	0.0	50.0	0.0	52.0	104			
Zinc	0.0	25.0	0.3	22.1	88			

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04** **ICS Source:** **Inorganic Ventures**

Concentration Units): **ug/L**

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Calcium	500000.0	500000.0	475800.0	475200.0	95			
Iron	200000.0	200000.0	185800.0	185900.0	93			
Magnesium	500000.0	500000.0	437100.0	439500.0	88			
Potassium	0.0		-9.2	16.2				
Sodium	0.0		49.7	29.9				

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1S **Lab Code:** K1409907-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	75 - 125	102.7		3.7		100.0	99.0		6020A
Antimony	75 - 125	53.41		0.16		50.0	106.5		6020A
Arsenic	75 - 125	54.90		0.46	J	50.0	108.9		6020A
Barium	75 - 125	183.20		73.62		100.0	109.6		6020A
Beryllium	75 - 125	2.290		0.008	U	2.5	91.6		6020A
Cadmium	75 - 125	23.395		0.024		25.0	93.5		6020A
Chromium	75 - 125	10.97		0.21		10.0	107.6		6020A
Cobalt	75 - 125	25.029		0.254		25.0	99.1		6020A
Copper	75 - 125	12.00		0.55		12.5	91.6		6020A
Lead	75 - 125	45.503		0.003	J	50.0	91.0		6020A
Manganese		548.46		551.69		25.0	-12.9		6020A
Nickel	75 - 125	27.19		3.96		25.0	92.9		6020A
Selenium	75 - 125	51.3		0.4	U	50.0	102.6		6020A
Silver	75 - 125	12.009		0.005	J	12.5	96.0		6020A
Thallium	75 - 125	49.470		0.002	J	50.0	98.9		6020A
Vanadium	75 - 125	26.398		0.077	J	25.0	105.3		6020A
Zinc	75 - 125	47.55		25.57		25.0	87.9		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2S **Lab Code:** K1409912-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Calcium		280000		270000		10000.00	100.0		6010C
Iron	75 - 125	1190		256		1000.00	93.4		6010C
Magnesium		578000		559000		10000.00	190.0		6010C
Potassium		187000		175000		10000.00	120.0		6010C
Sodium		4820000		4720000		10000.00	1000.0		6010C

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1A **Lab Code:** K1409907-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	80 - 120	23.1		3.7		20.0	97		6020A
Antimony	80 - 120	20.74		0.16		20.0	103		6020A
Arsenic	80 - 120	22.04		0.46		20.0	108		6020A
Barium	80 - 120	94.65		73.62		20.0	105		6020A
Beryllium	80 - 120	18.175		0.008		20.0	91		6020A
Cadmium	80 - 120	18.687		0.024		20.0	93		6020A
Chromium	80 - 120	20.19		0.21		20.0	100		6020A
Cobalt	80 - 120	19.853		0.254		20.0	98		6020A
Copper	80 - 120	18.50		0.55		20.0	90		6020A
Lead	80 - 120	17.905		0.003		20.0	90		6020A
Nickel	80 - 120	22.97		3.96		20.0	95		6020A
Selenium	80 - 120	20.3		0.4		20.0	102		6020A
Silver	80 - 120	9.336		0.005		10.0	93		6020A
Thallium	80 - 120	19.369		0.002		20.0	97		6020A
Vanadium	80 - 120	21.397		0.077		20.0	107		6020A
Zinc	80 - 120	41.59		25.57		20.0	80		6020A

Metals

- 5B -
POST SPIKE SAMPLE RECOVERY

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: **Batch QC2A** **Lab Code:** **K1409912-001A**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Iron	80 - 120	2616.0		255.5		2500	94		6010C

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1D **Lab Code:** K1409907-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum		3.7		4.0		7.8		6020A
Antimony		0.16		0.15		6.5		6020A
Arsenic		0.46	J	0.44	J	4.4		6020A
Barium	20	73.62		74.07		0.6		6020A
Beryllium		0.008	U	0.008	U			6020A
Cadmium		0.024		0.029		18.9		6020A
Chromium		0.21		0.20	J	4.9		6020A
Cobalt	20	0.254		0.248		2.4		6020A
Copper	20	0.55		0.52		5.6		6020A
Lead		0.003	J	0.002	J	40.0		6020A
Manganese	20	551.69		527.76		4.4		6020A
Nickel	20	3.96		3.92		1.0		6020A
Selenium		0.4	U	0.4	U			6020A
Silver		0.005	J	0.005	U	200.0		6020A
Thallium		0.002	J	0.002	U	200.0		6020A
Vanadium		0.077	J	0.073	J	5.3		6020A
Zinc	20	25.57		26.20		2.4		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2D **Lab Code:** K1409912-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Calcium	20	270000		267000		1.1		6010C
Iron	20	256		250		2.4		6010C
Magnesium	20	559000		564000		0.9		6010C
Potassium	20	175000		178000		1.7		6010C
Sodium	20	4720000		4780000		1.3		6010C

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Aqueous LCS Source: **ALS MIXED** **Solid LCS Source:**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	100.0	104.9	104.9					
Antimony	50.0	52.5	105.0					
Arsenic	50.0	52.0	104.0					
Barium	100.0	100.1	100.1					
Beryllium	2.5	2.5	100.0					
Cadmium	25.0	25.4	101.6					
Calcium	12500	12500	100.0					
Chromium	10.0	9.9	99.0					
Cobalt	25.0	24.6	98.4					
Copper	12.5	12.8	102.4					
Iron	2500	2470	98.8					
Lead	50.0	50.2	100.4					
Magnesium	12500	12600	100.8					
Manganese	25.0	25.7	102.8					
Nickel	25.0	24.5	98.0					
Potassium	12500	12400	99.2					
Selenium	50.0	52.1	104.2					
Silver	12.5	12.1	96.8					
Sodium	12500	12500	100.0					
Thallium	50.0	52.6	105.2					
Vanadium	25.0	23.9	95.6					
Zinc	25.0	26.8	107.2					

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Units:** UG/L

Project Name: Marine View Drive RS/FS

Sample Name: Batch QC1L **Lab Code:** K1409907-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	3.7		4.6	J	24		MS
Antimony	0.16		0.16	J	0		MS
Arsenic	0.46	J	0.43	J	7		MS
Barium	73.62		72.17		2		MS
Beryllium	0.008	U	0.040	U			MS
Cadmium	0.024		0.025	U	100.0		MS
Chromium	0.21		0.16	J	24		MS
Cobalt	0.254		0.213		16		MS
Copper	0.55		0.61		11		MS
Lead	0.003	J	0.010	U	100.0		MS
Manganese	551.69		506.61		8		MS
Nickel	3.96		3.92		1		MS
Selenium	0.4	U	2.0	U			MS
Silver	0.005	J	0.025	U	100.0		MS
Thallium	0.002	J	0.010	U	100.0		MS
Vanadium	0.077	J	0.250	U	100.0		MS
Zinc	25.57		27.25		7		MS

Metals

- 10 -

DETECTION LIMITS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Calcium	393.3		20.0	0.6	P
Iron	259.9		20.0	3.0	P
Magnesium	279.5		10.0	0.2	P
Potassium	766.5		200.0	50.0	P
Sodium	589.5		200.0	20.0	P

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP/ICP-MS ID #: **K-ICP-MS-04**

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Aluminum	27		2.0	0.2	MS
Antimony	123		0.05	0.01	MS
Arsenic	75		0.50	0.05	MS
Barium	137		0.05	0.01	MS
Beryllium	9		0.020	0.008	MS
Cadmium	111		0.020	0.005	MS
Chromium	52		0.20	0.02	MS
Cobalt	59		0.020	0.006	MS
Copper	65		0.10	0.03	MS
Lead	208		0.020	0.002	MS
Manganese	55		0.05	0.01	MS
Nickel	60		0.20	0.04	MS
Selenium	78		1.0	0.4	MS
Silver	107		0.020	0.005	MS
Thallium	205		0.020	0.002	MS
Vanadium	51		0.200	0.050	MS
Zinc	66		0.50	0.09	MS

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0001070	0.0000000	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0000640	0.0000000	0.0000410
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000140	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006690	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001460	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000200	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000900	0.0000000	0.0000000	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	260.569	0.0000000	-0.0000050	0.0000100	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000260	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	-0.0001640	0.0000000	-0.0000370
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000090
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000130	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Zinc	213.856	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	-0.0001860	0.0004130	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0004520	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0038080	0.0002890	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000280	0.0000230	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	-0.0001770	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	-0.0005250	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002800	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0044710
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	260.569	0.0000000	-0.0000420	0.0007060	-0.0001240	-0.0000120
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0001750	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0014230	0.0003810	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000280	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0063260	-0.0000590

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0010860

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Pb	Sb
Aluminum	394.401	0.0000000	0.0002510	0.0002820	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0002570	0.0004610	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000240	-0.0001730	-0.0000210	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0014840	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0000190	-0.0000190	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0001840	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0000370	0.0001050	0.0000000	0.0000000
Copper	327.396	0.0000000	-0.0000640	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0008520	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0005090	0.0000000	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	260.569	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000180
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0007360	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0101570	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	-0.0006360	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000310	0.0001200	0.0000000	0.0000000
Vanadium	292.402	-0.0013700	-0.0000860	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Zinc	213.856	0.0000000	-0.0001090	0.0051730	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Analyte	Wave-length (nm)	Interelement Correction Factors for: Si	Ti	V		
Aluminum	394.401	0.0000000	0.0000000	0.0000000		
Antimony	217.581	-0.0000460	0.0000000	0.0021080		
Arsenic	189.042	0.0000000	0.0000000	0.0000000		
Barium	455.403	0.0000000	0.0000000	0.0000000		
Beryllium	234.861	0.0000000	0.0000000	0.0000000		
Boron	249.678	0.0000000	0.0000000	-0.0004770		
Cadmium	226.502	0.0000040	0.0001350	0.0000000		
Calcium	393.366	0.0000000	0.0000000	0.0000000		
Chromium	267.716	0.0000000	0.0000000	-0.0001070		
Cobalt	228.616	-0.0000080	0.0000000	0.0000000		
Copper	327.396	0.0000000	0.0000960	-0.0001120		
Iron	259.94	0.0000000	0.0000000	0.0000000		
Lead	220.353	0.0013940	0.0000000	0.0000000		
Lithium	670.784	0.0000000	0.0000000	0.0000000		
Magnesium	285.213	0.0000000	0.0000000	0.0000000		
Manganese	260.569	-0.0000030	-0.0000350	0.0000000		
Molybdenum	202.03	0.0000000	0.0000000	0.0000000		
Nickel	231.604	0.0000000	0.0000000	0.0000000		
Phosphorus	214.914	0.0000000	0.0000000	0.0000000		
Potassium	766.491	0.0000000	0.0000000	0.0000000		
Selenium	196.0	0.0000000	0.0000000	0.0000000		
Silicon	251.611	0.0000000	0.0000000	0.0000000		
Silver	328.068	0.0000000	0.0000000	0.0000730		
Sodium	589.592	0.0000000	0.0000000	0.0000000		
Strontium	407.771	0.0000000	0.0000000	0.0000000		
Thallium	190.856	0.0000000	-0.0003060	0.0005750		
Tin	189.989	0.0000000	0.0000000	0.0000000		
Titanium	336.121	0.0000000	0.0000000	0.0000000		
Vanadium	292.402	0.0000000	0.0003820	0.0000000		

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Zinc	213.856	0.0000000	-0.0003390	0.0000000		

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-MS-04**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Aluminum	45.000	9000	6020A
Antimony	45.000	3000	6020A
Arsenic	45.000	3000	6020A
Barium	45.000	3000	6020A
Beryllium	45.000	3000	6020A
Cadmium	45.000	3000	6020A
Chromium	45.000	3000	6020A
Cobalt	45.000	3000	6020A
Copper	45.000	3000	6020A
Lead	45.000	3000	6020A
Manganese	45.000	3000	6020A
Nickel	45.000	3000	6020A
Selenium	45.000	3000	6020A
Silver	45.000	900	6020A
Thallium	45.000	3000	6020A
Vanadium	45.000	3000	6020A
Zinc	45.000	3000	6020A

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

ICP ID Number: **K-ICP-AES-04**

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium	15.000	450000	6010C
Iron	15.000	360000	6010C
Magnesium	15.000	90000	6010C
Potassium	15.000	450000	6010C
Sodium	15.000	450000	6010C

Comments:

Metals

-13-

PREPARATION LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1409912-001D	09/19/14	50.0	50.0
K1409912-001S	09/19/14	50.0	50.0
K1409921-012	09/19/14	50.0	50.0
K1409921-013	09/19/14	50.0	50.0
K1409921-014	09/19/14	50.0	50.0
K1409921-015	09/19/14	50.0	50.0
K1409921-016	09/19/14	50.0	50.0
K1409921-017	09/19/14	50.0	50.0
K1409921-018	09/19/14	50.0	50.0
K1409921-MB	09/19/14	50.0	50.0
LCSW	09/19/14	50.0	50.0

Metals

-13-

PREPARATION LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101

Project Name: Marine View Drive RS/FS

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1409907-001D	09/19/14	50.0	50.0
K1409907-001S	09/19/14	50.0	50.0
K1409921-012	09/19/14	50.0	50.0
K1409921-013	09/19/14	50.0	50.0
K1409921-014	09/19/14	50.0	50.0
K1409921-015	09/19/14	50.0	50.0
K1409921-016	09/19/14	50.0	50.0
K1409921-017	09/19/14	50.0	50.0
K1409921-018	09/19/14	50.0	50.0
K1409921-MB	09/19/14	50.0	50.0
LCSW	09/19/14	50.0	50.0

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092014AICP04

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/20/14 **End Date:** 09/20/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1.0	10:39								X				X		X				X			X				
STD A	1.0	10:42								X						X											
STD B	1.0	10:44								X				X		X				X			X				
ICV1	1.0	10:46								X						X											
ICV1	1.0	10:49								X				X		X				X			X				
ICB1	1.0	10:51								X				X		X				X			X				
LLICV1	1.0	10:54								X				X		X				X			X				
ZZZZZZ	1.0	10:56																									
ZZZZZZ	1.0	10:59																									
CCV1	1.0	11:01								X				X		X				X			X				
CCV1	1.0	11:05								X						X											
CCB1	1.0	11:09								X				X		X				X			X				
ICSA	1.0	11:12								X				X		X				X			X				
ICSAB	1.0	11:14								X				X		X				X			X				
ZZZZZZ	1.0	11:28																									
ZZZZZZ	1.0	11:30																									
ZZZZZZ	1.0	11:32																									
ZZZZZZ	5.0	11:35																									
ZZZZZZ	1.0	11:37																									
ZZZZZZ	1.0	11:40																									
ZZZZZZ	1.0	11:42																									
ZZZZZZ	1.0	11:45																									
ZZZZZZ	1.0	11:47																									
ZZZZZZ	1.0	11:50																									
CCV2	1.0	11:52								X				X		X				X			X				
CCV2	1.0	11:55								X						X											
CCB2	1.0	11:57								X				X		X				X			X				
ZZZZZZ	1.0	11:59																									
ZZZZZZ	1.0	12:02																									
ZZZZZZ	1.0	12:04																									
ZZZZZZ	1.0	12:07																									
ZZZZZZ	1.0	12:10																									

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092014AICP04

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/20/14 **End Date:** 09/20/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	12:12																										
ZZZZZZ	1.0	12:15																										
ZZZZZZ	1.0	12:17																										
ZZZZZZ	1.0	12:20																										
ZZZZZZ	1.0	12:22																										
CCV3	1.0	12:25								X				X		X				X			X					
CCV3	1.0	12:28								X						X												
CCB3	1.0	12:30								X				X		X				X			X					
ZZZZZZ	1.0	12:32																										
ZZZZZZ	1.0	12:35																										
ZZZZZZ	1.0	12:37																										
ZZZZZZ	1.0	12:40																										
ZZZZZZ	1.0	12:42																										
ZZZZZZ	1.0	12:45																										
ZZZZZZ	1.0	12:48																										
K1409921-MB	1.0	12:56								X				X		X				X			X					
LCSW	1.0	12:58								X				X		X				X			X					
ZZZZZZ	1.0	13:00																										
CCV4	1.0	13:03								X				X		X				X			X					
CCV4	1.0	13:05								X						X												
CCB4	1.0	13:08								X				X		X				X			X					
LLCCV1	1.0	13:11								X				X		X				X			X					
ZZZZZZ	1.0	13:14																										
K1409912-001D	1.0	13:16												X														
K1409912-001S	1.0	13:19												X														
ZZZZZZ	1.0	13:21																										
K1409912-001A	1.0	13:25												X														
ZZZZZZ	50.0	13:32																										
K1409912-001D	50.0	13:34								X						X				X			X					
K1409912-001S	50.0	13:37								X						X				X			X					
ZZZZZZ	50.0	13:40																										
K1409921-012	1.0	13:47								X				X		X				X			X					

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 092014AICP04

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/20/14 **End Date:** 09/20/14

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV5	1.0	13:50								X				X		X				X			X				
CCV5	1.0	13:52								X						X											
CCB5	1.0	13:55								X				X		X				X			X				
K1409921-013	1.0	13:57								X				X		X				X			X				
K1409921-014	1.0	14:00								X				X		X				X			X				
K1409921-015	1.0	14:02								X				X		X				X			X				
K1409921-016	1.0	14:05								X				X		X				X			X				
K1409921-017	1.0	14:07								X				X		X				X			X				
K1409921-018	1.0	14:10								X				X		X				X			X				
CCV6	1.0	14:12								X				X		X				X			X				
CCV6	1.0	14:15								X						X											
CCB6	1.0	14:17								X				X		X				X			X				
ZZZZZZ	1.0	14:20																									
LLCCV2	1.0	14:22								X				X						X			X				
ZZZZZZ	1.0	14:24																									
LLCCV2	1.0	14:27														X											

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 100114d

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/01/14 **End Date:** 10/02/14

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1.0	16:20		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
Standard 1	1.0	16:25		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ICV1	1.0	16:30		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV1	1.0	16:35		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ICB1	1.0	16:40		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	16:45																												
CCB1	1.0	16:50		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
LLICVW1	1.0	16:55		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ICS-A1	1.0	17:01		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ICS-AB1	1.0	17:06		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	17:11																												
ZZZZZZ	1.0	17:16																												
ZZZZZZ	1.0	17:21																												
ZZZZZZ	1.0	17:26																												
ZZZZZZ	1.0	17:31																												
ZZZZZZ	1.0	17:36																												
ZZZZZZ	1.0	17:41																												
CCV2	1.0	17:47		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB2	1.0	17:52		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	17:57																												
ZZZZZZ	1.0	18:02																												
ZZZZZZ	1.0	18:07																												
ZZZZZZ	1.0	18:12																												
ZZZZZZ	1.0	18:17																												
ZZZZZZ	1.0	18:22																												
ZZZZZZ	1.0	18:28																												
ZZZZZZ	1.0	18:33																												
ZZZZZZ	1.0	18:38																												
ZZZZZZ	1.0	18:43																												
ZZZZZZ	1.0	18:48																												
CCV3	1.0	18:53		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB3	1.0	18:58		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 100114d

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/01/14 **End Date:** 10/02/14

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.0	19:03																												
LLCCVW1	1.0	19:08		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
ZZZZZZ	1.0	19:14																												
ZZZZZZ	1.0	19:19																												
ZZZZZZ	1.0	19:24																												
ZZZZZZ	1.0	19:29																												
ZZZZZZ	1.0	19:34																												
ZZZZZZ	1.0	19:39																												
ZZZZZZ	1.0	19:44																												
ZZZZZZ	1.0	19:49																												
ZZZZZZ	1.0	19:55																												
ZZZZZZ	1.0	20:00																												
CCV4	1.0	20:05		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
CCB4	1.0	20:10		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
ZZZZZZ	1.0	20:15																												
ZZZZZZ	1.0	20:20																												
ZZZZZZ	1.0	20:25																												
ZZZZZZ	1.0	20:30																												
ZZZZZZ	1.0	20:35																												
ZZZZZZ	1.0	20:41																												
ZZZZZZ	1.0	20:46																												
ZZZZZZ	1.0	20:51																												
ZZZZZZ	1.0	20:56																												
ZZZZZZ	1.0	21:01																												
ZZZZZZ	1.0	21:06																												
CCV5	1.0	21:11		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
CCB5	1.0	21:16		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
ZZZZZZ	1.0	21:21																												
LLCCVW2	1.0	21:26		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X				
ZZZZZZ	1.0	21:32																												
ZZZZZZ	1.0	21:37																												
ZZZZZZ	1.0	21:42																												

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 100114d

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/01/14 **End Date:** 10/02/14

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	21:47																												
ZZZZZZ	1.0	21:52																												
ZZZZZZ	1.0	21:57																												
ZZZZZZ	1.0	22:02																												
ZZZZZZ	1.0	22:07																												
ZZZZZZ	5.0	22:12																												
ZZZZZZ	1.0	22:18																												
ZZZZZZ	5.0	22:23																												
CCV6	1.0	22:28		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB6	1.0	22:33		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	22:38																												
ZZZZZZ	1.0	22:43																												
K1409921-MB	1.0	22:48		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
LCSW	1.0	22:53		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	22:59																												
K1409907-001D	1.0	23:04		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409907-001L	5.0	23:09		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409907-001A	1.0	23:14		X	X	X	X	X	X		X	X	X		X				X		X	X		X	X	X	
K1409907-001S	1.0	23:19		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-012	1.0	23:24		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-013	1.0	23:29		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV7	1.0	23:34		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB7	1.0	23:40		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	23:45																												
LLCCVW3	1.0	23:50		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-014	1.0	23:55		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-015	1.0	00:00		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-016	1.0	00:05		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-017	1.0	00:10		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
K1409921-018	1.0	00:15		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	00:20																												
ZZZZZZ	1.0	00:26																												

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

- 14 -

ANALYSIS RUN LOG

Client: Conestoga-Rovers & Associates, I **Service Request:** K1409921

Project No.: 009973-021101 **Run Number:** 100114d

Project Name: Marine View Drive RS/FS

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/01/14 **End Date:** 10/02/14

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.0	00:31																												
ZZZZZZ	1.0	00:36																												
ZZZZZZ	1.0	00:41																												
CCV8	1.0	00:46		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB8	1.0	00:51		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	00:56																												
ZZZZZZ	1.0	01:01																												
ZZZZZZ	1.0	01:06																												
ZZZZZZ	1.0	01:11																												
ZZZZZZ	1.0	01:17																												
ZZZZZZ	1.0	01:22																												
ZZZZZZ	5.0	01:27																												
ZZZZZZ	1.0	01:32																												
ZZZZZZ	1.0	01:37																												
ZZZZZZ	1.0	01:42																												
ZZZZZZ	1.0	01:47																												
CCV9	1.0	01:52		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
CCB9	1.0	01:57		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
ZZZZZZ	1.0	02:02																												
LLCCVW4	1.0	02:07		X	X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: _____ NRAS No.: _____ SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element LiK1_6	Q	Element GeK2_72	Q	Element Ge	Q	Element GeK3_72	Q	Element RhK3_103	Q	Element InK1_115	Q
Blank	Blank	1620	100		100		100		100		100		100	
Standard 1	Standard 1	1625	100		102		105		101		99		105	
ICV1	ICV	1630	101		101		101		101		100		105	
CCV1	CCV	1635	104		102		103		100		99		105	
ICB1	ICB	1640	104		101		105		100		100		102	
ZZZZZZ	ZZZZZZ	1645												
CCB1	CCB	1650	102		100		107		97		97		104	
LLICVW1	LLICVW1	1655	101		100		102		101		99		102	
ICS-A1	ICSA	1701	92		88		93		88		84		91	
ICS-AB1	ICSAB	1706	89		88		93		87		85		95	
ZZZZZZ	ZZZZZZ	1711												
ZZZZZZ	ZZZZZZ	1716												
ZZZZZZ	ZZZZZZ	1721												
ZZZZZZ	ZZZZZZ	1726												
ZZZZZZ	ZZZZZZ	1731												
ZZZZZZ	ZZZZZZ	1736												
ZZZZZZ	ZZZZZZ	1741												
CCV2	CCV	1747	100		102		105		102		101		108	
CCB2	CCB	1752	99		98		103		101		99		107	
ZZZZZZ	ZZZZZZ	1757												
ZZZZZZ	ZZZZZZ	1802												
ZZZZZZ	ZZZZZZ	1807												
ZZZZZZ	ZZZZZZ	1812												
ZZZZZZ	ZZZZZZ	1817												
ZZZZZZ	ZZZZZZ	1822												
ZZZZZZ	ZZZZZZ	1828												
ZZZZZZ	ZZZZZZ	1833												
ZZZZZZ	ZZZZZZ	1838												
ZZZZZZ	ZZZZZZ	1843												
ZZZZZZ	ZZZZZZ	1848												
CCV3	CCV	1853	100		100		104		101		99		107	
CCB3	CCB	1858	98		101		103		99		98		104	
ZZZZZZ	ZZZZZZ	1903												
LLCCVW1	LLCCVW1	1908	97		101		101		99		97		104	
ZZZZZZ	ZZZZZZ	1914												
ZZZZZZ	ZZZZZZ	1919												
ZZZZZZ	ZZZZZZ	1924												
ZZZZZZ	ZZZZZZ	1929												
ZZZZZZ	ZZZZZZ	1934												
ZZZZZZ	ZZZZZZ	1939												
ZZZZZZ	ZZZZZZ	1944												
ZZZZZZ	ZZZZZZ	1949												
ZZZZZZ	ZZZZZZ	1955												
ZZZZZZ	ZZZZZZ	2000												

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: _____ NRAS No.: _____ SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element LiK1_6	Q	Element GeK2_72	Q	Element Ge	Q	Element GeK3_72	Q	Element RhK3_103	Q	Element InK1_115	Q
CCV4	CCV	2005	98		102		101		101		99		105	
CCB4	CCB	2010	97		99		99		98		98		103	
ZZZZZZ	ZZZZZZ	2015												
ZZZZZZ	ZZZZZZ	2020												
ZZZZZZ	ZZZZZZ	2025												
ZZZZZZ	ZZZZZZ	2030												
ZZZZZZ	ZZZZZZ	2035												
ZZZZZZ	ZZZZZZ	2041												
ZZZZZZ	ZZZZZZ	2046												
ZZZZZZ	ZZZZZZ	2051												
ZZZZZZ	ZZZZZZ	2056												
ZZZZZZ	ZZZZZZ	2101												
ZZZZZZ	ZZZZZZ	2106												
CCV5	CCV	2111	99		101		100		98		98		102	
CCB5	CCB	2116	98		99		100		99		97		102	
ZZZZZZ	ZZZZZZ	2121												
LLCCVW2	LLCCVW2	2126	95		98		100		99		96		100	
ZZZZZZ	ZZZZZZ	2132												
ZZZZZZ	ZZZZZZ	2137												
ZZZZZZ	ZZZZZZ	2142												
ZZZZZZ	ZZZZZZ	2147												
ZZZZZZ	ZZZZZZ	2152												
ZZZZZZ	ZZZZZZ	2157												
ZZZZZZ	ZZZZZZ	2202												
ZZZZZZ	ZZZZZZ	2207												
ZZZZZZ	ZZZZZZ	2212												
ZZZZZZ	ZZZZZZ	2218												
ZZZZZZ	ZZZZZZ	2223												
CCV6	CCV	2228	96		100		102		99		98		104	
CCB6	CCB	2233	97		98		101		99		97		102	
ZZZZZZ	ZZZZZZ	2238												
ZZZZZZ	ZZZZZZ	2243												
K1409921-MB	Method Blank	2248	98		101		98		98		96		102	
LCSW	Lab Control	2253	95		100		101		99		100		103	
ZZZZZZ	ZZZZZZ	2259												
K1409907-001D	Batch QC1D	2304	87		86		90		83		80		92	
K1409907-001L	Batch QC1L	2309	94		96		101		94		90		102	
K1409907-001A	Batch QC1A	2314	85		85		92		84		81		91	
K1409907-001S	Batch QC1S	2319	85		83		89		82		79		91	
K1409921-012	WS-091514-RB-SW0	2324	94		95		98		91		88		103	
K1409921-013	WS-091514-RB-SW0	2329	94		95		100		93		89		101	
CCV7	CCV	2334	94		99		97		97		97		104	
CCB7	CCB	2340	93		96		95		93		91		102	
ZZZZZZ	ZZZZZZ	2345												

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: _____ NRAS No.: _____ SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element LiK1_6	Q	Element GeK2_72	Q	Element Ge	Q	Element GeK3_72	Q	Element RhK3_103	Q	Element InK1_115	Q
LLCCVW3	LLCCVW3	2350	91		96		96		94		93		102	
K1409921-014	WS-091514-RB-SW0	2355	96		95		96		95		91		101	
K1409921-015	WS-091514-RB-SW0	0000	99		96		100		94		91		104	
K1409921-016	WS-091514-RB-SW0	0005	95		96		96		93		90		100	
K1409921-017	WS-091514-RB-FD1	0010	95		97		97		95		90		102	
K1409921-018	RINSE BLANK 9-15	0015	96		97		96		97		94		104	
ZZZZZZ	ZZZZZZ	0020												
ZZZZZZ	ZZZZZZ	0026												
ZZZZZZ	ZZZZZZ	0031												
ZZZZZZ	ZZZZZZ	0036												
ZZZZZZ	ZZZZZZ	0041												
CCV8	CCV	0046	95		95		97		93		94		104	
CCB8	CCB	0051	91		95		95		94		92		99	
ZZZZZZ	ZZZZZZ	0056												
ZZZZZZ	ZZZZZZ	0101												
ZZZZZZ	ZZZZZZ	0106												
ZZZZZZ	ZZZZZZ	0111												
ZZZZZZ	ZZZZZZ	0117												
ZZZZZZ	ZZZZZZ	0122												
ZZZZZZ	ZZZZZZ	0127												
ZZZZZZ	ZZZZZZ	0132												
ZZZZZZ	ZZZZZZ	0137												
ZZZZZZ	ZZZZZZ	0142												
ZZZZZZ	ZZZZZZ	0147												
CCV9	CCV	0152	100		97		97		96		95		106	
CCB9	CCB	0157	99		98		94		98		95		102	
ZZZZZZ	ZZZZZZ	0202												
LLCCVW4	LLCCVW4	0207	98		96		95		95		93		102	

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: _____ NRAS No.: _____ SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element InK2_115	Q	Element LuK1_175	Q	Element ThK1_232	Q	Element	Q	Element	Q		
Blank	Blank	1620	100		100		100							
Standard 1	Standard 1	1625	100		101		102							
ICV1	ICV	1630	100		101		103							
CCV1	CCV	1635	102		100		102							
ICB1	ICB	1640	100		99		100							
ZZZZZZ	ZZZZZZ	1645												
CCB1	CCB	1650	98		97		100							
LLICVW1	LLICVW1	1655	100		99		100							
ICS-A1	ICSA	1701	89		96		101							
ICS-AB1	ICSAB	1706	89		96		103							
ZZZZZZ	ZZZZZZ	1711												
ZZZZZZ	ZZZZZZ	1716												
ZZZZZZ	ZZZZZZ	1721												
ZZZZZZ	ZZZZZZ	1726												
ZZZZZZ	ZZZZZZ	1731												
ZZZZZZ	ZZZZZZ	1736												
ZZZZZZ	ZZZZZZ	1741												
CCV2	CCV	1747	100		103		105							
CCB2	CCB	1752	99		101		104							
ZZZZZZ	ZZZZZZ	1757												
ZZZZZZ	ZZZZZZ	1802												
ZZZZZZ	ZZZZZZ	1807												
ZZZZZZ	ZZZZZZ	1812												
ZZZZZZ	ZZZZZZ	1817												
ZZZZZZ	ZZZZZZ	1822												
ZZZZZZ	ZZZZZZ	1828												
ZZZZZZ	ZZZZZZ	1833												
ZZZZZZ	ZZZZZZ	1838												
ZZZZZZ	ZZZZZZ	1843												
ZZZZZZ	ZZZZZZ	1848												
CCV3	CCV	1853	98		102		106							
CCB3	CCB	1858	99		100		103							
ZZZZZZ	ZZZZZZ	1903												
LLCCVW1	LLCCVW1	1908	98		101		102							
ZZZZZZ	ZZZZZZ	1914												
ZZZZZZ	ZZZZZZ	1919												
ZZZZZZ	ZZZZZZ	1924												
ZZZZZZ	ZZZZZZ	1929												
ZZZZZZ	ZZZZZZ	1934												
ZZZZZZ	ZZZZZZ	1939												
ZZZZZZ	ZZZZZZ	1944												
ZZZZZZ	ZZZZZZ	1949												
ZZZZZZ	ZZZZZZ	1955												
ZZZZZZ	ZZZZZZ	2000												

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: NRAS No.: SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element InK2_115	Q	Element LuK1_175	Q	Element ThK1_232	Q	Element	Q	Element	Q		
CCV4	CCV	2005	99		100		104							
CCB4	CCB	2010	98		98		102							
ZZZZZZ	ZZZZZZ	2015												
ZZZZZZ	ZZZZZZ	2020												
ZZZZZZ	ZZZZZZ	2025												
ZZZZZZ	ZZZZZZ	2030												
ZZZZZZ	ZZZZZZ	2035												
ZZZZZZ	ZZZZZZ	2041												
ZZZZZZ	ZZZZZZ	2046												
ZZZZZZ	ZZZZZZ	2051												
ZZZZZZ	ZZZZZZ	2056												
ZZZZZZ	ZZZZZZ	2101												
ZZZZZZ	ZZZZZZ	2106												
CCV5	CCV	2111	97		100		104							
CCB5	CCB	2116	97		98		101							
ZZZZZZ	ZZZZZZ	2121												
LLCCVW2	LLCCVW2	2126	98		98		101							
ZZZZZZ	ZZZZZZ	2132												
ZZZZZZ	ZZZZZZ	2137												
ZZZZZZ	ZZZZZZ	2142												
ZZZZZZ	ZZZZZZ	2147												
ZZZZZZ	ZZZZZZ	2152												
ZZZZZZ	ZZZZZZ	2157												
ZZZZZZ	ZZZZZZ	2202												
ZZZZZZ	ZZZZZZ	2207												
ZZZZZZ	ZZZZZZ	2212												
ZZZZZZ	ZZZZZZ	2218												
ZZZZZZ	ZZZZZZ	2223												
CCV6	CCV	2228	98		99		104							
CCB6	CCB	2233	97		97		102							
ZZZZZZ	ZZZZZZ	2238												
ZZZZZZ	ZZZZZZ	2243												
K1409921-MB	Method Blank	2248	98		98		102							
LCSW	Lab Control	2253	97		101		104							
ZZZZZZ	ZZZZZZ	2259												
K1409907-001D	Batch QC1D	2304	85		96		102							
K1409907-001L	Batch QC1L	2309	95		102		106							
K1409907-001A	Batch QC1A	2314	84		98		102							
K1409907-001S	Batch QC1S	2319	85		96		102							
K1409921-012	WS-091514-RB-SW0	2324	92		102		105							
K1409921-013	WS-091514-RB-SW0	2329	91		97		101							
CCV7	CCV	2334	95		98		101							
CCB7	CCB	2340	94		97		101							
ZZZZZZ	ZZZZZZ	2345												

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: 009973-021101

Lab Code: ALSK Case No.: _____ NRAS No.: _____ SDG NO.: K1409921

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/01/2014 End Date: 10/02/2014

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element InK2_115	Q	Element LuK1_175	Q	Element ThK1_232	Q	Element	Q	Element	Q		
LLCCVW3	LLCCVW3	2350	93		97		101							
K1409921-014	WS-091514-RB-SW0	2355	91		97		102							
K1409921-015	WS-091514-RB-SW0	0000	94		99		102							
K1409921-016	WS-091514-RB-SW0	0005	92		96		100							
K1409921-017	WS-091514-RB-FD1	0010	93		96		100							
K1409921-018	RINSE BLANK 9-15	0015	95		96		100							
ZZZZZZ	ZZZZZZ	0020												
ZZZZZZ	ZZZZZZ	0026												
ZZZZZZ	ZZZZZZ	0031												
ZZZZZZ	ZZZZZZ	0036												
ZZZZZZ	ZZZZZZ	0041												
CCV8	CCV	0046	94		98		104							
CCB8	CCB	0051	95		95		100							
ZZZZZZ	ZZZZZZ	0056												
ZZZZZZ	ZZZZZZ	0101												
ZZZZZZ	ZZZZZZ	0106												
ZZZZZZ	ZZZZZZ	0111												
ZZZZZZ	ZZZZZZ	0117												
ZZZZZZ	ZZZZZZ	0122												
ZZZZZZ	ZZZZZZ	0127												
ZZZZZZ	ZZZZZZ	0132												
ZZZZZZ	ZZZZZZ	0137												
ZZZZZZ	ZZZZZZ	0142												
ZZZZZZ	ZZZZZZ	0147												
CCV9	CCV	0152	98		100		105							
CCB9	CCB	0157	97		100		103							
ZZZZZZ	ZZZZZZ	0202												
LLCCVW4	LLCCVW4	0207	95		99		104							

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Cover Page - Organic Analysis Data Package
Organochlorine Pesticides

Sample Name	Lab Code	Date Collected	Date Received
SE-091514-RB-SD11	K1409921-004	09/15/2014	09/16/2014
SE-091514-RB-SD10	K1409921-005	09/15/2014	09/16/2014
SE-091514-RB-SD09	K1409921-006	09/15/2014	09/16/2014
SE-091514-RB-SD08	K1409921-007	09/15/2014	09/16/2014
SE-091514-RB-SD07	K1409921-008	09/15/2014	09/16/2014
SE-091514-RB-SD06	K1409921-009	09/15/2014	09/16/2014
SE-091514-RB-SD05	K1409921-010	09/15/2014	09/16/2014
SE-091514-RB-SD12	K1409921-011	09/15/2014	09/16/2014
SE-091514-RB-SD11MS	KWG1413413-1	09/15/2014	09/16/2014
SE-091514-RB-SD11DMS	KWG1413413-2	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD11	**Units:**	ug/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.6	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	1.6	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	1.6	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	1.6	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	1.6	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	ND	U	1.6	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	U	1.6	0.85	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	48	21-112	10/03/14	Acceptable
Decachlorobiphenyl	56	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD10	**Units:**	ug/Kg
Lab Code:	K1409921-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	2.0	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	2.0	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	2.0	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	2.0	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	2.0	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	ND	U	2.0	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	Ui	2.8	2.8	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	50	21-112	10/03/14	Acceptable
Decachlorobiphenyl	64	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD09	**Units:**	ug/Kg
Lab Code:	K1409921-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.7	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	1.7	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	1.7	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	1.7	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	1.7	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	ND	U	1.7	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	U	1.7	0.85	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	56	21-112	10/03/14	Acceptable
Decachlorobiphenyl	66	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD08	**Units:**	ug/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	2.0	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	2.0	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	2.0	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	2.0	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	2.0	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	**1.7**	J	2.0	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	Ui	2.0	1.8	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	Ui	25	25	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	54	21-112	10/03/14	Acceptable
Decachlorobiphenyl	66	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD07	**Units:**	ug/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	2.0	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	Ui	2.0	0.89	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	Ui	2.0	0.41	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	2.0	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	Ui	2.9	2.9	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	**8.5**		2.0	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	Ui	4.1	4.1	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	Ui	62	62	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	57	21-112	10/03/14	Acceptable
Decachlorobiphenyl	62	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD06	**Units:**	ug/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.8	0.46	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	1.8	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	1.8	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	1.8	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	1.8	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	**2.1**	P	1.8	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	Ui	4.1	4.1	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	Ui	55	55	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	45	21-112	10/03/14	Acceptable
Decachlorobiphenyl	53	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD05	**Units:**	ug/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	5.3	0.74	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	5.3	1.1	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	**1.3**	JP	5.3	0.94	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	5.3	0.78	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	5.3	1.8	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	5.3	3.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	**2.5**	JP	5.3	2.1	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	5.3	3.0	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	Ui	18	18	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	55	21-112	10/03/14	Acceptable
Decachlorobiphenyl	63	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD12	**Units:**	ug/Kg
Lab Code:	K1409921-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.6	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	1.6	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	1.6	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	1.6	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	1.6	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	ND	U	1.6	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	U	1.6	0.85	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	48	21-112	10/03/14	Acceptable
Decachlorobiphenyl	62	15-130	10/03/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1413413-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.3	0.35	1	09/25/14	10/03/14	KWG1413413	
beta-BHC	ND	U	2.5	0.50	1	09/25/14	10/03/14	KWG1413413	
gamma-BHC (Lindane)	ND	U	1.3	0.45	1	09/25/14	10/03/14	KWG1413413	
delta-BHC	ND	U	1.3	0.37	1	09/25/14	10/03/14	KWG1413413	
Heptachlor	ND	U	1.3	0.83	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDE	ND	U	1.6	1.6	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDD	ND	U	1.3	1.0	1	09/25/14	10/03/14	KWG1413413	
Endrin Aldehyde	ND	U	2.5	1.4	1	09/25/14	10/03/14	KWG1413413	
4,4'-DDT	ND	U	1.3	0.85	1	09/25/14	10/03/14	KWG1413413	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	37	21-112	10/03/14	Acceptable
Decachlorobiphenyl	44	15-130	10/03/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Sediment

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
SE-091514-RB-SD11	K1409921-004	48	56
SE-091514-RB-SD10	K1409921-005	50	64
SE-091514-RB-SD09	K1409921-006	56	66
SE-091514-RB-SD08	K1409921-007	54	66
SE-091514-RB-SD07	K1409921-008	57	62
SE-091514-RB-SD06	K1409921-009	45	53
SE-091514-RB-SD05	K1409921-010	55	63
SE-091514-RB-SD12	K1409921-011	48	62
Method Blank	KWG1413413-4	37	44
SE-091514-RB-SD11MS	KWG1413413-1	48	56
SE-091514-RB-SD11DMS	KWG1413413-2	55	64
Lab Control Sample	KWG1413413-3	48	60

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	21-112
Sur2	=	Decachlorobiphenyl	15-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014
		Time Analyzed:	07:33

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\100314\1003F002.D	**Lab Code:**	KWG1413448-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1413448
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	1,827,328	6.16
	Upper Limit ==>	3,654,656	6.66
	Lower Limit ==>	913,664	5.66
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413448-3	2,470,562	5.89
SE-091514-RB-SD11	K1409921-004	2,632,613	5.90
SE-091514-RB-SD11MS	KWG1413413-1	2,562,285	5.91
SE-091514-RB-SD11DMS	KWG1413413-2	2,589,908	5.90
SE-091514-RB-SD10	K1409921-005	2,780,782	5.90
SE-091514-RB-SD09	K1409921-006	2,871,725	5.90
SE-091514-RB-SD08	K1409921-007	2,841,953	5.91
SE-091514-RB-SD07	K1409921-008	2,816,584	5.91
SE-091514-RB-SD06	K1409921-009	2,757,606	5.90
SE-091514-RB-SD05	K1409921-010	2,783,386	5.90
SE-091514-RB-SD12	K1409921-011	2,785,606	5.90
Lab Control Sample	KWG1413413-3	2,708,881	5.90
Method Blank	KWG1413413-4	2,697,427	5.90

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014
		Time Analyzed:	07:33

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\100314\1003F002.D\1003F002C.D	**Lab Code:**	KWG1413448-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1413448
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	703,371	5.56
	Upper Limit ==>	1,406,741	6.06
	Lower Limit ==>	351,685	5.06
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413448-3	942,972	5.33
SE-091514-RB-SD11	K1409921-004	955,525	5.34
SE-091514-RB-SD11MS	KWG1413413-1	936,274	5.34
SE-091514-RB-SD11DMS	KWG1413413-2	938,260	5.34
SE-091514-RB-SD10	K1409921-005	972,991	5.34
SE-091514-RB-SD09	K1409921-006	1,014,125	5.34
SE-091514-RB-SD08	K1409921-007	998,478	5.34
SE-091514-RB-SD07	K1409921-008	1,006,174	5.34
SE-091514-RB-SD06	K1409921-009	993,018	5.34
SE-091514-RB-SD05	K1409921-010	983,763	5.34
SE-091514-RB-SD12	K1409921-011	983,762	5.34
Lab Control Sample	KWG1413413-3	952,191	5.34
Method Blank	KWG1413413-4	978,433	5.34

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/03/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD11	**Units:**	ug/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1413413

		SE-091514-RB-SD11MS KWG1413413-1 Matrix Spike			SE-091514-RB-SD11DMS KWG1413413-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
alpha-BHC	ND	37.0	62.8	59	40.8	62.4	65	23-133	10	40
beta-BHC	ND	38.9	62.8	62	42.1	62.4	67	22-142	8	40
gamma-BHC (Lindane)	ND	37.7	62.8	60	41.0	62.4	66	26-135	8	40
delta-BHC	ND	42.0	62.8	67	45.8	62.4	73	25-148	9	40
Heptachlor	ND	35.4	62.8	56	38.8	62.4	62	21-136	9	40
4,4'-DDE	ND	39.7	62.8	63	43.3	62.4	69	22-142	9	40
4,4'-DDD	ND	40.7	62.8	65	43.6	62.4	70	19-143	7	40
Endrin Aldehyde	ND	42.7	62.8	68	44.4	62.4	71	10-129	4	40
4,4'-DDT	ND	42.4	62.8	67	45.1	62.4	72	19-154	6	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/03/2014

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8081B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1413413

Lab Control Sample
KWG1413413-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
alpha-BHC	62.6	100	63	36-139
beta-BHC	65.4	100	65	38-142
gamma-BHC (Lindane)	63.0	100	63	40-142
delta-BHC	70.6	100	71	48-145
Heptachlor	58.9	100	59	39-135
4,4'-DDE	65.7	100	66	46-141
4,4'-DDD	67.3	100	67	46-146
Endrin Aldehyde	76.7	100	77	32-132
4,4'-DDT	69.4	100	69	46-151

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/03/2014
		Time Analyzed:	17:23

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1413413-4	**File ID:**	J:\GC23\DATA\100314\1003F022.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1413413

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SE-091514-RB-SD11	K1409921-004	J:\GC23\DATA\100314\1003F011.D	10/03/14	11:59
SE-091514-RB-SD11MS	KWG1413413-1	J:\GC23\DATA\100314\1003F012.D	10/03/14	12:29
SE-091514-RB-SD11DMS	KWG1413413-2	J:\GC23\DATA\100314\1003F013.D	10/03/14	12:59
SE-091514-RB-SD10	K1409921-005	J:\GC23\DATA\100314\1003F014.D	10/03/14	13:28
SE-091514-RB-SD09	K1409921-006	J:\GC23\DATA\100314\1003F015.D	10/03/14	13:58
SE-091514-RB-SD08	K1409921-007	J:\GC23\DATA\100314\1003F016.D	10/03/14	14:27
SE-091514-RB-SD07	K1409921-008	J:\GC23\DATA\100314\1003F017.D	10/03/14	14:56
SE-091514-RB-SD06	K1409921-009	J:\GC23\DATA\100314\1003F018.D	10/03/14	15:26
SE-091514-RB-SD05	K1409921-010	J:\GC23\DATA\100314\1003F019.D	10/03/14	15:55
SE-091514-RB-SD12	K1409921-011	J:\GC23\DATA\100314\1003F020.D	10/03/14	16:25
Lab Control Sample	KWG1413413-3	J:\GC23\DATA\100314\1003F021.D	10/03/14	16:54

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/03/2014
		Time Analyzed:	16:54

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC23
Lab Code:	KWG1413413-3	**File ID:**	J:\GC23\DATA\100314\1003F021.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1413413

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SE-091514-RB-SD11	K1409921-004	J:\GC23\DATA\100314\1003F011.D	10/03/14	11:59
SE-091514-RB-SD11MS	KWG1413413-1	J:\GC23\DATA\100314\1003F012.D	10/03/14	12:29
SE-091514-RB-SD11DMS	KWG1413413-2	J:\GC23\DATA\100314\1003F013.D	10/03/14	12:59
SE-091514-RB-SD10	K1409921-005	J:\GC23\DATA\100314\1003F014.D	10/03/14	13:28
SE-091514-RB-SD09	K1409921-006	J:\GC23\DATA\100314\1003F015.D	10/03/14	13:58
SE-091514-RB-SD08	K1409921-007	J:\GC23\DATA\100314\1003F016.D	10/03/14	14:27
SE-091514-RB-SD07	K1409921-008	J:\GC23\DATA\100314\1003F017.D	10/03/14	14:56
SE-091514-RB-SD06	K1409921-009	J:\GC23\DATA\100314\1003F018.D	10/03/14	15:26
SE-091514-RB-SD05	K1409921-010	J:\GC23\DATA\100314\1003F019.D	10/03/14	15:55
SE-091514-RB-SD12	K1409921-011	J:\GC23\DATA\100314\1003F020.D	10/03/14	16:25
Method Blank	KWG1413413-4	J:\GC23\DATA\100314\1003F022.D	10/03/14	17:23

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB XLB
Instrument ID: GC23

Level ID	File ID
A	J:\GC23\DATA\031714ICAL\0317F012.D
B	J:\GC23\DATA\031714ICAL\0317F013.D
C	J:\GC23\DATA\031714ICAL\0317F014.D
D	J:\GC23\DATA\031714ICAL\0317F015.D
E	J:\GC23\DATA\031714ICAL\0317F016.D
F	J:\GC23\DATA\031714ICAL\0317F017.D
G	J:\GC23\DATA\031714ICAL\0317F020.D
H	J:\GC23\DATA\031714ICAL\0317F021.D
I	J:\GC23\DATA\031714ICAL\0317F023.D
J	J:\GC23\DATA\031714ICAL\0317F024.D
K	J:\GC23\DATA\031714ICAL\0317F026.D
L	J:\GC23\DATA\031714ICAL\0317F027.D
M	J:\GC23\DATA\031714ICAL\0317F028.D
N	J:\GC23\DATA\031714ICAL\0317F029.D
O	J:\GC23\DATA\031714ICAL\0317F030.D
P	J:\GC23\DATA\031714ICAL\0317F031.D
Q	J:\GC23\DATA\031814C\0318F005.D
R	J:\GC23\DATA\031814C\0318F006.D
S	J:\GC23\DATA\031814C\0318F007.D
T	J:\GC23\DATA\031814C\0318F008.D
U	J:\GC23\DATA\031814C\0318F009.D
V	J:\GC23\DATA\031814C\0318F010.D
W	J:\GC23\DATA\031714ICAL\0319FX05.D
X	J:\GC23\DATA\031714ICAL\0319FX06.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene				Q	2.0	1.76	R	5.0	1.39	S	20	1.25	T	50	1.16
	U	100	1.20	V	200	1.19									
Decachlorobiphenyl				Q	2.0	1.48	R	5.0	1.26	S	20	1.17	T	50	1.05
	U	100	1.03	V	200	0.957									
alpha-BHC				Q	2.0	1.83	R	5.0	1.47	S	20	1.39	T	50	1.50
	U	100	1.48	V	200	1.59									
beta-BHC							R	5.0	0.719	S	20	0.649	T	50	0.665
	U	100	0.570	V	200	0.590									
gamma-BHC (Lindane)				Q	2.0	1.73	R	5.0	1.38	S	20	1.29	T	50	1.37
	U	100	1.33	V	200	1.42									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB XLB
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
delta-BHC				Q	2.0	1.63	R	5.0	1.31	S	20	1.25	T	50	1.38
	U	100	1.30	V	200	1.41									
Heptachlor				Q	2.0	1.69	R	5.0	1.42	S	20	1.28	T	50	1.26
	U	100	1.30	V	200	1.32									
4,4'-DDE				Q	2.0	1.50	R	5.0	1.24	S	20	1.19	T	50	1.18
	U	100	1.21	V	200	1.23									
4,4'-DDD				Q	2.0	1.27	R	5.0	0.990	S	20	0.960	T	50	0.993
	U	100	0.951	V	200	1.00									
Endrin Aldehyde							R	5.0	0.760	S	20	0.708	T	50	0.764
	U	100	0.624	V	200	0.689									
4,4'-DDT				Q	2.0	1.01	R	5.0	0.858	S	20	0.891	T	50	0.881
	U	100	0.894	V	200	0.945									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB XLB
Instrument ID: GC23

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	Quadratic	COD	1.000		≥ 0.990	1.33		
Decachlorobiphenyl	SURR	Quadratic	COD	1.000		≥ 0.990	1.16		
alpha-BHC	MS	AverageRF	% RSD	9.9		≤ 20	1.54		
beta-BHC	MS	AverageRF	% RSD	9.4		≤ 20	0.638		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	11.0		≤ 20	1.42		
delta-BHC	MS	AverageRF	% RSD	9.7		≤ 20	1.38		
Heptachlor	MS	AverageRF	% RSD	11.8		≤ 20	1.38		
4,4'-DDE	MS	AverageRF	% RSD	9.7		≤ 20	1.26		
4,4'-DDD	MS	AverageRF	% RSD	11.7		≤ 20	1.03		
Endrin Aldehyde	MS	AverageRF	% RSD	8.1		≤ 20	0.709		
4,4'-DDT	MS	AverageRF	% RSD	6.2		≤ 20	0.914		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 03/17/2014
Date Analyzed: 03/19/2014

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL13214
Units: ug/L

File ID: J:\GC23\DATA\031714ICAL\0317F018.D
J:\GC23\DATA\031714ICAL\0317F032.D
J:\GC23\DATA\031714ICAL\0319FX07.D
J:\GC23\DATA\031814C\0318F011.D
J:\GC23\DATA\031814C\0318F012.D

Column ID: DB XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D		%Drift	Criteria	Curve Fit
alpha-BHC	40	41	1.54	1.60	3		NA	± 20 %	AverageRF
beta-BHC	40	46	0.638	0.736	15		NA	± 20 %	AverageRF
gamma-BHC (Lindane)	40	42	1.42	1.48	4		NA	± 20 %	AverageRF
delta-BHC	40	43	1.38	1.49	8		NA	± 20 %	AverageRF
Heptachlor	40	40	1.38	1.38	0		NA	± 20 %	AverageRF
4,4'-DDE	40	41	1.26	1.30	3		NA	± 20 %	AverageRF
4,4'-DDD	40	41	1.03	1.06	3		NA	± 20 %	AverageRF
Endrin Aldehyde	40	48	0.709	0.858	21	*	NA	± 20 %	AverageRF
4,4'-DDT	40	39	0.914	0.897	-2		NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB-35MS
Instrument ID: GC23

Level ID	File ID
A	J:\GC23\DATA\031714ICAL\0317F012.D\0317F012c.d
B	J:\GC23\DATA\031714ICAL\0317F013.D\0317F013c.d
C	J:\GC23\DATA\031714ICAL\0317F014.D\0317F014c.d
D	J:\GC23\DATA\031714ICAL\0317F015.D\0317F015c.d
E	J:\GC23\DATA\031714ICAL\0317F016.D\0317F016c.d
F	J:\GC23\DATA\031714ICAL\0317F017.D\0317F017c.d
G	J:\GC23\DATA\031714ICAL\0317F020.D\0317F020c.d
H	J:\GC23\DATA\031714ICAL\0317F021.D\0317F021c.d
I	J:\GC23\DATA\031714ICAL\0317F023.D\0317F023c.d
J	J:\GC23\DATA\031714ICAL\0317F024.D\0317F024c.d
K	J:\GC23\DATA\031714ICAL\0317F026.D\0317F026c.d
L	J:\GC23\DATA\031714ICAL\0317F027.D\0317F027c.d
M	J:\GC23\DATA\031714ICAL\0317F028.D\0317F028c.d
N	J:\GC23\DATA\031714ICAL\0317F029.D\0317F029c.d
O	J:\GC23\DATA\031714ICAL\0317F030.D\0317F030c.d
P	J:\GC23\DATA\031714ICAL\0317F031.D\0317F031c.d
Q	J:\GC23\DATA\031814C\0318F005.D\0318F005c.d
R	J:\GC23\DATA\031814C\0318F006.D\0318F006c.d
S	J:\GC23\DATA\031814C\0318F007.D\0318F007c.d
T	J:\GC23\DATA\031814C\0318F008.D\0318F008c.d
U	J:\GC23\DATA\031814C\0318F009.D\0318F009c.d
V	J:\GC23\DATA\031814C\0318F010.D\0318F010c.d
W	J:\GC23\DATA\031714ICAL\0319FX05.D\0319FX05c.d
X	J:\GC23\DATA\031714ICAL\0319FX06.D\0319FX06c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene				Q	2.0	1.60	R	5.0	1.34	S	20	1.28	T	50	1.22
	U	100	1.23	V	200	1.24									
Decachlorobiphenyl				Q	2.0	1.37	R	5.0	1.17	S	20	1.13	T	50	1.02
	U	100	1.02	V	200	0.995									
alpha-BHC				Q	2.0	1.73	R	5.0	1.46	S	20	1.49	T	50	1.61
	U	100	1.57	V	200	1.68									
beta-BHC				Q	2.0	0.931	R	5.0	0.750	S	20	0.693	T	50	0.718
	U	100	0.626	V	200	0.670									
gamma-BHC (Lindane)				Q	2.0	1.69	R	5.0	1.37	S	20	1.38	T	50	1.47
	U	100	1.40	V	200	1.50									

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB-35MS
Instrument ID: GC23

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
delta-BHC				Q	2.0	1.59	R	5.0	1.37	S	20	1.33	T	50	1.48
	U	100	1.38	V	200	1.50									
Heptachlor				Q	2.0	1.68	R	5.0	1.36	S	20	1.32	T	50	1.28
	U	100	1.29	V	200	1.30									
4,4'-DDE				Q	2.0	1.52	R	5.0	1.36	S	20	1.31	T	50	1.30
	U	100	1.32	V	200	1.36									
4,4'-DDD				Q	2.0	1.22	R	5.0	1.05	S	20	1.02	T	50	1.05
	U	100	0.993	V	200	1.05									
Endrin Aldehyde				Q	2.0	1.09	R	5.0	0.864	S	20	0.812	T	50	0.889
	U	100	0.747	V	200	0.828									
4,4'-DDT				Q	2.0	1.23	R	5.0	1.01	S	20	0.967	T	50	0.951
	U	100	0.934	V	200	0.957									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 03/17/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13214 **Column:** DB-35MS
Instrument ID: GC23

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	11.0		≤ 20	1.32		
Decachlorobiphenyl	SURR	AverageRF	% RSD	12.8		≤ 20	1.12		
alpha-BHC	MS	AverageRF	% RSD	6.6		≤ 20	1.59		
beta-BHC	MS	AverageRF	% RSD	14.6		≤ 20	0.732		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	8.2		≤ 20	1.47		
delta-BHC	MS	AverageRF	% RSD	6.8		≤ 20	1.44		
Heptachlor	MS	AverageRF	% RSD	11.1		≤ 20	1.37		
4,4'-DDE	MS	AverageRF	% RSD	5.8		≤ 20	1.36		
4,4'-DDD	MS	AverageRF	% RSD	7.5		≤ 20	1.06		
Endrin Aldehyde	MS	AverageRF	% RSD	13.4		≤ 20	0.871		
4,4'-DDT	MS	AverageRF	% RSD	11.0		≤ 20	1.01		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 03/17/2014
Date Analyzed: 03/19/2014

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL13214
Units: ug/L

File ID: J:\GC23\DATA\031714ICAL\0317F018.D\0317F018c.d
J:\GC23\DATA\031714ICAL\0317F032.D\0317F032c.d
J:\GC23\DATA\031714ICAL\0319FX07.D\0319FX07c.d
J:\GC23\DATA\031814C\0318F011.D\0318F011c.d
J:\GC23\DATA\031814C\0318F012.D\0318F012c.d

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
alpha-BHC	40	45	1.59	1.78	12	NA	± 20 %	AverageRF
beta-BHC	40	45	0.732	0.828	13	NA	± 20 %	AverageRF
gamma-BHC (Lindane)	40	44	1.47	1.63	11	NA	± 20 %	AverageRF
delta-BHC	40	46	1.44	1.65	15	NA	± 20 %	AverageRF
Heptachlor	40	42	1.37	1.42	4	NA	± 20 %	AverageRF
4,4'-DDE	40	44	1.36	1.49	10	NA	± 20 %	AverageRF
4,4'-DDD	40	43	1.06	1.15	8	NA	± 20 %	AverageRF
Endrin Aldehyde	40	48	0.871	1.04	19	NA	± 20 %	AverageRF
4,4'-DDT	40	39	1.01	0.983	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration Date:**	03/17/2014
Analysis Method:	8081B	**Calibration ID:**	CAL13214
		Analysis Lot:	KWG1413448
		Units:	ug/L
File ID:	J:\GC23\DATA\100314\1003F002.D	**Column ID:**	DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	50	50		1.33	1.20	NA		0	± 20 %	Quadratic
Decachlorobiphenyl	50	48		1.16	1.02	NA		-5	± 20 %	Quadratic
alpha-BHC	50	49		1.54	1.52	-1		NA	± 20 %	AverageRF
beta-BHC	50	52		0.638	0.668	5		NA	± 20 %	AverageRF
gamma-BHC (Lindane)	50	49		1.42	1.39	-2		NA	± 20 %	AverageRF
delta-BHC	50	51		1.38	1.40	2		NA	± 20 %	AverageRF
Heptachlor	50	46		1.38	1.26	-8		NA	± 20 %	AverageRF
4,4'-DDE	50	51		1.26	1.27	1		NA	± 20 %	AverageRF
4,4'-DDD	50	51		1.03	1.05	2		NA	± 20 %	AverageRF
Endrin Aldehyde	50	62		0.709	0.876	24	*	NA	± 20 %	AverageRF
4,4'-DDT	50	44		0.914	0.811	-11		NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration Date:**	03/17/2014
Analysis Method:	8081B	**Calibration ID:**	CAL13214
		Analysis Lot:	KWG1413448
		Units:	ug/L
File ID:	J:\GC23\DATA\100314\1003F002.D\1003F002C.D	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	50	44		1.32	1.16	-12	NA	± 20 %	AverageRF
Decachlorobiphenyl	50	46		1.12	1.03	-8	NA	± 20 %	AverageRF
alpha-BHC	50	53		1.59	1.67	5	NA	± 20 %	AverageRF
beta-BHC	50	50		0.732	0.727	-1	NA	± 20 %	AverageRF
gamma-BHC (Lindane)	50	53		1.47	1.55	5	NA	± 20 %	AverageRF
delta-BHC	50	54		1.44	1.56	8	NA	± 20 %	AverageRF
Heptachlor	50	53		1.37	1.45	5	NA	± 20 %	AverageRF
4,4'-DDE	50	50		1.36	1.35	-1	NA	± 20 %	AverageRF
4,4'-DDD	50	55		1.06	1.16	9	NA	± 20 %	AverageRF
Endrin Aldehyde	50	57		0.871	0.997	14	NA	± 20 %	AverageRF
4,4'-DDT	50	52		1.01	1.05	4	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1413448
Instrument ID: GC23
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1003F001.D	Performance Evaluation Mixture	KWG1413448-2	10/3/2014	07:04		10/3/2014	07:26
1003F002.D	Continuing Calibration Verification	KWG1413448-3	10/3/2014	07:33		10/3/2014	07:55
1003F003.D	Instrument Blank	KWG1413448-1	10/3/2014	08:02		10/3/2014	08:24
1003F004.D	ZZZZZZ	ZZZZZZ	10/3/2014	08:32		10/3/2014	08:54
1003F005.D	ZZZZZZ	ZZZZZZ	10/3/2014	09:01		10/3/2014	09:23
1003F006.D	ZZZZZZ	ZZZZZZ	10/3/2014	09:31		10/3/2014	09:53
1003F007.D	ZZZZZZ	ZZZZZZ	10/3/2014	10:00		10/3/2014	10:22
1003F008.D	ZZZZZZ	ZZZZZZ	10/3/2014	10:30		10/3/2014	10:52
1003F009.D	ZZZZZZ	ZZZZZZ	10/3/2014	11:00		10/3/2014	11:22
1003F010.D	ZZZZZZ	ZZZZZZ	10/3/2014	11:30		10/3/2014	11:52
1003F011.D	SE-091514-RB-SD11	K1409921-004	10/3/2014	11:59		10/3/2014	12:21
1003F012.D	SE-091514-RB-SD11MS	KWG1413413-1	10/3/2014	12:29		10/3/2014	12:51
1003F013.D	SE-091514-RB-SD11DMS	KWG1413413-2	10/3/2014	12:59		10/3/2014	13:21
1003F014.D	SE-091514-RB-SD10	K1409921-005	10/3/2014	13:28		10/3/2014	13:50
1003F015.D	SE-091514-RB-SD09	K1409921-006	10/3/2014	13:58		10/3/2014	14:20
1003F016.D	SE-091514-RB-SD08	K1409921-007	10/3/2014	14:27		10/3/2014	14:49
1003F017.D	SE-091514-RB-SD07	K1409921-008	10/3/2014	14:56		10/3/2014	15:18
1003F018.D	SE-091514-RB-SD06	K1409921-009	10/3/2014	15:26		10/3/2014	15:48
1003F019.D	SE-091514-RB-SD05	K1409921-010	10/3/2014	15:55		10/3/2014	16:17
1003F020.D	SE-091514-RB-SD12	K1409921-011	10/3/2014	16:25		10/3/2014	16:47
1003F021.D	Lab Control Sample	KWG1413413-3	10/3/2014	16:54		10/3/2014	17:16
1003F022.D	Method Blank	KWG1413413-4	10/3/2014	17:23		10/3/2014	17:45

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment		

Extraction Prep Log
Organochlorine Pesticides

Extraction Method:	EPA 3541	**Extraction Lot:**	KWG1413413
Analysis Method:	8081B	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SE-091514-RB-SD11	K1409921-004	09/15/14	09/16/14	20.051g	10mL	78.5	
SE-091514-RB-SD10	K1409921-005	09/15/14	09/16/14	20.143g	10mL	63	
SE-091514-RB-SD09	K1409921-006	09/15/14	09/16/14	20.026g	10mL	74.6	
SE-091514-RB-SD08	K1409921-007	09/15/14	09/16/14	20.087g	10mL	62.6	
SE-091514-RB-SD07	K1409921-008	09/15/14	09/16/14	20.104g	10mL	63.7	
SE-091514-RB-SD06	K1409921-009	09/15/14	09/16/14	20.109g	10mL	69.4	
SE-091514-RB-SD05	K1409921-010	09/15/14	09/16/14	20.298g	10mL	23.6	
SE-091514-RB-SD12	K1409921-011	09/15/14	09/16/14	20.388g	10mL	77.9	
Method Blank	KWG1413413-4	NA	NA	20.410g	10mL	NA	
SE-091514-RB-SD11MS	KWG1413413-1	09/15/14	09/16/14	20.283g	10mL	78.5	
SE-091514-RB-SD11DMS	KWG1413413-2	09/15/14	09/16/14	20.410g	10mL	78.5	
Lab Control Sample	KWG1413413-3	NA	NA	10.000g	10mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD08	**Units:**	ug/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	2.0	1.0	1.7	2.0	16.2	J	1	10/03/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD07	**Units:**	ug/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	2.0	1.0	8.5	8.5	0.0		1	10/03/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD06	**Units:**	ug/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	1.8	1.0	2.1	3.2	41.5	P	1	10/03/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Organochlorine Pesticides

Sample Name:	SE-091514-RB-SD05	**Units:**	ug/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	5.3	0.94	1.3	2.6	66.7	JP	1	10/03/14
4,4'-DDD	5.3	2.1	2.5	5.4	73.4	JP	1	10/03/14

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Cover Page - Organic Analysis Data Package
Organochlorine Pesticides

Sample Name	Lab Code	Date Collected	Date Received
WS-091514-RB-SW03	K1409921-012	09/15/2014	09/16/2014
WS-091514-RB-SW04	K1409921-013	09/15/2014	09/16/2014
WS-091514-RB-SW05	K1409921-014	09/15/2014	09/16/2014
WS-091514-RB-SW02	K1409921-015	09/15/2014	09/16/2014
WS-091514-RB-SW01	K1409921-016	09/15/2014	09/16/2014
WS-091514-RB-FD10	K1409921-017	09/15/2014	09/16/2014
RINSE BLANK 9-15	K1409921-018	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW03	**Units:**	ng/L
Lab Code:	K1409921-012	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.0	0.75	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	1.0	0.47	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	Ui	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	1.0	0.11	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	Ui	1.0	0.31	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	97	20-106	09/29/14	Acceptable
Decachlorobiphenyl	91	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW04	**Units:**	ng/L
Lab Code:	K1409921-013	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.0	0.62	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	1.0	0.47	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	**0.37**	J	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	Ui	1.0	0.21	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	Ui	1.0	0.47	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	1.0	0.30	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	89	20-106	09/29/14	Acceptable
Decachlorobiphenyl	91	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW05	**Units:**	ng/L
Lab Code:	K1409921-014	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	**0.30**	J	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	1.0	0.47	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	U	1.0	0.13	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	1.0	0.11	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	1.0	0.30	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	98	20-106	09/29/14	Acceptable
Decachlorobiphenyl	96	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW02	**Units:**	ng/L
Lab Code:	K1409921-015	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.1	0.20	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	ND	U	1.1	0.21	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	1.1	0.48	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	1.1	0.23	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.1	0.21	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	Ui	1.1	0.17	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	1.1	0.12	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.1	0.29	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	Ui	1.1	0.74	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	1.1	0.31	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	94	20-106	09/29/14	Acceptable
Decachlorobiphenyl	86	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW01	**Units:**	ng/L
Lab Code:	K1409921-016	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	0.99	0.19	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	**0.28**	J	0.99	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	0.99	0.47	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	0.99	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	0.99	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	U	0.99	0.13	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	0.99	0.11	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	0.99	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	0.99	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	0.99	0.30	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	90	20-106	09/29/14	Acceptable
Decachlorobiphenyl	89	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-FD10	**Units:**	ng/L
Lab Code:	K1409921-017	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	**0.23**	J	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	U	1.0	0.47	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	U	1.0	0.13	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	1.0	0.11	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	1.0	0.30	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	76	20-106	09/29/14	Acceptable
Decachlorobiphenyl	70	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Organochlorine Pesticides

Sample Name:	RINSE BLANK 9-15	**Units:**	ng/L
Lab Code:	K1409921-018	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.19	1	09/19/14	09/29/14	KWG1413165	
Hexachlorobenzene	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
beta-BHC	ND	Ui	1.0	0.52	1	09/19/14	09/29/14	KWG1413165	
gamma-BHC (Lindane)	**0.97**	J	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/29/14	KWG1413165	
Heptachlor	ND	Ui	15	15	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDE	ND	U	1.0	0.11	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/29/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/29/14	KWG1413165	
4,4'-DDT	ND	U	1.0	0.30	1	09/19/14	09/29/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	69	20-106	09/29/14	Acceptable
Decachlorobiphenyl	72	19-127	09/29/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KWG1413165-5	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.0	0.27	1	09/19/14	09/30/14	KWG1413165	
Hexachlorobenzene	ND	U	1.0	0.20	1	09/19/14	09/30/14	KWG1413165	
beta-BHC	ND	U	1.0	0.47	1	09/19/14	09/30/14	KWG1413165	
gamma-BHC (Lindane)	ND	U	1.0	0.22	1	09/19/14	09/30/14	KWG1413165	
delta-BHC	ND	U	1.0	0.20	1	09/19/14	09/30/14	KWG1413165	
Heptachlor	ND	U	1.0	0.13	1	09/19/14	09/30/14	KWG1413165	
4,4'-DDE	ND	U	1.0	0.11	1	09/19/14	09/30/14	KWG1413165	
4,4'-DDD	ND	U	1.0	0.28	1	09/19/14	09/30/14	KWG1413165	
Endrin Aldehyde	ND	U	1.0	0.22	1	09/19/14	09/30/14	KWG1413165	
4,4'-DDT	ND	U	1.0	0.30	1	09/19/14	09/30/14	KWG1413165	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	97	20-106	09/30/14	Acceptable
Decachlorobiphenyl	90	19-127	09/30/14	Acceptable

Comments:

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
WS-091514-RB-SW03	K1409921-012	97	91
WS-091514-RB-SW04	K1409921-013	89	91
WS-091514-RB-SW05	K1409921-014	98	96
WS-091514-RB-SW02	K1409921-015	94	86
WS-091514-RB-SW01	K1409921-016	90	89
WS-091514-RB-FD10	K1409921-017	76	70
RINSE BLANK 9-15	K1409921-018	69	72
Method Blank	KWG1413165-5	97	90
Lab Control Sample	KWG1413165-1	61	56
Duplicate Lab Control Sample	KWG1413165-2	63	59

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	20-106
Sur2	=	Decachlorobiphenyl	19-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014
		Time Analyzed:	09:34

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC34\DATA\092914\0929000003.D	**Lab Code:**	KWG1413270-3
Instrument ID:	GC34	**Analysis Lot:**	KWG1413270
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	9,390,362	4.31
	Upper Limit ==>	18,780,724	4.81
	Lower Limit ==>	4,695,181	3.81
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413270-3	8,571,521	4.30
WS-091514-RB-SW03	K1409921-012	7,785,871	4.30
WS-091514-RB-SW04	K1409921-013	8,198,068	4.30
WS-091514-RB-SW05	K1409921-014	8,531,938	4.30
WS-091514-RB-SW02	K1409921-015	8,382,931	4.30
WS-091514-RB-SW01	K1409921-016	9,010,945	4.30
WS-091514-RB-FD10	K1409921-017	9,279,366	4.30
RINSE BLANK 9-15	K1409921-018	8,964,090	4.30

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014
		Time Analyzed:	09:34

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC34\DATA\092914\0929000003.D\0929000003C.	**Lab Code:**	KWG1413270-3
Instrument ID:	GC34	**Analysis Lot:**	KWG1413270
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	3,393,038	3.92
	Upper Limit ==>	6,786,076	4.42
	Lower Limit ==>	1,696,519	3.42
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413270-3	2,590,295	3.91
WS-091514-RB-SW03	K1409921-012	2,623,938	3.91
WS-091514-RB-SW04	K1409921-013	2,632,437	3.91
WS-091514-RB-SW05	K1409921-014	2,743,635	3.92
WS-091514-RB-SW02	K1409921-015	2,733,754	3.91
WS-091514-RB-SW01	K1409921-016	2,759,726	3.91
WS-091514-RB-FD10	K1409921-017	2,987,748	3.91
RINSE BLANK 9-15	K1409921-018	2,925,962	3.91

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014
		Time Analyzed:	18:40

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC34\DATA\092914\0929000018.D	**Lab Code:**	KWG1413270-6
Instrument ID:	GC34	**Analysis Lot:**	KWG1413270
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	9,390,362	4.31
	Upper Limit ==>	18,780,724	4.81
	Lower Limit ==>	4,695,181	3.81
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413270-6	10,864,490	4.30
Lab Control Sample	KWG1413165-1	10,584,270	4.30
Duplicate Lab Control Sample	KWG1413165-2	9,970,944	4.30
Method Blank	KWG1413165-5	8,548,066	4.30

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014
		Time Analyzed:	18:40

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC34\DATA\092914\0929000018.D\0929000018C.	**Lab Code:**	KWG1413270-6
Instrument ID:	GC34	**Analysis Lot:**	KWG1413270
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	3,393,038	3.92
	Upper Limit ==>	6,786,076	4.42
	Lower Limit ==>	1,696,519	3.42
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1413270-6	3,152,913	3.91
Lab Control Sample	KWG1413165-1	3,098,423	3.91
Duplicate Lab Control Sample	KWG1413165-2	3,088,154	3.91
Method Blank	KWG1413165-5	2,568,920	3.91

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	09/30/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3535A	**Units:**	ng/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413165

	Lab Control Sample KWG1413165-1 Lab Control Spike			Duplicate Lab Control Sample KWG1413165-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
alpha-BHC	7.05	10.0	71	5.88	10.0	59	36-122	18	30
Hexachlorobenzene	6.24	10.0	62	5.33	10.0	53	31-95	16	30
beta-BHC	8.22	10.0	82	6.98	10.0	70	42-125	16	30
gamma-BHC (Lindane)	7.29	10.0	73	6.17	10.0	62	44-117	17	30
delta-BHC	7.73	10.0	77	6.60	10.0	66	48-123	16	30
Heptachlor	7.46	10.0	75	5.98	10.0	60	40-115	22	30
4,4'-DDE	6.82	10.0	68	5.79	10.0	58	41-116	16	30
4,4'-DDD	7.16	10.0	72	6.29	10.0	63	33-132	13	30
Endrin Aldehyde	6.92	10.0	69	6.07	10.0	61	27-104	13	30
4,4'-DDT	6.33	10.0	63	5.52	10.0	55	42-143	14	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	09/30/2014
		Time Analyzed:	02:33

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC34
Lab Code:	KWG1413165-5	**File ID:**	J:\GC34\DATA\092914\0929000031.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1413165

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
WS-091514-RB-SW03	K1409921-012	J:\GC34\DATA\092914\0929000008.D	09/29/14	12:37
WS-091514-RB-SW04	K1409921-013	J:\GC34\DATA\092914\0929000009.D	09/29/14	13:13
WS-091514-RB-SW05	K1409921-014	J:\GC34\DATA\092914\0929000010.D	09/29/14	13:49
WS-091514-RB-SW02	K1409921-015	J:\GC34\DATA\092914\0929000011.D	09/29/14	14:26
WS-091514-RB-SW01	K1409921-016	J:\GC34\DATA\092914\0929000012.D	09/29/14	15:02
WS-091514-RB-FD10	K1409921-017	J:\GC34\DATA\092914\0929000013.D	09/29/14	15:38
RINSE BLANK 9-15	K1409921-018	J:\GC34\DATA\092914\0929000014.D	09/29/14	16:15
Lab Control Sample	KWG1413165-1	J:\GC34\DATA\092914\0929000027.D	09/30/14	00:08
Duplicate Lab Control Sample	KWG1413165-2	J:\GC34\DATA\092914\0929000028.D	09/30/14	00:44

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	09/30/2014
		Time Analyzed:	00:08

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC34
Lab Code:	KWG1413165-1	**File ID:**	J:\GC34\DATA\092914\0929000027.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1413165

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
WS-091514-RB-SW03	K1409921-012	J:\GC34\DATA\092914\0929000008.D	09/29/14	12:37
WS-091514-RB-SW04	K1409921-013	J:\GC34\DATA\092914\0929000009.D	09/29/14	13:13
WS-091514-RB-SW05	K1409921-014	J:\GC34\DATA\092914\0929000010.D	09/29/14	13:49
WS-091514-RB-SW02	K1409921-015	J:\GC34\DATA\092914\0929000011.D	09/29/14	14:26
WS-091514-RB-SW01	K1409921-016	J:\GC34\DATA\092914\0929000012.D	09/29/14	15:02
WS-091514-RB-FD10	K1409921-017	J:\GC34\DATA\092914\0929000013.D	09/29/14	15:38
RINSE BLANK 9-15	K1409921-018	J:\GC34\DATA\092914\0929000014.D	09/29/14	16:15
Method Blank	KWG1413165-5	J:\GC34\DATA\092914\0929000031.D	09/30/14	02:33

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB XLB
Instrument ID: GC34

Level ID	File ID
A	J:\GC34\DATA\090214\0902000502.D
B	J:\GC34\DATA\090214\0902000503.D
C	J:\GC34\DATA\090214\0902000504.D
D	J:\GC34\DATA\090214\0902000505.D
E	J:\GC34\DATA\090214\0902000506.D
F	J:\GC34\DATA\090214\0902000509.D
G	J:\GC34\DATA\090214\0902000510.D
H	J:\GC34\DATA\090214\0902000511.D
I	J:\GC34\DATA\090214\0902000512.D
J	J:\GC34\DATA\090214\0902000513.D
K	J:\GC34\DATA\090214\0902000514.D
L	J:\GC34\DATA\090214\0902000516.D
M	J:\GC34\DATA\090214\0902000517.D
N	J:\GC34\DATA\090214\0902000518.D
O	J:\GC34\DATA\090214\0902000519.D
AB	J:\GC34\DATA\092214\0922000007.D
AC	J:\GC34\DATA\092214\0922000008.D
P	J:\GC34\DATA\090214\0902000520.D
Q	J:\GC34\DATA\090214\0902000521.D
R	J:\GC34\DATA\090214\0902000523.D
S	J:\GC34\DATA\090214\0902000524.D
T	J:\GC34\DATA\090214\0902000525.D
U	J:\GC34\DATA\090214\0902000526.D
V	J:\GC34\DATA\090214\0902000527.D
W	J:\GC34\DATA\090214\0902000528.D
X	J:\GC34\DATA\090214\0902000531.D
Y	J:\GC34\DATA\092214\0922000004.D
Z	J:\GC34\DATA\092214\0922000005.D
AA	J:\GC34\DATA\092214\0922000006.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene							R	0.20	1.09	S	0.50	0.987	T	1.0	1.06
	U	2.0	1.08	V	5.0	1.10	W	10	1.20						
Decachlorobiphenyl							R	0.20	2.09	S	0.50	1.76	T	1.0	1.76
	U	2.0	1.68	V	5.0	1.49	W	10	1.49						
alpha-BHC							R	0.20	0.898	S	0.50	0.801	T	1.0	0.874
	U	2.0	0.953	V	5.0	1.06	W	10	1.27						
Hexachlorobenzene							R	0.20	1.78	S	0.50	1.60	T	1.0	1.65
	U	2.0	1.63	V	5.0	1.58	W	10	1.62						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
beta-BHC							R	0.20	0.645	S	0.50	0.557	T	1.0	0.577
	U	2.0	0.599	V	5.0	0.596	W	10	0.622						
gamma-BHC (Lindane)							R	0.20	1.01	S	0.50	0.835	T	1.0	0.896
	U	2.0	0.956	V	5.0	1.02	W	10	1.18						
delta-BHC							R	0.20	0.838	S	0.50	0.744	T	1.0	0.802
	U	2.0	0.862	V	5.0	0.924	W	10	1.10						
Heptachlor							R	0.20	1.29	S	0.50	1.09	T	1.0	1.11
	U	2.0	1.16	V	5.0	1.18	W	10	1.28						
4,4'-DDE							R	0.20	1.15	S	0.50	0.971	T	1.0	0.975
	U	2.0	0.997	V	5.0	1.00	W	10	1.12						
4,4'-DDD							R	0.20	0.767	S	0.50	0.628	T	1.0	0.707
	U	2.0	0.732	V	5.0	0.737	W	10	0.819						

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB XLB
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Endrin Aldehyde							R	0.20	0.999	S	0.50	0.817	T	1.0	0.855
	U	2.0	0.864	V	5.0	0.822	W	10	0.873						
4,4'-DDT							R	0.20	1.04	S	0.50	0.819	T	1.0	0.857
	U	2.0	0.862	V	5.0	0.828	W	10	0.915						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB XLB
Instrument ID: GC34

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	6.4		≤ 20	1.09		
Decachlorobiphenyl	SURR	Linear	R2	1.000		≥ 0.990	1.71		
alpha-BHC	MS	Quadratic	COD	1.000		≥ 0.990	0.977		
Hexachlorobenzene	MS	AverageRF	% RSD	4.4		≤ 20	1.64		
beta-BHC	MS	AverageRF	% RSD	5.2		≤ 20	0.599		
gamma-BHC (Lindane)	MS	Quadratic	COD	1.000		≥ 0.990	0.984		
delta-BHC	MS	Quadratic	COD	1.000		≥ 0.990	0.878		
Heptachlor	MS	AverageRF	% RSD	7.1		≤ 20	1.18		
4,4'-DDE	MS	AverageRF	% RSD	7.6		≤ 20	1.04		
4,4'-DDD	MS	AverageRF	% RSD	8.7		≤ 20	0.732		
Endrin Aldehyde	MS	AverageRF	% RSD	7.6		≤ 20	0.872		
4,4'-DDT	MS	AverageRF	% RSD	9.2		≤ 20	0.887		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 09/03/2014
Date Analyzed: 09/04/2014

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL13530
Units: ug/L

File ID: J:\GC34\DATA\090214\0902000515.D
J:\GC34\DATA\090214\0902000522.D
J:\GC34\DATA\090214\0902000529.D
J:\GC34\DATA\090214\0902000530.D
J:\GC34\DATA\090214\0902000534.D
J:\GC34\DATA\092214\0922000009.D

Column ID: DB XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
alpha-BHC	2.0	2.0	0.977	0.955	NA	2	± 20 %	Quadratic
Hexachlorobenzene	2.0	1.9	1.64	1.57	-5	NA	± 20 %	AverageRF
beta-BHC	2.0	2.2	0.599	0.667	11	NA	± 20 %	AverageRF
gamma-BHC (Lindane)	2.0	2.1	0.984	0.985	NA	5	± 20 %	Quadratic
delta-BHC	2.0	2.2	0.878	0.920	NA	10	± 20 %	Quadratic
Heptachlor	2.0	1.9	1.18	1.15	-3	NA	± 20 %	AverageRF
4,4'-DDE	2.0	1.8	1.04	0.954	-8	NA	± 20 %	AverageRF
4,4'-DDD	2.0	2.0	0.732	0.732	0	NA	± 20 %	AverageRF
Endrin Aldehyde	2.0	2.3	0.872	1.02	17	NA	± 20 %	AverageRF
4,4'-DDT	2.0	1.8	0.887	0.782	-12	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530
Instrument ID: GC34

Column: DB-35MS

Level ID	File ID
A	J:\GC34\DATA\090214\0902000502.D\0902000502c.d
B	J:\GC34\DATA\090214\0902000503.D\0902000503c.d
C	J:\GC34\DATA\090214\0902000504.D\0902000504c.d
D	J:\GC34\DATA\090214\0902000505.D\0902000505c.d
E	J:\GC34\DATA\090214\0902000506.D\0902000506c.d
F	J:\GC34\DATA\090214\0902000509.D\0902000509c.d
G	J:\GC34\DATA\090214\0902000510.D\0902000510c.d
H	J:\GC34\DATA\090214\0902000511.D\0902000511c.d
I	J:\GC34\DATA\090214\0902000512.D\0902000512c.d
J	J:\GC34\DATA\090214\0902000513.D\0902000513c.d
K	J:\GC34\DATA\090214\0902000514.D\0902000514c.d
L	J:\GC34\DATA\090214\0902000516.D\0902000516c.d
M	J:\GC34\DATA\090214\0902000517.D\0902000517c.d
N	J:\GC34\DATA\090214\0902000518.D\0902000518c.d
O	J:\GC34\DATA\090214\0902000519.D\0902000519c.d
P	J:\GC34\DATA\090214\0902000520.D\0902000520c.d
Q	J:\GC34\DATA\090214\0902000521.D\0902000521c.d
R	J:\GC34\DATA\090214\0902000523.D\0902000523c.d
S	J:\GC34\DATA\090214\0902000524.D\0902000524c.d
T	J:\GC34\DATA\090214\0902000525.D\0902000525c.d
U	J:\GC34\DATA\090214\0902000526.D\0902000526c.d
V	J:\GC34\DATA\090214\0902000527.D\0902000527c.d
W	J:\GC34\DATA\090214\0902000528.D\0902000528c.d
X	J:\GC34\DATA\090214\0902000531.D\0902000531c.d
Y	J:\GC34\DATA\092214\0922000004.D\0922000004c.d
Z	J:\GC34\DATA\092214\0922000005.D\0922000005c.d
AA	J:\GC34\DATA\092214\0922000006.D\0922000006c.d
AB	J:\GC34\DATA\092214\0922000007.D\0922000007c.d
AC	J:\GC34\DATA\092214\0922000008.D\0922000008c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene							R	0.20	1.45	S	0.50	1.20	T	1.0	1.28
	U	2.0	1.28	V	5.0	1.16	W	10	1.16						
Decachlorobiphenyl							R	0.20	1.72	S	0.50	1.41	T	1.0	1.44
	U	2.0	1.37	V	5.0	1.18	W	10	1.13						
alpha-BHC							R	0.20	1.51	S	0.50	1.38	T	1.0	1.35
	U	2.0	1.32	V	5.0	1.24	W	10	1.27						
Hexachlorobenzene							R	0.20	1.75	S	0.50	1.64	T	1.0	1.68
	U	2.0	1.64	V	5.0	1.46	W	10	1.42						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
beta-BHC							R	0.20	1.12	S	0.50	0.767	T	1.0	0.771
	U	2.0	0.740	V	5.0	0.678	W	10	0.669						
gamma-BHC (Lindane)							R	0.20	1.53	S	0.50	1.26	T	1.0	1.31
	U	2.0	1.30	V	5.0	1.21	W	10	1.22						
delta-BHC							R	0.20	1.39	S	0.50	1.20	T	1.0	1.26
	U	2.0	1.26	V	5.0	1.19	W	10	1.21						
Heptachlor							R	0.20	1.63	S	0.50	1.46	T	1.0	1.43
	U	2.0	1.43	V	5.0	1.31	W	10	1.29						
4,4'-DDE							R	0.20	1.50	S	0.50	1.30	T	1.0	1.28
	U	2.0	1.24	V	5.0	1.17	W	10	1.18						
4,4'-DDD							R	0.20	1.23	S	0.50	0.924	T	1.0	1.00
	U	2.0	0.989	V	5.0	0.926	W	10	0.950						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB-35MS
Instrument ID: GC34

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Endrin Aldehyde							R	0.20	0.807	S	0.50	0.627	T	1.0	0.744
	U	2.0	0.712	V	5.0	0.678	W	10	0.701						
4,4'-DDT							R	0.20	1.28	S	0.50	1.05	T	1.0	1.13
	U	2.0	1.07	V	5.0	1.05	W	10	1.06						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/03/2014

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL13530 **Column:** DB-35MS
Instrument ID: GC34

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	8.7		≤ 20	1.25		
Decachlorobiphenyl	SURR	Quadratic	COD	0.999		≥ 0.990	1.38		
alpha-BHC	MS	AverageRF	% RSD	7.2		≤ 20	1.34		
Hexachlorobenzene	MS	AverageRF	% RSD	8.0		≤ 20	1.60		
beta-BHC	MS	Linear	R2	1.000		≥ 0.990	0.792		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	8.9		≤ 20	1.31		
delta-BHC	MS	AverageRF	% RSD	5.9		≤ 20	1.25		
Heptachlor	MS	AverageRF	% RSD	8.6		≤ 20	1.42		
4,4'-DDE	MS	AverageRF	% RSD	9.4		≤ 20	1.28		
4,4'-DDD	MS	AverageRF	% RSD	11.4		≤ 20	1.00		
Endrin Aldehyde	MS	AverageRF	% RSD	8.6		≤ 20	0.712		
4,4'-DDT	MS	AverageRF	% RSD	8.0		≤ 20	1.11		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Calibration Date:**	09/03/2014
		Date Analyzed:	09/04/2014

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration ID:**	CAL13530
Analysis Method:	8081B	**Units:**	ug/L
File ID:	J:\GC34\DATA\090214\0902000515.D\0902000515c.d J:\GC34\DATA\090214\0902000522.D\0902000522c.d J:\GC34\DATA\090214\0902000529.D\0902000529c.d J:\GC34\DATA\090214\0902000530.D\0902000530c.d J:\GC34\DATA\090214\0902000534.D\0902000534c.d J:\GC34\DATA\092214\0922000009.D\0922000009c.d	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
alpha-BHC	2.0	2.0	1.34	1.32	-2	NA	± 20 %	AverageRF
Hexachlorobenzene	2.0	1.9	1.60	1.52	-5	NA	± 20 %	AverageRF
beta-BHC	2.0	2.4	0.792	0.826	NA	18	± 20 %	Linear
gamma-BHC (Lindane)	2.0	2.0	1.31	1.33	2	NA	± 20 %	AverageRF
delta-BHC	2.0	2.1	1.25	1.34	7	NA	± 20 %	AverageRF
Heptachlor	2.0	2.0	1.42	1.39	-2	NA	± 20 %	AverageRF
4,4'-DDE	2.0	1.8	1.28	1.18	-8	NA	± 20 %	AverageRF
4,4'-DDD	2.0	1.9	1.00	0.940	-6	NA	± 20 %	AverageRF
Endrin Aldehyde	2.0	2.3	0.712	0.831	17	NA	± 20 %	AverageRF
4,4'-DDT	2.0	1.8	1.11	0.991	-10	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/29/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration Date: 09/03/2014
Calibration ID: CAL13530
Analysis Lot: KWG1413270
Units: ug/L

File ID: J:\GC34\DATA\092914\0929000003.D

Column ID: DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift		Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.0		1.09	1.11	2		NA		± 20 %	AverageRF
Decachlorobiphenyl	2.0	1.5		1.71	1.18	NA		-27	*	± 20 %	Linear
alpha-BHC	2.0	2.3		0.977	1.11	NA		17		± 20 %	Quadratic
Hexachlorobenzene	2.0	2.1		1.64	1.71	4		NA		± 20 %	AverageRF
beta-BHC	2.0	2.5		0.599	0.758	26	*	NA		± 20 %	AverageRF
gamma-BHC (Lindane)	2.0	2.4		0.984	1.12	NA		19		± 20 %	Quadratic
delta-BHC	2.0	2.4		0.878	1.03	NA		21	*	± 20 %	Quadratic
Heptachlor	2.0	2.3		1.18	1.37	16		NA		± 20 %	AverageRF
4,4'-DDE	2.0	1.9		1.04	1.00	-3		NA		± 20 %	AverageRF
4,4'-DDD	2.0	2.1		0.732	0.785	7		NA		± 20 %	AverageRF
Endrin Aldehyde	2.0	2.4		0.872	1.06	21	*	NA		± 20 %	AverageRF
4,4'-DDT	2.0	1.8		0.887	0.808	-9		NA		± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration Date:**	09/03/2014
Analysis Method:	8081B	**Calibration ID:**	CAL13530
		Analysis Lot:	KWG1413270
		Units:	ug/L
File ID:	J:\GC34\DATA\092914\0929000003.D\0929000003C.	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift		Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.0		1.25	1.23	-2		NA		± 20 %	AverageRF
Decachlorobiphenyl	2.0	1.6		1.38	1.06	NA		-20		± 20 %	Quadratic
alpha-BHC	2.0	2.2		1.34	1.46	9		NA		± 20 %	AverageRF
Hexachlorobenzene	2.0	2.0		1.60	1.63	2		NA		± 20 %	AverageRF
beta-BHC	2.0	2.5		0.792	0.884	NA		26	*	± 20 %	Linear
gamma-BHC (Lindane)	2.0	2.2		1.31	1.44	10		NA		± 20 %	AverageRF
delta-BHC	2.0	2.3		1.25	1.42	13		NA		± 20 %	AverageRF
Heptachlor	2.0	2.2		1.42	1.55	9		NA		± 20 %	AverageRF
4,4'-DDE	2.0	1.9		1.28	1.24	-3		NA		± 20 %	AverageRF
4,4'-DDD	2.0	2.1		1.00	1.06	5		NA		± 20 %	AverageRF
Endrin Aldehyde	2.0	3.1		0.712	1.10	55	*	NA		± 20 %	AverageRF
4,4'-DDT	2.0	1.7		1.11	0.954	-14		NA		± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration Date:**	09/03/2014
Analysis Method:	8081B	**Calibration ID:**	CAL13530
		Analysis Lot:	KWG1413270
		Units:	ug/L
File ID:	J:\GC34\DATA\092914\0929000018.D	**Column ID:**	DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift		Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.0		1.09	1.10	2		NA		± 20 %	AverageRF
Decachlorobiphenyl	2.0	1.4		1.71	1.15	NA		-29	*	± 20 %	Linear
alpha-BHC	2.0	2.4		0.977	1.12	NA		18		± 20 %	Quadratic
Hexachlorobenzene	2.0	2.1		1.64	1.71	4		NA		± 20 %	AverageRF
beta-BHC	2.0	2.5		0.599	0.749	25	*	NA		± 20 %	AverageRF
gamma-BHC (Lindane)	2.0	2.4		0.984	1.12	NA		19		± 20 %	Quadratic
delta-BHC	2.0	2.4		0.878	1.01	NA		19		± 20 %	Quadratic
Heptachlor	2.0	2.3		1.18	1.35	14		NA		± 20 %	AverageRF
4,4'-DDE	2.0	2.0		1.04	1.02	-1		NA		± 20 %	AverageRF
4,4'-DDD	2.0	2.2		0.732	0.805	10		NA		± 20 %	AverageRF
Endrin Aldehyde	2.0	2.5		0.872	1.09	25	*	NA		± 20 %	AverageRF
4,4'-DDT	2.0	2.0		0.887	0.880	-1		NA		± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/29/2014

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type:	Internal Standard	**Calibration Date:**	09/03/2014
Analysis Method:	8081B	**Calibration ID:**	CAL13530
		Analysis Lot:	KWG1413270
		Units:	ug/L
File ID:	J:\GC34\DATA\092914\0929000018.D\0929000018C.	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift		Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.0		1.25	1.24	-1		NA		± 20 %	AverageRF
Decachlorobiphenyl	2.0	1.7		1.38	1.13	NA		-14		± 20 %	Quadratic
alpha-BHC	2.0	2.2		1.34	1.47	9		NA		± 20 %	AverageRF
Hexachlorobenzene	2.0	2.0		1.60	1.61	1		NA		± 20 %	AverageRF
beta-BHC	2.0	2.5		0.792	0.881	NA		26	*	± 20 %	Linear
gamma-BHC (Lindane)	2.0	2.2		1.31	1.43	10		NA		± 20 %	AverageRF
delta-BHC	2.0	2.2		1.25	1.38	11		NA		± 20 %	AverageRF
Heptachlor	2.0	2.1		1.42	1.52	7		NA		± 20 %	AverageRF
4,4'-DDE	2.0	1.9		1.28	1.23	-4		NA		± 20 %	AverageRF
4,4'-DDD	2.0	2.1		1.00	1.04	4		NA		± 20 %	AverageRF
Endrin Aldehyde	2.0	3.0		0.712	1.06	49	*	NA		± 20 %	AverageRF
4,4'-DDT	2.0	1.7		1.11	0.925	-16		NA		± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1413270
Instrument ID: GC34
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
29000002.D	Performance Evaluation Mixture	KWG1413270-2	9/29/2014	08:58		9/29/2014	09:30
29000003.D	Continuing Calibration Verification	KWG1413270-3	9/29/2014	09:34		9/29/2014	10:06
29000004.D	Continuing Calibration Verification	KWG1413270-3	9/29/2014	10:11		9/29/2014	10:43
29000005.D	Continuing Calibration Verification	KWG1413270-3	9/29/2014	10:47		9/29/2014	11:19
29000006.D	Continuing Calibration Verification	KWG1413270-3	9/29/2014	11:24		9/29/2014	11:56
29000007.D	Instrument Blank	KWG1413270-1	9/29/2014	12:00		9/29/2014	12:32
29000008.D	WS-091514-RB-SW03	K1409921-012	9/29/2014	12:37		9/29/2014	13:08
29000009.D	WS-091514-RB-SW04	K1409921-013	9/29/2014	13:13		9/29/2014	13:45
29000010.D	WS-091514-RB-SW05	K1409921-014	9/29/2014	13:49		9/29/2014	14:21
29000011.D	WS-091514-RB-SW02	K1409921-015	9/29/2014	14:26		9/29/2014	14:58
29000012.D	WS-091514-RB-SW01	K1409921-016	9/29/2014	15:02		9/29/2014	15:34
29000013.D	WS-091514-RB-FD10	K1409921-017	9/29/2014	15:38		9/29/2014	16:10
29000014.D	RINSE BLANK 9-15	K1409921-018	9/29/2014	16:15		9/29/2014	16:47
29000015.D	ZZZZZZ	ZZZZZZ	9/29/2014	16:51		9/29/2014	17:23
29000016.D	ZZZZZZ	ZZZZZZ	9/29/2014	17:27		9/29/2014	17:59
29000017.D	Performance Evaluation Mixture	KWG1413270-5	9/29/2014	18:04		9/29/2014	18:36
29000018.D	Continuing Calibration Verification	KWG1413270-6	9/29/2014	18:40		9/29/2014	19:12
29000019.D	Continuing Calibration Verification	KWG1413270-6	9/29/2014	19:16		9/29/2014	19:48
29000020.D	Continuing Calibration Verification	KWG1413270-6	9/29/2014	19:53		9/29/2014	20:25
29000021.D	Continuing Calibration Verification	KWG1413270-6	9/29/2014	20:30		9/29/2014	21:02
29000022.D	Instrument Blank	KWG1413270-4	9/29/2014	21:06		9/29/2014	21:38
29000023.D	ZZZZZZ	ZZZZZZ	9/29/2014	21:42		9/29/2014	22:14
29000025.D	ZZZZZZ	ZZZZZZ	9/29/2014	22:55		9/29/2014	23:27
29000026.D	ZZZZZZ	ZZZZZZ	9/29/2014	23:31		9/30/2014	00:03
29000027.D	Lab Control Sample	KWG1413165-1	9/30/2014	00:08		9/30/2014	00:40
29000028.D	Duplicate Lab Control Sample	KWG1413165-2	9/30/2014	00:44		9/30/2014	01:16
29000029.D	ZZZZZZ	ZZZZZZ	9/30/2014	01:20		9/30/2014	01:52
29000030.D	ZZZZZZ	ZZZZZZ	9/30/2014	01:57		9/30/2014	02:29
29000031.D	Method Blank	KWG1413165-5	9/30/2014	02:33		9/30/2014	03:05

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Service Request: K1409921
Date Extracted: 09/19/2014

Extraction Prep Log
Organochlorine Pesticides

Extraction Method: EPA 3535A
Analysis Method: 8081B

Extraction Lot: KWG1413165
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
WS-091514-RB-SW03	K1409921-012	09/15/14	09/16/14	1000mL	2mL	NA	
WS-091514-RB-SW04	K1409921-013	09/15/14	09/16/14	1000mL	2mL	NA	
WS-091514-RB-SW05	K1409921-014	09/15/14	09/16/14	1010mL	2mL	NA	
WS-091514-RB-SW02	K1409921-015	09/15/14	09/16/14	990mL	2mL	NA	
WS-091514-RB-SW01	K1409921-016	09/15/14	09/16/14	1020mL	2mL	NA	
WS-091514-RB-FD10	K1409921-017	09/15/14	09/16/14	1010mL	2mL	NA	
RINSE BLANK 9-15	K1409921-018	09/15/14	09/16/14	1000mL	2mL	NA	
Method Blank	KWG1413165-5	NA	NA	1010mL	2mL	NA	
Lab Control Sample	KWG1413165-1	NA	NA	1000mL	2mL	NA	
Duplicate Lab Control Sample	KWG1413165-2	NA	NA	1000mL	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW04	**Units:**	ng/L
Lab Code:	K1409921-013	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	1.0	0.22	0.37	0.38	2.7	J	1	09/29/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW05	**Units:**	ng/L
Lab Code:	K1409921-014	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Hexachlorobenzene	1.0	0.20	0.30	0.40	28.6	J	1	09/29/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-SW01	**Units:**	ng/L
Lab Code:	K1409921-016	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Hexachlorobenzene	0.99	0.20	0.28	0.31	10.2	J	1	09/29/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Organochlorine Pesticides

Sample Name:	WS-091514-RB-FD10	**Units:**	ng/L
Lab Code:	K1409921-017	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Hexachlorobenzene	1.0	0.20	0.23	0.29	23.1	J	1	09/29/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Organochlorine Pesticides

Sample Name:	RINSE BLANK 9-15	**Units:**	ng/L
Lab Code:	K1409921-018	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8081B		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	1.0	0.22	0.97	1.3	29.1	J	1	09/29/14

Polychlorinated Biphenyls

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
SE-091514-RB-SD11	K1409921-004	09/15/2014	09/16/2014
SE-091514-RB-SD10	K1409921-005	09/15/2014	09/16/2014
SE-091514-RB-SD09	K1409921-006	09/15/2014	09/16/2014
SE-091514-RB-SD08	K1409921-007	09/15/2014	09/16/2014
SE-091514-RB-SD07	K1409921-008	09/15/2014	09/16/2014
SE-091514-RB-SD06	K1409921-009	09/15/2014	09/16/2014
SE-091514-RB-SD05	K1409921-010	09/15/2014	09/16/2014
SE-091514-RB-SD12	K1409921-011	09/15/2014	09/16/2014
WS-091514-RB-SW03	K1409921-012	09/15/2014	09/16/2014
WS-091514-RB-SW04	K1409921-013	09/15/2014	09/16/2014
WS-091514-RB-SW05	K1409921-014	09/15/2014	09/16/2014
WS-091514-RB-SW02	K1409921-015	09/15/2014	09/16/2014
WS-091514-RB-SW01	K1409921-016	09/15/2014	09/16/2014
WS-091514-RB-FD10	K1409921-017	09/15/2014	09/16/2014
RINSE BLANK 9-15	K1409921-018	09/15/2014	09/16/2014
SE-091514-RB-SD11MS	KWG1413412-1	09/15/2014	09/16/2014
SE-091514-RB-SD11DMS	KWG1413412-2	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW03	**Units:**	ug/L
Lab Code:	K1409921-012	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0022**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.0024**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0015**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	124	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW04	**Units:**	ug/L
Lab Code:	K1409921-013	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0026**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.0025**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0022**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	118	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW05	**Units:**	ug/L
Lab Code:	K1409921-014	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0038**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.0088**		0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0056**		0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	133	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW02	**Units:**	ug/L
Lab Code:	K1409921-015	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.011	0.0025	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0056**		0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.017**		0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0095**		0.0051	0.00097	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	112	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW01	**Units:**	ug/L
Lab Code:	K1409921-016	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0016**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.0010**	JP	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0020**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	121	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-FD10	**Units:**	ug/L
Lab Code:	K1409921-017	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	**0.0029**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	**0.0042**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	**0.0025**	J	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	RINSE BLANK 9-15	**Units:**	ug/L
Lab Code:	K1409921-018	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	106	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413166-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1221	ND	U	0.010	0.0024	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1232	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1242	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1248	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1254	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	
Aroclor 1260	ND	U	0.0050	0.00096	1	09/19/14	10/04/14	KWG1413166	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	109	39-140	10/04/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD11	**Units:**	mg/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.032	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	65	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD10	**Units:**	mg/Kg
Lab Code:	K1409921-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.040	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	**0.0092**	J	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	**0.041**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	**0.025**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	69	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD09	**Units:**	mg/Kg
Lab Code:	K1409921-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.034	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	ND	U	0.017	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	75	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD08	**Units:**	mg/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.040	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	**0.013**	J	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	**0.18**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	**0.13**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD07	**Units:**	mg/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.040	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	**0.051**	P	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	**0.54**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	**0.37**		0.020	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	107	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD06	**Units:**	mg/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.041	0.041	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	Ui	0.054	0.054	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	Ui	0.045	0.045	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	ND	Ui	0.041	0.041	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	Ui	0.049	0.049	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	**0.56**		0.018	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	**0.19**		0.018	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	60	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD05	**Units:**	mg/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.053	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.11	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.053	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	**0.065**		0.053	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.053	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	**0.25**		0.053	0.018	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	**0.12**		0.053	0.018	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	70	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD12	**Units:**	mg/Kg
Lab Code:	K1409921-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.032	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	ND	U	0.016	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	70	43-148	10/07/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1413412-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1221	ND	U	0.025	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1232	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1242	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1248	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1254	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	
Aroclor 1260	ND	U	0.013	0.0085	1	09/25/14	10/07/14	KWG1413412	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	48	43-148	10/07/14	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
WS-091514-RB-SW03	K1409921-012	124
WS-091514-RB-SW04	K1409921-013	118
WS-091514-RB-SW05	K1409921-014	133
WS-091514-RB-SW02	K1409921-015	112
WS-091514-RB-SW01	K1409921-016	121
WS-091514-RB-FD10	K1409921-017	108
RINSE BLANK 9-15	K1409921-018	106
Method Blank	KWG1413166-3	109
Lab Control Sample	KWG1413166-1	97
Duplicate Lab Control Sample	KWG1413166-2	104

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 39-140

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Sediment

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
SE-091514-RB-SD11	K1409921-004	65
SE-091514-RB-SD10	K1409921-005	69
SE-091514-RB-SD09	K1409921-006	75
SE-091514-RB-SD08	K1409921-007	74
SE-091514-RB-SD07	K1409921-008	107
SE-091514-RB-SD06	K1409921-009	60
SE-091514-RB-SD05	K1409921-010	70
SE-091514-RB-SD12	K1409921-011	70
Method Blank	KWG1413412-4	48
SE-091514-RB-SD11MS	KWG1413412-1	56
SE-091514-RB-SD11DMS	KWG1413412-2	71
Lab Control Sample	KWG1413412-3	69

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 43-148

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/07/2014

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD11	**Units:**	mg/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1413412

		SE-091514-RB-SD11MS KWG1413412-1 Matrix Spike			SE-091514-RB-SD11DMS KWG1413412-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	0.369	0.632	58	0.440	0.633	70	23-145	17	40
Aroclor 1260	ND	0.392	0.632	62	0.474	0.633	75	24-148	19	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	10/04/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8082A	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413166

	Lab Control Sample KWG1413166-1 Lab Control Spike			Duplicate Lab Control Sample KWG1413166-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	0.169	0.200	84	0.157	0.200	79	60-103	7	30
Aroclor 1260	0.212	0.200	106 *	0.208	0.200	104 *	60-103	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/07/2014

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1413412

Lab Control Sample
KWG1413412-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	0.701	1.00	70	42-122
Aroclor 1260	0.655	1.00	65	50-124

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	10/04/2014
		Time Analyzed:	05:35

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Instrument ID:**	GC32.i
Lab Code:	KWG1413166-3	**File ID:**	J:\GC32\DATA\100314ULL.B\1003F007.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1413166

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413166-1	J:\GC32\DATA\100314ULL.B\1003F005.D	10/04/14	04:53
Duplicate Lab Control Sample	KWG1413166-2	J:\GC32\DATA\100314ULL.B\1003F006.D	10/04/14	05:14
WS-091514-RB-SW03	K1409921-012	J:\GC32\DATA\100314ULL.B\1003F008.D	10/04/14	05:56
WS-091514-RB-SW04	K1409921-013	J:\GC32\DATA\100314ULL.B\1003F009.D	10/04/14	06:17
WS-091514-RB-SW05	K1409921-014	J:\GC32\DATA\100314ULL.B\1003F010.D	10/04/14	06:38
WS-091514-RB-SW02	K1409921-015	J:\GC32\DATA\100314ULL.B\1003F011.D	10/04/14	06:59
WS-091514-RB-SW01	K1409921-016	J:\GC32\DATA\100314ULL.B\1003F012.D	10/04/14	07:21
WS-091514-RB-FD10	K1409921-017	J:\GC32\DATA\100314ULL.B\1003F013.D	10/04/14	07:42
RINSE BLANK 9-15	K1409921-018	J:\GC32\DATA\100314ULL.B\1003F014.D	10/04/14	08:03

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/07/2014
		Time Analyzed:	06:29

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Instrument ID:**	GC27.i
Lab Code:	KWG1413412-4	**File ID:**	J:\GC27\DATA\100614A.B\1006F113.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1413412

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413412-3	J:\GC27\DATA\100614A.B\1006F112.D	10/07/14	06:05
SE-091514-RB-SD11	K1409921-004	J:\GC27\DATA\100614A.B\1006F114.D	10/07/14	06:54
SE-091514-RB-SD11MS	KWG1413412-1	J:\GC27\DATA\100614A.B\1006F115.D	10/07/14	07:18
SE-091514-RB-SD11DMS	KWG1413412-2	J:\GC27\DATA\100614A.B\1006F116.D	10/07/14	07:42
SE-091514-RB-SD10	K1409921-005	J:\GC27\DATA\100614A.B\1006F117.D	10/07/14	08:07
SE-091514-RB-SD09	K1409921-006	J:\GC27\DATA\100614A.B\1006F118.D	10/07/14	08:31
SE-091514-RB-SD08	K1409921-007	J:\GC27\DATA\100614A.B\1006F119.D	10/07/14	08:55
SE-091514-RB-SD06	K1409921-009	J:\GC27\DATA\100614A.B\1006F120.D	10/07/14	09:20
SE-091514-RB-SD05	K1409921-010	J:\GC27\DATA\100614A.B\1006F121.D	10/07/14	09:44
SE-091514-RB-SD12	K1409921-011	J:\GC27\DATA\100614A.B\1006F122.D	10/07/14	10:08
SE-091514-RB-SD07	K1409921-008	J:\GC27\DATA\100614A.B\1006F125.D	10/07/14	11:21

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water	**Date Analyzed:**	10/04/2014
		Time Analyzed:	04:53

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Instrument ID:**	GC32.i
Lab Code:	KWG1413166-1	**File ID:**	J:\GC32\DATA\100314ULL.B\1003F005.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1413166

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413166-3	J:\GC32\DATA\100314ULL.B\1003F007.D	10/04/14	05:35
WS-091514-RB-SW03	K1409921-012	J:\GC32\DATA\100314ULL.B\1003F008.D	10/04/14	05:56
WS-091514-RB-SW04	K1409921-013	J:\GC32\DATA\100314ULL.B\1003F009.D	10/04/14	06:17
WS-091514-RB-SW05	K1409921-014	J:\GC32\DATA\100314ULL.B\1003F010.D	10/04/14	06:38
WS-091514-RB-SW02	K1409921-015	J:\GC32\DATA\100314ULL.B\1003F011.D	10/04/14	06:59
WS-091514-RB-SW01	K1409921-016	J:\GC32\DATA\100314ULL.B\1003F012.D	10/04/14	07:21
WS-091514-RB-FD10	K1409921-017	J:\GC32\DATA\100314ULL.B\1003F013.D	10/04/14	07:42
RINSE BLANK 9-15	K1409921-018	J:\GC32\DATA\100314ULL.B\1003F014.D	10/04/14	08:03

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/07/2014
		Time Analyzed:	06:05

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Instrument ID:**	GC27.i
Lab Code:	KWG1413412-3	**File ID:**	J:\GC27\DATA\100614A.B\1006F112.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1413412

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413412-4	J:\GC27\DATA\100614A.B\1006F113.D	10/07/14	06:29
SE-091514-RB-SD11	K1409921-004	J:\GC27\DATA\100614A.B\1006F114.D	10/07/14	06:54
SE-091514-RB-SD11MS	KWG1413412-1	J:\GC27\DATA\100614A.B\1006F115.D	10/07/14	07:18
SE-091514-RB-SD11DMS	KWG1413412-2	J:\GC27\DATA\100614A.B\1006F116.D	10/07/14	07:42
SE-091514-RB-SD10	K1409921-005	J:\GC27\DATA\100614A.B\1006F117.D	10/07/14	08:07
SE-091514-RB-SD09	K1409921-006	J:\GC27\DATA\100614A.B\1006F118.D	10/07/14	08:31
SE-091514-RB-SD08	K1409921-007	J:\GC27\DATA\100614A.B\1006F119.D	10/07/14	08:55
SE-091514-RB-SD06	K1409921-009	J:\GC27\DATA\100614A.B\1006F120.D	10/07/14	09:20
SE-091514-RB-SD05	K1409921-010	J:\GC27\DATA\100614A.B\1006F121.D	10/07/14	09:44
SE-091514-RB-SD12	K1409921-011	J:\GC27\DATA\100614A.B\1006F122.D	10/07/14	10:08
SE-091514-RB-SD07	K1409921-008	J:\GC27\DATA\100614A.B\1006F125.D	10/07/14	11:21

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590 **Column:** DB-35MS
Instrument ID: GC27.i

Level ID	File ID
A	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D
B	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D
C	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D
D	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D
E	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D
F	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D
G	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D
H	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D
I	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D
J	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D
K	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D
L	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D
M	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D
N	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D
O	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D
P	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F220.D
Q	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D
R	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F222.D
S	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D
T	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D
U	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F225.D
V	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D
W	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F227.D
X	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D
Y	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D
Z	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D
AA	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D
AB	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D
AC	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D
AD	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	1.94E+5	B	5.0	2.13E+5	C	50	1.66E+5	D	100	1.97E+5	E	200	1.76E+5
	F	500	1.74E+5												
Aroclor 1016 {1}	A	25	8000	B	50	7490	C	500	5590	D	1000	7920	E	2000	6510
	F	5000	5870												
Aroclor 1016 {2}	A	25	5790	B	50	5290	C	500	4300	D	1000	6090	E	2000	5080
	F	5000	4390												
Aroclor 1016 {3}	A	25	17900	B	50	18400	C	500	13700	D	1000	17600	E	2000	17000
	F	5000	14900												
Aroclor 1016 {4}	A	25	7960	B	50	7770	C	500	6230	D	1000	8360	E	2000	6980
	F	5000	6370												
Aroclor 1016 {5}	A	25	7930	B	50	7650	C	500	6340	D	1000	8420	E	2000	7180
	F	5000	6640												
Aroclor 1260 {1}	A	25	12600	B	50	12800	C	500	10300	D	1000	12300	E	2000	11000
	F	5000	10400												
Aroclor 1260 {2}	A	25	10100	B	50	9880	C	500	8350	D	1000	10000	E	2000	8930
	F	5000	8420												
Aroclor 1260 {3}	A	25	9550	B	50	9590	C	500	8400	D	1000	9990	E	2000	8950
	F	5000	8520												
Aroclor 1260 {4}	A	25	22400	B	50	23200	C	500	18900	D	1000	23000	E	2000	21100
	F	5000	21000												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590 **Column:** DB-35MS
Instrument ID: GC27.i

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	16700	B	50	18600	C	500	14700	D	1000	17600	E	2000	15900
	F	5000	15600												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590 **Column:** DB-35MS
Instrument ID: GC27.i

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	9.5		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	14.0		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	11.3		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	12.1		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	10.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	9.7		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	8.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	7.0		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	7.4		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	8.6		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 10/03/2014
Date Analyzed: 10/03/2014

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL13590
Units: ng/mL

File ID: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F235.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F236.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F237.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F238.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F239.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F240.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F241.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F242.D
\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F243.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	930	6900	6440	-7	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	890	5160	4580	-11	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	830	16600	13800	-17	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	860	7280	6290	-14	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	920	7360	6800	-8	NA	± 100 %	AverageRF
Aroclor 1016	1000	890	NA	NA	NA	-11	± 20 %	NA
Aroclor 1260 {1}	1000	880	11600	10100	-12	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	9290	9650	4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	9160	9460	3	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	21600	21600	0	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	990	16500	16300	-1	NA	± 100 %	AverageRF
Aroclor 1260	1000	990	NA	NA	NA	-1	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590 **Column:** DB-XLB
Instrument ID: GC27.i

Level ID	File ID
A	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F205.D
B	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F206.D
C	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F207.D
D	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F208.D
E	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F209.D
F	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F210.D
G	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F211.D
H	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F212.D
I	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F213.D
J	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F214.D
K	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F215.D
L	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F216.D
M	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F217.D
N	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F218.D
O	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F219.D
P	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F220.D
Q	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D
R	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F222.D
S	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F223.D
T	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F224.D
U	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F225.D
V	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F226.D
W	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F227.D
X	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F228.D
Y	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D
Z	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D
AA	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D
AB	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D
AC	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D
AD	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F234.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	1.14E+5	B	5.0	1.19E+5	C	50	1.05E+5	D	100	1.27E+5	E	200	1.14E+5
	F	500	1.15E+5												
Aroclor 1016 {1}	A	25	4140	B	50	3980	C	500	3070	D	1000	4420	E	2000	3720
	F	5000	3460												
Aroclor 1016 {2}	A	25	5220	B	50	5080	C	500	3830	D	1000	5410	E	2000	4590
	F	5000	4330												
Aroclor 1016 {3}	A	25	5420	B	50	5670	C	500	4520	D	1000	6260	E	2000	5250
	F	5000	5100												
Aroclor 1016 {4}	A	25	3910	B	50	3840	C	500	3180	D	1000	4230	E	2000	3660
	F	5000	3470												
Aroclor 1016 {5}	A	25	3610	B	50	3690	C	500	3060	D	1000	4100	E	2000	3580
	F	5000	3420												
Aroclor 1260 {1}	A	25	2890	B	50	3620	C	500	3080	D	1000	3770	E	2000	3460
	F	5000	3330												
Aroclor 1260 {2}	A	25	5500	B	50	6250	C	500	5270	D	1000	6340	E	2000	5840
	F	5000	5820												
Aroclor 1260 {3}	A	25	5080	B	50	5750	C	500	4940	D	1000	5820	E	2000	5370
	F	5000	5400												
Aroclor 1260 {4}	A	25	12700	B	50	13800	C	500	11900	D	1000	14400	E	2000	13600
	F	5000	14100												

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590
Instrument ID: GC27.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	8100	B	50	8450	C	500	7560	D	1000	9110	E	2000	8420
	F	5000	8520												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/03/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13590 **Column:** DB-XLB
Instrument ID: GC27.i

		Calibration Evaluation				
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**
Decachlorobiphenyl	SURR	AverageRF	% RSD	6.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	12.8		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	12.7		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	10.9		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	9.8		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	9.5		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	9.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	7.1		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	6.5		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	7.1		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	6.1		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 10/03/2014
Date Analyzed: 10/03/2014

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL13590
Units: ng/mL

File ID: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F235.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F236.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F237.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F238.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F239.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F240.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F241.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F242.D
\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F243.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	890	3800	3390	-11	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	890	4740	4220	-11	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	910	5370	4880	-9	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	910	3720	3390	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	930	3580	3330	-7	NA	± 100 %	AverageRF
Aroclor 1016	1000	910	NA	NA	NA	-9	± 20 %	NA
Aroclor 1260 {1}	1000	1000	3360	3360	0	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1100	5840	6230	7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	5400	5500	2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	13400	13800	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1000	8360	8410	1	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	2	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-35MS
Instrument ID: GC32.i

Level ID	File ID
A	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D
B	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D
C	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D
D	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D
E	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D
F	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F110.D
G	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
H	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
I	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D
J	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D
K	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D
L	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D
M	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
N	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
O	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D
P	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D
Q	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D
R	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D
S	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
T	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D
U	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D
V	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D
W	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D
X	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D
Y	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D
Z	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D
AA	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D
AB	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D
AC	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D
AD	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	0.25	6.53E+5	B	0.50	6.05E+5	C	2.5	5.54E+5	D	5.0	5.14E+5	E	25	4.46E+5
	F	50	4.34E+5												
Aroclor 1016 {1}	A	2.5	13500	B	5.0	12500	C	25	13100	D	50	12900	E	250	11400
	F	500	11100												
Aroclor 1016 {2}	A	2.5	12400	B	5.0	11700	C	25	12100	D	50	11600	E	250	10200
	F	500	9700												
Aroclor 1016 {3}	A	2.5	32800	B	5.0	33400	C	25	32600	D	50	30300	E	250	28600
	F	500	26400												
Aroclor 1016 {4}	A	2.5	22500	B	5.0	21000	C	25	21300	D	50	20800	E	250	18800
	F	500	18800												
Aroclor 1016 {5}	A	2.5	20400	B	5.0	17500	C	25	18000	D	50	17300	E	250	15700
	F	500	15600												
Aroclor 1260 {1}	A	2.5	14000	B	5.0	13300	C	25	13300	D	50	13300	E	250	12500
	F	500	12500												
Aroclor 1260 {2}	A	2.5	26100	B	5.0	23000	C	25	22500	D	50	21400	E	250	19100
	F	500	18600												
Aroclor 1260 {3}	A	2.5	24700	B	5.0	23400	C	25	23600	D	50	22600	E	250	20100
	F	500	19500												
Aroclor 1260 {4}	A	2.5	57700	B	5.0	53500	C	25	49500	D	50	46200	E	250	42000
	F	500	41700												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-35MS
Instrument ID: GC32.i

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	2.5	47000	B	5.0	40900	C	25	39300	D	50	36900	E	250	32900
	F	500	32200												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-35MS
Instrument ID: GC32.i

		Calibration Evaluation				
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**
Decachlorobiphenyl	SURR	AverageRF	% RSD	16.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	7.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	9.5		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	9.0		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	7.1		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	10.2		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	4.5		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	12.6		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	9.3		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.2		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	14.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 06/25/2014
Date Analyzed: 06/25/2014

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL13402
Units: ng/mL

File ID: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F135.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F136.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F137.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F138.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F139.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F140.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F141.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F142.D
\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F143.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	100	100	12400	12400	0	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	92	11300	10400	-8	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	83	30700	25600	-17	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	92	20500	18900	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	91	17400	15900	-9	NA	± 100 %	AverageRF
Aroclor 1016	100	92	NA	NA	NA	-8	± 20 %	NA
Aroclor 1260 {1}	100	97	13200	12800	-3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	21800	24800	14	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	22300	24700	11	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	48400	51500	6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	100	38200	40100	5	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	7	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-XLB
Instrument ID: GC32.i

Level ID	File ID
A	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F105.D
B	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F106.D
C	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F107.D
D	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F108.D
E	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F109.D
F	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F110.D
G	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F111.D
H	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D
I	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F113.D
J	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F114.D
K	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F115.D
L	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F116.D
M	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
N	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D
O	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D
P	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D
Q	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F121.D
R	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F122.D
S	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F123.D
T	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D
U	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F125.D
V	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F126.D
W	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F127.D
X	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F128.D
Y	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D
Z	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D
AA	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D
AB	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D
AC	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D
AD	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	0.25	9.82E+5	B	0.50	8.80E+5	C	2.5	7.69E+5	D	5.0	7.11E+5	E	25	6.16E+5
Aroclor 1016 {1}	A	2.5	22300	B	5.0	23100	C	25	22600	D	50	21600	E	250	19700
	F	500	18700												
Aroclor 1016 {2}	A	2.5	39600	B	5.0	36800	C	25	32700	D	50	30600	E	250	27500
	F	500	26400												
Aroclor 1016 {3}	A	2.5	33900	B	5.0	33300	C	25	32300	D	50	31200	E	250	29100
	F	500	27900												
Aroclor 1016 {4}	A	2.5	30000	B	5.0	28000	C	25	26100	D	50	24800	E	250	22900
	F	500	22000												
Aroclor 1016 {5}	A	2.5	27900	B	5.0	25700	C	25	24700	D	50	23800	E	250	22300
	F	500	21600												
Aroclor 1260 {1}	A	2.5	29200	B	5.0	27500	C	25	22800	D	50	21800	E	250	20700
	F	500	20100												
Aroclor 1260 {2}	A	2.5	38200	B	5.0	33800	C	25	32500	D	50	31100	E	250	28100
	F	500	27400												
Aroclor 1260 {3}	A	2.5	38900	B	5.0	35800	C	25	32800	D	50	31100	E	250	28400
	F	500	27500												
Aroclor 1260 {4}	A	2.5	84600	B	5.0	79100	C	25	71600	D	50	66800	E	250	62200
	F	500	61200												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-XLB
Instrument ID: GC32.i

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	2.5	54200	B	5.0	52000	C	25	48300	D	50	45100	E	250	41000
	F	500	39500												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 06/25/2014

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL13402 **Column:** DB-XLB
Instrument ID: GC32.i

		Calibration Evaluation				
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.1		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	8.1		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	16.1		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	7.6		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	11.9		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	9.5		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	15.9		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	12.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	13.5		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.3		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	12.7		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 06/25/2014
Date Analyzed: 06/25/2014

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL13402
Units: ng/mL

File ID: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F135.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F136.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F137.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F138.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F139.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F140.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F141.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F142.D
\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F143.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	100	100	21300	21200	0	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	93	32300	30200	-7	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	94	31300	29600	-6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	91	25600	23400	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	95	24300	23000	-5	NA	± 100 %	AverageRF
Aroclor 1016	100	95	NA	NA	NA	-5	± 20 %	NA
Aroclor 1260 {1}	100	95	23700	22400	-5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	31800	36400	14	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	120	32400	37600	16	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	120	70900	81600	15	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	100	46700	47600	2	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	8	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/04/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	06/25/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13402
		Analysis Lot:	KWG1413521
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F003.D	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	5.0	5.0	534000	529000	-1	NA	± 20 %	AverageRF
Aroclor 1016 {1}	50	41	12400	10100	-18	NA	± 100 %	AverageRF
Aroclor 1016 {2}	50	43	11300	9790	-13	NA	± 100 %	AverageRF
Aroclor 1016 {3}	50	43	30700	26600	-13	NA	± 100 %	AverageRF
Aroclor 1016 {4}	50	44	20500	18100	-12	NA	± 100 %	AverageRF
Aroclor 1016 {5}	50	46	17400	16000	-8	NA	± 100 %	AverageRF
Aroclor 1016	50	44	NA	NA	NA	-13	± 20 %	NA
Aroclor 1260 {1}	50	47	13200	12400	-6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	50	48	21800	20700	-5	NA	± 100 %	AverageRF
Aroclor 1260 {3}	50	49	22300	22000	-2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	50	48	48400	46700	-4	NA	± 100 %	AverageRF
Aroclor 1260 {5}	50	48	38200	36700	-4	NA	± 100 %	AverageRF
Aroclor 1260	50	48	NA	NA	NA	-4	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/04/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	06/25/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13402
		Analysis Lot:	KWG1413521
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F003.D	**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	5.0	5.4	792000	848000	7	NA	± 20 %	AverageRF
Aroclor 1016 {1}	50	47	21300	20100	-6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	50	45	32300	29100	-10	NA	± 100 %	AverageRF
Aroclor 1016 {3}	50	50	31300	31500	1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	50	51	25600	26100	2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	50	53	24300	25700	5	NA	± 100 %	AverageRF
Aroclor 1016	50	49	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	50	60	23700	28600	21	NA	± 100 %	AverageRF
Aroclor 1260 {2}	50	55	31800	35200	11	NA	± 100 %	AverageRF
Aroclor 1260 {3}	50	55	32400	35500	9	NA	± 100 %	AverageRF
Aroclor 1260 {4}	50	53	70900	75100	6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	50	54	46700	50500	8	NA	± 100 %	AverageRF
Aroclor 1260	50	56	NA	NA	NA	11	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/04/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	06/25/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13402
		Analysis Lot:	KWG1413521
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F015.D	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	5.0	5.3	534000	567000	6	NA	± 20 %	AverageRF
Aroclor 1016 {1}	50	45	12400	11100	-11	NA	± 100 %	AverageRF
Aroclor 1016 {2}	50	44	11300	10000	-11	NA	± 100 %	AverageRF
Aroclor 1016 {3}	50	47	30700	28900	-6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	50	48	20500	19800	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	50	50	17400	17400	0	NA	± 100 %	AverageRF
Aroclor 1016	50	47	NA	NA	NA	-6	± 20 %	NA
Aroclor 1260 {1}	50	51	13200	13300	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	50	51	21800	22300	2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	50	52	22300	23300	5	NA	± 100 %	AverageRF
Aroclor 1260 {4}	50	51	48400	49800	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	50	51	38200	39200	3	NA	± 100 %	AverageRF
Aroclor 1260	50	51	NA	NA	NA	3	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/04/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 06/25/2014
Calibration ID: CAL13402
Analysis Lot: KWG1413521
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F015.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	5.0	5.7	792000	896000	13	NA	± 20 %	AverageRF
Aroclor 1016 {1}	50	50	21300	21400	0	NA	± 100 %	AverageRF
Aroclor 1016 {2}	50	48	32300	31300	-3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	50	53	31300	32900	5	NA	± 100 %	AverageRF
Aroclor 1016 {4}	50	55	25600	28000	9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	50	56	24300	27400	13	NA	± 100 %	AverageRF
Aroclor 1016	50	52	NA	NA	NA	5	± 20 %	NA
Aroclor 1260 {1}	50	66	23700	31300	32	NA	± 100 %	AverageRF
Aroclor 1260 {2}	50	59	31800	37500	18	NA	± 100 %	AverageRF
Aroclor 1260 {3}	50	58	32400	37600	16	NA	± 100 %	AverageRF
Aroclor 1260 {4}	50	56	70900	79800	13	NA	± 100 %	AverageRF
Aroclor 1260 {5}	50	58	46700	54300	16	NA	± 100 %	AverageRF
Aroclor 1260	50	59	NA	NA	NA	19	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	10/03/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13590
		Analysis Lot:	KWG1413671
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F110.D	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	46	186000	171000	-8	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	530	6900	7310	6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	530	5160	5430	5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	450	16600	14800	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	490	7280	7170	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	490	7360	7160	-3	NA	± 100 %	AverageRF
Aroclor 1016	500	500	NA	NA	NA	-1	± 20 %	NA
Aroclor 1260 {1}	500	460	11600	10500	-9	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	460	9290	8460	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	460	9160	8450	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	450	21600	19300	-11	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	450	16500	15000	-9	NA	± 100 %	AverageRF
Aroclor 1260	500	450	NA	NA	NA	-9	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	10/03/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13590
		Analysis Lot:	KWG1413671
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F110.D	**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	45	116000	103000	-11	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	520	3800	3950	4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	510	4740	4840	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	480	5370	5160	-4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	470	3720	3510	-6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	470	3580	3360	-6	NA	± 100 %	AverageRF
Aroclor 1016	500	490	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	500	450	3360	3030	-10	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	420	5840	4920	-16	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	430	5400	4630	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	420	13400	11300	-16	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	440	8360	7310	-13	NA	± 100 %	AverageRF
Aroclor 1260	500	430	NA	NA	NA	-14	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 10/03/2014
Calibration ID: CAL13590
Analysis Lot: KWG1413671
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F123.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	47	186000	175000	-6	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	530	6900	7330	6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	540	5160	5610	9	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	520	16600	17200	4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	530	7280	7710	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	520	7360	7700	5	NA	± 100 %	AverageRF
Aroclor 1016	500	530	NA	NA	NA	6	± 20 %	NA
Aroclor 1260 {1}	500	490	11600	11200	-3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	480	9290	8870	-5	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	480	9160	8790	-4	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	460	21600	19900	-8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	470	16500	15400	-7	NA	± 100 %	AverageRF
Aroclor 1260	500	470	NA	NA	NA	-5	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 10/03/2014
Calibration ID: CAL13590
Analysis Lot: KWG1413671
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F123.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	46	116000	106000	-8	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	510	3800	3900	3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	520	4740	4910	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	490	5370	5270	-2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	490	3720	3670	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	490	3580	3540	-1	NA	± 100 %	AverageRF
Aroclor 1016	500	500	NA	NA	NA	0	± 20 %	NA
Aroclor 1260 {1}	500	460	3360	3090	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	430	5840	5020	-14	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	440	5400	4730	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	430	13400	11500	-15	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	440	8360	7330	-12	NA	± 100 %	AverageRF
Aroclor 1260	500	440	NA	NA	NA	-12	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	10/03/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13590
		Analysis Lot:	KWG1413671
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F127.D	**Column ID:**	DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	48	186000	177000	-5	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	500	6900	6950	1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	510	5160	5260	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	490	16600	16100	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	500	7280	7280	0	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	500	7360	7290	-1	NA	± 100 %	AverageRF
Aroclor 1016	500	500	NA	NA	NA	0	± 20 %	NA
Aroclor 1260 {1}	500	480	11600	11000	-5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	470	9290	8800	-5	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	480	9160	8830	-4	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	460	21600	20000	-7	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	470	16500	15500	-6	NA	± 100 %	AverageRF
Aroclor 1260	500	470	NA	NA	NA	-5	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/07/2014

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	10/03/2014
Analysis Method:	8082A	**Calibration ID:**	CAL13590
		Analysis Lot:	KWG1413671
		Units:	ng/mL
File ID:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F127.D	**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	50	47	116000	109000	-6	NA	± 20 %	AverageRF
Aroclor 1016 {1}	500	510	3800	3880	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	500	510	4740	4830	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	500	500	5370	5340	-1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	500	500	3720	3730	0	NA	± 100 %	AverageRF
Aroclor 1016 {5}	500	500	3580	3550	-1	NA	± 100 %	AverageRF
Aroclor 1016	500	500	NA	NA	NA	1	± 20 %	NA
Aroclor 1260 {1}	500	480	3360	3220	-4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	500	460	5840	5330	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	500	460	5400	5000	-7	NA	± 100 %	AverageRF
Aroclor 1260 {4}	500	450	13400	12100	-10	NA	± 100 %	AverageRF
Aroclor 1260 {5}	500	460	8360	7720	-8	NA	± 100 %	AverageRF
Aroclor 1260	500	460	NA	NA	NA	-7	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A **Analysis Lot:** KWG1413671
Instrument ID: GC27.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1006F103.D	Continuing Calibration Verification	KWG1413671-1	10/7/2014	02:27		10/7/2014	02:27
1006F104.D	Instrument Blank	KWG1413671-2	10/7/2014	02:51		10/7/2014	02:51
1006F105.D	ZZZZZZ	ZZZZZZ	10/7/2014	03:16		10/7/2014	03:16
1006F106.D	ZZZZZZ	ZZZZZZ	10/7/2014	03:40		10/7/2014	03:40
1006F107.D	ZZZZZZ	ZZZZZZ	10/7/2014	04:04		10/7/2014	04:04
1006F108.D	ZZZZZZ	ZZZZZZ	10/7/2014	04:28		10/7/2014	04:28
1006F109.D	ZZZZZZ	ZZZZZZ	10/7/2014	04:52		10/7/2014	04:52
1006F110.D	Continuing Calibration Verification	KWG1413671-3	10/7/2014	05:17		10/7/2014	05:17
1006F111.D	Instrument Blank	KWG1413671-4	10/7/2014	05:41		10/7/2014	05:41
1006F112.D	Lab Control Sample	KWG1413412-3	10/7/2014	06:05		10/7/2014	06:05
1006F113.D	Method Blank	KWG1413412-4	10/7/2014	06:29		10/7/2014	06:29
1006F114.D	SE-091514-RB-SD11	K1409921-004	10/7/2014	06:54		10/7/2014	06:54
1006F115.D	SE-091514-RB-SD11MS	KWG1413412-1	10/7/2014	07:18		10/7/2014	07:18
1006F116.D	SE-091514-RB-SD11DMS	KWG1413412-2	10/7/2014	07:42		10/7/2014	07:42
1006F117.D	SE-091514-RB-SD10	K1409921-005	10/7/2014	08:07		10/7/2014	08:07
1006F118.D	SE-091514-RB-SD09	K1409921-006	10/7/2014	08:31		10/7/2014	08:31
1006F119.D	SE-091514-RB-SD08	K1409921-007	10/7/2014	08:55		10/7/2014	08:55
1006F120.D	SE-091514-RB-SD06	K1409921-009	10/7/2014	09:20		10/7/2014	09:20
1006F121.D	SE-091514-RB-SD05	K1409921-010	10/7/2014	09:44		10/7/2014	09:44
1006F122.D	SE-091514-RB-SD12	K1409921-011	10/7/2014	10:08		10/7/2014	10:08
1006F123.D	Continuing Calibration Verification	KWG1413671-5	10/7/2014	10:32		10/7/2014	10:32
1006F124.D	Instrument Blank	KWG1413671-6	10/7/2014	10:57		10/7/2014	10:57
1006F125.D	SE-091514-RB-SD07	K1409921-008	10/7/2014	11:21		10/7/2014	11:21
1006F127.D	Continuing Calibration Verification	KWG1413671-7	10/7/2014	12:08		10/7/2014	12:08
1006F128.D	Instrument Blank	KWG1413671-8	10/7/2014	12:33		10/7/2014	12:33

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A **Analysis Lot:** KWG1413521
Instrument ID: GC32.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1003F003.D	Continuing Calibration Verification	KWG1413521-1	10/4/2014	04:11		10/4/2014	04:11
1003F004.D	Instrument Blank	KWG1413521-2	10/4/2014	04:32		10/4/2014	04:32
1003F005.D	Lab Control Sample	KWG1413166-1	10/4/2014	04:53		10/4/2014	04:53
1003F006.D	Duplicate Lab Control Sample	KWG1413166-2	10/4/2014	05:14		10/4/2014	05:14
1003F007.D	Method Blank	KWG1413166-3	10/4/2014	05:35		10/4/2014	05:35
1003F008.D	WS-091514-RB-SW03	K1409921-012	10/4/2014	05:56		10/4/2014	05:56
1003F009.D	WS-091514-RB-SW04	K1409921-013	10/4/2014	06:17		10/4/2014	06:17
1003F010.D	WS-091514-RB-SW05	K1409921-014	10/4/2014	06:38		10/4/2014	06:38
1003F011.D	WS-091514-RB-SW02	K1409921-015	10/4/2014	06:59		10/4/2014	06:59
1003F012.D	WS-091514-RB-SW01	K1409921-016	10/4/2014	07:21		10/4/2014	07:21
1003F013.D	WS-091514-RB-FD10	K1409921-017	10/4/2014	07:42		10/4/2014	07:42
1003F014.D	RINSE BLANK 9-15	K1409921-018	10/4/2014	08:03		10/4/2014	08:03
1003F015.D	Continuing Calibration Verification	KWG1413521-3	10/4/2014	08:24		10/4/2014	08:24
1003F016.D	Instrument Blank	KWG1413521-4	10/4/2014	08:45		10/4/2014	08:45

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Water		

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Extraction Lot:**	KWG1413166
Analysis Method:	8082A	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
WS-091514-RB-SW03	K1409921-012	09/15/14	09/16/14	1000mL	2mL	NA	
WS-091514-RB-SW04	K1409921-013	09/15/14	09/16/14	1000mL	2mL	NA	
WS-091514-RB-SW05	K1409921-014	09/15/14	09/16/14	1010mL	2mL	NA	
WS-091514-RB-SW02	K1409921-015	09/15/14	09/16/14	990mL	2mL	NA	
WS-091514-RB-SW01	K1409921-016	09/15/14	09/16/14	1020mL	2mL	NA	
WS-091514-RB-FD10	K1409921-017	09/15/14	09/16/14	1010mL	2mL	NA	
RINSE BLANK 9-15	K1409921-018	09/15/14	09/16/14	1000mL	2mL	NA	
Method Blank	KWG1413166-3	NA	NA	1010mL	2mL	NA	
Lab Control Sample	KWG1413166-1	NA	NA	1000mL	2mL	NA	
Duplicate Lab Control Sample	KWG1413166-2	NA	NA	1000mL	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/25/2014
Sample Matrix:	Sediment		

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Extraction Lot:**	KWG1413412
Analysis Method:	8082A	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SE-091514-RB-SD11	K1409921-004	09/15/14	09/16/14	20.051g	10mL	78.5	
SE-091514-RB-SD10	K1409921-005	09/15/14	09/16/14	20.143g	10mL	63	
SE-091514-RB-SD09	K1409921-006	09/15/14	09/16/14	20.026g	10mL	74.6	
SE-091514-RB-SD08	K1409921-007	09/15/14	09/16/14	20.087g	10mL	62.6	
SE-091514-RB-SD07	K1409921-008	09/15/14	09/16/14	20.104g	10mL	63.7	
SE-091514-RB-SD06	K1409921-009	09/15/14	09/16/14	20.109g	10mL	69.4	
SE-091514-RB-SD05	K1409921-010	09/15/14	09/16/14	20.298g	10mL	23.6	
SE-091514-RB-SD12	K1409921-011	09/15/14	09/16/14	20.388g	10mL	77.9	
Method Blank	KWG1413412-4	NA	NA	20.410g	10mL	NA	
SE-091514-RB-SD11MS	KWG1413412-1	09/15/14	09/16/14	20.153g	10mL	78.5	
SE-091514-RB-SD11DMS	KWG1413412-2	09/15/14	09/16/14	20.116g	10mL	78.5	
Lab Control Sample	KWG1413412-3	NA	NA	10.000g	10mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW03	**Units:**	ug/L
Lab Code:	K1409921-012	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0050	0.00096	0.0022	0.0038	53.3	JP	1	10/04/14
Aroclor 1254	0.0050	0.00096	0.0024	0.0041	52.3	JP	1	10/04/14
Aroclor 1260	0.0050	0.00096	0.0015	0.0017	12.5	J	1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW04	**Units:**	ug/L
Lab Code:	K1409921-013	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0050	0.00096	0.0026	0.0050	63.2	JP	1	10/04/14
Aroclor 1254	0.0050	0.00096	0.0025	0.0046	59.2	JP	1	10/04/14
Aroclor 1260	0.0050	0.00096	0.0022	0.0026	16.7	J	1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW05	**Units:**	ug/L
Lab Code:	K1409921-014	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0050	0.00096	0.0038	0.0058	41.7	JP	1	10/04/14
Aroclor 1254	0.0050	0.00096	0.0088	0.011	22.2		1	10/04/14
Aroclor 1260	0.0050	0.00096	0.0056	0.0065	14.9		1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW02	**Units:**	ug/L
Lab Code:	K1409921-015	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0051	0.00097	0.0056	0.0072	25.0		1	10/04/14
Aroclor 1254	0.0051	0.00097	0.017	0.019	11.1		1	10/04/14
Aroclor 1260	0.0051	0.00097	0.0095	0.012	23.3		1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-SW01	**Units:**	ug/L
Lab Code:	K1409921-016	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0050	0.00096	0.0016	0.0023	35.9	J	1	10/04/14
Aroclor 1254	0.0050	0.00096	0.0010	0.0024	82.4	JP	1	10/04/14
Aroclor 1260	0.0050	0.00096	0.0020	0.0023	14.0	J	1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014
		Date Extracted:	09/19/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	WS-091514-RB-FD10	**Units:**	ug/L
Lab Code:	K1409921-017	**Basis:**	NA
		Level:	Low
Extraction Method:	EPA 3535A		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.0050	0.00096	0.0029	0.0040	31.9	J	1	10/04/14
Aroclor 1254	0.0050	0.00096	0.0042	0.0062	38.5	J	1	10/04/14
Aroclor 1260	0.0050	0.00096	0.0025	0.0031	21.4	J	1	10/04/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD10	**Units:**	mg/Kg
Lab Code:	K1409921-005	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.020	0.0085	0.0092	0.0096	4.3	J	1	10/07/14
Aroclor 1254	0.020	0.0085	0.041	0.044	7.1		1	10/07/14
Aroclor 1260	0.020	0.0085	0.025	0.027	7.7		1	10/07/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD08	**Units:**	mg/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.020	0.0085	0.013	0.014	7.4	J	1	10/07/14
Aroclor 1254	0.020	0.0085	0.18	0.19	5.4		1	10/07/14
Aroclor 1260	0.020	0.0085	0.13	0.16	20.7		1	10/07/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD07	**Units:**	mg/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.020	0.0085	0.051	0.11	73.3	P	1	10/07/14
Aroclor 1254	0.020	0.0085	0.54	0.58	7.1		1	10/07/14
Aroclor 1260	0.020	0.0085	0.37	0.41	10.3		1	10/07/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD06	**Units:**	mg/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	0.018	0.0085	0.56	0.71	23.6		1	10/07/14
Aroclor 1260	0.018	0.0085	0.19	0.20	5.1		1	10/07/14

Confirmation Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014
		Date Extracted:	09/25/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	SE-091514-RB-SD05	**Units:**	mg/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082A		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.053	0.018	0.065	0.070	7.4		1	10/07/14
Aroclor 1254	0.053	0.018	0.25	0.27	7.7		1	10/07/14
Aroclor 1260	0.053	0.018	0.12	0.15	22.2		1	10/07/14

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
SE-091514-RB-SD11	K1409921-004	09/15/2014	09/16/2014
SE-091514-RB-SD10	K1409921-005	09/15/2014	09/16/2014
SE-091514-RB-SD09	K1409921-006	09/15/2014	09/16/2014
SE-091514-RB-SD08	K1409921-007	09/15/2014	09/16/2014
SE-091514-RB-SD07	K1409921-008	09/15/2014	09/16/2014
SE-091514-RB-SD06	K1409921-009	09/15/2014	09/16/2014
SE-091514-RB-SD05	K1409921-010	09/15/2014	09/16/2014
SE-091514-RB-SD12	K1409921-011	09/15/2014	09/16/2014
WS-091514-RB-SW03	K1409921-012	09/15/2014	09/16/2014
WS-091514-RB-SW04	K1409921-013	09/15/2014	09/16/2014
WS-091514-RB-SW05	K1409921-014	09/15/2014	09/16/2014
WS-091514-RB-SW02	K1409921-015	09/15/2014	09/16/2014
WS-091514-RB-SW01	K1409921-016	09/15/2014	09/16/2014
WS-091514-RB-FD10	K1409921-017	09/15/2014	09/16/2014
RINSE BLANK 9-15	K1409921-018	09/15/2014	09/16/2014
Trip Blank	K1409921-019	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-SW03	**Units:**	ug/L
Lab Code:	K1409921-012	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	73-122	09/20/14	Acceptable
Toluene-d8	99	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	95	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-SW04	**Units:**	ug/L
Lab Code:	K1409921-013	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	09/20/14	Acceptable
Toluene-d8	97	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	96	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-SW05	**Units:**	ug/L
Lab Code:	K1409921-014	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	**0.070**	J	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	73-122	09/20/14	Acceptable
Toluene-d8	97	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	97	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-SW02	**Units:**	ug/L
Lab Code:	K1409921-015	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	73-122	09/20/14	Acceptable
Toluene-d8	97	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	97	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-SW01	**Units:**	ug/L
Lab Code:	K1409921-016	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	73-122	09/20/14	Acceptable
Toluene-d8	96	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	96	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	WS-091514-RB-FD10	**Units:**	ug/L
Lab Code:	K1409921-017	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	**0.060**	J	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	73-122	09/20/14	Acceptable
Toluene-d8	95	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	96	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	RINSE BLANK 9-15	**Units:**	ug/L
Lab Code:	K1409921-018	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412904	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412904	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412904	
Acetone	**11**	J	20	3.3	1	09/20/14	09/20/14	KWG1412904	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412904	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412904	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412904	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412904	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412904	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412904	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412904	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412904	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412904	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412904	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412904	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412904	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412904	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412904	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412904	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412904	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412904	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412904	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	09/20/14	Acceptable
Toluene-d8	97	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	92	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1409921-019	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412904	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412904	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412904	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412904	
Carbon Disulfide	**0.080**	J	0.50	0.069	1	09/20/14	09/20/14	KWG1412904	
Methylene Chloride	**0.10**	J	2.0	0.10	1	09/20/14	09/20/14	KWG1412904	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412904	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412904	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412904	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412904	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412904	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412904	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412904	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412904	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412904	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412904	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412904	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412904	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412904	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412904	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412904	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412904	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	73-122	09/20/14	Acceptable
Toluene-d8	98	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	91	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1412904-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412904	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412904	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412904	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412904	
Carbon Disulfide	**0.12**	J	0.50	0.069	1	09/20/14	09/20/14	KWG1412904	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412904	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412904	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412904	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412904	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412904	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412904	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412904	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412904	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412904	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412904	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412904	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412904	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412904	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412904	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412904	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412904	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/20/14	09/20/14	KWG1412904	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	73-122	09/20/14	Acceptable
Toluene-d8	97	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	93	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1412906-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	0.50	0.068	1	09/20/14	09/20/14	KWG1412906	
Vinyl Chloride	ND	U	0.50	0.075	1	09/20/14	09/20/14	KWG1412906	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/20/14	09/20/14	KWG1412906	
Acetone	ND	U	20	3.3	1	09/20/14	09/20/14	KWG1412906	
Carbon Disulfide	ND	U	0.50	0.069	1	09/20/14	09/20/14	KWG1412906	
Methylene Chloride	ND	U	2.0	0.10	1	09/20/14	09/20/14	KWG1412906	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/20/14	09/20/14	KWG1412906	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/20/14	09/20/14	KWG1412906	
2-Butanone (MEK)	ND	U	20	1.9	1	09/20/14	09/20/14	KWG1412906	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/20/14	09/20/14	KWG1412906	
Benzene	ND	U	0.50	0.062	1	09/20/14	09/20/14	KWG1412906	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/20/14	09/20/14	KWG1412906	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	09/20/14	09/20/14	KWG1412906	
Toluene	ND	U	0.50	0.054	1	09/20/14	09/20/14	KWG1412906	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/20/14	09/20/14	KWG1412906	
2-Hexanone	ND	U	20	2.7	1	09/20/14	09/20/14	KWG1412906	
Dibromochloromethane	ND	U	0.50	0.14	1	09/20/14	09/20/14	KWG1412906	
Ethylbenzene	ND	U	0.50	0.050	1	09/20/14	09/20/14	KWG1412906	
m,p-Xylenes	ND	U	0.50	0.11	1	09/20/14	09/20/14	KWG1412906	
o-Xylene	ND	U	0.50	0.074	1	09/20/14	09/20/14	KWG1412906	
Styrene	ND	U	0.50	0.089	1	09/20/14	09/20/14	KWG1412906	
Bromoform	ND	U	0.50	0.16	1	09/20/14	09/20/14	KWG1412906	
1,2,4-Trichlorobenzene	**0.10**	J	2.0	0.096	1	09/20/14	09/20/14	KWG1412906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	73-122	09/20/14	Acceptable
Toluene-d8	95	65-144	09/20/14	Acceptable
4-Bromofluorobenzene	98	68-117	09/20/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD11	**Units:**	ug/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	4.8	0.18	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	4.8	0.18	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	4.8	0.25	1	09/19/14	09/19/14	KWG1412873	
Acetone	**36**		19	2.9	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**0.12**	J	4.8	0.092	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**2.7**	J	9.5	0.16	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	4.8	0.12	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	4.8	0.12	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**2.8**	J	19	0.90	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	4.8	0.094	1	09/19/14	09/19/14	KWG1412873	
Benzene	**0.57**	J	4.8	0.054	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	4.8	0.15	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	19	1.8	1	09/19/14	09/19/14	KWG1412873	
Toluene	**0.88**	J	4.8	0.15	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	4.8	0.16	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	19	0.93	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	4.8	0.18	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	ND	U	4.8	0.094	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	4.8	0.10	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	4.8	0.081	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	4.8	0.14	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	4.8	0.14	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	19	0.13	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	82-146	09/19/14	Acceptable
Toluene-d8	97	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	99	88-127	09/19/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD10	**Units:**	ug/Kg
Lab Code:	K1409921-005	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	7.9	0.29	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	7.9	0.29	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	7.9	0.40	1	09/19/14	09/19/14	KWG1412873	
Acetone	**150**		32	4.6	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**20**		7.9	0.15	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**3.6**	J	16	0.26	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	7.9	0.19	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	7.9	0.19	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**33**		32	1.5	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	7.9	0.15	1	09/19/14	09/19/14	KWG1412873	
Benzene	**0.19**	J	7.9	0.085	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	7.9	0.24	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	32	2.9	1	09/19/14	09/19/14	KWG1412873	
Toluene	**13**		7.9	0.24	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	7.9	0.26	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	32	1.5	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	7.9	0.29	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	**2.2**	J	7.9	0.15	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	7.9	0.16	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	7.9	0.13	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	7.9	0.23	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	7.9	0.23	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	32	0.21	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	82-146	09/19/14	Acceptable
Toluene-d8	95	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	91	88-127	09/19/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD09	**Units:**	ug/Kg
Lab Code:	K1409921-006	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	7.5	0.27	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	7.5	0.27	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	7.5	0.38	1	09/19/14	09/19/14	KWG1412873	
Acetone	**130**		30	4.4	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**1.0**	J	7.5	0.14	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**3.9**	J	15	0.24	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	7.5	0.18	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	7.5	0.18	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**10**	J	30	1.4	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	7.5	0.15	1	09/19/14	09/19/14	KWG1412873	
Benzene	**0.40**	J	7.5	0.081	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	7.5	0.23	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	30	2.7	1	09/19/14	09/19/14	KWG1412873	
Toluene	**0.60**	J	7.5	0.23	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	7.5	0.24	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	30	1.4	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	7.5	0.27	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	ND	U	7.5	0.15	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	7.5	0.15	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	7.5	0.13	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	7.5	0.21	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	7.5	0.21	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	30	0.20	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	82-146	09/19/14	Acceptable
Toluene-d8	95	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	93	88-127	09/19/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD08	**Units:**	ug/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	8.5	0.31	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	8.5	0.31	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	8.5	0.43	1	09/19/14	09/19/14	KWG1412873	
Acetone	**90**		34	5.0	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**2.2**	J	8.5	0.16	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**3.7**	J	17	0.28	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	8.5	0.21	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	8.5	0.21	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**11**	J	34	1.6	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	8.5	0.16	1	09/19/14	09/19/14	KWG1412873	
Benzene	**1.2**	J	8.5	0.092	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	8.5	0.26	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	34	3.1	1	09/19/14	09/19/14	KWG1412873	
Toluene	**17**		8.5	0.26	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	8.5	0.28	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	34	1.6	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	8.5	0.31	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	**1.3**	J	8.5	0.16	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	**0.36**	J	8.5	0.17	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	8.5	0.14	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	8.5	0.24	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	8.5	0.24	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	34	0.23	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	82-146	09/19/14	Acceptable
Toluene-d8	94	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	89	88-127	09/19/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD07	**Units:**	ug/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	12	0.41	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	12	0.41	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	12	0.56	1	09/19/14	09/19/14	KWG1412873	
Acetone	**150**		45	6.5	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**4.4**	J	12	0.21	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**5.1**	J	23	0.36	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	12	0.27	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	12	0.27	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**18**	J	45	2.1	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	12	0.22	1	09/19/14	09/19/14	KWG1412873	
Benzene	**5.2**	J	12	0.13	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	**1.2**	J	12	0.34	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	45	4.1	1	09/19/14	09/19/14	KWG1412873	
Toluene	**11**	J	12	0.34	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	12	0.36	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	45	2.1	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	12	0.41	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	**0.78**	J	12	0.22	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	**1.5**	J	12	0.23	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	**0.60**	J	12	0.19	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	12	0.32	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	12	0.32	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	45	0.30	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	82-146	09/19/14	Acceptable
Toluene-d8	92	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	82	88-127	09/19/14	Outside Control Limits

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD06	**Units:**	ug/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	6.3	0.23	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	6.3	0.23	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	6.3	0.32	1	09/19/14	09/19/14	KWG1412873	
Acetone	**38**		26	3.7	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**0.61**	J	6.3	0.12	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**2.4**	J	13	0.21	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	6.3	0.16	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	6.3	0.16	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**4.2**	J	26	1.2	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	6.3	0.12	1	09/19/14	09/19/14	KWG1412873	
Benzene	**0.26**	J	6.3	0.068	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	6.3	0.19	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	26	2.3	1	09/19/14	09/19/14	KWG1412873	
Toluene	**0.38**	J	6.3	0.19	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	6.3	0.21	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	26	1.2	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	6.3	0.23	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	**1.3**	J	6.3	0.12	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	6.3	0.13	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	6.3	0.11	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	6.3	0.18	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	6.3	0.18	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	26	0.17	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	82-146	09/19/14	Acceptable
Toluene-d8	91	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	94	88-127	09/19/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD05	**Units:**	ug/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	33	1.2	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	33	1.2	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	33	1.7	1	09/19/14	09/19/14	KWG1412873	
Acetone	**550**		130	19	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**63**		33	0.60	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**14**	J	65	1.1	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	33	0.78	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	33	0.78	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**81**	J	130	5.8	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	33	0.61	1	09/19/14	09/19/14	KWG1412873	
Benzene	**1.7**	J	33	0.35	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	33	0.97	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	130	12	1	09/19/14	09/19/14	KWG1412873	
Toluene	**3.5**	J	33	0.97	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	33	1.1	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	130	6.0	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	33	1.2	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	ND	U	33	0.61	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	33	0.65	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	33	0.53	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	33	0.90	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	33	0.90	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	130	0.84	1	09/19/14	09/19/14	KWG1412873	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	82-146	09/19/14	Acceptable
Toluene-d8	93	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	81	88-127	09/19/14	Outside Control Limits

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Volatile Organic Compounds

Sample Name:	SE-091514-RB-SD12	**Units:**	ug/Kg
Lab Code:	K1409921-011	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.7	0.21	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	5.7	0.21	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	5.7	0.29	1	09/19/14	09/19/14	KWG1412873	
Acetone	**45**		23	3.3	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**39**		5.7	0.11	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**2.3**	J	12	0.19	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	5.7	0.14	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	5.7	0.14	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	**6.2**	J	23	1.1	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	5.7	0.11	1	09/19/14	09/19/14	KWG1412873	
Benzene	**3.9**	J	5.7	0.062	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	**0.64**	J	5.7	0.18	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	23	2.1	1	09/19/14	09/19/14	KWG1412873	
Toluene	**0.80**	J	5.7	0.18	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	5.7	0.19	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	23	1.1	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	5.7	0.21	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	ND	U	5.7	0.11	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	5.7	0.12	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	5.7	0.093	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	5.7	0.16	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	5.7	0.16	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	ND	U	23	0.15	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	82-146	09/19/14	Acceptable
Toluene-d8	97	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	96	88-127	09/19/14	Acceptable

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1412873-5	**Basis:**	Dry
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.18	1	09/19/14	09/19/14	KWG1412873	*
Vinyl Chloride	ND	U	5.0	0.18	1	09/19/14	09/19/14	KWG1412873	*
1,1-Dichloroethene	ND	U	5.0	0.25	1	09/19/14	09/19/14	KWG1412873	
Acetone	**8.9**	J	20	2.9	1	09/19/14	09/19/14	KWG1412873	
Carbon Disulfide	**0.19**	J	5.0	0.092	1	09/19/14	09/19/14	KWG1412873	
Methylene Chloride	**4.4**	J	10	0.16	1	09/19/14	09/19/14	KWG1412873	
trans-1,2-Dichloroethene	ND	U	5.0	0.12	1	09/19/14	09/19/14	KWG1412873	
cis-1,2-Dichloroethene	ND	U	5.0	0.12	1	09/19/14	09/19/14	KWG1412873	
2-Butanone (MEK)	ND	U	20	0.90	1	09/19/14	09/19/14	KWG1412873	
Carbon Tetrachloride	ND	U	5.0	0.094	1	09/19/14	09/19/14	KWG1412873	
Benzene	ND	U	5.0	0.054	1	09/19/14	09/19/14	KWG1412873	
Trichloroethene (TCE)	ND	U	5.0	0.15	1	09/19/14	09/19/14	KWG1412873	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1.8	1	09/19/14	09/19/14	KWG1412873	
Toluene	ND	U	5.0	0.15	1	09/19/14	09/19/14	KWG1412873	
Tetrachloroethene (PCE)	ND	U	5.0	0.16	1	09/19/14	09/19/14	KWG1412873	
2-Hexanone	ND	U	20	0.93	1	09/19/14	09/19/14	KWG1412873	
Dibromochloromethane	ND	U	5.0	0.18	1	09/19/14	09/19/14	KWG1412873	
Ethylbenzene	ND	U	5.0	0.094	1	09/19/14	09/19/14	KWG1412873	
m,p-Xylenes	ND	U	5.0	0.10	1	09/19/14	09/19/14	KWG1412873	
o-Xylene	ND	U	5.0	0.081	1	09/19/14	09/19/14	KWG1412873	
Styrene	ND	U	5.0	0.14	1	09/19/14	09/19/14	KWG1412873	
Bromoform	ND	U	5.0	0.14	1	09/19/14	09/19/14	KWG1412873	
1,2,4-Trichlorobenzene	**0.21**	J	20	0.13	1	09/19/14	09/19/14	KWG1412873	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	82-146	09/19/14	Acceptable
Toluene-d8	95	90-142	09/19/14	Acceptable
4-Bromofluorobenzene	96	88-127	09/19/14	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1409859-012	95	97	97
WS-091514-RB-SW03	K1409921-012	95	99	95
WS-091514-RB-SW04	K1409921-013	92	97	96
WS-091514-RB-SW05	K1409921-014	92	97	97
WS-091514-RB-SW02	K1409921-015	93	97	97
WS-091514-RB-SW01	K1409921-016	91	96	96
WS-091514-RB-FD10	K1409921-017	93	95	96
RINSE BLANK 9-15	K1409921-018	103	97	92
Trip Blank	K1409921-019	104	98	91
Method Blank	KWG1412904-4	103	97	93
Method Blank	KWG1412906-4	91	95	98
Batch QCMS	KWG1412906-1	100	100	100
Batch QCDMS	KWG1412906-2	100	100	100
Lab Control Sample	KWG1412904-3	98	101	102
Lab Control Sample	KWG1412906-3	101	99	101

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Sediment

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5035A **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
SE-091514-RB-SD11	K1409921-004	102	97	99	
SE-091514-RB-SD10	K1409921-005	104	95	91	
SE-091514-RB-SD09	K1409921-006	102	95	93	
SE-091514-RB-SD08	K1409921-007	101	94	89	
SE-091514-RB-SD07	K1409921-008	102	92	82	*
SE-091514-RB-SD06	K1409921-009	99	91	94	
SE-091514-RB-SD05	K1409921-010	104	93	81	*
SE-091514-RB-SD12	K1409921-011	103	97	96	
Batch QC	K1410113-003	99	97	96	
Method Blank	KWG1412873-5	102	95	96	
Batch QCMS	KWG1412873-1	98	98	96	
Batch QCDMS	KWG1412873-2	104	98	96	
Lab Control Sample	KWG1412873-3	101	98	95	
Duplicate Lab Control Sample	KWG1412873-4	103	99	96	

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	82-146
Sur2	=	Toluene-d8	90-142
Sur3	=	4-Bromofluorobenzene	88-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/19/2014
Time Analyzed: 11:08

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS24\DATA\091914\0919F004.D
Instrument ID: MS24
Analysis Method: 8260C

Lab Code: KWG1412874-2
Analysis Lot: KWG1412874

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	459,845	3.97	164,577	6.60	147,206	8.91
	Upper Limit ==>	919,690	4.47	329,154	7.10	294,412	9.41
	Lower Limit ==>	229,923	3.47	82,289	6.10	73,603	8.41
	ICAL Result ==>	400,369	3.98	156,686	6.60	147,845	8.91
Associated Analyses							
Lab Control Sample	KWG1412873-3	417,857	3.96	159,535	6.59	141,883	8.91
Duplicate Lab Control Sample	KWG1412873-4	394,904	3.97	154,005	6.60	137,552	8.91
Batch QCMS	KWG1412873-1	398,793	3.97	152,757	6.59	136,285	8.91
Batch QCDMS	KWG1412873-2	393,608	3.97	154,576	6.60	139,613	8.91
Method Blank	KWG1412873-5	393,244	3.97	150,054	6.60	136,558	8.91
Batch QC	K1410113-003	373,641	3.98	146,909	6.59	128,655	8.91
SE-091514-RB-SD11	K1409921-004	399,046	3.98	155,456	6.60	147,905	8.91
SE-091514-RB-SD10	K1409921-005	399,285	3.98	144,093	6.60	115,025	8.91
SE-091514-RB-SD09	K1409921-006	349,464	3.97	129,983	6.60	109,641	8.91
SE-091514-RB-SD08	K1409921-007	410,559	3.97	146,009	6.60	115,068	8.91
SE-091514-RB-SD07	K1409921-008	386,646	3.98	128,410	6.60	80,722	8.91
SE-091514-RB-SD06	K1409921-009	428,240	3.98	152,633	6.60	133,519	8.91
SE-091514-RB-SD05	K1409921-010	377,919	3.97	123,413	6.60	73,090*	8.91
SE-091514-RB-SD12	K1409921-011	402,688	3.97	159,792	6.59	144,546	8.91

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/20/2014
		Time Analyzed:	08:51

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID:	J:\MS13\DATA\092014\0920F003.D	**Lab Code:**	KWG1412900-2
Instrument ID:	MS13	**Analysis Lot:**	KWG1412900
Analysis Method:	8260C		

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	510,380	6.11	199,558	12.03	169,913	15.05
	Upper Limit ==>	1,020,760	6.61	399,116	12.53	339,826	15.55
	Lower Limit ==>	255,190	5.61	99,779	11.53	84,957	14.55
	ICAL Result ==>	564,474	6.11	214,895	12.03	184,778	15.05
Associated Analyses							
Lab Control Sample	KWG1412904-3	510,804	6.11	199,111	12.02	168,909	15.05
Method Blank	KWG1412904-4	495,876	6.11	198,157	12.03	157,137	15.05
Trip Blank	K1409921-019	505,906	6.11	201,120	12.02	157,956	15.05
RINSE BLANK 9-15	K1409921-018	478,906	6.11	192,891	12.02	150,016	15.05

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/20/2014
Time Analyzed: 08:59

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\092014\0920F004.D
Instrument ID: GC-MS 18
Analysis Method: 8260C

Lab Code: KWG1412905-2
Analysis Lot: KWG1412905

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	316,125	6.32	129,390	9.64	129,827	12.05
	Upper Limit ==>	632,250	6.82	258,780	10.14	259,654	12.55
	Lower Limit ==>	158,063	5.82	64,695	9.14	64,914	11.55
	ICAL Result ==>	325,249	6.32	135,589	9.64	130,777	12.05
Associated Analyses							
Lab Control Sample	KWG1412906-3	317,387	6.31	129,393	9.64	131,373	12.05
Batch QCMS	KWG1412906-1	320,387	6.32	132,487	9.64	132,635	12.05
Batch QCDMS	KWG1412906-2	277,885	6.32	112,963	9.64	112,066	12.05
Method Blank	KWG1412906-4	313,132	6.32	125,417	9.64	121,861	12.05
WS-091514-RB-SW03	K1409921-012	294,710	6.32	123,067	9.64	117,878	12.05
WS-091514-RB-SW04	K1409921-013	247,503	6.32	100,581	9.64	95,457	12.05
WS-091514-RB-SW05	K1409921-014	294,691	6.32	122,203	9.64	117,616	12.05
WS-091514-RB-SW02	K1409921-015	294,758	6.32	120,970	9.64	118,111	12.05
WS-091514-RB-SW01	K1409921-016	298,623	6.32	121,982	9.64	118,002	12.05
WS-091514-RB-FD10	K1409921-017	296,292	6.32	121,607	9.64	117,156	12.05
Batch QCDL	K1409859-012	290,499	6.32	119,654	9.64	114,419	12.05
Batch QC	K1409859-012	289,306	6.32	118,995	9.64	112,937	12.05

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1409859-012	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412906

		Batch QCMS KWG1412906-1 Matrix Spike			Batch QCDMS KWG1412906-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	26.7	25.0	107	30.3	25.0	121	49-136	12	30
1,1-Dichloroethene	ND	28.8	25.0	115	33.6	25.0	134	59-171	15	30
Carbon Tetrachloride	ND	26.3	25.0	105	29.3	25.0	117	53-161	11	30
Benzene	ND	26.0	25.0	104	29.6	25.0	118	63-144	13	30
Trichloroethene (TCE)	480	562E	25.0	314 #	643E	25.0	637 #	53-139	13	30
Toluene	ND	26.2	25.0	105	30.1	25.0	120	71-136	14	30
2-Hexanone	ND	128	125	102	148	125	118	53-132	15	30
Ethylbenzene	ND	26.4	25.0	106	30.8	25.0	123	66-136	15	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/19/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1410113-003	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412873

		Batch QCMS KWG1412873-1 Matrix Spike			Batch QCDMS KWG1412873-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	59.8	65.0	92	59.7	66.4	90	31-140	0	40
1,1-Dichloroethene	ND	74.7	65.0	115	74.0	66.4	112	31-153	1	40
Carbon Tetrachloride	ND	62.6	65.0	96	63.2	66.4	95	10-144	1	40
Benzene	ND	57.5	65.0	88	57.0	66.4	86	30-137	1	40
Trichloroethene (TCE)	ND	58.1	65.0	89	56.7	66.4	85	18-145	2	40
Toluene	ND	56.6	65.0	87	55.6	66.4	84	24-142	2	40
2-Hexanone	3.4	266	325	81	258	332	77	15-162	3	40
Ethylbenzene	ND	58.6	65.0	90	54.7	66.4	82	13-128	7	40

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412904

Lab Control Sample
KWG1412904-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Chloromethane	8.45	10.0	85	34-130
Vinyl Chloride	9.99	10.0	100	55-123
1,1-Dichloroethene	11.1	10.0	111	66-129
Acetone	54.9	50.0	110	68-135
Carbon Disulfide	21.2	20.0	106	46-144
Methylene Chloride	8.21	10.0	82	71-122
trans-1,2-Dichloroethene	10.5	10.0	105	67-125
cis-1,2-Dichloroethene	10.0	10.0	100	71-118
2-Butanone (MEK)	53.1	50.0	106	71-149
Carbon Tetrachloride	10.8	10.0	108	55-140
Benzene	9.95	10.0	100	69-124
Trichloroethene (TCE)	10.1	10.0	101	67-128
4-Methyl-2-pentanone (MIBK)	45.7	50.0	91	64-134
Toluene	9.83	10.0	98	69-124
Tetrachloroethene (PCE)	9.98	10.0	100	62-126
2-Hexanone	49.6	50.0	99	59-131
Dibromochloromethane	9.42	10.0	94	67-126
Ethylbenzene	10.0	10.0	100	67-121
m,p-Xylenes	20.5	20.0	102	69-121
o-Xylene	10.2	10.0	102	71-119
Styrene	10.2	10.0	102	74-121
Bromoform	9.72	10.0	97	52-144
1,2,4-Trichlorobenzene	9.08	10.0	91	58-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412906

Lab Control Sample
KWG1412906-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Chloromethane	9.39	10.0	94	34-130
Vinyl Chloride	9.88	10.0	99	55-123
1,1-Dichloroethene	11.1	10.0	111	66-129
Acetone	49.1	50.0	98	68-135
Carbon Disulfide	21.9	20.0	110	46-144
Methylene Chloride	8.63	10.0	86	71-122
trans-1,2-Dichloroethene	10.5	10.0	105	67-125
cis-1,2-Dichloroethene	10.1	10.0	101	71-118
2-Butanone (MEK)	49.9	50.0	100	71-149
Carbon Tetrachloride	9.58	10.0	96	55-140
Benzene	9.96	10.0	100	69-124
Trichloroethene (TCE)	9.91	10.0	99	67-128
4-Methyl-2-pentanone (MIBK)	49.6	50.0	99	64-134
Toluene	9.77	10.0	98	69-124
Tetrachloroethene (PCE)	10.6	10.0	106	62-126
2-Hexanone	50.1	50.0	100	59-131
Dibromochloromethane	10.1	10.0	101	67-126
Ethylbenzene	10.2	10.0	102	67-121
m,p-Xylenes	20.8	20.0	104	69-121
o-Xylene	10.4	10.0	104	71-119
Styrene	10.9	10.0	109	74-121
Bromoform	8.76	10.0	88	52-144
1,2,4-Trichlorobenzene	9.64	10.0	96	58-126

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/19/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5035A	**Units:**	ug/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1412873

	Lab Control Sample KWG1412873-3 Lab Control Spike			Duplicate Lab Control Sample KWG1412873-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	42.7	50.0	85	41.3	50.0	83	37-146	3	40
Vinyl Chloride	46.8	50.0	94	44.5	50.0	89	54-127	5	40
1,1-Dichloroethene	56.5	50.0	113	55.8	50.0	112	64-152	1	40
Acetone	209	250	84	215	250	86	32-135	3	40
Carbon Disulfide	117	100	117	113	100	113	55-141	4	40
Methylene Chloride	44.2	50.0	88	44.0	50.0	88	65-122	0	40
trans-1,2-Dichloroethene	51.3	50.0	103	49.6	50.0	99	63-127	3	40
cis-1,2-Dichloroethene	49.3	50.0	99	48.8	50.0	98	62-138	1	40
2-Butanone (MEK)	239	250	96	240	250	96	54-116	0	40
Carbon Tetrachloride	48.2	50.0	96	48.3	50.0	97	51-135	0	40
Benzene	46.7	50.0	93	46.6	50.0	93	68-122	0	40
Trichloroethene (TCE)	45.6	50.0	91	45.4	50.0	91	67-126	1	40
4-Methyl-2-pentanone (MIBK)	249	250	100	254	250	102	69-126	2	40
Toluene	45.2	50.0	90	44.4	50.0	89	75-117	2	40
Tetrachloroethene (PCE)	47.6	50.0	95	45.7	50.0	91	66-126	4	40
2-Hexanone	243	250	97	238	250	95	67-121	2	40
Dibromochloromethane	56.0	50.0	112	55.4	50.0	111	69-120	1	40
Ethylbenzene	46.4	50.0	93	45.0	50.0	90	70-118	3	40
m,p-Xylenes	93.4	100	93	90.1	100	90	69-127	4	40
o-Xylene	45.5	50.0	91	43.5	50.0	87	69-124	4	40
Styrene	47.5	50.0	95	46.8	50.0	94	62-135	1	40
Bromoform	61.4	50.0	123	59.8	50.0	120	62-134	3	40
1,2,4-Trichlorobenzene	45.0	50.0	90	44.2	50.0	88	57-136	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014
		Time Analyzed:	11:13

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS13
Lab Code:	KWG1412904-4	**File ID:**	J:\MS13\DATA\092014\0920F008.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412904

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1412904-3	J:\MS13\DATA\092014\0920F004.D	09/20/14	09:24
Trip Blank	K1409921-019	J:\MS13\DATA\092014\0920F011.D	09/20/14	12:34
RINSE BLANK 9-15	K1409921-018	J:\MS13\DATA\092014\0920F014.D	09/20/14	13:55

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014
		Time Analyzed:	11:18

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1412906-4	**File ID:**	J:\MS18\DATA\092014\0920F010.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412906

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1412906-3	J:\MS18\DATA\092014\0920F005.D	09/20/14	09:32
Batch QCMS	KWG1412906-1	J:\MS18\DATA\092014\0920F006.D	09/20/14	09:53
Batch QCDMS	KWG1412906-2	J:\MS18\DATA\092014\0920F007.D	09/20/14	10:14
WS-091514-RB-SW03	K1409921-012	J:\MS18\DATA\092014\0920F019.D	09/20/14	14:30
WS-091514-RB-SW04	K1409921-013	J:\MS18\DATA\092014\0920F020.D	09/20/14	14:51
WS-091514-RB-SW05	K1409921-014	J:\MS18\DATA\092014\0920F021.D	09/20/14	15:12
WS-091514-RB-SW02	K1409921-015	J:\MS18\DATA\092014\0920F022.D	09/20/14	15:34
WS-091514-RB-SW01	K1409921-016	J:\MS18\DATA\092014\0920F023.D	09/20/14	15:55
WS-091514-RB-FD10	K1409921-017	J:\MS18\DATA\092014\0920F024.D	09/20/14	16:16
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F029.D	09/20/14	18:03
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F031.D	09/20/14	18:45

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/19/2014
		Time Analyzed:	13:57

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS24
Lab Code:	KWG1412873-5	**File ID:**	J:\MS24\DATA\091914\0919F011.D
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412873

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1412873-3	J:\MS24\DATA\091914\0919F005.D	09/19/14	11:44
Duplicate Lab Control Sample	KWG1412873-4	J:\MS24\DATA\091914\0919F006.D	09/19/14	12:05
Batch QCMS	KWG1412873-1	J:\MS24\DATA\091914\0919F007.D	09/19/14	12:35
Batch QCDMS	KWG1412873-2	J:\MS24\DATA\091914\0919F008.D	09/19/14	12:56
Batch QC	K1410113-003	J:\MS24\DATA\091914\0919F012.D	09/19/14	14:18
SE-091514-RB-SD11	K1409921-004	J:\MS24\DATA\091914\0919F018.D	09/19/14	16:21
SE-091514-RB-SD10	K1409921-005	J:\MS24\DATA\091914\0919F019.D	09/19/14	16:42
SE-091514-RB-SD09	K1409921-006	J:\MS24\DATA\091914\0919F020.D	09/19/14	17:02
SE-091514-RB-SD08	K1409921-007	J:\MS24\DATA\091914\0919F021.D	09/19/14	17:23
SE-091514-RB-SD07	K1409921-008	J:\MS24\DATA\091914\0919F022.D	09/19/14	17:43
SE-091514-RB-SD06	K1409921-009	J:\MS24\DATA\091914\0919F023.D	09/19/14	18:04
SE-091514-RB-SD05	K1409921-010	J:\MS24\DATA\091914\0919F024.D	09/19/14	18:24
SE-091514-RB-SD12	K1409921-011	J:\MS24\DATA\091914\0919F025.D	09/19/14	18:45

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014
		Time Analyzed:	09:24

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS13
Lab Code:	KWG1412904-3	**File ID:**	J:\MS13\DATA\092014\0920F004.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412904

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1412904-4	J:\MS13\DATA\092014\0920F008.D	09/20/14	11:13
Trip Blank	K1409921-019	J:\MS13\DATA\092014\0920F011.D	09/20/14	12:34
RINSE BLANK 9-15	K1409921-018	J:\MS13\DATA\092014\0920F014.D	09/20/14	13:55

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water	**Date Analyzed:**	09/20/2014
		Time Analyzed:	09:32

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1412906-3	**File ID:**	J:\MS18\DATA\092014\0920F005.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412906

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1412906-1	J:\MS18\DATA\092014\0920F006.D	09/20/14	09:53
Batch QCDMS	KWG1412906-2	J:\MS18\DATA\092014\0920F007.D	09/20/14	10:14
Method Blank	KWG1412906-4	J:\MS18\DATA\092014\0920F010.D	09/20/14	11:18
WS-091514-RB-SW03	K1409921-012	J:\MS18\DATA\092014\0920F019.D	09/20/14	14:30
WS-091514-RB-SW04	K1409921-013	J:\MS18\DATA\092014\0920F020.D	09/20/14	14:51
WS-091514-RB-SW05	K1409921-014	J:\MS18\DATA\092014\0920F021.D	09/20/14	15:12
WS-091514-RB-SW02	K1409921-015	J:\MS18\DATA\092014\0920F022.D	09/20/14	15:34
WS-091514-RB-SW01	K1409921-016	J:\MS18\DATA\092014\0920F023.D	09/20/14	15:55
WS-091514-RB-FD10	K1409921-017	J:\MS18\DATA\092014\0920F024.D	09/20/14	16:16
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F029.D	09/20/14	18:03
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F031.D	09/20/14	18:45

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Soil	**Date Analyzed:**	09/19/2014
		Time Analyzed:	11:44

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS24
Lab Code:	KWG1412873-3	**File ID:**	J:\MS24\DATA\091914\0919F005.D
Extraction Method:	EPA 5035A	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1412873

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1412873-1	J:\MS24\DATA\091914\0919F007.D	09/19/14	12:35
Batch QCDMS	KWG1412873-2	J:\MS24\DATA\091914\0919F008.D	09/19/14	12:56
Method Blank	KWG1412873-5	J:\MS24\DATA\091914\0919F011.D	09/19/14	13:57
Batch QC	K1410113-003	J:\MS24\DATA\091914\0919F012.D	09/19/14	14:18
SE-091514-RB-SD11	K1409921-004	J:\MS24\DATA\091914\0919F018.D	09/19/14	16:21
SE-091514-RB-SD10	K1409921-005	J:\MS24\DATA\091914\0919F019.D	09/19/14	16:42
SE-091514-RB-SD09	K1409921-006	J:\MS24\DATA\091914\0919F020.D	09/19/14	17:02
SE-091514-RB-SD08	K1409921-007	J:\MS24\DATA\091914\0919F021.D	09/19/14	17:23
SE-091514-RB-SD07	K1409921-008	J:\MS24\DATA\091914\0919F022.D	09/19/14	17:43
SE-091514-RB-SD06	K1409921-009	J:\MS24\DATA\091914\0919F023.D	09/19/14	18:04
SE-091514-RB-SD05	K1409921-010	J:\MS24\DATA\091914\0919F024.D	09/19/14	18:24
SE-091514-RB-SD12	K1409921-011	J:\MS24\DATA\091914\0919F025.D	09/19/14	18:45

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/19/2014
Time Analyzed: 10:20

Tune Summary
Volatile Organic Compounds

File ID: J:\MS24\DATA\091914\0919F003.D
Instrument ID: MS24
Column:

Analysis Method: 8260C
Analysis Lot: KWG1412874

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	15.6	1075	PASS
75	95	30	60	44.8	3092	PASS
95	95	100	100	100.0	6899	PASS
96	95	5	9	6.7	461	PASS
173	174	0	2	0.2	14	PASS
174	95	50	120	86.0	5930	PASS
175	174	5	9	8.1	479	PASS
176	174	95	101	98.9	5863	PASS
177	176	5	9	6.4	378	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1412874-2	J:\MS24\DATA\091914\0919F004.D	09/19/2014	11:08	
Lab Control Sample	KWG1412873-3	J:\MS24\DATA\091914\0919F005.D	09/19/2014	11:44	
Duplicate Lab Control Sample	KWG1412873-4	J:\MS24\DATA\091914\0919F006.D	09/19/2014	12:05	
Batch QCMS	KWG1412873-1	J:\MS24\DATA\091914\0919F007.D	09/19/2014	12:35	
Batch QCDMS	KWG1412873-2	J:\MS24\DATA\091914\0919F008.D	09/19/2014	12:56	
Method Blank	KWG1412873-5	J:\MS24\DATA\091914\0919F011.D	09/19/2014	13:57	
Batch QC	K1410113-003	J:\MS24\DATA\091914\0919F012.D	09/19/2014	14:18	
SE-091514-RB-SD11	K1409921-004	J:\MS24\DATA\091914\0919F018.D	09/19/2014	16:21	
SE-091514-RB-SD10	K1409921-005	J:\MS24\DATA\091914\0919F019.D	09/19/2014	16:42	
SE-091514-RB-SD09	K1409921-006	J:\MS24\DATA\091914\0919F020.D	09/19/2014	17:02	
SE-091514-RB-SD08	K1409921-007	J:\MS24\DATA\091914\0919F021.D	09/19/2014	17:23	
SE-091514-RB-SD07	K1409921-008	J:\MS24\DATA\091914\0919F022.D	09/19/2014	17:43	
SE-091514-RB-SD06	K1409921-009	J:\MS24\DATA\091914\0919F023.D	09/19/2014	18:04	
SE-091514-RB-SD05	K1409921-010	J:\MS24\DATA\091914\0919F024.D	09/19/2014	18:24	
SE-091514-RB-SD12	K1409921-011	J:\MS24\DATA\091914\0919F025.D	09/19/2014	18:45	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/20/2014
Time Analyzed: 08:21

Tune Summary
Volatile Organic Compounds

File ID: J:\MS13\DATA\092014\0920F002.D
Instrument ID: MS13
Column:

Analysis Method: 8260C
Analysis Lot: KWG1412900

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	18.5	1783	PASS
75	95	30	60	49.4	4774	PASS
95	95	100	100	100.0	9655	PASS
96	95	5	9	7.6	730	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	80.3	7750	PASS
175	174	5	9	5.3	407	PASS
176	174	95	101	100.6	7800	PASS
177	176	5	9	5.8	453	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1412900-2	J:\MS13\DATA\092014\0920F003.D	09/20/2014	08:51	
Lab Control Sample	KWG1412904-3	J:\MS13\DATA\092014\0920F004.D	09/20/2014	09:24	
Method Blank	KWG1412904-4	J:\MS13\DATA\092014\0920F008.D	09/20/2014	11:13	
Trip Blank	K1409921-019	J:\MS13\DATA\092014\0920F011.D	09/20/2014	12:34	
RINSE BLANK 9-15	K1409921-018	J:\MS13\DATA\092014\0920F014.D	09/20/2014	13:55	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/20/2014
Time Analyzed: 08:33

Tune Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\092014\0920F003.D
Instrument ID: GC-MS 18
Column:

Analysis Method: 8260C
Analysis Lot: KWG1412905

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	18.2	7491	PASS
75	95	30	60	47.2	19397	PASS
95	95	100	100	100.0	41120	PASS
96	95	5	9	6.9	2833	PASS
173	174	0	2	0.7	232	PASS
174	95	50	120	77.9	32037	PASS
175	174	5	9	7.3	2352	PASS
176	174	95	101	99.5	31885	PASS
177	176	5	9	7.0	2227	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1412905-2	J:\MS18\DATA\092014\0920F004.D	09/20/2014	08:59	
Lab Control Sample	KWG1412906-3	J:\MS18\DATA\092014\0920F005.D	09/20/2014	09:32	
Batch QCMS	KWG1412906-1	J:\MS18\DATA\092014\0920F006.D	09/20/2014	09:53	
Batch QCDMS	KWG1412906-2	J:\MS18\DATA\092014\0920F007.D	09/20/2014	10:14	
Method Blank	KWG1412906-4	J:\MS18\DATA\092014\0920F010.D	09/20/2014	11:18	
WS-091514-RB-SW03	K1409921-012	J:\MS18\DATA\092014\0920F019.D	09/20/2014	14:30	
WS-091514-RB-SW04	K1409921-013	J:\MS18\DATA\092014\0920F020.D	09/20/2014	14:51	
WS-091514-RB-SW05	K1409921-014	J:\MS18\DATA\092014\0920F021.D	09/20/2014	15:12	
WS-091514-RB-SW02	K1409921-015	J:\MS18\DATA\092014\0920F022.D	09/20/2014	15:34	
WS-091514-RB-SW01	K1409921-016	J:\MS18\DATA\092014\0920F023.D	09/20/2014	15:55	
WS-091514-RB-FD10	K1409921-017	J:\MS18\DATA\092014\0920F024.D	09/20/2014	16:16	
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F029.D	09/20/2014	18:03	
Batch QC	K1409859-012	J:\MS18\DATA\092014\0920F031.D	09/20/2014	18:45	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556 **Column:** MS
Instrument ID: GC-MS 18

Level ID	File ID	Level ID	File ID
A	J:\MS18\DATA\091714\0917F008.D	G	J:\MS18\DATA\091714\0917F014.D
B	J:\MS18\DATA\091714\0917F009.D	H	J:\MS18\DATA\091714\0917F015.D
C	J:\MS18\DATA\091714\0917F010.D	I	J:\MS18\DATA\091714\0917F016.D
D	J:\MS18\DATA\091714\0917F011.D	J	J:\MS18\DATA\091714\0917F017.D
E	J:\MS18\DATA\091714\0917F012.D	K	J:\MS18\DATA\091714\0917F018.D
F	J:\MS18\DATA\091714\0917F013.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chloromethane	A	0.10	0.453	B	0.20	0.416	C	0.50	0.373	D	1.0	0.394	E	2.0	0.343
	F	5.0	0.426	G	10	0.366	H	20	0.356	I	40	0.380	J	60	0.391
	K	80	0.395												
Vinyl Chloride	A	0.10	0.268	B	0.20	0.358	C	0.50	0.363	D	1.0	0.368	E	2.0	0.343
	F	5.0	0.462	G	10	0.397	H	20	0.388	I	40	0.384	J	60	0.397
	K	80	0.395												
1,1-Dichloroethene	A	0.10	0.164	B	0.20	0.204	C	0.50	0.213	D	1.0	0.225	E	2.0	0.197
	F	5.0	0.264	G	10	0.224	H	20	0.218	I	40	0.223	J	60	0.236
	K	80	0.236												
Acetone				B	8.0	0.0487	C	20	0.0484	D	40	0.0477	E	80	0.0448
	F	100	0.0419	G	200	0.0490	H	400	0.0491	I	800	0.0462	J	1600	0.0496
	K	2000	0.0501												
Carbon Disulfide	A	0.10	0.541	B	0.20	0.611	C	0.50	0.695	D	1.0	0.695	E	2.0	0.624
	F	5.0	0.877	G	10	0.769	H	20	0.790	I	40	0.831	J	60	0.878
	K	80	0.884												
Methylene Chloride							C	0.50	0.411	D	1.0	0.356	E	2.0	0.289
	F	5.0	0.351	G	10	0.284	H	20	0.276	I	40	0.286	J	60	0.291
	K	80	0.293												
trans-1,2-Dichloroethene	A	0.10	0.271	B	0.20	0.264	C	0.50	0.250	D	1.0	0.269	E	2.0	0.237
	F	5.0	0.317	G	10	0.270	H	20	0.266	I	40	0.280	J	60	0.285
	K	80	0.290												
cis-1,2-Dichloroethene				B	0.20	0.285	C	0.50	0.303	D	1.0	0.331	E	2.0	0.293
	F	5.0	0.361	G	10	0.311	H	20	0.323	I	40	0.334	J	60	0.335
	K	80	0.336												
2-Butanone (MEK)	A	4.0	0.0150	B	8.0	0.0185	C	20	0.0186	D	40	0.0196	E	80	0.0180
	F	100	0.0176	G	200	0.0203	H	400	0.0208	I	800	0.0199	J	1600	0.0222
	K	2000	0.0221												
Carbon Tetrachloride	A	0.10	0.242	B	0.20	0.284	C	0.50	0.327	D	1.0	0.334	E	2.0	0.304
	F	5.0	0.434	G	10	0.372	H	20	0.375	I	40	0.398	J	60	0.412
	K	80	0.428												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556 **Column:** MS
Instrument ID: GC-MS 18

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.10	1.11	B	0.20	1.22	C	0.50	1.21	D	1.0	1.20	E	2.0	1.11
	F	5.0	1.46	G	10	1.23	H	20	1.22	I	40	1.27	J	60	1.30
	K	80	1.30												
Trichloroethene (TCE)	A	0.10	0.220	B	0.20	0.275	C	0.50	0.247	D	1.0	0.294	E	2.0	0.254
	F	5.0	0.356	G	10	0.290	H	20	0.302	I	40	0.311	J	60	0.319
	K	80	0.312												
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0523	B	8.0	0.0585	C	20	0.0641	D	40	0.0650	E	80	0.0612
	F	100	0.0602	G	200	0.0712	H	400	0.0752	I	800	0.0714			
Toluene	A	0.10	0.798	B	0.20	0.776	C	0.50	0.743	D	1.0	0.784	E	2.0	0.714
	F	5.0	0.986	G	10	0.832	H	20	0.839	I	40	0.868	J	60	0.898
	K	80	0.898												
Tetrachloroethene (PCE)	A	0.10	0.558	B	0.20	0.566	C	0.50	0.542	D	1.0	0.597	E	2.0	0.533
	F	5.0	0.709	G	10	0.615	H	20	0.620	I	40	0.664	J	60	0.665
	K	80	0.668												
2-Hexanone				B	8.0	0.0448	C	20	0.0496	D	40	0.0521	E	80	0.0494
	F	100	0.0488	G	200	0.0578	H	400	0.0598	I	800	0.0575			
Dibromochloromethane				B	0.20	0.400	C	0.50	0.476	D	1.0	0.483	E	2.0	0.435
	F	5.0	0.634	G	10	0.560	H	20	0.611	I	40	0.679			
Ethylbenzene	A	0.10	0.858	B	0.20	1.01	C	0.50	1.16	D	1.0	1.19	E	2.0	1.05
	F	5.0	1.48	G	10	1.25	H	20	1.26	I	40	1.32	J	60	1.34
	K	80	1.36												
m,p-Xylenes	A	0.20	1.19	B	0.40	1.29	C	1.0	1.37	D	2.0	1.41	E	4.0	1.24
	F	10	1.79	G	20	1.55	H	40	1.55	I	80	1.64	J	120	1.67
	K	160	1.68												
o-Xylene	A	0.10	1.31	B	0.20	1.26	C	0.50	1.33	D	1.0	1.39	E	2.0	1.21
	F	5.0	1.77	G	10	1.48	H	20	1.52	I	40	1.60	J	60	1.61
	K	80	1.62												
Styrene				B	0.20	0.804	C	0.50	0.950	D	1.0	0.928	E	2.0	0.864
	F	5.0	1.29	G	10	1.14	H	20	1.17	I	40	1.26	J	60	1.28
	K	80	1.29												
Bromoform							C	0.50	0.247	D	1.0	0.224	E	2.0	0.221
	F	5.0	0.316	G	10	0.285	H	20	0.323	I	40	0.361	J	60	0.399

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556 **Column:** MS
Instrument ID: GC-MS 18

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,2,4-Trichlorobenzene				B	0.20	1.10	C	0.50	0.881	D	1.0	0.869	E	2.0	0.782
	F	5.0	1.06	G	10	0.928	H	20	0.907	I	40	0.968	J	60	0.987
	K	80	0.991												
Dibromofluoromethane	A	10	0.213	B	10	0.215	C	10	0.205	D	10	0.212	E	10	0.221
	F	10	0.219	G	10	0.217	H	10	0.227	I	10	0.226	J	10	0.226
	K	10	0.233												
Toluene-d8	A	10	1.00	B	10	1.00	C	10	0.972	D	10	1.01	E	10	1.01
	F	10	0.988	G	10	1.02	H	10	1.02	I	10	1.02	J	10	1.03
	K	10	1.03												
4-Bromofluorobenzene	A	10	0.886	B	10	0.891	C	10	0.885	D	10	0.876	E	10	0.877
	F	10	0.897	G	10	0.907	H	10	0.910	I	10	0.925	J	10	0.935
	K	10	0.931												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556 **Column:** MS
Instrument ID: GC-MS 18

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Chloromethane	TRG	AverageRF	% RSD	8.2		≤ 20	0.390		0.100
Vinyl Chloride	MS	AverageRF	% RSD	12.6		≤ 20	0.375		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	11.6		≤ 20	0.219		0.100
Acetone	TRG	AverageRF	% RSD	5.3		≤ 20	0.0476		0.010
Carbon Disulfide	TRG	AverageRF	% RSD	16.1		≤ 20	0.745		0.100
Methylene Chloride	TRG	AverageRF	% RSD	14.7		≤ 20	0.315		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	7.6		≤ 20	0.273		0.100
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	7.2		≤ 20	0.321		0.100
2-Butanone (MEK)	TRG	AverageRF	% RSD	10.9		≤ 20	0.0193		0.010
Carbon Tetrachloride	MS	AverageRF	% RSD	17.6		≤ 20	0.355		0.100
Benzene	MS	AverageRF	% RSD	7.7		≤ 20	1.24		0.500
Trichloroethene (TCE)	MS	AverageRF	% RSD	13.2		≤ 20	0.289		0.200
4-Methyl-2-pentanone (MIBK)	TRG	AverageRF	% RSD	11.3		≤ 20	0.0643		0.010
Toluene	MS	AverageRF	% RSD	9.5		≤ 20	0.831		0.400
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	9.6		≤ 20	0.613		0.200
2-Hexanone	MS	AverageRF	% RSD	10.1		≤ 20	0.0525		0.015
Dibromochloromethane	TRG	AverageRF	% RSD	18.9		≤ 20	0.535		0.100
Ethylbenzene	MS	AverageRF	% RSD	14.8		≤ 20	1.21		0.100
m,p-Xylenes	TRG	AverageRF	% RSD	13.4		≤ 20	1.49		0.100
o-Xylene	TRG	AverageRF	% RSD	12.0		≤ 20	1.46		0.300
Styrene	TRG	AverageRF	% RSD	17.5		≤ 20	1.10		0.300
Bromoform	TRG	Quadratic(0,0)	COD	1.000		≥ 0.990	0.297		0.100
1,2,4-Trichlorobenzene	TRG	AverageRF	% RSD	9.9		≤ 20	0.947		0.200
Dibromofluoromethane	SURR	AverageRF	% RSD	3.6		≤ 20	0.219		0.01
Toluene-d8	SURR	AverageRF	% RSD	1.8		≤ 20	1.01		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	2.4		≤ 20	0.902		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 09/17/2014
Date Analyzed: 09/17/2014 - 09/18/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13556
Units: PPB

File ID: J:\MS18\DATA\091714\0917F021.D
J:\MS18\DATA\091814\0918F003.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	9.4	0.390	0.368	-6	NA	± 30 %	AverageRF
Vinyl Chloride	10	11	0.375	0.399	6	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	12	0.219	0.257	17	NA	± 30 %	AverageRF
Acetone	50	51	0.0476	0.0487	2	NA	± 30 %	AverageRF
Carbon Disulfide	20	22	0.745	0.806	8	NA	± 30 %	AverageRF
Methylene Chloride	10	8.8	0.315	0.278	-12	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	11	0.273	0.308	13	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	11	0.321	0.341	6	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	55	0.0193	0.0211	9	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.355	0.396	11	NA	± 30 %	AverageRF
Benzene	10	11	1.24	1.32	7	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	11	0.289	0.312	8	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	57	0.0643	0.0728	13	NA	± 30 %	AverageRF
Toluene	10	11	0.831	0.886	7	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	11	0.613	0.658	7	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.0525	0.0571	9	NA	± 30 %	AverageRF
Dibromochloromethane	10	11	0.535	0.601	12	NA	± 30 %	AverageRF
Ethylbenzene	10	11	1.21	1.31	9	NA	± 30 %	AverageRF
m,p-Xylenes	20	22	1.49	1.63	10	NA	± 30 %	AverageRF
o-Xylene	10	11	1.46	1.58	8	NA	± 30 %	AverageRF
Styrene	10	11	1.10	1.20	9	NA	± 30 %	AverageRF
Bromoform	10	10	0.297	0.312	NA	3	± 30 %	Quadratic(0,0
1,2,4-Trichlorobenzene	10	10	0.947	0.978	3	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

Level ID	File ID	Level ID	File ID
A	J:\MS13\DATA\091014\0910F028.D	G	J:\MS13\DATA\091014\0910F034.D
B	J:\MS13\DATA\091014\0910F029.D	H	J:\MS13\DATA\091014\0910F035.D
C	J:\MS13\DATA\091014\0910F030.D	I	J:\MS13\DATA\091014\0910F036.D
D	J:\MS13\DATA\091014\0910F031.D	J	J:\MS13\DATA\091014\0910F037.D
E	J:\MS13\DATA\091014\0910F032.D	K	J:\MS13\DATA\091014\0910F038.D
F	J:\MS13\DATA\091014\0910F033.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chloromethane				B	0.20	0.560	C	0.50	0.416	D	1.0	0.405	E	2.0	0.380
	F	5.0	0.332	G	10	0.369	H	20	0.347	I	40	0.376	J	60	0.375
	K	80	0.372												
Vinyl Chloride	A	0.10	0.295	B	0.20	0.306	C	0.50	0.299	D	1.0	0.320	E	2.0	0.315
	F	5.0	0.264	G	10	0.312	H	20	0.298	I	40	0.344	J	60	0.344
	K	80	0.344												
1,1-Dichloroethene	A	0.10	0.190	B	0.20	0.220	C	0.50	0.182	D	1.0	0.186	E	2.0	0.186
	F	5.0	0.160	G	10	0.195	H	20	0.183	I	40	0.210	J	60	0.207
	K	80	0.209												
Acetone	A	4.0	0.0436	B	8.0	0.0386	C	20	0.0354	D	40	0.0339	E	80	0.0329
	F	100	0.0298	G	200	0.0348	H	400	0.0341	I	800	0.0337	J	1600	0.0345
	K	2000	0.0340												
Carbon Disulfide	A	0.10	0.954	B	0.20	0.822	C	0.50	0.709	D	1.0	0.696	E	2.0	0.672
	F	5.0	0.578	G	10	0.681	H	20	0.644	I	40	0.745	J	60	0.751
	K	80	0.752												
Methylene Chloride										D	1.0	0.355	E	2.0	0.283
	F	5.0	0.257	G	10	0.258	H	20	0.243	I	40	0.245	J	60	0.246
	K	80	0.243												
trans-1,2-Dichloroethene	A	0.10	0.282	B	0.20	0.246	C	0.50	0.224	D	1.0	0.232	E	2.0	0.212
	F	5.0	0.200	G	10	0.232	H	20	0.222	I	40	0.240	J	60	0.242
	K	80	0.242												
cis-1,2-Dichloroethene	A	0.10	0.218	B	0.20	0.252	C	0.50	0.261	D	1.0	0.267	E	2.0	0.248
	F	5.0	0.247	G	10	0.271	H	20	0.263	I	40	0.276	J	60	0.277
	K	80	0.278												
2-Butanone (MEK)	A	4.0	0.0141	B	8.0	0.0136	C	20	0.0131	D	40	0.0137	E	80	0.0128
	F	100	0.0119	G	200	0.0145	H	400	0.0144	I	800	0.0139	J	1600	0.0148
	K	2000	0.0146												
Carbon Tetrachloride	A	0.10	0.320	B	0.20	0.290	C	0.50	0.273	D	1.0	0.277	E	2.0	0.290
	F	5.0	0.247	G	10	0.290	H	20	0.282	I	40	0.333	J	60	0.335
	K	80	0.336												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzene	A	0.10	0.996	B	0.20	1.09	C	0.50	1.04	D	1.0	1.02	E	2.0	0.989
	F	5.0	0.952	G	10	1.07	H	20	1.02	I	40	1.10	J	60	1.10
	K	80	1.10												
Trichloroethene (TCE)				B	0.20	0.227	C	0.50	0.245	D	1.0	0.241	E	2.0	0.239
	F	5.0	0.220	G	10	0.252	H	20	0.244	I	40	0.271	J	60	0.276
	K	80	0.277												
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0602	B	8.0	0.0491	C	20	0.0465	D	40	0.0444	E	80	0.0430
	F	100	0.0405	G	200	0.0487	H	400	0.0490	I	800	0.0490	J	1600	0.0512
	K	2000	0.0506												
Toluene	A	0.10	0.645	B	0.20	0.672	C	0.50	0.667	D	1.0	0.639	E	2.0	0.628
	F	5.0	0.605	G	10	0.674	H	20	0.650	I	40	0.705	J	60	0.708
	K	80	0.708												
Tetrachloroethene (PCE)				B	0.20	0.582	C	0.50	0.523	D	1.0	0.531	E	2.0	0.504
	F	5.0	0.455	G	10	0.529	H	20	0.511	I	40	0.589	J	60	0.590
	K	80	0.596												
2-Hexanone	A	4.0	0.0264	B	8.0	0.0294	C	20	0.0320	D	40	0.0326	E	80	0.0347
	F	100	0.0329	G	200	0.0401	H	400	0.0417	I	800	0.0420	J	1600	0.0433
	K	2000	0.0433												
Dibromochloromethane				B	0.20	0.472	C	0.50	0.511	D	1.0	0.505	E	2.0	0.496
	F	5.0	0.519	G	10	0.559	H	20	0.533	I	40	0.546	J	60	0.550
	K	80	0.550												
Ethylbenzene	A	0.10	0.814	B	0.20	1.02	C	0.50	0.882	D	1.0	0.884	E	2.0	0.918
	F	5.0	0.906	G	10	1.04	H	20	1.02	I	40	1.12	J	60	1.11
	K	80	1.13												
m,p-Xylenes	A	0.20	0.953	B	0.40	1.17	C	1.0	1.09	D	2.0	1.11	E	4.0	1.14
	F	10	1.13	G	20	1.29	H	40	1.27	I	80	1.37	J	120	1.38
	K	160	1.39												
o-Xylene	A	0.10	0.900	B	0.20	0.890	C	0.50	0.986	D	1.0	1.07	E	2.0	1.03
	F	5.0	1.08	G	10	1.23	H	20	1.21	I	40	1.31	J	60	1.32
	K	80	1.33												
Styrene	A	0.10	0.792	B	0.20	0.770	C	0.50	0.805	D	1.0	0.849	E	2.0	0.853
	F	5.0	0.926	G	10	1.01	H	20	1.02	I	40	1.04	J	60	1.05
	K	80	1.06												
Bromoform				B	0.20	0.257	C	0.50	0.277	D	1.0	0.277	E	2.0	0.263
	F	5.0	0.282	G	10	0.298	H	20	0.300	I	40	0.314	J	60	0.318
	K	80	0.322												

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† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,2,4-Trichlorobenzene	A	0.10	0.800	B	0.20	0.814	C	0.50	0.792	D	1.0	0.741	E	2.0	0.766
	F	5.0	0.830	G	10	0.920	H	20	0.956	I	40	1.02	J	60	1.02
	K	80	1.04												
Dibromofluoromethane	A	10	0.216	B	10	0.216	C	10	0.217	D	10	0.217	E	10	0.215
	F	10	0.212	G	10	0.216	H	10	0.210	I	10	0.207	J	10	0.206
	K	10	0.212												
Toluene-d8	A	10	0.939	B	10	0.948	C	10	0.953	D	10	0.982	E	10	0.987
	F	10	0.964	G	10	0.998	H	10	0.987	I	10	0.969	J	10	0.973
	K	10	0.969												
4-Bromofluorobenzene	A	10	0.772	B	10	0.765	C	10	0.799	D	10	0.815	E	10	0.823
	F	10	0.838	G	10	0.843	H	10	0.827	I	10	0.824	J	10	0.818
	K	10	0.824												

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Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Chloromethane	TRG	AverageRF	% RSD	16.1		≤ 20	0.393		0.100
Vinyl Chloride	MS	AverageRF	% RSD	7.9		≤ 20	0.313		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	8.8		≤ 20	0.193		0.100
Acetone	TRG	AverageRF	% RSD	10.1		≤ 20	0.0350		0.010
Carbon Disulfide	TRG	AverageRF	% RSD	13.6		≤ 20	0.728		0.100
Methylene Chloride	TRG	AverageRF	% RSD	14.3		≤ 20	0.266		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	9.0		≤ 20	0.234		0.100
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	6.9		≤ 20	0.260		0.100
2-Butanone (MEK)	TRG	AverageRF	% RSD	6.4		≤ 20	0.0138		0.010
Carbon Tetrachloride	MS	AverageRF	% RSD	9.9		≤ 20	0.298		0.100
Benzene	MS	AverageRF	% RSD	4.9		≤ 20	1.04		0.500
Trichloroethene (TCE)	MS	AverageRF	% RSD	8.0		≤ 20	0.249		0.200
4-Methyl-2-pentanone (MIBK)	TRG	AverageRF	% RSD	10.6		≤ 20	0.0484		0.010
Toluene	MS	AverageRF	% RSD	5.2		≤ 20	0.664		0.400
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	8.6		≤ 20	0.541		0.200
2-Hexanone	MS	AverageRF	% RSD	16.7		≤ 20	0.0362		0.015
Dibromochloromethane	TRG	AverageRF	% RSD	5.4		≤ 20	0.524		0.100
Ethylbenzene	MS	AverageRF	% RSD	11.2		≤ 20	0.986		0.100
m,p-Xylenes	TRG	AverageRF	% RSD	11.6		≤ 20	1.21		0.100
o-Xylene	TRG	AverageRF	% RSD	14.7		≤ 20	1.12		0.300
Styrene	TRG	AverageRF	% RSD	12.3		≤ 20	0.925		0.300
Bromoform	TRG	AverageRF	% RSD	7.9		≤ 20	0.291		0.100
1,2,4-Trichlorobenzene	TRG	AverageRF	% RSD	12.6		≤ 20	0.881		0.200
Dibromofluoromethane	SURR	AverageRF	% RSD	1.9		≤ 20	0.213		0.01
Toluene-d8	SURR	AverageRF	% RSD	1.9		≤ 20	0.970		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	3.1		≤ 20	0.813		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 09/11/2014
Date Analyzed: 09/11/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13540
Units: PPB

File ID: J:\MS13\DATA\091014\0910F042.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	7.6	0.393	0.298	-24	NA	± 30 %	AverageRF
Vinyl Chloride	10	8.6	0.313	0.269	-14	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.7	0.193	0.187	-3	NA	± 30 %	AverageRF
Acetone	50	55	0.0350	0.0384	10	NA	± 30 %	AverageRF
Carbon Disulfide	20	16	0.728	0.591	-19	NA	± 30 %	AverageRF
Methylene Chloride	10	8.3	0.266	0.222	-17	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	9.2	0.234	0.215	-8	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.260	0.247	-5	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	52	0.0138	0.0143	4	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	8.8	0.298	0.262	-12	NA	± 30 %	AverageRF
Benzene	10	9.3	1.04	0.969	-7	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.3	0.249	0.232	-7	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	48	0.0484	0.0462	-5	NA	± 30 %	AverageRF
Toluene	10	9.1	0.664	0.603	-9	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	8.9	0.541	0.480	-11	NA	± 30 %	AverageRF
2-Hexanone	50	53	0.0362	0.0384	6	NA	± 30 %	AverageRF
Dibromochloromethane	10	9.1	0.524	0.479	-9	NA	± 30 %	AverageRF
Ethylbenzene	10	8.9	0.986	0.882	-11	NA	± 30 %	AverageRF
m,p-Xylenes	20	19	1.21	1.12	-7	NA	± 30 %	AverageRF
o-Xylene	10	9.5	1.12	1.07	-5	NA	± 30 %	AverageRF
Styrene	10	9.7	0.925	0.896	-3	NA	± 30 %	AverageRF
Bromoform	10	9.6	0.291	0.278	-4	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	9.1	0.881	0.798	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/07/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12826 **Column:** MS
Instrument ID: MS24

Level ID	File ID
A	J:\MS24\DATA\100713\1007F012.D
B	J:\MS24\DATA\100713\1007F013.D
C	J:\MS24\DATA\100713\1007F014.D
D	J:\MS24\DATA\100713\1007F015.D
E	J:\MS24\DATA\100713\1007F016.D
F	J:\MS24\DATA\100713\1007F017.D
G	J:\MS24\DATA\100713\1007F018.D
H	J:\MS24\DATA\100813\1008F009.D
I	J:\MS24\DATA\100813\1008F010.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chloromethane	A	2.0	0.242	B	5.0	0.250	C	10	0.235	D	20	0.241	E	50	0.225
	F	100	0.227	G	200	0.238	H	1.0	0.281	I	300	0.198			
Vinyl Chloride	A	2.0	0.236	B	5.0	0.267	C	10	0.266	D	20	0.267	E	50	0.249
	F	100	0.252	G	200	0.269				I	300	0.226			
1,1-Dichloroethene	A	2.0	0.160	B	5.0	0.169	C	10	0.170	D	20	0.170	E	50	0.158
	F	100	0.158	G	200	0.169	H	1.0	0.175	I	300	0.144			
Acetone							C	20	0.0818	D	40	0.0747	E	100	0.0527
	F	200	0.0514	G	400	0.0618				I	600	0.0539			
Carbon Disulfide	A	2.0	0.551	B	5.0	0.647	C	10	0.639	D	20	0.645	E	50	0.630
	F	100	0.646	G	200	0.708	H	1.0	0.623	I	300	0.598			
Methylene Chloride				B	5.0	0.343	C	10	0.293	D	20	0.268	E	50	0.243
	F	100	0.239	G	200	0.250				I	300	0.211			
trans-1,2-Dichloroethene	A	2.0	0.194	B	5.0	0.225	C	10	0.233	D	20	0.224	E	50	0.210
	F	100	0.215	G	200	0.231				I	300	0.195			
cis-1,2-Dichloroethene	A	2.0	0.230	B	5.0	0.264	C	10	0.270	D	20	0.269	E	50	0.252
	F	100	0.256	G	200	0.273				I	300	0.231			
2-Butanone (MEK)				B	10	0.0331	C	20	0.0338	D	40	0.0331	E	100	0.0264
	F	200	0.0274	G	400	0.0309				I	600	0.0260			
Carbon Tetrachloride	A	2.0	0.218	B	5.0	0.251	C	10	0.259	D	20	0.258	E	50	0.247
	F	100	0.250	G	200	0.273				I	300	0.232			
Benzene	A	2.0	0.831	B	5.0	0.903	C	10	0.942	D	20	0.964	E	50	0.880
	F	100	0.888	G	200	0.922	H	1.0	1.02	I	300	0.782			
Trichloroethene (TCE)	A	2.0	0.193	B	5.0	0.239	C	10	0.236	D	20	0.232	E	50	0.219
	F	100	0.218	G	200	0.232	H	1.0	0.241	I	300	0.198			
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0728	B	10	0.0838	C	20	0.0830	D	40	0.0855	E	100	0.0748
	F	200	0.0777	G	400	0.0855				I	600	0.0697			
Toluene	A	2.0	0.509	B	5.0	0.598	C	10	0.597	D	20	0.587	E	50	0.551
	F	100	0.557	G	200	0.595	H	1.0	0.653	I	300	0.502			

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/07/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12826 **Column:** MS
Instrument ID: MS24

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloroethene (PCE)	A	2.0	0.408	B	5.0	0.482	C	10	0.482	D	20	0.466	E	50	0.446
	F	100	0.429	G	200	0.463	H	1.0	0.451	I	300	0.394			
2-Hexanone				B	10	0.0796	C	20	0.0769	D	40	0.0747	E	100	0.0651
	F	200	0.0676	G	400	0.0751				I	600	0.0593			
Dibromochloromethane	A	2.0	0.426	B	5.0	0.544	C	10	0.508	D	20	0.547	E	50	0.541
	F	100	0.577												
Ethylbenzene	A	2.0	0.730	B	5.0	0.858	C	10	0.890	D	20	0.864	E	50	0.838
	F	100	0.838	G	200	0.888	H	1.0	0.770	I	300	0.749			
m,p-Xylenes	A	4.0	0.912	B	10	1.09	C	20	1.08	D	40	1.06	E	100	1.03
	F	200	1.03	G	400	1.08	H	2.0	1.00	I	600	0.920			
o-Xylene	A	2.0	0.947	B	5.0	1.07	C	10	1.09	D	20	1.07	E	50	1.04
	F	100	1.04	G	200	1.08	H	1.0	1.05	I	300	0.915			
Styrene				B	5.0	0.858	C	10	0.833	D	20	0.836	E	50	0.812
	F	100	0.814	G	200	0.851				I	300	0.738			
Bromoform	A	2.0	0.233	B	5.0	0.305	C	10	0.317	D	20	0.355	E	50	0.348
	F	100	0.371	G	200	0.411				I	300	0.336			
1,2,4-Trichlorobenzene	A	2.0	0.853	B	5.0	0.996	C	10	0.975	D	20	0.988	E	50	0.941
	F	100	0.903	G	200	0.961				I	300	0.843			
Dibromofluoromethane	A	50	0.243	B	50	0.248	C	50	0.252	D	50	0.251	E	50	0.248
	F	50	0.255	G	50	0.255	H	50	0.238	I	50	0.257			
Toluene-d8	A	50	0.972	B	50	0.977	C	50	0.945	D	50	0.975	E	50	0.953
	F	50	0.966	G	50	0.969	H	50	0.968	I	50	0.970			
4-Bromofluorobenzene	A	50	0.891	B	50	0.891	C	50	0.906	D	50	0.907	E	50	0.901
	F	50	0.893	G	50	0.867	H	50	0.880	I	50	0.864			

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 10/07/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12826 **Column:** MS
Instrument ID: MS24

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Chloromethane	TRG	AverageRF	% RSD	9.3		≤ 20	0.238		0.100
Vinyl Chloride	MS	AverageRF	% RSD	6.4		≤ 20	0.254		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	5.8		≤ 20	0.164		0.100
Acetone	TRG	Quadratic(0,0)	COD	0.991		≥ 0.990	0.0627		0.010
Carbon Disulfide	TRG	AverageRF	% RSD	6.7		≤ 20	0.632		0.100
Methylene Chloride	TRG	AverageRF	% RSD	16.4		≤ 20	0.264		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	7.0		≤ 20	0.216		0.100
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	6.6		≤ 20	0.256		0.100
2-Butanone (MEK)	TRG	AverageRF	% RSD	11.4		≤ 20	0.0301		0.010
Carbon Tetrachloride	MS	AverageRF	% RSD	6.9		≤ 20	0.249		0.100
Benzene	MS	AverageRF	% RSD	7.9		≤ 20	0.904		0.500
Trichloroethene (TCE)	MS	AverageRF	% RSD	7.9		≤ 20	0.223		0.200
4-Methyl-2-pentanone (MIBK)	TRG	AverageRF	% RSD	7.8		≤ 20	0.0791		0.010
Toluene	MS	AverageRF	% RSD	8.4		≤ 20	0.572		0.400
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	7.0		≤ 20	0.447		0.200
2-Hexanone	MS	AverageRF	% RSD	10.3		≤ 20	0.0712		0.015
Dibromochloromethane	TRG	AverageRF	% RSD	10.1		≤ 20	0.524		0.100
Ethylbenzene	MS	AverageRF	% RSD	7.3		≤ 20	0.825		0.100
m,p-Xylenes	TRG	AverageRF	% RSD	6.6		≤ 20	1.02		0.100
o-Xylene	TRG	AverageRF	% RSD	6.0		≤ 20	1.03		0.300
Styrene	TRG	AverageRF	% RSD	4.9		≤ 20	0.820		0.300
Bromoform	TRG	AverageRF	% RSD	15.7		≤ 20	0.334		0.100
1,2,4-Trichlorobenzene	TRG	AverageRF	% RSD	6.4		≤ 20	0.933		0.200
Dibromofluoromethane	SURR	AverageRF	% RSD	2.4		≤ 20	0.250		0.01
Toluene-d8	SURR	AverageRF	% RSD	1.1		≤ 20	0.966		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	1.8		≤ 20	0.889		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 10/07/2013
Date Analyzed: 10/08/2013

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL12826
Units: PPB

File ID: J:\MS24\DATA\100813\1008F013.D
J:\MS24\DATA\100813\1008F014.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	50	40	0.238	0.189	-20	NA	± 30 %	AverageRF
Vinyl Chloride	50	42	0.254	0.212	-17	NA	± 30 %	AverageRF
1,1-Dichloroethene	50	54	0.164	0.176	7	NA	± 30 %	AverageRF
Acetone	250	200	0.0627	0.0482	NA	-19	± 30 %	Quadratic(0,0
Carbon Disulfide	100	95	0.632	0.603	-5	NA	± 30 %	AverageRF
Methylene Chloride	50	48	0.264	0.253	-4	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	50	50	0.216	0.217	0	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	50	49	0.256	0.249	-3	NA	± 30 %	AverageRF
2-Butanone (MEK)	250	200	0.0301	0.0246	-18	NA	± 30 %	AverageRF
Carbon Tetrachloride	50	49	0.249	0.243	-2	NA	± 30 %	AverageRF
Benzene	50	49	0.904	0.887	-2	NA	± 30 %	AverageRF
Trichloroethene (TCE)	50	50	0.223	0.223	0	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	250	240	0.0791	0.0763	-4	NA	± 30 %	AverageRF
Toluene	50	49	0.572	0.558	-2	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	50	49	0.447	0.436	-2	NA	± 30 %	AverageRF
2-Hexanone	250	230	0.0712	0.0651	-9	NA	± 30 %	AverageRF
Dibromochloromethane	50	51	0.524	0.531	1	NA	± 30 %	AverageRF
Ethylbenzene	50	50	0.825	0.826	0	NA	± 30 %	AverageRF
m,p-Xylenes	100	100	1.02	1.03	0	NA	± 30 %	AverageRF
o-Xylene	50	50	1.03	1.03	-1	NA	± 30 %	AverageRF
Styrene	50	51	0.820	0.844	3	NA	± 30 %	AverageRF
Bromoform	50	47	0.334	0.317	-5	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	50	49	0.933	0.917	-2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/19/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 10/07/2013
Calibration ID: CAL12826
Analysis Lot: KWG1412874
Units: PPB

File ID: J:\MS24\DATA\091914\0919F004.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Chloromethane	50	32	0.100	0.238	0.153	-35	*	NA	± 20 %	AverageRF
Vinyl Chloride	50	37	0.100	0.254	0.190	-25	*	NA	± 20 %	AverageRF
1,1-Dichloroethene	50	49	0.100	0.164	0.160	-3		NA	± 20 %	AverageRF
Acetone	100	83	0.010	0.0627	0.0502	NA		-17	± 20 %	Quadratic(0,0)
Carbon Disulfide	50	47	0.100	0.632	0.593	-6		NA	± 20 %	AverageRF
Methylene Chloride	50	46	0.100	0.264	0.244	-7		NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	50	46	0.100	0.216	0.201	-7		NA	± 20 %	AverageRF
cis-1,2-Dichloroethene	50	47	0.100	0.256	0.241	-6		NA	± 20 %	AverageRF
2-Butanone (MEK)	100	90	0.010	0.0301	0.0271	-10		NA	± 20 %	AverageRF
Carbon Tetrachloride	50	47	0.100	0.249	0.232	-7		NA	± 20 %	AverageRF
Benzene	50	47	0.500	0.904	0.851	-6		NA	± 20 %	AverageRF
Trichloroethene (TCE)	50	47	0.200	0.223	0.209	-6		NA	± 20 %	AverageRF
4-Methyl-2-pentanone (MIBK)	100	88	0.010	0.0791	0.0693	-12		NA	± 20 %	AverageRF
Toluene	50	44	0.400	0.572	0.505	-12		NA	± 20 %	AverageRF
Tetrachloroethene (PCE)	50	49	0.200	0.447	0.439	-2		NA	± 20 %	AverageRF
2-Hexanone	100	88	0.015	0.0712	0.0623	-12		NA	± 20 %	AverageRF
Dibromochloromethane	50	59	0.100	0.524	0.620	18		NA	± 20 %	AverageRF
Ethylbenzene	50	49	0.100	0.825	0.816	-1		NA	± 20 %	AverageRF
m,p-Xylenes	100	98	0.100	1.02	1.01	-2		NA	± 20 %	AverageRF
o-Xylene	50	48	0.300	1.03	0.988	-4		NA	± 20 %	AverageRF
Styrene	50	52	0.300	0.820	0.846	3		NA	± 20 %	AverageRF
Bromoform	50	64	0.100	0.334	0.428	28	*	NA	± 20 %	AverageRF
1,2,4-Trichlorobenzene	50	49	0.200	0.933	0.912	-2		NA	± 20 %	AverageRF
Dibromofluoromethane	50	48	0.01	0.250	0.239	-4		NA	± 20 %	AverageRF
Toluene-d8	50	47	0.01	0.966	0.900	-7		NA	± 20 %	AverageRF
4-Bromofluorobenzene	50	49	0.01	0.889	0.863	-3		NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/20/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/11/2014
Calibration ID: CAL13540
Analysis Lot: KWG1412900
Units: PPB

File ID: J:\MS13\DATA\092014\0920F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	8.5	0.100	0.393	0.332	-15	NA	± 20 %	AverageRF
Vinyl Chloride	10	10	0.100	0.313	0.323	3	NA	± 20 %	AverageRF
1,1-Dichloroethene	10	11	0.100	0.193	0.206	7	NA	± 20 %	AverageRF
Acetone	200	170	0.010	0.0350	0.0306	-13	NA	± 20 %	AverageRF
Carbon Disulfide	10	9.9	0.100	0.728	0.718	-1	NA	± 20 %	AverageRF
Methylene Chloride	10	8.9	0.100	0.266	0.238	-11	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.100	0.234	0.243	4	NA	± 20 %	AverageRF
cis-1,2-Dichloroethene	10	10	0.100	0.260	0.268	3	NA	± 20 %	AverageRF
2-Butanone (MEK)	200	170	0.010	0.0138	0.0120	-13	NA	± 20 %	AverageRF
Carbon Tetrachloride	10	11	0.100	0.298	0.329	11	NA	± 20 %	AverageRF
Benzene	10	10	0.500	1.04	1.07	2	NA	± 20 %	AverageRF
Trichloroethene (TCE)	10	10	0.200	0.249	0.259	4	NA	± 20 %	AverageRF
4-Methyl-2-pentanone (MIBK)	200	170	0.010	0.0484	0.0401	-17	NA	± 20 %	AverageRF
Toluene	10	10	0.400	0.664	0.667	0	NA	± 20 %	AverageRF
Tetrachloroethene (PCE)	10	10	0.200	0.541	0.553	2	NA	± 20 %	AverageRF
2-Hexanone	200	170	0.015	0.0362	0.0307	-15	NA	± 20 %	AverageRF
Dibromochloromethane	10	9.6	0.100	0.524	0.501	-4	NA	± 20 %	AverageRF
Ethylbenzene	10	10	0.100	0.986	1.02	4	NA	± 20 %	AverageRF
m,p-Xylenes	20	21	0.100	1.21	1.28	6	NA	± 20 %	AverageRF
o-Xylene	10	10	0.300	1.12	1.17	4	NA	± 20 %	AverageRF
Styrene	10	10	0.300	0.925	0.959	4	NA	± 20 %	AverageRF
Bromoform	10	9.5	0.100	0.291	0.276	-5	NA	± 20 %	AverageRF
1,2,4-Trichlorobenzene	10	9.2	0.200	0.881	0.806	-9	NA	± 20 %	AverageRF
Dibromofluoromethane	10	10	0.01	0.213	0.214	0	NA	± 20 %	AverageRF
Toluene-d8	10	10	0.01	0.970	0.986	2	NA	± 20 %	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.813	0.827	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/20/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/17/2014
Calibration ID: CAL13556
Analysis Lot: KWG1412905
Units: PPB

File ID: J:\MS18\DATA\092014\0920F004.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	9.7	0.100	0.390	0.378	-3	NA	± 20 %	AverageRF
Vinyl Chloride	10	10	0.100	0.375	0.385	3	NA	± 20 %	AverageRF
1,1-Dichloroethene	10	11	0.100	0.219	0.235	7	NA	± 20 %	AverageRF
Acetone	200	200	0.010	0.0476	0.0472	-1	NA	± 20 %	AverageRF
Carbon Disulfide	10	9.6	0.100	0.745	0.716	-4	NA	± 20 %	AverageRF
Methylene Chloride	10	9.3	0.100	0.315	0.292	-7	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.100	0.273	0.275	1	NA	± 20 %	AverageRF
cis-1,2-Dichloroethene	10	10	0.100	0.321	0.331	3	NA	± 20 %	AverageRF
2-Butanone (MEK)	200	210	0.010	0.0193	0.0199	3	NA	± 20 %	AverageRF
Carbon Tetrachloride	10	10	0.100	0.355	0.355	0	NA	± 20 %	AverageRF
Benzene	10	10	0.500	1.24	1.26	2	NA	± 20 %	AverageRF
Trichloroethene (TCE)	10	11	0.200	0.289	0.304	5	NA	± 20 %	AverageRF
4-Methyl-2-pentanone (MIBK)	200	210	0.010	0.0643	0.0683	6	NA	± 20 %	AverageRF
Toluene	10	10	0.400	0.831	0.857	3	NA	± 20 %	AverageRF
Tetrachloroethene (PCE)	10	11	0.200	0.613	0.679	11	NA	± 20 %	AverageRF
2-Hexanone	200	210	0.015	0.0525	0.0548	5	NA	± 20 %	AverageRF
Dibromochloromethane	10	10	0.100	0.535	0.557	4	NA	± 20 %	AverageRF
Ethylbenzene	10	11	0.100	1.21	1.33	10	NA	± 20 %	AverageRF
m,p-Xylenes	20	22	0.100	1.49	1.64	10	NA	± 20 %	AverageRF
o-Xylene	10	11	0.300	1.46	1.57	8	NA	± 20 %	AverageRF
Styrene	10	11	0.300	1.10	1.21	11	NA	± 20 %	AverageRF
Bromoform	10	9.0	0.100	0.297	0.268	NA	-10	± 20 %	Quadratic(0,0)
1,2,4-Trichlorobenzene	10	10	0.200	0.947	0.950	0	NA	± 20 %	AverageRF
Dibromofluoromethane	10	9.9	0.01	0.219	0.217	-1	NA	± 20 %	AverageRF
Toluene-d8	10	9.8	0.01	1.01	0.988	-2	NA	± 20 %	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.902	0.923	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921

Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1412905

Instrument ID: GC-MS 18

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0920F003.D	GC/MS Tuning - Bromofluorobenzene	KWG1412905-1	9/20/2014	08:33		9/20/2014	08:49
0920F004.D	Continuing Calibration Verification	KWG1412905-2	9/20/2014	08:59		9/20/2014	09:15
0920F005.D	Lab Control Sample	KWG1412906-3	9/20/2014	09:32		9/20/2014	09:48
0920F006.D	Batch QCMS	KWG1412906-1	9/20/2014	09:53		9/20/2014	10:09
0920F007.D	Batch QCDMS	KWG1412906-2	9/20/2014	10:14		9/20/2014	10:30
0920F010.D	Method Blank	KWG1412906-4	9/20/2014	11:18		9/20/2014	11:34
0920F011.D	ZZZZZZ	ZZZZZZ	9/20/2014	11:39		9/20/2014	11:55
0920F012.D	ZZZZZZ	ZZZZZZ	9/20/2014	12:01		9/20/2014	12:17
0920F013.D	ZZZZZZ	ZZZZZZ	9/20/2014	12:22		9/20/2014	12:38
0920F014.D	ZZZZZZ	ZZZZZZ	9/20/2014	12:43		9/20/2014	12:59
0920F015.D	ZZZZZZ	ZZZZZZ	9/20/2014	13:05		9/20/2014	13:21
0920F016.D	ZZZZZZ	ZZZZZZ	9/20/2014	13:26		9/20/2014	13:42
0920F017.D	ZZZZZZ	ZZZZZZ	9/20/2014	13:47		9/20/2014	14:03
0920F018.D	ZZZZZZ	ZZZZZZ	9/20/2014	14:08		9/20/2014	14:24
0920F019.D	WS-091514-RB-SW03	K1409921-012	9/20/2014	14:30		9/20/2014	14:46
0920F020.D	WS-091514-RB-SW04	K1409921-013	9/20/2014	14:51		9/20/2014	15:07
0920F021.D	WS-091514-RB-SW05	K1409921-014	9/20/2014	15:12		9/20/2014	15:28
0920F022.D	WS-091514-RB-SW02	K1409921-015	9/20/2014	15:34		9/20/2014	15:50
0920F023.D	WS-091514-RB-SW01	K1409921-016	9/20/2014	15:55		9/20/2014	16:11
0920F024.D	WS-091514-RB-FD10	K1409921-017	9/20/2014	16:16		9/20/2014	16:32
0920F025.D	ZZZZZZ	ZZZZZZ	9/20/2014	16:38		9/20/2014	16:54
0920F026.D	ZZZZZZ	ZZZZZZ	9/20/2014	16:59		9/20/2014	17:15
0920F027.D	ZZZZZZ	ZZZZZZ	9/20/2014	17:20		9/20/2014	17:36
0920F028.D	ZZZZZZ	ZZZZZZ	9/20/2014	17:42		9/20/2014	17:58
0920F029.D	Batch QC	K1409859-012	9/20/2014	18:03		9/20/2014	18:19
0920F030.D	ZZZZZZ	ZZZZZZ	9/20/2014	18:24		9/20/2014	18:40
0920F031.D	Batch QC	K1409859-012	9/20/2014	18:45		9/20/2014	19:01
0920F032.D	ZZZZZZ	ZZZZZZ	9/20/2014	19:07		9/20/2014	19:23

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921

Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1412900

Instrument ID: MS13

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0920F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1412900-1	9/20/2014	08:21		9/20/2014	08:40
0920F003.D	Continuing Calibration Verification	KWG1412900-2	9/20/2014	08:51		9/20/2014	09:10
0920F004.D	Lab Control Sample	KWG1412904-3	9/20/2014	09:24		9/20/2014	09:43
0920F005.D	ZZZZZZ	ZZZZZZ	9/20/2014	09:52		9/20/2014	10:11
0920F006.D	ZZZZZZ	ZZZZZZ	9/20/2014	10:19		9/20/2014	10:38
0920F008.D	Method Blank	KWG1412904-4	9/20/2014	11:13		9/20/2014	11:32
0920F009.D	ZZZZZZ	ZZZZZZ	9/20/2014	11:40		9/20/2014	11:59
0920F010.D	ZZZZZZ	ZZZZZZ	9/20/2014	12:07		9/20/2014	12:26
0920F011.D	Trip Blank	K1409921-019	9/20/2014	12:34		9/20/2014	12:53
0920F012.D	ZZZZZZ	ZZZZZZ	9/20/2014	13:01		9/20/2014	13:20
0920F013.D	ZZZZZZ	ZZZZZZ	9/20/2014	13:28		9/20/2014	13:47
0920F014.D	RINSE BLANK 9-15	K1409921-018	9/20/2014	13:55		9/20/2014	14:14
0920F015.D	ZZZZZZ	ZZZZZZ	9/20/2014	14:22		9/20/2014	14:41
0920F016.D	ZZZZZZ	ZZZZZZ	9/20/2014	14:49		9/20/2014	15:08
0920F017.D	ZZZZZZ	ZZZZZZ	9/20/2014	15:15		9/20/2014	15:34
0920F018.D	ZZZZZZ	ZZZZZZ	9/20/2014	15:42		9/20/2014	16:01
0920F019.D	ZZZZZZ	ZZZZZZ	9/20/2014	16:09		9/20/2014	16:28
0920F020.D	ZZZZZZ	ZZZZZZ	9/20/2014	16:37		9/20/2014	16:56
0920F021.D	ZZZZZZ	ZZZZZZ	9/20/2014	17:04		9/20/2014	17:23
0920F022.D	ZZZZZZ	ZZZZZZ	9/20/2014	17:31		9/20/2014	17:50
0920F023.D	ZZZZZZ	ZZZZZZ	9/20/2014	17:57		9/20/2014	18:16
0920F024.D	ZZZZZZ	ZZZZZZ	9/20/2014	18:24		9/20/2014	18:43
0920F025.D	ZZZZZZ	ZZZZZZ	9/20/2014	18:51		9/20/2014	19:10
0920F026.D	ZZZZZZ	ZZZZZZ	9/20/2014	19:18		9/20/2014	19:37

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1412874
Instrument ID: MS24

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0919F003.D	GC/MS Tuning - Bromofluorobenzene	KWG1412874-1	9/19/2014	10:20		9/19/2014	10:33
0919F004.D	Continuing Calibration Verification	KWG1412874-2	9/19/2014	11:08		9/19/2014	11:21
0919F005.D	Lab Control Sample	KWG1412873-3	9/19/2014	11:44		9/19/2014	11:57
0919F006.D	Duplicate Lab Control Sample	KWG1412873-4	9/19/2014	12:05		9/19/2014	12:18
0919F007.D	Batch QCMS	KWG1412873-1	9/19/2014	12:35		9/19/2014	12:48
0919F008.D	Batch QCDMS	KWG1412873-2	9/19/2014	12:56		9/19/2014	13:09
0919F011.D	Method Blank	KWG1412873-5	9/19/2014	13:57		9/19/2014	14:10
0919F012.D	Batch QC	K1410113-003	9/19/2014	14:18		9/19/2014	14:31
0919F013.D	ZZZZZZ	ZZZZZZ	9/19/2014	14:38		9/19/2014	14:51
0919F014.D	ZZZZZZ	ZZZZZZ	9/19/2014	14:59		9/19/2014	15:12
0919F015.D	ZZZZZZ	ZZZZZZ	9/19/2014	15:20		9/19/2014	15:33
0919F016.D	ZZZZZZ	ZZZZZZ	9/19/2014	15:40		9/19/2014	15:53
0919F018.D	SE-091514-RB-SD11	K1409921-004	9/19/2014	16:21		9/19/2014	16:34
0919F019.D	SE-091514-RB-SD10	K1409921-005	9/19/2014	16:42		9/19/2014	16:55
0919F020.D	SE-091514-RB-SD09	K1409921-006	9/19/2014	17:02		9/19/2014	17:15
0919F021.D	SE-091514-RB-SD08	K1409921-007	9/19/2014	17:23		9/19/2014	17:36
0919F022.D	SE-091514-RB-SD07	K1409921-008	9/19/2014	17:43		9/19/2014	17:56
0919F023.D	SE-091514-RB-SD06	K1409921-009	9/19/2014	18:04		9/19/2014	18:17
0919F024.D	SE-091514-RB-SD05	K1409921-010	9/19/2014	18:24		9/19/2014	18:37
0919F025.D	SE-091514-RB-SD12	K1409921-011	9/19/2014	18:45		9/19/2014	18:58

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/20/2014
Sample Matrix:	Water		

Extraction Prep Log
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Extraction Lot:**	KWG1412904
Analysis Method:	8260C	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
RINSE BLANK 9-15	K1409921-018	09/15/14	09/16/14	10ml	10ml	NA	
Trip Blank	K1409921-019	09/15/14	09/16/14	10ml	10ml	NA	
Method Blank	KWG1412904-4	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1412904-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Service Request: K1409921
Date Extracted: 09/20/2014

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1412906
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
WS-091514-RB-SW03	K1409921-012	09/15/14	09/16/14	10ml	10ml	NA	
WS-091514-RB-SW04	K1409921-013	09/15/14	09/16/14	10ml	10ml	NA	
WS-091514-RB-SW05	K1409921-014	09/15/14	09/16/14	10ml	10ml	NA	
WS-091514-RB-SW02	K1409921-015	09/15/14	09/16/14	10ml	10ml	NA	
WS-091514-RB-SW01	K1409921-016	09/15/14	09/16/14	10ml	10ml	NA	
WS-091514-RB-FD10	K1409921-017	09/15/14	09/16/14	10ml	10ml	NA	
Method Blank	KWG1412906-4	NA	NA	10ml	10ml	NA	
Batch QC	K1409859-012	NA	NA	10ml	10ml	NA	
Batch QCDL	K1409859-012	NA	NA	10ml	10ml	NA	
Batch QCMS	KWG1412906-1	NA	NA	10ml	10ml	NA	
Batch QCDMS	KWG1412906-2	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1412906-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/19/2014
Sample Matrix:	Sediment		

Extraction Prep Log
Volatile Organic Compounds

Extraction Method:	EPA 5035A	**Extraction Lot:**	KWG1412873
Analysis Method:	8260C	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SE-091514-RB-SD11	K1409921-004	09/15/14	09/16/14	6.77g	5.0ml	78.5	
SE-091514-RB-SD10	K1409921-005	09/15/14	09/16/14	5.05g	5.0ml	63.0	
SE-091514-RB-SD09	K1409921-006	09/15/14	09/16/14	4.49g	5.0ml	74.6	
SE-091514-RB-SD08	K1409921-007	09/15/14	09/16/14	4.70g	5.0ml	62.6	
SE-091514-RB-SD07	K1409921-008	09/15/14	09/16/14	3.51g	5.0ml	63.7	
SE-091514-RB-SD06	K1409921-009	09/15/14	09/16/14	5.75g	5.0ml	69.4	
SE-091514-RB-SD05	K1409921-010	09/15/14	09/16/14	3.30g	5.0ml	23.6	
SE-091514-RB-SD12	K1409921-011	09/15/14	09/16/14	5.65g	5.0ml	77.9	
Method Blank	KWG1412873-5	NA	NA	5.00g	5.0ml	NA	
Batch QC	K1410113-003	NA	NA	5.072g	5.0ml	74.9	
Batch QCMS	KWG1412873-1	NA	NA	5.133g	5.0ml	74.9	
Batch QCDMS	KWG1412873-2	NA	NA	5.030g	5.0ml	74.9	
Lab Control Sample	KWG1412873-3	NA	NA	5.00g	5.0ml	NA	
Duplicate Lab Control Sample	KWG1412873-4	NA	NA	5.00g	5.0ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
SE-091514-RB-SD11	K1409921-004	09/15/2014	09/16/2014
SE-091514-RB-SD10	K1409921-005	09/15/2014	09/16/2014
SE-091514-RB-SD09	K1409921-006	09/15/2014	09/16/2014
SE-091514-RB-SD08	K1409921-007	09/15/2014	09/16/2014
SE-091514-RB-SD07	K1409921-008	09/15/2014	09/16/2014
SE-091514-RB-SD06	K1409921-009	09/15/2014	09/16/2014
SE-091514-RB-SD05	K1409921-010	09/15/2014	09/16/2014
SE-091514-RB-SD12	K1409921-011	09/15/2014	09/16/2014
SE-091514-RB-SD12MS	KWG1412851-1	09/15/2014	09/16/2014
SE-091514-RB-SD12DMS	KWG1412851-2	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD11	**Units:**	mg/Kg
Lab Code:	K1409921-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.32	0.019	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.32	0.017	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	ND	U	0.32	0.017	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.32	0.015	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.32	0.014	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.32	0.014	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.14	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.32	0.015	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	ND	U	0.32	0.011	1	09/22/14	10/02/14	KWG1412851	
Pyrene	ND	U	0.32	0.014	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	ND	U	0.32	0.016	1	09/22/14	10/02/14	KWG1412851	
Chrysene	ND	U	0.32	0.012	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	ND	U	0.32	0.019	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.32	0.024	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	41	26-106	10/02/14	Acceptable
Nitrobenzene-d5	41	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	40	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	57	20-123	10/02/14	Acceptable
Terphenyl-d14	64	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD10	**Units:**	mg/Kg
Lab Code:	K1409921-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.39	0.023	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.39	0.020	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	ND	U	0.39	0.020	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.39	0.018	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.4	0.17	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.39	0.018	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.063**	J	0.39	0.013	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.050**	J	0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	**0.11**	J	0.39	0.019	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**0.11**	J	0.39	0.015	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**0.20**	J	0.39	0.023	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.39	0.029	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	47	26-106	10/02/14	Acceptable
Nitrobenzene-d5	48	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	49	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	66	20-123	10/02/14	Acceptable
Terphenyl-d14	66	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD09	**Units:**	mg/Kg
Lab Code:	K1409921-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.33	0.019	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.33	0.017	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	ND	U	0.33	0.017	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.33	0.015	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.33	0.014	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.33	0.014	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.14	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.33	0.015	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.031**	J	0.33	0.011	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.026**	J	0.33	0.014	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	ND	U	0.33	0.016	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**0.018**	J	0.33	0.012	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**0.072**	J	0.33	0.019	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.33	0.024	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	36	26-106	10/02/14	Acceptable
Nitrobenzene-d5	35	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	38	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	55	20-123	10/02/14	Acceptable
Terphenyl-d14	59	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD08	**Units:**	mg/Kg
Lab Code:	K1409921-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.40	0.023	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.40	0.021	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	**0.027**	J	0.40	0.021	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.40	0.018	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.40	0.017	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.40	0.017	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.4	0.17	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.40	0.018	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.25**	J	0.40	0.014	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.29**	J	0.40	0.017	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	**0.47**		0.40	0.019	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**1.2**		0.40	0.015	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**14**	D	2.0	0.12	5	09/22/14	10/03/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.40	0.029	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	44	26-106	10/02/14	Acceptable
Nitrobenzene-d5	42	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	47	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	73	20-123	10/02/14	Acceptable
Terphenyl-d14	71	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD07	**Units:**	mg/Kg
Lab Code:	K1409921-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.39	0.023	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.39	0.020	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	**0.022**	J	0.39	0.020	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.39	0.018	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.4	0.17	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.39	0.018	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.59**		0.39	0.013	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.62**		0.39	0.017	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	**0.41**		0.39	0.019	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**0.93**		0.39	0.015	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**1.2**		0.39	0.023	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	**0.069**	J	0.39	0.029	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	46	26-106	10/02/14	Acceptable
Nitrobenzene-d5	43	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	50	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	71	20-123	10/02/14	Acceptable
Terphenyl-d14	69	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD06	**Units:**	mg/Kg
Lab Code:	K1409921-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.36	0.021	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	0.36	0.019	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	ND	U	0.36	0.019	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.36	0.017	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.36	0.015	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	0.36	0.015	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.2	0.15	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	0.36	0.017	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.28**	J	0.36	0.012	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.24**	J	0.36	0.015	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	**0.44**		0.36	0.018	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**0.40**		0.36	0.013	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**0.28**	J	0.36	0.021	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.36	0.026	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	45	26-106	10/02/14	Acceptable
Nitrobenzene-d5	42	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	55	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	86	20-123	10/02/14	Acceptable
Terphenyl-d14	78	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD05	**Units:**	mg/Kg
Lab Code:	K1409921-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	Ui	1.1	0.060	1	09/22/14	10/02/14	KWG1412851	
2-Methylphenol	ND	U	1.1	0.054	1	09/22/14	10/02/14	KWG1412851	
4-Methylphenol†	**0.082**	J	1.1	0.054	1	09/22/14	10/02/14	KWG1412851	
2,4-Dimethylphenol	ND	U	1.1	0.048	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobutadiene	ND	U	1.1	0.045	1	09/22/14	10/02/14	KWG1412851	
Diethyl Phthalate	ND	U	1.1	0.045	1	09/22/14	10/02/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	6.4	0.45	1	09/22/14	10/02/14	KWG1412851	
Hexachlorobenzene	ND	U	1.1	0.048	1	09/22/14	10/02/14	KWG1412851	
Fluoranthene	**0.30**	J	1.1	0.035	1	09/22/14	10/02/14	KWG1412851	
Pyrene	**0.20**	J	1.1	0.045	1	09/22/14	10/02/14	KWG1412851	
Butyl Benzyl Phthalate	**0.34**	J	1.1	0.051	1	09/22/14	10/02/14	KWG1412851	
Chrysene	**0.40**	J	1.1	0.038	1	09/22/14	10/02/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**0.66**	J	1.1	0.060	1	09/22/14	10/02/14	KWG1412851	
Di-n-octyl Phthalate	**0.087**	J	1.1	0.076	1	09/22/14	10/02/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	43	26-106	10/02/14	Acceptable
Nitrobenzene-d5	42	29-116	10/02/14	Acceptable
2-Fluorobiphenyl	46	32-104	10/02/14	Acceptable
2,4,6-Tribromophenol	56	20-123	10/02/14	Acceptable
Terphenyl-d14	56	37-133	10/02/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Sediment	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD12	**Units:**	mg/Kg
Lab Code:	K1409921-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.32	0.019	1	09/22/14	10/01/14	KWG1412851	
2-Methylphenol	ND	U	0.32	0.017	1	09/22/14	10/01/14	KWG1412851	
4-Methylphenol†	ND	U	0.32	0.017	1	09/22/14	10/01/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.32	0.015	1	09/22/14	10/01/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.32	0.014	1	09/22/14	10/01/14	KWG1412851	
Diethyl Phthalate	ND	U	0.32	0.014	1	09/22/14	10/01/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.14	1	09/22/14	10/01/14	KWG1412851	
Hexachlorobenzene	ND	U	0.32	0.015	1	09/22/14	10/01/14	KWG1412851	
Fluoranthene	**0.018**	J	0.32	0.011	1	09/22/14	10/01/14	KWG1412851	
Pyrene	**0.018**	J	0.32	0.014	1	09/22/14	10/01/14	KWG1412851	
Butyl Benzyl Phthalate	**0.046**	J	0.32	0.016	1	09/22/14	10/01/14	KWG1412851	
Chrysene	**0.022**	J	0.32	0.012	1	09/22/14	10/01/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	**0.17**	J	0.32	0.019	1	09/22/14	10/01/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.32	0.024	1	09/22/14	10/01/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	53	26-106	10/01/14	Acceptable
Nitrobenzene-d5	51	29-116	10/01/14	Acceptable
2-Fluorobiphenyl	53	32-104	10/01/14	Acceptable
2,4,6-Tribromophenol	82	20-123	10/01/14	Acceptable
Terphenyl-d14	77	37-133	10/01/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1412851-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.25	0.019	1	09/22/14	10/01/14	KWG1412851	
2-Methylphenol	ND	U	0.25	0.017	1	09/22/14	10/01/14	KWG1412851	
4-Methylphenol†	ND	U	0.25	0.017	1	09/22/14	10/01/14	KWG1412851	
2,4-Dimethylphenol	ND	U	0.25	0.015	1	09/22/14	10/01/14	KWG1412851	
Hexachlorobutadiene	ND	U	0.25	0.014	1	09/22/14	10/01/14	KWG1412851	
Diethyl Phthalate	ND	U	0.25	0.014	1	09/22/14	10/01/14	KWG1412851	
2-Methyl-4,6-dinitrophenol	ND	U	1.5	0.14	1	09/22/14	10/01/14	KWG1412851	
Hexachlorobenzene	ND	U	0.25	0.015	1	09/22/14	10/01/14	KWG1412851	
Fluoranthene	ND	U	0.25	0.011	1	09/22/14	10/01/14	KWG1412851	
Pyrene	ND	U	0.25	0.014	1	09/22/14	10/01/14	KWG1412851	
Butyl Benzyl Phthalate	ND	U	0.25	0.016	1	09/22/14	10/01/14	KWG1412851	
Chrysene	ND	U	0.25	0.012	1	09/22/14	10/01/14	KWG1412851	
Bis(2-ethylhexyl) Phthalate	ND	U	0.25	0.019	1	09/22/14	10/01/14	KWG1412851	
Di-n-octyl Phthalate	ND	U	0.25	0.024	1	09/22/14	10/01/14	KWG1412851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	48	26-106	10/01/14	Acceptable
Nitrobenzene-d5	52	29-116	10/01/14	Acceptable
2-Fluorobiphenyl	46	32-104	10/01/14	Acceptable
2,4,6-Tribromophenol	58	20-123	10/01/14	Acceptable
Terphenyl-d14	79	37-133	10/01/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Sediment

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5
SE-091514-RB-SD11	K1409921-004	41	41	40	57	64
SE-091514-RB-SD10	K1409921-005	47	48	49	66	66
SE-091514-RB-SD09	K1409921-006	36	35	38	55	59
SE-091514-RB-SD08	K1409921-007	44	42	47	73	71
SE-091514-RB-SD07	K1409921-008	46	43	50	71	69
SE-091514-RB-SD06	K1409921-009	45	42	55	86	78
SE-091514-RB-SD05	K1409921-010	43	42	46	56	56
SE-091514-RB-SD12	K1409921-011	53	51	53	82	77
Method Blank	KWG1412851-5	48	52	46	58	79
SE-091514-RB-SD12MS	KWG1412851-1	46	48	53	78	75
SE-091514-RB-SD12DMS	KWG1412851-2	52	60	57	71	71
Lab Control Sample	KWG1412851-3	53	59	58	76	79
Duplicate Lab Control Sample	KWG1412851-4	58	64	62	80	85

Surrogate Recovery Control Limits (%)

Sur1 =	Phenol-d6	26-106	Sur5 =	Terphenyl-d14	37-133
Sur2 =	Nitrobenzene-d5	29-116			
Sur3 =	2-Fluorobiphenyl	32-104			
Sur4 =	2,4,6-Tribromophenol	20-123			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/01/2014
Time Analyzed: 19:46

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100114\1001F002.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1413431-2
Analysis Lot: KWG1413431

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	66,521	9.21	228,760	11.31	109,822	14.17
	Upper Limit ==>	133,042	9.71	457,520	11.81	219,644	14.67
	Lower Limit ==>	33,261	8.71	114,380	10.81	54,911	13.67
	ICAL Result ==>	69,792	9.21	256,342	11.31	116,440	14.17
Associated Analyses							
Method Blank	KWG1412851-5	64,712	9.21	234,173	11.31	118,216	14.16
Lab Control Sample	KWG1412851-3	69,555	9.21	227,931	11.31	109,394	14.17
Duplicate Lab Control Sample	KWG1412851-4	64,508	9.21	237,209	11.31	111,676	14.17
SE-091514-RB-SD12MS	KWG1412851-1	66,854	9.20	230,126	11.31	106,375	14.17
SE-091514-RB-SD12DMS	KWG1412851-2	67,586	9.21	238,619	11.31	115,794	14.17
SE-091514-RB-SD12	K1409921-011	70,791	9.20	256,735	11.30	123,673	14.16
SE-091514-RB-SD05	K1409921-010	69,615	9.20	234,265	11.31	117,432	14.17
SE-091514-RB-SD06	K1409921-009	71,127	9.20	243,088	11.31	123,192	14.17
SE-091514-RB-SD07	K1409921-008	70,475	9.21	246,310	11.31	122,602	14.17
SE-091514-RB-SD08	K1409921-007	76,412	9.21	253,580	11.32	123,260	14.18
SE-091514-RB-SD09	K1409921-006	75,122	9.21	259,583	11.31	129,829	14.17
SE-091514-RB-SD10	K1409921-005	72,829	9.21	261,124	11.32	124,718	14.18
SE-091514-RB-SD11	K1409921-004	70,352	9.21	253,951	11.31	128,928	14.17

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/01/2014
		Time Analyzed:	19:46

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID:	J:\MS07\DATA\100114\1001F002.D	**Lab Code:**	KWG1413431-2
Instrument ID:	MS07	**Analysis Lot:**	KWG1413431
Analysis Method:	8270D		

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	212,160	16.58	211,461	20.98	211,926	24.12
	Upper Limit ==>	424,320	17.08	422,922	21.48	423,852	24.62
	Lower Limit ==>	106,080	16.08	105,731	20.48	105,963	23.62
	ICAL Result ==>	235,150	16.58	228,474	20.98	239,923	24.12
Associated Analyses							
Method Blank	KWG1412851-5	211,192	16.58	217,749	20.97	218,645	24.11
Lab Control Sample	KWG1412851-3	207,805	16.57	200,447	20.97	210,543	24.12
Duplicate Lab Control Sample	KWG1412851-4	213,324	16.57	204,697	20.97	214,725	24.12
SE-091514-RB-SD12MS	KWG1412851-1	204,875	16.57	209,175	20.97	204,437	24.12
SE-091514-RB-SD12DMS	KWG1412851-2	213,646	16.58	214,104	20.98	217,309	24.12
SE-091514-RB-SD12	K1409921-011	215,456	16.57	222,487	20.97	213,913	24.11
SE-091514-RB-SD05	K1409921-010	213,069	16.57	215,402	20.97	193,068	24.13
SE-091514-RB-SD06	K1409921-009	209,547	16.58	219,991	20.98	204,948	24.13
SE-091514-RB-SD07	K1409921-008	210,289	16.57	209,364	20.98	187,589	24.15
SE-091514-RB-SD08	K1409921-007	219,494	16.58	219,970	20.98	207,469	24.15
SE-091514-RB-SD09	K1409921-006	231,547	16.57	224,947	20.98	215,148	24.13
SE-091514-RB-SD10	K1409921-005	223,508	16.58	227,260	20.98	202,986	24.13
SE-091514-RB-SD11	K1409921-004	243,704	16.57	234,254	20.98	220,732	24.13

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014
		Time Analyzed:	14:40

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID:	J:\MS07\DATA\100314\1003F002.D	**Lab Code:**	KWG1413542-2
Instrument ID:	MS07	**Analysis Lot:**	KWG1413542
Analysis Method:	8270D		

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	45,462	9.22	155,388	11.33	87,775	14.19
	Upper Limit ==>	90,924	9.72	310,776	11.83	175,550	14.69
	Lower Limit ==>	22,731	8.72	77,694	10.83	43,888	13.69
	ICAL Result ==>	69,792	9.21	256,342	11.31	116,440	14.17
Associated Analyses							
SE-091514-RB-SD08DL	K1409921-007	48,171	9.22	173,860	11.32	96,703	14.18

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	10/03/2014
		Time Analyzed:	14:40

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID:	J:\MS07\DATA\100314\1003F002.D	**Lab Code:**	KWG1413542-2
Instrument ID:	MS07	**Analysis Lot:**	KWG1413542
Analysis Method:	8270D		

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	139,076	16.59	146,988	21.00	135,594	24.16
	Upper Limit ==>	278,152	17.09	293,976	21.50	271,188	24.66
	Lower Limit ==>	69,538	16.09	73,494	20.50	67,797	23.66
	ICAL Result ==>	235,150	16.58	228,474	20.98	239,923	24.12
Associated Analyses							
SE-091514-RB-SD08DL	K1409921-007	145,891	16.59	152,927	20.99	146,734	24.15

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/01/2014

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	SE-091514-RB-SD12	**Units:**	mg/Kg
Lab Code:	K1409921-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412851

		SE-091514-RB-SD12MS KWG1412851-1 Matrix Spike			SE-091514-RB-SD12DMS KWG1412851-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	ND	1.56	3.21	49	1.70	3.18	53	18-106	8	40
2-Methylphenol	ND	1.58	3.21	49	1.79	3.18	56	14-103	13	40
4-Methylphenol	ND	1.75	3.21	54	1.93	3.18	61	26-97	10	40
2,4-Dimethylphenol	ND	1.86	3.21	58	1.67	3.18	53	10-117	11	40
Hexachlorobutadiene	ND	1.54	3.21	48	1.75	3.18	55	27-107	13	40
Diethyl Phthalate	ND	2.53	3.21	79	2.23	3.18	70	23-131	13	40
2-Methyl-4,6-dinitrophenol	ND	2.59	3.21	81	1.81	3.18	57	10-138	35	40
Hexachlorobenzene	ND	2.57	3.21	80	2.22	3.18	70	37-119	15	40
Fluoranthene	0.018	2.51	3.21	78	2.33	3.18	73	34-142	7	40
Pyrene	0.018	2.59	3.21	80	2.42	3.18	76	26-130	7	40
Butyl Benzyl Phthalate	0.046	2.84	3.21	87	2.54	3.18	79	36-129	11	40
Chrysene	0.022	2.63	3.21	81	2.41	3.18	75	33-121	9	40
Bis(2-ethylhexyl) Phthalate	0.17	3.07	3.21	90	2.76	3.18	81	35-126	11	40
Di-n-octyl Phthalate	ND	2.79	3.21	87	2.48	3.18	78	36-136	12	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/01/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1412851

	Lab Control Sample KWG1412851-3 Lab Control Spike			Duplicate Lab Control Sample KWG1412851-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	1.85	3.33	55	2.01	3.33	60	40-87	8	40
2-Methylphenol	1.89	3.33	57	2.08	3.33	62	44-96	10	40
4-Methylphenol	2.05	3.33	62	2.28	3.33	68	38-94	11	40
2,4-Dimethylphenol	2.03	3.33	61	2.08	3.33	62	29-93	2	40
Hexachlorobutadiene	1.92	3.33	58	1.95	3.33	59	42-99	1	40
Diethyl Phthalate	2.48	3.33	74	2.87	3.33	86	45-121	15	40
2-Methyl-4,6-dinitrophenol	2.65	3.33	80	2.91	3.33	87	41-119	9	40
Hexachlorobenzene	2.63	3.33	79	2.87	3.33	86	50-109	9	40
Fluoranthene	2.70	3.33	81	2.84	3.33	85	47-117	5	40
Pyrene	2.89	3.33	87	2.99	3.33	90	53-124	3	40
Butyl Benzyl Phthalate	2.91	3.33	87	3.30	3.33	99	53-114	13	40
Chrysene	2.88	3.33	86	3.06	3.33	92	53-109	6	40
Bis(2-ethylhexyl) Phthalate	3.02	3.33	90	3.48	3.33	104	51-115	14	40
Di-n-octyl Phthalate	2.83	3.33	85	3.04	3.33	91	51-121	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/01/2014
		Time Analyzed:	20:31

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	MS07
Lab Code:	KWG1412851-5	**File ID:**	J:\MS07\DATA\100114\1001F003.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412851

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1412851-3	J:\MS07\DATA\100114\1001F004.D	10/01/14	21:12
Duplicate Lab Control Sample	KWG1412851-4	J:\MS07\DATA\100114\1001F005.D	10/01/14	21:52
SE-091514-RB-SD12MS	KWG1412851-1	J:\MS07\DATA\100114\1001F006.D	10/01/14	22:33
SE-091514-RB-SD12DMS	KWG1412851-2	J:\MS07\DATA\100114\1001F007.D	10/01/14	23:13
SE-091514-RB-SD12	K1409921-011	J:\MS07\DATA\100114\1001F008.D	10/01/14	23:54
SE-091514-RB-SD05	K1409921-010	J:\MS07\DATA\100114\1001F009.D	10/02/14	00:34
SE-091514-RB-SD06	K1409921-009	J:\MS07\DATA\100114\1001F010.D	10/02/14	01:15
SE-091514-RB-SD07	K1409921-008	J:\MS07\DATA\100114\1001F011.D	10/02/14	01:55
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100114\1001F012.D	10/02/14	02:36
SE-091514-RB-SD09	K1409921-006	J:\MS07\DATA\100114\1001F013.D	10/02/14	03:16
SE-091514-RB-SD10	K1409921-005	J:\MS07\DATA\100114\1001F014.D	10/02/14	03:57
SE-091514-RB-SD11	K1409921-004	J:\MS07\DATA\100114\1001F015.D	10/02/14	04:37
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100314\1003F014.D	10/03/14	23:00

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Sediment	**Date Analyzed:**	10/01/2014
		Time Analyzed:	21:12

Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	MS07
Lab Code:	KWG1412851-3	**File ID:**	J:\MS07\DATA\100114\1001F004.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412851

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1412851-5	J:\MS07\DATA\100114\1001F003.D	10/01/14	20:31
SE-091514-RB-SD12MS	KWG1412851-1	J:\MS07\DATA\100114\1001F006.D	10/01/14	22:33
SE-091514-RB-SD12DMS	KWG1412851-2	J:\MS07\DATA\100114\1001F007.D	10/01/14	23:13
SE-091514-RB-SD12	K1409921-011	J:\MS07\DATA\100114\1001F008.D	10/01/14	23:54
SE-091514-RB-SD05	K1409921-010	J:\MS07\DATA\100114\1001F009.D	10/02/14	00:34
SE-091514-RB-SD06	K1409921-009	J:\MS07\DATA\100114\1001F010.D	10/02/14	01:15
SE-091514-RB-SD07	K1409921-008	J:\MS07\DATA\100114\1001F011.D	10/02/14	01:55
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100114\1001F012.D	10/02/14	02:36
SE-091514-RB-SD09	K1409921-006	J:\MS07\DATA\100114\1001F013.D	10/02/14	03:16
SE-091514-RB-SD10	K1409921-005	J:\MS07\DATA\100114\1001F014.D	10/02/14	03:57
SE-091514-RB-SD11	K1409921-004	J:\MS07\DATA\100114\1001F015.D	10/02/14	04:37
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100314\1003F014.D	10/03/14	23:00

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/01/2014
Time Analyzed: 19:06

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100114\1001F001.D
Instrument ID: MS07
Column:

Analysis Method: 8270D
Analysis Lot: KWG1413431

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	38.5	17096	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	55.2	24520	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	51.3	22800	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	44432	PASS
199	198	5	9	6.7	2989	PASS
275	198	10	30	22.0	9788	PASS
365	198	1	100	2.3	1017	PASS
441	443	0	100	80.9	3784	PASS
442	198	40	110	53.8	23912	PASS
443	442	15	24	19.6	4680	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413431-2	J:\MS07\DATA\100114\1001F002.D	10/01/2014	19:46	
Method Blank	KWG1412851-5	J:\MS07\DATA\100114\1001F003.D	10/01/2014	20:31	
Lab Control Sample	KWG1412851-3	J:\MS07\DATA\100114\1001F004.D	10/01/2014	21:12	
Duplicate Lab Control Sample	KWG1412851-4	J:\MS07\DATA\100114\1001F005.D	10/01/2014	21:52	
SE-091514-RB-SD12MS	KWG1412851-1	J:\MS07\DATA\100114\1001F006.D	10/01/2014	22:33	
SE-091514-RB-SD12DMS	KWG1412851-2	J:\MS07\DATA\100114\1001F007.D	10/01/2014	23:13	
SE-091514-RB-SD12	K1409921-011	J:\MS07\DATA\100114\1001F008.D	10/01/2014	23:54	
SE-091514-RB-SD05	K1409921-010	J:\MS07\DATA\100114\1001F009.D	10/02/2014	00:34	
SE-091514-RB-SD06	K1409921-009	J:\MS07\DATA\100114\1001F010.D	10/02/2014	01:15	
SE-091514-RB-SD07	K1409921-008	J:\MS07\DATA\100114\1001F011.D	10/02/2014	01:55	
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100114\1001F012.D	10/02/2014	02:36	
SE-091514-RB-SD09	K1409921-006	J:\MS07\DATA\100114\1001F013.D	10/02/2014	03:16	
SE-091514-RB-SD10	K1409921-005	J:\MS07\DATA\100114\1001F014.D	10/02/2014	03:57	
SE-091514-RB-SD11	K1409921-004	J:\MS07\DATA\100114\1001F015.D	10/02/2014	04:37	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/03/2014
Time Analyzed: 14:40

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100314A\1003A002.D
Instrument ID: MS07
Column:

Analysis Method: 8270D
Analysis Lot: KWG1413542

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	33.7	4878	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	47.6	6887	PASS
70	69	0	2	0.6	43	PASS
127	198	25	75	45.7	6607	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	14455	PASS
199	198	5	9	7.1	1028	PASS
275	198	10	30	25.3	3663	PASS
365	198	1	100	2.5	355	PASS
441	443	0	100	82.8	1462	PASS
442	198	40	110	62.9	9091	PASS
443	442	15	24	19.4	1766	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413542-2	J:\MS07\DATA\100314\1003F002.D	10/03/2014	14:40	
SE-091514-RB-SD08	K1409921-007	J:\MS07\DATA\100314\1003F014.D	10/03/2014	23:00	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580 **Column:** MS
Instrument ID: MS07

Level ID	File ID	Level ID	File ID
A	J:\MS07\DATA\093014\0930F003.D	G	J:\MS07\DATA\093014\0930F009.D
B	J:\MS07\DATA\093014\0930F004.D	H	J:\MS07\DATA\093014\0930F010.D
C	J:\MS07\DATA\093014\0930F005.D	I	J:\MS07\DATA\093014\0930F011.D
D	J:\MS07\DATA\093014\0930F006.D	J	J:\MS07\DATA\093014\0930F012.D
E	J:\MS07\DATA\093014\0930F007.D		
F	J:\MS07\DATA\093014\0930F008.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Phenol	A	1.0	1.51	B	5.0	1.31	C	10	1.51	D	20	1.40	E	50	1.29
	F	80	1.26	G	100	1.20	H	120	1.25	I	160	1.19	J	200	1.07
2-Methylphenol	A	1.0	0.854	B	5.0	0.931	C	10	0.971	D	20	0.960	E	50	0.853
	F	80	0.877	G	100	0.850	H	120	0.808	I	160	0.756	J	200	0.714
4-Methylphenol	A	1.0	1.23	B	5.0	1.37	C	10	1.40	D	20	1.41	E	50	1.31
	F	80	1.27	G	100	1.20	H	120	1.12	I	160	1.10	J	200	0.943
2,4-Dimethylphenol	A	1.0	0.267	B	5.0	0.290	C	10	0.306	D	20	0.296	E	50	0.277
	F	80	0.250	G	100	0.260	H	120	0.252	I	160	0.243	J	200	0.232
Hexachlorobutadiene	A	1.0	0.243	B	5.0	0.244	C	10	0.245	D	20	0.248	E	50	0.247
	F	80	0.232	G	100	0.242	H	120	0.235	I	160	0.211	J	200	0.216
Diethyl Phthalate	A	1.0	1.59	B	5.0	1.58	C	10	1.50	D	20	1.54	E	50	1.47
	F	80	1.52	G	100	1.53	H	120	1.55	I	160	1.52	J	200	1.44
2-Methyl-4,6-dinitrophenol										D	20	0.218	E	50	0.291
	F	80	0.312	G	100	0.326	H	120	0.341	I	160	0.332	J	200	0.328
Hexachlorobenzene	A	1.0	0.353	B	5.0	0.350	C	10	0.342	D	20	0.345	E	50	0.361
	F	80	0.336	G	100	0.352	H	120	0.334	I	160	0.330	J	200	0.299
Fluoranthene	A	1.0	1.17	B	5.0	1.13	C	10	1.14	D	20	1.19	E	50	1.18
	F	80	1.08	G	100	1.11	H	120	1.06	I	160	0.970	J	200	0.926
Pyrene	A	1.0	1.16	B	5.0	1.19	C	10	1.27	D	20	1.24	E	50	1.24
	F	80	1.22	G	100	1.16	H	120	1.19	I	160	1.13	J	200	1.06
Butyl Benzyl Phthalate	A	1.0	0.464	B	5.0	0.508	C	10	0.559	D	20	0.570	E	50	0.584
	F	80	0.560	G	100	0.534	H	120	0.579	I	160	0.562	J	200	0.522
Chrysene	A	1.0	1.02	B	5.0	1.02	C	10	1.01	D	20	0.997	E	50	0.975
	F	80	1.01	G	100	0.964	H	120	1.02	I	160	0.975	J	200	0.953
Bis(2-ethylhexyl) Phthalate	A	1.0	0.558	B	5.0	0.643	C	10	0.692	D	20	0.729	E	50	0.747
	F	80	0.773	G	100	0.758	H	120	0.801	I	160	0.749	J	200	0.709
Di-n-octyl Phthalate				B	5.0	0.979	C	10	1.15	D	20	1.32	E	50	1.37
	F	80	1.41	G	100	1.33	H	120	1.46	I	160	1.36	J	200	1.41

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580 **Column:** MS
Instrument ID: MS07

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Phenol-d6	A	1.0	1.37	B	5.0	1.34	C	10	1.55	D	20	1.47	E	50	1.37
	F	80	1.39	G	100	1.31	H	120	1.32	I	160	1.26	J	200	1.15
Nitrobenzene-d5	A	1.0	1.11	B	5.0	1.22	C	10	1.32	D	20	1.28	E	50	1.23
	F	80	1.26	G	100	1.22	H	120	1.17	I	160	1.17	J	200	1.13
2-Fluorobiphenyl	A	1.0	1.58	B	5.0	1.54	C	10	1.59	D	20	1.55	E	50	1.49
	F	80	1.47	G	100	1.52	H	120	1.50	I	160	1.40	J	200	1.43
2,4,6-Tribromophenol				B	5.0	0.189	C	10	0.209	D	20	0.214	E	50	0.235
	F	80	0.223	G	100	0.237	H	120	0.230	I	160	0.227	J	200	0.217
Terphenyl-d14	A	1.0	0.852	B	5.0	0.889	C	10	0.934	D	20	0.892	E	50	0.929
	F	80	0.874	G	100	0.876	H	120	0.869	I	160	0.834	J	200	0.793

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580 **Column:** MS
Instrument ID: MS07

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Phenol	MS	AverageRF	% RSD	10.8		≤ 20	1.30		0.800
2-Methylphenol	MS	AverageRF	% RSD	9.7		≤ 20	0.857		0.700
4-Methylphenol	MS	AverageRF	% RSD	12.0		≤ 20	1.23		0.600
2,4-Dimethylphenol	MS	AverageRF	% RSD	9.1		≤ 20	0.267		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	5.5		≤ 20	0.236		0.010
Diethyl Phthalate	MS	AverageRF	% RSD	3.1		≤ 20	1.52		0.010
2-Methyl-4,6-dinitrophenol	MS	AverageRF	% RSD	13.9		≤ 20	0.307		0.010
Hexachlorobenzene	MS	AverageRF	% RSD	5.1		≤ 20	0.340		0.100
Fluoranthene	MS	AverageRF	% RSD	8.1		≤ 20	1.10		0.600
Pyrene	MS	AverageRF	% RSD	5.2		≤ 20	1.18		0.600
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	6.8		≤ 20	0.544		0.010
Chrysene	MS	AverageRF	% RSD	2.5		≤ 20	0.994		0.700
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	9.9		≤ 20	0.716		0.010
Di-n-octyl Phthalate	MS	AverageRF	% RSD	11.6		≤ 20	1.31		0.010
Phenol-d6	SURR	AverageRF	% RSD	8.0		≤ 20	1.35		0.010
Nitrobenzene-d5	SURR	AverageRF	% RSD	5.5		≤ 20	1.21		0.010
2-Fluorobiphenyl	SURR	AverageRF	% RSD	4.1		≤ 20	1.51		0.010
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	6.8		≤ 20	0.220		0.010
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 20	0.874		0.010

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Calibration Date: 09/30/2014
Date Analyzed: 10/01/2014

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL13580
Units: ug/ml

File ID: J:\MS07\DATA\093014\0930F013.D
J:\MS07\DATA\093014\0930F015.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Phenol	80	77	1.30	1.25	-4	NA	± 30 %	AverageRF
2-Methylphenol	80	79	0.857	0.843	-2	NA	± 30 %	AverageRF
4-Methylphenol	80	77	1.23	1.19	-3	NA	± 30 %	AverageRF
2,4-Dimethylphenol	80	77	0.267	0.257	-4	NA	± 30 %	AverageRF
Hexachlorobutadiene	80	79	0.236	0.233	-1	NA	± 30 %	AverageRF
Diethyl Phthalate	80	76	1.52	1.45	-5	NA	± 30 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	81	0.307	0.310	1	NA	± 30 %	AverageRF
Hexachlorobenzene	80	75	0.340	0.320	-6	NA	± 30 %	AverageRF
Fluoranthene	80	77	1.10	1.06	-3	NA	± 30 %	AverageRF
Pyrene	80	76	1.18	1.12	-5	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	80	85	0.544	0.577	6	NA	± 30 %	AverageRF
Chrysene	80	80	0.994	0.994	0	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	88	0.716	0.784	9	NA	± 30 %	AverageRF
Di-n-octyl Phthalate	80	85	1.31	1.39	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/01/2014

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/30/2014
Calibration ID: CAL13580
Analysis Lot: KWG1413431
Units: ug/ml

File ID: J:\MS07\DATA\100114\1001F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Phenol	80	78	0.800	1.30	1.26	-3	NA	± 20 %	AverageRF
2-Methylphenol	80	78	0.700	0.857	0.840	-2	NA	± 20 %	AverageRF
4-Methylphenol	80	84	0.600	1.23	1.29	5	NA	± 20 %	AverageRF
2,4-Dimethylphenol	80	83	0.200	0.267	0.278	4	NA	± 20 %	AverageRF
Hexachlorobutadiene	80	82	0.010	0.236	0.242	2	NA	± 20 %	AverageRF
Diethyl Phthalate	80	79	0.010	1.52	1.50	-1	NA	± 20 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	88	0.010	0.307	0.338	10	NA	± 20 %	AverageRF
Hexachlorobenzene	80	79	0.100	0.340	0.337	-1	NA	± 20 %	AverageRF
Fluoranthene	80	80	0.600	1.10	1.10	1	NA	± 20 %	AverageRF
Pyrene	80	85	0.600	1.18	1.26	7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	80	86	0.010	0.544	0.582	7	NA	± 20 %	AverageRF
Chrysene	80	83	0.700	0.994	1.03	3	NA	± 20 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	89	0.010	0.716	0.800	12	NA	± 20 %	AverageRF
Di-n-octyl Phthalate	80	84	0.010	1.31	1.38	6	NA	± 20 %	AverageRF
Phenol-d6	80	79	0.010	1.35	1.33	-2	NA	± 20 %	AverageRF
Nitrobenzene-d5	80	84	0.010	1.21	1.27	5	NA	± 20 %	AverageRF
2-Fluorobiphenyl	80	76	0.010	1.51	1.44	-5	NA	± 20 %	AverageRF
2,4,6-Tribromophenol	80	79	0.010	0.220	0.217	-1	NA	± 20 %	AverageRF
Terphenyl-d14	80	81	0.010	0.874	0.881	1	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 10/03/2014

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/30/2014
Calibration ID: CAL13580
Analysis Lot: KWG1413542
Units: ug/ml

File ID: J:\MS07\DATA\100314\1003F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Phenol	80	79	0.800	1.30	1.29	-1	NA	± 20 %	AverageRF
2-Methylphenol	80	87	0.700	0.857	0.933	9	NA	± 20 %	AverageRF
4-Methylphenol	80	83	0.600	1.23	1.28	4	NA	± 20 %	AverageRF
2,4-Dimethylphenol	80	88	0.200	0.267	0.292	9	NA	± 20 %	AverageRF
Hexachlorobutadiene	80	92	0.010	0.236	0.272	15	NA	± 20 %	AverageRF
Diethyl Phthalate	80	68	0.010	1.52	1.30	-14	NA	± 20 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	69	0.010	0.307	0.263	-14	NA	± 20 %	AverageRF
Hexachlorobenzene	80	89	0.100	0.340	0.379	11	NA	± 20 %	AverageRF
Fluoranthene	80	81	0.600	1.10	1.10	1	NA	± 20 %	AverageRF
Pyrene	80	74	0.600	1.18	1.10	-7	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	80	88	0.010	0.544	0.600	10	NA	± 20 %	AverageRF
Chrysene	80	80	0.700	0.994	1.00	1	NA	± 20 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	89	0.010	0.716	0.795	11	NA	± 20 %	AverageRF
Di-n-octyl Phthalate	80	85	0.010	1.31	1.39	6	NA	± 20 %	AverageRF
Phenol-d6	80	77	0.010	1.35	1.29	-4	NA	± 20 %	AverageRF
Nitrobenzene-d5	80	88	0.010	1.21	1.33	10	NA	± 20 %	AverageRF
2-Fluorobiphenyl	80	76	0.010	1.51	1.43	-5	NA	± 20 %	AverageRF
2,4,6-Tribromophenol	80	89	0.010	0.220	0.244	11	NA	± 20 %	AverageRF
Terphenyl-d14	80	75	0.010	0.874	0.823	-6	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D **Analysis Lot:** KWG1413431
Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1001F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1413431-1	10/1/2014	19:06		10/1/2014	19:37
1001F002.D	Continuing Calibration Verification	KWG1413431-2	10/1/2014	19:46		10/1/2014	20:17
1001F003.D	Method Blank	KWG1412851-5	10/1/2014	20:31		10/1/2014	21:02
1001F004.D	Lab Control Sample	KWG1412851-3	10/1/2014	21:12		10/1/2014	21:43
1001F005.D	Duplicate Lab Control Sample	KWG1412851-4	10/1/2014	21:52		10/1/2014	22:23
1001F006.D	SE-091514-RB-SD12MS	KWG1412851-1	10/1/2014	22:33		10/1/2014	23:04
1001F007.D	SE-091514-RB-SD12DMS	KWG1412851-2	10/1/2014	23:13		10/1/2014	23:44
1001F008.D	SE-091514-RB-SD12	K1409921-011	10/1/2014	23:54		10/2/2014	00:25
1001F009.D	SE-091514-RB-SD05	K1409921-010	10/2/2014	00:34		10/2/2014	01:05
1001F010.D	SE-091514-RB-SD06	K1409921-009	10/2/2014	01:15		10/2/2014	01:46
1001F011.D	SE-091514-RB-SD07	K1409921-008	10/2/2014	01:55		10/2/2014	02:26
1001F012.D	SE-091514-RB-SD08	K1409921-007	10/2/2014	02:36		10/2/2014	03:07
1001F013.D	SE-091514-RB-SD09	K1409921-006	10/2/2014	03:16		10/2/2014	03:47
1001F014.D	SE-091514-RB-SD10	K1409921-005	10/2/2014	03:57		10/2/2014	04:28
1001F015.D	SE-091514-RB-SD11	K1409921-004	10/2/2014	04:37		10/2/2014	05:08
1001F016.D	ZZZZZZ	ZZZZZZ	10/2/2014	05:17		10/2/2014	05:48
1001F017.D	ZZZZZZ	ZZZZZZ	10/2/2014	05:58		10/2/2014	06:29
1001F018.D	ZZZZZZ	ZZZZZZ	10/2/2014	06:38		10/2/2014	07:09
1001F019.D	ZZZZZZ	ZZZZZZ	10/2/2014	07:19		10/2/2014	07:50
1001F020.D	ZZZZZZ	ZZZZZZ	10/2/2014	07:59		10/2/2014	08:30
1001F021.D	ZZZZZZ	ZZZZZZ	10/2/2014	08:40		10/2/2014	09:11
1001F022.D	ZZZZZZ	ZZZZZZ	10/2/2014	09:20		10/2/2014	09:51
1001F023.D	ZZZZZZ	ZZZZZZ	10/2/2014	10:01		10/2/2014	10:32
1001F024.D	ZZZZZZ	ZZZZZZ	10/2/2014	10:41		10/2/2014	11:12
1001F025.D	ZZZZZZ	ZZZZZZ	10/2/2014	11:22		10/2/2014	11:53
1001F026.D	ZZZZZZ	ZZZZZZ	10/2/2014	12:03		10/2/2014	12:34
1001F027.D	ZZZZZZ	ZZZZZZ	10/2/2014	12:43		10/2/2014	13:14
1001F028.D	ZZZZZZ	ZZZZZZ	10/2/2014	13:24		10/2/2014	13:55
1001F029.D	ZZZZZZ	ZZZZZZ	10/2/2014	14:04		10/2/2014	14:35
1001F030.D	ZZZZZZ	ZZZZZZ	10/2/2014	14:45		10/2/2014	15:16
1001F031.D	ZZZZZZ	ZZZZZZ	10/2/2014	15:26		10/2/2014	15:57
1001F032.D	ZZZZZZ	ZZZZZZ	10/2/2014	16:06		10/2/2014	16:37
1001F033.D	ZZZZZZ	ZZZZZZ	10/2/2014	16:46		10/2/2014	17:17
1001F034.D	ZZZZZZ	ZZZZZZ	10/2/2014	17:26		10/2/2014	17:57

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921

Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D **Analysis Lot:** KWG1413431

Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1001F035.D	ZZZZZZ	ZZZZZZ	10/2/2014	18:07		10/2/2014	18:38
1001F036.D	ZZZZZZ	ZZZZZZ	10/2/2014	18:47		10/2/2014	19:18

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921

Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D **Analysis Lot:** KWG1413542

Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
003F002A.D	ZZZZZZ	ZZZZZZ	10/3/2014	14:40		10/3/2014	15:11
1003A002.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1413542-1	10/3/2014	14:40		10/3/2014	15:11
1003F002.D	Continuing Calibration Verification	KWG1413542-2	10/3/2014	14:40		10/3/2014	15:11
1003F003.D	ZZZZZZ	ZZZZZZ	10/3/2014	15:35		10/3/2014	16:06
1003F004.D	ZZZZZZ	ZZZZZZ	10/3/2014	16:15		10/3/2014	16:46
1003F005.D	ZZZZZZ	ZZZZZZ	10/3/2014	16:56		10/3/2014	17:27
1003F006.D	ZZZZZZ	ZZZZZZ	10/3/2014	17:37		10/3/2014	18:08
1003F007.D	ZZZZZZ	ZZZZZZ	10/3/2014	18:17		10/3/2014	18:48
1003F008.D	ZZZZZZ	ZZZZZZ	10/3/2014	18:57		10/3/2014	19:28
1003F009.D	ZZZZZZ	ZZZZZZ	10/3/2014	19:38		10/3/2014	20:09
1003F010.D	ZZZZZZ	ZZZZZZ	10/3/2014	20:18		10/3/2014	20:49
1003F011.D	ZZZZZZ	ZZZZZZ	10/3/2014	20:59		10/3/2014	21:30
1003F012.D	ZZZZZZ	ZZZZZZ	10/3/2014	21:39		10/3/2014	22:10
1003F013.D	ZZZZZZ	ZZZZZZ	10/3/2014	22:19		10/3/2014	22:50
1003F014.D	SE-091514-RB-SD08	K1409921-007	10/3/2014	23:00		10/3/2014	23:31
1003F015.D	ZZZZZZ	ZZZZZZ	10/3/2014	23:40		10/4/2014	00:11
1003F016.D	ZZZZZZ	ZZZZZZ	10/4/2014	00:21		10/4/2014	00:52
1003F017.D	ZZZZZZ	ZZZZZZ	10/4/2014	01:01		10/4/2014	01:32
1003F018.D	ZZZZZZ	ZZZZZZ	10/4/2014	01:42		10/4/2014	02:13
1003F019.D	ZZZZZZ	ZZZZZZ	10/4/2014	02:22		10/4/2014	02:53
1003F020.D	ZZZZZZ	ZZZZZZ	10/4/2014	03:03		10/4/2014	03:34
1003F021.D	ZZZZZZ	ZZZZZZ	10/4/2014	03:43		10/4/2014	04:14

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Sediment		

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Extraction Lot:**	KWG1412851
Analysis Method:	8270D	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SE-091514-RB-SD11	K1409921-004	09/15/14	09/16/14	40.337g	1ml	78.5	
SE-091514-RB-SD10	K1409921-005	09/15/14	09/16/14	40.481g	1ml	63.0	
SE-091514-RB-SD09	K1409921-006	09/15/14	09/16/14	40.372g	1ml	74.6	
SE-091514-RB-SD08	K1409921-007	09/15/14	09/16/14	40.408g	1ml	62.6	
SE-091514-RB-SD08DL	K1409921-007	09/15/14	09/16/14	40.408g	1ml	62.6	
SE-091514-RB-SD07	K1409921-008	09/15/14	09/16/14	40.062g	1ml	63.7	
SE-091514-RB-SD06	K1409921-009	09/15/14	09/16/14	40.490g	1ml	69.4	
SE-091514-RB-SD05	K1409921-010	09/15/14	09/16/14	40.330g	1ml	23.6	
SE-091514-RB-SD12	K1409921-011	09/15/14	09/16/14	40.240g	1ml	77.9	
Method Blank	KWG1412851-5	NA	NA	40.490g	1ml	NA	
SE-091514-RB-SD12MS	KWG1412851-1	09/15/14	09/16/14	40.017g	1ml	77.9	
SE-091514-RB-SD12DMS	KWG1412851-2	09/15/14	09/16/14	40.410g	1ml	77.9	
Lab Control Sample	KWG1412851-3	NA	NA	30.000g	1ml	NA	
Duplicate Lab Control Sample	KWG1412851-4	NA	NA	30.000g	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101
Service Request: K1409921

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
WS-091514-RB-SW03	K1409921-012	09/15/2014	09/16/2014
WS-091514-RB-SW04	K1409921-013	09/15/2014	09/16/2014
WS-091514-RB-SW05	K1409921-014	09/15/2014	09/16/2014
WS-091514-RB-SW02	K1409921-015	09/15/2014	09/16/2014
WS-091514-RB-SW01	K1409921-016	09/15/2014	09/16/2014
WS-091514-RB-FD10	K1409921-017	09/15/2014	09/16/2014
RINSE BLANK 9-15	K1409921-018	09/15/2014	09/16/2014

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-SW03	**Units:**	ug/L
Lab Code:	K1409921-012	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.19	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	ND	U	0.95	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	76	23-106	09/26/14	Acceptable
Nitrobenzene-d5	84	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	74	31-94	09/26/14	Acceptable
Terphenyl-d14	91	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-SW04	**Units:**	ug/L
Lab Code:	K1409921-013	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.19	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	ND	U	0.95	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	69	23-106	09/26/14	Acceptable
Nitrobenzene-d5	76	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	71	31-94	09/26/14	Acceptable
Terphenyl-d14	87	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-SW05	**Units:**	ug/L
Lab Code:	K1409921-014	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.50	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.50	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.50	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	4.0	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.20	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.20	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.20	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.20	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.20	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.20	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	**0.13**	BJ	1.0	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.20	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	23-106	09/26/14	Acceptable
Nitrobenzene-d5	65	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	68	31-94	09/26/14	Acceptable
Terphenyl-d14	91	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-SW02	**Units:**	ug/L
Lab Code:	K1409921-015	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.19	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	ND	U	0.95	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	84	23-106	09/26/14	Acceptable
Nitrobenzene-d5	86	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	72	31-94	09/26/14	Acceptable
Terphenyl-d14	78	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-SW01	**Units:**	ug/L
Lab Code:	K1409921-016	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.19	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	ND	U	0.95	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	73	23-106	09/26/14	Acceptable
Nitrobenzene-d5	79	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	67	31-94	09/26/14	Acceptable
Terphenyl-d14	83	40-127	09/26/14	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	WS-091514-RB-FD10	**Units:**	ug/L
Lab Code:	K1409921-017	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.52	0.065	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.52	0.12	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.52	0.13	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	4.1	2.3	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.21	0.028	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	ND	U	0.21	0.016	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	2.1	0.026	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.21	0.021	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.21	0.020	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.21	0.022	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.21	0.029	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	**0.72**	BJ	1.1	0.14	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.21	0.034	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	69	23-106	09/26/14	Acceptable
Nitrobenzene-d5	72	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	67	31-94	09/26/14	Acceptable
Terphenyl-d14	92	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	09/15/2014
Sample Matrix:	Water	**Date Received:**	09/16/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	RINSE BLANK 9-15	**Units:**	ug/L
Lab Code:	K1409921-018	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/26/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/26/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/26/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/26/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/26/14	KWG1412928	
Diethyl Phthalate	**0.49**		0.19	0.015	1	09/22/14	09/26/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/26/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/26/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/26/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/26/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/26/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	**6.3**	B	0.95	0.13	1	09/22/14	09/26/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/26/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	64	23-106	09/26/14	Acceptable
Nitrobenzene-d5	65	26-110	09/26/14	Acceptable
2-Fluorobiphenyl	69	31-94	09/26/14	Acceptable
Terphenyl-d14	86	40-127	09/26/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Analytical Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1412928-3	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	0.48	0.063	1	09/22/14	09/25/14	KWG1412928	
2-Methylphenol	ND	U	0.48	0.11	1	09/22/14	09/25/14	KWG1412928	
4-Methylphenol†	ND	U	0.48	0.12	1	09/22/14	09/25/14	KWG1412928	
2,4-Dimethylphenol	ND	U	3.8	2.2	1	09/22/14	09/25/14	KWG1412928	
Hexachlorobutadiene	ND	U	0.19	0.027	1	09/22/14	09/25/14	KWG1412928	
Diethyl Phthalate	ND	U	0.19	0.015	1	09/22/14	09/25/14	KWG1412928	
2-Methyl-4,6-dinitrophenol	ND	U	1.9	0.025	1	09/22/14	09/25/14	KWG1412928	
Fluoranthene	ND	U	0.19	0.020	1	09/22/14	09/25/14	KWG1412928	
Pyrene	ND	U	0.19	0.019	1	09/22/14	09/25/14	KWG1412928	
Butyl Benzyl Phthalate	ND	U	0.19	0.021	1	09/22/14	09/25/14	KWG1412928	
Chrysene	ND	U	0.19	0.028	1	09/22/14	09/25/14	KWG1412928	
Bis(2-ethylhexyl) Phthalate	**0.96**		0.95	0.13	1	09/22/14	09/25/14	KWG1412928	*
Di-n-octyl Phthalate	ND	U	0.19	0.033	1	09/22/14	09/25/14	KWG1412928	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	82	23-106	09/25/14	Acceptable
Nitrobenzene-d5	89	26-110	09/25/14	Acceptable
2-Fluorobiphenyl	77	31-94	09/25/14	Acceptable
Terphenyl-d14	93	40-127	09/25/14	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
WS-091514-RB-SW03	K1409921-012	76	84	74	91
WS-091514-RB-SW04	K1409921-013	69	76	71	87
WS-091514-RB-SW05	K1409921-014	64	65	68	91
WS-091514-RB-SW02	K1409921-015	84	86	72	78
WS-091514-RB-SW01	K1409921-016	73	79	67	83
WS-091514-RB-FD10	K1409921-017	69	72	67	92
RINSE BLANK 9-15	K1409921-018	64	65	69	86
Method Blank	KWG1412928-3	82	89	77	93
Lab Control Sample	KWG1412928-1	76	85	74	81
Duplicate Lab Control Sample	KWG1412928-2	75	92	70	76

Surrogate Recovery Control Limits (%)

Sur1	= Phenol-d6	23-106
Sur2	= Nitrobenzene-d5	26-110
Sur3	= 2-Fluorobiphenyl	31-94
Sur4	= Terphenyl-d14	40-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/25/2014
		Time Analyzed:	20:10

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID:	J:\MS06\DATA\092514\0925F003.D	**Lab Code:**	KWG1413176-2
Instrument ID:	MS06	**Analysis Lot:**	KWG1413176
Analysis Method:	8270D		

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	16,267	8.85	91,208	10.77	46,496	13.61
	Upper Limit ==>	32,534	9.35	182,416	11.27	92,992	14.11
	Lower Limit ==>	8,134	8.35	45,604	10.27	23,248	13.11
	ICAL Result ==>	26,876	8.87	95,174	10.80	55,190	13.63
Associated Analyses							
Method Blank	KWG1412928-3	18,003	8.85	78,997	10.77	40,932	13.60
Lab Control Sample	KWG1412928-1	19,411	8.84	72,374	10.77	41,251	13.60
Duplicate Lab Control Sample	KWG1412928-2	15,818	8.85	77,250	10.77	40,608	13.61
WS-091514-RB-SW03	K1409921-012	20,173	8.85	77,459	10.77	41,121	13.60
WS-091514-RB-SW04	K1409921-013	19,478	8.85	65,682	10.77	37,292	13.61
WS-091514-RB-SW05	K1409921-014	18,521	8.85	47,866	10.77	36,485	13.61
WS-091514-RB-SW02	K1409921-015	17,261	8.85	64,840	10.77	37,092	13.61
WS-091514-RB-SW01	K1409921-016	16,704	8.84	60,939	10.77	39,484	13.60
WS-091514-RB-FD10	K1409921-017	19,344	8.85	63,270	10.77	35,373	13.61
RINSE BLANK 9-15	K1409921-018	23,213	8.86	62,416	10.77	29,333	13.61

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Analyzed:**	09/25/2014
		Time Analyzed:	20:10

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID:	J:\MS06\DATA\092514\0925F003.D	**Lab Code:**	KWG1413176-2
Instrument ID:	MS06	**Analysis Lot:**	KWG1413176
Analysis Method:	8270D		

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	80,413	16.04	74,218	20.62	84,303	24.32
	Upper Limit ==>	160,826	16.54	148,436	21.12	168,606	24.82
	Lower Limit ==>	40,207	15.54	37,109	20.12	42,152	23.82
	ICAL Result ==>	95,411	16.08	94,444	20.66	81,064	24.38
Associated Analyses							
Method Blank	KWG1412928-3	72,463	16.03	62,057	20.61	71,431	24.31
Lab Control Sample	KWG1412928-1	62,814	16.04	72,448	20.61	67,819	24.32
Duplicate Lab Control Sample	KWG1412928-2	70,380	16.04	65,820	20.61	71,511	24.31
WS-091514-RB-SW03	K1409921-012	62,913	16.04	61,357	20.61	65,538	24.32
WS-091514-RB-SW04	K1409921-013	55,699	16.04	64,745	20.62	61,262	24.32
WS-091514-RB-SW05	K1409921-014	66,754	16.03	57,404	20.61	60,594	24.31
WS-091514-RB-SW02	K1409921-015	58,464	16.03	63,823	20.61	63,681	24.31
WS-091514-RB-SW01	K1409921-016	63,617	16.04	63,923	20.60	60,171	24.31
WS-091514-RB-FD10	K1409921-017	58,705	16.04	56,374	20.61	59,613	24.31
RINSE BLANK 9-15	K1409921-018	79,755	16.04	67,807	20.61	64,367	24.31

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Water	**Date Analyzed:**	09/25/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	8270D	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1412928

	Lab Control Sample KWG1412928-1 Lab Control Spike			Duplicate Lab Control Sample KWG1412928-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	3.82	5.00	76	3.51	5.00	70	50-112	8	30
2-Methylphenol	4.30	5.00	86	4.49	5.00	90	20-118	4	30
4-Methylphenol	4.18	5.00	84	4.82	5.00	96	19-121	14	30
2,4-Dimethylphenol	4.49	15.0	30	3.95	15.0	26	10-128	13	30
Hexachlorobutadiene	1.66	5.00	33	1.72	5.00	34	10-85	4	30
Diethyl Phthalate	4.43	5.00	89	4.22	5.00	84	56-112	5	30
2-Methyl-4,6-dinitrophenol	3.44	5.00	69	3.67	5.00	73	38-109	6	30
Fluoranthene	5.26	5.00	105	4.37	5.00	87	56-110	18	30
Pyrene	4.27	5.00	85	4.30	5.00	86	59-109	1	30
Butyl Benzyl Phthalate	4.58	5.00	92	4.34	5.00	87	62-112	6	30
Chrysene	4.65	5.00	93	4.59	5.00	92	61-107	1	30
Bis(2-ethylhexyl) Phthalate	5.60	5.00	112	7.17	5.00	143 *	61-118	25	30
Di-n-octyl Phthalate	4.55	5.00	91	4.46	5.00	89	60-110	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Water	**Date Analyzed:**	09/25/2014
		Time Analyzed:	21:28

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	MS06
Lab Code:	KWG1412928-3	**File ID:**	J:\MS06\DATA\092514\0925F005.D
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412928

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1412928-1	J:\MS06\DATA\092514\0925F006.D	09/25/14	22:08
Duplicate Lab Control Sample	KWG1412928-2	J:\MS06\DATA\092514\0925F007.D	09/25/14	22:47
WS-091514-RB-SW03	K1409921-012	J:\MS06\DATA\092514\0925F013.D	09/26/14	02:44
WS-091514-RB-SW04	K1409921-013	J:\MS06\DATA\092514\0925F014.D	09/26/14	03:23
WS-091514-RB-SW05	K1409921-014	J:\MS06\DATA\092514\0925F015.D	09/26/14	04:02
WS-091514-RB-SW02	K1409921-015	J:\MS06\DATA\092514\0925F016.D	09/26/14	04:41
WS-091514-RB-SW01	K1409921-016	J:\MS06\DATA\092514\0925F017.D	09/26/14	05:21
WS-091514-RB-FD10	K1409921-017	J:\MS06\DATA\092514\0925F018.D	09/26/14	06:00
RINSE BLANK 9-15	K1409921-018	J:\MS06\DATA\092514\0925F019.D	09/26/14	06:40

QA/QC Report

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Date Extracted:**	09/22/2014
Sample Matrix:	Water	**Date Analyzed:**	09/25/2014
		Time Analyzed:	22:08

Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	MS06
Lab Code:	KWG1412928-1	**File ID:**	J:\MS06\DATA\092514\0925F006.D
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1412928

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1412928-3	J:\MS06\DATA\092514\0925F005.D	09/25/14	21:28
WS-091514-RB-SW03	K1409921-012	J:\MS06\DATA\092514\0925F013.D	09/26/14	02:44
WS-091514-RB-SW04	K1409921-013	J:\MS06\DATA\092514\0925F014.D	09/26/14	03:23
WS-091514-RB-SW05	K1409921-014	J:\MS06\DATA\092514\0925F015.D	09/26/14	04:02
WS-091514-RB-SW02	K1409921-015	J:\MS06\DATA\092514\0925F016.D	09/26/14	04:41
WS-091514-RB-SW01	K1409921-016	J:\MS06\DATA\092514\0925F017.D	09/26/14	05:21
WS-091514-RB-FD10	K1409921-017	J:\MS06\DATA\092514\0925F018.D	09/26/14	06:00
RINSE BLANK 9-15	K1409921-018	J:\MS06\DATA\092514\0925F019.D	09/26/14	06:40

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/25/2014
Time Analyzed: 20:10

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS06\DATA\092514\0925A003.D
Instrument ID: MS06
Column:

Analysis Method: 8270D
Analysis Lot: KWG1413176

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	62.9	8721	PASS
68	69	0	2	0.4	37	PASS
69	198	0	100	60.4	8364	PASS
70	69	0	2	0.3	25	PASS
127	198	25	75	45.8	6340	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	13855	PASS
199	198	5	9	7.2	997	PASS
275	198	10	30	23.9	3318	PASS
365	198	1	100	3.6	492	PASS
441	443	0	100	11.1	192	PASS
442	198	40	110	66.0	9146	PASS
443	442	15	24	18.9	1729	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413176-2	J:\MS06\DATA\092514\0925F003.D	09/25/2014	20:10	
Method Blank	KWG1412928-3	J:\MS06\DATA\092514\0925F005.D	09/25/2014	21:28	
Lab Control Sample	KWG1412928-1	J:\MS06\DATA\092514\0925F006.D	09/25/2014	22:08	
Duplicate Lab Control Sample	KWG1412928-2	J:\MS06\DATA\092514\0925F007.D	09/25/2014	22:47	
WS-091514-RB-SW03	K1409921-012	J:\MS06\DATA\092514\0925F013.D	09/26/2014	02:44	
WS-091514-RB-SW04	K1409921-013	J:\MS06\DATA\092514\0925F014.D	09/26/2014	03:23	
WS-091514-RB-SW05	K1409921-014	J:\MS06\DATA\092514\0925F015.D	09/26/2014	04:02	
WS-091514-RB-SW02	K1409921-015	J:\MS06\DATA\092514\0925F016.D	09/26/2014	04:41	
WS-091514-RB-SW01	K1409921-016	J:\MS06\DATA\092514\0925F017.D	09/26/2014	05:21	
WS-091514-RB-FD10	K1409921-017	J:\MS06\DATA\092514\0925F018.D	09/26/2014	06:00	
RINSE BLANK 9-15	K1409921-018	J:\MS06\DATA\092514\0925F019.D	09/26/2014	06:40	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/24/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13569 **Column:** MS
Instrument ID: MS06

Level ID	File ID
A	J:\MS06\DATA\092414\0924F005.D
B	J:\MS06\DATA\092414\0924F006.D
C	J:\MS06\DATA\092414\0924F007.D
D	J:\MS06\DATA\092414\0924F008.D
E	J:\MS06\DATA\092414\0924F009.D
F	J:\MS06\DATA\092414\0924F010.D
G	J:\MS06\DATA\092414\0924F011.D
H	J:\MS06\DATA\092414\0924F012.D
I	J:\MS06\DATA\092414\0924F013.D
J	J:\MS06\DATA\092414\0924F014.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Phenol				B	100	2.10	C	200	1.48	D	500	1.89	E	1000	1.51
	F	2000	1.50	G	3000	1.62	H	5000	1.73	I	7000	1.75	J	10000	1.73
2-Methylphenol				B	100	1.10	C	200	0.993	D	500	1.28	E	1000	0.953
	F	2000	0.914	G	3000	0.994	H	5000	1.18	I	7000	1.08	J	10000	0.881
4-Methylphenol				B	100	1.36	C	200	1.48	D	500	1.93	E	1000	1.35
	F	2000	1.38	G	3000	1.43	H	5000	1.94	I	7000	1.66	J	10000	1.26
2,4-Dimethylphenol				B	100	0.298	C	200	0.338	D	500	0.286	E	1000	0.279
	F	2000	0.266	G	3000	0.272	H	5000	0.292	I	7000	0.309	J	10000	0.306
Hexachlorobutadiene				B	100	0.295	C	200	0.328	D	500	0.289	E	1000	0.271
	F	2000	0.290	G	3000	0.280	H	5000	0.309	I	7000	0.325	J	10000	0.301
Diethyl Phthalate				B	100	1.67	C	200	1.72	D	500	1.77	E	1000	1.65
	F	2000	1.67	G	3000	1.70	H	5000	1.72	I	7000	1.75	J	10000	2.23
2-Methyl-4,6-dinitrophenol										D	500	0.178	E	1000	0.205
	F	2000	0.256	G	3000	0.293	H	5000	0.322	I	7000	0.333	J	10000	0.420
Fluoranthene	A	50	1.18	B	100	1.16	C	200	1.06	D	500	1.10	E	1000	1.15
	F	2000	1.07	G	3000	1.15	H	5000	1.20	I	7000	1.18	J	10000	1.15
Pyrene	A	50	1.51	B	100	1.58	C	200	1.32	D	500	1.35	E	1000	1.29
	F	2000	1.16	G	3000	1.28	H	5000	1.33	I	7000	1.22	J	10000	1.33
Butyl Benzyl Phthalate				B	100	0.689	C	200	0.701	D	500	0.671	E	1000	0.687
	F	2000	0.660	G	3000	0.682	H	5000	0.700	I	7000	0.704	J	10000	0.709
Chrysene	A	50	1.06	B	100	1.20	C	200	1.14	D	500	1.11	E	1000	1.07
	F	2000	1.05	G	3000	1.03	H	5000	1.04	I	7000	1.12	J	10000	1.10
Bis(2-ethylhexyl) Phthalate				B	100	0.952	C	200	0.965	D	500	1.03	E	1000	0.905
	F	2000	0.943	G	3000	0.927	H	5000	0.899	I	7000	1.03	J	10000	1.02
Di-n-octyl Phthalate				B	100	1.41	C	200	1.61	D	500	1.70	E	1000	1.71
	F	2000	1.75	G	3000	1.77	H	5000	1.76	I	7000	2.04	J	10000	2.10
Phenol-d6				B	100	1.61	C	200	1.40	D	500	1.77	E	1000	1.42
	F	2000	1.41	G	3000	1.49	H	5000	1.55	I	7000	1.59	J	10000	1.52

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/24/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13569 **Column:** MS
Instrument ID: MS06

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Nitrobenzene-d5				B	100	1.74	C	200	1.44	D	500	2.00	E	1000	1.48
	F	2000	1.45	G	3000	1.51	H	5000	1.89	I	7000	1.71	J	10000	1.30
2-Fluorobiphenyl				B	100	1.58	C	200	1.61	D	500	1.59	E	1000	1.52
	F	2000	1.52	G	3000	1.52	H	5000	1.64	I	7000	1.57	J	10000	1.30
Terphenyl-d14				B	100	1.06	C	200	0.962	D	500	0.923	E	1000	0.937
	F	2000	0.850	G	3000	0.915	H	5000	0.974	I	7000	0.914	J	10000	0.991

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921
Project: Marine View Drive RS/FS/009973-021101 **Calibration Date:** 09/24/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13569 **Column:** MS
Instrument ID: MS06

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Phenol	MS	AverageRF	% RSD	12.0		≤ 20	1.70		0.800
2-Methylphenol	MS	AverageRF	% RSD	12.6		≤ 20	1.04		0.500
4-Methylphenol	MS	AverageRF	% RSD	16.6		≤ 20	1.53		0.600
2,4-Dimethylphenol	MS	AverageRF	% RSD	7.5		≤ 20	0.294		0.100
Hexachlorobutadiene	MS	AverageRF	% RSD	6.4		≤ 20	0.299		0.010
Diethyl Phthalate	MS	AverageRF	% RSD	10.1		≤ 20	1.76		0.010
2-Methyl-4,6-dinitrophenol	MS	Quadratic	COD	0.997		≥ 0.990	0.287		0.010
Fluoranthene	MS	AverageRF	% RSD	4.3		≤ 20	1.14		0.600
Pyrene	MS	AverageRF	% RSD	9.3		≤ 20	1.34		0.600
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	2.4		≤ 20	0.689		0.010
Chrysene	MS	AverageRF	% RSD	4.7		≤ 20	1.09		0.600
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	5.5		≤ 20	0.964		0.010
Di-n-octyl Phthalate	MS	AverageRF	% RSD	11.9		≤ 20	1.76		0.010
Phenol-d6	SURR	AverageRF	% RSD	7.8		≤ 20	1.53		0.01
Nitrobenzene-d5	SURR	AverageRF	% RSD	14.4		≤ 20	1.61		0.01
2-Fluorobiphenyl	SURR	AverageRF	% RSD	6.5		≤ 20	1.54		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	6.2		≤ 20	0.947		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client:	Conestoga-Rovers & Associates, Incorpora	**Service Request:**	K1409921
Project:	Marine View Drive RS/FS/009973-021101	**Calibration Date:**	09/24/2014
		Date Analyzed:	09/25/2014

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type:	Internal Standard	**Calibration ID:**	CAL13569
Analysis Method:	8270D	**Units:**	ng/ml

File ID: J:\MS06\DATA\092414\0924F015.D
J:\MS06\DATA\092414\0924F016.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Phenol	3000	2600	1.70	1.47	-14	NA	± 30 %	AverageRF
2-Methylphenol	3000	2400	1.04	0.833	-20	NA	± 30 %	AverageRF
4-Methylphenol	3000	2200	1.53	1.13	-26	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2800	0.294	0.275	-6	NA	± 30 %	AverageRF
Hexachlorobutadiene	3000	2800	0.299	0.281	-6	NA	± 30 %	AverageRF
Diethyl Phthalate	3000	2700	1.76	1.58	-10	NA	± 30 %	AverageRF
2-Methyl-4,6-dinitrophenol	3000	3200	0.287	0.296	NA	8	± 30 %	Quadratic
Fluoranthene	3000	2600	1.14	0.981	-14	NA	± 30 %	AverageRF
Pyrene	3000	2400	1.34	1.09	-19	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	3000	2700	0.689	0.622	-10	NA	± 30 %	AverageRF
Chrysene	3000	3100	1.09	1.13	4	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	2600	0.964	0.836	-13	NA	± 30 %	AverageRF
Di-n-octyl Phthalate	3000	2800	1.76	1.62	-8	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101

Service Request: K1409921
Date Analyzed: 09/25/2014

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/24/2014
Calibration ID: CAL13569
Analysis Lot: KWG1413176
Units: ng/ml

File ID: J:\MS06\DATA\092514\0925F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Phenol	3000	3100	0.800	1.70	1.75	3		NA	± 20 %	AverageRF
2-Methylphenol	3000	3900	0.500	1.04	1.36	30	*	NA	± 20 %	AverageRF
4-Methylphenol	3000	4400	0.600	1.53	2.25	47	*	NA	± 20 %	AverageRF
2,4-Dimethylphenol	3000	3400	0.100	0.294	0.332	13		NA	± 20 %	AverageRF
Hexachlorobutadiene	3000	3300	0.010	0.299	0.331	11		NA	± 20 %	AverageRF
Diethyl Phthalate	3000	3000	0.010	1.76	1.74	-1		NA	± 20 %	AverageRF
2-Methyl-4,6-dinitrophenol	3000	2800	0.010	0.287	0.247	NA		-7	± 20 %	Quadratic
Fluoranthene	3000	3400	0.600	1.14	1.28	12		NA	± 20 %	AverageRF
Pyrene	3000	3300	0.600	1.34	1.49	11		NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	3000	3100	0.010	0.689	0.716	4		NA	± 20 %	AverageRF
Chrysene	3000	3100	0.600	1.09	1.14	4		NA	± 20 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3300	0.010	0.964	1.05	9		NA	± 20 %	AverageRF
Di-n-octyl Phthalate	3000	3100	0.010	1.76	1.80	2		NA	± 20 %	AverageRF
Phenol-d6	3000	3300	0.01	1.53	1.67	9		NA	± 20 %	AverageRF
Nitrobenzene-d5	3000	4100	0.01	1.61	2.20	37	*	NA	± 20 %	AverageRF
2-Fluorobiphenyl	3000	3300	0.01	1.54	1.70	10		NA	± 20 %	AverageRF
Terphenyl-d14	3000	3400	0.01	0.947	1.07	13		NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Conestoga-Rovers & Associates, Incorpora **Service Request:** K1409921

Project: Marine View Drive RS/FS/009973-021101

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D **Analysis Lot:** KWG1413176

Instrument ID: MS06

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0925F002.D	GC/MS Tuning - Generic	KWG1413176-1	9/25/2014	19:30		9/25/2014	20:00
0925F003.D	Continuing Calibration Verification	KWG1413176-2	9/25/2014	20:10		9/25/2014	20:40
0925A003.D	GC/MS Tuning - Generic	KWG1413176-1	9/25/2014	20:10		9/25/2014	20:40
0925F005.D	Method Blank	KWG1412928-3	9/25/2014	21:28		9/25/2014	21:58
0925F006.D	Lab Control Sample	KWG1412928-1	9/25/2014	22:08		9/25/2014	22:38
0925F007.D	Duplicate Lab Control Sample	KWG1412928-2	9/25/2014	22:47		9/25/2014	23:17
0925F008.D	ZZZZZZ	ZZZZZZ	9/25/2014	23:27		9/25/2014	23:57
0925F009.D	ZZZZZZ	ZZZZZZ	9/26/2014	00:06		9/26/2014	00:36
0925F010.D	ZZZZZZ	ZZZZZZ	9/26/2014	00:45		9/26/2014	01:15
0925F011.D	ZZZZZZ	ZZZZZZ	9/26/2014	01:25		9/26/2014	01:55
0925F012.D	ZZZZZZ	ZZZZZZ	9/26/2014	02:04		9/26/2014	02:34
0925F013.D	WS-091514-RB-SW03	K1409921-012	9/26/2014	02:44		9/26/2014	03:14
0925F014.D	WS-091514-RB-SW04	K1409921-013	9/26/2014	03:23		9/26/2014	03:53
0925F015.D	WS-091514-RB-SW05	K1409921-014	9/26/2014	04:02		9/26/2014	04:32
0925F016.D	WS-091514-RB-SW02	K1409921-015	9/26/2014	04:41		9/26/2014	05:11
0925F017.D	WS-091514-RB-SW01	K1409921-016	9/26/2014	05:21		9/26/2014	05:51
0925F018.D	WS-091514-RB-FD10	K1409921-017	9/26/2014	06:00		9/26/2014	06:30
0925F019.D	RINSE BLANK 9-15	K1409921-018	9/26/2014	06:40		9/26/2014	07:10

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: Marine View Drive RS/FS/009973-021101
Sample Matrix: Water

Service Request: K1409921
Date Extracted: 09/22/2014

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Extraction Lot: KWG1412928
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
WS-091514-RB-SW03	K1409921-012	09/15/14	09/16/14	1060ml	2ml	NA	
WS-091514-RB-SW04	K1409921-013	09/15/14	09/16/14	1060ml	2ml	NA	
WS-091514-RB-SW05	K1409921-014	09/15/14	09/16/14	1000ml	2ml	NA	
WS-091514-RB-SW02	K1409921-015	09/15/14	09/16/14	1060ml	2ml	NA	
WS-091514-RB-SW01	K1409921-016	09/15/14	09/16/14	1060ml	2ml	NA	
WS-091514-RB-FD10	K1409921-017	09/15/14	09/16/14	980ml	2ml	NA	
RINSE BLANK 9-15	K1409921-018	09/15/14	09/16/14	1060ml	2ml	NA	
Method Blank	KWG1412928-3	NA	NA	1060ml	2ml	NA	
Lab Control Sample	KWG1412928-1	NA	NA	1000ml	2ml	NA	
Duplicate Lab Control Sample	KWG1412928-2	NA	NA	1000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

Benchsheet

Service Request #:	K1409908, KQ1412294, K1409921, K1409945, K1410358	**Run #:**	414315
Test:	TS	**Balance ID:**	K-Balance-35
Method:	160.3 Modified		

Pan ID:	Lab Code:	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
	K1409908-001	1.27	9.95	4.39	3.12	31.4	
	K1409908-001DUP	1.27	9.86	4.33	3.06	31.0	1
	K1409908-002	1.28	11.13	5.09	3.81	34.2	
	K1409908-003	1.27	28.38	6.79	5.52	19.5	
	K1409908-004	1.28	10.89	5.76	4.48	41.1	
	K1409908-005	1.27	10.90	5.75	4.48	41.1	
	K1409921-001	1.28	9.88	9.16	7.88	79.8	
	K1409921-002	1.27	11.04	10.19	8.92	80.8	
	K1409921-003	1.27	11.90	10.98	9.71	81.6	
	K1409921-004	1.27	9.84	8.99	7.72	78.5	
	K1409921-005	1.27	10.55	7.92	6.65	63.0	
	K1409921-006	1.28	9.80	8.59	7.31	74.6	
	K1409921-007	1.27	9.78	7.39	6.12	62.6	
	K1409921-008	1.27	10.73	8.11	6.84	63.7	
	K1409921-009	1.27	10.55	8.59	7.32	69.4	
	K1409921-010	1.27	9.51	3.51	2.24	23.6	
	K1409921-011	1.28	11.45	10.20	8.92	77.9	
	K1409945-001	1.27	10.87	10.74	9.47	87.1	
	K1409945-005	1.27	10.25	8.58	7.31	71.3	
	K1409945-009	1.27	10.78	10.72	9.45	87.7	
	K1410358-001	1.27	10.59	10.49	9.22	87.1	
	K1410358-001DUP	1.26	10.72	10.59	9.33	87.0	<1

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	K- OVEN 07	105	105	10/2/2014	14:12	10/3/2014	08:22	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-Balance-16	1.00, 99.99	.99, 99.99	10/2/2014	13:30	10/2/2014	14:12
Calibration2	K-Balance-16	1.00, 99.99	1.00, 99.99	10/3/2014	08:53	10/3/2014	08:58

Comments: JF

Analytical Results Summary

Instrument Name: K-Balance-35 **Analyst:** DMADDEN **Analysis Lot:** 414315 **Method/Testcode:** 160.3 Modified/TS

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1409908-001	Solids, Total	N/A		Sediment	31.40 Percent	9.95	31.4 Percent	1					10/2/14 14:12	N	V
K1409908-002	Solids, Total	N/A		Sediment	34.20 Percent	11.13	34.2 Percent	1					10/2/14 14:12	N	V
K1409908-003	Solids, Total	N/A		Sediment	19.50 Percent	28.38	19.5 Percent	1					10/2/14 14:12	N	V
K1409908-004	Solids, Total	N/A		Sediment	41.10 Percent	10.89	41.1 Percent	1					10/2/14 14:12	N	V
K1409908-005	Solids, Total	N/A		Sediment	41.10 Percent	10.90	41.1 Percent	1					10/2/14 14:12	N	V
K1409921-001	Solids, Total	N/A		Soil	79.80 Percent	9.88	79.8 Percent	1					10/2/14 14:12	N	V
K1409921-002	Solids, Total	N/A		Soil	80.80 Percent	11.04	80.8 Percent	1					10/2/14 14:12	N	V
K1409921-003	Solids, Total	N/A		Soil	81.60 Percent	11.90	81.6 Percent	1					10/2/14 14:12	N	V
K1409921-004	Solids, Total	N/A		Sediment	78.50 Percent	9.84	78.5 Percent	1					10/2/14 14:12	N	V
K1409921-005	Solids, Total	N/A		Sediment	63.00 Percent	10.55	63.0 Percent	1					10/2/14 14:12	N	V
K1409921-006	Solids, Total	N/A		Sediment	74.60 Percent	9.80	74.6 Percent	1					10/2/14 14:12	N	V
K1409921-007	Solids, Total	N/A		Sediment	62.60 Percent	9.78	62.6 Percent	1					10/2/14 14:12	N	V
K1409921-008	Solids, Total	N/A		Sediment	63.70 Percent	10.73	63.7 Percent	1					10/2/14 14:12	N	V
K1409921-009	Solids, Total	N/A		Sediment	69.40 Percent	10.55	69.4 Percent	1					10/2/14 14:12	N	V
K1409921-010	Solids, Total	N/A		Sediment	23.60 Percent	9.51	23.6 Percent	1					10/2/14 14:12	N	V
K1409921-011	Solids, Total	N/A		Sediment	77.90 Percent	11.45	77.9 Percent	1					10/2/14 14:12	N	V
K1409945-001	Solids, Total	N/A		Soil	87.10 Percent	10.87	87.1 Percent	1					10/2/14 14:12	N	IV
K1409945-005	Solids, Total	N/A		Soil	71.30 Percent	10.25	71.3 Percent	1					10/2/14 14:12	N	IV
K1409945-009	Solids, Total	N/A		Soil	87.70 Percent	10.78	87.7 Percent	1					10/2/14 14:12	N	IV
K1410358-001	Solids, Total	N/A		Soil	87.10 Percent	10.59	87.1 Percent	1					10/2/14 14:12	N	II
KQ1412294-01	Solids, Total	DUP	K1409908-001	Sediment	31.00 Percent	9.86 g	31.0 Percent	1				1	10/2/14 14:12	N	V
KQ1412294-02	Solids, Total	DUP	K1410358-001	Soil	87.00 Percent	10.72 g	87.0 Percent	1				<1	10/2/14 14:12	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Request # Original (K9625) K9753 K9921 K10085 K10088

Tier: V V V II II

Date Analyzed: 9.22.14

Analyst: BH

Analysis: CN - TOTAL

Run # 412495

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: _____ Date: 9/22/14

DQREPORT

Analytical Results Summary

Instrument Name: K-FIA-03 **Analyst:** BHETLAND **Analysis Lot:** 412495 **Method/Testcode:** 9012B/CN Tot

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1409625-001	Cyanide, Total	N/A		Sludge, Solid	240.00 µg/L	2.5010 g	5.43 mg/Kg	2	0.14	0.45			9/22/14 13:02:43	Y	V
K1409625-001	Cyanide, Total	N/A		Sludge, Solid	240.00 µg/L	2.5010 g	5.43 mg/Kg	2	0.14	0.23			9/22/14 13:02:43	Y	V
K1409625-003	Cyanide, Total	N/A		Sludge, Solid	27.50 µg/L	2.5840 g	1.18 mg/Kg	1	0.26	0.86			9/22/14 13:02:43	N	V
K1409625-003	Cyanide, Total	N/A		Sludge, Solid	27.50 µg/L	2.5840 g	1.18 mg/Kg	1	0.26	0.43			9/22/14 13:02:43	N	V
K1409753-002	Cyanide, Total	N/A		Sludge, Solid	87.60 µg/L	2.5350 g	4.04 mg/Kg	1	0.28	0.92			9/22/14 13:02:43	N	V
K1409753-003	Cyanide, Total	N/A		Sludge, Solid	92.50 µg/L	2.6620 g	3.83 mg/Kg	1	0.25	0.83			9/22/14 13:02:43	N	V
K1409921-001	Cyanide, Total	N/A		Soil	0.88 µg/L	2.5040 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-002	Cyanide, Total	N/A		Soil	0.59 µg/L	2.5410 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-003	Cyanide, Total	N/A		Soil	0.14 µg/L	2.5080 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-004	Cyanide, Total	N/A		Sediment	2.66 µg/L	2.5270 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-005	Cyanide, Total	N/A		Sediment	1.97 µg/L	2.5370 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-006	Cyanide, Total	N/A		Sediment	3.05 µg/L	2.8380 g	0.18 mg/Kg # U	1	0.06	0.18			9/22/14 13:02:43	N	V
K1409921-007	Cyanide, Total	N/A		Sediment	3.68 µg/L	2.5280 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1409921-008	Cyanide, Total	N/A		Sediment	17.20 µg/L	2.7760 g	0.15 mg/Kg # J	1	0.06	0.18			9/22/14 13:02:43	N	V
K1409921-009	Cyanide, Total	N/A		Sediment	5.29 µg/L	2.6210 g	0.19 mg/Kg # U	1	0.06	0.19			9/22/14 13:02:43	N	V
K1409921-010	Cyanide, Total	N/A		Sediment	4.83 µg/L	2.5900 g	0.19 mg/Kg # U	1	0.06	0.19			9/22/14 13:02:43	N	V
K1409921-011	Cyanide, Total	N/A		Sediment	1.09 µg/L	2.5460 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	V
K1410008-001	Cyanide, Total	N/A		Sediment	16.00 µg/L	2.5630 g	0.16 mg/Kg # J	1	0.06	0.20			9/22/14 13:02:43	N	II
K1410008-002	Cyanide, Total	N/A		Sediment	0.80 µg/L	2.9220 g	0.17 mg/Kg # U	1	0.06	0.17			9/22/14 13:02:43	N	II
K1410008-003	Cyanide, Total	N/A		Sediment	13.20 µg/L	2.5580 g	0.13 mg/Kg # J	1	0.06	0.20			9/22/14 13:02:43	N	II
K1410008-004	Cyanide, Total	N/A		Sediment	1.77 µg/L	2.5280 g	0.20 mg/Kg # U	1	0.06	0.20			9/22/14 13:02:43	N	II
K1410085-001	Cyanide, Total	N/A		Solid	72.50 µg/L	2.7310 g	66.4 mg/Kg #	100	6.0	9.2			9/22/14 13:02:43	N	II
KQ1411695-01	Cyanide, Total	MB		Sludge, Solid	-0.34 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411695-01	Cyanide, Total	MB		Sludge, Solid	-0.34 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V
KQ1411695-02	Cyanide, Total	LCS		Sludge, Solid	20.30 µg/L	0.2650 g	95.8 mg/Kg	50	29	94	88		9/22/14 13:02:43	N	V
KQ1411695-02	Cyanide, Total	LCS		Sludge, Solid	20.30 µg/L	0.2650 g	95.8 mg/Kg	50	29	47	88		9/22/14 13:02:43	N	V
KQ1411695-03	Cyanide, Total	MS	K1409625-001	Sludge, Solid	288.00 µg/L	2.5250 g	6.46 mg/Kg	2	0.14	0.45	46		9/22/14 13:02:43	N	V
KQ1411695-03	Cyanide, Total	MS	K1409625-001	Sludge, Solid	288.00 µg/L	2.5250 g	6.46 mg/Kg	2	0.14	0.22	46		9/22/14 13:02:43	N	V
KQ1411695-04	Cyanide, Total	DMS	K1409625-001	Sludge, Solid	288.00 µg/L	2.5400 g	6.42 mg/Kg	2	0.14	0.45	44	4	9/22/14 13:02:43	N	V

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-FIA-03 **Analyst:** BHETLAND **Analysis Lot:** 412495 **Method/Testcode:** SM 4500-CN- E Modified/CN Tot

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1411695-04	Cyanide, Total	DMS	K1409625-001	Sludge, Solid	288.00 µg/L	2.5400 g	6.42 mg/Kg	2	0.14	0.22	44	<1	9/22/14 13:02:43	N	V
KQ1411695-05	Cyanide, Total	DUP	K1409625-001	Sludge, Solid	244.00 µg/L	2.5300 g	5.46 mg/Kg	2	0.14	0.45		<1	9/22/14 13:02:43	N	V
KQ1411695-05	Cyanide, Total	DUP	K1409625-001	Sludge, Solid	244.00 µg/L	2.5300 g	5.46 mg/Kg	2	0.14	0.22		<1	9/22/14 13:02:43	N	V
KQ1411698-01	Cyanide, Total	CCV		Sludge, Solid	102.00 µg/L	2.5 g	102 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-01	Cyanide, Total	CCV		Sludge, Solid	102.00 µg/L	2.5 g	102 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-02	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-02	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-03	Cyanide, Total	CCV		Sludge, Solid	102.00 µg/L	2.5 g	102 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-03	Cyanide, Total	CCV		Sludge, Solid	102.00 µg/L	2.5 g	102 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-04	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-04	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-05	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-05	Cyanide, Total	CCV		Sludge, Solid	103.00 µg/L	2.5 g	103 µg/L	1					9/22/14 13:02:43	N	V
KQ1411698-06	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411698-06	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V
KQ1411698-07	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411698-07	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V
KQ1411698-08	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411698-08	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V
KQ1411698-09	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411698-09	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V
KQ1411698-10	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.20 mg/Kg U	1	0.06	0.20			9/22/14 13:02:43	N	V
KQ1411698-10	Cyanide, Total	CCB		Sludge, Solid	0.00 µg/L	2.5 g	0.10 mg/Kg U	1	0.06	0.10			9/22/14 13:02:43	N	V

418

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Preparation Information Benchsheet

Prep Run#: 218710 **Prep WorkFlow:** Gen Dist CN **Status:** Prepped
Team: GenChem/BHETLAND **Prep Method:** SM 4500-CN-C Modified **Prep Date/Time:** 9/22/14 10:30 AM
Number of Copies to make: 5

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1411695-01	MB		9012B/CN Tot		Solid	2.5g	25.00mL	
2	KQ1411695-01	MB		SM 4500-CN- E Modified/CN To		Solid	2.5g	25.00mL	
3	KQ1411695-02	LCS		9012B/CN Tot		Solid	0.2650g	25.00mL	
4	KQ1411695-02	LCS		SM 4500-CN- E Modified/CN To		Solid	0.2650g	25.00mL	
5	K1409625-001	Kahuku Sludge Grab 14090515-001	.01	9012B/CN Tot		Sludge, Solid	2.5010g	25.00mL	
6	K1409625-001	Kahuku Sludge Grab 14090515-001	.01	SM 4500-CN- E Modified/CN To		Sludge, Solid	2.5010g	25.00mL	
7	KQ1411695-05	K1409625-001 DUP	.01	9012B/CN Tot		Solid	2.5300g	25.00mL	
8	KQ1411695-05	K1409625-001 DUP	.01	SM 4500-CN- E Modified/CN To		Solid	2.5300g	25.00mL	
9	KQ1411695-03	K1409625-001 MS	.01	9012B/CN Tot		Solid	2.5250g	25.00mL	
10	KQ1411695-03	K1409625-001 MS	.01	SM 4500-CN- E Modified/CN To		Solid	2.5250g	25.00mL	
11	KQ1411695-04	K1409625-001 DMS	.01	9012B/CN Tot		Solid	2.5400g	25.00mL	
12	KQ1411695-04	K1409625-001 DMS	.01	SM 4500-CN- E Modified/CN To		Solid	2.5400g	25.00mL	
13	K1409625-003	Kailua Sludge Grab 14090514-001	.01	9012B/CN Tot		Sludge, Solid	2.5840g	25.00mL	
14	K1409625-003	Kailua Sludge Grab 14090514-001	.01	SM 4500-CN- E Modified/CN To		Sludge, Solid	2.5840g	25.00mL	
15	K1409753-002	14-21825	.01	9012B/CN Tot		Sludge, Solid	2.5350g	25.00mL	
16	K1409753-003	14-21826	.01	9012B/CN Tot		Sludge, Solid	2.6620g	25.00mL	
17	K1409921-001	SO-091514-RB-TP37-2	.02	9012B/CN Tot		Soil	2.5040g	25.00mL	
18	K1409921-002	SO-091514-RB-TP37-5	.02	9012B/CN Tot		Soil	2.5410g	25.00mL	
19	K1409921-003	SO-091514-RB-TP37-7.5	.02	9012B/CN Tot		Soil	2.5080g	25.00mL	
20	K1409921-004	SE-091514-RB-SD11	.02	9012B/CN Tot		Sediment	2.5270g	25.00mL	
21	K1409921-005	SE-091514-RB-SD10	.02	9012B/CN Tot		Sediment	2.5370g	25.00mL	
22	K1409921-006	SE-091514-RB-SD09	.02	9012B/CN Tot		Sediment	2.8380g	25.00mL	
23	K1409921-007	SE-091514-RB-SD08	.02	9012B/CN Tot		Sediment	2.5280g	25.00mL	
24	K1409921-008	SE-091514-RB-SD07	.02	9012B/CN Tot		Sediment	2.7760g	25.00mL	
25	K1409921-009	SE-091514-RB-SD06	.02	9012B/CN Tot		Sediment	2.6210g	25.00mL	
26	K1409921-010	SE-091514-RB-SD05	.02	9012B/CN Tot		Sediment	2.5900g	25.00mL	
27	K1409921-011	SE-091514-RB-SD12	.02	9012B/CN Tot		Sediment	2.5460g	25.00mL	
28	K1410085-001	39311	.01	SM 4500-CN- E Modified/CN To		Solid	2.7310g	25.00mL	
29	K1410008-001	1408134-01	.01	9012B/CN Tot		Sediment	2.5630g	25.00mL	
30	K1410008-002	1408134-02	.01	9012B/CN Tot		Sediment	2.9220g	25.00mL	
31	K1410008-003	1408134-03	.01	9012B/CN Tot		Sediment	2.5580g	25.00mL	
32	K1410008-004	1408134-04	.01	9012B/CN Tot		Sediment	2.5280g	25.00mL	

Preparation Information Benchsheet

Prep Run#: 218710 **Prep WorkFlow:** Gen Dist CN **Status:** Prepped
Team: GenChem/BHETLAND **Prep Method:** Method **Prep Date/Time:** 9/22/14 10:30 AM

Spiking Solutions

Name:	Cyanide 10 ppm as CN	Inventory ID	42534	Logbook Ref:	CN-1-11-S	Expires On:	10/27/2013

KQ1411695-03	0.50mL	KQ1411695-03	0.50mL	KQ1411695-04	0.50mL	KQ1411695-04	0.50mL

Name:	Cyanide LCS Soil	Inventory ID	56854	Logbook Ref:		Expires On:	04/18/2014

KQ1411695-02	0.27g	KQ1411695-02	0.27g

Preparation Steps

Step: Distillation
Started: 9/22/14 10:30
Finished: 9/22/14 14:19
By: BHETLAND
Comments

420

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: _____

Analysis: _____

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
9.22.14	MB	2.500	25.0 ml				
	LCS	0.265					
	9625-1	2.501					
	-1d	2.530					
	-1ms	2.525					
	-1msd	2.540					
	-3	2.584					
	9753-2	2.535					
	-3	2.662					
	9971-1	2.507					
	-2	2.541					
	-3	2.508					
	-4	2.527					
	-5	2.537					
	-6	2.838					
	-7	2.528					
	-8	2.776					
	-9	2.621					
	-10	2.590					
	-11	2.546					
	10085-1	2.731					
	10088-1	2.563					
	-2	2.922					
	-3	2.558					
	-4	2.528					

MS=

MSD=

X=

RPD=

9625-1 ; 1 heterogenous

STD ID # =

Comments:

Prepared By:	B. Hatton	Date Prepared:	9.22.14 10:30
Analyzed By:	B. Hatton	Date Analyzed:	9.23.14
Reviewed By:		Date Reviewed:	9/23/14

Author: Omnion User

Date : 9/22/2014

Original Run Filename: OM_9-22-2014_01-02-43PM.OMN created 9/22/2014 1:02:43 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_9-22-2014_01-02-43PM.OMN last modified 9/22/2014 1:57:47 PM
Current Run Author's Signature: [Omnion User]
Description: 10-107-04-1-C

Sample	Rep.	Channel 2 Cyanide (ug/L)	
Cal Std A	1	300	
Cal Std B	1	200	
Cal Std C	1	150	
Cal Std D	1	100	
Cal Std E	1	50.0	
Cal Std F	1	20.0	
Cal Std G	1	10.0	
	2	10.0	
Blank	1	0.00	
	2	0.00	
ICV	1	141	94%
Calibration:		Table/Fig. 1	
ICB	1	-0.427	< 10.0
CCV	1	102	102%
Known Conc:		100	
CCB	1	-0.162	< 10.0
Known Conc:		0.00	
MB 9.22	1	-0.337	
LCS 50X	1	20.3	
0.150 2X	1	156	104%
0.05	1	102	102%
9625-1	1	448	NA
9625-1D	1	458	NA
9625-1MS 2X	1	287	NA
9625-1MSD 2X	1	288	
9625-3	1	27.5	
9753-2	1	87.6	
CCV	1	103	103%
Known Conc:		100	
CCB	1	-0.220	< 10.0
Known Conc:		0.00	
9753-3	1	92.5	
10085-1 100X	1	72.5	
10008-1 50X	1	-0.424	NR over dilute
10008-2 50X	1	-0.399	
10008-3 50X	1	-0.469	
10008-4 50X	1	-0.454	
9921-1	1	0.875	
9921-2	1	0.587	
9921-3	1	0.136	
9921-4	1	2.66	
CCV	1	102	102%
Known Conc:		100	
CCB	1	-0.347	< 10.0
Known Conc:		0.00	
9921-5	1	1.97	
9921-6	1	3.05	
9921-7	1	3.68	
9921-8	1	17.2	
9921-9	1	5.29	
9921-10	1	4.83	
9921-11	1	1.09	
9625-1 2X	1	240	NR No sample added to bottle
9625-1D 2X	1	-0.243	
9625-1MS 2X	1	288	
CCV	1	103	103%
Known Conc:		100	
CCB	1	-0.375	< 10.0

ICV: CN/I-34.66 T.V. : 0.15 mg/L

CCV: CN/I-24-EE T.V. : 0.10 mg/L

MS: CN/I. 12-A

LCS = CN/I -51-M T.V. = 109 mg/kg

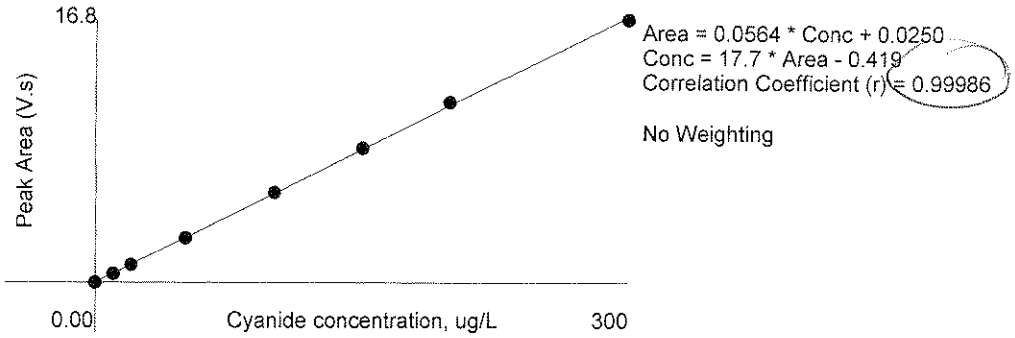
BH 9.22.14

Known Conc:		0.00
10008-1	1	16.0
10008-2	1	0.797
10008-3	1	13.2
10008-4	1	1.77
9625-1D 2X	1	244
CCV	1	103
Known Conc:		100
CCB	1	-0.289
Known Conc:		0.00

Table 1: Cyanide

	Known Conc. (ug/L)	Rep	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc. (ug/L)	Detection Date	Detection Time
1	300	1	16.8	1.00	0.0	1.1	297	9/22/2014	1:03:34 PM
2	200	1	11.5	0.689	0.0	-1.8	204	9/22/2014	1:04:26 PM
3	150	1	8.56	0.515	0.0	-0.8	151	9/22/2014	1:05:17 PM
4	100	1	5.72	0.345	0.0	-0.9	101	9/22/2014	1:06:09 PM
5	50.0	1	2.83	0.174	0.0	0.6	49.7	9/22/2014	1:07:02 PM
6	20.0	1	1.13	0.0693	0.0	2.1	19.6	9/22/2014	1:07:56 PM
7	10.0	1	0.558	0.0352	0.6	5.4	9.46	9/22/2014	1:08:50 PM
8	10.0	2	0.563	0.0357	0.6	4.5	9.55	9/22/2014	1:09:45 PM
9	0.00	1	4.58e-3	1.44e-3			-0.338	9/22/2014	1:10:40 PM
10	0.00	2	4.00e-3	2.37e-3			-0.349	9/22/2014	1:11:35 PM

Figure 1: Cyanide



Work Request # Original (K10151) K9812 K9782 K10118 K10022 K9912 K9957 K10165 K9921

Tier: II II II I II II II II II

Date Analyzed: 9.23.14

Analyst: BH

Analysis: CN-TOTAL

Rev# 412718

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS: 10.) K10151-ins/lmsd Low Rec's for 335.4 method. Suspect Matrix interference.

17.) K9812 Due 9.24.14

Final Approved by: _____ Date: 9/23/14

DQREPORT

Analytical Results Summary

Instrument Name: K-FIA-03 **Analyst:** BHETLAND **Analysis Lot:** 412718 **Method/Testcode:** 335.4/CN T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1409782-002	Cyanide, Total	N/A		Water	0.21 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	II
K1409812-001	Cyanide, Total	N/A		Water	31.30 µg/L	50 mL	0.313 mg/L	20	0.018	0.094			9/23/14 13:44:51	N	V
K1409912-001	Cyanide, Total	N/A		Water	-0.36 µg/L	50 mL	0.010 mg/L U	1		0.010			9/23/14 13:44:51	N	II
K1409921-012	Cyanide, Total	N/A		Water	0.35 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-013	Cyanide, Total	N/A		Water	0.36 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-014	Cyanide, Total	N/A		Water	0.25 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-015	Cyanide, Total	N/A		Water	0.04 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-016	Cyanide, Total	N/A		Water	0.21 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-017	Cyanide, Total	N/A		Water	-0.05 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409921-018	Cyanide, Total	N/A		Water	-0.39 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1409957-002	Cyanide, Total	N/A		Water	3.89 µg/L	50 mL	0.0019 mg/L J	1	0.0009	0.0047			9/23/14 13:44:51	N	V
K1410022-001	Cyanide, Total	N/A		Water	15.60 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
K1410022-002	Cyanide, Total	N/A		Water	26.90 µg/L	50 mL	0.013 mg/L	1	0.0009	0.010			9/23/14 13:44:51	N	V
K1410022-003	Cyanide, Total	N/A		Water	26.80 µg/L	50 mL	0.013 mg/L	1	0.0009	0.010			9/23/14 13:44:51	N	V
K1410022-004	Cyanide, Total	N/A		Water	-0.20 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
K1410118-001	Cyanide, Total	N/A		Drinking Water	-0.28 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	I
K1410151-004	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	Y	V
K1410151-005	Cyanide, Total	N/A		Water	1.51 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
K1410165-001	Cyanide, Total	N/A		Water	8.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	II
KQ1411752-01	Cyanide, Total	MB		Water	-0.39 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411752-01	Cyanide, Total	MB		Water	-0.39 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-01	Cyanide, Total	MB		Water	-0.39 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-01	Cyanide, Total	MB		Water	-0.39 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411752-01	Cyanide, Total	MB		Water	-0.39 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-02	Cyanide, Total	LCS		Water	140.00 µg/L	50 mL	0.140 mg/L	2	0.0018	0.0094	93		9/23/14 13:44:51	N	V
KQ1411752-02	Cyanide, Total	LCS		Water	140.00 µg/L	50 mL	0.140 mg/L	2	0.002	0.020	93		9/23/14 13:44:51	N	V
KQ1411752-02	Cyanide, Total	LCS		Water	140.00 µg/L	50 mL	0.140 mg/L	2	0.002	0.020	93		9/23/14 13:44:51	N	V
KQ1411752-02	Cyanide, Total	LCS		Water	140.00 µg/L	50 mL	0.140 mg/L	2	0.0018	0.0094	93		9/23/14 13:44:51	N	V
KQ1411752-02	Cyanide, Total	LCS		Water	140.00 µg/L	50 mL	0.140 mg/L	2	0.002	0.020	93		9/23/14 13:44:51	N	V
KQ1411752-03	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411752-03	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-03	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-03	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411752-03	Cyanide, Total	N/A		Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411752-04	Cyanide, Total	MS	KQ1411752-03	Water	153.00 µg/L	50 mL	0.0765 mg/L	1	0.0009	0.0047	76*		9/23/14 13:44:51	N	V
KQ1411752-04	Cyanide, Total	MS	KQ1411752-03	Water	153.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	76*		9/23/14 13:44:51	N	V

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

425

Analytical Results Summary

Instrument Name: K-FIA-03 **Analyst:** BHETLAND **Analysis Lot:** 412718 **Method/Testcode:** 335.4/CN T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1411752-04	Cyanide, Total	MS	KQ1411752-03	Water	153.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	76		9/23/14 13:44:51	N	V
KQ1411752-04	Cyanide, Total	MS	KQ1411752-03	Water	153.00 µg/L	50 mL	0.0765 mg/L	1	0.0009	0.0047	76		9/23/14 13:44:51	N	V
KQ1411752-04	Cyanide, Total	MS	KQ1411752-03	Water	153.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	76		9/23/14 13:44:51	N	V
KQ1411752-05	Cyanide, Total	DMS	KQ1411752-03	Water	154.00 µg/L	50 mL	0.0770 mg/L	1	0.0009	0.0047	77*	<1	9/23/14 13:44:51	N	V
KQ1411752-05	Cyanide, Total	DMS	KQ1411752-03	Water	154.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	77*	<1	9/23/14 13:44:51	N	V
KQ1411752-05	Cyanide, Total	DMS	KQ1411752-03	Water	154.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	77	<1	9/23/14 13:44:51	N	V
KQ1411752-05	Cyanide, Total	DMS	KQ1411752-03	Water	154.00 µg/L	50 mL	0.0770 mg/L	1	0.0009	0.0047	77	<1	9/23/14 13:44:51	N	V
KQ1411752-05	Cyanide, Total	DMS	KQ1411752-03	Water	154.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	77	<1	9/23/14 13:44:51	N	V
KQ1411752-06	Cyanide, Total	DUP	KQ1411752-03	Water	1.68 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047		NC	9/23/14 13:44:51	N	V
KQ1411752-06	Cyanide, Total	DUP	KQ1411752-03	Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010		NC	9/23/14 13:44:51	N	V
KQ1411752-06	Cyanide, Total	DUP	KQ1411752-03	Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010		NC	9/23/14 13:44:51	N	V
KQ1411752-06	Cyanide, Total	DUP	KQ1411752-03	Water	1.68 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047		NC	9/23/14 13:44:51	N	V
KQ1411752-06	Cyanide, Total	DUP	KQ1411752-03	Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010		NC	9/23/14 13:44:51	N	V
KQ1411752-07	Cyanide, Total	MS	K1410151-004	Water	153.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	76		9/23/14 13:44:51	N	V
KQ1411752-08	Cyanide, Total	DMS	K1410151-004	Water	154.00 µg/L	50 mL	0.077 mg/L	1	0.0009	0.010	77	<1	9/23/14 13:44:51	N	V
KQ1411752-09	Cyanide, Total	DUP	K1410151-004	Water	1.68 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010		NC	9/23/14 13:44:51	N	V
KQ1411769-01	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-01	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-01	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-01	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-01	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-02	Cyanide, Total	CCV		Water	99.70 µg/L	50 mL	99.7 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-02	Cyanide, Total	CCV		Water	99.70 µg/L	50 mL	99.7 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-02	Cyanide, Total	CCV		Water	99.70 µg/L	50 mL	99.7 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-02	Cyanide, Total	CCV		Water	99.70 µg/L	50 mL	99.7 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-02	Cyanide, Total	CCV		Water	99.70 µg/L	50 mL	99.7 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-03	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-03	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-03	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-03	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-04	Cyanide, Total	CCV		Water	102.00 µg/L	50 mL	102 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-04	Cyanide, Total	CCV		Water	102.00 µg/L	50 mL	102 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-04	Cyanide, Total	CCV		Water	102.00 µg/L	50 mL	102 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-04	Cyanide, Total	CCV		Water	102.00 µg/L	50 mL	102 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-04	Cyanide, Total	CCV		Water	102.00 µg/L	50 mL	102 µg/L	1					9/23/14 13:44:51	N	V

426

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-FIA-03 **Analyst:** BHETLAND **Analysis Lot:** 412718 **Method/Testcode:** SM 4500-CN- E/CN T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1411769-05	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-05	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-05	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-05	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-05	Cyanide, Total	CCV		Water	101.00 µg/L	50 mL	101 µg/L	1					9/23/14 13:44:51	N	V
KQ1411769-06	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-06	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-06	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-06	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-06	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-07	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-07	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-07	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-07	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-07	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-08	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-08	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-08	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-08	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-08	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-09	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-09	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-09	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-09	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-09	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-10	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-10	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-10	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V
KQ1411769-10	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.0047 mg/L U	1	0.0009	0.0047			9/23/14 13:44:51	N	V
KQ1411769-10	Cyanide, Total	CCB		Water	0.00 µg/L	50 mL	0.010 mg/L U	1	0.0009	0.010			9/23/14 13:44:51	N	V

427

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Preparation Information Benchsheet

Prep Run#: 218816
Team: GenChem/BHETLAND
Number of Copies to make: 9

Prep WorkFlow: Gen Dist CN
Prep Method: SM 4500-CN-C

Status: Prepped
Prep Date/Time: 9/23/14 11:35 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1411752-01	MB		335.4/CN T LL		Liquid	50mL	25.00mL	
2	KQ1411752-01	MB		335.4/CN T		Liquid	50mL	25.00mL	
3	KQ1411752-01	MB		9012B/CN Tot		Liquid	50mL	25.00mL	
4	KQ1411752-01	MB		SM 4500-CN- E/CN T LL		Liquid	50mL	25.00mL	
5	KQ1411752-01	MB		SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
6	KQ1411752-02	LCS		335.4/CN T LL		Liquid	50mL	25.00mL	
7	KQ1411752-02	LCS		335.4/CN T		Liquid	50mL	25.00mL	
8	KQ1411752-02	LCS		9012B/CN Tot		Liquid	50mL	25.00mL	
9	KQ1411752-02	LCS		SM 4500-CN- E/CN T LL		Liquid	50mL	25.00mL	
10	KQ1411752-02	LCS		SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
11	K1410151-004	LF5140918LM6-1	.03	SM 4500-CN- E/CN T		Water	50mL	25.00mL	
12	KQ1411752-09	K1410151-004 DUP	.03	SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
13	KQ1411752-07	K1410151-004 MS	.03	SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
14	KQ1411752-08	K1410151-004 DMS	.03	SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
15	KQ1411752-03	Batch QC		335.4/CN T LL		Water	50mL	25.00mL	
16	KQ1411752-03	Batch QC		335.4/CN T		Water	50mL	25.00mL	
17	KQ1411752-03	Batch QC		9012B/CN Tot		Water	50mL	25.00mL	
18	KQ1411752-03	Batch QC		SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
19	KQ1411752-03	Batch QC		SM 4500-CN- E/CN T		Water	50mL	25.00mL	
20	KQ1411752-06	KQ1411752-03 DUP		335.4/CN T LL		Liquid	50mL	25.00mL	
21	KQ1411752-06	KQ1411752-03 DUP		335.4/CN T		Liquid	50mL	25.00mL	
22	KQ1411752-06	KQ1411752-03 DUP		9012B/CN Tot		Liquid	50mL	25.00mL	
23	KQ1411752-06	KQ1411752-03 DUP		SM 4500-CN- E/CN T LL		Liquid	50mL	25.00mL	
24	KQ1411752-06	KQ1411752-03 DUP		SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
25	KQ1411752-04	KQ1411752-03 MS		335.4/CN T LL		Liquid	50mL	25.00mL	
26	KQ1411752-04	KQ1411752-03 MS		335.4/CN T		Liquid	50mL	25.00mL	
27	KQ1411752-04	KQ1411752-03 MS		9012B/CN Tot		Liquid	50mL	25.00mL	
28	KQ1411752-04	KQ1411752-03 MS		SM 4500-CN- E/CN T LL		Liquid	50mL	25.00mL	
29	KQ1411752-04	KQ1411752-03 MS		SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	
30	KQ1411752-05	KQ1411752-03 DMS		335.4/CN T LL		Liquid	50mL	25.00mL	
31	KQ1411752-05	KQ1411752-03 DMS		335.4/CN T		Liquid	50mL	25.00mL	
32	KQ1411752-05	KQ1411752-03 DMS		9012B/CN Tot		Liquid	50mL	25.00mL	
33	KQ1411752-05	KQ1411752-03 DMS		SM 4500-CN- E/CN T LL		Liquid	50mL	25.00mL	
34	KQ1411752-05	KQ1411752-03 DMS		SM 4500-CN- E/CN T		Liquid	50mL	25.00mL	

428

Preparation Information Benchsheet

Prep Run#: 218816 **Prep WorkFlow:** Gen Dist CN **Status:** Prepped
Team: GenChem/BHETLAND **Prep Method:** SM 4500-CN-C **Prep Date/Time:** 9/23/14 11:35 AM

35	K1410151-005	LF5140918DUP-2	.03	SM 4500-CN- E/CN T		Water	50mL	25.00mL	
36	K1409812-001	Cleanout_091114	.02	335.4/CN T LL		Water	50mL	25.00mL	
37	K1409782-002	PSF Grab Comp	.01	335.4/CN T		Water	50mL	25.00mL	
38	K1410118-001	Wellhead BHJ641	.10	335.4/CN T		Drinking Water	50mL	25.00mL	
39	K1410022-001	T/O Run 1	.01	9012B/CN Tot		Water	50mL	25.00mL	
40	K1410022-002	T/O Run 2	.01	9012B/CN Tot		Water	50mL	25.00mL	
41	K1410022-003	T/O Run 3	.01	9012B/CN Tot		Water	50mL	25.00mL	
42	K1410022-004	Blank	.01	9012B/CN Tot		Water	50mL	25.00mL	
43	K1409912-001	KCP INJ 1	.01	9012B/CN Tot		Water	50mL	25.00mL	
44	K1409957-002	W-2-20140916	.01	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
45	K1410165-001	AB06698	.03	SM 4500-CN- E/CN T		Water	50mL	25.00mL	
46	K1409921-012	WS-091514-RB-SW03	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
47	K1409921-013	WS-091514-RB-SW04	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
48	K1409921-014	WS-091514-RB-SW05	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
49	K1409921-015	WS-091514-RB-SW02	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
50	K1409921-016	WS-091514-RB-SW01	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
51	K1409921-017	WS-091514-RB-FD10	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	
52	K1409921-018	RINSE BLANK 9-15	.06	SM 4500-CN- E/CN T LL		Water	50mL	25.00mL	

429

Spiking Solutions

Name: Cyanide 10 ppm as CN Inventory ID 42534 Logbook Ref: CN-I-11-S Expires On: 10/27/2013

KQ1411752-02	0.75mL	KQ1411752-02	0.75mL	KQ1411752-02	0.75mL	KQ1411752-02	0.75mL	KQ1411752-02	0.75mL	KQ1411752-04	0.50mL
KQ1411752-04	0.50mL	KQ1411752-04	0.50mL	KQ1411752-04	0.50mL	KQ1411752-04	0.50mL	KQ1411752-05	0.50mL	KQ1411752-05	0.50mL
KQ1411752-05	0.50mL	KQ1411752-05	0.50mL	KQ1411752-05	0.50mL	KQ1411752-07	0.50mL	KQ1411752-08	0.50mL		

Preparation Steps

Step: Distillation
Started: 9/23/14 11:35
Finished: 9/23/14 11:40
By: BHETLAND
Comments

Comments:

Author: Omnion User

Date : 9/23/2014

Original Run Filename: OM_9-23-2014_01-44-51PM.OMN created 9/23/2014 1:44:51 PM
Original Run Author's Signature: [Omnion User]
Current Run Filename: OM_9-23-2014_01-44-51PM.OMN last modified 9/23/2014 2:42:26 PM
Current Run Author's Signature: [Omnion User]
Description: 10-107-04-1-C

Sample	Rep.	Channel 2 Cyanide (ug/L)	
Cal Std A	1	300	
Cal Std B	1	200	
Cal Std C	1	150	
Cal Std D	1	100	
Cal Std E	1	50.0	
Cal Std F	1	20.0	
Cal Std G	1	10.0	
	2	10.0	
Blank	1	0.00	
	2	0.00	
ICV	1	139	93%
Calibration:		Table/Fig. 1	
ICB	1	-0.311	< 10.0
CCV	1	101	101%
Known Conc:		100	
CCB	1	-0.355	< 10.0
Known Conc:		0.00	
MB 9.23	1	-0.389	
LCS 2X	1	140	
0.150 2X	1	153	102%
0.05	1	103	103%
10151-4 5X	1	0.0833	NR overdilute
10151-4D 5X	1	9.43e-3	
10151-4MS 5X	1	29.0	
10151-4MSD 5X	1	29.4	
10151-5	1	1.51	
9812-1 20X	1	31.3	
CCV	1	99.7	100%
Known Conc:		100	
CCB	1	-0.261	< 10.0
Known Conc:		0.00	
9782-2	1	0.205	
10022-1 500X	1	-0.375	NR overdilute
10022-2 500X	1	-0.325	
10022-3 500X	1	-0.325	
10022-4	1	-0.203	
10118-1	1	-0.277	
9912-1	1	-0.356	
9957-2	1	3.89	
10165-1 2X	1	4.01	NR overdilute
9921-12	1	0.348	
CCV	1	101	101%
Known Conc:		100	
CCB	1	-0.188	< 10.0
Known Conc:		0.00	
9921-13	1	0.364	
9921-14	1	0.254	
9921-15	1	0.0355	
9921-16	1	0.205	
9921-17	1	-0.0517	
9921-18	1	-0.391	
10151-4	1	1.68	
10151-4D	1	1.68	
10151-4MS	1	153	
10151-4MSD	1	154	
CCV	1	102	102%
Known Conc:		100	
CCB	1	-0.280	< 10.0

ICV = CN/I-34-GG T.V. = 0.15 mg/L
CCV = CN/I-24-EE T.V. = 0.10 mg/L
MS = CN/I-13-B
LCS = CN/I-13-A T.V. = 0.15 mg/L

K1401022-1 - 510 mL
K1401022-2 - 500 mL
K1401022-3 - 580 mL
K1401022-4 - 175 mL

BA 9.23.14

Known Conc:		0.00
10022-1 2X	1	7.29
10022-2 2X	1	13.2
10022-3 2X	1	13.1
10022-1	1	15.6
10022-2	1	26.9
10022-3	1	26.8
RB	1	-0.370
10165-1	1	8.68
CCV	1	101
Known Conc:		100
CCB	1	-0.153
Known Conc:		0.00

N Rerun dilute

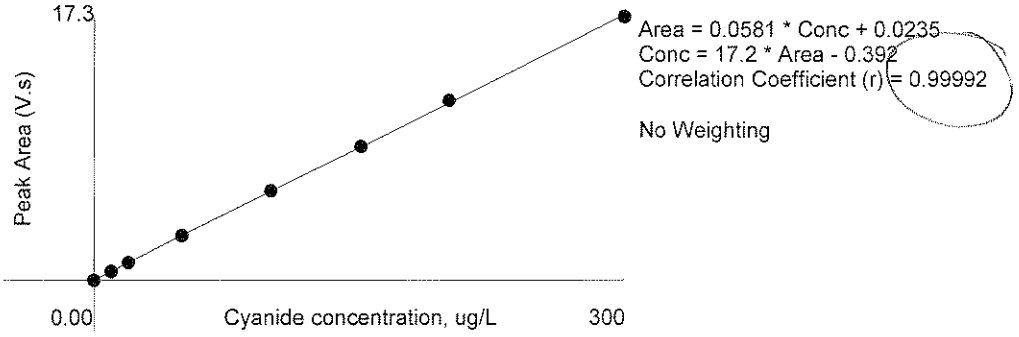
101%

<0.0

Table 1: Cyanide

	Known Conc. (ug/L)	Rep	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc. (ug/L)	Detection Date	Detection Time
1	300	1	17.3	1.03	0.0	0.8	298	9/23/2014	1:45:37 PM
2	200	1	11.8	0.707	0.0	-1.4	203	9/23/2014	1:46:29 PM
3	150	1	8.78	0.528	0.0	-0.5	151	9/23/2014	1:47:21 PM
4	100	1	5.84	0.351	0.0	-0.2	100	9/23/2014	1:48:13 PM
5	50.0	1	2.92	0.176	0.0	0.2	49.9	9/23/2014	1:49:06 PM
6	20.0	1	1.16	0.0708	0.0	2.2	19.6	9/23/2014	1:49:59 PM
7	10.0	1	0.595	0.0366	1.5	1.5	9.86	9/23/2014	1:50:54 PM
8	10.0	2	0.583	0.0358	1.5	3.6	9.64	9/23/2014	1:51:49 PM
9	0.00	1	0.0103	3.20e-3			-0.214	9/23/2014	1:52:44 PM
10	0.00	2	6.55e-3	1.95e-3			-0.279	9/23/2014	1:53:39 PM

Figure 1: Cyanide



9.19.23.14

Mercury

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Service Request #:	K1409868, K1409882, K1409883, K1409881, K1409878, K1409915, K1409914, K1409921, K1409998		
MS/MSD with #:	K1409868, K1409921		
StarLims Run # :	412605		
StarLims Prep # :	218240		
Prep Date:	9/22/2014		
OPR Standard ID:	AF1-93-C	Expiration Date:	9/25/2014
QCS Standard ID:	AF1-93-D	Expiration Date:	9/25/2014
Parent OPR ID:	AF1-92-D	Expiration Date:	1/25/2015
Parent QCS ID:	AF1-92-C	Expiration Date:	1/25/2015

1631 Data Review Form

	Yes	No	NA
1. 20 samples (or less) in batch	X		
2. MS/MSD every 10 samples	X		
3. Current Calibration factor used	X		
4. Calibration data included	X		
5. Method Blank < 0.5 ng/L	X		
6. 3 Bubbler Blanks Ran Avg < 25pg	X		
7. Bubbler Blanks < 50 pg	X		
8. OPR, QCS in control (77-123%)	X		
9. MS/MSD recovery 71-125%	X		
10. Spike RPD within 24%	X		
11. All samples within the linear range	X		
12. All corresponding charts included	X		
13. Dilution factors calculated	X		
14. Bench sheet signed	X		
15. Reagent Blank below 20 pg	X		
16. Water Blank Ran < 0.5 ng/L	X		

Comments

Primary Reviewed by TDS Date 9/24/14

Secondary Reviewed by JDB Date 9/24/14

Batch Information Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run Duration:	2.5	Method Blank Type:	Concentration
Heating Duration:	2.5	Integration Mode:	Auto Total Hg
Retention Start Time:	0.7	Integration Type:	Peak Area
Retention Stop Time:	1.3	Result Units:	ng/L
Purge Duration:	6.0		
Drying Duration:	6.0		
Calibration File:	This File		

Analyst Comments:

PMT: 542
OFFSET: 3,338
NOISE: 76

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Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (ng/L)	QA Results	Criteria	Notes
1	X	CCB	RINSE		1	58,518	0.774		0.774	< 50	accept
2	Y	CCB	RINSE		1	54,172	0.453		0.453	< 50	accept
3	X	CB	CB-1		1	52,179	3.86		3.86	< 50	accept
4	Y	CB	CB-2		1	46,020	3.40		3.40	< 50	accept
5	X	CB	CB-3		1	45,731	3.38		3.38	< 50	accept
6	Y	CB	CB-4		1	48,265	3.57		3.57	< 50	accept
7	X	STD	5 pg		1	117,618	5.15		103	75-125	accept
8	Y	STD	10 pg		1	189,770	10.5		105	75-125	accept
9	X	STD	25 pg		1	391,992	25.4		102	75-125	accept
10	Y	STD	100 pg		1	1,438,286	103		103	75-125	accept
11	X	STD	500 pg		1	6,702,687	492		98.4	75-125	accept
12	Y	STD	2500 pg		1	32,528,612	2,400		96.1	75-125	accept
13	X	STD	10000 pg		1	127,225,812	9,410		94.1	75-125	accept
14	Y	OPR	OPR-1		1	1,879,107	135	5.42	108	77-123	accept
15	X	QCS	QCS-1(218115)		1	1,891,995	136	5.46	109	77-123	accept
16	Y	MBA	MB-1(218115)		1	98,470	3.73	0.149	0.149	< 0.5	accept
17	X	S	K1409873-003		1	181,870	9.90	0.396		< HS	accept
18	Y	MS	K1409873-003		1	16,115,974	1,190	47.5	94.3	71-125	accept
19	X	MSD	K1409873-003		1	16,159,132	1,190	47.7	94.5	71-125	accept
20	Y	S	K1409873-001		1	148,975	7.47	0.299		< HS	accept
21	X	S	K1409873-002		1	131,094	6.14	0.246		< HS	accept
22	Y	S	K1409873-004		1	111,563	4.70	0.188		< HS	accept
23	X	S	K1409873-005		1	144,389	7.13	0.285		< HS	accept
24	Y	S	K1409873-006		1	160,524	8.32	0.333		< HS	accept
25	X	S	K1409873-007		1	129,344	6.01	0.241		< HS	accept
26	Y	S	K1409873-008		1	101,898	3.98	0.159		< HS	accept
27	X	S	K1409873-009		1	134,031	6.36	0.254		< HS	accept
28	Y	S	K1409873-010		1	108,660	4.48	0.179		< HS	accept
29	X	MBA	MB-2(218115)		1	57,526	0.701	0.0280	0.0280	< 0.5	accept
30	Y	S	K1409873-011		1	151,201	7.63	0.305		< HS	accept
31	X	MS	K1409873-011		1	14,594,812	1,080	43.0	85.5	71-125	accept
32	Y	MSD	K1409873-011		1	15,261,642	1,130	45.0	89.4	71-125	accept
33	X	S	K1409873-012		1	154,498	7.87	0.315		< HS	accept

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Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (ng/L)	QA Results	Criteria	Notes
34	Y	S	K1409873-013		1	112,512	4.77	0.191		< HS	accept
35	X	S	K1409873-014		1	106,510	4.32	0.173		< HS	accept
36	Y	S	K1409873-015		1	88,187	2.97	0.119		< HS	accept
37	X	S	K1409873-016		1	129,351	6.01	0.241		< HS	accept
38	Y	S	K1409873-017		1	108,736	4.49	0.180		< HS	accept
39	X	S	K1409873-018		1	100,793	3.90	0.156		< HS	accept
40	Y	S	K1409873-019		1	117,452	5.13	0.205		< HS	accept
41	X	S	K1409693-002		1	71,615	1.74	0.0697		< HS	accept
42	Y	MBA	MB-3(218115)		1	51,813	0.278	0.0111	0.0111	< 0.5	accept
43	X	OPR	OPR-2		1	1,766,150	127	5.08	102	77-123	accept
44	Y	QCS	QCS-1(218240)		1	1,779,745	128	5.12	102	77-123	accept
45	X	MBA	MB-1(218240)		1	63,956	1.18	0.0471	0.0471	< 0.5	accept
46	Y	S	K1409868-001		1	117,962	5.17	0.207		< HS	accept
47	X	MS	K1409868-001		1	16,219,263	1,200	47.8	95.3	71-125	accept
48	Y	MSD	K1409868-001		1	16,148,149	1,190	47.6	94.9	71-125	accept
49	X	S	K1409882-001		1	736,743	50.9	2.04		< HS	accept
50	Y	S	K1409883-001		1	326,801	20.6	0.825		< HS	accept
51	X	S	K1409881-001		1	1,117,275	79.1	3.16		< HS	accept
52	Y	S	K1409878-001		1	284,043	17.5	0.698		< HS	accept
53	X	S	K1409915-001		1	81,263	2.46	0.0983		< HS	accept
54	Y	S	K1409915-002		1	274,912	16.8	67.1		< HS	accept
55	X	S	K1409915-003		1	95,000	3.47	0.139		< HS	accept
56	Y	S	K1409914-001		1	81,891	2.50	0.100		< HS	accept
57	X	S	K1409914-002		1	2,621,196	190.	761		< HS	accept
58	Y	MBA	MB-2(218240)		1	49,017	0.0716	0.00286	0.00286	< 0.5	accept
59	X	S	K1409921-012		1	918,637	64.4	2.58		< HS	accept
60	Y	MS	K1409921-012		1	16,202,859	1,190	47.8	90.4	71-125	accept
61	X	MSD	K1409921-012		1	15,893,409	1,170	46.9	88.6	71-125	accept
62	Y	S	K1409921-013		1	1,259,391	89.6	3.58		< HS	accept
63	X	S	K1409921-014		1	2,091,491	151	6.05		< HS	accept
64	Y	S	K1409921-015		1	1,334,905	95.2	3.81		< HS	accept
65	X	S	K1409921-016		1	623,754	42.6	1.70		< HS	accept
66	Y	S	K1409921-017		1	2,647,119	192	7.69		< HS	accept

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Run Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (ng/L)	QA Results	Criteria	Notes
67	X	S	K1409921-018		1	86,079	2.81	0.113		< HS	accept
68	Y	S	K1409998-001		1	192,622	10.7	0.428		< HS	accept
69	X	S	K1409998-007		1	401,171	26.1	1.04		< HS	accept
70	Y	S	K1409998-008		1	132,008	6.21	0.248		< HS	accept
71	X	MBA	MB-3(218240)		1	52,619	0.338	0.0135	0.0135	< 0.5	accept
72	Y	OPR	OPR-3		1	1,767,914	127	5.09	102	77-123	accept
73	X	QCS	QCS-1(218679)		1	1,743,443	125	5.02	100.	77-123	accept
74	Y	MBA	MB-1(218679)		1	59,366	0.837	0.0335	0.0335	< 0.5	accept
75	X	S	K1409972-001		1	164,851	8.64	0.346		< HS	accept
76	Y	MS	K1409972-001		1	16,180,391	1,190	47.7	94.8	71-125	accept
77	X	MSD	K1409972-001		1	16,185,532	1,190	47.7	94.8	71-125	accept
78	Y	S	K1409972-002		1	160,204,441	11,800	474		< HS	reject
79	X	S	K1409972-003		1	335,815	21.3	0.851		< HS	accept
80	Y	S	K1409972-004		1	379,541	24.5	0.981		< HS	accept
81	X	S	K1409972-005		1	319,072	20.0	0.802		< HS	accept
82	Y	S	K1409972-006		1	75,091,809	5,550	222		< HS	accept
83	X	S	K1409972-007		1	266,139	16.1	0.645		< HS	accept
84	Y	S	K1409972-008		1	262,938	15.9	0.636		< HS	accept
85	X	S	K1409972-009		1	820,422	57.1	2.29		< HS	accept
86	Y	S	K1409972-010		1	242,798	14.4	0.576		< HS	accept
87	X	MBA	MB-2(218679)		1	64,689	1.23	0.0492	0.0492	< 0.5	accept
88	Y	S	K1409986-001		1	1,307,414	93.2	3.73		< HS	accept
89	X	MS	K1409986-001		1	15,582,011	1,150	46.0	84.5	71-125	accept
90	Y	MSD	K1409986-001		1	15,952,266	1,180	47.1	86.7	71-125	accept
91	X	S	K1409986-002		1	205,405	11.6	0.466		< HS	accept
92	Y	S	K1409975-001		1	1,002,901	70.6	2.83		< HS	accept
93	X	S	K1409975-002		1	1,011,670	71.3	2.85		< HS	accept
94	Y	S	K1409975-003		1	102,826	4.05	0.162		< HS	accept
95	X	S	K1409980-001		1	274,823	16.8	0.671		< HS	accept
96	Y	S	K1409980-002		1	248,309	14.8	0.593		< HS	accept
97	X	S	K1409980-003		1	508,617	34.1	6.81		< HS	accept
98	Y	S	K1409980-007		1	1,649,094	118	23.7		< HS	accept
99	X	S	K1409980-010		1	355,367	22.7	18.2		< HS	accept

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Run Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Peak	Peak Area	Analyzed Result (pg)	Final Result (ng/L)	QA Results	Criteria	Notes
100	Y	S	K1409972-002		1	37,454,718	2,770	553		< HS	accept
101	X	MBA	MB-3(218679)		1	60,200	0.899	0.0360	0.0360	< 0.5	accept
102	Y	OPR	OPR-4		1	1,768,345	127	5.09	102	77-123	accept
103	X	QCS	QCS-1(218680)		1	1,770,039	127	5.09	102	77-123	accept
104	Y	MBA	MB-1(218680)		1	56,563	0.630	0.0252	0.0252	< 0.5	accept
105	X	S	K1409973-001		1	252,130	15.1	0.604		< HS	accept
106	Y	S	K1410047-001		1	398,476	25.9	1.04		< HS	accept
107	X	S	K1410059-001		1	162,327	8.45	0.338		< HS	accept
108	Y	MS	K1410059-001		1	15,854,467	1,170	46.8	92.9	71-125	accept
109	X	MSD	K1410059-001		1	15,998,412	1,180	47.2	93.7	71-125	accept
110	Y	S	K1410059-002		1	653,145	44.8	1.79		< HS	accept
111	X	S	K1410059-003		1	14,023,053	1,030	41.3		< HS	accept
112	Y	S	K1410059-004		1	9,381,138	690.	27.6		< HS	accept
113	X	S	K1410059-005		1	4,161,770	304	12.2		< HS	accept
114	Y	S	K1410056-001		1	225,391	13.1	0.525		< HS	accept
115	X	S	K1410056-001		1	840,279	58.6	2.34		< HS	accept
116	Y	S	K1410090-001		1	5,961,497	437	17.5		< HS	accept
117	X	MS	K1410090-001		1	19,965,324	1,470	58.9	82.9	71-125	accept
118	Y	MSD	K1410090-001		1	18,952,807	1,400	55.9	76.9	71-125	accept
119	X	MBA	MB-2(218680)		1	93,977	3.40	0.136	0.136	< 0.5	accept
120	Y	S	K1410133-001		1	163,052	8.51	0.340		< HS	accept
121	X	S	K1410133-002		1	1,009,649	71.1	2.85		< HS	accept
122	Y	MS	K1410133-002		1	13,332,822	983	39.3	72.9	71-125	accept
123	X	MSD	K1410133-002		1	14,083,788	1,040	41.5	77.4	71-125	accept
124	Y	S	K1410052-001		1	222,015	12.9	0.515		< HS	accept
125	X	MS	K1410052-001		1	15,736,797	1,160	46.4	91.8	71-125	accept
126	Y	MSD	K1410052-001		1	15,759,645	1,160	46.5	91.9	71-125	accept
127	X	S	K1410052-002		1	240,535	14.2	0.570		< HS	accept
128	Y	S	K1410052-003		1	829,608	57.8	2.31		< HS	accept
129	X	S	K1410052-004		1	218,160	12.6	0.503		< HS	accept
130	Y	S	K1410221-001		1	63,240,403	4,670	187		< HS	accept
131	X	MBA	MB-3(218680)		1	77,126	2.15	0.0860	0.0860	< 0.5	accept
132	Y	OPR	OPR-5		1	1,781,273	128	5.13	103	77-123	accept

Analyst Comments:

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QA Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Bias and Precision

Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
MS	K1409873-003	47.5	ng/L	50.0	0.396	94.3	71-125			accept
	K1409873-011	43.0	ng/L	50.0	0.305	85.5	71-125			accept
	K1409868-001	47.8	ng/L	50.0	0.207	95.3	71-125			accept
	K1409921-012	47.8	ng/L	50.0	2.58	90.4	71-125			accept
	K1409972-001	47.7	ng/L	50.0	0.346	94.8	71-125			accept
	K1409986-001	46.0	ng/L	50.0	3.73	84.5	71-125			accept
	K1410059-001	46.8	ng/L	50.0	0.338	92.9	71-125			accept
	K1410090-001	58.9	ng/L	50.0	17.5	82.9	71-125			accept
	K1410133-002	39.3	ng/L	50.0	2.85	72.9	71-125			accept
	K1410052-001	46.4	ng/L	50.0	0.515	91.8	71-125			accept
MSD	K1409873-003	47.7	ng/L	50.0	0.396	94.5	71-125	0.268	< 24	accept
	K1409873-011	45.0	ng/L	50.0	0.305	89.4	71-125	4.48	< 24	accept
	K1409868-001	47.6	ng/L	50.0	0.207	94.9	71-125	0.441	< 24	accept
	K1409921-012	46.9	ng/L	50.0	2.58	88.6	71-125	1.93	< 24	accept
	K1409972-001	47.7	ng/L	50.0	0.346	94.8	71-125	0.0319	< 24	accept
	K1409986-001	47.1	ng/L	50.0	3.73	86.7	71-125			accept
	K1410059-001	47.2	ng/L	50.0	0.338	93.7	71-125			accept
	K1410090-001	55.9	ng/L	50.0	17.5	76.9	71-125			accept
	K1410133-002	41.5	ng/L	50.0	2.85	77.4	71-125			accept
	K1410052-001	46.5	ng/L	50.0	0.515	91.9	71-125			accept
OPR	OPR-1	5.42	ng/L	5		108	77-123			accept
	OPR-2	5.08	ng/L	5.0		102	77-123			accept
	OPR-3	5.09	ng/L	5.0		102	77-123			accept

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QA Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Bias and Precision

Type	Name/ID	Final Result	Units	Spike Level	Source Result	% REC	% REC Limit	RPD	RPD Limit	Notes
OPR	OPR-4	5.09	ng/L	5.0		102	77-123			accept
	OPR-5	5.13	ng/L	5.0		103	77-123			accept
QCS	QCS-1(218679)	5.02	ng/L	5.0		100.	77-123			accept
	QCS-1(218680)	5.09	ng/L	5.0		102	77-123			accept

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QA Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Calibration									
QA Sample Type	**Name/ID**	**Analyzed Result**	**Units**	**Spike Level**	**% REC**	**% REC Limit**	**RSD**	**RSD Limit**	**Notes**
Calibration	5 pg	5.15	pg	5	103	75-125			accept
	10 pg	10.5	pg	10	105	75-125			accept
	25 pg	25.4	pg	25	102	75-125			accept
	100 pg	103	pg	100	103	75-125			accept
	500 pg	492	pg	500	98.4	75-125			accept
	2500 pg	2,400	pg	2500	96.1	75-125			accept
	10000 pg	9,410	pg	10000	94.1	75-125			accept
Calibration Factor		0.0000740	pg/PA				4.05	< 15	accept
Calibration Date		9/23/14							

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QA Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Blank Summary

QA Sample Type	Name/ID	Analyzed Result	Units	Criteria	StDev	StDev Limit	Notes
CB	CB-1	3.86	pg	< 50			accept
	CB-2	3.40	pg	< 50			accept
	CB-3	3.38	pg	< 50			accept
	CB-4	3.57	pg	< 50			accept
Average		3.55	pg	< 25	0.220	< 10	accept
MBA	MB-1(218115)	0.149	ng/L	< 0.5			accept
	MB-2(218115)	0.0280	ng/L	< 0.5			accept
	MB-3(218115)	0.0111	ng/L	< 0.5			accept
	MB-1(218240)	0.0471	ng/L	< 0.5			accept
	MB-2(218240)	0.00286	ng/L	< 0.5			accept
	MB-3(218240)	0.0135	ng/L	< 0.5			accept
	MB-1(218679)	0.0335	ng/L	< 0.5			accept
	MB-2(218679)	0.0492	ng/L	< 0.5			accept
	MB-3(218679)	0.0360	ng/L	< 0.5			accept
	MB-1(218680)	0.0252	ng/L	< 0.5			accept
	MB-2(218680)	0.136	ng/L	< 0.5			accept
	MB-3(218680)	0.0860	ng/L	< 0.5			accept
Average		0.0515	ng/L		0.0478		

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QA Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

QA Comments:

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Sample Results Summary Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Name/ID	Final Result (ng/L)	Notes
46	K1409868-001	0.207	accept
52	K1409878-001	0.698	accept
51	K1409881-001	3.16	accept
49	K1409882-001	2.04	accept
50	K1409883-001	0.825	accept
56	K1409914-001	0.100	accept
57	K1409914-002	761	accept
53	K1409915-001	0.0983	accept
54	K1409915-002	67.1	accept
55	K1409915-003	0.139	accept
59	K1409921-012	2.58	accept
62	K1409921-013	3.58	accept
63	K1409921-014	6.05	accept
64	K1409921-015	3.81	accept
65	K1409921-016	1.70	accept
66	K1409921-017	7.69	accept
67	K1409921-018	0.113	accept
68	K1409998-001	0.428	accept
69	K1409998-007	1.04	accept
70	K1409998-008	0.248	accept

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Run Information Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
1	X	CCB	RINSE						
2	Y	CCB	RINSE						
3	X	CB	CB-1						
4	Y	CB	CB-2						
5	X	CB	CB-3						
6	Y	CB	CB-4						
7	X	STD	5 pg					5	
8	Y	STD	10 pg					10	
9	X	STD	25 pg					25	
10	Y	STD	100 pg					100	
11	X	STD	500 pg					500	
12	Y	STD	2500 pg					2500	
13	X	STD	10000 pg					10000	
14	Y	OPR	OPR-1		25	25	25	5	
15	X	QCS	QCS-1(218115)		25	25	25	5	
16	Y	MBA	MB-1(218115)		500	500	25		
17	X	S	K1409873-003		500	500	25		
18	Y	MS	K1409873-003		500	500	25	50.0	
19	X	MSD	K1409873-003		500	500	25	50.0	
20	Y	S	K1409873-001		500	500	25		
21	X	S	K1409873-002		500	500	25		
22	Y	S	K1409873-004		500	500	25		
23	X	S	K1409873-005		500	500	25		
24	Y	S	K1409873-006		500	500	25		
25	X	S	K1409873-007		500	500	25		
26	Y	S	K1409873-008		500	500	25		
27	X	S	K1409873-009		500	500	25		
28	Y	S	K1409873-010		500	500	25		
29	X	MBA	MB-2(218115)		500	500	25		
30	Y	S	K1409873-011		500	500	25		
31	X	MS	K1409873-011		500	500	25	50.0	
32	Y	MSD	K1409873-011		500	500	25	50.0	
33	X	S	K1409873-012		500	500	25		

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Run Information Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
34	Y	S	K1409873-013		500	500	25		
35	X	S	K1409873-014		500	500	25		
36	Y	S	K1409873-015		500	500	25		
37	X	S	K1409873-016		500	500	25		
38	Y	S	K1409873-017		500	500	25		
39	X	S	K1409873-018		500	500	25		
40	Y	S	K1409873-019		500	500	25		
41	X	S	K1409693-002		500	500	25		
42	Y	MBA	MB-3(218115)		500	500	25		
43	X	OPR	OPR-2		25	25	25	5.0	
44	Y	QCS	QCS-1(218240)		25	25	25	5.0	
45	X	MBA	MB-1(218240)		500	500	25		
46	Y	S	K1409868-001		500	500	25		
47	X	MS	K1409868-001		500	500	25	50.0	
48	Y	MSD	K1409868-001		500	500	25	50.0	
49	X	S	K1409882-001		500	500	25		
50	Y	S	K1409883-001		500	500	25		
51	X	S	K1409881-001		500	500	25		
52	Y	S	K1409878-001		500	500	25		
53	X	S	K1409915-001		500	500	25		
54	Y	S	K1409915-002		25	500	5.0		
55	X	S	K1409915-003		500	500	25		
56	Y	S	K1409914-001		500	500	25		
57	X	S	K1409914-002		25	500	5.0		
58	Y	MBA	MB-2(218240)		500	500	25		
59	X	S	K1409921-012		500	500	25		
60	Y	MS	K1409921-012		500	500	25	50.0	
61	X	MSD	K1409921-012		500	500	25	50.0	
62	Y	S	K1409921-013		500	500	25		
63	X	S	K1409921-014		500	500	25		
64	Y	S	K1409921-015		500	500	25		
65	X	S	K1409921-016		500	500	25		
66	Y	S	K1409921-017		500	500	25		

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Run Information Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
67	X	S	K1409921-018		500	500	25		
68	Y	S	K1409998-001		500	500	25		
69	X	S	K1409998-007		500	500	25		
70	Y	S	K1409998-008		500	500	25		
71	X	MBA	MB-3(218240)		500	500	25		
72	Y	OPR	OPR-3		25	25	25	5.0	
73	X	QCS	QCS-1(218679)		25	25	25	5.0	
74	Y	MBA	MB-1(218679)		500	500	25		
75	X	S	K1409972-001		500	500	25		
76	Y	MS	K1409972-001		500	500	25	50.0	
77	X	MSD	K1409972-001		500	500	25	50.0	
78	Y	S	K1409972-002		500	500	25		
79	X	S	K1409972-003		500	500	25		
80	Y	S	K1409972-004		500	500	25		
81	X	S	K1409972-005		500	500	25		
82	Y	S	K1409972-006		500	500	25		
83	X	S	K1409972-007		500	500	25		
84	Y	S	K1409972-008		500	500	25		
85	X	S	K1409972-009		500	500	25		
86	Y	S	K1409972-010		500	500	25		
87	X	MBA	MB-2(218679)		500	500	25		
88	Y	S	K1409986-001		500	500	25		
89	X	MS	K1409986-001		500	500	25	50.0	
90	Y	MSD	K1409986-001		500	500	25	50.0	
91	X	S	K1409986-002		500	500	25		
92	Y	S	K1409975-001		500	500	25		
93	X	S	K1409975-002		500	500	25		
94	Y	S	K1409975-003		500	500	25		
95	X	S	K1409980-001		500	500	25		
96	Y	S	K1409980-002		500	500	25		
97	X	S	K1409980-003		100	500	25		
98	Y	S	K1409980-007		100	500	25		
99	X	S	K1409980-010		25	500	25		

BS 9/24/14

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Run Information Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

Run	Trap	Type	Name/ID	Method Blank	Sample Vol/Wt	Dilution Vol (ml)	Analyzed Vol (ml)	Expected Value	Notes
100	Y	S	K1409972-002		500	500	5.0		
101	X	MBA	MB-3(218679)		500	500	25		
102	Y	OPR	OPR-4		25	25	25	5.0	
103	X	QCS	QCS-1(218680)		25	25	25	5.0	
104	Y	MBA	MB-1(218680)		500	500	25		
105	X	S	K1409973-001		500	500	25		
106	Y	S	K1410047-001		500	500	25		
107	X	S	K1410059-001		500	500	25		
108	Y	MS	K1410059-001		500	500	25	50.0	
109	X	MSD	K1410059-001		500	500	25	50.0	
110	Y	S	K1410059-002		500	500	25		
111	X	S	K1410059-003		500	500	25		
112	Y	S	K1410059-004		500	500	25		
113	X	S	K1410059-005		500	500	25		
114	Y	S	K1410056-001		500	500	25		
115	X	S	K1410056-001		500	500	25		
116	Y	S	K1410090-001		500	500	25		
117	X	MS	K1410090-001		500	500	25	50.0	
118	Y	MSD	K1410090-001		500	500	25	50.0	
119	X	MBA	MB-2(218680)		500	500	25		
120	Y	S	K1410133-001		500	500	25		
121	X	S	K1410133-002		500	500	25		
122	Y	MS	K1410133-002		500	500	25	50.0	
123	X	MSD	K1410133-002		500	500	25	50.0	
124	Y	S	K1410052-001		500	500	25		
125	X	MS	K1410052-001		500	500	25	50.0	
126	Y	MSD	K1410052-001		500	500	25	50.0	
127	X	S	K1410052-002		500	500	25		
128	Y	S	K1410052-003		500	500	25		
129	X	S	K1410052-004		500	500	25		
130	Y	S	K1410221-001		500	500	25		
131	X	MBA	MB-3(218680)		500	500	25		
132	Y	OPR	OPR-5		25	25	25	5.0	

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Metals Digestion Sheet

Service Requests:

Method : **1631E** | Analysis for : **CVAFS**

Sample	StarLims #	Date Prepped	> BrCl	Prepared Initial Vol. (ml)	Prepared Final Vol. (ml)	Analyzed Vol. (ml)	Analyzed Dil. Vol. (ml)	Matrix
Method Blank		9/22/2014	X	500	500	100	100	0.5% BrCl
Method Blank		9/22/2014	X	500	500	100	100	0.5% BrCl
OPR 1			X	25	25	25	25	0.5% BrCl
QCS			X	25	25	25	25	0.5% BrCl
K1409868-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409868-001MS	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409868-001MSD	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409882-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409883-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409881-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409878-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409915-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409915-002	218240	9/22/2014	X	25	500	5	25	0.5% BrCl
K1409915-003	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409914-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409914-002	218240	9/22/2014	X	25	500	5	25	0.5% BrCl
K1409921-012	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-012MS	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-012MSD	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-013	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-014	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-015	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-016	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-017	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409921-018	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409998-001	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409998-007	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
K1409998-008	218240	9/22/2014	X	500	500	25	25	0.5% BrCl
Method Blank		9/22/2014	X	500	500	25	25	0.5% BrCl
OPR-2			X	25	25	25	25	0.5% BrCl

RE2-61-N **BrCl** *Time Started : 02:00pm*

AF1-93-D *(10 ng/mL)* ----- **QCS:** 12.5uL

AF1-93-C *(10 ng/mL)* ------ **OPR:** 12.5uL

1st MS / DMS: 0.125mL

2nd MS / DMS: 0.125mL

Comments: _____

_____

Analyst _____

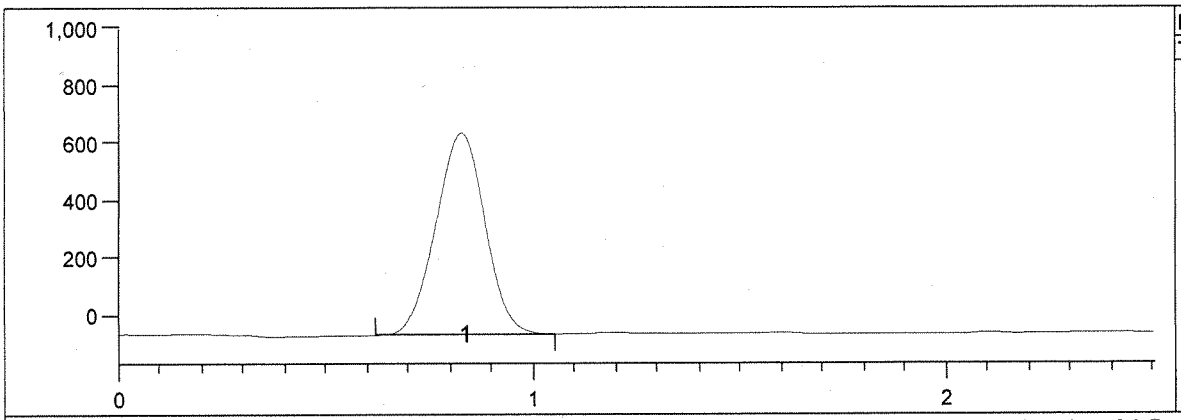
1631Dig.XLS
2/8/2008

Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

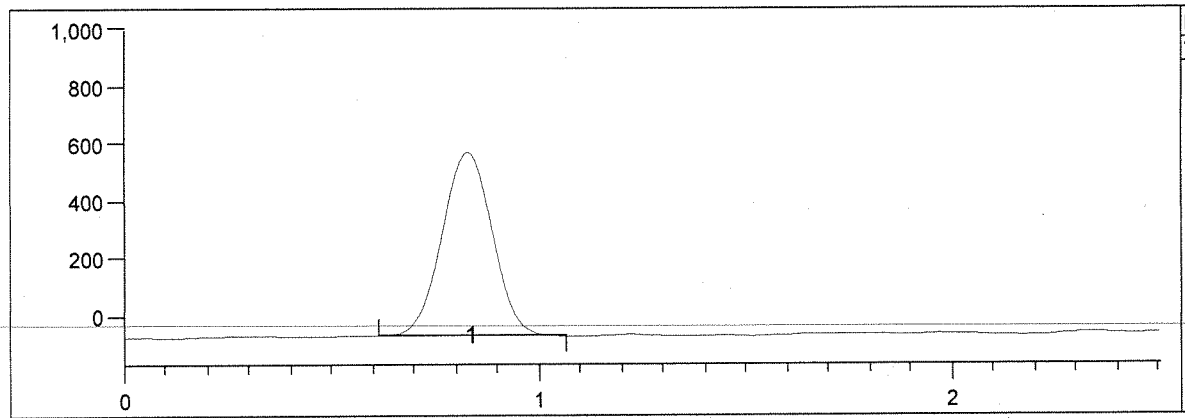


Date:	9/23/14
Time:	8:27 AM

Peak	rt	Area
1	0.82	58,518

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
1	X	CCB	RINSE		1	58,518	0.774		0.774	< 50	accept

Notes

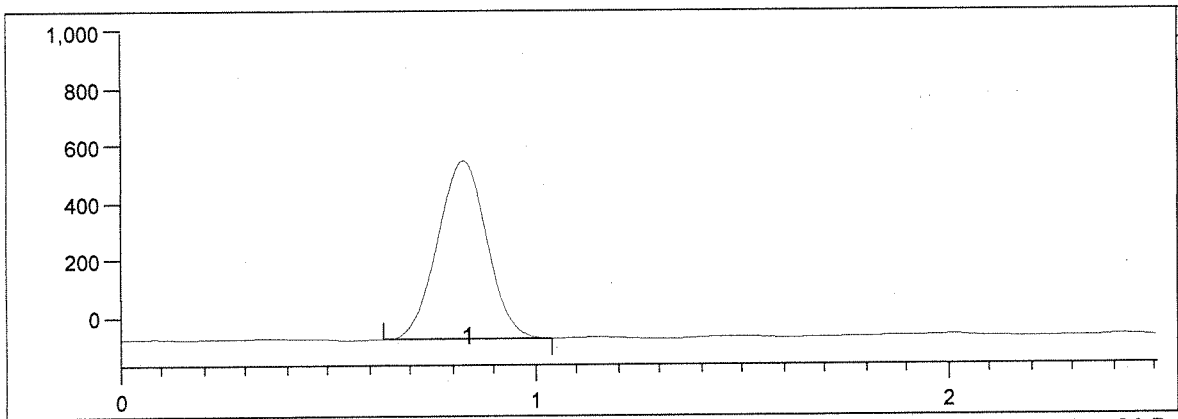


Date:	9/23/14
Time:	8:32 AM

Peak	rt	Area
1	0.82	54,172

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
2	Y	CCB	RINSE		1	54,172	0.453		0.453	< 50	accept

Notes



Date:	9/23/14
Time:	8:37 AM

Peak	rt	Area
1	0.82	52,179

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
3	X	CB	CB-1		1	52,179	3.86		3.86	< 50	accept

Notes

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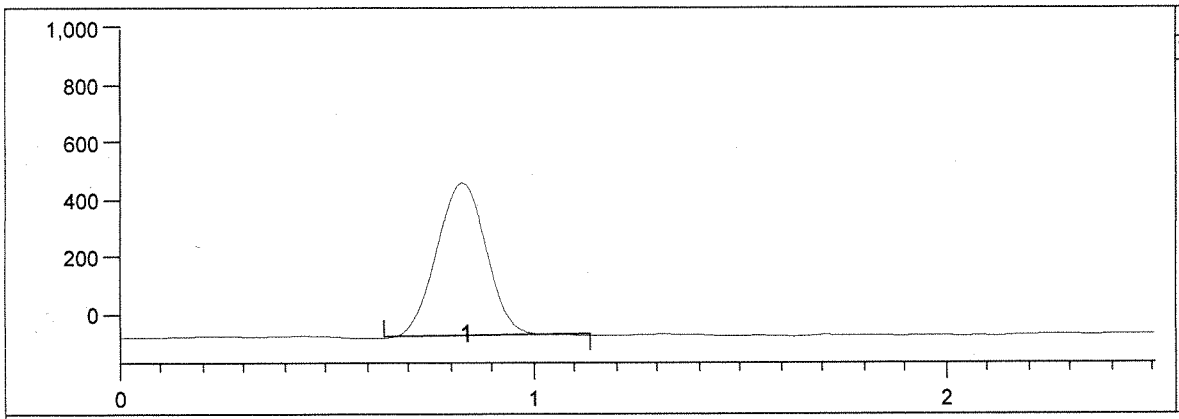
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

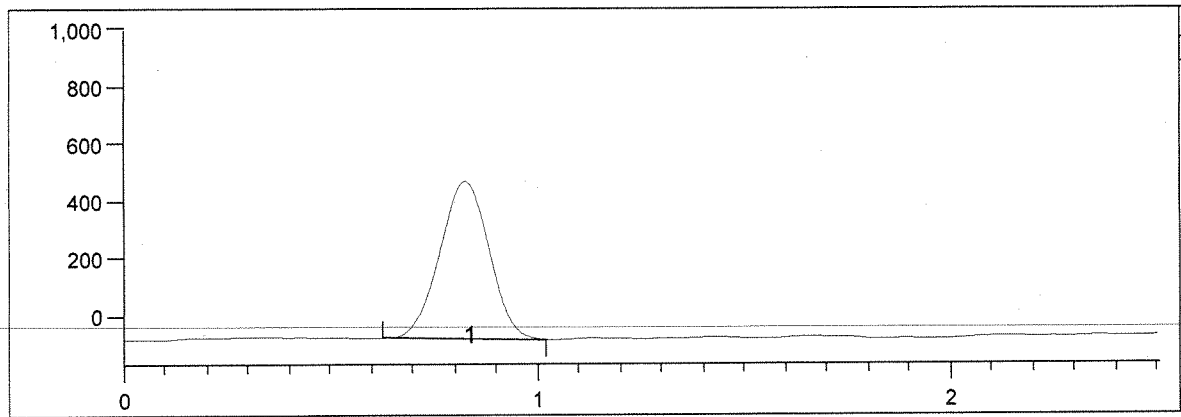


Date: 9/23/14
Time: 8:42 AM

Peak	rt	Area
1	0.82	46,020

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
4	Y	CB	CB-2		1	46,020	3.40		3.40	< 50	accept

Notes

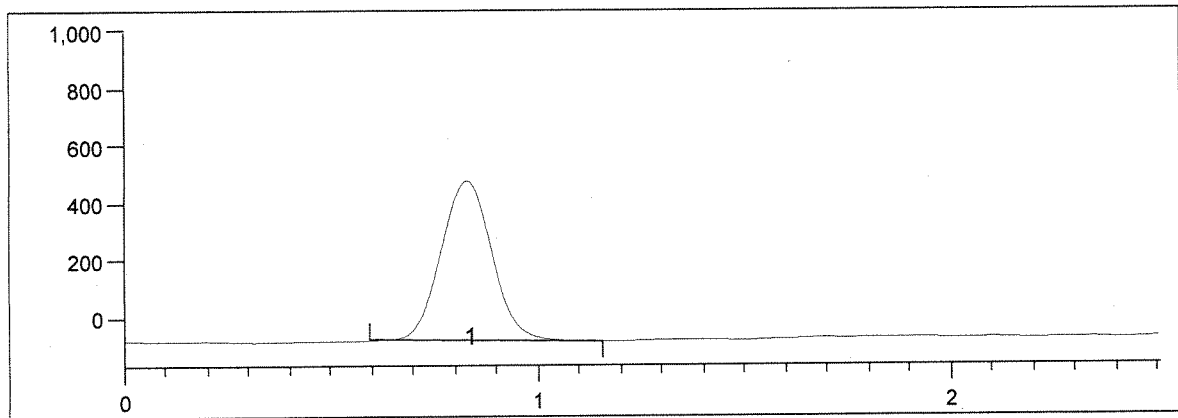


Date: 9/23/14
Time: 8:47 AM

Peak	rt	Area
1	0.82	45,731

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
5	X	CB	CB-3		1	45,731	3.38		3.38	< 50	accept

Notes



Date: 9/23/14
Time: 8:52 AM

Peak	rt	Area
1	0.82	48,265

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
6	Y	CB	CB-4		1	48,265	3.57		3.57	< 50	accept

Notes

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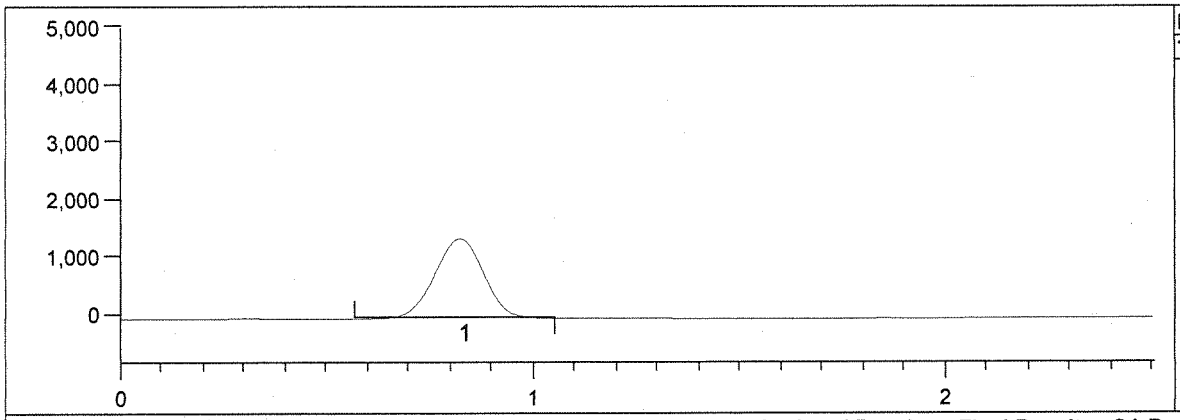
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

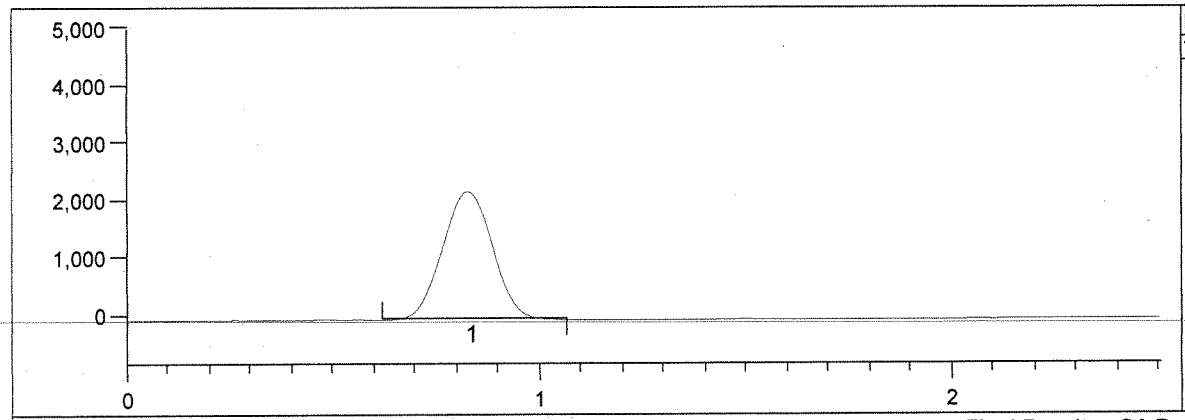


Date:	9/23/14
Time:	8:57 AM

Peak	rt	Area
1	0.82	117,618

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
7	X	STD	5 pg		1	117,618	5.15		103	75-125	accept

Notes

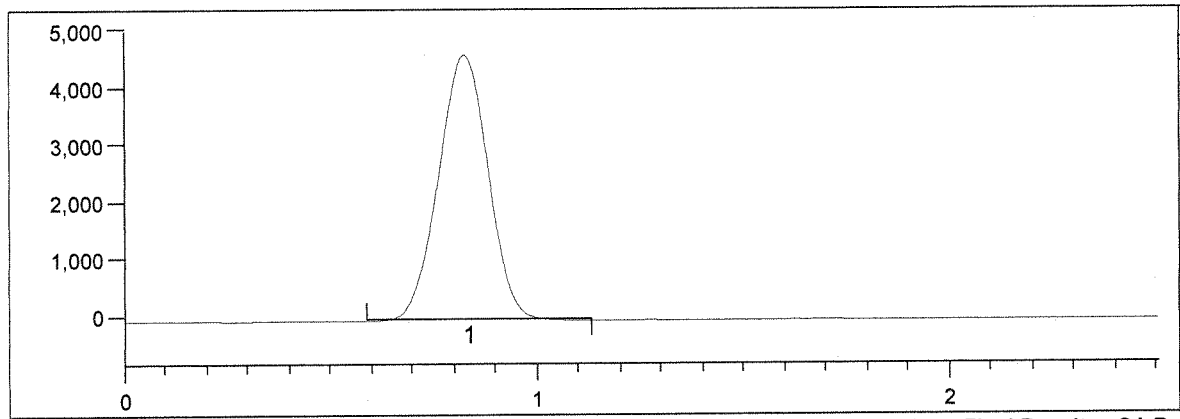


Date:	9/23/14
Time:	9:02 AM

Peak	rt	Area
1	0.82	189,770

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
8	Y	STD	10 pg		1	189,770	10.5		105	75-125	accept

Notes



Date:	9/23/14
Time:	9:07 AM

Peak	rt	Area
1	0.82	391,992

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
9	X	STD	25 pg		1	391,992	25.4		102	75-125	accept

Notes

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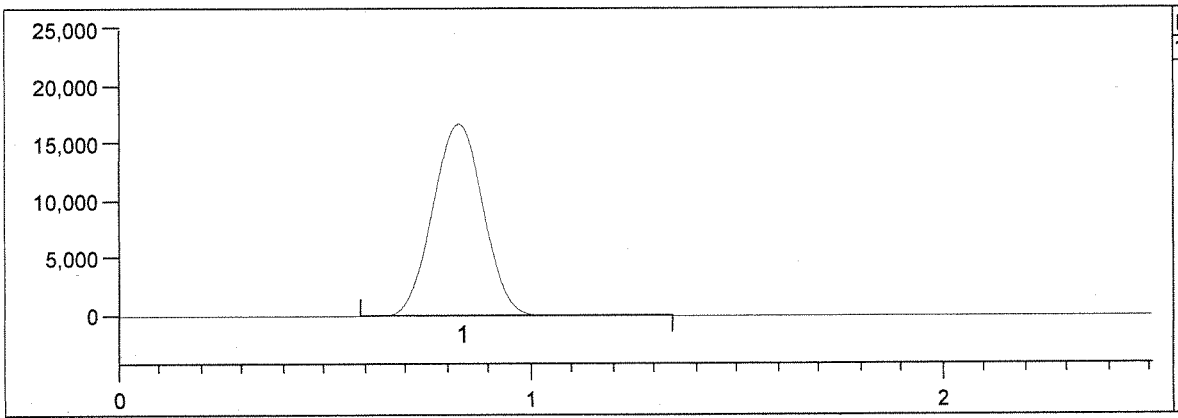
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

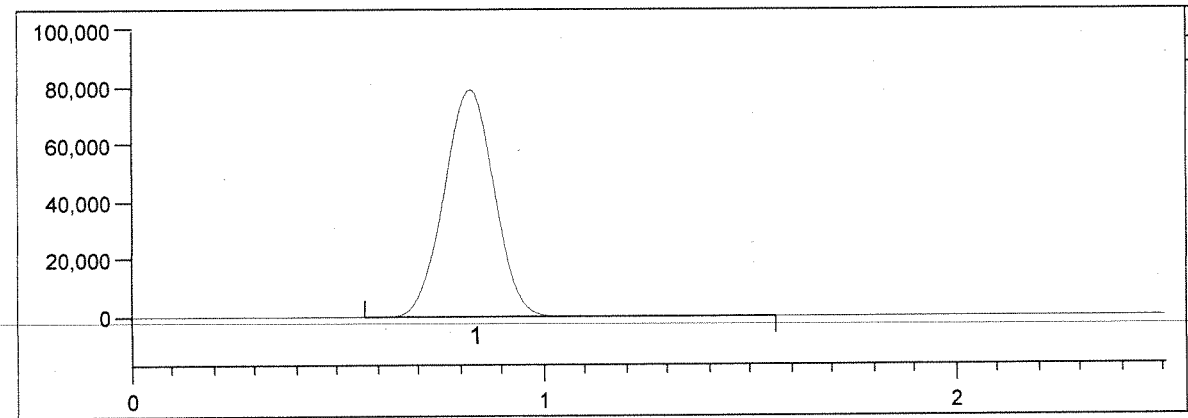


Date: 9/23/14
Time: 9:12 AM

Peak	rt	Area
1	0.82	1,438,286

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
10	Y	STD	100 pg		1	1,438,286	103		103	75-125	accept

Notes

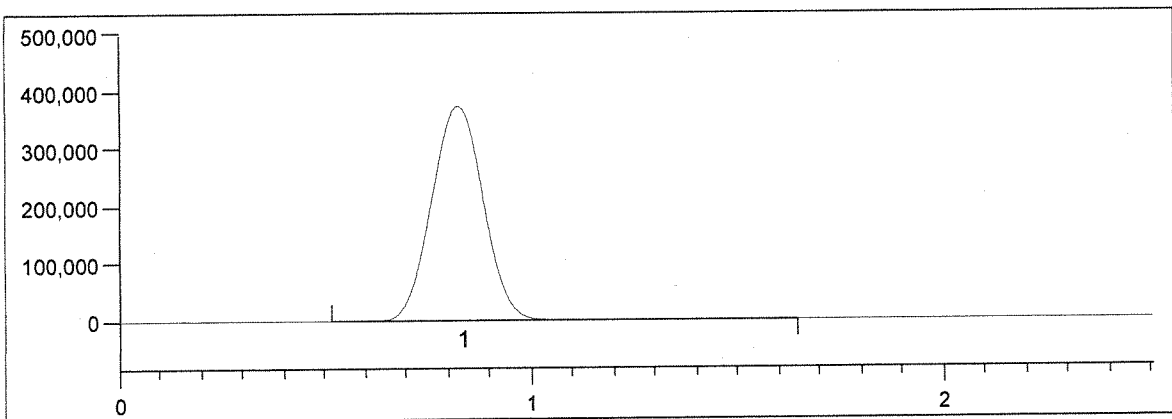


Date: 9/23/14
Time: 9:17 AM

Peak	rt	Area
1	0.82	6,702,687

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
11	X	STD	500 pg		1	6,702,687	492		98.4	75-125	accept

Notes



Date: 9/23/14
Time: 9:22 AM

Peak	rt	Area
1	0.82	32,528,612

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
12	Y	STD	2500 pg		1	32,528,612	2,400		96.1	75-125	accept

Notes

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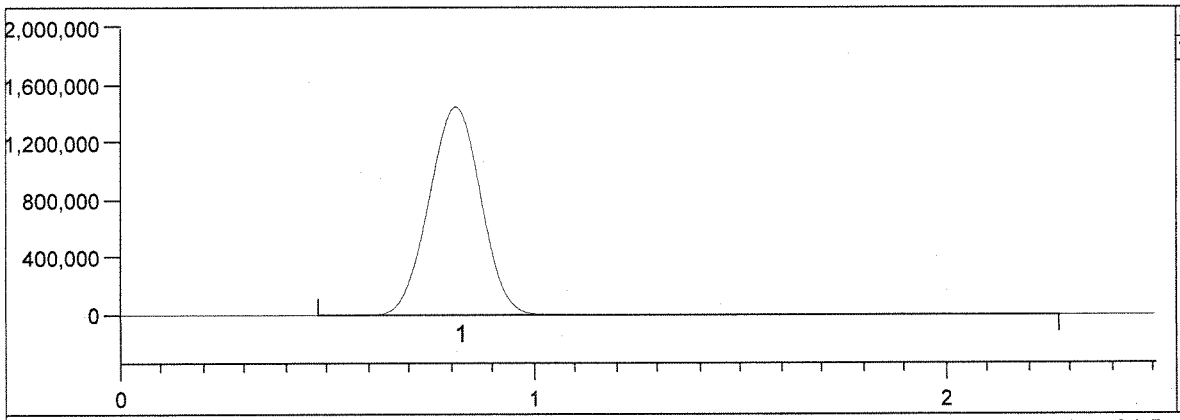
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon



Date:	9/23/14
Time:	9:27 AM

Peak	rt	Area
1	0.81	127,225,812

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
13	X	STD	10000 pg		1	127,225,812	9,410		94.1	75-125	accept

Notes

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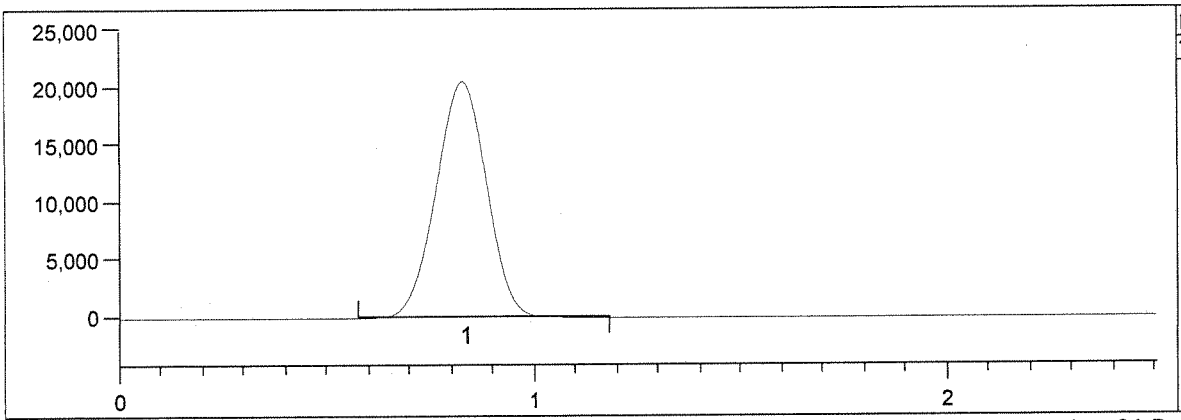
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

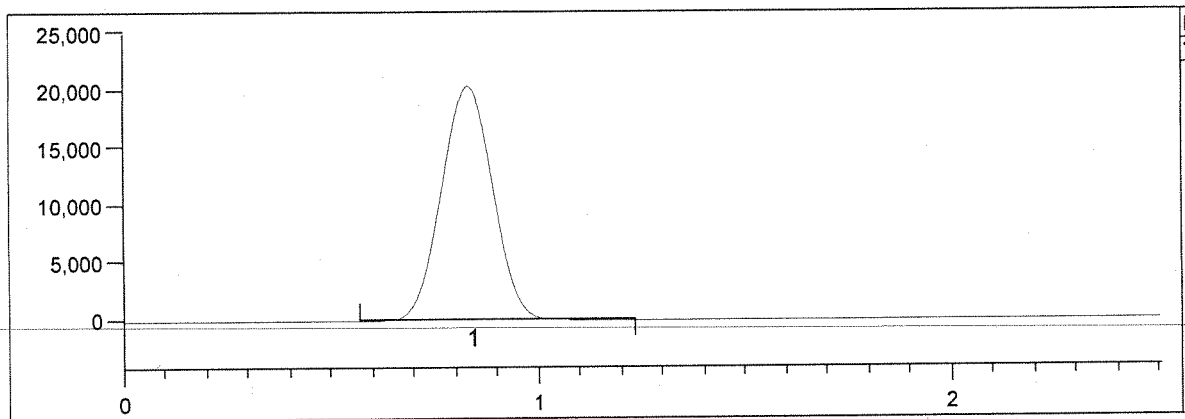


Date: 9/23/14
Time: 11:57 AM

Peak	rt	Area
1	0.82	1,766,150

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
43	X	OPR	OPR-2		1	1,766,150	127	5.08	102	77-123	accept

Notes

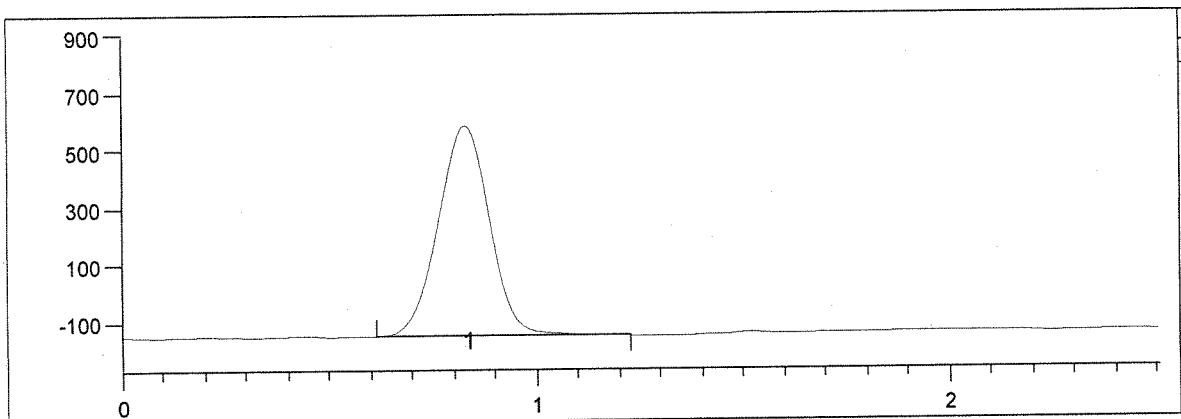


Date: 9/23/14
Time: 12:02 PM

Peak	rt	Area
1	0.83	1,779,745

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
44	Y	QCS	QCS-1(218240)		1	1,779,745	128	5.12	102	77-123	accept

Notes



Date: 9/23/14
Time: 12:07 PM

Peak	rt	Area
1	0.82	63,956

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
45	X	MBA	MB-1(218240)		1	63,956	1.18	0.0471	0.0471	< 0.5	accept

Notes

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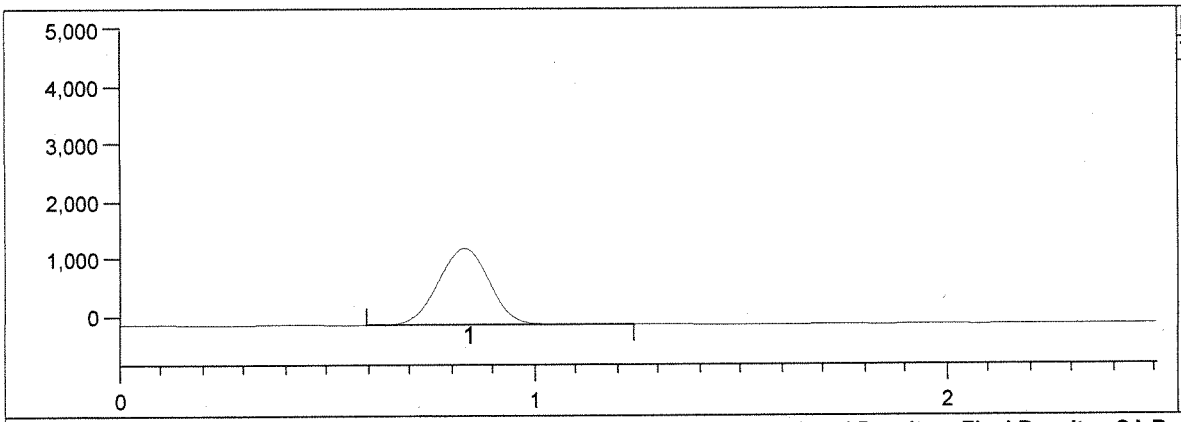
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

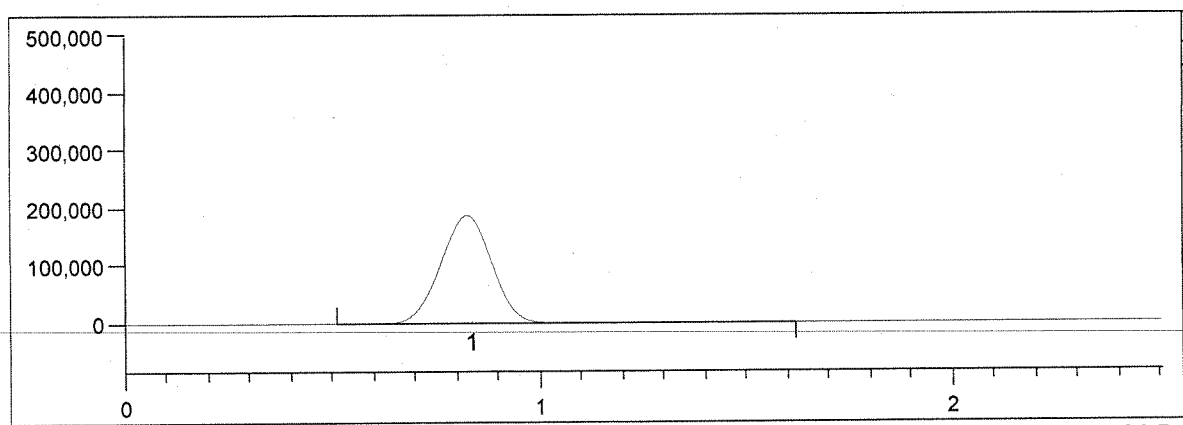


Date: 9/23/14
Time: 12:12 PM

Peak	rt	Area
1	0.83	117,962

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
46	Y	S	K1409868-001		1	117,962	5.17	0.207		< HS	accept

Notes

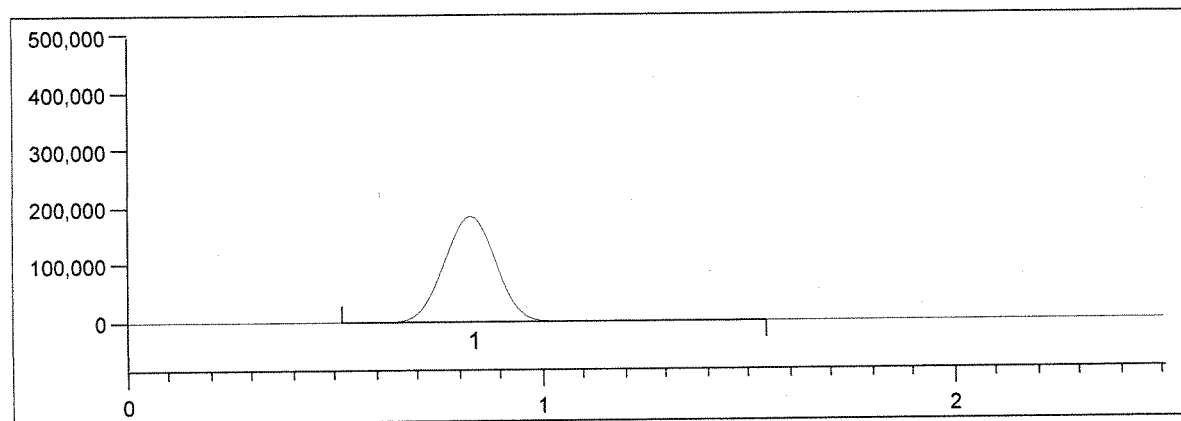


Date: 9/23/14
Time: 12:17 PM

Peak	rt	Area
1	0.82	16,219,263

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
47	X	MS	K1409868-001		1	16,219,263	1,200	47.8	95.3	71-125	accept

Notes



Date: 9/23/14
Time: 12:22 PM

Peak	rt	Area
1	0.82	16,148,149

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
48	Y	MSD	K1409868-001		1	16,148,149	1,190	47.6	94.9	71-125	accept

Notes

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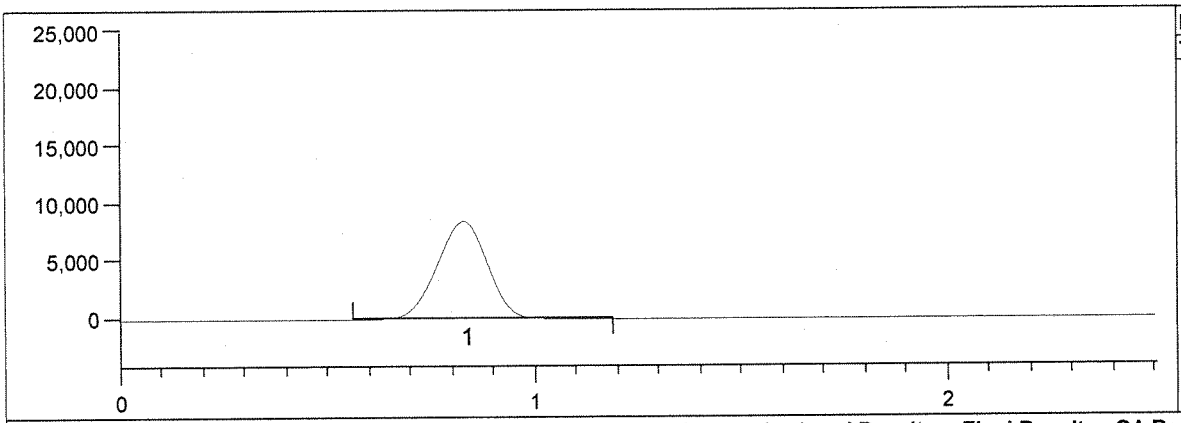
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

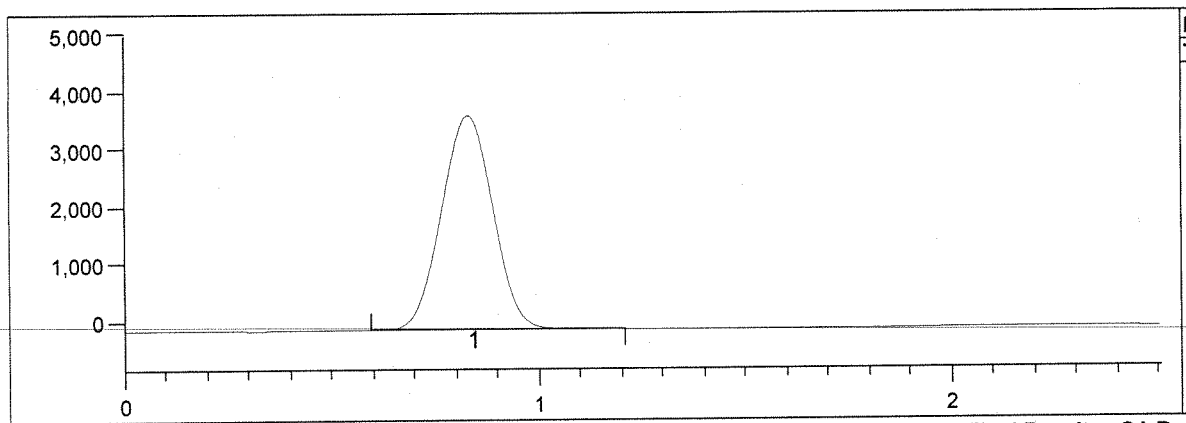


Date: 9/23/14
Time: 12:27 PM

Peak	rt	Area
1	0.82	736,743

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
49	X	S	K1409882-001		1	736,743	50.9	2.04		< HS	accept

Notes

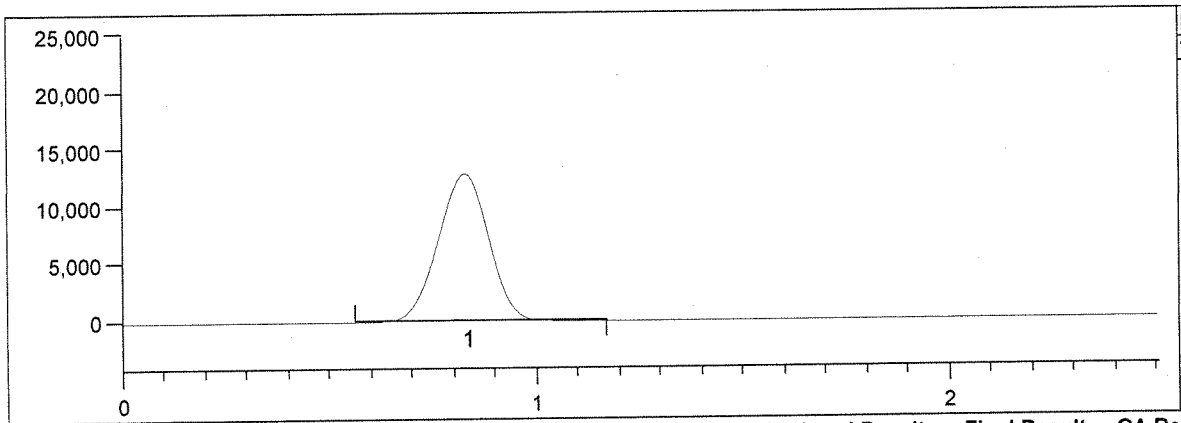


Date: 9/23/14
Time: 12:32 PM

Peak	rt	Area
1	0.82	326,801

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
50	Y	S	K1409883-001		1	326,801	20.6	0.825		< HS	accept

Notes



Date: 9/23/14
Time: 12:37 PM

Peak	rt	Area
1	0.82	1,117,275

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
51	X	S	K1409881-001		1	1,117,275	79.1	3.16		< HS	accept

Notes

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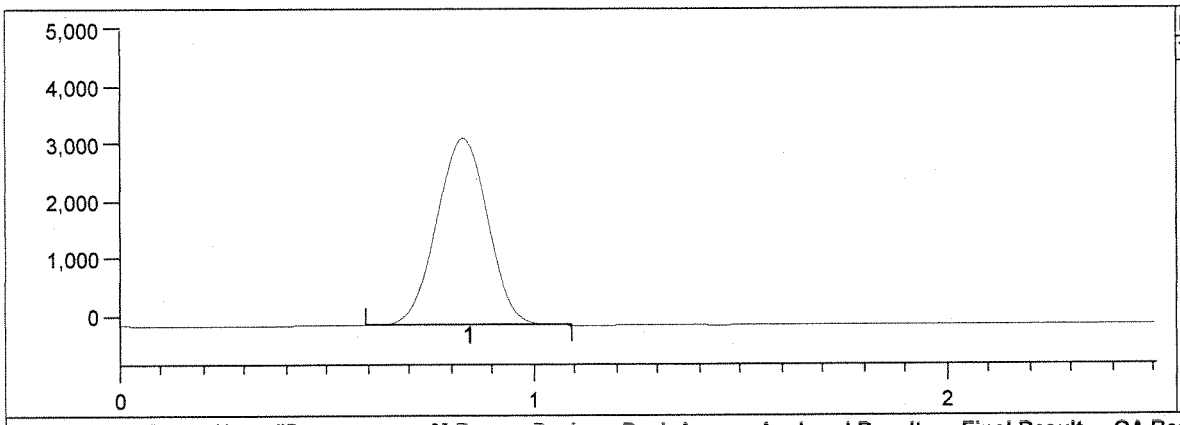
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

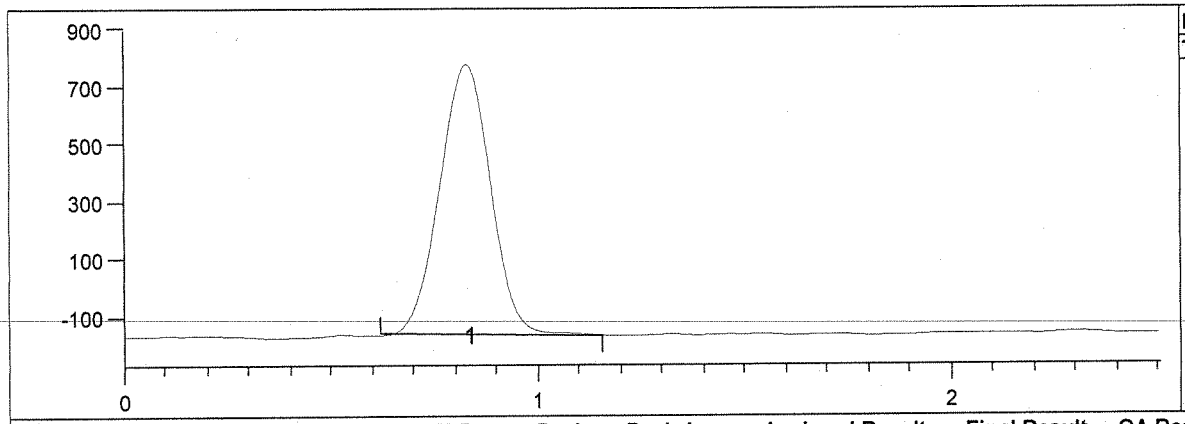


Date:	9/23/14
Time:	12:42 PM

Peak	rt	Area
1	0.82	284,043

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
52	Y	S	K1409878-001		1	284,043	17.5	0.698		< HS	accept

Notes

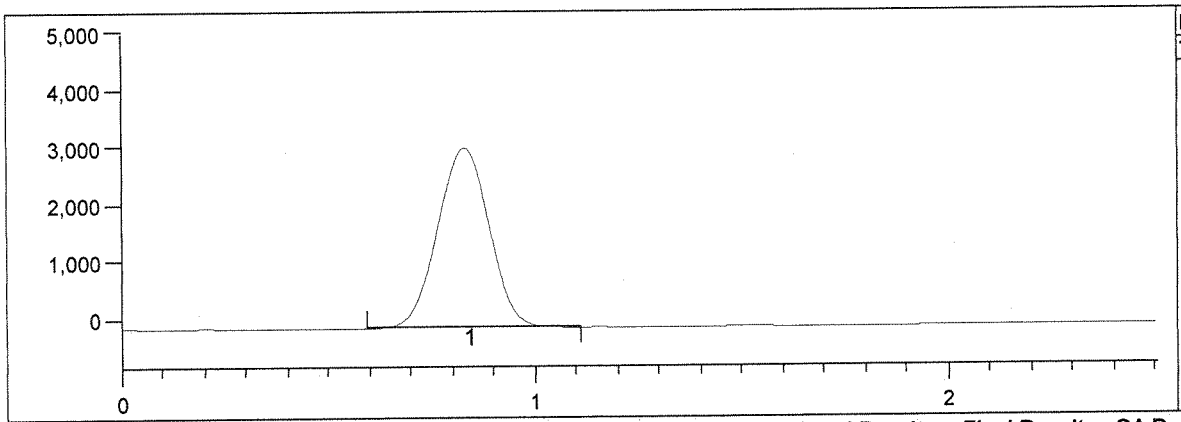


Date:	9/23/14
Time:	12:47 PM

Peak	rt	Area
1	0.82	81,263

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
53	X	S	K1409915-001		1	81,263	2.46	0.0983		< HS	accept

Notes



Date:	9/23/14
Time:	12:52 PM

Peak	rt	Area
1	0.82	274,912

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
54	Y	S	K1409915-002		1	274,912	16.8	67.1		< HS	accept

Notes

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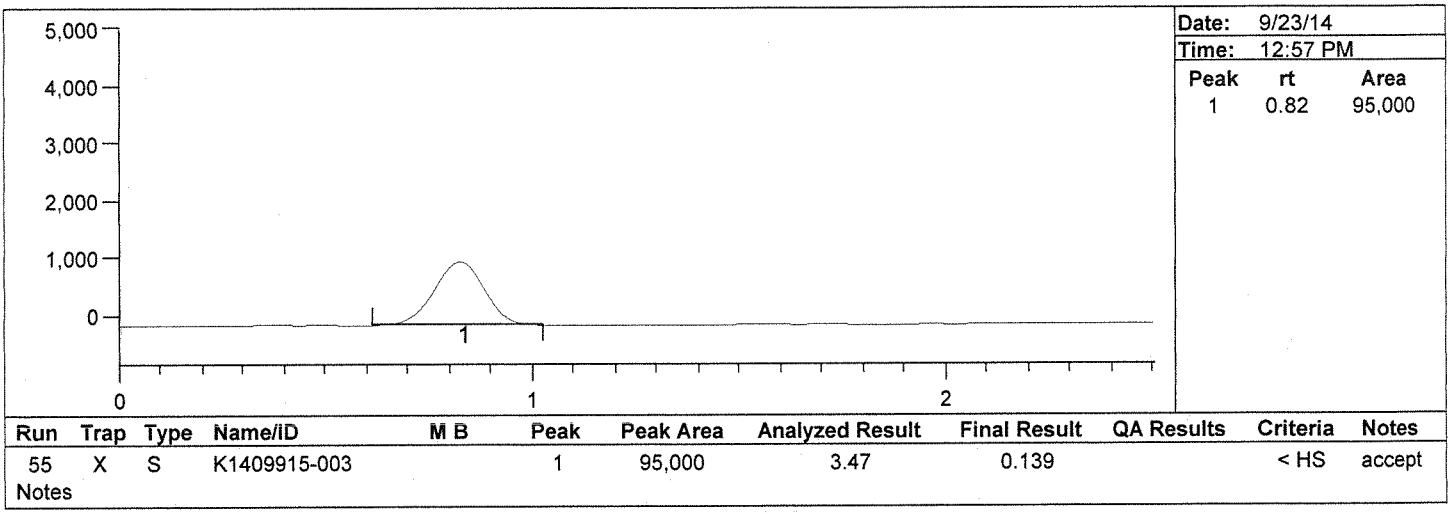
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

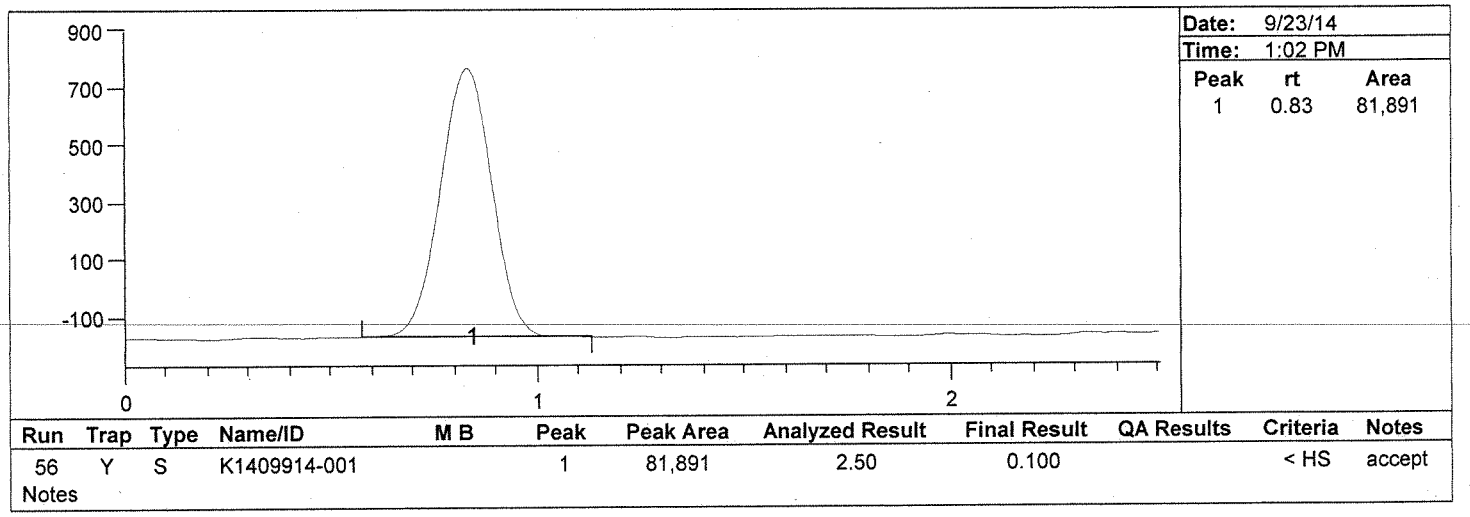


Date:	9/23/14
Time:	12:57 PM

Peak	rt	Area
1	0.82	95,000

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
55	X	S	K1409915-003		1	95,000	3.47	0.139		< HS	accept

Notes

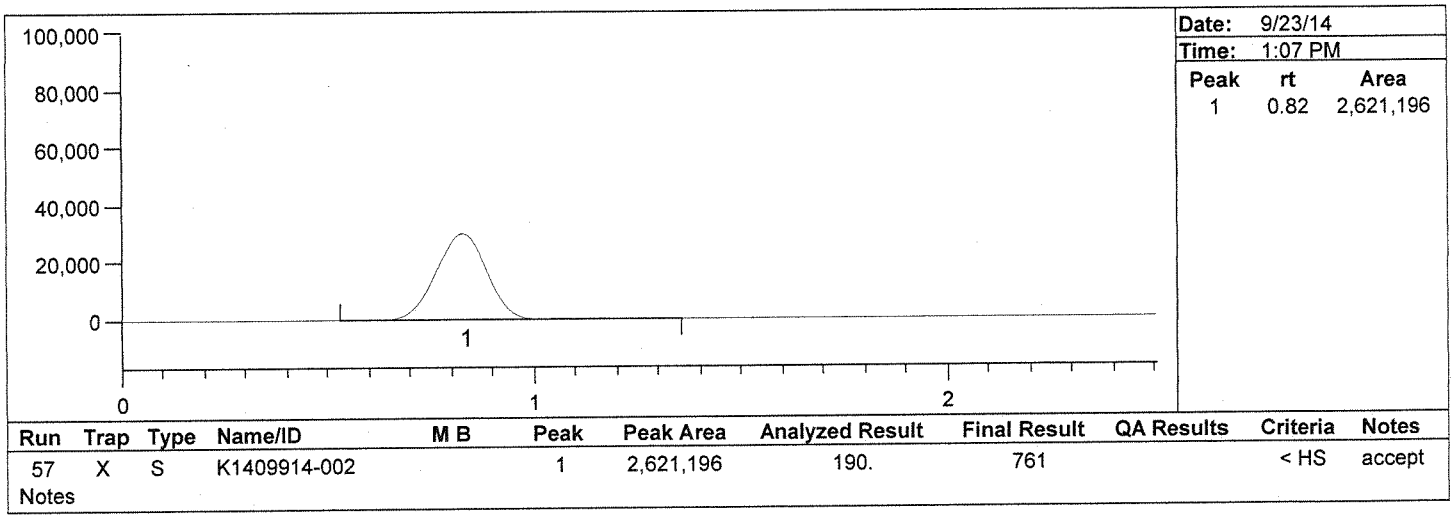


Date:	9/23/14
Time:	1:02 PM

Peak	rt	Area
1	0.83	81,891

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
56	Y	S	K1409914-001		1	81,891	2.50	0.100		< HS	accept

Notes



Date:	9/23/14
Time:	1:07 PM

Peak	rt	Area
1	0.82	2,621,196

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
57	X	S	K1409914-002		1	2,621,196	190.	761		< HS	accept

Notes

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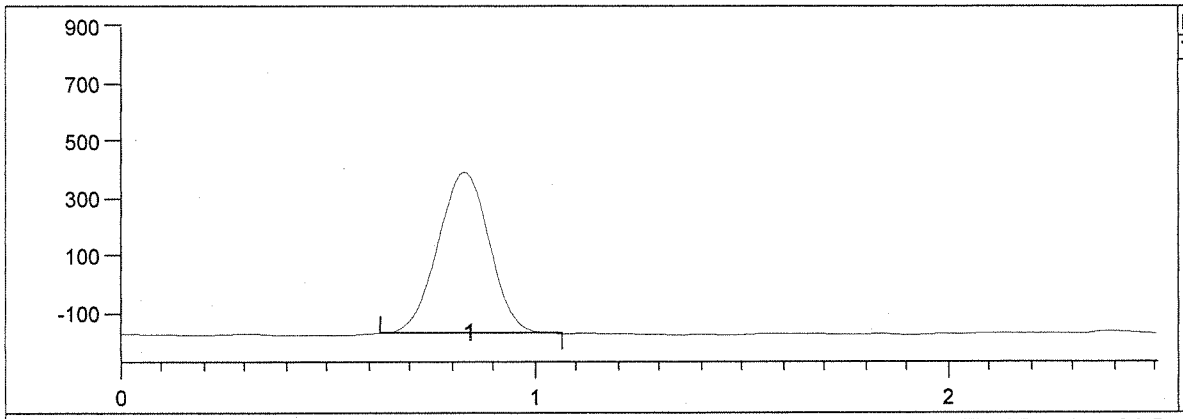
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

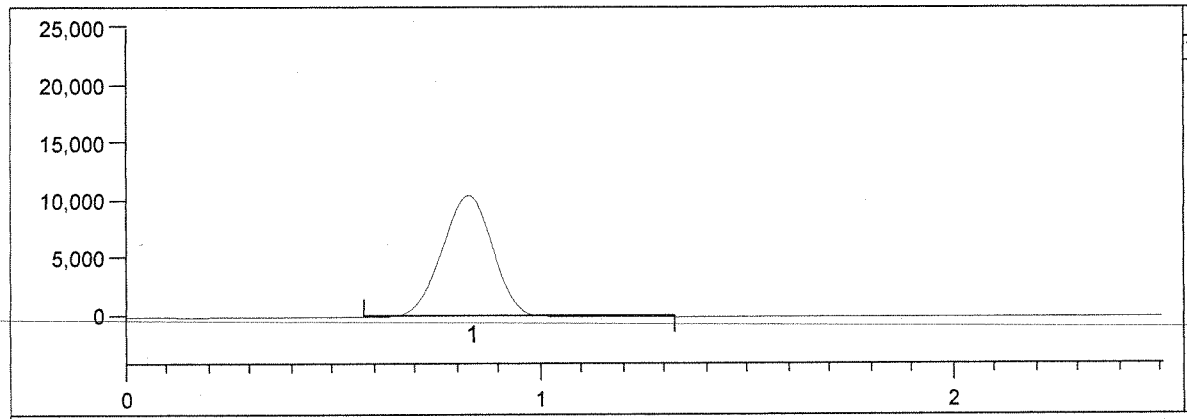


Date: 9/23/14
Time: 1:12 PM

Peak	rt	Area
1	0.82	49,017

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
58	Y	MBA	MB-2(218240)		1	49,017	0.0716	0.00286	0.00286	< 0.5	accept

Notes

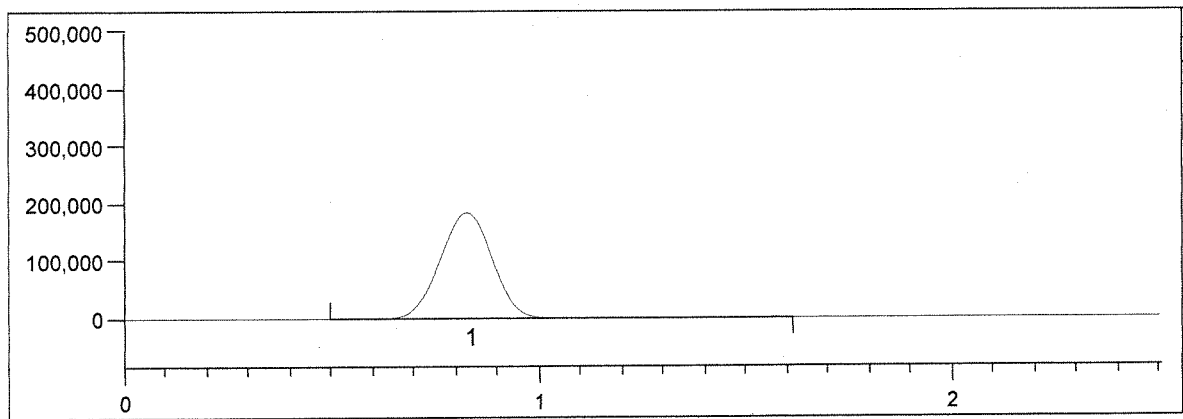


Date: 9/23/14
Time: 1:17 PM

Peak	rt	Area
1	0.82	918,637

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
59	X	S	K1409921-012		1	918,637	64.4	2.58		< HS	accept

Notes



Date: 9/23/14
Time: 1:22 PM

Peak	rt	Area
1	0.82	16,202,859

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
60	Y	MS	K1409921-012		1	16,202,859	1,190	47.8	90.4	71-125	accept

Notes

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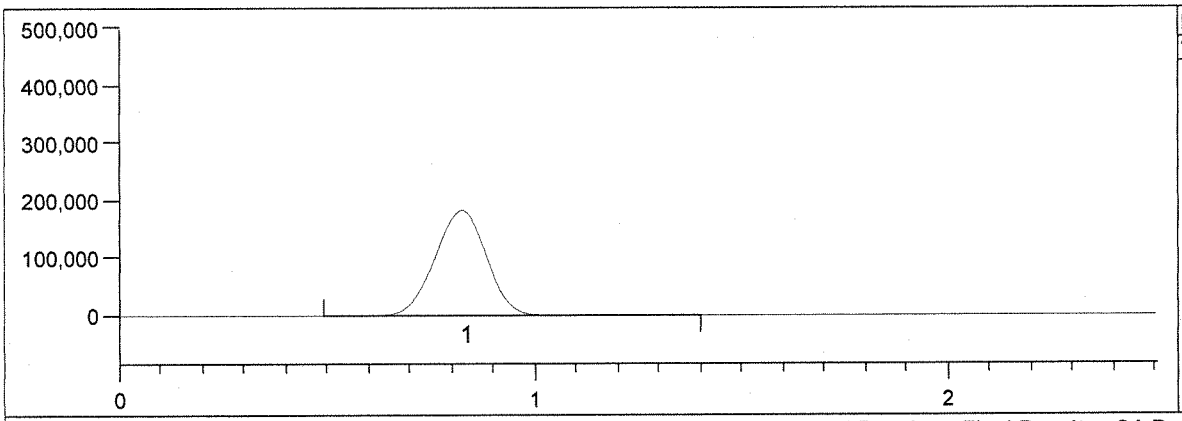
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

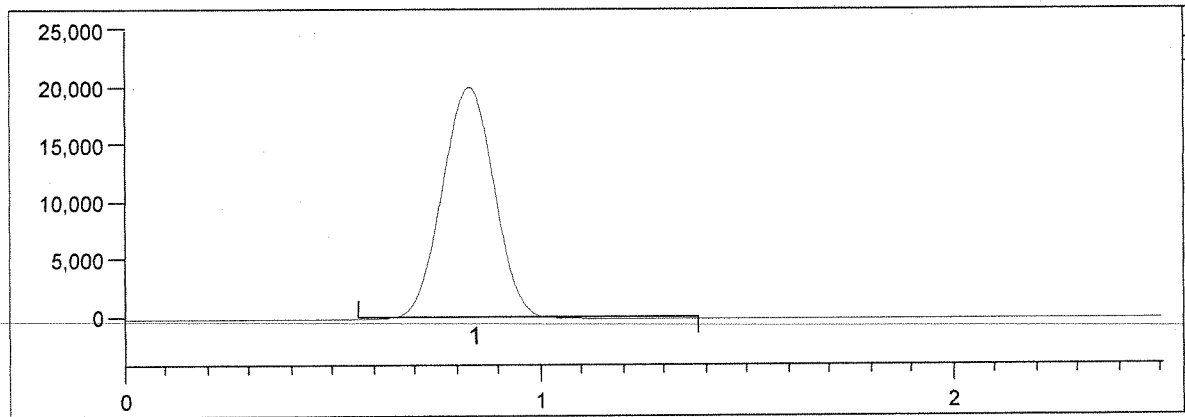


Date: 9/23/14
Time: 1:27 PM

Peak	rt	Area
1	0.82	15,893,409

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
61	X	MSD	K1409921-012		1	15,893,409	1,170	46.9	88.6	71-125	accept

Notes

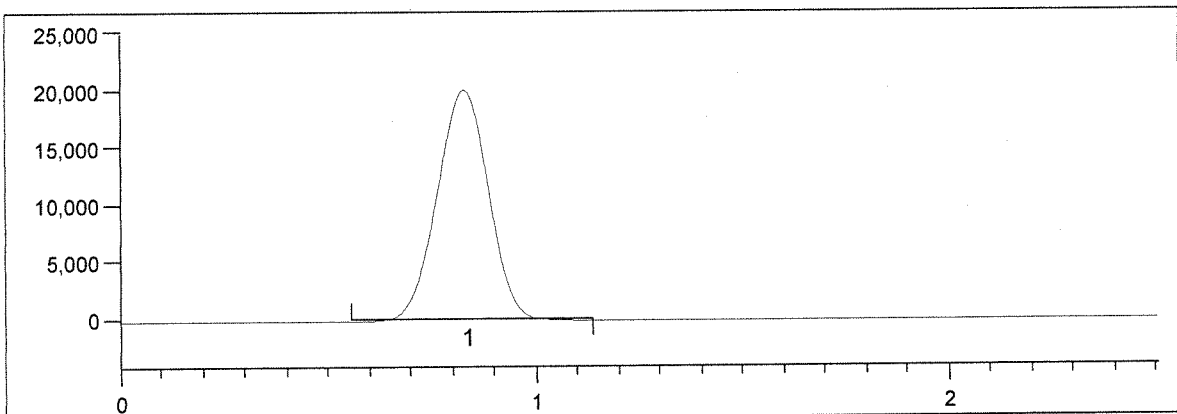


Date: 9/23/14
Time: 2:22 PM

Peak	rt	Area
1	0.82	1,767,914

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
72	Y	OPR	OPR-3		1	1,767,914	127	5.09	102	77-123	accept

Notes



Date: 9/23/14
Time: 2:27 PM

Peak	rt	Area
1	0.82	1,743,443

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
73	X	QCS	QCS-1(218679)		1	1,743,443	125	5.02	100.	77-123	accept

Notes

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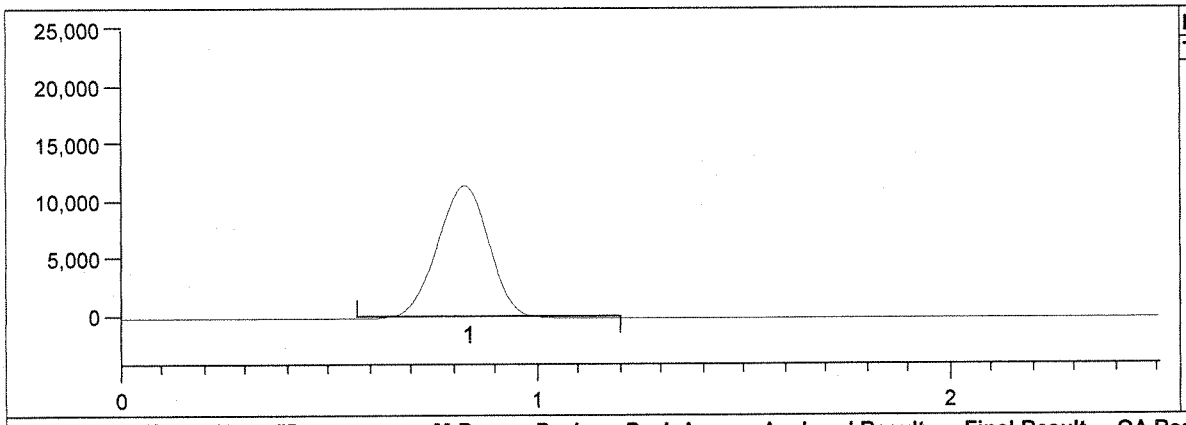
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

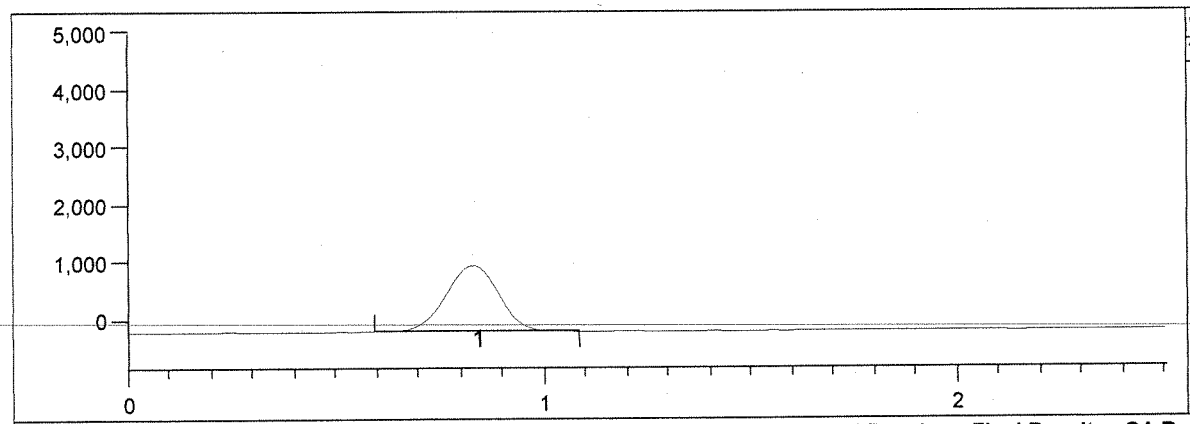


Date: 9/23/14
Time: 4:07 PM

Peak	rt	Area
1	0.82	1,011,670

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
93	X	S	K1409975-002		1	1,011,670	71.3	2.85		< HS	accept

Notes

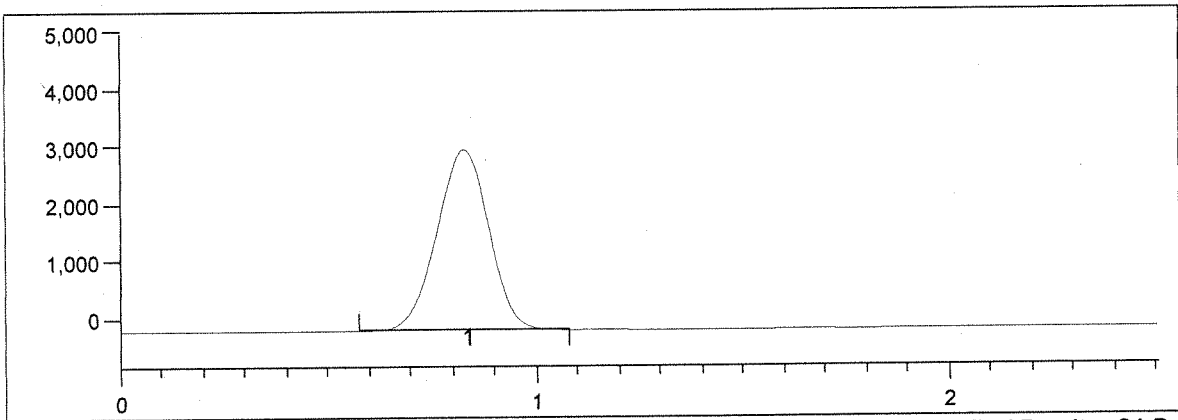


Date: 9/23/14
Time: 4:12 PM

Peak	rt	Area
1	0.82	102,826

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
94	Y	S	K1409975-003		1	102,826	4.05	0.162		< HS	accept

Notes



Date: 9/23/14
Time: 4:17 PM

Peak	rt	Area
1	0.82	274,823

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
95	X	S	K1409980-001		1	274,823	16.8	0.671		< HS	accept

Notes

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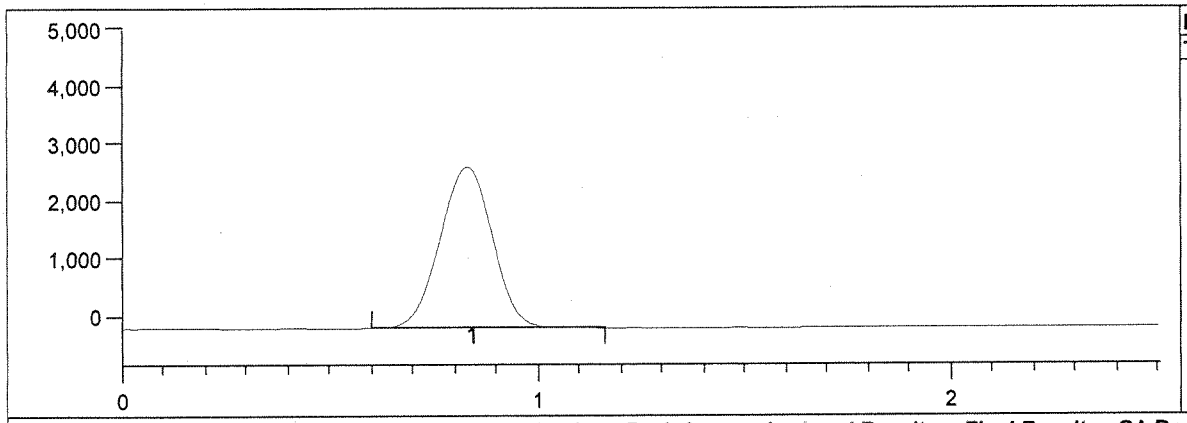
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

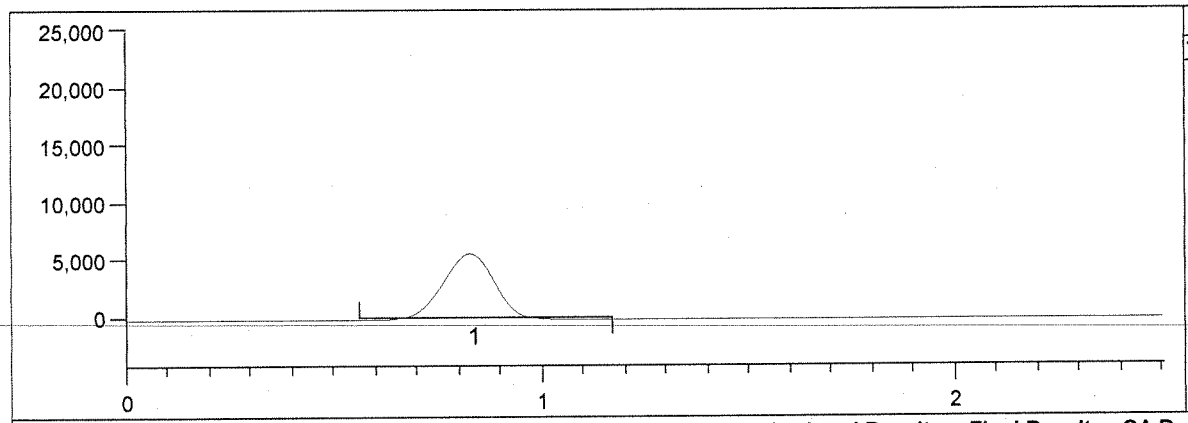


Date: 9/23/14
Time: 4:22 PM

Peak	rt	Area
1	0.82	248,309

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
96	Y	S	K1409980-002		1	248,309	14.8	0.593		< HS	accept

Notes

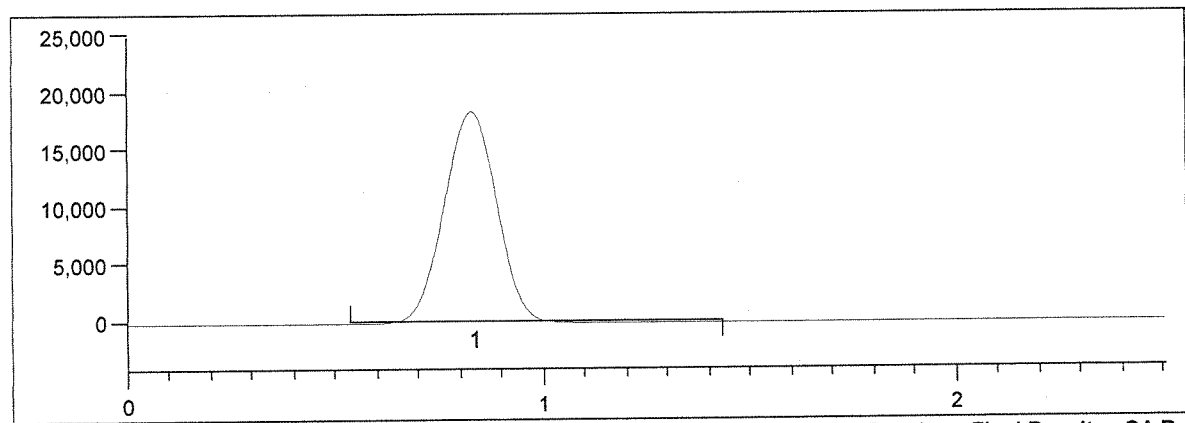


Date: 9/23/14
Time: 4:27 PM

Peak	rt	Area
1	0.82	508,617

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
97	X	S	K1409980-003		1	508,617	34.1	6.81		< HS	accept

Notes



Date: 9/23/14
Time: 4:32 PM

Peak	rt	Area
1	0.82	1,649,094

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
98	Y	S	K1409980-007		1	1,649,094	118	23.7		< HS	accept

Notes

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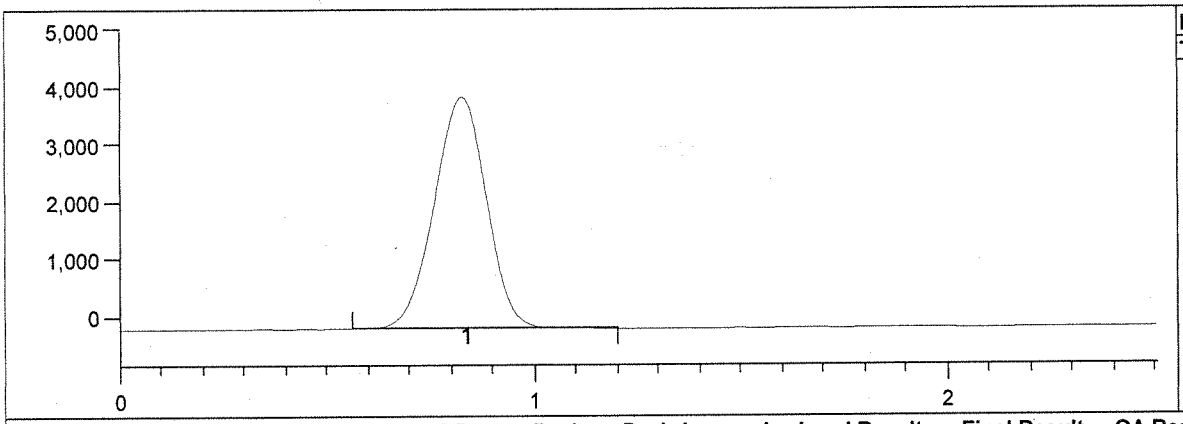
Peak Report

Batch Number:
Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon

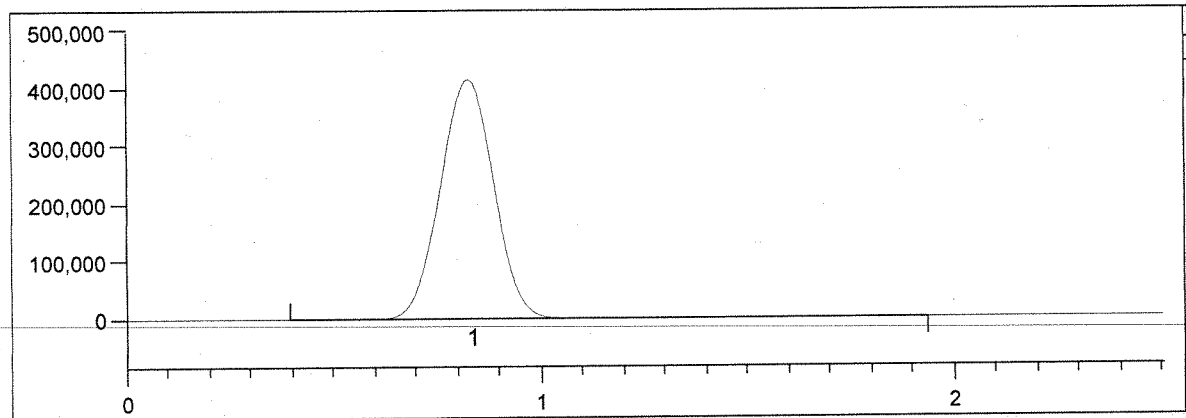


Date:	9/23/14
Time:	4:37 PM

Peak	rt	Area
1	0.82	355,367

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
99	X	S	K1409980-010		1	355,367	22.7	18.2		< HS	accept

Notes

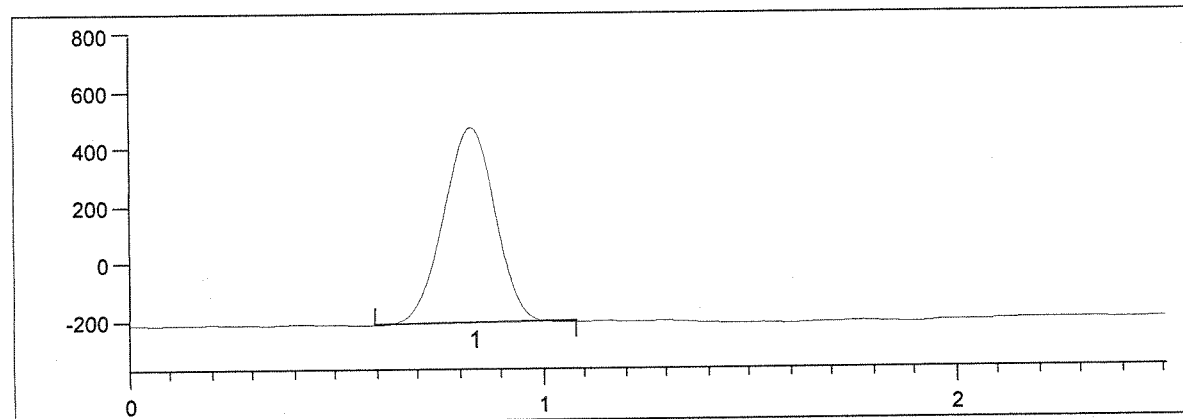


Date:	9/23/14
Time:	4:42 PM

Peak	rt	Area
1	0.82	37,454,718

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
100	Y	S	K1409972-002		1	37,454,718	2,770	553		< HS	accept

Notes



Date:	9/23/14
Time:	4:47 PM

Peak	rt	Area
1	0.82	60,200

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
101	X	MBA	MB-3(218679)		1	60,200	0.899	0.0360	0.0360	< 0.5	accept

Notes

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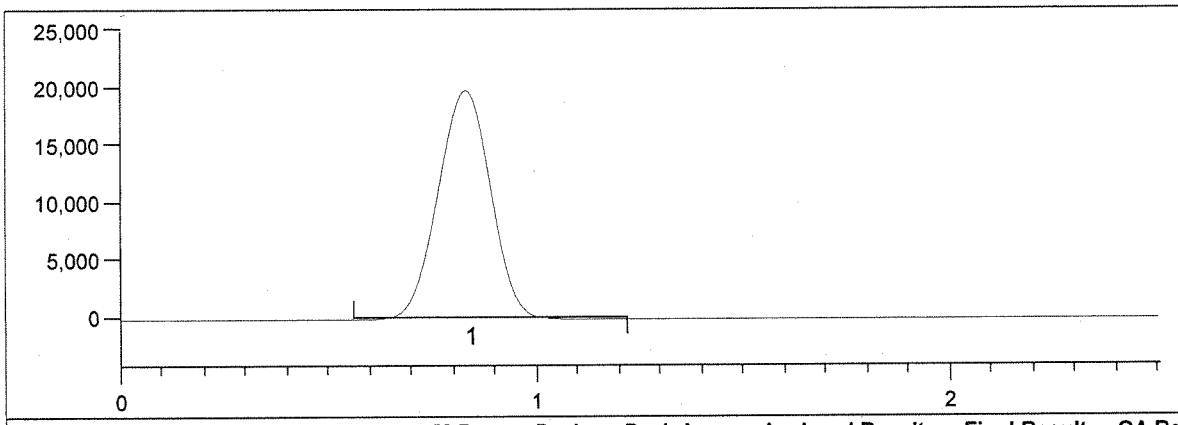
Peak Report

Batch Number:

Method Number: EPA 1631E

Project Number(s):
Instrument ID: K-AFS-04

Date Analyzed: 9/23/14
Analyst Name: Brian Sheldon



Date:	9/23/14
Time:	4:52 PM

Peak	rt	Area
1	0.82	1,768,345

Run	Trap	Type	Name/ID	M B	Peak	Peak Area	Analyzed Result	Final Result	QA Results	Criteria	Notes
102	Y	OPR	OPR-4		1	1,768,345	127	5.09	102	77-123	accept

Notes

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Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 218730
Team: Metals
Analyst: Tyler Reinhardt
Prep Workflow: MetDigSICP
Prep Method: EPA 3050B
Rush/NPDES: N/A
Status: Prepped
Current Step: Digestion
Prep Date: 09/23/2014 09:52
Due Date: 09/27/2014
Hold Date: 03/04/2015

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1411729-02	Method Blank		1.04 g	As Received	100 mL			10% HNO3, 10% HCl
KQ1411729-01	Lab Control Sample		1.00 g	As Received	100 mL	1 g	69665	10% HNO3, 10% HCl
K1409921-001	SO-091514-RB-TP37-2	.02	1.59 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-001: KQ1411729-03	Duplicate	.02	1.58 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-001: KQ1411729-04	Matrix Spike	.02	1.56 g	As Received	100 mL	1 mL 1 mL 1 mL 2 mL	73162 73834 74138 74821	10% HNO3, 10% HCl
K1409921-002	SO-091514-RB-TP37-5	.02	1.37 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-003	SO-091514-RB-TP37-7.5	.02	1.40 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-004	SE-091514-RB-SD11	.02	1.55 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-005	SE-091514-RB-SD10	.02	1.55 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-006	SE-091514-RB-SD09	.02	1.52 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-007	SE-091514-RB-SD08	.02	1.59 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-008	SE-091514-RB-SD07	.02	1.55 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-009	SE-091514-RB-SD06	.02	1.56 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-010	SE-091514-RB-SD05	.02	1.31 g	As Received	100 mL			10% HNO3, 10% HCl
K1409921-011	SE-091514-RB-SD12	.02	1.24 g	As Received	100 mL			10% HNO3, 10% HCl
K1409966-002	091214AD-02	.01	1.06 g	As Received	100 mL			10% HNO3, 10% HCl
K1410080-001	A1409222-01A/Sludge 2014	.01	3.01 g	As Received	100 mL			10% HNO3, 10% HCl
K1410083-001	GW-1-30	.01	1.11 g	As Received	100 mL			10% HNO3, 10% HCl
K1410083-002	GW-1-40	.01	1.12 g	As Received	100 mL			10% HNO3, 10% HCl
K1410083-003	GW-1-50	.01	1.12 g	As Received	100 mL			10% HNO3, 10% HCl
K1410083-004	GW-2-30	.01	1.10 g	As Received	100 mL			10% HNO3, 10% HCl
K1410083-005	GW-2-40	.01	1.10 g	As Received	100 mL			10% HNO3, 10% HCl

22 Total Samples consisting of 18 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET SOIL CRM	Spike	69665	4/17/2015
K-MET SS3	Spike	73162	10/1/2014
K-MET SS4	Spike	74138	2/24/2015
K-MET SS5	Spike	73834	12/1/2014
K-MET-SS1	Spike	74821	2/8/2015

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	64551
Digestion	Teflon Chips	69101
Digestion	K-MET HCL	74685

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	9/23/14	
Digestion	K-BlockDigester-07	Corrected Temperature	95	deg C
Digestion	K-BlockDigester-07	Correction Factor	0	deg C
Digestion	K-BlockDigester-07	Observed Temperature	95	deg C
Digestion	K-BlockDigester-07	Thermometer ID 1135503		NONE
Digestion	K-BlockDigester-07	Thermometer Location	34	NONE

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	23-SEP-14 09:52	23-SEP-14 11:30	Tyler Reinhardt		N	

Comments

HNO3 Lot# 0000084115, H2O2 Lot# 54044415. R1: 5mL DI/5mL HNO3 = 15 minutes, R2: 5mL HNO3 = 32 minutes, R3: 10mL HCl = 15 minutes.

Review

Reviewed by: _____ Date: 9/23/14

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	100	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
*** Add after HNO3	Mn	100*	1000ml	50	
and before cas cal	Ni	100*	1000ml	50	
-14	Sb***	50	1000ml	50	
when making the	V	100*	1000ml	50	
solution	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
	Hg	6	500	12	
K-MET SS4	HNO3	25	500ml	-	
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 091914B HG2

Starlims # 412209

Cal. STD/CCV Source: HG2-56-B

Service Request Numbers:

K1409523, K1409569, K1409582, K1409792, K1409921

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: AEM (Initials)

Primary Reviewed By: AEM Date: 9/19/14

Secondary Reviewed By: JDS Date: 9/19/14

CVAA Hg ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471B) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	Cal. Blk.	~	50	~	0.00		0.00
2	Std 0.2	*0.1	50	~	0.20		0.20
3	Std 0.5	*0.25	50	~	0.50		0.50
4	Std 1.0	*0.5	50	~	1.00		1.00
5	Std 5.0	*2.5	50	~	5.00		5.00
6	Std 10.0	*5.0	50	~	10.00		10.00
7	ICV1	**0.25	50	~	5.040		101%
8	ICB1	~	50	~	-0.003		-0.003
9	LLICV1	*0.1	50	~	0.211		106%
10	CCV1	*2.5	50	~	5.100		102%
11	CCB1	~	50	~	-0.002		-0.002
12	KQ1411520-03	0.549	50	~	-0.002		-0.002
13	KQ1411520-01	~	50	~	4.900		98%
14	KQ1411520-02	0.250	50	50	2.000	20.000	101%
15	K1409523-004	0.582	50	~	0.005	0.000	
16	K1409569-003	0.574	50	~	0.565	0.049	
17	K1409569-004	0.547	50	~	0.945	0.086	
18	K1409569-005	0.581	50	~	1.920	0.165	
19	K1409582-001	0.537	50	~	0.451	0.042	
20	K1409582-001D	0.541	50	~	0.190	0.018	
21	K1409582-001S	0.535	50	~	4.800	0.449	87%
22	CCV2	*2.5	50	~	5.100		102%
23	CCB2	~	50	~	0.000		0.000
24	~~K1409792-001~~	~~0.518~~	~~50~~	~	~~205.000~~	~~19.788~~	
25	~~K1409792-001-200~~	~~0.518~~	~~50~~	~~200~~	~~13.000~~	~~250.965~~	

AEm 9/19/14

Comments: Cal. Inter. Std*_(100ppb)__HG2-56-B__
2nd Source Inter Std**_(1ppm)_HG2-55-I__

Soil/Tissue Spike Level: K1409582-001S=0.467 mg/kg

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	1.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	19.9mg/kg	0.02 mg/kg	48-137%	80-120%	20%	+/- 20%
7471A Tissue Tort	0.292 mg/kg	0.02 mg/kg	74-129%	80-120%	20%	+/- 20%

Analyst:	Date: 9/19/14	Page Number: 1

CVAA Hg ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471B) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	~~K1409792-001D 200~~	~~0.515~~	~~50~~	~~200~~	~~11.700~~	~~227.184~~	
27	~~K1409792-001S 200~~	~~0.516~~	~~50~~	~~200~~	~~16.100~~	~~312.016~~	~~4X~~
28	~~K1409792-002 200~~	~~0.561~~	~~50~~	~~200~~	~~18.900~~	~~336.898~~	
29	K1409792-003 200	0.506	50	200	4.140	81.818	
30	K1409792-004 200	0.546	50	200	3.750	68.681	
31	K1409921-001	0.569	50	~	0.233	0.020	
32	K1409921-002	0.558	50	~	0.238	0.021	
33	K1409921-003	0.570	50	~	0.082	0.007	
34	CCV3	*2.5	50	~	5.260		105%
35	CCB3	~	50	~	-0.021		-0.021
36	K1409921-004	0.548	50	~	0.216	0.020	
37	K1409921-005	0.543	50	~	0.677	0.062	
38	K1409921-006	0.564	50	~	0.328	0.029	
39	K1409921-007	0.560	50	~	2.400	0.214	
40	K1409921-008	0.554	50	~	5.970	0.539	
41	~~K1409921-009~~	~~0.653~~	~~50~~	~	~~25.100~~	~~1.922~~	
42	K1409921-010	0.652	50	~	1.030	0.079	
43	K1409921-011	0.730	50	~	0.279	0.019	
44	K1409792-001 500	0.518	50	500	5.280	254.826	
45	K1409792-001D 500	0.515	50	500	5.020	243.689	
46	CCV4	*2.5	50	~	5.120		102%
47	CCB4	~	50	~	-0.005		-0.005
48	K1409792-001S 500	0.516	50	500	5.730	277.616	4X
49	K1409792-002 500	0.561	50	500	7.180	319.964	
50	K1409921-009 5	0.653	50	5	5.500	2.106	

AE 9/19

AEM 9/19/14

Comments:

Soil/Tissue Spike Level: K1409792-001S=0.484 mg/kg

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	1.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	19.9mg/kg	0.02 mg/kg	48-137%	80-120%	20%	+/- 20%
7471A Tissue Tort	0.292 mg/kg	0.02 mg/kg	74-129%	80-120%	20%	+/- 20%

Analyst:	Date: 9/19/14	Page Number: 2

[091914B HG2 SOILS] HG2.XLS

CVAA Hg ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471B 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1409921-008L	0.554	50	5	1.190	0.537	0%
52	CCV5	*2.5	50	~	5.060		101%
53	CCB5	~	50	~	-0.007		-0.007
54							
55							
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57							
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73							
74							
75							

Comments:

Soil/Tissue Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	1.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	19.9mg/kg	0.02 mg/kg	48-137%	80-120%	20%	+/- 20%
7471A Tissue Tort	0.292 mg/kg	0.02 mg/kg	74-129%	80-120%	20%	+/- 20%

Analyst:	Date: 9/19/14	Page Number: 3

[091914B HG2 SOILS] HG3.XLS

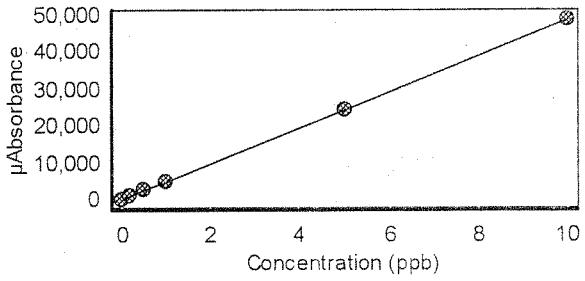
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\091914B HG2.wsz
Date Started: 9/19/2014 8:56:57 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	09/19/14 09:21:14 am	0.000	48	61.91	
Replicates	81.0	51.9	9.1	48.9					
Standard #1				STD	09/19/14 09:22:50 am	0.200	1058	1.69	
Replicates	1036.3	1075.3	1070.3	1051.6					
Standard #2				STD	09/19/14 09:24:27 am	0.500	2549	0.82	
Replicates	2567.7	2547.7	2520.6	2560.9					
Standard #3				STD	09/19/14 09:26:05 am	1.000	5062	0.71	
Replicates	5020.5	5048.5	5104.5	5075.1					
Standard #4				STD	09/19/14 09:27:43 am	5.000	24419	0.26	
Replicates	24338.2	24490.0	24440.4	24406.9					
Standard #5				STD	09/19/14 09:29:22 am	10.000	48737	0.32	
Replicates	48508.5	48773.4	48808.0	48857.3					

Calibration

Equation: A = 47.714 + 4871.439C
R2: 0.99998
SEE: 94.7549
Flags:



ICV1				ICV	09/19/14 09:31:02 am	5.040	24604	0.39	
Replicates	24508.7	24553.1	24628.0	24725.4					
% Recovery	100.82								
ICB1				ICB	09/19/14 09:32:38 am	-0.003	36	36.73	
Replicates	30.7	19.3	47.5	44.6					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1				CRDL	09/19/14 09:34:14 am	0.211	1075	2.23	
Replicates	1107.6	1069.7	1072.8	1049.8					
% Recovery	105.43								
CCV1				CCV	09/19/14 09:35:52 am	5.100	24891	0.38	
Replicates	24782.5	24846.1	24986.1	24949.2					
% Recovery	102.00								
CCB1				CCB	09/19/14 09:37:29 am	-0.002	37	56.78	
Replicates	53.4	7.3	51.0	37.8					
KQ1411520-03				UNK	09/19/14 09:39:04 am	-0.002	38	47.52	
Replicates	56.1	35.6	14.0	45.7					
KQ1411520-01				UNK	09/19/14 09:40:41 am	4.900	23900	0.32	
Replicates	23855.6	23841.9	23890.2	24012.3					
KQ1411520-02				UNK	09/19/14 09:42:17 am	2.000	9803	0.90	
Replicates	9717.4	9759.2	9815.7	9920.3					
K1409523-004				UNK	09/19/14 09:43:54 am	0.005	71	29.15	
Replicates	50.0	66.8	68.1	99.7					
K1409569-003				UNK	09/19/14 09:45:31 am	0.565	2802	0.69	
Replicates	2801.7	2786.0	2792.5	2829.7					
K1409569-004				UNK	09/19/14 09:47:08 am	0.945	4651	1.42	
Replicates	4558.9	4648.4	4706.8	4688.4					
K1409569-005				UNK	09/19/14 09:48:46 am	1.920	9412	0.21	
Replicates	9410.7	9384.4	9425.5	9428.5					
K1409582-001				UNK	09/19/14 09:50:23 am	0.451	2246	1.57	
Replicates	2194.9	2249.7	2273.3	2264.9					
K1409582-001D				UNK	09/19/14 09:52:02 am	0.190	972	2.50	
Replicates	941.1	970.7	974.9	1000.3					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1409582-001S				UNK	09/19/14 09:53:40 am	4.800	23415	0.34	
Replicates	23321.2	23377.3	23469.1	23493.3					
CCV2				CCV	09/19/14 09:55:18 am	5.100	24897	0.43	
Replicates	25001.3	24970.2	24843.6	24773.7					
% Recovery	102.02								
CCB2				CCB	09/19/14 09:56:54 am	0.000	46	35.92	
Replicates	63.4	56.9	34.8	29.4					
K1409792-001				UNK	09/19/14 09:58:33 am	205.000	997878	0.04	O
Replicates	997339.9	997808.1	998028.3	998337.4					
K1409792-001 200				UNK	09/19/14 10:11:40 am	13.000	63580	0.60	O
Replicates	63150.7	63484.5	63682.9	64052.5					
K1409792-001D 200				UNK	09/19/14 10:14:59 am	11.700	57091	0.32	O
Replicates	56833.7	57090.0	57222.9	57218.4					
K1409792-001S 200				UNK	09/19/14 10:16:34 am	16.100	78334	0.39	O
Replicates	77881.1	78448.5	78492.8	78514.0					
K1409792-002 200				UNK	09/19/14 10:19:45 am	18.900	92162	0.57	O
Replicates	91933.4	91863.4	91900.0	92951.9					
K1409792-003 200				UNK	09/19/14 10:22:54 am	4.140	20218	0.44	
Replicates	20092.3	20219.5	20288.2	20270.5					
K1409792-004 200				UNK	09/19/14 10:24:30 am	3.750	18300	0.47	
Replicates	18176.6	18303.3	18367.9	18350.8					
K1409921-001				UNK	09/19/14 10:26:07 am	0.233	1182	4.36	
Replicates	1155.4	1122.3	1217.6	1231.3					
K1409921-002				UNK	09/19/14 10:27:44 am	0.238	1207	2.20	
Replicates	1194.6	1189.1	1246.1	1196.5					

Diluted.
AEM
9/19/14

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1409921-003				UNK	09/19/14 10:29:21 am	0.082	446	2.61	
Replicates	435.6	460.2	437.2	450.2					
CCV3				CCV	09/19/14 10:30:59 am	5.260	25653	0.56	
Replicates	25514.5	25570.5	25688.7	25836.4					
% Recovery	105.12								
CCB3				CCB	09/19/14 10:32:35 am	-0.021	-56	22.63	
Replicates	-65.3	-40.3	-51.2	-67.3					
K1409921-004				UNK	09/19/14 10:34:12 am	0.216	1100	5.10	
Replicates	1045.5	1060.3	1161.1	1134.1					
K1409921-005				UNK	09/19/14 10:35:50 am	0.677	3347	1.26	
Replicates	3307.3	3369.0	3316.4	3395.5					
K1409921-006				UNK	09/19/14 10:37:28 am	0.328	1647	1.26	
Replicates	1618.5	1649.6	1668.5	1651.3					
K1409921-007				UNK	09/19/14 10:39:06 am	2.400	11749	0.43	
Replicates	11696.1	11716.0	11800.5	11783.8					
K1409921-008				UNK	09/19/14 10:40:45 am	5.970	29132	0.55	
Replicates	28964.6	29077.7	29135.8	29348.4					
~~K1409921-009~~				~~UNK~~	~~09/19/14 10:42:21 am~~	~~25.100~~	~~122483~~	~~0.43~~	~~O~~
Replicates	121807.8	122375.2	122693.2	123056.7					
K1409921-010				UNK	09/19/14 10:45:26 am	1.030	5065	0.58	
Replicates	5034.2	5045.0	5089.5	5090.4					
K1409921-011				UNK	09/19/14 10:47:02 am	0.279	1407	2.38	
Replicates	1386.7	1379.1	1453.4	1408.7					
K1409792-001 500				UNK	09/19/14 10:53:48 am	5.280	25784	1.11	
Replicates	25406.6	25733.4	25939.0	26057.5					

AEM
9/19/14

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1409792-001D 500				UNK	09/19/14 10:55:25 am	5.020	24508	0.49	
Replicates	24393.8	24432.8	24545.8	24661.3					
CCV4				CCV	09/19/14 10:57:03 am	5.120	24991	0.38	
Replicates	24852.3	25017.3	25036.3	25058.6					
% Recovery	102.41								
CCB4				CCB	09/19/14 10:58:39 am	-0.005	26	81.05	
Replicates	48.4	37.9	3.5	13.4					
K1409792-001S 500				UNK	09/19/14 11:00:16 am	5.730	27965	0.66	
Replicates	27704.7	27966.1	28127.5	28060.5					
K1409792-002 500				UNK	09/19/14 11:01:53 am	7.180	35014	0.72	
Replicates	34736.0	34902.6	35091.7	35324.0					
K1409921-009 5				UNK	09/19/14 11:03:30 am	5.500	26820	0.81	
Replicates	26570.9	26742.8	26878.2	27087.0					
K1409921-008L				UNK	09/19/14 11:05:08 am	1.190	5843	0.40	
Replicates	5822.5	5824.1	5854.9	5869.5					
CCV5				CCV	09/19/14 11:06:46 am	5.060	24686	0.46	
Replicates	24531.7	24676.8	24741.6	24794.0					
% Recovery	101.15								
CCB5				CCB	09/19/14 11:08:22 am	-0.007	13	181.96	
Replicates	46.3	9.7	-10.9	7.6					

Preparation Information Benchsheet

Prep Run: 218438 **Prep Workflow:** HgDigS **Status:** Prepped **Prep Date:** 09/18/2014 16:15
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 09/18/2014
Analyst: AMCKORNEY **Rush/NPDES:** RUSH **Hold Date:** 10/02/2014

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1411520-03	Method Blank		0.549 g	AS RECEIVED	50 mL			
KQ1411520-01	Lab Control Sample		g	AS RECEIVED	50 mL	0.25 mL	74245	
KQ1411520-02	Lab Control Sample		0.250 g	AS RECEIVED	50 mL	0.25 g	69665	
K1409523-004	Composite	.06	0.582 g	COMPOSITE	50 mL			
K1409569-003	CCP26-SC-10-80-140904	.01	0.574 g	AS RECEIVED	50 mL			
K1409569-004	CCP26-SC-80-157-140904	.01	0.547 g	AS RECEIVED	50 mL			
K1409569-005	CCP26-SC-157-180-140904	.01	0.581 g	AS RECEIVED	50 mL			
K1409582-001	OXN14J04505 (23M)	.06	0.537 g	COMPOSITE	50 mL			
K1409582-001: KQ1411520-04	Duplicate	.06	0.541 g	COMPOSITE	50 mL			
K1409582-001: KQ1411520-05	Matrix Spike	.06	0.535 g	COMPOSITE	50 mL	0.25 mL	74245	
K1409792-001	14080208	.01	0.518 g	AS RECEIVED	50 mL			
K1409792-001: KQ1411520-06	Duplicate	.01	0.515 g	AS RECEIVED	50 mL			
K1409792-001: KQ1411520-07	Matrix Spike	.01	0.516 g	AS RECEIVED	50 mL	0.25 mL	74245	
K1409792-002	14080209	.01	0.561 g	AS RECEIVED	50 mL			
K1409792-003	14080210	.01	0.506 g	AS RECEIVED	50 mL			
K1409792-004	14080211	.01	0.546 g	AS RECEIVED	50 mL			
K1409921-001	SO-091514-RB-TP37-2	.03	0.569 g	AS RECEIVED	50 mL			
K1409921-002	SO-091514-RB-TP37-5	.03	0.558 g	AS RECEIVED	50 mL			
K1409921-003	SO-091514-RB-TP37-7.5	.02	0.570 g	AS RECEIVED	50 mL			
K1409921-004	SE-091514-RB-SD11	.03	0.548 g	AS RECEIVED	50 mL			
K1409921-005	SE-091514-RB-SD10	.02	0.543 g	AS RECEIVED	50 mL			
K1409921-006	SE-091514-RB-SD09	.03	0.641 g	AS RECEIVED	50 mL			
K1409921-007	SE-091514-RB-SD08	.03	0.560 g	AS RECEIVED	50 mL			
K1409921-008	SE-091514-RB-SD07	.02	0.554 g	AS RECEIVED	50 mL			

K1409921-009	SE-091514-RB-SD06	.03	0.653 g	AS RECEIVED	50 mL			
K1409921-010	SE-091514-RB-SD05	.03	0.652 g	AS RECEIVED	50 mL			
K1409921-011	SE-091514-RB-SD12	.02	0.730 g	AS RECEIVED	50 mL			

27 Total Samples consisting of 20 Client Samples, 4 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	74245	10/1/2014	K-MET SOIL CRM	Spike	69665	4/17/2015

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	62753	Digestion	K-MET HCl Hg	71523
Digestion	K-MET 100ml Centrifuge Tube	64551	Digestion	K-MET NH2OH-HCl Hg	71524
Digestion	Teflon Chips	69101	Digestion	K-MET KMnO4 Hg	71525
Digestion	K-MET HNO3 Hg	71521	Digestion	K-MET SnCl Hg	71526

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-Balance-37	Date Calibrated	09/18/14		Digestion	K-BlockDigester-03	Observed Temperature	95	deg C
Digestion	K-BlockDigester-03	Correction Factor	0	deg C	Digestion	K-BlockDigester-03	Thermometer ID 1134911		NONE
Digestion	K-BlockDigester-03	Corrected Temperature	95	deg C	Digestion	K-BlockDigester-03	Thermometer Location	25	NONE

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	18-SEP-14 16:15	18-SEP-14 16:45	AMCKORNEY		N	

Comments

CAL. STD/CCV SOURCE: HG2-56-B

Review

Reviewed by: JDS Date: 9/19/14

Preparation Information Benchsheet

Prep Run: 218438 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 09/18/2014 09:55
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 09/12/2014
Analyst: AMCKORNEY **Rush/NPDES:** RUSH **Hold Date:** 10/02/2014

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1411520-03	Method Blank		0.5 g						0.549
KQ1411520-01	Lab Control Sample		0.5 g				0.25 mL	74245	NA
KQ1411520-02	Lab Control Sample		0.5 g				0.25 g	69665	0.250
K1409523-004	Composite	.06	0.5 g						0.582
K1409569-003	CCP26-SC-10-80-140904	.01	0.5 g						0.574
K1409569-004	CCP26-SC-80-157-140904	.01	0.5 g						0.547
K1409569-005	CCP26-SC-157-180-140904	.01	0.5 g						0.581
K1409582-001	OXN14J04505 (23M)	.06	0.5 g						0.537
K1409582-001: KQ1411520-04	Duplicate	.06	0.5 g						0.541
K1409582-001: KQ1411520-05	Matrix Spike	.06	0.5 g				0.25 mL	74245	0.575
K1409792-001	14080208	.01	0.5 g						0.518
K1409792-001: KQ1411520-06	Duplicate	.01	0.5 g						0.515
K1409792-001: KQ1411520-07	Matrix Spike	.01	0.5 g				0.25 mL	74245	0.516
K1409792-002	14080209	.01	0.5 g						0.561
K1409792-003	14080210	.01	0.5 g						0.506
K1409792-004	14080211	.01	0.5 g						0.546
K1409921-001	SO-091514-RB-TP37-2'	.03	0.5 g						0.569
K1409921-002	SO-091514-RB-TP37-5	.03	0.5 g						0.558
K1409921-003	SO-091514-RB-TP37-7.5	.02	0.5 g						0.570
K1409921-004	SE-091514-RB-SD11	.03	0.5 g						0.548
K1409921-005	SE-091514-RB-SD10	.02	0.5 g						0.543
K1409921-006	SE-091514-RB-SD09	.03	0.5 g						0.641
K1409921-007	SE-091514-RB-SD08	.03	0.5 g						0.560
K1409921-008	SE-091514-RB-SD07	.02	0.5 g						0.554
K1409921-009	SE-091514-RB-SD06	.03	0.5 g						0.653

16:15 9/18/14

HG2-56-B

K1409921-010	SE-091514-RB-SD05	.03	0.5 g						0.652
K1409921-011	SE-091514-RB-SD12	.02	0.5 g						0.730

27 Total Samples consisting of 20 Client Samples, 4 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	74245	10/1/2014	K-MET SOIL CRM	Spike	69665	4/17/2015

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	62753	Digestion	K-MET HCl Hg	71523
Digestion	K-MET 100ml Centrifuge Tube	64551	Digestion	K-MET NH2OH-HCl Hg	71524
Digestion	Teflon Chips	69101	Digestion	K-MET KMnO4 Hg	71525
Digestion	K-MET HNO3 Hg	71521	Digestion	K-MET SnCl Hg	71526

Preparation Hardware / Equipment

Step	Name	Property	Value	Step	Name	Property	Value
Digestion	K-Balance-37	Date Calibrated		Digestion	K-BlockDigester-03	Observed Temperature	deg C
Digestion	K-BlockDigester-03	Correction Factor	deg C	Digestion	K-BlockDigester-03	Thermometer ID 1134911	NONE
Digestion	K-BlockDigester-03	Corrected Temperature	deg C	Digestion	K-BlockDigester-03	Thermometer Location	NONE

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Service Request # K1409921 *1-11
Instrument ID# K-ICP-AES-03

ICP-OES 6010 Data Review Form

		Yes	No
1.	Standardization completed	X	
2.	ICV within 10 % of true value	X	
3.	ICB below MRL	X	
4.	CRI/LLICV standard analyzed.	X	
5.	ICS standards within 20% of true value	X	
6.	All preceding CCVs within 10 % of true value	X	
7.	Following CCV within 10 % of true value	X	
8.	Bracketing CCBs below MRL	X	
9.	Method Blank below MRL		X①
10.	MS (75-125), Dup (20) and LCS (80-120) within control limits		X②
11.	All analytes within instrument linear range	X	
12.	Adequate rinse out time allowed between samples to eliminate memory effect	X	
13.	Run terminated early		X

Comments:
StarLIMS Run 412614 Saved under 092314AICP03
6010C: Non DOD work: OK
DOD work: MRL=2X for As.
① MB: Cs=0.023, samples>20X
② IS: Sb=65%, Cs=50%, post spike okay Non-homogeneous samples

Primary Review by [signature] Date 9/23/14

Secondary Review by [signature] Date 9/24/14

Sample Name: BLK Acquired: 9/23/2014 8:40:48 Type: Cal
Method: 2014B-ICP03(v39) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0002	-48.95	2.033	2.297	.0105	-3.8921	-12.75
Stddev	.0001	3.51	.550	.231	.0012	.9869	4.41
%RSD	24.24	7.180	27.05	10.06	11.32	25.356	34.57
#1	.0003	-46.47	2.422	2.460	.0114	-3.1943	-9.633
#2	.0002	-51.44	1.644	2.133	.0097	-4.5899	-15.87

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0005	-.0003	.0027	.1300	-.0001	.0003	-.0001
Stddev	.0004	.0006	.0010	.0005	.0001	.0002	.0001
%RSD	73.21	214.2	36.99	.4202	122.4	58.27	119.8
#1	-.0002	.0001	.0034	.1304	-.0001	.0005	.0000
#2	-.0007	-.0007	.0020	.1296	.0000	.0002	-.0002

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-142.9	-.0012	.0004	39.12	-.0005	.0016	-11.00
Stddev	10.9	.0001	.0002	18.81	.0009	.0004	.85
%RSD	7.652	4.920	36.23	48.08	185.3	22.74	7.714
#1	-135.2	-.0012	.0003	25.82	.0002	.0019	-11.60
#2	-150.6	-.0013	.0006	52.42	-.0012	.0014	-10.40

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0001	-.0001	.0003	.0010	-.0002	7.180	-.4663
Stddev	.0000	.0000	.0000	.0002	.0002	13.68	.2296
%RSD	57.13	14.70	13.37	22.08	97.82	190.6	49.23
#1	-.0001	-.0001	.0003	.0008	-.0003	16.86	-.6287
#2	.0000	-.0001	.0003	.0011	-.0001	-2.495	-.3040

Sample Name: BLK Acquired: 9/23/2014 8:40:48 Type: Cal
Method: 2014B-ICP03(v39) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.492	-21.13	-50.22	-.00426	.0001	.0002	.0014
Stddev	.678	2.86	23.63	.00083	.0003	.0002	.0000
%RSD	19.41	13.55	47.05	19.470	346.4	69.27	.6885
#1	3.013	-23.16	-33.51	-.00367	-.0001	.0001	.0014
#2	3.971	-19.11	-66.92	-.00485	.0003	.0003	.0014

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0002	.0001	3.160	.0018	.4942
Stddev	.0000	.0001	.340	.0005	.1112
%RSD	12.46	59.60	10.77	30.05	22.50
#1	.0002	.0001	3.401	.0022	.4156
#2	.0002	.0001	2.919	.0014	.5728

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2917.5	76141.	4822.4
Stddev	2.8	171.	24.0
%RSD	.09609	.22419	.49726
#1	2915.5	76020.	4805.4
#2	2919.5	76262.	4839.3

AW
10/9/14

Sample Name: STD A Acquired: 9/23/2014 8:43:16 Type: Cal
Method: 2014B-ICP03(v39) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-11-C

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.3531	262.5	24317.	2097.	2.786	2.254	25.87	.0901
Stddev	.0002	.4	44.	2.	.006	.001	.85	.0001
%RSD	.0513	.1499	.18064	.0908	.2068	.0327	3.278	.1176
#1	.3530	262.2	24348.	2095.	2.790	2.255	25.27	.0902
#2	.3533	262.8	24286.	2098.	2.782	2.254	26.47	.0900

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.8636	.4825	8552.	.1747	4.226	.4927	.6409	.9014
Stddev	.0020	.0006	10.	.0008	.135	.0027	.0025	.0007
%RSD	.2337	.1232	.1146	.4471	3.202	.5572	.3939	.0740
#1	.8650	.4821	8559.	.1753	4.130	.4946	.6427	.9018
#2	.8621	.4829	8545.	.1742	4.322	.4908	.6391	.9009

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179.8	9252.	.1186	.1411	.4000	.1131	.7286	6118.
Stddev	.6	21.	.0001	.0000	.0016	.0004	.0014	3.
%RSD	.3269	.2271	.0903	.0245	.3898	.3905	.1895	.0430
#1	179.4	9267.	.1186	.1411	.4011	.1134	.7296	6116.
#2	180.2	9237.	.1185	.1412	.3989	.1128	.7276	6119.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2934.7	76309.	4777.0
Stddev	4.9	202.	101.7
%RSD	.16646	.26444	2.1278
#1	2931.2	76166.	4848.9
#2	2938.1	76451.	4705.1

Sample Name: STD B Acquired: 9/23/2014 8:45:27 Type: Cal
Method: 2014B-ICP03(v39) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-D

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	68540.	680.9	154.2	2.975	4.709	12780.	.5592	48430.
Stddev	961.	2.3	.7	.007	.003	101.	.0031	372.
%RSD	1.402	.3316	.4512	.2216	.0708	.7934	.5515	.7672
#1	67860.	682.5	154.7	2.970	4.707	12710.	.5614	48160.
#2	69220.	679.3	153.7	2.979	4.711	12850.	.5570	48690.

Elem	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0690	2.211	8298.	7728.	26790.	24.439	.5180	419.2
Stddev	.0002	.009	74.	77.	233.	.086	.0011	.5
%RSD	.3116	.4017	.8897	.9951	.8689	.35330	.2099	.1267
#1	.0688	2.217	8246.	7674.	26630.	24.378	.5188	419.6
#2	.0691	2.205	8350.	7783.	26960.	24.500	.5173	418.8

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2896.8	74286.	4832.4
Stddev	2.4	103.	31.4
%RSD	.08217	.13801	.64875
#1	2895.2	74214.	4810.3
#2	2898.5	74359.	4854.6

Sample Name: ICVB Acquired: 9/23/2014 8:48:02 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9689	.9997	-.0014	.0035	.0010	-.00008	2.007	.0001
Stddev	.0008	.0077	.0000	.0025	.0000	.00011	.008	.0000
%RSD	.0819	.7746	1.288	71.82	3.291	132.48	.3819	21.32
#1	.9695	1.005	-.0014	.0053	.0009	-.00001	2.012	.0001
#2	.9683	.9942	-.0014	.0017	.0010	-.00016	2.002	.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	5.012	4.784	-.0009	.0002	.0003	.0001	10.08
Stddev	.0001	.015	.017	.0006	.0000	.0001	.0004	.05
%RSD	5295.	.3024	.3575	59.94	14.85	39.19	302.9	.5370
#1	.0001	5.001	4.796	-.0013	.0002	.0002	.0005	10.04
#2	-.0001	5.023	4.772	-.0005	.0003	.0004	-.0002	10.12
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	2.017	5.035	4.837	5.040	9.653	10.07	-.0002
Stddev	.0009	.004	.000	.007	.002	.077	.02	.0003
%RSD	49.11	.1778	.0015	.1403	.0306	.7971	.1527	162.0
#1	-.0012	2.015	5.035	4.832	5.042	9.599	10.06	-.0004
#2	-.0025	2.020	5.035	4.842	5.039	9.708	10.08	.0000
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 9/23/2014 8:48:02 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	5.056	-.0099	.0022	5.038	.0000	14.59	2.0312
Stddev	.0000	.004	.0163	.0017	.000	.0008	.00	.0034
%RSD	7.602	.0852	164.8	75.18	.0070	22200.	.0106	.16633
#1	.0002	5.053	-.0214	.0010	5.038	-.0005	14.59	2.0288
#2	.0002	5.059	.0016	.0034	5.038	.0005	14.59	2.0336
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0074	4.866	.0001	.0135	.0002	.0001	5.102	4.966
Stddev	.0014	.004	.0001	.0005	.0002	.0001	.010	.014
%RSD	19.03	.0752	35.07	3.621	71.01	99.99	.1908	.2903
#1	-.0064	4.869	.0001	.0139	.0001	.0000	5.109	4.976
#2	-.0084	4.864	.0002	.0132	.0004	.0001	5.095	4.956
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2880.2	74535.	4819.0
Stddev	.8	183.	11.3
%RSD	.02886	.24517	.23381
#1	2879.6	74664.	4827.0
#2	2880.8	74406.	4811.0

Sample Name: ICV Acquired: 9/23/2014 8:50:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.244	4.977	2.365	2.466	4.995	.12178	.0043	1.202
Stddev	.003	.035	.007	.011	.015	.00017	.0012	.003
%RSD	.0658	.7138	.2822	.4427	.3080	.13586	27.96	.2545
#1	4.242	5.002	2.361	2.458	5.006	.12167	.0034	1.199
#2	4.246	4.952	2.370	2.473	4.984	.12190	.0051	1.204
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.203	12.31	11.58	.4887	1.203	.5976	.6095	2.442
Stddev	.004	.02	.06	.0010	.001	.0002	.0025	.008
%RSD	.3378	.1393	.4762	.2077	.0729	.0357	.4140	.3403
#1	1.200	12.32	11.54	.4894	1.202	.5975	.6113	2.436
#2	1.206	12.30	11.62	.4880	1.203	.5978	.6077	2.448
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.358	-.0020	12.26	11.37	12.33	1.216	1.229	1.968
Stddev	* .005	.0005	.09	.09	.14	.002	.007	.002
%RSD	.2153	27.17	.7082	.8230	1.097	.1909	.5367	.1086
#1	2.355	-.0016	12.20	11.30	12.23	1.217	1.225	1.966
#2	2.362	-.0024	12.32	11.43	12.43	1.214	1.234	1.969
Check ?	Chk Fail	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value	2.500							
Range	-5.440%							

*NR for 200.7
ok for 6010
GW
10/9/14

Sample Name: ICV Acquired: 9/23/2014 8:50:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.190	.0020	12.49	F 2.328	.0136	.5922	12.55	.00058
Stddev	.005	.0006	.04	.001	.0082	.0005	.14	.00005
%RSD	.3950	29.31	.3171	.0249	60.19	.0889	1.076	9.1270
#1	1.187	.0016	12.46	2.328	.0078	.5926	12.46	.00054
#2	1.194	.0025	12.51	2.328	.0193	.5919	12.65	.00061
Check ?	Chk Pass	None	Chk Pass	Chk Fail	None	Chk Pass	Chk Pass	None
Value				2.500				
Range				-5.440%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.389	.0007	1.994	1.229	1.208	1.192	.0142	.0064
Stddev	.004	.0004	.005	.003	.003	.002	.0000	.0027
%RSD	.1569	62.47	.2481	.2383	.2825	.1786	.2609	41.69
#1	2.386	.0004	1.998	1.231	1.206	1.190	.0142	.0045
#2	2.392	.0010	1.991	1.227	1.211	1.193	.0142	.0083
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2913.7	75873.	4890.5
Stddev	.8	136.	10.6
%RSD	.02836	.17933	.21659
#1	2914.3	75777.	4883.0
#2	2913.1	75970.	4898.0

*NR for 200.7
ok for 6010
GW
10/9/14

Sample Name: ICV Acquired: 9/23/2014 8:52:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.231	4.938	F 2.363	2.463	4.988	.12152	.0034	1.201
Stddev	.001	.033	.010	.014	.023	.00051	.0001	.001
%RSD	.0179	.6679	.4183	.5852	.4556	.41571	3.067	.1033
#1	4.231	4.915	2.356	2.453	5.004	.12116	.0035	1.200
#2	4.230	4.962	2.370	2.473	4.971	.12188	.0033	1.202
Check ?	None	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value			2.500					
Range			-5.440%					

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.204	12.27	11.65	.4895	1.201	.5972	.6068	2.442
Stddev	.001	.08	.08	.0001	.001	.0002	.0017	.000
%RSD	.0884	.6781	.6483	.0195	.0657	.0291	.2725	.0141
#1	1.203	12.33	11.71	.4894	1.200	.5973	.6079	2.442
#2	1.204	12.21	11.60	.4896	1.201	.5971	.6056	2.443
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.363	-.0011	12.19	11.38	12.33	1.218	1.227	1.965
Stddev	.004	.0007	.03	.01	.07	.007	.009	.002
%RSD	.1908	58.38	.2267	.0449	.5291	.5807	.7283	.1095
#1	2.360	-.0016	12.17	11.39	12.29	1.213	1.220	1.963
#2	2.366	-.0007	12.21	11.38	12.38	1.223	1.233	1.966
Check ?	Chk Fail	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value	2.500							
Range	-5.440%							

NR
am
10/9/14

Sample Name: ICV Acquired: 9/23/2014 8:52:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.191	.0041	12.50	F 2.330	.0176	.5921	12.57	.00059
Stddev	.000	.0003	.03	.012	.0008	.0001	.02	.00003
%RSD	.0112	6.790	.2362	.4996	4.792	.0239	.1210	4.4140
#1	1.190	.0043	12.48	2.322	.0182	.5920	12.56	.00057
#2	1.191	.0039	12.52	2.338	.0170	.5922	12.58	.00061
Check ?	Chk Pass	None	Chk Pass	Chk Fail	None	Chk Pass	Chk Pass	None
Value				2.500				
Range				-5.440%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.386	.0000	1.985	1.231	1.205	1.193	.0138	.0077
Stddev	.002	.0002	.009	.007	.001	.004	.0021	.0005
%RSD	.0635	528.6	.4752	.6011	.0478	.3606	15.18	6.096
#1	2.387	.0002	1.978	1.226	1.205	1.190	.0123	.0080
#2	2.385	-.0001	1.991	1.236	1.205	1.196	.0153	.0073
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2917.6	75738.	4885.1
Stddev	8.1	63.	29.5
%RSD	.27628	.08321	.60475
#1	2911.9	75782.	4864.2
#2	2923.3	75693.	4906.0

NR
am
10/9/14

Sample Name: ICB Acquired: 9/23/2014 8:55:01 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0022	.0006	.0024	.0002	-.00002	.0011	.0000
Stddev	.0003	.0032	.0004	.0001	.0001	.00013	.0006	.0001
%RSD	209.8	144.4	69.81	5.756	92.84	689.45	55.40	951.6
#1	.0004	.0000	.0003	.0023	.0003	.00007	.0007	.0000
#2	-.0001	.0045	.0008	.0025	.0001	-.00011	.0015	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0026	.0004	-.0004	.0003	.0001	.0004	.0046
Stddev	.000	.0119	.0001	.0002	.0005	.0004	.0000	.0009
%RSD	83.84	465.0	26.81	46.94	195.8	378.3	.3279	19.43
#1	-.0001	-.0059	.0005	-.0003	.0006	.0004	.0004	.0040
#2	.0000	.0110	.0003	-.0006	-.0001	-.0002	.0004	.0052
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	-.0003	-.0065	.0003	.0024	.0001	.0007	.0008
Stddev	.0002	.0019	.0123	.0000	.0019	.0000	.0013	.0002
%RSD	27.51	603.3	190.2	4.428	81.16	5.430	173.5	21.74
#1	-.0009	-.0016	.0022	.0004	.0037	.0001	.0017	.0007
#2	-.0006	.0010	-.0152	.0003	.0010	.0001	-.0002	.0009
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 9/23/2014 8:55:01 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0016	.0136	.0024	.0108	.0007	.0122	.00010
Stddev	.0001	.0002	.0244	.0020	.0051	.0002	.0030	.00009
%RSD	143.0	12.00	179.3	82.59	47.16	29.78	24.30	86.590
#1	.0000	.0017	-.0036	.0010	.0072	.0009	.0143	.00016
#2	.0001	.0014	.0309	.0038	.0144	.0006	.0101	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0003	.0003	.0001	.0000	.0000	-.0012	.0009
Stddev	.0005	.0006	.0001	.0003	.000	.0000	.0017	.0002
%RSD	166.3	158.0	23.24	195.4	307.4	14.23	139.9	19.85
#1	.0000	.0000	.0004	.0000	.0000	.0000	.0000	.0008
#2	-.0006	-.0007	.0003	.0003	.0000	.0000	-.0024	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2955.7	77121.	4887.6
Stddev	6.2	122.	2.3
%RSD	.21048	.15810	.04630
#1	2951.3	77207.	4886.0
#2	2960.1	77034.	4889.2

Sample Name: LLICV Acquired: 9/23/2014 8:57:28 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50mL DOD CHECK TABLE

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0117	.0187	F .0129	.0043	.00097	.0215	.0010
Stddev	.0001	.0024	.0024	.0021	.0001	.00004	.0010	.0001
%RSD	.8713	20.68	13.01	16.20	1.914	4.1189	4.449	8.058
#1	.0104	.0135	.0204	.0114	.0043	.00095	.0222	.0011
#2	.0103	.0100	.0170	.0144	.0042	.00100	.0208	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100				
Range				20.00%				

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	F .0253	.0199	.0038	.0023	.0033	.0044	F .0254
Stddev	.0000	.0031	.0001	.0003	.0001	.0001	.0004	.0009
%RSD	.7288	12.38	.3126	8.436	3.220	2.141	9.347	3.539
#1	.0011	.0231	.0199	.0041	.0023	.0033	.0047	.0248
#2	.0011	.0276	.0198	.0036	.0024	.0034	.0041	.0261
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value		.0200						.0200
Range		20.00%						20.00%

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0194	-.0115	.0050	F .0071	.0011	.0008	.0043
Stddev	.0006	.0016	.0042	.0000	.0005	.0000	.0003	.0000
%RSD	7.077	8.277	36.61	.6380	6.754	3.883	40.28	.2734
#1	.0092	.0206	-.0145	.0050	.0075	.0011	.0010	.0043
#2	.0083	.0183	-.0085	.0051	.0068	.0011	.0006	.0043
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value					.0050			
Range					20.00%			

① Rerun
② 2X
am
10/9/14

Sample Name: LLICV Acquired: 9/23/2014 8:57:28 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50mL DOD CHECK TABLE

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	.0429	.2050	.0220	.2127	.0044	.2190	.00102
Stddev	.0002	.0019	.0040	.0019	.0099	.0006	.0041	.00011
%RSD	6.114	4.359	1.956	8.725	4.645	14.01	1.868	10.602
#1	.0039	.0442	.2078	.0234	.2197	.0049	.2219	.00094
#2	.0042	.0416	.2021	.0207	.2057	.0040	.2161	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0197	.0020	.0043	.0043	.0043	.0216	.0420
Stddev	.0023	.0001	.0001	.0005	.0002	.0001	.0014	.0007
%RSD	22.97	.7461	3.051	12.25	5.591	2.073	6.474	1.671
#1	.0082	.0198	.0020	.0046	.0044	.0044	.0226	.0415
#2	.0114	.0196	.0021	.0039	.0041	.0042	.0206	.0425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2987.8	77794.	4893.9
Stddev	5.2	151.	24.7
%RSD	.17440	.19400	.50564
#1	2991.5	77688.	4911.4
#2	2984.1	77901.	4876.4

Sample Name: LLICV Acquired: 9/23/2014 8:59:54 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50mL DOD CHECK TABLE RERUN

ok for 2nd DOD
DMH 10/10/14

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102	.0113	.0189	F .0124	.0039	.00093	.0211	.0011
Stddev	.0002	.0010	.0034	.0028	.0000	.00001	.0010	.0000
%RSD	2.064	9.145	17.99	22.59	.8420	.85092	4.894	3.470
#1	.0103	.0120	.0165	.0144	.0039	.00093	.0203	.0010
#2	.0100	.0105	.0213	.0104	.0039	.00092	.0218	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100				
Range				20.00%				

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0237	.0201	.0045	F .0025	.0037	.0038	.0215
Stddev	.0000	.0106	.0001	.0002	.0002	.0000	.0006	.0013
%RSD	4.135	44.58	.3780	4.926	6.376	1.300	15.11	5.918
#1	.0011	.0162	.0201	.0046	.0027	.0038	.0034	.0224
#2	.0010	.0312	.0200	.0043	.0024	.0037	.0042	.0206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0020			
Range					20.00%			

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.0178	.0161	.0050	F .0067	.0011	.0008	.0043
Stddev	.0004	.0011	.0028	.0001	.0005	.0000	.0004	.0001
%RSD	5.223	6.275	17.41	2.421	7.580	.7029	52.14	2.939
#1	.0084	.0186	.0181	.0051	.0071	.0011	.0005	.0044
#2	.0078	.0171	.0141	.0049	.0064	.0011	.0012	.0042
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value					.0050			
Range					20.00%			

Sample Name: LLICV Acquired: 9/23/2014 8:59:54 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50mL DOD CHECK TABLE RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0436	.2142	.0238	.2131	.0045	.2156	.00106
Stddev	.0001	.0022	.0480	.0007	.0010	.0000	.0102	.00004
%RSD	1.595	5.118	22.40	3.078	.4612	.3896	4.750	3.9287
#1	.0042	.0452	.2482	.0243	.2138	.0045	.2084	.00103
#2	.0041	.0420	.1803	.0233	.2124	.0045	.2228	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085	.0202	.0020	.0043	.0044	.0043	.0214	.0432
Stddev	.0000	.0001	.0002	.0002	.0004	.0000	.0005	.0027
%RSD	.4290	.3216	10.23	4.136	8.098	.1047	2.431	6.163
#1	.0085	.0202	.0018	.0042	.0047	.0043	.0218	.0413
#2	.0085	.0203	.0021	.0044	.0042	.0043	.0210	.0451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2969.0	77328.	4896.9
Stddev	6.5	151.	14.2
%RSD	.21925	.19488	.28958
#1	2964.4	77222.	4886.9
#2	2973.6	77435.	4907.0

Sample Name: LLICV,0.5 Acquired: 9/23/2014 9:02:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 1/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205	.0201	.0425	.0226	.0080	.00201	.0410	.0021
Stddev	.0000	.0018	.0003	.0023	.0002	.00002	.0001	.0000
%RSD	.1201	9.027	.7960	10.39	2.139	.90882	.2601	1.567
#1	.0205	.0214	.0427	.0209	.0079	.00200	.0411	.0020
#2	.0206	.0189	.0422	.0242	.0082	.00203	.0410	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0434	.0390	.0075	.0046	.0079	.0085	.0434
Stddev	.0001	.0024	.0002	.0000	.0000	.0001	.0002	.0008
%RSD	5.542	5.620	.5551	.2783	.5554	1.208	2.461	1.799
#1	.0020	.0417	.0391	.0076	.0046	.0080	.0084	.0439
#2	.0022	.0452	.0388	.0075	.0046	.0078	.0087	.0428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189	.0414	.0094	.0099	.0109	.0020	.0024	.0082
Stddev	.0004	.0021	.0176	.0001	.0012	.0000	.0019	.0003
%RSD	2.133	5.032	187.3	.9883	11.15	1.337	78.49	3.143
#1	.0186	.0399	-.0030	.0100	.0117	.0021	.0011	.0080
#2	.0192	.0428	.0218	.0099	.0100	.0020	.0037	.0083
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLICV,0.5 Acquired: 9/23/2014 9:02:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 1/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0826	.4187	.0420	.4040	.0085	.4233	.00196
Stddev	.0004	.0006	.0407	.0008	.0050	.0000	.0021	.00007
%RSD	4.436	.7452	9.715	1.973	1.242	.1877	.4962	3.6095
#1	.0078	.0821	.4474	.0426	.4005	.0085	.4218	.00191
#2	.0083	.0830	.3899	.0414	.4076	.0085	.4248	.00201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	.0400	.0043	.0079	.0082	.0083	.0441	.0811
Stddev	.0001	.0001	.0001	.0004	.0002	.0000	.0005	.0045
%RSD	.5857	.3104	1.522	5.524	2.728	.1399	1.135	5.600
#1	.0188	.0399	.0044	.0082	.0083	.0083	.0438	.0843
#2	.0187	.0401	.0043	.0076	.0080	.0083	.0445	.0779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2985.1	78061.	4973.7
Stddev	7.9	75.	34.8
%RSD	.26569	.09608	.69882
#1	2990.7	78008.	4949.1
#2	2979.5	78114.	4998.3

Sample Name: LLICV-TCLP Acquired: 9/23/2014 9:05:14 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-11-D 0.2/10mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0007	.0004	.0002	.1978	-.00006	.0008	.0000
Stddev	.0000	.0005	.0022	.0009	.0001	.00007	.0008	.0000
%RSD	7.414	71.79	557.2	510.9	.0748	131.61	101.2	99.94
#1	.0004	.0010	-.0012	-.0005	.1980	.00000	.0013	.0000
#2	.0004	.0003	.0020	.0008	.1977	-.00011	.0002	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0060	.0013	-.0001	.0002	.0005	-.0004	.0013
Stddev	.000	.0055	.0001	.0002	.0000	.0000	.0001	.0020
%RSD	252.5	92.52	4.940	224.9	16.03	7.821	16.16	155.3
#1	.0000	-.0099	.0012	-.0003	.0002	.0005	-.0004	-.0001
#2	-.0001	-.0021	.0013	.0001	.0003	.0005	-.0005	.0027
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	.0000	.0107	.0002	.0001	.0001	-.0004	.0000
Stddev	.0002	.001	.0286	.0000	.0008	.0001	.0022	.0001
%RSD	8.461	4793.	267.5	3.775	1366.	87.35	489.0	129.9
#1	-.0025	.0003	.0309	.0002	-.0005	.0000	.0011	.0001
#2	-.0022	-.0004	-.0095	.0002	.0007	.0001	-.0020	.0000
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLICV-TCLP Acquired: 9/23/2014 9:05:14 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-11-D 0.2/10mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0008	-.0206	.0003	-.0002	.0000	.0043	.00017
Stddev	.0000	.0034	.0158	.0027	.0040	.000	.0003	.00004
%RSD	107.1	441.6	76.86	776.9	1821.	788.4	6.431	21.901
#1	.0000	-.0016	-.0094	.0023	.0026	.0001	.0041	.00020
#2	.0000	.0032	-.0318	-.0016	-.0031	-.0002	.0045	.00014
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	-.0004	.0000	.0005	.1935	.1958	-.0004	-.0006
Stddev	.0013	.0001	.0000	.0003	.0002	.0004	.0001	.0014
%RSD	112.4	20.72	126.8	72.88	.0942	.1962	15.11	228.2
#1	-.0020	-.0003	.0000	.0002	.1936	.1960	-.0005	-.0016
#2	-.0002	-.0004	.0000	.0007	.1934	.1955	-.0004	.0004
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2956.1	77317.	4914.5
Stddev	.7	209.	17.0
%RSD	.02294	.27025	.34598
#1	2956.5	77170.	4926.5
#2	2955.6	77465.	4902.5

Sample Name: CCVB1 Acquired: 9/23/2014 9:08:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.572	9.891	-.0002	1.004	10.06	-.00010	.0009	-.0001
Stddev	.019	.056	.0018	.003	.10	.00003	.0006	.0001
%RSD	.2534	.5607	707.1	.3106	1.013	26.213	58.74	110.3
#1	7.581	9.887	-.0028	1.006	9.992	-.00011	.0005	.0000
#2	7.592	9.963	.0007	1.001	10.17	-.00010	.0017	.0000
#3	7.548	9.828	.0012	1.002	9.954	-.00013	.0008	-.0002
#4	7.568	9.886	-.0002	1.008	10.11	-.00007	.0006	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.05	9.347	.0001	.0004	-.0003	-.0001	9.972
Stddev	.000	.02	.080	.0004	.0002	.0002	.0007	.034
%RSD	748.3	.2208	.8583	383.4	49.50	72.46	777.9	.3408
#1	-.0002	10.03	9.281	.0001	.0007	-.0004	-.0001	9.928
#2	.0000	10.04	9.459	.0005	.0004	-.0003	.0005	10.01
#3	.0000	10.05	9.299	.0004	.0003	.0000	.0003	9.966
#4	.0001	10.08	9.348	-.0005	.0002	-.0004	-.0011	9.989
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Sample Name: CCVB1 Acquired: 9/23/2014 9:08:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	1.004	9.978	9.407	9.895	.9790	.9848	.0001
Stddev	.0007	.004	.108	.074	.025	.0050	.0053	.0000
%RSD	52.38	.3626	1.083	.7883	.2483	.5123	.5361	92.11
#1	-.0014	.9990	9.835	9.465	9.865	.9810	.9799	.0000
#2	-.0003	1.007	10.05	9.455	9.923	.9793	.9825	.0001
#3	-.0017	1.006	9.954	9.303	9.904	.9837	.9922	.0000
#4	-.0016	1.006	10.07	9.405	9.888	.9720	.9847	.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	10.01	10.06	.0031	9.951	.0003	10.02	.98737
Stddev	.0003	.03	.09	.0019	.023	.0002	.05	.00392
%RSD	111.2	.2853	.9049	62.81	.2275	47.01	.4567	.39721
#1	.0004	10.02	9.937	.0035	9.922	.0004	9.976	.98173
#2	.0006	10.04	10.06	.0049	9.960	.0005	10.04	.99068
#3	-.0001	9.976	10.12	.0035	9.975	.0001	10.08	.98912
#4	.0001	10.01	10.14	.0004	9.946	.0003	10.00	.98795
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVB1 Acquired: 9/23/2014 9:08:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	TI1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	.0008	.0006	.0013	.0002	.0000	1.017	1.004
Stddev	.0012	.0009	.0003	.0002	.0001	.0001	.002	.007
%RSD	93.07	109.0	56.70	16.35	39.66	197.0	.2290	.7343
#1	-.0010	-.0001	.0004	.0011	.0002	.0000	1.020	1.010
#2	-.0021	.0016	.0007	.0013	.0002	.0000	1.017	.9942
#3	-.0025	.0014	.0009	.0014	.0004	.0001	1.014	1.002
#4	.0003	.0003	.0003	.0016	.0002	.0001	1.015	1.010
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2933.3	75328.	4855.0
Stddev	3.7	368.	14.1
%RSD	.12579	.48869	.28994
#1	2934.6	75491.	4853.3
#2	2927.8	75467.	4843.0
#3	2935.7	74780.	4875.2
#4	2935.2	75572.	4848.6

Sample Name: CCVA1 Acquired: 9/23/2014 9:14:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2526	.2543	.2492	.2528	.2560	.24768	.2488	.2508
Stddev	.0001	.0039	.0023	.0003	.0003	.00066	.0008	.0006
%RSD	.0574	1.522	.9122	.1202	.1325	.26666	.3110	.2264
#1	.2525	.2491	.2520	.2527	.2557	.24684	.2482	.2510
#2	.2527	.2583	.2465	.2525	.2559	.24836	.2482	.2512
#3	.2528	.2557	.2489	.2529	.2565	.24801	.2490	.2509
#4	.2525	.2541	.2492	.2532	.2561	.24750	.2498	.2499
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2517	.5164	.4878	.2495	.2503	.2512	.2514	.2589
Stddev	.0009	.0040	.0013	.0009	.0008	.0011	.0002	.0016
%RSD	.3571	.7658	.2695	.3730	.3169	.4472	.0964	.6333
#1	.2512	.5191	.4889	.2495	.2507	.2513	.2514	.2571
#2	.2526	.5117	.4859	.2482	.2511	.2528	.2511	.2610
#3	.2524	.5202	.4884	.2504	.2503	.2507	.2517	.2586
#4	.2507	.5146	.4878	.2500	.2492	.2502	.2512	.2589
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/23/2014 9:14:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2516	-.0007	.2491	.2464	.2524	.2468	.2470	.2493
Stddev	.0010	.0020	.0336	.0004	.0014	.0007	.0017	.0008
%RSD	.4048	279.0	13.47	.1612	.5629	.2675	.6925	.3243
#1	.2518	-.0019	.2026	.2468	.2531	.2472	.2487	.2488
#2	.2521	-.0028	.2678	.2463	.2530	.2458	.2458	.2501
#3	.2523	.0003	.2476	.2467	.2532	.2472	.2480	.2498
#4	.2501	.0015	.2785	.2459	.2503	.2470	.2452	.2484
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2505	.0034	2.537	.2511	.1316	.2495	.2632	.00019
Stddev	.0010	.0009	.031	.0016	.0055	.0010	.0052	.00012
%RSD	.4115	25.93	1.210	.6490	4.192	.4017	1.990	63.791
#1	.2498	.0030	2.514	.2530	.1335	.2496	.2623	.00021
#2	.2515	.0024	2.567	.2517	.1379	.2509	.2701	.00006
#3	.2512	.0043	2.559	.2492	.1248	.2487	.2574	.00014
#4	.2494	.0041	2.507	.2505	.1302	.2490	.2628	.00034
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/23/2014 9:14:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2502	.2493	.2479	.2469	.2510	.2510	.0037	.0017
Stddev	.0015	.0010	.0003	.0008	.0006	.0006	.0014	.0030
%RSD	.5913	.4195	.1068	.3370	.2452	.2493	37.01	175.0
#1	.2502	.2496	.2481	.2466	.2513	.2517	.0020	.0020
#2	.2518	.2502	.2476	.2469	.2515	.2511	.0040	-.0009
#3	.2506	.2496	.2481	.2460	.2509	.2509	.0054	-.0001
#4	.2482	.2478	.2477	.2480	.2501	.2502	.0036	.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2938.4	76605.	4867.4
Stddev	6.8	282.	10.7
%RSD	.23037	.36758	.22002
#1	2944.9	76383.	4869.2
#2	2929.9	77014.	4880.3
#3	2936.0	76468.	4854.2
#4	2942.6	76556.	4866.1

Sample Name: CCB Acquired: 9/23/2014 9:19:58 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0024	-.0023	.0003	.0000	-.00004	.0023	.0000
Stddev	.0000	.0019	.0009	.0004	.000	.00003	.0010	.000
%RSD	11.78	80.31	37.73	156.4	54.09	87.576	42.98	517.9
#1	-.0002	.0010	-.0017	.0006	.0000	-.00001	.0030	.0000
#2	-.0002	.0038	-.0029	.0000	.0000	-.00006	.0016	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0041	.0001	-.0002	-.0001	.0000	-.0002	.0014
Stddev	.0000	.0068	.0000	.0001	.0004	.0007	.0001	.0014
%RSD	81.10	164.7	64.67	25.64	339.9	2498.	50.93	100.3
#1	.0000	.0089	.0001	-.0002	-.0004	-.0005	-.0001	.0004
#2	.0001	-.0007	.0000	-.0003	.0002	.0005	-.0003	.0024
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0008	.0109	.0000	.0016	.0001	.0013	.0005
Stddev	.0005	.0003	.0143	.0000	.0010	.0000	.0007	.0001
%RSD	121.0	36.69	131.1	94.69	63.46	10.69	51.55	12.95
#1	-.0007	-.0010	.0210	.0001	.0009	.0001	.0008	.0006
#2	-.0001	-.0006	.0008	.0000	.0023	.0001	.0018	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 9:19:58 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0017	-.0122	.0030	.0089	.0009	.0091	.00015
Stddev	.0000	.0024	.0351	.0008	.0015	.0002	.0105	.00003
%RSD	6.692	143.8	286.8	27.18	16.50	18.16	114.3	17.233
#1	.0005	.0000	-.0370	.0036	.0099	.0010	.0165	.00013
#2	.0004	.0033	.0126	.0024	.0078	.0008	.0018	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	-.0004	.0000	.0002	.0000	.0000	-.0011	-.0002
Stddev	.0005	.0002	.000	.0002	.000	.0001	.0016	.0016
%RSD	75.58	59.66	12660.	94.31	54.42	192.3	142.4	700.5
#1	-.0010	-.0002	.0002	.0004	.0000	.0001	-.0023	.0009
#2	-.0003	-.0006	-.0002	.0001	-.0001	.0000	.0000	-.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2932.4	76814.	4861.0
Stddev	8.9	23.	.5
%RSD	.30518	.03045	.01103
#1	2938.8	76797.	4860.6
#2	2926.1	76830.	4861.3

Sample Name: ICSA Acquired: 9/23/2014 9:22:23 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.59	437.3	.0052	.0066	.0004	-.00048	.0083	-.0001
Stddev	.06	6.9	.0004	.0045	.0003	.00014	.0000	.0000
%RSD	.2858	1.573	7.549	67.51	57.29	28.437	.4184	49.08
#1	20.54	442.2	.0049	.0035	.0006	-.00038	.0083	-.0001
#2	20.63	432.5	.0054	.0098	.0003	-.00058	.0083	-.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	472.3	*****	.0016	-.0010	-.0037	-.0009	185.5
Stddev	.0002	2.1	-----	.0007	.0002	.0009	.0003	.6
%RSD	39.23	.4355	-----	44.11	24.84	23.84	27.41	.3000
#1	-.0004	473.8	-----	.0021	-.0008	-.0043	-.0011	185.9
#2	-.0007	470.9	-----	.0011	-.0012	-.0031	-.0007	185.1
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0069	.0018	502.6	*****	349.6	-.0010	.0012	-.0001
Stddev	.0013	.0018	2.9	-----	3.2	.0001	.0006	.0010
%RSD	18.42	98.48	.5855	-----	.9174	5.089	50.51	838.0
#1	-.0060	.0006	504.7	-----	347.4	-.0010	.0017	.0006
#2	-.0078	.0031	500.5	-----	351.9	-.0010	.0008	-.0009
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 9/23/2014 9:22:23 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-B

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	.0045	-.0496	.0203	.0019	.0000	.0225	.00363
Stddev	.0003	.0053	.0022	.0045	.0018	.0005	.0051	.00008
%RSD	7.778	118.4	4.488	21.96	94.03	2413.	22.62	2.1863
#1	.0038	.0083	-.0512	.0171	.0032	-.0003	.0189	.00368
#2	.0043	.0007	-.0480	.0235	.0007	.0003	.0261	.00357
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0025	-.0002	.0035	.0014	-.0049	.0172	.0560
Stddev	.0030	.0000	.0000	.0002	.0004	.0002	.0011	.0090
%RSD	624.2	.3895	28.71	6.983	27.99	4.035	6.645	16.00
#1	-.0026	.0025	-.0002	.0033	.0011	-.0048	.0180	.0497
#2	.0016	.0025	-.0001	.0037	.0016	-.0050	.0164	.0624
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2567.1	65769.	4616.6
Stddev	10.3	134.	26.3
%RSD	.40151	.20379	.57047
#1	2574.4	65674.	4598.0
#2	2559.8	65863.	4635.2

Sample Name: ICSAB Acquired: 9/23/2014 9:25:04 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.54	435.8	.8701	.0050	.5110	.47252	.0059	.9075
Stddev	.10	5.4	.0106	.0051	.0009	.00085	.0010	.0012
%RSD	.4865	1.248	1.216	100.8	.1664	.17988	17.63	.1354
#1	20.47	439.6	.8775	.0086	.5116	.47313	.0067	.9067
#2	20.61	431.9	.8626	.0014	.5104	.47192	.0052	.9084
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9021	469.0	*****	.4936	.4481	.4500	.4514	185.5
Stddev	.0042	5.0	-----	.0011	.0018	.0018	.0008	.6
%RSD	.4702	1.069	-----	.2202	.3947	.3984	.1820	.3151
#1	.8991	465.5	-----	.4944	.4469	.4487	.4508	185.1
#2	.9051	472.6	-----	.4928	.4494	.4513	.4520	185.9
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8655	.0017	502.5	*****	347.3	.4780	.5268	-.0003
Stddev	.0018	.0034	1.0	-----	1.6	.0028	.0012	.0001
%RSD	.2134	202.9	.2045	-----	.4634	.5864	.2367	38.32
#1	.8642	.0040	501.8	-----	348.4	.4800	.5277	-.0002
#2	.8668	-.0007	503.3	-----	346.2	.4760	.5260	-.0003
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: ICSAB Acquired: 9/23/2014 9:25:04 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-C

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8810	.0078	-.0768	.0242	.0025	.9054	.0235	.00357
Stddev	.0029	.0025	.0295	.0016	.0008	.0018	.0005	.00024
%RSD	.3323	32.48	38.36	6.718	30.42	.2035	2.075	6.6913
#1	.8790	.0060	-.0560	.0231	.0030	.9067	.0231	.00374
#2	.8831	.0096	-.0977	.0254	.0019	.9041	.0238	.00340
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0016	-.0002	.5123	.8973	.8456	.0186	.0563
Stddev	.0004	.0011	.0003	.0018	.0012	.0026	.0010	.0021
%RSD	59.08	67.54	125.6	.3600	.1355	.3102	5.418	3.664
#1	.0008	.0023	.0000	.5136	.8964	.8474	.0179	.0577
#2	.0003	.0008	-.0004	.5110	.8982	.8437	.0193	.0548
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2572.1	65837.	4630.0
Stddev	7.4	212.	17.1
%RSD	.28932	.32181	.36910
#1	2577.4	65687.	4642.1
#2	2566.8	65986.	4617.9

Sample Name: 200ppm Fe Acquired: 9/23/2014 9:29:56 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A 0.2/10mL Fe 10,000ppm MET2-40-J

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0194	-.0071	-.0016	.0046	-.0001	-.00028	-.0061	.0000
Stddev	.0015	.0036	.0002	.0003	.0001	.00005	.0004	.0001
%RSD	7.572	50.72	13.76	5.410	45.63	18.664	6.469	164900.
#1	.0205	-.0045	-.0017	.0048	-.0002	-.00024	-.0064	.0000
#2	.0184	-.0096	-.0014	.0045	-.0001	-.00031	-.0058	.0000
Check ?	Chk Fail	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.0100							
Low Limit	-.0100							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0065	.0050	.0009	.0011	.0000	-.0001	F 192.4
Stddev	.000	.0116	.0002	.0002	.0003	.0007	.0002	.5
%RSD	55030.	178.1	4.380	20.24	25.38	6234.	218.0	.2607
#1	.0000	.0148	.0051	.0008	.0013	.0005	.0000	192.1
#2	.0000	-.0017	.0048	.0011	.0009	-.0005	-.0002	192.8
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit								.0200
Low Limit								-.0200

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0060	-.0004	-.0107	.0034	.0043	.0000	.0021	-.0009
Stddev	.0003	.0005	.0033	.0003	.0018	.000	.0002	.0001
%RSD	4.354	132.6	31.12	8.281	43.02	669.3	11.01	6.711
#1	-.0058	.0000	-.0083	.0036	.0056	-.0001	.0019	-.0010
#2	-.0062	-.0008	-.0131	.0032	.0030	.0001	.0023	-.0009
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: 200ppm Fe Acquired: 9/23/2014 9:29:56 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A 0.2/10mL Fe 10,000ppm MET2-40-J

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0070	-.0708	.0128	-.0065	.0004	.0001	.00018
Stddev	.0002	.0013	.0290	.0018	.0068	.0001	.0047	.00016
%RSD	16.03	18.00	40.96	14.11	104.5	18.38	3220.	89.757
#1	.0011	.0079	-.0913	.0115	-.0017	.0004	-.0031	.00030
#2	.0014	.0061	-.0503	.0141	-.0113	.0005	.0034	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0002	.0002	.0028	.0000	-.0038	.0113	.0016
Stddev	.0007	.0008	.0001	.0004	.0001	.0002	.0017	.0029
%RSD	127.7	464.9	58.01	15.54	1771.	5.057	15.12	179.0
#1	.0010	.0007	.0001	.0025	.0000	-.0039	.0101	-.0004
#2	.0001	-.0004	.0002	.0031	.0000	-.0036	.0126	.0037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2932.1	76309.	4910.6
Stddev	.3	453.	19.8
%RSD	.01153	.59319	.40419
#1	2931.8	75989.	4924.7
#2	2932.3	76629.	4896.6

Sample Name: KQ1411685-02 Acquired: 9/23/2014 9:49:11 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5 K1410183-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0150	-.0007	.0004	.0003	-.00011	.0206	-.0001	.0000
#1	.0146	-.0009	-.0012	.0002	-.00011	.0208	.0000	-.0001
#2	.0154	-.0004	.0019	.0004	-.00011	.0205	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0458	-.0001	.0000	.0002	-.0003	.0086	-.0003	-.0003
#1	.0459	.0003	-.0003	.0003	-.0004	.0074	.0005	-.0003
#2	.0457	-.0005	.0002	.0000	-.0001	.0099	-.0011	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	.0002	.0002	.0003	.0028	-.0196	.0039	.1014
#1	.0098	.0002	-.0001	.0003	.0010	-.0429	.0027	.1046
#2	.0097	.0002	.0004	.0002	.0046	.0037	.0051	.0981

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	1.167	.00025	-.0009	-.0011	.0003	.0007	.0008
#1	.0009	1.167	.00017	-.0009	-.0010	.0003	.0005	.0006
#2	.0008	1.167	.00034	-.0009	-.0011	.0003	.0008	.0010

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0009	-.0002	.0028
#1	.0008	.0000	.0018
#2	.0009	-.0004	.0039

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2932.2	76932.	4863.3
#1	2933.3	76785.	4868.1
#2	2931.0	77078.	4858.4

Sample Name: KQ1411685-01 Acquired: 9/23/2014 9:51:36 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5 K1410183-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	-.0026	.9912	2.005	-.00015	.0143	.1985	.1977
#1	.0065	-.0030	.9920	1.996	-.00011	.0151	.1986	.1979
#2	.0069	-.0022	.9904	2.013	-.00019	.0136	.1984	.1975

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0424	.9926	.0005	.2011	.2013	.0072	.9995	.0007
#1	.0423	.9912	.0005	.2014	.2017	.0040	.9972	.0000
#2	.0424	.9941	.0004	.2008	.2009	.0104	1.002	.0013

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	.0001	.0004	.2000	.0023	.0332	.1912	.0955
#1	.0086	.0001	.0004	.2004	.0017	.0731	.1903	.0986
#2	.0085	.0002	.0004	.1997	.0029	-.0066	.1921	.0923

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1973	1.153	.00013	-.0017	-.0005	.0000	.0047	1.963
#1	.1962	1.148	.00008	-.0018	-.0005	-.0002	.0046	1.965
#2	.1983	1.159	.00019	-.0016	-.0006	.0002	.0048	1.960

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.926	-.0016	.0033
#1	1.928	-.0002	.0051
#2	1.925	-.0031	.0016

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2918.7	76676.	4887.2
#1	2919.2	76662.	4887.2
#2	2918.2	76690.	4887.1

Sample Name: K1410183-002 Acquired: 9/23/2014 9:53:52 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	-.0008	-.0015	.0036	-.00011	.0147	.0001	.0000
#1	.0035	-.0004	-.0018	.0037	-.00013	.0147	.0001	.0001
#2	.0038	-.0012	-.0012	.0035	-.00009	.0146	.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.238	.0000	.0000	-.0003	.0001	.0054	-.0012	-.0007
#1	4.236	-.0001	.0001	-.0004	-.0002	.0047	-.0017	-.0028
#2	4.239	.0001	-.0001	-.0002	.0003	.0060	-.0007	.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.607	.0735	.0001	.0003	.0086	1.219	.0040	1.056
#1	1.606	.0736	-.0002	.0003	.0083	1.221	.0049	1.057
#2	1.608	.0734	.0003	.0003	.0090	1.218	.0030	1.055

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	8.866	.01859	-.0012	-.0004	.0000	.0004	.0893
#1	.0001	8.877	.01871	-.0007	-.0004	.0001	.0005	.0895
#2	-.0005	8.855	.01847	-.0017	-.0004	-.0001	.0004	.0892

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0891	-.0015	1.607
#1	.0892	-.0014	1.613
#2	.0890	-.0016	1.602

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2950.9	76986.	4946.4
#1	2950.0	76906.	4953.8
#2	2951.8	77066.	4938.9

Sample Name: K1410183-002L Acquired: 9/23/2014 9:56:21 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/25

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0019	-.0001	.0007	-.00002	.0040	.0000	.0000
#1	.0012	-.0028	.0000	.0007	.00008	.0037	.0000	.0001
#2	.0009	-.0009	-.0002	.0007	-.00011	.0043	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8805	-.0005	.0001	-.0005	.0000	.0017	-.0019	-.0017
#1	.8803	-.0003	-.0002	-.0006	-.0005	.0020	-.0017	-.0040
#2	.8807	-.0008	.0004	-.0004	.0004	.0014	-.0021	.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3336	.0156	.0002	.0002	.0044	.2298	.0017	.2173
#1	.3339	.0155	.0003	.0004	.0035	.2505	.0015	.2196
#2	.3332	.0157	.0001	.0001	.0052	.2090	.0019	.2151

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	1.808	.00391	-.0006	-.0007	.0001	.0003	.0184
#1	.0003	1.806	.00398	.0001	.0005	.0002	.0004	.0185
#2	.0006	1.809	.00385	-.0014	-.0018	.0001	.0003	.0184

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0184	.0017	.3274
#1	.0183	.0017	.3295
#2	.0184	.0018	.3253

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2912.5	76073.	4842.4
#1	2905.8	76041.	4835.5
#2	2919.2	76104.	4849.4

Sample Name: K1410183-002S Acquired: 9/23/2014 9:58:45 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	-.0055	1.006	2.055	-.00008	.0160	.1995	.1999
#1	.0054	-.0069	1.003	2.053	-.00013	.0155	.1990	.1993
#2	.0056	-.0041	1.009	2.057	-.00003	.0166	.2000	.2005

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.414	1.011	.0007	.1985	.1994	.0044	1.001	-.0006
#1	4.378	1.015	.0007	.1974	.1995	.0063	.9983	-.0012
#2	4.450	1.007	.0007	.1996	.1993	.0026	1.003	.0000

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.638	.0754	.0003	.2008	.0108	1.271	.1883	1.068
#1	1.638	.0755	.0003	.2003	.0110	1.287	.1877	1.077
#2	1.638	.0753	.0002	.2014	.0106	1.255	.1890	1.060

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1952	8.852	.01909	-.0011	-.0007	.0000	.0049	2.067
#1	.1962	8.846	.01918	-.0015	-.0010	-.0001	.0046	2.063
#2	.1941	8.858	.01900	-.0006	-.0003	.0000	.0052	2.070

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.009	-.0017	1.592
#1	2.004	-.0029	1.585
#2	2.015	-.0005	1.599

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2886.0	75685.	4842.3
#1	2884.9	75576.	4850.0
#2	2887.1	75794.	4834.7

Sample Name: K1410183-002SD Acquired: 9/23/2014 10:01:05 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	-.0038	1.009	2.016	-.00007	.0186	.1961	.1963
#1	.0072	-.0024	1.007	2.015	-.00008	.0174	.1963	.1966
#2	.0068	-.0051	1.011	2.016	-.00005	.0199	.1959	.1961

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.321	.9921	.0006	.1958	.1967	.0100	.9809	-.0015
#1	4.345	.9927	.0006	.1960	.1963	.0073	.9826	-.0014
#2	4.297	.9915	.0005	.1956	.1971	.0126	.9792	-.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.632	.0752	.0005	.1973	.0102	1.267	.1919	.9832
#1	1.631	.0754	.0006	.1980	.0115	1.290	.1929	.9758
#2	1.633	.0750	.0004	.1966	.0089	1.245	.1910	.9905

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1002	8.962	.01865	-.0006	.0003	.0000	.0051	2.033
#1	.1010	8.955	.01852	-.0012	-.0002	.0000	.0052	2.036
#2	.0994	8.970	.01878	.0001	.0007	.0000	.0050	2.031

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.016	-.0017	1.623
#1	2.014	-.0023	1.619
#2	2.018	-.0011	1.627

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2939.2	76775.	4908.8
#1	2934.2	76868.	4900.4
#2	2944.2	76681.	4917.2

Sample Name: K1410183-002A Acquired: 9/23/2014 10:03:25 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: EM 092314A TCLP 1/5 A=0.1/10mL MET2-47-F

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	-.0167	4.908	9.837	-.00014	.0158	.9681	.9689
#1	.0043	-.0185	4.907	9.933	-.00011	.0151	.9678	.9678
#2	.0044	-.0148	4.908	9.740	-.00016	.0166	.9685	.9701

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.264	4.849	.0015	.9701	.9726	.0032	4.867	-.0012
#1	4.265	4.856	.0013	.9709	.9747	.0018	4.866	-.0002
#2	4.263	4.842	.0017	.9694	.9705	.0046	4.868	-.0022

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.604	.0735	.0018	.9724	.0096	1.257	.9307	1.043
#1	1.607	.0737	.0018	.9718	.0109	1.239	.9306	1.041
#2	1.601	.0733	.0017	.9731	.0083	1.276	.9307	1.044

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9460	8.784	.01864	-.0009	-.0008	.0001	.0215	9.677
#1	.9481	8.792	.01873	.0001	-.0003	.0002	.0215	9.675
#2	.9440	8.775	.01855	-.0019	-.0014	-.0001	.0215	9.678

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0007	1.599
#1	9.222	-.0020	1.600
#2	9.225	.0007	1.599

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2905.4	76891.	4926.5
#1	2907.3	76935.	4923.5
#2	2903.5	76847.	4929.6

Sample Name: LRA Acquired: 9/23/2014 10:05:49 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A 0.2/10mL MET2-47-F

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	-.0372	9.917	19.93	-.00006	.0008	2.034	2.034
#1	.0016	-.0378	9.931	19.91	-.00006	.0010	2.036	2.034
#2	.0013	-.0365	9.903	19.95	-.00006	.0005	2.031	2.033

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	9.933	.0029	2.049	1.986	.0047	10.23	-.0012
#1	.0012	9.928	.0027	2.052	1.993	.0063	10.24	-.0001
#2	.0010	9.939	.0031	2.045	1.979	.0031	10.23	-.0023

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0001	.0034	2.035	-.0007	-.0079	1.959	.0051
#1	.0002	.0001	.0032	2.038	-.0014	.0062	1.966	.0029
#2	.0002	.0001	.0035	2.031	-.0001	-.0220	1.952	.0073

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>1.800	.0066	.00041	-.0018	-.0001	.0000	.0443	>18.00
#1	1.977	.0048	.00039	-.0010	.0004	-.0001	.0445	19.91
#2	1.967	.0084	.00043	-.0025	-.0007	.0000	.0441	19.85

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0028	-.0013
#1	17.78	-.0013	-.0011
#2	17.70	-.0043	-.0015

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2828.9	76100.	4834.8
#1	2831.2	76206.	4852.8
#2	2826.6	75995.	4816.8

Sample Name: KQ1411661-05 Acquired: 9/23/2014 10:08:10 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4 K1409762-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-.0012	.0012	.0015	-.00014	.0003	-.0001	.0001
#1	.0020	-.0025	.0016	.0017	-.00016	.0002	-.0001	.0000
#2	.0018	.0002	.0008	.0012	-.00011	.0003	-.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0008	.0001	-.0001	-.0008	.0053	-.0013	-.0023
#1	.0025	.0008	.0004	-.0004	-.0010	.0068	-.0004	-.0019
#2	.0026	.0009	-.0002	.0003	-.0006	.0037	-.0022	-.0027

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0001	.0003	.0003	.0157	.0269	.0039	.0100
#1	.0006	.0001	.0003	.0003	.0166	.0214	.0033	.0073
#2	.0007	.0001	.0003	.0002	.0148	.0324	.0044	.0126

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0080	.00011	-.0017	.0166	-.0001	.0002	.0015
#1	.0009	-.0049	.00008	-.0018	.0170	-.0002	.0005	.0016
#2	.0007	.0208	.00013	-.0016	.0162	.0001	.0000	.0013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0015	.0001	.0020
#1	.0017	-.0002	.0040
#2	.0014	.0004	.0000

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2953.9	78235.	4945.1
#1	2955.7	78296.	4948.3
#2	2952.0	78173.	4941.9

Sample Name: CCVB Acquired: 9/23/2014 10:10:37 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.707	10.05	-.0020	1.014	10.06	-.00017	-.0002	.0000
Stddev	.004	.06	.0027	.004	.04	.00001	.0028	.0001
%RSD	.0522	.5597	135.3	.3492	.3657	7.3161	1694.	130.9
#1	7.710	10.09	-.0039	1.016	10.08	-.00017	-.0022	.0001
#2	7.704	10.01	-.0001	1.011	10.03	-.00016	.0018	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	10.13	9.536	-.0003	.0004	-.0007	-.0002	10.15
Stddev	.0001	.03	.033	.0000	.0003	.0001	.0009	.02
%RSD	75.50	.2588	.3505	14.42	66.96	13.09	571.3	.1611
#1	.0001	10.15	9.512	-.0003	.0006	-.0006	.0005	10.16
#2	.0002	10.11	9.559	-.0003	.0002	-.0008	-.0008	10.13
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	1.016	10.08	9.583	9.963	.9961	1.004	.0002
Stddev	.0003	.002	.01	.015	.005	.0006	.010	.0002
%RSD	36.51	.1646	.0708	.1565	.0460	.0569	1.012	122.3
#1	-.0005	1.017	10.08	9.572	9.966	.9957	.9963	.0003
#2	-.0009	1.015	10.07	9.593	9.959	.9965	1.011	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 10:10:37 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	10.17	10.06	.0035	10.03	.0005	10.13	1.0015
Stddev	.0003	.01	.02	.0001	.03	.0001	.01	.0006
%RSD	46.38	.1368	.2464	3.244	.3181	12.32	.0897	.05655
#1	.0007	10.18	10.04	.0034	10.01	.0004	10.14	1.0011
#2	.0004	10.16	10.08	.0036	10.06	.0005	10.12	1.0019
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	.0015	.0004	.0017	.0006	.0001	1.029	1.017
Stddev	.0004	.0002	.0000	.0006	.0003	.0000	.002	.003
%RSD	17.85	10.52	10.91	34.88	41.90	21.04	.1655	.3037
#1	-.0020	.0016	.0003	.0021	.0004	.0001	1.030	1.015
#2	-.0026	.0014	.0004	.0013	.0008	.0001	1.028	1.019
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2905.3	74648.	4822.1
Stddev	2.8	288.	6.1
%RSD	.09583	.38526	.12702
#1	2903.3	74852.	4817.8
#2	2907.2	74445.	4826.4

Sample Name: CCVA Acquired: 9/23/2014 10:13:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2505	.2536	.2487	.2522	.2499	.24781	.2492	.2484
Stddev	.0001	.0012	.0003	.0020	.0013	.00091	.0022	.0010
%RSD	.0224	.4878	.1279	.8069	.5200	.36830	.8749	.4035
#1	.2505	.2545	.2490	.2536	.2508	.24845	.2508	.2491
#2	.2504	.2528	.2485	.2507	.2490	.24716	.2477	.2477
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2474	.5080	.4804	.2430	.2480	.2491	.2499	.2546
Stddev	.0001	.0002	.0002	.0011	.0007	.0007	.0001	.0016
%RSD	.0290	.0331	.0404	.4629	.3008	.2737	.0497	.6447
#1	.2474	.5081	.4803	.2438	.2486	.2486	.2498	.2557
#2	.2473	.5079	.4805	.2422	.2475	.2495	.2500	.2534
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2464	-.0030	.2449	.2453	.2527	.2437	.2467	.2467
Stddev	.0016	.0011	.0004	.0006	.0016	.0014	.0002	.0004
%RSD	.6601	35.91	.1444	.2562	.6479	.5668	.0950	.1550
#1	.2476	-.0023	.2452	.2449	.2515	.2446	.2465	.2469
#2	.2453	-.0038	.2447	.2458	.2538	.2427	.2469	.2464
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 10:13:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	.0025	2.506	.2496	.1298	.2476	.2630	.00013
Stddev	.0007	.0019	.032	.0010	.0000	.0003	.0097	.00003
%RSD	.2847	75.07	1.290	.4176	.0166	.1370	3.676	25.439
#1	.2475	.0012	2.529	.2488	.1298	.2479	.2699	.00016
#2	.2465	.0039	2.483	.2503	.1298	.2474	.2562	.00011
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2501	.2479	.2464	.2432	.2486	.2494	.0016	.0022
Stddev	.0000	.0002	.0001	.0004	.0003	.0003	.0001	.0027
%RSD	.0028	.0960	.0358	.1749	.1142	.1393	5.976	121.3
#1	.2501	.2480	.2465	.2429	.2488	.2497	.0015	.0041
#2	.2501	.2477	.2463	.2435	.2484	.2492	.0017	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2955.0	77227.	4916.9
Stddev	4.8	54.	17.6
%RSD	.16344	.07007	.35829
#1	2951.6	77189.	4929.4
#2	2958.4	77265.	4904.5

Sample Name: CCB Acquired: 9/23/2014 10:15:26 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0014	.0003	-.0003	.0002	-.00011	.0008	-.0001
Stddev	.0001	.0032	.0009	.0022	.0002	.00005	.0004	.0000
%RSD	66.32	222.9	254.1	702.0	129.4	47.567	42.55	13.16
#1	-.0001	-.0008	.0010	.0012	.0004	-.00008	.0006	-.0001
#2	-.0002	.0037	-.0003	-.0019	.0000	-.00015	.0011	-.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0044	.0002	.0001	.0001	-.0001	-.0002	.0029
Stddev	.0001	.0027	.0001	.0000	.0001	.0004	.0002	.0020
%RSD	699.4	60.96	28.43	31.41	53.50	382.4	114.5	70.03
#1	.0001	.0063	.0002	.0001	.0002	-.0003	.0000	.0043
#2	-.0001	.0025	.0002	.0001	.0001	.0002	-.0003	.0015
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0022	.0004	-.0328	.0000	.0003	.0001	.0016	.0002
Stddev	.0003	.0008	.0373	.0000	.0008	.0000	.0005	.0000
%RSD	11.96	181.4	114.0	.1327	238.6	32.93	31.67	11.56
#1	-.0024	-.0001	-.0592	.0000	.0009	.0002	.0012	.0002
#2	-.0020	.0010	-.0064	.0000	-.0002	.0001	.0020	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 10:15:26 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0015	.0091	-.0003	.0045	.0005	.0046	.00019
Stddev	.0002	.0003	.0026	.0009	.0005	.0001	.0204	.00013
%RSD	590.8	20.68	28.47	287.7	11.77	30.79	446.4	67.776
#1	-.0001	.0017	.0073	.0003	.0042	.0006	-.0098	.00029
#2	.0002	.0013	.0109	-.0010	.0049	.0004	.0190	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	.0001	.0000	.0005	.0003	.0000	-.0010	-.0009
Stddev	.0003	.0002	.0001	.0000	.0000	.000	.0017	.0003
%RSD	27.22	252.7	218.5	1.472	9.325	71.70	170.3	30.24
#1	-.0015	.0002	.0001	.0005	.0003	.0000	-.0022	-.0007
#2	-.0010	-.0001	.0000	.0005	.0003	.0000	.0002	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2888.3	75244.	4758.8
Stddev	1.5	487.	15.6
%RSD	.05088	.64672	.32770
#1	2887.2	75588.	4769.9
#2	2889.3	74900.	4747.8

Sample Name: LLCCV Acquired: 9/23/2014 10:17:55 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0107	.0222	.0128	.0043	.00092	.0202	.0011
Stddev	.0000	.0023	.0018	.0009	.0000	.00007	.0010	.0000
%RSD	.2258	21.26	8.229	6.722	1.075	7.9013	5.031	.3831
#1	.0108	.0123	.0235	.0134	.0044	.00086	.0195	.0011
#2	.0108	.0091	.0209	.0122	.0043	.00097	.0210	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0216	.0208	.0040	.0024	.0036	.0042	.0242
Stddev	.0001	.0080	.0003	.0001	.0004	.0001	.0002	.0014
%RSD	7.713	37.16	1.358	1.557	18.33	2.673	4.521	5.796
#1	.0011	.0273	.0206	.0039	.0021	.0035	.0043	.0232
#2	.0010	.0159	.0210	.0040	.0028	.0036	.0041	.0252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	.0175	.0036	.0054	.0059	.0010	.0016	.0044
Stddev	.0008	.0004	.0253	.0001	.0000	.0001	.0001	.0001
%RSD	8.687	2.075	707.1	1.526	.0006	12.25	6.598	3.230
#1	.0081	.0177	-.0143	.0054	.0059	.0011	.0017	.0045
#2	.0092	.0172	.0215	.0055	.0059	.0009	.0015	.0043
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/23/2014 10:17:55 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0428	.2328	.0198	.2067	.0043	.2171	.00108
Stddev	.0000	.0010	.0254	.0013	.0004	.0000	.0008	.00006
%RSD	.8792	2.259	10.91	6.789	.1876	.3217	.3674	5.1504
#1	.0042	.0435	.2149	.0189	.2070	.0043	.2165	.00104
#2	.0042	.0421	.2508	.0208	.2065	.0043	.2176	.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.0208	.0021	.0045	.0045	.0045	.0212	.0424
Stddev	.0010	.0004	.0000	.0005	.0003	.0001	.0028	.0017
%RSD	10.93	1.740	.7011	10.52	6.426	1.715	12.97	4.128
#1	.0099	.0205	.0021	.0049	.0047	.0045	.0193	.0436
#2	.0085	.0210	.0022	.0042	.0043	.0046	.0232	.0411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2897.6	75666.	4790.3
Stddev	.7	107.	13.4
%RSD	.02473	.14088	.27991
#1	2897.1	75591.	4799.8
#2	2898.1	75742.	4780.8

Sample Name: LLCCV Acquired: 9/23/2014 10:20:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0119	.0194	F .0130	.0040	.00096	.0215	.0011
Stddev	.0000	.0010	.0000	.0012	.0004	.00006	.0004	.0001
%RSD	.0190	8.025	.1038	9.374	9.681	6.5703	1.843	9.700
#1	.0106	.0125	.0195	.0139	.0043	.00092	.0218	.0011
#2	.0106	.0112	.0194	.0122	.0038	.00101	.0212	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100				
Range				30.00%				

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0239	.0207	.0037	.0025	.0039	.0042	.0239
Stddev	.0001	.0059	.0000	.0004	.0002	.0004	.0004	.0021
%RSD	5.729	24.75	.0541	10.52	6.248	10.86	9.386	8.862
#1	.0010	.0197	.0207	.0034	.0026	.0036	.0039	.0254
#2	.0010	.0281	.0207	.0040	.0024	.0042	.0045	.0224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	.0197	-.0026	.0053	.0062	.0010	.0017	.0042
Stddev	.0005	.0015	.0007	.0000	.0018	.0001	.0011	.0001
%RSD	4.798	7.708	27.05	.8207	28.85	6.333	62.87	1.234
#1	.0094	.0207	-.0031	.0053	.0075	.0011	.0024	.0043
#2	.0100	.0186	-.0021	.0053	.0050	.0010	.0009	.0042
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

NR
EM
10/9/14

Sample Name: LLCCV Acquired: 9/23/2014 10:20:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0425	.1789	.0220	.1997	.0042	.2135	.00102
Stddev	.0002	.0008	.0686	.0002	.0010	.0007	.0015	.00004
%RSD	4.401	1.889	38.34	.7087	.5081	15.58	.6888	3.6218
#1	.0043	.0431	.1304	.0221	.1990	.0038	.2124	.00105
#2	.0041	.0419	.2274	.0219	.2005	.0047	.2145	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	.0197	.0021	.0043	.0043	.0045	.0219	.0401
Stddev	.0007	.0004	.0000	.0006	.0003	.0001	.0018	.0008
%RSD	7.852	2.040	1.926	13.19	6.320	1.144	8.235	2.000
#1	.0084	.0194	.0022	.0047	.0041	.0045	.0206	.0407
#2	.0094	.0199	.0021	.0039	.0045	.0044	.0231	.0396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2925.4	76698.	4838.4
Stddev	9.5	2.	43.0
%RSD	.32316	.00210	.88881
#1	2918.7	76699.	4808.0
#2	2932.1	76697.	4868.8

NR
Gm
10/9/14

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 10:22:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212	.0202	.0387	.0214	.0084	.00194	.0413	.0020
Stddev	.0000	.0001	.0012	.0011	.0003	.00010	.0019	.0000
%RSD	.1594	.2770	3.083	4.921	3.322	4.9261	4.508	.3159
#1	.0211	.0201	.0378	.0207	.0082	.00200	.0426	.0020
#2	.0212	.0202	.0395	.0222	.0086	.00187	.0400	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0404	.0401	.0086	.0044	.0082	.0087	.0453
Stddev	.0000	.0023	.0000	.0001	.0000	.0000	.0002	.0000
%RSD	.4228	5.792	.1012	1.361	.1290	.2999	2.546	.0163
#1	.0020	.0387	.0401	.0085	.0044	.0083	.0086	.0453
#2	.0020	.0420	.0402	.0087	.0044	.0082	.0089	.0453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	.0405	-.0047	.0101	.0101	.0020	.0028	.0081
Stddev	.0009	.0005	.0398	.0001	.0009	.0001	.0020	.0002
%RSD	4.998	1.191	849.5	1.239	8.505	3.739	70.69	2.045
#1	.0182	.0402	.0235	.0102	.0095	.0021	.0042	.0080
#2	.0195	.0409	-.0328	.0101	.0107	.0020	.0014	.0082
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 10:22:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0857	.3989	.0433	.3990	.0082	.4101	.00214
Stddev	.0001	.0012	.0309	.0021	.0003	.0005	.0028	.00005
%RSD	.8631	1.365	7.742	4.763	.0692	6.194	.6710	2.1416
#1	.0081	.0849	.4207	.0448	.3992	.0078	.4082	.00217
#2	.0082	.0865	.3771	.0419	.3988	.0085	.4120	.00211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0194	.0404	.0044	.0085	.0083	.0084	.0430	.0809
Stddev	.0005	.0004	.0003	.0002	.0002	.0000	.0001	.0013
%RSD	2.716	.9735	7.874	2.876	1.816	.0345	.1902	1.558
#1	.0197	.0406	.0046	.0083	.0084	.0084	.0429	.0818
#2	.0190	.0401	.0041	.0086	.0082	.0084	.0430	.0800
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2934.7	76503.	4875.9
Stddev	20.5	11.	8.4
%RSD	.69948	.01455	.17179
#1	2920.1	76511.	4870.0
#2	2949.2	76495.	4881.9

Sample Name: LLCCV-TCLP Acquired: 9/23/2014 10:25:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0014	-.0008	.0028	.2003	-.00002	.0004	.0000
Stddev	.0000	.0013	.0005	.0023	.0001	.00008	.0009	.0000
%RSD	5.673	97.17	66.14	81.78	.0369	410.11	220.4	19.40
#1	.0006	.0004	-.0012	.0044	.2003	.00003	.0010	.0000
#2	.0007	.0023	-.0004	.0012	.2002	-.00007	-.0002	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0058	.0014	.0000	.0004	.0000	.0002	.0024
Stddev	.0001	.0002	.0000	.0006	.0003	.0002	.0000	.0007
%RSD	83.08	3.711	2.245	2040.	74.29	1679.	3.138	30.40
#1	.0001	.0057	.0014	-.0004	.0006	-.0001	.0002	.0030
#2	.0000	.0060	.0013	.0005	.0002	.0001	.0002	.0019
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.0012	-.0149	.0003	.0005	.0001	.0011	.0001
Stddev	.0004	.0020	.0073	.0000	.0001	.0000	.0010	.0002
%RSD	58.29	162.3	49.05	14.52	11.32	43.41	96.12	327.8
#1	-.0011	-.0026	-.0201	.0003	.0005	.0001	.0003	-.0001
#2	-.0004	.0002	-.0097	.0003	.0006	.0001	.0018	.0002
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLCCV-TCLP Acquired: 9/23/2014 10:25:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0027	-.0290	.0022	.0101	.0002	.0054	.00005
Stddev	.0000	.0022	.0208	.0009	.0010	.0000	.0090	.00005
%RSD	7.113	82.68	71.74	40.36	10.26	17.83	167.2	98.825
#1	.0002	.0011	-.0437	.0016	.0109	.0002	.0118	.00009
#2	.0002	.0043	-.0143	.0029	.0094	.0003	-.0010	.00002
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0002	.0000	.0007	.1977	.1952	-.0001	-.0018
Stddev	.0002	.0001	.000	.0002	.0006	.0000	.0013	.0031
%RSD	15.30	57.76	2296.	30.20	.2823	.0076	1255.	166.6
#1	-.0016	-.0003	-.0003	.0005	.1973	.1952	.0008	-.0040
#2	-.0013	-.0001	.0002	.0008	.1981	.1952	-.0010	.0003
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2903.4	75600.	4825.2
Stddev	1.5	163.	6.1
%RSD	.05016	.21565	.12670
#1	2904.4	75715.	4820.9
#2	2902.3	75484.	4829.6

Sample Name: KQ1411661-04 Acquired: 9/23/2014 10:28:29 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4 K1409762-LCSS

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.68	.3680	.5238	1.566	.37131	.6865	.8882	.8800
#1	34.67	.3671	.5232	1.566	.37213	.6890	.8886	.8817
#2	34.70	.3689	.5244	1.566	.37048	.6839	.8878	.8783

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.80	.6842	.6396	.4894	.5277	54.82	.5531	.0367
#1	33.82	.6846	.6402	.4892	.5282	54.84	.5566	.0371
#2	33.77	.6839	.6389	.4897	.5273	54.80	.5496	.0362

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.45	1.590	.6810	.7453	2.621	13.57	.7353	3.147
#1	14.45	1.593	.6825	.7453	2.624	13.60	.7371	3.146
#2	14.46	1.587	.6794	.7453	2.619	13.53	.7335	3.149

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2034	14.80	.49761	.8676	.5281	1.266	.4873	.7701
#1	.2044	14.80	.49683	.8698	.5277	1.264	.4882	.7700
#2	.2023	14.81	.49839	.8655	.5285	1.268	.4864	.7702

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7696	.0035	1.273
#1	.7696	.0019	1.273
#2	.7696	.0051	1.274

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2966.2	77681.	5045.5
#1	2962.8	77801.	5056.4
#2	2969.6	77561.	5034.6

Sample Name: K1409762-001 Acquired: 9/23/2014 10:30:45 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.26	-.0006	.0341	.5700	.00138	.0053	.0071	.0070
#1	41.16	-.0013	.0350	.5693	.00135	.0047	.0072	.0070
#2	41.37	.0000	.0332	.5707	.00141	.0059	.0070	.0069

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.17	.0945	.0286	.0686	.0765	74.52	.3211	.0643
#1	48.10	.0943	.0287	.0687	.0769	74.49	.3220	.0665
#2	48.23	.0947	.0286	.0684	.0760	74.55	.3201	.0622

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.09	1.519	.0028	.0786	6.215	9.750	.0061	3.592
#1	22.10	1.512	.0029	.0784	6.216	9.770	.0060	3.605
#2	22.07	1.526	.0027	.0788	6.215	9.731	.0061	3.579

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.4060	.17664	-.0008	.0197	3.043	.1302	.7105
#1	.0004	.4095	.17638	-.0018	.0189	3.035	.1305	.7108
#2	.0001	.4024	.17690	.0002	.0205	3.050	.1299	.7101

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7173	-.0004	.8818
#1	.7160	.0019	.8810
#2	.7187	-.0027	.8826

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2980.2	77824.	5082.3
#1	2978.3	77998.	5088.3
#2	2982.2	77649.	5076.3

Sample Name: K1409762-001L Acquired: 9/23/2014 10:33:07 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 20 Test Type: Sample Type:
Comment: EM 092314A 1/20

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.309	-.0010	.0069	.1206	.00027	.0013	.0016	.0015
#1	8.326	.0007	.0088	.1204	.00031	.0013	.0016	.0014
#2	8.291	-.0028	.0050	.1207	.00023	.0013	.0016	.0015

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.28	.0199	.0063	.0149	.0156	16.01	.0700	.0123
#1	10.24	.0201	.0064	.0149	.0155	15.99	.0698	.0119
#2	10.32	.0197	.0063	.0148	.0157	16.02	.0703	.0126

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.272	.3219	.0007	.0172	1.332	1.936	.0039	.7398
#1	4.258	.3222	.0006	.0173	1.335	1.930	.0037	.7583
#2	4.287	.3217	.0007	.0171	1.330	1.941	.0041	.7213

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0864	.03725	-.0004	.0038	.6312	.0271	.1547
#1	.0007	.0940	.03722	.0000	.0038	.6320	.0270	.1548
#2	.0009	.0789	.03727	-.0008	.0037	.6305	.0272	.1546

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1535	.0009	.1847
#1	.1532	.0016	.1827
#2	.1537	.0002	.1867

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2939.0	76528.	4888.3
#1	2930.2	76396.	4885.3
#2	2947.8	76661.	4891.3

Sample Name: K1409762-001D Acquired: 9/23/2014 10:35:32 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.95	.0000	.0338	.5677	.00135	.0035	.0071	.0071
#1	38.98	-.0005	.0370	.5697	.00145	.0033	.0072	.0071
#2	38.92	.0004	.0305	.5657	.00126	.0037	.0071	.0071

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.91	.0906	.0284	.0685	.0747	71.95	.3224	.0606
#1	48.14	.0898	.0282	.0685	.0742	72.11	.3230	.0598
#2	47.67	.0914	.0285	.0686	.0751	71.79	.3218	.0613

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.05	1.495	.0024	.0773	6.182	9.398	.0087	3.351
#1	20.88	1.494	.0023	.0775	6.183	9.357	.0082	3.300
#2	21.23	1.495	.0026	.0770	6.181	9.439	.0093	3.402

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.3587	.17354	-.0009	.0185	2.900	.1233	.7048
#1	.0007	.3566	.17318	-.0014	.0188	2.899	.1241	.7039
#2	.0006	.3608	.17390	-.0005	.0182	2.902	.1225	.7056

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7003	.0003	.8702
#1	.7003	.0013	.8652
#2	.7004	-.0007	.8752

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2940.6	76778.	5019.3
#1	2941.0	76686.	4993.7
#2	2940.2	76870.	5044.9

Sample Name: K1409762-001S Acquired: 9/23/2014 10:37:54 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.61	.1076	.2819	1.068	.02584	.2401	.0307	.0304
#1	40.57	.1080	.2814	1.066	.02593	.2412	.0308	.0305
#2	40.64	.1073	.2824	1.070	.02576	.2390	.0306	.0303

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.38	.1892	.2662	.1857	.2011	72.44	.5507	.0602
#1	50.18	.1906	.2660	.1852	.2010	72.40	.5506	.0612
#2	50.58	.1878	.2665	.1862	.2012	72.48	.5508	.0591

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.84	1.734	.2486	.3121	6.179	12.03	.2335	3.661
#1	24.00	1.739	.2484	.3122	6.186	12.08	.2352	3.657
#2	23.67	1.728	.2488	.3120	6.173	11.99	.2318	3.664

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247	3.007	.17317	.2288	.0178	3.009	.3727	.9345
#1	.0244	3.028	.17380	.2269	.0185	3.013	.3734	.9332
#2	.0251	2.986	.17254	.2307	.0170	3.006	.3719	.9357

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9364	.0033	.8750
#1	.9358	.0016	.8735
#2	.9371	.0050	.8765

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2960.7	77156.	5061.6
#1	2959.4	77017.	5084.6
#2	2962.0	77294.	5038.6

Sample Name: K1409762-001SD Acquired: 9/23/2014 10:40:08 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.91	.1039	.2855	1.083	.02612	.2403	.0310	.0308
#1	41.00	.1047	.2850	1.084	.02632	.2406	.0311	.0307
#2	40.82	.1031	.2861	1.082	.02591	.2400	.0310	.0308

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.28	.1934	.2703	.1885	.2021	74.44	.5585	.0609
#1	51.35	.1934	.2704	.1882	.2018	74.50	.5594	.0615
#2	51.22	.1934	.2702	.1889	.2024	74.38	.5576	.0603

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.17	1.751	.2534	.3175	6.256	12.14	.2328	3.036
#1	24.12	1.754	.2539	.3177	6.264	12.19	.2329	3.025
#2	24.21	1.747	.2530	.3173	6.248	12.09	.2328	3.047

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0245	3.048	.17603	.2335	.0188	3.015	.3806	.9430
#1	.0243	3.036	.17619	.2328	.0182	3.018	.3814	.9430
#2	.0247	3.060	.17587	.2342	.0194	3.013	.3798	.9430

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9401	.0027	.8768
#1	.9412	.0038	.8814
#2	.9391	.0015	.8723

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2946.6	76533.	5032.6
#1	2945.8	76477.	5028.6
#2	2947.3	76588.	5036.7

Sample Name: CCVB Acquired: 9/23/2014 10:42:24 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.624	9.857	-.0002	.9973	10.08	-.00014	.0013	.0000
Stddev	.005	.022	.0019	.0040	.11	.00001	.0004	.000
%RSD	.0617	.2187	901.1	.4042	1.077	6.3006	30.71	137.9
#1	7.628	9.842	-.0015	.9944	10.16	-.00014	.0010	.0000
#2	7.621	9.873	.0011	1.000	10.00	-.00015	.0016	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.04	9.369	.0001	.0003	-.0003	-.0002	9.939
Stddev	.0001	.09	.194	.0004	.0001	.0001	.0007	.053
%RSD	120.2	.9328	2.072	375.5	54.30	21.91	365.4	.5341
#1	.0000	10.10	9.507	-.0002	.0002	-.0004	-.0007	9.976
#2	.0001	9.970	9.232	.0004	.0004	-.0003	.0003	9.901
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	.9908	9.895	9.401	9.797	.9734	.9713	-.0001
Stddev	.0010	.0114	.022	.058	.093	.0017	.0121	.0001
%RSD	58.71	1.152	.2230	.6201	.9503	.1770	1.246	105.8
#1	-.0025	.9827	9.879	9.442	9.731	.9722	.9627	.0000
#2	-.0010	.9989	9.911	9.360	9.863	.9746	.9798	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 10:42:24 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	10.04	9.991	.0014	9.896	.0011	9.965	.97821
Stddev	.0003	.02	.096	.0011	.105	.0004	.103	.00172
%RSD	79.22	.2390	.9577	79.48	1.064	36.81	1.034	.17604
#1	.0005	10.05	9.923	.0022	9.821	.0008	9.893	.97699
#2	.0001	10.02	10.06	.0006	9.970	.0013	10.04	.97943
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0002	.0010	.0019	.0002	.0001	1.007	.9979
Stddev	.0005	.0005	.0002	.0002	.0000	.0000	.000	.0081
%RSD	29.18	218.8	14.92	8.216	8.130	16.27	.0423	.8123
#1	-.0019	.0006	.0009	.0020	.0002	.0001	1.008	1.004
#2	-.0013	-.0001	.0011	.0018	.0003	.0001	1.007	.9922
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2927.6	75750.	4842.6
Stddev	2.5	205.	46.5
%RSD	.08527	.27071	.96017
#1	2925.8	75895.	4809.7
#2	2929.4	75605.	4875.4

Sample Name: CCVA Acquired: 9/23/2014 10:45:00 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2576	.2501	.2488	.2542	.2576	.24638	.2455	.2530
Stddev	.0001	.0000	.0003	.0018	.0010	.00044	.0006	.0003
%RSD	.0349	.0005	.1103	.7009	.4030	.17997	.2556	.1052
#1	.2576	.2501	.2486	.2555	.2569	.24606	.2451	.2529
#2	.2575	.2501	.2490	.2530	.2584	.24669	.2459	.2532
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538	.5180	.4900	.2509	.2531	.2538	.2495	.2590
Stddev	.0001	.0027	.0017	.0005	.0001	.0003	.0007	.0021
%RSD	.0457	.5286	.3491	.2086	.0252	.1138	.2665	.8264
#1	.2537	.5199	.4888	.2505	.2531	.2540	.2490	.2605
#2	.2539	.5160	.4912	.2513	.2530	.2536	.2499	.2575
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2530	-.0026	.2593	.2485	.2493	.2479	.2474	.2520
Stddev	.0010	.0002	.0170	.0008	.0002	.0008	.0012	.0000
%RSD	.4134	6.190	6.570	.3416	.0810	.3042	.5008	.0104
#1	.2537	-.0025	.2713	.2479	.2494	.2473	.2483	.2521
#2	.2522	-.0027	.2472	.2491	.2492	.2484	.2466	.2520
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 10:45:00 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2518	.0017	2.492	.2501	.1319	.2473	.2575	.00016
Stddev	.0000	.0001	.043	.0012	.0059	.0014	.0089	.00016
%RSD	.0125	7.002	1.734	.4736	4.438	.5723	3.465	99.580
#1	.2519	.0018	2.523	.2493	.1361	.2463	.2638	.00005
#2	.2518	.0016	2.461	.2510	.1278	.2483	.2512	.00027
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2541	.2533	.2501	.2481	.2528	.2503	.0042	-.0028
Stddev	.0003	.0019	.0004	.0006	.0002	.0000	.0002	.0027
%RSD	.0995	.7689	.1523	.2595	.0604	.0106	3.962	94.48
#1	.2543	.2519	.2498	.2476	.2529	.2502	.0041	-.0009
#2	.2540	.2547	.2503	.2485	.2527	.2503	.0043	-.0047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2906.6	75692.	4794.9
Stddev	5.2	25.	9.0
%RSD	.17861	.03297	.18864
#1	2910.3	75675.	4801.3
#2	2902.9	75710.	4788.5

Sample Name: CCB Acquired: 9/23/2014 10:47:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0008	-.0014	.0026	.0000	-.00008	.0017	.0000
Stddev	.0001	.0017	.0010	.0003	.000	.00013	.0005	.0000
%RSD	9.249	209.4	70.21	11.77	798.0	169.19	27.02	273.2
#1	.0012	.0020	-.0020	.0028	.0000	.00002	.0020	.0000
#2	.0010	-.0004	-.0007	.0024	.0000	-.00017	.0014	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0036	.0020	-.0004	.0001	.0001	.0000	.0038
Stddev	.000	.0071	.0002	.0003	.0000	.0000	.0003	.0022
%RSD	245.3	196.6	10.55	66.44	45.06	31.86	4296.	58.37
#1	.0000	.0014	.0018	-.0002	.0001	.0001	.0002	.0022
#2	-.0001	-.0087	.0021	-.0006	.0000	.0001	-.0002	.0054
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.0012	-.0069	.0008	.0013	.0002	-.0006	.0003
Stddev	.0007	.0005	.0291	.0000	.0008	.0000	.0009	.0004
%RSD	99.38	40.33	421.4	5.964	64.49	3.869	150.7	144.0
#1	-.0002	.0008	.0137	.0008	.0019	.0002	.0000	.0000
#2	-.0011	.0015	-.0275	.0008	.0007	.0002	-.0012	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 10:47:13 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0010	-.0353	.0021	.0072	.0005	.0001	.00020
Stddev	.0002	.0021	.0072	.0012	.0046	.0005	.0134	.00011
%RSD	912.7	215.7	20.56	58.53	63.78	109.6	17940.	56.513
#1	.0001	-.0005	-.0301	.0012	.0105	.0008	-.0094	.00027
#2	-.0001	.0025	-.0404	.0030	.0040	.0001	.0095	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0012	.0002	.0004	.0001	.0001	-.0008	.0008
Stddev	.0000	.0009	.0002	.0003	.0000	.0001	.0009	.0016
%RSD	.9187	78.97	80.70	78.74	5.607	78.35	120.3	211.5
#1	-.0014	-.0019	.0001	.0002	.0001	.0002	-.0014	-.0004
#2	-.0014	-.0005	.0003	.0006	.0001	.0000	-.0001	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2882.3	75158.	4757.2
Stddev	.9	84.	6.0
%RSD	.03038	.11138	.12529
#1	2881.7	75217.	4753.0
#2	2882.9	75098.	4761.4

Sample Name: K1409762-001A Acquired: 9/23/2014 10:49:40 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4 A=0.1/10mL CICV-1,3 + Sb 1000ppm

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.44	8.902	4.665	9.916	.23122	.0032	2.208	2.212
#1	48.60	8.889	4.666	9.978	.23156	.0038	2.205	2.212
#2	48.29	8.915	4.664	9.855	.23087	.0025	2.211	2.211

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	71.07	1.014	2.257	1.174	1.242	77.96	4.588	.0609
#1	71.28	1.013	2.252	1.173	1.241	77.90	4.594	.0611
#2	70.87	1.016	2.262	1.175	1.242	78.02	4.581	.0608

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.67	3.708	.0018	2.255	6.316	33.62	4.188	3.527
#1	44.42	3.703	.0015	2.253	6.326	33.51	4.190	3.467
#2	44.92	3.712	.0021	2.257	6.305	33.74	4.186	3.587

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.103	24.71	.17251	4.230	.0187	3.019	2.462	2.910
#1	1.102	24.56	.17238	4.226	.0184	3.019	2.461	2.905
#2	1.103	24.86	.17265	4.233	.0189	3.018	2.463	2.914

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.898	.0270	.8749
#1	2.896	.0271	.8773
#2	2.900	.0270	.8725

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2916.9	75626.	5020.0
#1	2918.5	75612.	5006.6
#2	2915.3	75640.	5033.4

Sample Name: K1409762-002 Acquired: 9/23/2014 10:52:02 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.82	.0027	.0278	.5730	.00147	.0030	.0050	.0050
#1	42.76	.0042	.0266	.5713	.00148	.0022	.0050	.0050
#2	42.87	.0012	.0289	.5746	.00146	.0038	.0049	.0050

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.03	.0953	.0292	.0691	.0752	76.07	.2461	.0630
#1	13.99	.0950	.0291	.0692	.0757	75.86	.2446	.0606
#2	14.07	.0955	.0292	.0689	.0747	76.29	.2477	.0654

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.65	1.479	.0014	.0905	5.826	10.51	.0080	3.732
#1	21.67	1.478	.0015	.0899	5.829	10.46	.0068	3.739
#2	21.64	1.479	.0013	.0910	5.822	10.56	.0092	3.725

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.3406	.14049	-.0012	.0184	3.134	.1314	.5461
#1	-.0001	.3391	.14001	-.0026	.0182	3.135	.1314	.5456
#2	.0006	.3421	.14097	.0003	.0187	3.133	.1314	.5466

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.5401	-.0031	.5012
#1	.5394	-.0025	.4945
#2	.5409	-.0038	.5078

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2947.8	77290.	4986.5
#1	2943.6	77265.	5003.3
#2	2952.0	77315.	4969.7

Sample Name: K1409762-003 Acquired: 9/23/2014 10:54:26 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.91	.0007	.0275	.5659	.00109	.0032	.0072	.0072
#1	36.94	-.0012	.0290	.5672	.00118	.0024	.0073	.0071
#2	36.88	.0027	.0260	.5646	.00099	.0041	.0072	.0072

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.14	.0828	.0234	.0495	.0539	63.73	.3191	.0564
#1	14.19	.0824	.0238	.0493	.0539	63.91	.3206	.0573
#2	14.08	.0832	.0231	.0496	.0539	63.55	.3175	.0554

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.64	1.311	.0019	.0593	5.219	10.02	.0078	3.216
#1	18.63	1.305	.0018	.0593	5.219	10.05	.0105	3.200
#2	18.64	1.317	.0019	.0593	5.219	10.000	.0050	3.232

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.3119	.14838	-.0015	.0178	2.788	.1113	.6675
#1	.0000	.3249	.14886	-.0015	.0170	2.783	.1114	.6685
#2	.0003	.2989	.14789	-.0016	.0186	2.793	.1113	.6664

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6626	-.0020	.9722
#1	.6626	-.0029	.9728
#2	.6625	-.0011	.9717

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2946.5	77147.	4996.6
#1	2942.1	77358.	4983.3
#2	2950.9	76937.	5009.9

Sample Name: K1409762-004 Acquired: 9/23/2014 10:56:52 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.55	.0016	.0278	.5769	.00125	.0031	.0072	.0071
#1	38.59	.0034	.0275	.5766	.00125	.0036	.0072	.0072
#2	38.51	-.0002	.0281	.5771	.00125	.0025	.0072	.0071

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.93	.0883	.0243	.0510	.0563	65.51	.3366	.0615
#1	13.92	.0875	.0244	.0508	.0567	65.59	.3352	.0609
#2	13.93	.0891	.0242	.0513	.0560	65.43	.3380	.0621

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.71	1.347	.0016	.0617	5.017	10.21	.0086	3.247
#1	19.75	1.345	.0016	.0616	5.008	10.23	.0077	3.286
#2	19.67	1.350	.0015	.0617	5.026	10.19	.0095	3.208

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.3140	.15305	-.0023	.0169	2.860	.1147	.6589
#1	.0005	.3110	.15369	-.0027	.0166	2.858	.1154	.6577
#2	-.0002	.3170	.15241	-.0019	.0171	2.863	.1141	.6601

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6631	.0017	.9687
#1	.6618	.0004	.9700
#2	.6645	.0029	.9673

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2998.4	77986.	5069.1
#1	3000.5	78129.	5080.5
#2	2996.4	77844.	5057.6

Sample Name: K1409762-005 Acquired: 9/23/2014 10:59:18 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.57	.0034	.0276	.5637	.00108	.0031	.0068	.0067
#1	35.74	.0029	.0273	.5662	.00109	.0024	.0067	.0067
#2	35.41	.0039	.0278	.5612	.00107	.0037	.0068	.0067

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.60	.0830	.0234	.0530	.0568	63.80	.3075	.0556
#1	14.67	.0828	.0233	.0527	.0573	64.01	.3076	.0562
#2	14.53	.0832	.0236	.0534	.0562	63.58	.3075	.0550

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.75	1.291	.0016	.0595	5.416	10.04	.0063	3.081
#1	18.79	1.295	.0016	.0596	5.412	10.16	.0070	3.084
#2	18.71	1.287	.0016	.0594	5.421	9.927	.0056	3.077

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.2810	.15063	.0006	.0172	2.692	.1103	.6455
#1	.0002	.2890	.15077	.0014	.0176	2.694	.1106	.6447
#2	.0006	.2730	.15048	-.0002	.0168	2.690	.1100	.6463

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6434	.0026	.9195
#1	.6437	.0029	.9226
#2	.6431	.0023	.9164

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2965.2	76857.	5003.0
#1	2964.2	76991.	5010.1
#2	2966.2	76723.	4996.0

Sample Name: K1409762-006 Acquired: 9/23/2014 11:01:44 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.43	.0017	.0333	.5774	.00151	.0094	.0081	.0081
#1	40.46	.0013	.0324	.5797	.00152	.0113	.0081	.0082
#2	40.41	.0021	.0342	.5751	.00149	.0074	.0081	.0080

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.73	.0956	.0294	.0789	.0838	75.75	.3323	.0615
#1	49.79	.0952	.0296	.0789	.0841	75.74	.3338	.0618
#2	49.66	.0961	.0291	.0789	.0835	75.76	.3309	.0613

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.62	1.737	.0025	.0789	7.383	9.856	.0091	3.298
#1	21.50	1.736	.0027	.0793	7.393	9.904	.0101	3.279
#2	21.73	1.739	.0022	.0786	7.373	9.807	.0080	3.317

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.3461	.20457	-.0004	.0193	2.915	.1328	.7887
#1	.0000	.3500	.20421	.0000	.0198	2.917	.1330	.7894
#2	.0004	.3421	.20494	-.0008	.0189	2.914	.1326	.7881

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7817	.0002	1.137
#1	.7819	.0015	1.137
#2	.7814	-.0011	1.137

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2928.1	76193.	4973.8
#1	2925.1	76248.	4965.6
#2	2931.1	76137.	4982.0

Sample Name: K1409762-007 Acquired: 9/23/2014 11:04:05 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.75	.0168	.0527	2.222	.00096	.0050	.0239	.0239
#1	24.79	.0194	.0503	2.226	.00095	.0058	.0239	.0240
#2	24.70	.0142	.0551	2.218	.00097	.0041	.0240	.0239

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	221.9	.0828	.0256	.3810	.4021	120.8	1.166	.0471
#1	222.2	.0826	.0258	.3804	.4029	121.2	1.165	.0462
#2	221.5	.0829	.0253	.3816	.4013	120.3	1.167	.0481

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	120.4	1.589	.0204	.0693	6.508	4.425	.0107	4.814
#1	120.8	1.592	.0203	.0691	6.500	4.394	.0109	4.785
#2	120.0	1.586	.0205	.0695	6.516	4.457	.0105	4.844

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	.5771	.26827	-.0007	.0540	2.054	.1538	5.825
#1	.0048	.5794	.26946	.0003	.0542	2.053	.1533	5.833
#2	.0047	.5747	.26708	-.0017	.0539	2.056	.1544	5.818

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0048	23.83
#1	5.693	.0040	23.82
#2	5.701	.0056	23.84

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2815.3	73551.	4930.4
#1	2810.7	73647.	4916.5
#2	2819.8	73454.	4944.2

Sample Name: K1409762-008 Acquired: 9/23/2014 11:06:29 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.98	.0073	.0550	2.714	.00101	.0061	.0250	.0251
#1	25.05	.0084	.0549	2.719	.00097	.0071	.0250	.0249
#2	24.91	.0063	.0551	2.710	.00105	.0051	.0250	.0252

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	243.3	.0753	.0254	.3051	.3230	115.9	1.277	.0434
#1	243.3	.0755	.0253	.3046	.3233	115.7	1.274	.0426
#2	243.3	.0751	.0255	.3055	.3228	116.1	1.280	.0443

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	136.5	1.623	.0227	.0675	6.143	4.510	.0133	4.824
#1	135.7	1.622	.0225	.0674	6.130	4.540	.0129	4.835
#2	137.3	1.624	.0228	.0677	6.156	4.481	.0136	4.814

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.5798	.26918	-.0006	.0384	2.017	.1494	6.182
#1	.0044	.5798	.26834	-.0013	.0383	2.019	.1501	6.190
#2	.0040	.5798	.27002	.0001	.0386	2.015	.1488	6.174

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0063	13.55
#1	6.118	.0066	13.55
#2	6.139	.0061	13.55

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2843.6	73894.	4970.5
#1	2839.7	73786.	4976.7
#2	2847.5	74002.	4964.3

Sample Name: K1409762-009 Acquired: 9/23/2014 11:08:52 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.89	.0222	.0551	2.114	.00109	.0071	.0226	.0223
#1	26.99	.0213	.0565	2.123	.00114	.0075	.0225	.0223
#2	26.79	.0231	.0537	2.105	.00103	.0067	.0227	.0224

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	194.4	.0899	.0287	.4356	.4603	125.0	1.073	.0496
#1	194.6	.0900	.0286	.4345	.4601	125.5	1.073	.0521
#2	194.2	.0898	.0289	.4367	.4604	124.6	1.073	.0470

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	106.5	1.668	.0186	.0730	6.611	4.803	.0117	5.240
#1	106.8	1.670	.0183	.0733	6.606	4.849	.0121	5.271
#2	106.2	1.667	.0189	.0727	6.616	4.758	.0112	5.208

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.6007	.26451	-.0013	.0615	2.267	.1604	5.601
#1	.0093	.5926	.26657	-.0011	.0616	2.271	.1605	5.599
#2	.0090	.6088	.26246	-.0015	.0613	2.263	.1603	5.603

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0012	23.72
#1	5.508	-.0004	23.72
#2	5.501	.0028	23.72

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2835.4	73985.	4949.2
#1	2838.9	73866.	4935.3
#2	2832.0	74105.	4963.0

Sample Name: K1409762-010 Acquired: 9/23/2014 11:11:09 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.60	.0143	.0585	2.360	.00108	.0060	.0261	.0261
#1	26.67	.0120	.0584	2.359	.00104	.0060	.0260	.0261
#2	26.53	.0166	.0586	2.362	.00112	.0060	.0263	.0261

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	224.7	.0828	.0279	.3670	.3874	118.3	1.331	.0494
#1	224.9	.0825	.0277	.3665	.3874	118.6	1.331	.0481
#2	224.4	.0830	.0281	.3676	.3874	118.0	1.331	.0507

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	121.9	1.563	.0192	.0720	6.205	4.693	.0123	4.374
#1	122.2	1.567	.0193	.0723	6.200	4.658	.0117	4.407
#2	121.6	1.560	.0191	.0718	6.209	4.729	.0128	4.340

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.5260	.26241	-.0009	.0467	2.173	.1459	5.984
#1	.0060	.5275	.26285	-.0009	.0467	2.174	.1464	5.978
#2	.0066	.5246	.26198	-.0009	.0467	2.172	.1455	5.990

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0052	24.17
#1	5.850	.0031	24.21
#2	5.835	.0073	24.14

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2811.9	73211.	4893.1
#1	2814.4	73115.	4883.8
#2	2809.4	73308.	4902.3

Sample Name: CCVB Acquired: 9/23/2014 11:13:33 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.710	9.795	-.0008	1.004	10.07	.00001	.0010	.0000
Stddev	.001	.042	.0005	.003	.04	.00003	.0000	.000
%RSD	.0188	.4324	63.41	.2884	.3472	205.91	3.450	68.45
#1	7.709	9.825	-.0012	1.002	10.04	.00003	.0010	.0000
#2	7.711	9.765	-.0005	1.006	10.09	-.00001	.0011	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	10.04	9.456	.0001	.0004	-.0002	.0001	9.954
Stddev	.0001	.01	.010	.0001	.0001	.0001	.0003	.008
%RSD	73.15	.1411	.1052	108.4	16.02	54.12	528.6	.0790
#1	.0001	10.05	9.463	.0000	.0003	-.0001	-.0002	9.960
#2	.0000	10.03	9.449	.0002	.0004	-.0003	.0003	9.949
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	.9969	10.03	9.536	9.782	.9820	.9889	.0000
Stddev	.0017	.0025	.03	.050	.007	.0019	.0015	.0001
%RSD	96.73	.2493	.2525	.5196	.0742	.1972	.1564	349.2
#1	-.0030	.9987	10.01	9.571	9.787	.9834	.9878	-.0001
#2	-.0006	.9951	10.05	9.501	9.776	.9807	.9900	.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 11:13:33 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	10.14	9.942	.0046	9.842	.0002	9.949	.98460
Stddev	.0001	.01	.020	.0001	.006	.0006	.022	.00115
%RSD	16.40	.0830	.2009	2.481	.0592	290.9	.2208	.11632
#1	.0006	10.13	9.928	.0047	9.838	-.0002	9.933	.98379
#2	.0005	10.14	9.957	.0046	9.846	.0006	9.964	.98541
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0008	.0010	.0015	.0003	.0002	1.025	1.003
Stddev	.0008	.0000	.0000	.0000	.0001	.0000	.006	.001
%RSD	51.90	5.965	.8726	.3472	18.96	3.842	.5865	.0634
#1	-.0010	.0008	.0010	.0015	.0003	.0002	1.021	1.003
#2	-.0022	.0008	.0010	.0015	.0003	.0002	1.029	1.002
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2901.8	74631.	4802.7
Stddev	1.0	197.	4.9
%RSD	.03611	.26410	.10192
#1	2902.6	74492.	4799.3
#2	2901.1	74770.	4806.2

Sample Name: CCVA Acquired: 9/23/2014 11:16:08 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2585	.2506	.2491	.2570	.2584	.24708	.2454	.2546
Stddev	.0008	.0023	.0022	.0024	.0001	.00043	.0007	.0008
%RSD	.3265	.9100	.8996	.9451	.0459	.17460	.2654	.3167
#1	.2591	.2522	.2507	.2587	.2585	.24738	.2459	.2552
#2	.2579	.2490	.2475	.2552	.2583	.24677	.2450	.2540
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2543	.5253	.4942	.2511	.2552	.2567	.2502	.2570
Stddev	.0010	.0013	.0003	.0002	.0003	.0009	.0004	.0015
%RSD	.3983	.2464	.0674	.0812	.1188	.3312	.1560	.5751
#1	.2550	.5244	.4939	.2513	.2554	.2573	.2505	.2560
#2	.2536	.5262	.4944	.2510	.2550	.2561	.2500	.2581
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2534	-.0027	.2537	.2516	.2520	.2497	.2511	.2534
Stddev	.0011	.0006	.0139	.0008	.0022	.0008	.0010	.0005
%RSD	.4434	20.37	5.475	.3354	.8565	.3143	.4081	.1932
#1	.2526	-.0023	.2635	.2510	.2536	.2492	.2504	.2537
#2	.2542	-.0031	.2439	.2522	.2505	.2503	.2518	.2530
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 11:16:08 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2541	.0022	2.508	.2498	.1364	.2459	.2639	.00008
Stddev	.0013	.0020	.022	.0002	.0068	.0004	.0065	.00012
%RSD	.5299	91.02	.8938	.0639	4.961	.1776	2.455	162.50
#1	.2551	.0008	2.524	.2499	.1316	.2455	.2685	-.00001
#2	.2532	.0036	2.492	.2497	.1412	.2462	.2594	.00016
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2561	.2546	.2525	.2495	.2548	.2510	.0041	.0019
Stddev	.0001	.0003	.0012	.0019	.0012	.0009	.0001	.0018
%RSD	.0512	.1220	.4635	.7801	.4884	.3652	2.011	91.20
#1	.2560	.2543	.2517	.2481	.2557	.2517	.0041	.0007
#2	.2562	.2548	.2534	.2508	.2540	.2504	.0042	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2896.3	75080.	4789.5
Stddev	1.7	91.	13.0
%RSD	.05805	.12140	.27198
#1	2895.1	75144.	4798.8
#2	2897.5	75015.	4780.3

Sample Name: CCB Acquired: 9/23/2014 11:18:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0007	-.0023	-.0011	.0001	-.00007	.0009	.0000
Stddev	.0000	.0025	.0007	.0025	.0000	.00002	.0000	.000
%RSD	1.689	370.6	31.15	225.3	41.48	33.310	4.734	941.2
#1	.0002	.0011	-.0018	.0007	.0002	-.00006	.0009	.0000
#2	.0002	-.0025	-.0029	-.0029	.0001	-.00009	.0009	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0038	.0012	.0001	.0003	-.0002	.0000	.0034
Stddev	.0001	.0053	.0001	.0005	.0000	.0003	.0007	.0020
%RSD	216.3	139.1	9.311	583.9	14.42	176.1	102600.	58.31
#1	.0000	.0075	.0013	-.0003	.0003	.0000	-.0005	.0020
#2	-.0002	.0001	.0011	.0004	.0003	-.0004	.0005	.0048
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	-.0018	-.0050	.0005	.0022	.0001	.0007	.0001
Stddev	.0006	.0019	.0019	.0000	.0013	.0000	.0001	.0000
%RSD	38.43	104.3	37.48	4.489	60.22	59.68	15.28	30.56
#1	-.0012	-.0005	-.0037	.0004	.0031	.0000	.0006	.0001
#2	-.0022	-.0032	-.0063	.0005	.0012	.0001	.0007	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 11:18:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0015	-.0113	.0019	.0161	.0000	.0100	.00017
Stddev	.0001	.0012	.0062	.0034	.0057	.0003	.0101	.00002
%RSD	86.40	77.58	54.81	177.5	35.56	618.9	101.3	10.558
#1	-.0001	.0007	-.0069	.0043	.0120	.0002	.0171	.00018
#2	-.0002	.0024	-.0156	-.0005	.0201	-.0001	.0028	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	-.0011	.0000	.0003	.0001	.0000	-.0016	.0028
Stddev	.0004	.0004	.0000	.0002	.0000	.0000	.0018	.0001
%RSD	24.19	30.96	142.2	50.67	8.975	59.45	111.0	5.065
#1	-.0019	-.0014	.0000	.0005	.0001	.0001	-.0003	.0027
#2	-.0013	-.0009	.0000	.0002	.0001	.0000	-.0028	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2896.0	75696.	4785.3
Stddev	9.4	629.	16.8
%RSD	.32338	.83104	.35168
#1	2889.4	76141.	4797.2
#2	2902.7	75251.	4773.4

Sample Name: K1409762-011 Acquired: 9/23/2014 11:20:48 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.51	.0129	.0567	2.447	.00120	.0081	.0291	.0289
#1	26.56	.0119	.0561	2.436	.00113	.0078	.0290	.0291
#2	26.45	.0140	.0573	2.457	.00127	.0083	.0292	.0287

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	253.7	.0796	.0278	.3445	.3632	121.0	1.450	.0504
#1	252.5	.0795	.0277	.3446	.3632	120.3	1.448	.0505
#2	254.8	.0797	.0279	.3445	.3632	121.6	1.452	.0503

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	137.5	1.662	.0201	.0728	6.047	4.787	.0122	4.582
#1	137.1	1.665	.0198	.0728	6.066	4.798	.0139	4.571
#2	138.0	1.660	.0203	.0728	6.029	4.776	.0105	4.593

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.5227	.27167	-.0011	.0476	2.102	.1476	6.398
#1	.0047	.5154	.27122	-.0011	.0478	2.102	.1476	6.395
#2	.0036	.5300	.27213	-.0011	.0475	2.102	.1476	6.401

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0070	24.89
#1	6.276	.0079	24.92
#2	6.253	.0061	24.86

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2804.2	72988.	4896.4
#1	2808.8	72950.	4902.4
#2	2799.6	73025.	4890.5

Sample Name: K1409762-012 Acquired: 9/23/2014 11:23:11 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.28	.0215	.0563	2.141	.00099	.0089	.0268	.0265
#1	27.44	.0196	.0577	2.152	.00102	.0076	.0268	.0265
#2	27.12	.0233	.0550	2.131	.00096	.0103	.0267	.0265

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	233.9	.0850	.0288	.4401	.4712	126.0	1.371	.0515
#1	234.8	.0843	.0286	.4404	.4730	126.0	1.372	.0539
#2	233.0	.0856	.0289	.4397	.4694	126.1	1.371	.0492

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	125.5	1.678	.0213	.0736	6.254	4.809	.0130	4.648
#1	125.0	1.677	.0214	.0733	6.264	4.805	.0142	4.634
#2	125.9	1.679	.0213	.0738	6.245	4.812	.0118	4.662

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	.5610	.27441	.0003	.0615	2.144	.1475	6.445
#1	.0069	.5692	.27409	.0024	.0622	2.148	.1473	6.439
#2	.0061	.5527	.27473	-.0018	.0608	2.140	.1477	6.452

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0047	27.68
#1	6.382	.0053	27.67
#2	6.383	.0041	27.69

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2843.7	74028.	4905.6
#1	2842.7	74314.	4917.5
#2	2844.8	73742.	4893.8

Sample Name: K1409762-013 Acquired: 9/23/2014 11:25:33 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.31	.0013	.0352	.3687	.00115	.0021	.0084	.0083
#1	33.16	.0009	.0369	.3679	.00112	.0032	.0084	.0082
#2	33.46	.0018	.0336	.3694	.00117	.0010	.0084	.0083

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.98	.1148	.0215	.0709	.0771	60.47	.4363	.0492
#1	16.93	.1148	.0215	.0702	.0771	60.40	.4361	.0497
#2	17.03	.1149	.0214	.0716	.0771	60.54	.4365	.0486

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.95	1.375	.0014	.0575	5.556	5.816	.0055	2.932
#1	15.96	1.376	.0015	.0578	5.556	5.788	.0042	2.924
#2	15.95	1.375	.0012	.0572	5.556	5.843	.0068	2.939

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.3125	.11682	-.0014	.0195	2.437	.1077	.8236
#1	.0001	.3176	.11680	-.0011	.0199	2.435	.1080	.8242
#2	.0011	.3075	.11683	-.0018	.0190	2.438	.1074	.8230

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.8195	-.0019	.8989
#1	.8185	-.0022	.8992
#2	.8205	-.0015	.8986

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2964.5	77205.	4995.9
#1	2962.3	77033.	4980.6
#2	2966.8	77376.	5011.2

Sample Name: K1409762-014 Acquired: 9/23/2014 11:27:58 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.82	.0002	.0316	.5542	.00147	.0071	.0069	.0068
#1	40.65	.0020	.0288	.5541	.00140	.0079	.0070	.0069
#2	40.98	-.0017	.0343	.5542	.00153	.0064	.0069	.0068

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.31	.0938	.0282	.0722	.0798	74.01	.3070	.0594
#1	38.28	.0935	.0280	.0721	.0788	74.14	.3074	.0581
#2	38.34	.0940	.0284	.0722	.0809	73.88	.3067	.0607

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.95	1.629	.0022	.0745	6.977	9.534	.0087	3.338
#1	20.92	1.629	.0021	.0745	6.974	9.544	.0098	3.343
#2	20.97	1.629	.0023	.0745	6.979	9.524	.0076	3.333

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.3757	.18400	-.0004	.0190	2.912	.1324	.7057
#1	.0003	.3743	.18394	.0000	.0184	2.915	.1323	.7054
#2	-.0001	.3771	.18406	-.0009	.0197	2.909	.1325	.7060

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7079	-.0015	.9401
#1	.7074	-.0019	.9427
#2	.7084	-.0011	.9375

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2979.5	77427.	5008.2
#1	2980.0	77178.	5003.8
#2	2978.9	77677.	5012.7

Sample Name: K1409762-015 Acquired: 9/23/2014 11:30:23 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.17	.0016	.0327	.5426	.00148	.0066	.0072	.0071
#1	41.31	.0008	.0335	.5410	.00151	.0066	.0072	.0071
#2	41.03	.0024	.0320	.5443	.00145	.0066	.0071	.0071

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.19	.0942	.0289	.0735	.0804	75.20	.2928	.0620
#1	41.20	.0942	.0289	.0735	.0803	75.25	.2932	.0589
#2	41.17	.0942	.0289	.0735	.0804	75.16	.2925	.0650

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.23	1.659	.0020	.0763	7.165	9.755	.0073	3.458
#1	21.20	1.656	.0018	.0764	7.147	9.718	.0080	3.432
#2	21.27	1.662	.0021	.0761	7.184	9.792	.0067	3.484

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.3842	.19004	-.0016	.0200	2.981	.1350	.7158
#1	.0005	.3750	.18923	-.0011	.0203	2.986	.1345	.7145
#2	.0007	.3933	.19085	-.0022	.0197	2.977	.1354	.7171

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7107	-.0002	.9452
#1	.7105	-.0005	.9452
#2	.7109	.0000	.9452

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2948.0	76490.	4972.6
#1	2954.2	76476.	4967.0
#2	2941.7	76503.	4978.1

Sample Name: K1409762-016 Acquired: 9/23/2014 11:32:48 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.61	.0001	.0423	1.112	.00345	.0054	.0077	.0074
#1	73.46	.0006	.0436	1.110	.00350	.0030	.0077	.0075
#2	73.77	-.0004	.0411	1.114	.00340	.0077	.0077	.0073

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.07	.1517	.0493	.1126	.1309	109.0	.2909	.0856
#1	26.97	.1626	.0493	.1131	.1331	108.7	.2903	.0855
#2	27.17	.1408	.0493	.1120	.1288	109.4	.2915	.0856

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.06	3.540	.0029	.1077	6.265	10.48	.0106	3.166
#1	26.26	3.803	.0029	.1081	6.272	10.54	.0147	3.192
#2	25.85	3.276	.0030	.1073	6.258	10.41	.0064	3.140

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.9290	.79623	-.0023	.0191	3.282	.1840	1.038
#1	.0005	.9339	.79720	-.0015	.0196	3.529	.1972	1.037
#2	.0002	.9241	.79527	-.0030	.0187	3.034	.1709	1.040

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.074	.0033	1.828
#1	1.071	.0017	1.824
#2	1.076	.0048	1.833

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3063.3	74514.	5170.2
#1	3056.3	70465.	5215.5
#2	3070.3	78564.	5124.9

Sample Name: K1409762-017 Acquired: 9/23/2014 11:35:15 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	76.05	.0009	.0441	1.029	.00367	.0059	.0069	.0065
#1	76.63	.0018	.0429	1.030	.00362	.0043	.0069	.0065
#2	75.46	.0000	.0453	1.029	.00373	.0074	.0069	.0065

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.84	.1356	.0490	.1094	.1244	109.3	.2885	.0889
#1	26.81	.1352	.0494	.1091	.1249	109.4	.2876	.0883
#2	26.87	.1360	.0485	.1097	.1238	109.1	.2894	.0894

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.38	3.386	.0031	.1065	6.213	10.61	.0100	3.181
#1	25.37	3.369	.0030	.1064	6.222	10.56	.0124	3.157
#2	25.38	3.404	.0032	.1067	6.204	10.65	.0077	3.206

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.9637	.79574	-.0022	.0195	3.109	.1649	.9275
#1	.0008	.9631	.79707	-.0017	.0192	3.114	.1656	.9285
#2	.0012	.9642	.79440	-.0027	.0198	3.104	.1642	.9264

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9611	.0034	1.864
#1	.9613	.0016	1.861
#2	.9609	.0051	1.867

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3078.6	78852.	5185.1
#1	3079.0	78767.	5171.1
#2	3078.2	78937.	5199.0

Sample Name: K1409762-018 Acquired: 9/23/2014 11:37:48 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	77.61	-.0011	.0468	1.110	.00329	.0072	.0084	.0082
#1	77.59	-.0025	.0474	1.113	.00328	.0073	.0085	.0082
#2	77.64	.0003	.0462	1.107	.00331	.0071	.0083	.0083

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.64	.1505	.0513	.1124	.1284	113.5	.3324	.0949
#1	29.67	.1498	.0513	.1119	.1285	113.7	.3333	.0973
#2	29.60	.1512	.0512	.1129	.1283	113.4	.3315	.0925

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.75	3.398	.0031	.1130	6.563	11.16	.0100	3.403
#1	27.81	3.408	.0029	.1129	6.564	11.19	.0115	3.392
#2	27.70	3.387	.0033	.1131	6.563	11.14	.0085	3.415

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	1.014	.93111	-.0024	.0194	3.202	.1803	.7690
#1	.0011	1.007	.93228	-.0015	.0194	3.209	.1806	.7690
#2	.0013	1.021	.92994	-.0032	.0193	3.196	.1800	.7690

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7914	.0040	2.173
#1	.7930	.0025	2.175
#2	.7898	.0055	2.171

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3068.6	78481.	5221.1
#1	3071.8	78402.	5217.2
#2	3065.4	78560.	5225.0

Sample Name: K1409762-019 Acquired: 9/23/2014 11:40:21 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.78	.0018	.0368	.9244	.00280	.0052	.0042	.0041
#1	69.85	.0018	.0384	.9248	.00283	.0045	.0042	.0040
#2	69.70	.0018	.0351	.9239	.00277	.0058	.0043	.0042

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.23	.1471	.0493	.1066	.1210	110.0	.2221	.0789
#1	25.25	.1474	.0492	.1056	.1213	109.9	.2210	.0773
#2	25.20	.1469	.0493	.1076	.1206	110.1	.2231	.0805

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.88	2.807	.0031	.1208	6.091	10.69	.0057	3.668
#1	25.83	2.806	.0029	.1204	6.084	10.71	.0031	3.689
#2	25.94	2.809	.0032	.1212	6.098	10.66	.0083	3.648

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	1.009	.48570	-.0024	.0190	3.108	.1841	.6991
#1	.0006	1.018	.48382	-.0018	.0191	3.108	.1839	.6993
#2	.0009	.9993	.48758	-.0029	.0189	3.107	.1844	.6989

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7097	.0026	.9555
#1	.7081	.0039	.9605
#2	.7113	.0013	.9504

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3036.6	78546.	5091.8
#1	3036.1	78703.	5099.3
#2	3037.2	78389.	5084.3

Sample Name: K1409762-020 Acquired: 9/23/2014 11:42:49 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: EM 092314A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	79.09	.0028	.0509	1.165	.00264	.0092	.0146	.0149
#1	79.80	.0054	.0509	1.165	.00263	.0107	.0146	.0148
#2	78.37	.0003	.0509	1.165	.00266	.0077	.0147	.0150

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.11	.1772	.0480	.1394	.1539	110.1	.5670	.0756
#1	18.13	.1771	.0480	.1396	.1547	110.0	.5677	.0756
#2	18.08	.1772	.0480	.1392	.1531	110.2	.5662	.0756

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.85	2.632	.0056	.1261	10.11	12.50	.0059	3.392
#1	27.78	2.633	.0059	.1262	10.11	12.48	.0026	3.435
#2	27.93	2.630	.0053	.1259	10.10	12.51	.0092	3.349

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.8139	.23826	-.0003	.0274	3.223	.1783	12.42
#1	.0015	.8057	.23768	-.0017	.0270	3.224	.1793	12.41
#2	.0010	.8221	.23883	.0011	.0278	3.222	.1773	12.43

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0057	3.894
#1	12.11	.0038	3.890
#2	12.14	.0075	3.898

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3005.4	77872.	5093.8
#1	3000.9	77802.	5101.3
#2	3009.8	77942.	5086.2

Sample Name: CCVB Acquired: 9/23/2014 11:45:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.752	9.793	-.0018	.9966	10.20	-.00008	.0007	.0000
Stddev	.015	.066	.0015	.0039	.06	.00001	.0000	.000
%RSD	.1918	.6699	84.63	.3899	.5948	6.9929	6.546	65.27
#1	7.742	9.746	-.0007	.9939	10.25	-.00008	.0006	.0000
#2	7.763	9.839	-.0028	.9994	10.16	-.00009	.0007	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.13	9.394	-.0002	.0005	-.0001	.0003	9.977
Stddev	.0001	.00	.032	.0000	.0002	.0004	.0001	.023
%RSD	1598.	.0189	.3449	10.97	37.99	267.0	40.07	.2320
#1	-.0001	10.13	9.417	-.0002	.0007	.0001	.0002	9.993
#2	.0001	10.13	9.371	-.0002	.0004	-.0004	.0004	9.960
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.9854	9.928	9.597	9.605	.9762	.9694	.0001
Stddev	.0004	.0011	.079	.039	.018	.0047	.0021	.0001
%RSD	24.26	.1092	.7958	.4009	.1840	.4770	.2177	91.48
#1	-.0018	.9862	9.872	9.570	9.617	.9729	.9679	.0002
#2	-.0012	.9847	9.984	9.624	9.592	.9795	.9709	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 11:45:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	10.13	9.885	.0038	9.722	.0002	9.814	.97493
Stddev	.0000	.02	.040	.0003	.008	.0000	.007	.00132
%RSD	.3096	.2326	.4013	7.752	.0797	4.990	.0733	.13548
#1	.0007	10.11	9.914	.0036	9.728	.0002	9.819	.97586
#2	.0007	10.14	9.857	.0041	9.717	.0002	9.809	.97399
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	.0013	.0010	.0016	.0004	.0002	1.023	1.002
Stddev	.0001	.0001	.0001	.0006	.0000	.0000	.005	.005
%RSD	5.154	7.905	9.717	34.59	2.168	4.738	.5136	.5286
#1	-.0021	.0012	.0011	.0012	.0004	.0002	1.027	.9983
#2	-.0022	.0013	.0009	.0020	.0004	.0002	1.019	1.006
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2895.0	74641.	4762.5
Stddev	1.1	95.	5.4
%RSD	.03654	.12771	.11434
#1	2894.2	74573.	4758.7
#2	2895.7	74708.	4766.4

Sample Name: CCVA Acquired: 9/23/2014 11:47:53 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2532	.2538	.2473	.2507	.2498	.24613	.2443	.2480
Stddev	.0008	.0003	.0008	.0012	.0002	.00041	.0009	.0007
%RSD	.3311	.1164	.3124	.4822	.0769	.16738	.3522	.2726
#1	.2526	.2540	.2468	.2515	.2499	.24642	.2437	.2476
#2	.2538	.2536	.2479	.2498	.2496	.24584	.2449	.2485
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	.5040	.4766	.2424	.2487	.2496	.2501	.2492
Stddev	.0011	.0020	.0001	.0002	.0009	.0000	.0015	.0006
%RSD	.4635	.3888	.0175	.0697	.3532	.0110	.5902	.2283
#1	.2462	.5054	.4766	.2423	.2481	.2496	.2511	.2488
#2	.2478	.5026	.4767	.2425	.2493	.2496	.2490	.2496
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2459	.0005	.2514	.2449	.2460	.2405	.2386	.2469
Stddev	.0015	.0000	.0250	.0002	.0022	.0001	.0009	.0009
%RSD	.6302	1.199	9.933	.0994	.8877	.0491	.3897	.3642
#1	.2448	.0005	.2690	.2451	.2476	.2404	.2392	.2463
#2	.2470	.0005	.2337	.2447	.2445	.2406	.2379	.2476
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 11:47:53 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2465	.0035	2.477	.2474	.1310	.2452	.2610	.00019
Stddev	.0011	.0010	.009	.0015	.0010	.0002	.0050	.00013
%RSD	.4639	27.70	.3588	.6173	.7860	.0821	1.926	69.232
#1	.2457	.0028	2.483	.2485	.1317	.2451	.2645	.00029
#2	.2473	.0042	2.471	.2463	.1303	.2453	.2574	.00010
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2511	.2475	.2440	.2403	.2494	.2493	.0027	.0047
Stddev	.0007	.0001	.0005	.0007	.0013	.0001	.0004	.0022
%RSD	.2824	.0256	.2024	.3037	.5304	.0544	16.39	46.51
#1	.2506	.2474	.2437	.2398	.2485	.2492	.0030	.0063
#2	.2516	.2475	.2444	.2408	.2503	.2494	.0024	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2949.1	77369.	4865.8
Stddev	15.8	160.	7.7
%RSD	.53622	.20658	.15915
#1	2960.3	77482.	4860.3
#2	2937.9	77256.	4871.3

Sample Name: CCB Acquired: 9/23/2014 11:50:06 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0024	-.0021	.0007	.0002	-.00005	.0007	.0000
Stddev	.0002	.0011	.0001	.0040	.0003	.00000	.0010	.0001
%RSD	241.1	47.73	3.701	592.8	128.7	4.3532	147.8	572.6
#1	.0001	-.0016	-.0020	.0035	.0005	-.00005	.0014	.0001
#2	-.0003	-.0032	-.0022	-.0021	.0000	-.00006	.0000	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0037	.0004	-.0001	.0000	-.0001	-.0003	.0028
Stddev	.000	.0089	.0000	.0001	.001	.0000	.0001	.0017
%RSD	67.05	237.9	9.305	64.61	23070.	42.36	45.04	59.46
#1	.0000	.0101	.0004	-.0001	.0003	-.0001	-.0002	.0016
#2	.0000	-.0026	.0004	-.0002	-.0003	-.0001	-.0004	.0040
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0010	.0020	.0001	.0023	.0001	.0000	.0001
Stddev	.0001	.0014	.0137	.0000	.0006	.0000	.000	.0004
%RSD	82.11	142.0	693.3	23.24	27.78	1.202	186.5	347.3
#1	.0001	-.0020	.0117	.0001	.0019	.0001	-.0001	-.0002
#2	.0000	.0000	-.0077	.0001	.0028	.0001	.0000	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 11:50:06 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0020	-.0062	.0026	.0041	.0005	.0006	.00013
Stddev	.0004	.0000	.0017	.0011	.0093	.0004	.0145	.00012
%RSD	353.2	.7864	27.18	41.86	227.9	73.42	2345.	93.031
#1	-.0002	.0020	-.0074	.0019	.0107	.0002	.0108	.00021
#2	.0004	.0020	-.0050	.0034	-.0025	.0007	-.0096	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	-.0004	.0001	.0000	.0000	.0000	-.0009	.0020
Stddev	.0004	.0005	.0001	.0004	.000	.0001	.0007	.0015
%RSD	16.62	109.8	141.1	1370.	3433.	818.2	72.30	72.00
#1	-.0021	-.0001	.0002	-.0003	-.0001	.0001	-.0004	.0010
#2	-.0027	-.0007	.0000	.0003	.0001	.0000	-.0014	.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2907.2	76051.	4816.5
Stddev	9.4	334.	5.7
%RSD	.32454	.43911	.11745
#1	2900.6	75815.	4812.5
#2	2913.9	76288.	4820.5

Sample Name: LLCCV Acquired: 9/23/2014 11:52:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	F .0133	.0218	.0120	.0042	.00096	.0212	.0010
Stddev	.0003	.0023	.0012	.0001	.0002	.00010	.0013	.0000
%RSD	2.845	16.96	5.548	.5747	5.497	9.8880	5.902	.5707
#1	.0108	.0149	.0227	.0120	.0040	.00090	.0221	.0010
#2	.0112	.0117	.0210	.0121	.0044	.00103	.0203	.0010
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0100						
Range		30.00%						

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0274	.0205	.0045	.0023	.0042	.0040	.0245
Stddev	.0000	.0053	.0000	.0002	.0003	.0001	.0002	.0003
%RSD	.3682	19.25	.0631	5.250	11.87	1.381	5.054	1.327
#1	.0010	.0237	.0205	.0043	.0025	.0042	.0041	.0243
#2	.0010	.0312	.0205	.0046	.0021	.0042	.0038	.0247
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0192	-.0247	.0053	.0049	.0010	.0014	.0043
Stddev	.0008	.0004	.0131	.0001	.0001	.0000	.0002	.0000
%RSD	8.012	2.191	53.25	1.754	2.367	4.607	11.50	.8151
#1	.0099	.0195	-.0154	.0052	.0049	.0010	.0016	.0043
#2	.0088	.0189	-.0340	.0053	.0050	.0010	.0013	.0043
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/23/2014 11:52:46 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0425	.2116	.0234	.1998	.0042	.2181	.00116
Stddev	.0002	.0000	.0200	.0013	.0019	.0002	.0007	.00004
%RSD	5.362	.0652	9.466	5.696	.9471	4.966	.3020	3.5059
#1	.0044	.0424	.2258	.0224	.2011	.0044	.2176	.00113
#2	.0047	.0425	.1975	.0243	.1984	.0041	.2185	.00119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090	.0202	.0020	.0045	.0045	.0044	.0204	.0415
Stddev	.0018	.0008	.0000	.0000	.0001	.0000	.0007	.0018
%RSD	20.56	3.819	2.247	1.073	1.886	.5552	3.615	4.244
#1	.0077	.0207	.0020	.0046	.0046	.0044	.0209	.0403
#2	.0103	.0196	.0021	.0045	.0045	.0044	.0199	.0428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2924.5	76437.	4829.8
Stddev	.1	201.	4.2
%RSD	.00355	.26287	.08711
#1	2924.4	76579.	4826.8
#2	2924.5	76295.	4832.8

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 11:55:12 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	.0231	.0379	.0218	.0083	.00200	.0414	.0020
Stddev	.0001	.0042	.0011	.0009	.0001	.00006	.0009	.0000
%RSD	.4830	18.19	2.922	4.008	1.802	2.8178	2.184	.5029
#1	.0209	.0260	.0371	.0212	.0084	.00204	.0421	.0020
#2	.0207	.0201	.0387	.0224	.0082	.00196	.0408	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0321	.0395	.0084	.0046	.0081	.0092	.0443
Stddev	.0001	.0076	.0001	.0004	.0002	.0002	.0005	.0033
%RSD	2.510	23.69	.1926	4.465	5.309	2.477	5.371	7.367
#1	.0021	.0267	.0395	.0081	.0047	.0080	.0088	.0420
#2	.0020	.0374	.0396	.0086	.0044	.0082	.0095	.0466
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190	.0407	-.0002	.0103	.0120	.0020	.0023	.0084
Stddev	.0006	.0003	.0264	.0000	.0000	.0001	.0011	.0002
%RSD	3.199	.8229	16590.	.2422	.2425	4.833	47.58	2.700
#1	.0195	.0410	-.0188	.0103	.0120	.0021	.0015	.0082
#2	.0186	.0405	.0185	.0103	.0121	.0019	.0030	.0086
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 11:55:12 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0826	.4355	.0427	.4005	.0078	.4250	.00206
Stddev	.0003	.0014	.0003	.0014	.0004	.0009	.0049	.00005
%RSD	3.436	1.645	.0646	3.246	.1043	11.11	1.162	2.4942
#1	.0085	.0816	.4353	.0418	.4002	.0072	.4285	.00202
#2	.0081	.0835	.4357	.0437	.4008	.0084	.4215	.00209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	.0405	.0043	.0083	.0084	.0084	.0429	.0806
Stddev	.0006	.0007	.0003	.0001	.0000	.0001	.0006	.0000
%RSD	2.870	1.687	7.011	.7100	.0649	.6241	1.411	.0563
#1	.0201	.0410	.0041	.0084	.0084	.0084	.0424	.0806
#2	.0193	.0401	.0046	.0083	.0084	.0084	.0433	.0805
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2935.0	76524.	4864.3
Stddev	1.3	106.	31.6
%RSD	.04583	.13897	.64906
#1	2934.0	76449.	4842.0
#2	2935.9	76599.	4886.6

Sample Name: KQ1411683-02 Acquired: 9/23/2014 11:57:44 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1410179-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0008	-.0003	-.0003	-.00010	.0012	-.0002	.0001
#1	.0026	.0012	-.0018	.0000	-.00005	.0006	-.0002	.0001
#2	.0028	.0004	.0013	-.0006	-.00014	.0018	-.0001	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.0007	.0000	-.0001	-.0007	.0069	-.0022	-.0036
#1	.0051	.0010	-.0001	-.0001	-.0005	.0084	-.0020	-.0038
#2	.0050	.0004	.0001	-.0002	-.0010	.0053	-.0023	-.0035

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0002	.0002	.0002	.0155	.0331	.0020	.0098
#1	.0015	.0001	.0003	.0000	.0140	.0127	.0008	.0055
#2	.0015	.0002	.0001	.0005	.0170	.0535	.0031	.0141

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0142	.00018	-.0015	.0160	.0001	.0001	.0036
#1	-.0002	.0179	.00013	-.0032	.0165	.0002	-.0002	.0036
#2	.0008	.0106	.00023	.0002	.0154	.0000	.0003	.0037

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0039	-.0004	.0019
#1	.0038	-.0025	.0019
#2	.0039	.0018	.0018

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2938.0	77691.	4916.3
#1	2938.0	77719.	4918.4
#2	2938.0	77663.	4914.2

Sample Name: KQ1411683-01 Acquired: 9/23/2014 12:00:10 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1410179-LCSS

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.23	.3953	.5297	1.610	.37135	.7149	.8860	.8814
#1	36.24	.3965	.5277	1.613	.37021	.7127	.8874	.8835
#2	36.22	.3942	.5317	1.607	.37248	.7171	.8846	.8794

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.32	.6957	.6414	.4942	.5325	55.92	.5508	.0354
#1	34.45	.6980	.6416	.4948	.5317	56.06	.5507	.0353
#2	34.20	.6933	.6412	.4937	.5333	55.78	.5508	.0355

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.55	1.585	.6924	.7548	2.654	13.83	.7257	6.790
#1	14.51	1.592	.6931	.7561	2.657	13.82	.7274	6.758
#2	14.59	1.578	.6918	.7535	2.651	13.83	.7241	6.822

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2041	14.96	.52977	.8642	.5232	1.341	.4939	.7732
#1	.2048	14.91	.52931	.8660	.5244	1.346	.4954	.7741
#2	.2034	15.01	.53024	.8624	.5220	1.337	.4924	.7724

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7790	.0025	1.263
#1	.7802	.0023	1.258
#2	.7778	.0027	1.268

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2995.7	77560.	5035.3
#1	2993.4	77127.	5028.1
#2	2998.0	77993.	5042.5

Sample Name: K1410179-001 Acquired: 9/23/2014 12:02:26 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.08	.0001	.0238	.1801	.00074	.0267	.0008	.0008
#1	17.04	-.0011	.0253	.1800	.00071	.0263	.0007	.0007
#2	17.11	.0012	.0223	.1801	.00078	.0270	.0008	.0009

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	365.1	.0420	.0224	.0299	.0321	54.09	.0142	.0422
#1	364.9	.0421	.0220	.0288	.0320	54.01	.0134	.0434
#2	365.4	.0420	.0229	.0310	.0323	54.18	.0151	.0410

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.61	.6757	.0032	.0661	3.592	2.764	.0095	3.005
#1	21.70	.6762	.0029	.0651	3.527	2.787	.0083	3.015
#2	21.52	.6753	.0035	.0671	3.657	2.740	.0106	2.995

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	8.918	.67939	-.0033	.0166	.2730	.0589	.1861
#1	.0009	8.947	.67777	-.0034	.0159	.2726	.0589	.1829
#2	.0004	8.890	.68100	-.0033	.0174	.2734	.0590	.1892

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1827	.0030	1.144
#1	.1818	.0033	1.142
#2	.1836	.0027	1.145

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2813.3	74155.	4957.2
#1	2849.3	74253.	4990.0
#2	2777.3	74057.	4924.5

Sample Name: K1410179-001L Acquired: 9/23/2014 12:04:49 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: EM 092314A 1/10

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.505	-.0015	.0062	.0373	.00016	.0068	.0002	.0000
#1	3.497	-.0015	.0064	.0376	.00011	.0068	.0002	.0000
#2	3.513	-.0015	.0059	.0371	.00020	.0069	.0002	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	76.70	.0085	.0047	.0063	.0068	11.49	.0025	.0055
#1	76.93	.0082	.0049	.0064	.0071	11.53	.0025	.0052
#2	76.48	.0087	.0046	.0061	.0065	11.46	.0024	.0059

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.273	.1427	.0005	.0142	.7298	.5284	.0008	.6120
#1	4.289	.1427	.0005	.0143	.7272	.5390	.0005	.6174
#2	4.256	.1426	.0006	.0141	.7324	.5179	.0010	.6066

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	1.805	.13874	-.0024	.0027	.0558	.0125	.0397
#1	.0004	1.796	.13877	-.0006	.0028	.0559	.0123	.0397
#2	.0002	1.813	.13870	-.0041	.0026	.0557	.0127	.0398

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0388	-.0002	.2345
#1	.0389	-.0009	.2307
#2	.0388	.0004	.2384

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2900.1	75273.	4862.4
#1	2900.7	75175.	4855.8
#2	2899.5	75370.	4869.0

Sample Name: K1410179-001D Acquired: 9/23/2014 12:07:12 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.37	-.0017	.0251	.2090	.00087	.0267	.0009	.0006
#1	17.38	-.0029	.0238	.2096	.00080	.0277	.0009	.0007
#2	17.36	-.0005	.0264	.2084	.00094	.0257	.0009	.0005

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	366.4	.0432	.0230	.0297	.0328	54.66	.0161	.0437
#1	367.4	.0429	.0229	.0294	.0326	54.78	.0152	.0443
#2	365.4	.0434	.0231	.0300	.0330	54.54	.0169	.0432

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.07	.7049	.0031	.0681	3.653	2.812	.0082	3.171
#1	21.08	.7059	.0033	.0681	3.654	2.805	.0082	3.184
#2	21.05	.7039	.0029	.0681	3.651	2.819	.0083	3.158

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	8.908	.68900	-.0023	.0154	.2532	.0604	.1893
#1	.0005	8.927	.69113	-.0027	.0145	.2520	.0609	.1892
#2	-.0001	8.888	.68687	-.0020	.0164	.2543	.0599	.1894

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1872	.0023	1.121
#1	.1869	.0041	1.119
#2	.1874	.0006	1.122

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2827.9	73765.	4939.4
#1	2829.9	73635.	4931.9
#2	2825.9	73896.	4946.9

Sample Name: K1410179-001S Acquired: 9/23/2014 12:09:35 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.39	.3305	.4934	1.161	.04844	.4764	.0460	.0459
#1	18.48	.3307	.4906	1.161	.04845	.4759	.0459	.0457
#2	18.30	.3304	.4961	1.162	.04842	.4769	.0460	.0460

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	395.2	.2338	.4764	.2579	.2634	55.80	.4544	.0403
#1	395.0	.2338	.4766	.2573	.2638	55.68	.4517	.0401
#2	395.4	.2338	.4761	.2585	.2631	55.93	.4571	.0406

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.35	1.165	.4921	.5128	3.931	7.307	.4241	5.044
#1	27.28	1.165	.4921	.5115	3.922	7.288	.4228	5.016
#2	27.42	1.165	.4921	.5141	3.939	7.327	.4254	5.073

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0446	13.83	.72911	.4288	.0161	.3070	.5474	.6317
#1	.0444	13.79	.72564	.4306	.0165	.3075	.5476	.6317
#2	.0448	13.87	.73258	.4270	.0158	.3065	.5472	.6317

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6149	.0080	1.085
#1	.6142	.0094	1.090
#2	.6156	.0066	1.080

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2777.2	72250.	4820.6
#1	2778.0	72178.	4834.4
#2	2776.5	72322.	4806.8

Sample Name: K1410179-001A Acquired: 9/23/2014 12:11:49 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 A=0.1/10mL CICV-1,3 + Sb, B 1000ppm

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.62	8.702	4.581	9.835	.23255	8.958	2.207	2.214
#1	25.70	8.693	4.591	9.949	.23264	8.969	2.202	2.211
#2	25.54	8.712	4.571	9.721	.23245	8.947	2.212	2.218

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	394.7	.9743	2.241	1.152	1.162	59.19	4.287	.0426
#1	394.7	.9729	2.236	1.151	1.163	59.10	4.281	.0438
#2	394.6	.9756	2.247	1.152	1.162	59.28	4.294	.0415

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.79	2.936	.0030	2.234	3.583	26.84	4.097	3.031
#1	43.64	2.936	.0029	2.229	3.571	26.67	4.100	3.031
#2	43.94	2.935	.0030	2.238	3.595	27.01	4.094	3.031

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.087	33.04	.67978	4.128	.0162	.2766	2.448	2.396
#1	1.088	32.96	.67884	4.114	.0167	.2761	2.449	2.391
#2	1.086	33.12	.68072	4.141	.0157	.2772	2.447	2.402

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.332	.0310	1.113
#1	2.330	.0312	1.111
#2	2.333	.0308	1.115

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2765.9	71950.	4806.8
#1	2771.0	71993.	4792.8
#2	2760.7	71908.	4820.9

Sample Name: K1410179-002 Acquired: 9/23/2014 12:14:04 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.65	.0061	.0487	.2265	.00142	.0696	.0012	.0011
#1	26.63	.0069	.0467	.2265	.00147	.0687	.0011	.0012
#2	26.68	.0053	.0507	.2265	.00137	.0705	.0012	.0009

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	523.7	.0677	.0377	.0540	.0592	87.90	.0284	.0645
#1	521.5	.0677	.0374	.0546	.0586	87.70	.0289	.0639
#2	525.9	.0677	.0380	.0534	.0598	88.11	.0279	.0651

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.45	1.762	.0046	.0979	5.465	4.661	.0101	3.202
#1	35.50	1.755	.0044	.0975	5.468	4.711	.0092	3.194
#2	35.40	1.768	.0048	.0984	5.461	4.611	.0111	3.209

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	18.90	1.0157	-.0023	.0153	.2837	.1059	.2919
#1	.0004	18.95	1.0155	-.0033	.0161	.2827	.1057	.2925
#2	.0007	18.85	1.0159	-.0014	.0145	.2847	.1061	.2913

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2944	.0042	3.760
#1	.2942	.0042	3.758
#2	.2945	.0041	3.762

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2838.0	73252.	4985.1
#1	2834.4	73375.	5013.3
#2	2841.7	73130.	4956.9

Sample Name: K1410179-003 Acquired: 9/23/2014 12:16:31 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.88	.0030	.0591	.2436	.00139	.0676	.0008	.0006
#1	24.81	.0028	.0604	.2424	.00140	.0676	.0007	.0005
#2	24.95	.0032	.0579	.2447	.00138	.0676	.0009	.0006

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	376.8	.0602	.0363	.0527	.0573	88.81	.0433	.0555
#1	376.8	.0595	.0363	.0531	.0568	88.86	.0438	.0564
#2	376.8	.0609	.0364	.0524	.0578	88.76	.0429	.0546

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.17	1.437	.0048	.0901	4.817	4.603	.0107	3.684
#1	29.29	1.435	.0047	.0903	4.815	4.621	.0110	3.677
#2	29.04	1.439	.0049	.0899	4.818	4.585	.0104	3.692

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	19.96	.74705	-.0020	.0150	.2948	.1087	.2786
#1	.0008	20.06	.74743	-.0005	.0150	.2943	.1082	.2780
#2	.0003	19.87	.74667	-.0035	.0150	.2953	.1093	.2793

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2814	.0055	2.654
#1	.2817	.0045	2.652
#2	.2812	.0066	2.656

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2866.8	73808.	4960.9
#1	2870.4	73962.	4976.0
#2	2863.1	73654.	4945.8

Sample Name: K1410179-004 Acquired: 9/23/2014 12:18:52 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.21	-.0010	.0695	.3263	.00175	.0756	.0011	.0009
#1	29.04	.0005	.0686	.3260	.00173	.0766	.0010	.0010
#2	29.38	-.0026	.0705	.3266	.00177	.0746	.0011	.0008

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	430.2	.0711	.0431	.0634	.0682	102.7	.0524	.0671
#1	429.7	.0710	.0431	.0629	.0689	102.5	.0516	.0712
#2	430.7	.0713	.0430	.0638	.0674	102.9	.0531	.0631

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.16	1.774	.0053	.1058	5.690	5.416	.0120	3.825
#1	34.18	1.773	.0053	.1055	5.678	5.401	.0108	3.818
#2	34.13	1.775	.0052	.1062	5.701	5.432	.0131	3.832

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	25.38	.86922	-.0024	.0160	.3082	.1282	.3259
#1	.0006	25.43	.86801	-.0033	.0161	.3084	.1279	.3255
#2	-.0001	25.33	.87044	-.0014	.0159	.3079	.1284	.3263

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3262	.0067	3.281
#1	.3266	.0063	3.286
#2	.3259	.0070	3.275

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2843.7	73618.	4998.1
#1	2849.9	73440.	5002.2
#2	2837.4	73795.	4994.0

Sample Name: CCVB Acquired: 9/23/2014 12:21:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.703	10.07	.0017	1.002	10.00	-.00003	.0050	.0000
Stddev	.006	.06	.0008	.007	.18	.00006	.0002	.000
%RSD	.0725	.6199	45.09	.6897	1.811	196.88	3.873	640.7
#1	7.699	10.12	.0022	.9967	10.13	-.00007	.0051	.0000
#2	7.707	10.03	.0011	1.006	9.872	.00001	.0048	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.01	9.336	-.0003	.0004	-.0002	.0003	9.953
Stddev	.0000	.05	.038	.0000	.0003	.0000	.0006	.053
%RSD	92.02	.5414	.4052	18.55	81.82	19.95	169.2	.5311
#1	.0001	10.05	9.363	-.0002	.0002	-.0003	.0008	9.990
#2	.0000	9.971	9.309	-.0003	.0006	-.0002	-.0001	9.916
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	1.007	10.04	9.416	9.839	.9831	.9896	.0000
Stddev	.0015	.001	.07	.088	.011	.0007	.0003	.0000
%RSD	74.87	.0722	.6919	.9360	.1123	.0761	.0279	30.74
#1	-.0031	1.007	10.09	9.479	9.831	.9837	.9898	.0000
#2	-.0010	1.008	9.992	9.354	9.846	.9826	.9894	.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 12:21:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	10.07	9.971	.0019	9.893	.0002	10.05	.98733
Stddev	.0001	.02	.002	.0004	.013	.0004	.03	.00491
%RSD	26.47	.2373	.0203	18.58	.1286	151.2	.3384	.49699
#1	.0006	10.06	9.969	.0022	9.884	.0005	10.02	.99080
#2	.0004	10.09	9.972	.0017	9.902	.0000	10.07	.98386
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	.0011	.0004	.0022	.0006	.0001	1.023	1.009
Stddev	.0015	.0000	.0001	.0003	.0001	.0000	.004	.002
%RSD	77.05	4.054	11.95	11.76	10.77	39.09	.4027	.1809
#1	-.0031	.0011	.0005	.0024	.0007	.0001	1.026	1.008
#2	-.0009	.0010	.0004	.0020	.0006	.0001	1.020	1.010
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2905.9	75114.	4833.0
Stddev	.7	162.	36.2
%RSD	.02241	.21572	.74812
#1	2905.4	75229.	4807.4
#2	2906.4	75000.	4858.5

Sample Name: CCVA Acquired: 9/23/2014 12:23:57 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2528	.2561	.2501	.2523	.2506	.24758	.2526	.2489
Stddev	.0007	.0031	.0009	.0011	.0002	.00011	.0012	.0002
%RSD	.2773	1.199	.3432	.4235	.0879	.04471	.4611	.0967
#1	.2524	.2539	.2495	.2530	.2504	.24750	.2534	.2487
#2	.2533	.2583	.2507	.2515	.2507	.24766	.2518	.2490
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2476	.5033	.4831	.2449	.2492	.2487	.2496	.2549
Stddev	.0004	.0022	.0003	.0001	.0001	.0001	.0004	.0032
%RSD	.1613	.4446	.0653	.0492	.0486	.0245	.1711	1.242
#1	.2479	.5049	.4829	.2450	.2492	.2487	.2499	.2527
#2	.2473	.5017	.4833	.2448	.2493	.2486	.2493	.2571
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2451	-.0010	.2604	.2440	.2492	.2451	.2445	.2471
Stddev	.0013	.0001	.0312	.0007	.0022	.0008	.0021	.0005
%RSD	.5340	5.198	11.97	.2847	.8749	.3189	.8736	.2129
#1	.2460	-.0010	.2824	.2435	.2508	.2445	.2460	.2474
#2	.2442	-.0011	.2383	.2445	.2477	.2456	.2430	.2467
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 12:23:57 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2475	.0026	2.508	.2471	.1248	.2478	.2647	.00022
Stddev	.0004	.0027	.016	.0010	.0025	.0003	.0055	.00001
%RSD	.1619	104.4	.6509	.3924	2.043	.1162	2.095	3.6950
#1	.2472	.0045	2.496	.2464	.1230	.2476	.2686	.00023
#2	.2478	.0007	2.519	.2477	.1266	.2480	.2608	.00022
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2507	.2492	.2474	.2448	.2495	.2491	.0036	.0038
Stddev	.0008	.0001	.0003	.0001	.0002	.0005	.0006	.0011
%RSD	.3297	.0356	.1167	.0498	.0622	.1886	16.15	27.60
#1	.2513	.2493	.2476	.2449	.2494	.2495	.0032	.0031
#2	.2501	.2492	.2472	.2447	.2496	.2488	.0040	.0046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2947.5	76926.	4880.7
Stddev	3.8	44.	25.6
%RSD	.12906	.05723	.52417
#1	2950.2	76895.	4898.8
#2	2944.8	76958.	4862.6

Sample Name: CCB Acquired: 9/23/2014 12:26:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0011	-.0016	.0029	-.0001	-.00008	.0050	.0000
Stddev	.0001	.0008	.0012	.0044	.0000	.00001	.0010	.0000
%RSD	111.5	75.71	77.81	151.5	55.45	15.300	20.50	287.9
#1	.0000	.0016	-.0024	.0060	-.0001	-.00009	.0043	.0000
#2	-.0001	.0005	-.0007	-.0002	.0000	-.00007	.0058	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0073	-.0013	.0001	.0003	-.0005	-.0009	.0063
Stddev	.0000	.0107	.0000	.0002	.0004	.0004	.0001	.0027
%RSD	42.02	146.2	3.457	170.6	136.8	71.21	7.331	43.07
#1	.0001	-.0002	-.0013	.0003	.0006	-.0002	-.0010	.0044
#2	.0001	.0149	-.0013	.0000	.0000	-.0008	-.0009	.0082
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0005	-.0091	.0002	-.0007	.0001	.0001	.0002
Stddev	.0003	.0021	.0101	.0000	.0006	.0000	.0002	.0000
%RSD	21.65	447.0	110.7	20.10	76.77	45.62	203.3	16.70
#1	-.0011	.0010	-.0020	.0002	-.0011	.0001	.0000	.0002
#2	-.0015	-.0019	-.0163	.0002	-.0003	.0000	.0003	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 12:26:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0010	.0086	.0000	.0010	-.0003	.0113	.00005
Stddev	.0002	.0002	.0006	.0021	.0057	.0002	.0097	.00007
%RSD	208.3	18.10	7.046	35480.	551.0	46.98	86.00	138.74
#1	.0000	.0008	.0082	-.0015	-.0030	-.0004	.0044	.00000
#2	-.0002	.0011	.0090	.0015	.0050	-.0002	.0181	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0004	.0003	.0002	.0002	.0001	-.0009	-.0010
Stddev	.0009	.0003	.0001	.0002	.0002	.0001	.0035	.0009
%RSD	43.93	84.51	25.60	133.5	99.40	68.59	365.4	90.02
#1	-.0015	-.0002	.0003	.0000	.0000	.0001	.0015	-.0016
#2	-.0028	-.0007	.0002	.0003	.0003	.0002	-.0034	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2921.2	76153.	4821.5
Stddev	3.9	313.	22.3
%RSD	.13458	.41080	.46307
#1	2918.5	75932.	4837.3
#2	2924.0	76375.	4805.7

Sample Name: K1410179-005 Acquired: 9/23/2014 12:28:40 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.74	-.0022	.0495	.5682	.00175	.0862	.0015	.0013
#1	34.55	-.0044	.0493	.5666	.00173	.0864	.0015	.0013
#2	34.93	-.0001	.0497	.5699	.00177	.0860	.0015	.0014

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	385.9	.0797	.0353	.0541	.0616	129.9	.0249	.0754
#1	385.8	.0801	.0352	.0545	.0621	129.6	.0260	.0748
#2	386.0	.0793	.0354	.0537	.0612	130.2	.0238	.0761

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.24	1.258	.0049	.1220	5.261	5.860	.0152	4.032
#1	35.10	1.253	.0047	.1222	5.271	5.839	.0138	4.033
#2	35.38	1.263	.0050	.1219	5.251	5.882	.0167	4.030

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	39.97	.79649	-.0023	.0167	.3871	.1139	.2773
#1	.0001	39.88	.79307	-.0033	.0161	.3869	.1139	.2769
#2	.0010	40.07	.79992	-.0013	.0172	.3873	.1140	.2777

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2818	.0096	6.379
#1	.2821	.0100	6.376
#2	.2816	.0093	6.382

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2876.4	74266.	5070.3
#1	2875.9	74265.	5063.5
#2	2877.0	74266.	5077.1

Sample Name: K1410179-006 Acquired: 9/23/2014 12:30:59 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.39	.0001	.0307	.1658	.00077	.0325	.0006	.0004
#1	18.30	.0014	.0298	.1662	.00087	.0326	.0006	.0005
#2	18.47	-.0012	.0316	.1655	.00067	.0325	.0006	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	370.4	.0460	.0243	.0277	.0311	58.29	.0149	.0436
#1	369.9	.0459	.0245	.0279	.0313	58.30	.0136	.0431
#2	370.9	.0461	.0241	.0275	.0309	58.29	.0161	.0441

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.81	1.194	.0033	.0650	5.103	2.819	.0103	2.488
#1	22.87	1.192	.0033	.0650	5.116	2.800	.0105	2.482
#2	22.76	1.196	.0033	.0650	5.091	2.838	.0102	2.495

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	14.10	.71112	-.0002	.0156	.2907	.0712	.1872
#1	-.0002	14.12	.71213	.0012	.0155	.2897	.0712	.1875
#2	.0004	14.07	.71011	-.0017	.0158	.2917	.0713	.1869

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1867	.0027	1.775
#1	.1870	.0017	1.777
#2	.1865	.0036	1.772

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2851.2	73811.	4959.4
#1	2848.9	73700.	4956.3
#2	2853.5	73923.	4962.5

Sample Name: K1410179-007 Acquired: 9/23/2014 12:33:24 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.653	.0016	.0285	.1829	.00049	.0336	.0001	.0000
#1	9.628	.0017	.0281	.1827	.00052	.0347	.0001	.0000
#2	9.679	.0014	.0288	.1832	.00045	.0326	.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	112.4	.0242	.0133	.0207	.0217	48.52	.0128	.0223
#1	112.4	.0243	.0135	.0206	.0225	48.45	.0124	.0224
#2	112.4	.0241	.0131	.0208	.0210	48.58	.0133	.0223

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.19	.3623	.0031	.0476	2.145	1.917	.0074	3.132
#1	15.13	.3629	.0031	.0477	2.144	1.904	.0077	3.099
#2	15.25	.3617	.0030	.0476	2.147	1.929	.0071	3.166

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	10.85	.22780	-.0009	.0156	.1897	.0459	.1142
#1	-.0004	10.82	.22718	-.0010	.0165	.1896	.0456	.1143
#2	.0005	10.87	.22841	-.0007	.0147	.1899	.0462	.1141

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1111	.0031	1.268
#1	.1111	.0022	1.267
#2	.1111	.0039	1.268

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2874.9	74731.	4861.1
#1	2875.5	74480.	4855.1
#2	2874.2	74982.	4867.1

Sample Name: K1410179-008 Acquired: 9/23/2014 12:35:49 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.21	.0013	.0465	.5116	.00174	.0344	.0023	.0024
#1	39.31	.0045	.0471	.5105	.00178	.0332	.0022	.0025
#2	39.11	-.0018	.0458	.5127	.00170	.0355	.0023	.0024

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	774.4	.0966	.0432	.0846	.0922	131.4	.0294	.1069
#1	777.6	.0964	.0434	.0851	.0920	131.4	.0294	.1076
#2	771.3	.0968	.0430	.0841	.0924	131.5	.0294	.1062

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.81	1.432	.0053	.1387	6.184	5.609	.0151	4.380
#1	50.79	1.427	.0053	.1394	6.198	5.556	.0153	4.380
#2	50.83	1.437	.0053	.1381	6.169	5.661	.0150	4.381

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	17.92	1.5012	-.0028	.0150	.5267	.1352	.3720
#1	.0000	17.90	1.5022	-.0031	.0148	.5267	.1351	.3733
#2	.0002	17.94	1.5001	-.0025	.0151	.5266	.1353	.3707

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3710	.0097	2.126
#1	.3713	.0092	2.130
#2	.3706	.0102	2.123

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2778.0	71754.	4970.9
#1	2772.9	71783.	4960.0
#2	2783.2	71724.	4981.9

Sample Name: K1410179-009 Acquired: 9/23/2014 12:38:12 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.86	-.0005	.0354	.4878	.00151	.0387	.0017	.0017
#1	28.77	-.0011	.0369	.4858	.00140	.0383	.0017	.0016
#2	28.94	.0002	.0339	.4897	.00162	.0391	.0017	.0017

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	623.4	.0738	.0287	.0661	.0727	79.82	.0242	.0669
#1	620.3	.0735	.0287	.0662	.0725	79.55	.0245	.0671
#2	626.4	.0742	.0287	.0661	.0729	80.09	.0240	.0667

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.24	1.873	.0036	.1042	4.561	5.222	.0083	4.576
#1	41.28	1.866	.0035	.1043	4.565	5.202	.0078	4.566
#2	41.20	1.879	.0038	.1041	4.558	5.242	.0087	4.585

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	20.39	1.1381	-.0045	.0157	.4523	.1043	.2679
#1	.0005	20.43	1.1376	-.0057	.0157	.4504	.1042	.2674
#2	.0000	20.35	1.1385	-.0033	.0158	.4543	.1044	.2684

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2677	.0062	3.155
#1	.2679	.0057	3.153
#2	.2675	.0068	3.158

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2807.7	72649.	4957.3
#1	2809.8	72654.	4970.2
#2	2805.5	72644.	4944.4

Sample Name: K1410179-010 Acquired: 9/23/2014 12:40:39 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.54	-.0009	.0388	.2274	.00168	.1727	.0018	.0019
#1	28.44	-.0015	.0370	.2268	.00167	.1720	.0018	.0020
#2	28.65	-.0002	.0405	.2281	.00168	.1733	.0019	.0018

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	250.6	.0695	.0371	.0855	.0929	67.76	.0331	.0645
#1	250.3	.0694	.0373	.0856	.0921	67.62	.0339	.0629
#2	250.9	.0697	.0369	.0854	.0936	67.90	.0324	.0661

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.00	.6824	.0088	.1114	3.679	5.393	.0113	4.313
#1	38.96	.6822	.0090	.1115	3.672	5.344	.0095	4.299
#2	39.04	.6825	.0087	.1113	3.686	5.443	.0132	4.328

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	22.74	.54598	-.0008	.0161	.3486	.1048	.2862
#1	.0010	22.72	.54271	-.0003	.0165	.3452	.1047	.2859
#2	.0008	22.77	.54924	-.0014	.0156	.3520	.1048	.2864

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2899	.0034	12.19
#1	.2896	.0028	12.16
#2	.2901	.0041	12.23

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2897.4	75280.	5053.0
#1	2893.4	75263.	5058.6
#2	2901.5	75296.	5047.4

Sample Name: K1410179-011 Acquired: 9/23/2014 12:43:00 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.98	.0003	.0435	.2335	.00195	.2067	.0021	.0022
#1	30.04	-.0003	.0432	.2345	.00184	.2075	.0021	.0020
#2	29.92	.0010	.0437	.2325	.00206	.2059	.0021	.0023

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	287.0	.0761	.0401	.0986	.1081	70.27	.0355	.0720
#1	287.8	.0768	.0403	.0989	.1084	70.35	.0356	.0700
#2	286.2	.0754	.0399	.0983	.1078	70.20	.0354	.0739

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.52	.7531	.0101	.1214	4.108	5.845	.0099	6.999
#1	42.35	.7526	.0101	.1210	4.094	5.852	.0092	6.951
#2	42.69	.7535	.0100	.1218	4.122	5.838	.0105	7.046

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	29.94	.63317	-.0019	.0151	.4068	.1106	.3134
#1	.0002	29.84	.63170	-.0025	.0155	.4058	.1105	.3129
#2	.0007	30.04	.63463	-.0013	.0147	.4077	.1107	.3139

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3195	.0028	14.87
#1	.3192	.0010	14.89
#2	.3197	.0047	14.85

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2906.4	75256.	5077.8
#1	2910.1	75273.	5078.7
#2	2902.7	75240.	5076.9

Sample Name: K1410179-012 Acquired: 9/23/2014 12:45:19 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.13	-.0028	.0267	.4371	.00097	.0579	.0012	.0003
#1	22.04	-.0020	.0244	.4764	.00095	.0609	.0010	-.0004
#2	22.22	-.0035	.0289	.3978	.00099	.0550	.0014	.0011

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	411.4	.0523	.0241	.0414	.0455	64.76	.0182	.0488
#1	448.4	.0518	.0241	.0396	.0449	70.47	.0177	.0461
#2	374.4	.0528	.0241	.0432	.0461	59.05	.0186	.0515

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.57	.9936	.0017	.0818	3.533	3.781	.0083	4.518
#1	45.36	.9929	.0018	.0815	3.544	3.847	.0118	4.624
#2	43.78	.9943	.0016	.0820	3.521	3.715	.0049	4.413

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	10.90	.74210	-.0024	.0160	.3131	.0765	.2137
#1	.0010	11.08	.80784	-.0031	.0158	.3124	.0768	.2131
#2	.0001	10.71	.67635	-.0018	.0162	.3139	.0762	.2142

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2135	.0037	3.385
#1	.2129	.0041	3.391
#2	.2141	.0033	3.380

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2832.7	73573.	4613.5
#1	2832.9	73476.	4292.1
#2	2832.5	73671.	4934.9

Sample Name: K1410179-013 Acquired: 9/23/2014 12:47:40 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.33	.0008	.0228	.1367	.00048	.1138	.0004	.0003
#1	14.34	-.0012	.0247	.1362	.00048	.1134	.0004	.0003
#2	14.32	.0028	.0209	.1371	.00047	.1143	.0004	.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	131.8	.0319	.0169	.0188	.0196	45.78	.0113	.0320
#1	131.3	.0318	.0169	.0188	.0187	45.67	.0116	.0327
#2	132.3	.0321	.0170	.0188	.0205	45.90	.0110	.0312

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.30	.8692	.0027	.0460	2.939	2.952	.0076	2.848
#1	18.28	.8696	.0029	.0462	2.951	2.929	.0071	2.833
#2	18.32	.8687	.0026	.0459	2.928	2.976	.0080	2.864

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	25.13	.31877	-.0014	.0157	.2932	.0521	.1327
#1	.0008	25.05	.31847	-.0008	.0151	.2933	.0519	.1321
#2	.0006	25.20	.31907	-.0020	.0162	.2931	.0522	.1333

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1317	.0031	19.58
#1	.1320	.0037	19.62
#2	.1314	.0025	19.55

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2891.4	75154.	4981.5
#1	2892.2	74958.	4976.3
#2	2890.6	75351.	4986.7

Sample Name: K1410179-014 Acquired: 9/23/2014 12:50:03 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.42	-.0014	.0369	.2158	.00105	.0383	.0006	.0005
#1	19.35	-.0036	.0362	.2172	.00100	.0381	.0006	.0005
#2	19.49	.0008	.0376	.2144	.00110	.0384	.0005	.0005

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	289.4	.0504	.0265	.0376	.0399	64.08	.0227	.0486
#1	290.3	.0504	.0262	.0374	.0400	64.36	.0224	.0472
#2	288.5	.0504	.0268	.0378	.0398	63.80	.0229	.0500

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.12	.8974	.0031	.0730	3.820	3.342	.0057	3.069
#1	33.24	.8970	.0032	.0728	3.819	3.382	.0039	3.059
#2	32.99	.8978	.0030	.0733	3.821	3.302	.0076	3.079

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	11.45	.57289	-.0030	.0154	.2942	.0828	.2070
#1	.0007	11.49	.57747	-.0037	.0152	.2947	.0828	.2072
#2	.0006	11.41	.56831	-.0022	.0157	.2937	.0828	.2069

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2058	.0035	1.757
#1	.2059	.0041	1.759
#2	.2058	.0029	1.754

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2847.0	73920.	4964.5
#1	2849.4	73785.	4954.6
#2	2844.6	74056.	4974.4

Sample Name: CCVB Acquired: 9/23/2014 12:52:29 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.684	9.877	-.0008	1.006	10.01	-.00008	.0023	.0000
Stddev	.001	.009	.0008	.004	.06	.00006	.0000	.000
%RSD	.0166	.0886	94.56	.3550	.6056	76.321	1.439	400.7
#1	7.683	9.883	-.0014	1.004	9.968	-.00013	.0023	.0000
#2	7.685	9.871	-.0003	1.009	10.05	-.00004	.0023	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.01	9.348	-.0007	.0004	-.0001	.0007	9.948
Stddev	.0001	.02	.047	.0003	.0002	.0003	.0005	.051
%RSD	86.27	.1953	.4995	39.71	67.69	242.9	71.07	.5165
#1	-.0002	10.02	9.315	-.0008	.0002	-.0003	.0011	9.984
#2	-.0001	9.994	9.381	-.0005	.0005	.0001	.0004	9.912
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	1.000	9.907	9.434	9.787	.9797	.9797	.0000
Stddev	.0023	.009	.002	.028	.059	.0017	.0060	.0002
%RSD	235.7	.8980	.0181	.2956	.6062	.1687	.6105	964.7
#1	-.0026	1.007	9.906	9.415	9.829	.9785	.9840	-.0001
#2	.0006	.9940	9.909	9.454	9.745	.9808	.9755	.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 12:52:29 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	10.07	10.03	.0034	9.890	.0004	9.996	.98129
Stddev	.0000	.00	.01	.0012	.066	.0004	.115	.00659
%RSD	6.246	.0301	.0997	35.05	.6705	112.8	1.152	.67144
#1	.0006	10.07	10.03	.0042	9.937	.0007	10.08	.98595
#2	.0006	10.08	10.02	.0026	9.843	.0001	9.915	.97664
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0011	.0005	.0021	.0001	.0001	1.014	1.001
Stddev	.0000	.0003	.0000	.0000	.0000	.0000	.005	.000
%RSD	5.127	28.36	5.443	.8356	32.19	15.65	.5145	.0380
#1	-.0008	.0013	.0005	.0021	.0001	.0001	1.018	1.001
#2	-.0008	.0008	.0005	.0021	.0001	.0001	1.011	1.002
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2920.7	75315.	4843.9
Stddev	1.7	41.	6.3
%RSD	.05939	.05442	.12964
#1	2919.4	75344.	4848.4
#2	2921.9	75286.	4839.5

Sample Name: CCVA Acquired: 9/23/2014 12:55:05 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2560	.2585	.2497	.2544	.2537	.24970	.2512	.2519
Stddev	.0013	.0025	.0018	.0007	.0001	.00069	.0012	.0005
%RSD	.4985	.9787	.7255	.2606	.0420	.27654	.4646	.1913
#1	.2569	.2602	.2485	.2539	.2538	.25019	.2520	.2523
#2	.2551	.2567	.2510	.2549	.2536	.24921	.2503	.2516
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2513	.5074	.4894	.2478	.2515	.2525	.2510	.2555
Stddev	.0005	.0035	.0005	.0002	.0006	.0005	.0012	.0007
%RSD	.1829	.6966	.1029	.0630	.2190	.2139	.4617	.2714
#1	.2517	.5099	.4898	.2479	.2519	.2529	.2518	.2550
#2	.2510	.5049	.4891	.2477	.2511	.2522	.2502	.2560
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2501	-.0006	.2481	.2478	.2519	.2487	.2479	.2504
Stddev	.0013	.0018	.0221	.0000	.0015	.0004	.0018	.0003
%RSD	.5185	295.8	8.928	.0074	.6148	.1439	.7383	.1089
#1	.2510	-.0019	.2324	.2478	.2508	.2485	.2466	.2506
#2	.2492	.0007	.2638	.2478	.2530	.2490	.2492	.2502
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 12:55:05 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2514	.0023	2.544	.2497	.1415	.2494	.2657	.00008
Stddev	.0006	.0014	.017	.0025	.0107	.0021	.0120	.00009
%RSD	.2243	58.81	.6817	.9886	7.571	.8296	4.532	106.52
#1	.2518	.0014	2.531	.2514	.1340	.2509	.2743	.00015
#2	.2510	.0033	2.556	.2479	.1491	.2480	.2572	.00002
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2520	.2502	.2507	.2484	.2517	.2508	.0032	.0016
Stddev	.0006	.0007	.0009	.0001	.0003	.0001	.0007	.0013
%RSD	.2386	.2702	.3457	.0439	.1329	.0364	20.93	79.23
#1	.2524	.2507	.2501	.2483	.2519	.2508	.0037	.0007
#2	.2516	.2497	.2514	.2484	.2514	.2509	.0027	.0026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2934.1	76268.	4846.3
Stddev	4.6	293.	14.4
%RSD	.15745	.38351	.29642
#1	2930.8	76475.	4856.5
#2	2937.4	76061.	4836.2

Sample Name: CCB Acquired: 9/23/2014 12:57:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0024	-.0014	.0009	-.0004	-.00013	.0008	.0000
Stddev	.0002	.0012	.0016	.0008	.0001	.00000	.0006	.0000
%RSD	73.49	50.42	121.4	84.02	26.85	1.4489	84.67	43.64
#1	.0001	.0016	-.0025	.0014	-.0004	-.00013	.0003	.0001
#2	.0004	.0033	-.0002	.0004	-.0003	-.00014	.0012	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0019	-.0014	.0003	.0001	.0000	-.0002	.0026
Stddev	.0000	.0101	.0000	.0005	.0002	.0000	.0004	.0020
%RSD	6.475	542.8	2.477	143.5	142.5	106.1	196.5	74.55
#1	.0002	.0090	-.0014	.0000	.0003	.0000	-.0005	.0012
#2	.0002	-.0053	-.0014	.0007	.0000	.0001	.0001	.0040
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0021	.0014	.0002	.0004	.0001	-.0006	.0002
Stddev	.0006	.0004	.0114	.0000	.0013	.0000	.0014	.0001
%RSD	43.85	19.97	806.5	27.10	315.5	26.06	222.9	30.43
#1	-.0009	-.0018	-.0067	.0001	-.0005	.0001	-.0016	.0002
#2	-.0017	-.0025	.0095	.0002	.0013	.0001	.0004	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 12:57:18 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0001	.0100	.0030	.0032	.0001	.0163	.00027
Stddev	.0002	.0018	.0287	.0021	.0024	.0001	.0001	.00006
%RSD	113.0	3194.	287.5	69.51	75.84	80.40	.6919	23.321
#1	.0000	-.0012	-.0103	.0045	.0049	.0002	.0163	.00031
#2	.0004	.0013	.0302	.0015	.0015	.0001	.0162	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0005	.0001	.0003	.0002	.0001	-.0011	.0011
Stddev	.0002	.0000	.0001	.0001	.0001	.0000	.0012	.0020
%RSD	163.7	3.765	211.1	47.22	45.54	39.16	110.9	171.8
#1	.0002	-.0004	.0000	.0002	.0001	.0001	-.0002	-.0002
#2	.0000	-.0005	.0001	.0004	.0002	.0001	-.0020	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2926.3	75980.	4829.9
Stddev	3.4	56.	20.0
%RSD	.11629	.07389	.41371
#1	2923.9	76019.	4815.7
#2	2928.7	75940.	4844.0

Sample Name: LLCCV Acquired: 9/23/2014 12:59:55 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	.0123	.0231	.0105	.0038	.00095	.0220	.0010
Stddev	.0002	.0014	.0016	.0012	.0002	.00003	.0005	.0000
%RSD	2.054	11.31	6.759	11.15	4.063	2.9035	2.234	4.194
#1	.0111	.0133	.0242	.0096	.0037	.00097	.0217	.0011
#2	.0108	.0113	.0220	.0113	.0039	.00093	.0224	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	F .0274	.0217	.0042	.0023	.0043	.0042	.0235
Stddev	.0000	.0059	.0001	.0004	.0000	.0000	.0004	.0021
%RSD	2.915	21.67	.5758	10.01	1.137	.5491	8.813	8.975
#1	.0011	.0316	.0216	.0045	.0023	.0043	.0039	.0250
#2	.0011	.0232	.0218	.0039	.0024	.0043	.0044	.0220
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0198	-.0083	.0053	.0061	.0011	.0008	.0043
Stddev	.0004	.0016	.0032	.0001	.0005	.0001	.0001	.0003
%RSD	4.795	8.216	38.76	1.765	8.177	5.096	13.74	6.178
#1	.0086	.0187	-.0060	.0054	.0064	.0010	.0009	.0045
#2	.0080	.0210	-.0106	.0052	.0057	.0011	.0007	.0041
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/23/2014 12:59:55 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0442	.1754	.0217	.2099	.0047	.2196	.00119
Stddev	.0004	.0001	.0140	.0012	.0036	.0007	.0083	.00019
%RSD	8.064	.2254	8.008	5.371	1.699	14.67	3.764	16.031
#1	.0046	.0443	.1853	.0209	.2125	.0042	.2137	.00105
#2	.0041	.0441	.1655	.0226	.2074	.0052	.2254	.00132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.0197	.0022	.0047	.0042	.0043	.0222	.0426
Stddev	.0002	.0003	.0002	.0001	.0002	.0001	.0000	.0024
%RSD	2.312	1.721	9.128	2.771	4.307	2.002	.0291	5.744
#1	.0093	.0200	.0024	.0046	.0041	.0043	.0222	.0443
#2	.0090	.0195	.0021	.0048	.0044	.0042	.0222	.0409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2935.6	76520.	4865.4
Stddev	10.9	25.	12.5
%RSD	.37078	.03211	.25682
#1	2927.9	76502.	4874.2
#2	2943.3	76537.	4856.5

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 13:02:37 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211	.0192	.0397	.0205	.0084	.00205	.0418	.0020
Stddev	.0001	.0012	.0007	.0036	.0004	.00002	.0016	.0000
%RSD	.6005	6.375	1.819	17.66	4.290	1.2092	3.896	.8326
#1	.0210	.0183	.0392	.0179	.0087	.00204	.0429	.0020
#2	.0212	.0201	.0402	.0230	.0082	.00207	.0406	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	F .0535	.0414	.0079	.0045	.0080	.0085	.0432
Stddev	.0001	.0025	.0001	.0004	.0001	.0001	.0003	.0003
%RSD	2.972	4.758	.1828	4.561	1.620	.6620	3.851	.8046
#1	.0021	.0517	.0414	.0081	.0044	.0080	.0083	.0429
#2	.0020	.0553	.0413	.0076	.0045	.0081	.0087	.0434
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0400						
Range		30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195	.0401	-.0177	.0105	.0100	.0020	.0023	.0082
Stddev	.0004	.0018	.0001	.0001	.0003	.0000	.0006	.0001
%RSD	1.850	4.538	.4538	.6020	3.357	2.196	25.12	.6508
#1	.0198	.0388	-.0177	.0106	.0098	.0021	.0019	.0083
#2	.0193	.0414	-.0178	.0105	.0102	.0020	.0027	.0082
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 13:02:37 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085	.0848	.3792	.0418	.3986	.0082	.4200	.00220
Stddev	.0002	.0004	.0092	.0009	.0156	.0002	.0119	.00002
%RSD	2.264	.5210	2.427	2.226	3.910	2.068	2.826	1.0754
#1	.0084	.0844	.3857	.0412	.3875	.0083	.4117	.00222
#2	.0086	.0851	.3727	.0425	.4096	.0081	.4284	.00218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	.0405	.0044	.0085	.0085	.0084	.0451	.0839
Stddev	.0010	.0002	.0001	.0001	.0002	.0000	.0013	.0038
%RSD	5.033	.6176	1.192	1.027	2.253	.4169	2.913	4.530
#1	.0204	.0407	.0043	.0085	.0087	.0084	.0460	.0812
#2	.0190	.0403	.0044	.0086	.0084	.0083	.0441	.0866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2911.5	75913.	4817.6
Stddev	4.5	79.	35.0
%RSD	.15604	.10444	.72654
#1	2908.3	75857.	4792.8
#2	2914.8	75969.	4842.3

Sample Name: K1410042-MB Acquired: 9/23/2014 13:05:28 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: EM 092314A 9/10 K1410042-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0007	.0041	.0000	-.00002	.0010	.0001	.0002
#1	.0004	.0012	.0047	.0000	.00000	.0014	.0001	.0002
#2	.0006	.0001	.0036	.0000	-.00004	.0007	.0000	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0000	.0004	-.0002	.0000	.0026	-.0017	-.0003
#1	-.0002	.0003	.0002	-.0003	.0005	.0032	-.0012	-.0003
#2	-.0002	-.0003	.0007	-.0001	-.0006	.0020	-.0023	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0001	.0001	.0003	.0012	-.0020	.0025	.0027
#1	.0003	.0001	.0001	.0000	.0037	.0021	.0026	.0016
#2	.0003	.0001	.0001	.0005	-.0014	-.0061	.0024	.0039

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0130	.00025	-.0017	.0003	.0000	.0002	.0000
#1	.0002	.0146	.00026	-.0025	.0000	.0001	.0006	-.0001
#2	.0005	.0114	.00024	-.0010	.0005	-.0001	-.0002	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	-.0002	.0032
#1	.0001	-.0005	.0023
#2	.0001	.0001	.0040

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2897.7	75251.	4803.2
#1	2903.3	75283.	4813.6
#2	2892.1	75219.	4792.7

Sample Name: K1410042-001 Acquired: 9/23/2014 13:07:54 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: EM 092314A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0002	.0030	.0001	-.00013	.0004	.0001	.0001
#1	.0003	-.0002	.0042	.0000	-.00017	-.0002	.0000	.0001
#2	.0004	-.0003	.0018	.0002	-.00008	.0011	.0002	.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.0001	-.0001	-.0004	-.0004	.0024	-.0015	-.0005
#1	-.0017	.0005	.0002	-.0003	.0002	.0040	-.0015	.0001
#2	-.0017	-.0002	-.0004	-.0005	-.0009	.0008	-.0014	-.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0000	-.0001	.0002	.0034	-.0075	.0026	.0007
#1	.0007	.0000	.0000	.0002	.0026	.0005	.0017	.0021
#2	.0006	.0001	-.0002	.0002	.0043	-.0154	.0035	-.0008

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0037	.00012	-.0002	.0000	.0000	.0003	.0005
#1	.0006	.0186	.00009	.0000	.0004	.0001	.0002	.0005
#2	.0007	-.0112	.00016	-.0004	-.0004	.0000	.0005	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	.0007	.0042
#1	.0004	-.0005	.0037
#2	.0004	.0019	.0046

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2915.9	75834.	4803.5
#1	2908.9	76077.	4800.5
#2	2923.0	75590.	4806.5

Sample Name: K1410042-002 Acquired: 9/23/2014 13:10:20 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: EM 092314A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0012	.0017	.0002	-.00009	.0006	.0001	.0000
#1	.0002	-.0018	.0020	.0003	-.00007	.0014	.0001	.0000
#2	.0002	-.0006	.0014	.0002	-.00011	-.0002	.0002	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0003	.0000	-.0003	-.0002	.0057	-.0023	-.0037
#1	-.0014	-.0004	.0001	-.0004	-.0005	.0052	-.0033	-.0037
#2	-.0015	-.0001	-.0001	-.0001	.0000	.0063	-.0014	-.0037

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0001	.0002	.0002	.0020	.0106	.0010	-.0025
#1	.0003	.0001	.0002	.0003	.0019	.0012	.0016	-.0018
#2	.0003	.0001	.0001	.0001	.0020	.0200	.0004	-.0033

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0149	.00001	-.0007	-.0005	.0000	.0003	.0002
#1	.0001	.0204	-.00005	-.0004	-.0009	-.0001	.0002	.0003
#2	.0005	.0095	.00008	-.0010	-.0001	.0001	.0004	.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0002	-.0008	.0001
#1	.0002	-.0006	.0022
#2	.0002	-.0010	-.0021

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2892.3	75248.	4795.3
#1	2888.4	75192.	4796.4
#2	2896.1	75303.	4794.2

Sample Name: K1410042-002D Acquired: 9/23/2014 13:12:45 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: EM 092314A 9/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0010	.0019	.0000	-.00006	.0012	.0001	.0000
#1	.0001	.0019	.0032	-.0001	-.00006	.0016	.0001	.0000
#2	.0004	.0000	.0006	.0000	-.00006	.0007	.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	.0003	.0001	-.0004	.0000	.0070	-.0013	-.0022
#1	-.0020	.0003	-.0001	-.0004	.0004	.0102	-.0018	-.0003
#2	-.0020	.0002	.0003	-.0004	-.0003	.0038	-.0007	-.0041

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0001	-.0001	.0002	.0017	-.0303	.0037	-.0025
#1	.0001	.0001	-.0001	.0001	.0017	.0033	.0038	-.0024
#2	.0002	.0001	.0000	.0002	.0016	-.0640	.0037	-.0027

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0075	-.00003	-.0017	.0007	.0001	.0002	.0002
#1	.0004	.0119	-.00010	-.0018	.0011	.0001	.0002	.0004
#2	.0008	.0032	.00004	-.0016	.0003	.0000	.0002	.0001

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0002	.0010	-.0013
#1	.0002	.0022	-.0019
#2	.0001	-.0002	-.0007

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2902.7	75514.	4781.1
#1	2896.6	75577.	4761.1
#2	2908.8	75450.	4801.0

Sample Name: 14-METFED-01-24 Acquired: 9/23/2014 13:15:11 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1.111 Test Type: Sample Type:
Comment: EM 092314A 9/10 SCREEN

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0033	.0005	.0001	-.00007	.0019	.0001	.0000
#1	.0004	-.0030	-.0016	-.0001	-.00006	.0012	.0001	.0000
#2	.0004	-.0037	.0027	.0002	-.00007	.0026	.0002	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0000	.0003	-.0004	.0001	.0053	-.0007	-.0027
#1	.0036	-.0003	.0004	-.0001	.0007	.0061	.0014	-.0032
#2	.0025	.0002	.0002	-.0007	-.0005	.0046	-.0029	-.0023

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0001	.0000	.0005	.0023	-.0554	.0020	.0038
#1	.0009	.0001	.0000	.0003	.0023	-.0440	.0048	-.0031
#2	.0007	.0001	.0000	.0006	.0023	-.0668	-.0008	.0107

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0010	.00003	-.0019	-.0002	.0002	.0003	.0007
#1	.0005	.0061	.00008	-.0022	-.0005	.0000	.0001	.0007
#2	.0004	-.0041	-.00001	-.0016	.0001	.0003	.0006	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0006	-.0008	.0012
#1	.0006	-.0011	.0018
#2	.0006	-.0006	.0007

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2933.3	76307.	4849.3
#1	2938.8	76337.	4865.9
#2	2927.9	76277.	4832.8

NR
10/9/14

Sample Name: KQ1411702-01 Acquired: 9/23/2014 13:17:39 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A K1409993-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0005	.0015	.0000	-.00004	.0022	.0000	.0000
#1	.0036	.0010	.0010	-.0001	.00004	.0021	.0000	.0000
#2	.0037	.0001	.0021	.0001	-.00011	.0024	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0000	.0004	.0000	-.0002	.0029	-.0005	-.0018
#1	.0026	.0003	.0005	.0000	.0011	.0041	-.0001	-.0025
#2	.0026	-.0002	.0002	.0001	-.0015	.0017	-.0009	-.0010

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	-.0001	.0003	.0016	.0029	.0013	.0293
#1	.0004	.0000	-.0002	.0002	.0014	-.0218	.0022	.0319
#2	.0004	.0001	.0001	.0004	.0018	.0276	.0004	.0267

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0306	.00001	-.0005	-.0006	.0002	.0003	.0002
#1	.0002	.0291	.00004	.0002	-.0015	.0002	.0000	.0002
#2	.0002	.0320	-.00002	-.0011	.0004	.0001	.0006	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0001	-.0017	.0016
#1	.0000	-.0008	.0013
#2	.0002	-.0026	.0019

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2961.4	77107.	4913.8
#1	2965.9	77189.	4915.5
#2	2956.9	77026.	4912.0

Sample Name: KQ1411702-02 Acquired: 9/23/2014 13:20:05 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A K1409993-LCSW

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.852	2.350	2.469	4.946	.12158	.9687	1.200	1.198
#1	4.816	2.353	2.468	4.959	.12088	.9640	1.200	1.201
#2	4.887	2.347	2.471	4.932	.12229	.9735	1.200	1.195

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.22	.4864	1.206	.6011	.6048	2.427	2.342	-.0008
#1	12.26	.4870	1.206	.6024	.6025	2.428	2.350	-.0011
#2	12.18	.4858	1.206	.5998	.6071	2.425	2.333	-.0005

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.25	1.207	.9686	1.188	.0022	12.46	2.361	.0282
#1	12.20	1.202	.9703	1.191	.0011	12.44	2.361	.0231
#2	12.30	1.211	.9670	1.186	.0032	12.48	2.361	.0332

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5843	12.61	.00048	2.391	-.0003	.0006	1.218	1.220
#1	.5812	12.59	.00045	2.394	.0003	.0007	1.215	1.220
#2	.5874	12.64	.00051	2.388	-.0009	.0005	1.222	1.221

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.207	.0116	9.961
#1	1.206	.0113	9.936
#2	1.207	.0118	9.987

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2919.5	75637.	4930.1
#1	2915.3	75483.	4917.8
#2	2923.7	75791.	4942.4

Sample Name: K1409993-001 Acquired: 9/23/2014 13:22:21 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0015	.0036	.0214	-.00006	.0285	.0000	.0000
#1	.0103	.0013	.0057	.0215	-.00007	.0289	.0000	.0000
#2	.0102	.0017	.0015	.0213	-.00006	.0281	-.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.28	.0005	.0001	-.0001	-.0002	.0741	-.0021	.0006
#1	56.15	.0007	.0003	.0001	-.0009	.0746	-.0032	.0019
#2	56.42	.0004	-.0002	-.0004	.0006	.0737	-.0009	-.0007

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.506	.0475	.0302	.0009	.0060	4.370	.0045	2.317
#1	4.501	.0476	.0300	.0007	.0064	4.329	.0046	2.323
#2	4.511	.0474	.0304	.0011	.0056	4.412	.0044	2.310

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	52.19	1.8438	-.0004	-.0003	.0003	.0003	.0017
#1	.0003	52.28	1.8478	.0001	-.0006	.0003	.0004	.0017
#2	.0002	52.10	1.8399	-.0010	.0000	.0003	.0002	.0016

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0016	.0013	39.05
#1	.0016	-.0004	39.05
#2	.0016	.0029	39.05

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2847.3	73876.	4829.7
#1	2842.7	73916.	4827.7
#2	2851.8	73836.	4831.7

Sample Name: K1409993-001D Acquired: 9/23/2014 13:24:45 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	.0021	.0003	.0204	-.00005	.0290	-.0001	.0000
#1	.0109	.0028	-.0020	.0206	-.00001	.0299	.0000	.0000
#2	.0110	.0015	.0026	.0203	-.00009	.0281	-.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	55.95	.0003	-.0002	.0001	.0002	.0749	-.0022	-.0006
#1	56.01	.0008	-.0002	.0005	.0003	.0745	-.0021	.0005
#2	55.89	-.0001	-.0003	-.0004	.0001	.0754	-.0023	-.0017

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.486	.0473	.0299	.0009	.0033	4.353	.0044	2.308
#1	4.492	.0474	.0299	.0009	.0015	4.381	.0042	2.299
#2	4.480	.0472	.0298	.0009	.0051	4.326	.0046	2.316

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	52.09	1.8238	-.0016	.0001	.0003	.0003	.0017
#1	.0004	51.68	1.8203	-.0016	.0004	.0003	.0006	.0018
#2	.0001	52.49	1.8273	-.0015	-.0002	.0003	.0001	.0017

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0018	.0002	38.77
#1	.0017	.0004	38.77
#2	.0018	.0001	38.76

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2845.1	73667.	4849.0
#1	2848.8	73677.	4819.3
#2	2841.3	73657.	4878.6

Sample Name: K1409993-001S Acquired: 9/23/2014 13:27:10 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.826	1.856	.5146	.9755	1.001	.04675	.9879	.0478
#1	1.826	1.862	.5182	.9764	1.004	.04682	.9903	.0478
#2	1.826	1.849	.5110	.9745	.9988	.04667	.9854	.0478

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0475	64.42	.1942	.4746	.2368	.2320	1.032	.4646
#1	.0476	64.43	.1946	.4753	.2369	.2329	1.036	.4674
#2	.0475	64.40	.1937	.4739	.2367	.2311	1.028	.4618

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	13.83	.5151	1.020	.4686	.0040	13.86	.9074
#1	.0012	13.91	.5159	1.021	.4689	.0036	13.93	.9102
#2	.0015	13.75	.5143	1.018	.4683	.0043	13.79	.9047

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.305	.0506	60.20	1.7855	.9158	.0003	.0005	.4900
#1	2.312	.0514	60.41	1.7932	.9177	.0005	.0005	.4910
#2	2.298	.0499	59.98	1.7778	.9139	.0001	.0005	.4890

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4785	.4576	.0046	47.49
#1	.4777	.4579	.0047	47.46
#2	.4793	.4572	.0045	47.52

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2814.9	73092.	4795.8
#1	2813.7	73162.	4807.9
#2	2816.2	73023.	4783.6

Sample Name: CCVB Acquired: 9/23/2014 13:29:28 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.638	9.818	.0002	.9851	9.838	-.00012	.0028	.0000
Stddev	.030	.076	.0021	.0037	.143	.00008	.0000	.000
%RSD	.3878	.7719	868.7	.3707	1.452	65.447	1.034	178.0
#1	7.659	9.872	.0017	.9826	9.737	-.00018	.0028	.0000
#2	7.617	9.764	-.0012	.9877	9.939	-.00007	.0027	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	9.840	9.128	-.0001	.0003	-.0003	-.0001	9.700
Stddev	.0000	.016	.102	.0008	.0000	.0004	.0001	.013
%RSD	62.75	.1615	1.113	788.1	13.91	138.2	82.84	.1354
#1	.0001	9.852	9.056	.0005	.0003	-.0006	.0000	9.691
#2	.0000	9.829	9.200	-.0007	.0003	.0000	-.0001	9.709
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.9886	9.772	9.338	9.596	.9511	.9642	.0003
Stddev	.0007	.0024	.043	.107	.095	.0042	.0077	.0001
%RSD	41.85	.2449	.4423	1.146	.9909	.4399	.7968	32.92
#1	-.0011	.9903	9.742	9.262	9.663	.9540	.9588	.0004
#2	-.0020	.9869	9.803	9.413	9.529	.9481	.9696	.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 13:29:28 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	9.986	9.803	.0037	9.699	.0003	9.824	.95976
Stddev	.0001	.005	.083	.0012	.043	.0001	.083	.00101
%RSD	21.45	.0541	.8492	32.19	.4461	45.36	.8431	.10484
#1	.0004	9.990	9.862	.0029	9.730	.0002	9.882	.96047
#2	.0006	9.982	9.744	.0046	9.669	.0003	9.765	.95905
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.0011	.0005	.0016	.0002	.0001	1.010	1.001
Stddev	.0002	.0001	.0000	.0001	.0000	.0000	.002	.006
%RSD	18.44	9.878	7.333	3.455	17.98	21.88	.2256	.5568
#1	-.0010	.0010	.0005	.0015	.0002	.0001	1.011	1.005
#2	-.0013	.0012	.0005	.0016	.0003	.0001	1.008	.9969
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2909.6	75366.	4858.3
Stddev	12.4	650.	41.6
%RSD	.42687	.86310	.85541
#1	2900.9	75825.	4887.7
#2	2918.4	74906.	4828.9

Sample Name: CCVA Acquired: 9/23/2014 13:32:04 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.2544	.2461	.2494	.2666	.24499	.2455	.2488
Stddev	.0004	.0063	.0009	.0001	.0221	.00077	.0014	.0002
%RSD	.1729	2.479	.3755	.0472	8.283	.31598	.5653	.0853
#1	.2545	.2500	.2454	.2495	.2822	.24444	.2445	.2487
#2	.2539	.2589	.2467	.2493	.2510	.24554	.2465	.2490
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2466	.5348	.5111	.2435	.2504	.2509	.2491	.2661
Stddev	.0002	.0416	.0439	.0010	.0004	.0009	.0009	.0211
%RSD	.0829	7.785	8.598	.3977	.1710	.3527	.3778	7.924
#1	.2468	.5643	.5422	.2428	.2501	.2502	.2485	.2810
#2	.2465	.5054	.4800	.2442	.2507	.2515	.2498	.2512
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	-.0008	.2654	.2623	.2502	.2421	.2490	.2477
Stddev	.0010	.0026	.0296	.0234	.0067	.0002	.0065	.0002
%RSD	.4185	321.5	11.15	8.934	2.691	.0878	2.630	.1004
#1	.2462	-.0027	.2863	.2789	.2549	.2420	.2536	.2476
#2	.2477	.0010	.2445	.2457	.2454	.2423	.2443	.2479
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 13:32:04 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2472	.0038	2.525	.2495	.1316	.2442	.2704	.00031
Stddev	.0002	.0017	.077	.0021	.0022	.0010	.0064	.00000
%RSD	.0692	43.77	3.036	.8375	1.694	.4073	2.368	.47553
#1	.2473	.0049	2.579	.2480	.1332	.2435	.2749	.00031
#2	.2471	.0026	2.470	.2509	.1300	.2449	.2658	.00030
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.2487	.2464	.2429	.2503	.2484	.0019	.0096
Stddev	.0002	.0000	.0014	.0001	.0003	.0003	.0008	.0002
%RSD	.0911	.0149	.5828	.0327	.1078	.1010	43.50	2.589
#1	.2540	.2487	.2454	.2430	.2501	.2482	.0025	.0094
#2	.2543	.2487	.2475	.2428	.2504	.2486	.0013	.0098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2922.9	76165.	4658.3
Stddev	4.1	10.	301.9
%RSD	.13858	.01366	6.4799
#1	2920.0	76158.	4444.9
#2	2925.7	76173.	4871.8

Sample Name: CCB Acquired: 9/23/2014 13:34:17 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0006	-.0010	-.0003	.0001	-.00010	.0016	.0001
Stddev	.0001	.0014	.0002	.0001	.0001	.00004	.0000	.0000
%RSD	7549.	229.1	16.55	27.03	175.6	36.334	2.232	32.12
#1	.0000	.0016	-.0012	-.0002	.0000	-.00012	.0016	.0000
#2	.0000	-.0004	-.0009	-.0003	.0001	-.00007	.0016	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0053	-.0022	-.0001	.0002	-.0003	.0003	.0034
Stddev	.0000	.0110	.0001	.0001	.0003	.0001	.0005	.0007
%RSD	5.054	207.9	4.420	138.3	167.7	35.94	156.0	20.52
#1	.0001	-.0130	-.0021	-.0001	.0000	-.0002	.0007	.0038
#2	.0001	.0025	-.0022	.0000	.0003	-.0004	.0000	.0029
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0009	.0027	.0001	.0004	.0001	.0004	.0003
Stddev	.0004	.0017	.0004	.0000	.0001	.0000	.0011	.0001
%RSD	123.8	179.7	14.75	8.420	31.42	25.49	263.2	37.24
#1	-.0007	.0003	.0024	.0002	.0005	.0001	-.0004	.0004
#2	.0000	-.0021	.0030	.0001	.0003	.0001	.0012	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 13:34:17 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0020	.0250	.0017	-.0006	.0005	.0022	.00011
Stddev	.0002	.0026	.0138	.0025	.0033	.0004	.0041	.00005
%RSD	1025.	129.0	55.16	149.9	576.8	78.43	184.3	51.198
#1	-.0001	.0002	.0348	-.0001	-.0029	.0008	-.0007	.00007
#2	.0001	.0038	.0153	.0034	.0017	.0002	.0052	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	-.0001	.0002	.0004	.0002	.0001	.0009	.0065
Stddev	.0010	.0015	.0002	.0003	.0002	.0000	.0012	.0008
%RSD	142.9	1494.	77.25	82.58	132.6	48.33	133.6	12.44
#1	-.0015	.0010	.0003	.0002	.0000	.0001	.0018	.0060
#2	.0000	-.0012	.0001	.0006	.0003	.0001	.0001	.0071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2892.2	75798.	4806.2
Stddev	2.1	451.	6.2
%RSD	.07165	.59444	.12836
#1	2890.7	75479.	4810.6
#2	2893.6	76117.	4801.9

Sample Name: K1409993-004 Acquired: 9/23/2014 13:36:46 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0281	-.0005	.0020	.0143	-.00003	.0140	.0000	.0000
#1	.0285	-.0003	.0020	.0146	-.00004	.0141	.0000	.0000
#2	.0278	-.0007	.0020	.0140	-.00002	.0138	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.28	.0001	.0003	.0004	.0013	.0928	-.0010	.0011
#1	35.26	.0002	.0002	.0004	.0017	.0895	-.0009	.0023
#2	35.31	-.0001	.0004	.0005	.0010	.0960	-.0010	-.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.865	.0198	.0158	.0007	.0062	1.930	.0039	2.079
#1	2.862	.0199	.0158	.0008	.0053	1.927	.0048	2.077
#2	2.868	.0197	.0159	.0006	.0071	1.933	.0030	2.080

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	21.91	.88587	-.0011	.0002	.0013	.0005	.0008
#1	.0010	21.95	.88321	-.0011	.0007	.0013	.0005	.0010
#2	.0006	21.86	.88853	-.0011	-.0003	.0013	.0005	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0009	.0010	18.22
#1	.0009	-.0006	18.22
#2	.0009	.0025	18.22

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2852.7	74298.	4837.9
#1	2853.1	74194.	4857.5
#2	2852.4	74402.	4818.3

Sample Name: K1409993-005 Acquired: 9/23/2014 13:39:14 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.010	2.040	.0001	.0016	.0414	-.00008	.0204	.0000
#1	2.012	2.042	.0000	.0025	.0417	-.00013	.0193	.0000
#2	2.008	2.037	.0003	.0008	.0412	-.00004	.0215	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	49.76	.0006	.0015	.0115	.0112	2.912	-.0009
#1	.0000	49.96	.0007	.0015	.0115	.0112	2.912	.0001
#2	.0000	49.56	.0005	.0015	.0116	.0112	2.911	-.0020

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	5.196	.1471	.0349	.0009	.1290	2.217	.0073
#1	.0028	5.195	.1472	.0348	.0012	.1294	2.228	.0050
#2	.0027	5.197	.1470	.0349	.0006	.1286	2.207	.0096

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.345	.0005	23.78	1.7030	-.0010	.0001	.0979	.0067
#1	6.304	.0004	23.67	1.7000	-.0007	.0005	.1000	.0065
#2	6.385	.0006	23.88	1.7061	-.0013	-.0003	.0958	.0069

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.0099	.0098	.0005	27.53
#1	.0099	.0099	.0015	27.62
#2	.0099	.0097	-.0004	27.44

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2881.0	75067.	4857.1
#1	2886.1	75141.	4847.4
#2	2875.8	74994.	4866.9

Sample Name: K1409993-001 Acquired: 9/23/2014 13:41:36 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: EM 092314A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.0002	.0008	.0209	-.00009	.0291	.0000	.0000
#1	.0050	-.0014	-.0012	.0208	-.00007	.0279	.0000	-.0001
#2	.0053	.0018	.0028	.0209	-.00011	.0304	.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.16	.0008	.0002	.0003	-.0001	.0256	-.0010	-.0010
#1	56.22	.0009	.0001	.0003	-.0006	.0236	.0001	-.0004
#2	56.11	.0006	.0003	.0004	.0004	.0276	-.0022	-.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.506	.0475	.0304	.0007	.0020	4.439	.0033	2.330
#1	4.516	.0474	.0305	.0005	.0024	4.389	.0041	2.315
#2	4.495	.0475	.0303	.0008	.0016	4.489	.0024	2.346

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	53.08	1.8572	.0001	.0001	.0002	.0003	.0028
#1	.0001	52.77	1.8544	.0005	.0003	.0003	.0002	.0027
#2	-.0008	53.39	1.8601	-.0003	-.0001	.0002	.0004	.0029

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0027	-.0005	39.23
#1	.0028	-.0003	39.29
#2	.0027	-.0008	39.17

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2849.9	73746.	4857.0
#1	2846.7	73848.	4826.6
#2	2853.2	73645.	4887.3

Sample Name: K1409993-005 Acquired: 9/23/2014 13:44:00 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: EM 092314A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	.0006	.0019	.0273	-.00009	.0200	.0000	-.0001
#1	.0240	.0026	.0029	.0273	-.00007	.0206	.0000	-.0001
#2	.0243	-.0014	.0010	.0274	-.00011	.0195	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.02	-.0002	.0001	.0000	.0003	.0092	-.0008	.0002
#1	47.97	-.0002	-.0001	.0003	.0005	.0088	-.0007	.0020
#2	48.06	-.0001	.0002	-.0003	.0001	.0096	-.0010	-.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.182	.0297	.0365	.0008	.0037	1.984	.0035	2.943
#1	4.177	.0297	.0365	.0007	.0025	1.994	.0027	2.943
#2	4.186	.0298	.0365	.0009	.0049	1.974	.0042	2.943

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	23.96	1.7372	-.0021	-.0003	.0008	.0005	.0019
#1	.0003	23.95	1.7391	-.0025	.0001	.0007	.0002	.0020
#2	.0009	23.97	1.7354	-.0017	-.0007	.0008	.0007	.0019

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0017	.0013	28.08
#1	.0018	-.0008	28.16
#2	.0017	.0035	28.00

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2849.9	74271.	4822.8
#1	2848.9	74430.	4829.5
#2	2850.8	74112.	4816.1

Sample Name: K1409998-001 Acquired: 9/23/2014 13:46:28 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0274	-.0001	.0013	.0189	-.00011	.0270	-.0001	-.0001
#1	.0275	-.0004	.0022	.0187	-.00006	.0278	-.0001	-.0002
#2	.0274	.0002	.0004	.0192	-.00016	.0262	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	95.63	-.0004	.0001	.0006	.0002	.0575	-.0014	-.0005
#1	95.25	-.0007	.0003	.0006	.0004	.0546	-.0021	-.0009
#2	96.02	-.0001	-.0001	.0007	.0000	.0603	-.0007	-.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.502	.0448	.0092	.0010	.0034	16.01	.0016	1.194
#1	4.505	.0449	.0090	.0006	.0032	15.95	.0042	1.189
#2	4.499	.0448	.0094	.0013	.0035	16.07	-.0011	1.198

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	25.83	1.1933	-.0011	-.0004	.0003	.0002	.0008
#1	.0004	25.83	1.1939	.0009	.0004	.0003	.0003	.0008
#2	.0010	25.83	1.1926	-.0032	-.0011	.0004	.0002	.0009

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	.0003	77.71
#1	.0007	-.0004	77.88
#2	.0006	.0010	77.55

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2803.7	73065.	4798.6
#1	2808.4	72899.	4794.8
#2	2798.9	73231.	4802.3

Sample Name: K1409998-001D Acquired: 9/23/2014 13:48:52 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0277	-.0028	.0032	.0191	-.00007	.0258	.0000	.0000
#1	.0278	-.0029	.0056	.0188	-.00010	.0266	.0000	-.0001
#2	.0277	-.0028	.0008	.0193	-.00004	.0250	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	96.26	-.0003	.0001	.0004	.0008	.0526	-.0001	.0013
#1	96.18	-.0007	.0002	.0004	.0009	.0510	-.0008	.0040
#2	96.33	.0002	.0000	.0004	.0008	.0541	.0006	-.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.524	.0454	.0095	.0009	.0041	16.05	.0043	1.192
#1	4.518	.0454	.0096	.0005	.0016	16.11	.0048	1.206
#2	4.529	.0454	.0094	.0013	.0067	16.00	.0037	1.177

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	25.82	1.1922	-.0010	.0006	.0004	.0006	.0008
#1	.0002	25.89	1.1921	-.0008	.0000	.0005	.0006	.0008
#2	.0009	25.75	1.1923	-.0012	.0011	.0002	.0007	.0009

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	-.0012	78.10
#1	.0007	-.0002	77.76
#2	.0008	-.0022	78.44

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2810.0	72721.	4773.6
#1	2801.8	72761.	4784.9
#2	2818.3	72680.	4762.4

Sample Name: K1409998-001S Acquired: 9/23/2014 13:51:16 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.893	1.887	.4778	.9889	1.043	.04747	.9960	.0489
#1	1.892	1.880	.4748	.9909	1.044	.04750	.9976	.0489
#2	1.894	1.894	.4808	.9870	1.043	.04745	.9944	.0488

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0486	107.9	.1976	.4876	.2433	.2371	1.043	.4757
#1	.0487	107.9	.1984	.4879	.2433	.2373	1.035	.4785
#2	.0486	107.8	.1969	.4873	.2432	.2369	1.052	.4730

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	14.25	.5276	1.026	.4823	.0062	26.03	.9211
#1	.0010	14.20	.5283	1.027	.4825	.0044	25.94	.9257
#2	-.0002	14.29	.5268	1.025	.4821	.0080	26.12	.9164

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.218	.0470	35.80	1.2005	.9432	-.0001	.0008	.5030
#1	1.222	.0469	35.71	1.2013	.9428	-.0008	.0008	.5038
#2	1.213	.0471	35.89	1.1997	.9436	.0006	.0008	.5022

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4868	.4616	.0046	88.07
#1	.4856	.4626	.0032	87.90
#2	.4879	.4607	.0060	88.23

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2766.8	72050.	4742.1
#1	2769.3	72134.	4733.8
#2	2764.2	71966.	4750.4

Sample Name: K1409998-004 Acquired: 9/23/2014 13:53:31 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0310	-.0006	.0037	.0197	-.00007	.0276	.0000	-.0001
#1	.0311	-.0008	.0050	.0195	-.00009	.0279	-.0001	-.0001
#2	.0309	-.0004	.0024	.0200	-.00005	.0272	.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	97.97	-.0006	.0002	.0008	.0005	.1235	.0007	-.0003
#1	97.63	-.0008	.0002	.0008	.0004	.1260	.0001	-.0004
#2	98.31	-.0004	.0003	.0007	.0006	.1210	.0014	-.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.614	.0604	.0096	.0011	.0070	15.87	.0015	1.221
#1	4.607	.0605	.0096	.0011	.0090	15.91	.0029	1.220
#2	4.622	.0602	.0095	.0011	.0051	15.84	.0002	1.221

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	25.28	1.2067	-.0014	.0003	.0003	.0003	.0007
#1	-.0002	25.47	1.2083	-.0015	.0004	.0003	.0004	.0007
#2	.0004	25.08	1.2050	-.0014	.0002	.0002	.0002	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0005	.0021	77.61
#1	.0005	.0019	77.78
#2	.0004	.0024	77.43

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2785.1	72593.	4721.3
#1	2783.7	72393.	4748.9
#2	2786.5	72794.	4693.6

Sample Name: K1409998-006 Acquired: 9/23/2014 13:55:55 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0651	-.0016	.0010	.0129	-.00011	.0158	.0000	-.0001
#1	.0649	-.0010	.0018	.0128	-.00008	.0160	.0001	-.0001
#2	.0653	-.0022	.0003	.0131	-.00013	.0156	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.78	.0002	.0003	.0004	.0000	.1779	-.0011	.0020
#1	57.77	-.0002	.0006	.0005	.0001	.1822	-.0015	.0016
#2	57.80	.0007	-.0001	.0002	-.0002	.1736	-.0008	.0025

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.870	.0395	.0048	.0011	.0054	8.044	.0032	1.511
#1	2.870	.0395	.0046	.0010	.0044	8.049	.0017	1.518
#2	2.869	.0396	.0049	.0012	.0064	8.039	.0048	1.504

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	13.37	.61289	-.0018	.0001	.0010	.0005	.0014
#1	.0003	13.41	.61557	-.0032	.0007	.0010	.0003	.0013
#2	.0004	13.33	.61021	-.0005	-.0005	.0009	.0007	.0014

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0013	.0016	39.21
#1	.0014	.0028	39.15
#2	.0013	.0005	39.28

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2811.9	73440.	4769.8
#1	2810.0	73478.	4765.7
#2	2813.7	73403.	4773.8

Sample Name: K1409998-007 Acquired: 9/23/2014 13:58:19 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0783	-.0009	.0015	.0288	-.00012	.0327	.0001	.0000
#1	.0782	.0003	.0004	.0286	-.00008	.0337	.0001	.0001
#2	.0784	-.0022	.0026	.0289	-.00016	.0316	.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	113.3	-.0003	.0002	.0010	.0007	.1456	-.0016	-.0024
#1	113.0	.0002	.0004	.0006	.0004	.1415	-.0001	-.0018
#2	113.5	-.0009	-.0001	.0013	.0010	.1496	-.0030	-.0031

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.264	.1785	.0115	.0021	.0087	18.12	.0052	1.435
#1	5.257	.1777	.0117	.0022	.0098	18.19	.0043	1.430
#2	5.272	.1793	.0114	.0019	.0077	18.05	.0060	1.440

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	22.39	1.4551	-.0031	-.0009	.0059	.0004	.0049
#1	.0004	22.43	1.4588	-.0032	-.0009	.0106	.0006	.0049
#2	.0010	22.35	1.4514	-.0031	-.0009	.0012	.0003	.0050

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0045	-.0004	93.08
#1	.0045	-.0008	93.07
#2	.0044	.0000	93.10

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2765.3	71971.	4746.1
#1	2772.7	71942.	4750.8
#2	2757.8	71999.	4741.4

Sample Name: CCVB Acquired: 9/23/2014 14:00:45 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.733	9.959	.0017	.9905	10.03	-.00001	.0017	.0000
Stddev	.023	.074	.0012	.0006	.05	.00008	.0010	.0000
%RSD	.2990	.7418	67.66	.0654	.4604	554.58	58.99	528.1
#1	7.717	10.01	.0025	.9910	10.06	.00004	.0010	.0000
#2	7.750	9.907	.0009	.9901	9.994	-.00007	.0024	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	9.972	9.360	-.0001	.0002	-.0001	-.0001	9.915
Stddev	.000	.023	.021	.0004	.0001	.0003	.0007	.028
%RSD	821.5	.2298	.2201	407.2	72.42	205.6	558.4	.2838
#1	-.0001	9.988	9.346	-.0003	.0002	.0001	-.0006	9.935
#2	.0001	9.956	9.375	.0002	.0001	-.0003	.0004	9.895
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.9910	10.01	9.455	9.706	.9859	.9838	.0001
Stddev	.0000	.0085	.06	.148	.014	.0010	.0014	.0000
%RSD	5.708	.8571	.5859	1.566	.1402	.1008	.1457	34.03
#1	-.0007	.9970	10.05	9.350	9.716	.9866	.9849	.0002
#2	-.0008	.9850	9.969	9.559	9.697	.9852	.9828	.0001
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 14:00:45 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	10.09	9.853	.0044	9.769	.0004	9.888	.98585
Stddev	.0002	.03	.079	.0005	.004	.0002	.026	.00362
%RSD	37.08	.3368	.7983	12.24	.0454	62.73	.2665	.36710
#1	.0007	10.07	9.909	.0048	9.766	.0005	9.906	.98841
#2	.0004	10.11	9.797	.0040	9.772	.0002	9.869	.98329
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	.0008	.0007	.0022	.0002	.0000	1.025	1.014
Stddev	.0010	.0007	.0004	.0001	.0002	.0001	.001	.001
%RSD	104.2	84.01	60.06	2.828	75.63	226.1	.1301	.1172
#1	-.0003	.0013	.0010	.0022	.0004	.0001	1.024	1.015
#2	-.0017	.0003	.0004	.0022	.0001	.0000	1.026	1.013
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2872.0	74065.	4751.3
Stddev	4.3	11.	12.8
%RSD	.15075	.01493	.26929
#1	2875.1	74073.	4760.3
#2	2869.0	74057.	4742.2

Sample Name: CCVA Acquired: 9/23/2014 14:03:22 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2541	.2564	.2450	.2505	.2522	.24707	.2506	.2499
Stddev	.0007	.0066	.0052	.0019	.0005	.00046	.0008	.0005
%RSD	.2778	2.579	2.127	.7599	.1787	.18725	.2994	.1921
#1	.2546	.2611	.2487	.2491	.2519	.24740	.2511	.2496
#2	.2536	.2517	.2413	.2518	.2525	.24674	.2501	.2502
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2482	.5153	.4851	.2459	.2512	.2499	.2490	.2556
Stddev	.0004	.0059	.0005	.0002	.0005	.0011	.0008	.0018
%RSD	.1429	1.142	.1096	.0895	.1792	.4549	.3328	.7088
#1	.2485	.5111	.4847	.2460	.2515	.2507	.2496	.2569
#2	.2480	.5195	.4855	.2457	.2509	.2491	.2484	.2543
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2471	-.0010	.2546	.2454	.2473	.2456	.2441	.2483
Stddev	.0003	.0034	.0163	.0006	.0008	.0004	.0033	.0003
%RSD	.1027	327.3	6.400	.2557	.3410	.1488	1.370	.1129
#1	.2473	.0014	.2661	.2450	.2479	.2459	.2465	.2485
#2	.2470	-.0034	.2431	.2459	.2467	.2453	.2418	.2481
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 14:03:22 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2485	.0015	2.552	.2492	.1297	.2474	.2636	.00019
Stddev	.0000	.0031	.007	.0034	.0029	.0008	.0055	.00002
%RSD	.0034	207.7	.2574	1.378	2.213	.3298	2.093	10.293
#1	.2485	.0037	2.547	.2468	.1317	.2468	.2675	.00020
#2	.2485	-.0007	2.557	.2517	.1277	.2480	.2597	.00018
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2537	.2493	.2481	.2456	.2499	.2481	.0021	.0188
Stddev	.0011	.0006	.0002	.0001	.0001	.0009	.0004	.0039
%RSD	.4206	.2277	.0963	.0534	.0271	.3634	19.26	20.78
#1	.2529	.2497	.2482	.2455	.2499	.2474	.0018	.0216
#2	.2544	.2489	.2479	.2457	.2498	.2487	.0024	.0160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2912.4	76004.	4795.6
Stddev	5.8	132.	21.7
%RSD	.20028	.17325	.45228
#1	2908.3	75911.	4810.9
#2	2916.5	76098.	4780.2

Sample Name: CCB Acquired: 9/23/2014 14:05:35 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0009	-.0014	-.0002	-.0003	-.00002	.0022	.0001
Stddev	.0000	.0020	.0004	.0005	.0002	.00005	.0013	.0000
%RSD	656.5	225.8	30.13	191.9	87.11	233.89	61.62	13.47
#1	.0000	.0024	-.0011	-.0006	-.0001	.00001	.0031	.0001
#2	.0000	-.0005	-.0017	.0001	-.0004	-.00005	.0012	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0011	.0001	-.0002	.0001	-.0003	.0001	.0000
Stddev	.0001	.0103	.0003	.0001	.0001	.0002	.0005	.0046
%RSD	120.5	898.6	257.6	53.05	94.58	60.43	509.4	9306.
#1	.0000	-.0061	.0003	-.0001	.0002	-.0002	.0005	.0033
#2	.0002	.0084	-.0001	-.0003	.0000	-.0004	-.0003	-.0032
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	-.0027	.0039	.0003	.0004	.0001	.0001	.0004
Stddev	.0001	.0004	.0038	.0000	.0005	.0000	.0009	.0001
%RSD	5.726	15.00	97.27	13.97	107.7	59.30	1437.	18.02
#1	-.0019	-.0024	.0065	.0004	.0008	.0000	-.0005	.0004
#2	-.0018	-.0030	.0012	.0003	.0001	.0001	.0007	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 14:05:35 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0011	.0168	.0010	.0024	.0005	.0117	.00011
Stddev	.0000	.0033	.0206	.0013	.0049	.0001	.0001	.00010
%RSD	2.924	316.6	122.6	122.1	207.1	25.17	1.022	89.272
#1	.0002	-.0013	.0022	.0019	-.0011	.0006	.0116	.00018
#2	.0002	.0034	.0314	.0001	.0058	.0004	.0118	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	.0007	.0002	.0002	.0001	.0002	.0012	.0134
Stddev	.0003	.0009	.0001	.0001	.0000	.0001	.0001	.0036
%RSD	14.14	126.9	84.69	42.11	12.67	33.37	8.321	26.83
#1	-.0019	.0001	.0001	.0001	.0002	.0002	.0012	.0160
#2	-.0023	.0014	.0002	.0002	.0001	.0001	.0013	.0109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2914.1	76169.	4802.5
Stddev	.5	110.	34.5
%RSD	.01840	.14503	.71748
#1	2913.8	76247.	4826.9
#2	2914.5	76091.	4778.1

Sample Name: K1409998-001 Acquired: 9/23/2014 14:08:03 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: EM 092314A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0279	.0005	.0023	.0186	-.00007	.0252	.0000	.0000
#1	.0280	.0002	.0041	.0186	-.00008	.0249	.0000	.0000
#2	.0278	.0008	.0006	.0187	-.00005	.0256	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	95.88	-.0001	.0000	.0005	.0007	.0298	-.0017	-.0027
#1	95.93	-.0001	.0002	.0004	.0003	.0318	-.0027	-.0022
#2	95.83	-.0001	-.0002	.0006	.0011	.0277	-.0007	-.0032

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.523	.0320	.0092	.0009	.0038	15.80	.0028	1.179
#1	4.536	.0319	.0093	.0007	.0046	15.72	.0061	1.180
#2	4.509	.0321	.0092	.0011	.0030	15.88	-.0005	1.179

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	25.64	1.1923	-.0008	.0003	.0006	.0003	.0006
#1	.0002	25.65	1.1958	-.0005	-.0005	.0006	.0005	.0006
#2	.0002	25.62	1.1889	-.0011	.0010	.0005	.0000	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	-.0003	77.84
#1	.0008	-.0001	77.97
#2	.0008	-.0005	77.71

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2804.6	73113.	4754.2
#1	2800.8	73083.	4736.3
#2	2808.5	73143.	4772.1

Sample Name: K1409998-007 Acquired: 9/23/2014 14:10:27 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: EM 092314A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0461	.0004	.0013	.0278	-.00013	.0316	.0000	.0001
#1	.0460	-.0003	.0008	.0278	-.00009	.0319	.0000	.0000
#2	.0461	.0010	.0017	.0279	-.00017	.0313	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	111.2	-.0002	.0003	.0010	.0012	.0353	-.0018	-.0007
#1	111.1	-.0001	.0003	.0011	.0014	.0347	-.0026	.0008
#2	111.2	-.0003	.0003	.0009	.0010	.0359	-.0011	-.0021

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.148	.1554	.0110	.0022	.0024	17.42	.0030	1.310
#1	5.141	.1556	.0111	.0023	.0038	17.39	.0032	1.320
#2	5.155	.1552	.0110	.0020	.0010	17.46	.0028	1.301

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	21.52	1.4014	-.0013	-.0006	.0004	.0002	.0047
#1	.0007	21.41	1.3993	-.0002	-.0009	.0006	.0000	.0047
#2	.0003	21.63	1.4035	-.0024	-.0003	.0002	.0004	.0047

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0043	-.0012	90.50
#1	.0042	-.0011	90.56
#2	.0043	-.0014	90.44

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2766.4	72416.	4725.0
#1	2762.0	72761.	4707.4
#2	2770.9	72071.	4742.6

Sample Name: K1409900-001 Acquired: 9/23/2014 14:12:54 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0805	-.0005	.0022	.0279	-.00006	.0306	.0000	.0000
#1	.0807	-.0010	.0023	.0279	-.00011	.0305	.0000	.0001
#2	.0804	.0000	.0020	.0278	-.00001	.0307	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	109.9	.0002	.0004	.0012	.0006	.1611	-.0012	-.0004
#1	109.6	.0003	.0001	.0011	.0004	.1591	-.0021	.0016
#2	110.2	.0000	.0007	.0013	.0009	.1632	-.0002	-.0025

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.091	.1738	.0109	.0020	.0102	17.32	.0044	1.389
#1	5.080	.1733	.0111	.0019	.0116	17.38	.0040	1.389
#2	5.102	.1743	.0107	.0020	.0088	17.27	.0047	1.389

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	21.33	1.3876	-.0001	-.0002	.0019	.0012	.0048
#1	.0003	21.41	1.3843	-.0004	.0000	.0022	.0013	.0047
#2	-.0001	21.25	1.3909	.0002	-.0004	.0016	.0010	.0049

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0045	-.0009	88.54
#1	.0045	-.0003	88.38
#2	.0044	-.0014	88.70

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2757.4	71631.	4719.6
#1	2751.3	71806.	4745.9
#2	2763.5	71457.	4693.2

Sample Name: K1409900-002 Acquired: 9/23/2014 14:15:18 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0882	-.0013	.0016	.0055	-.00003	.0060	.0000	.0001
#1	.0877	-.0012	.0030	.0058	-.00006	.0049	.0000	.0001
#2	.0887	-.0014	.0001	.0052	-.00001	.0071	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.55	.0002	.0001	.0000	.0004	.2047	-.0006	-.0012
#1	19.61	-.0005	.0000	.0003	.0008	.2029	.0007	-.0017
#2	19.48	.0008	.0003	-.0002	-.0001	.2065	-.0019	-.0007

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.144	.0301	.0001	.0003	.0072	.2389	.0039	1.815
#1	1.145	.0299	.0001	.0003	.0085	.2010	.0049	1.805
#2	1.144	.0302	.0002	.0003	.0059	.2768	.0029	1.825

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	1.701	.04200	-.0030	-.0002	.0019	.0007	.0006
#1	.0003	1.704	.04191	-.0042	-.0001	.0020	.0008	.0005
#2	.0003	1.698	.04209	-.0018	-.0003	.0019	.0006	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	-.0002	.7605
#1	.0004	-.0024	.7634
#2	.0003	.0021	.7576

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2866.0	74698.	4741.9
#1	2865.7	74579.	4736.9
#2	2866.4	74816.	4746.8

Sample Name: K1409900-003 Acquired: 9/23/2014 14:17:47 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0603	-.0001	-.0007	.0128	-.00012	.0173	.0000	.0000
#1	.0604	.0004	-.0012	.0129	-.00016	.0175	.0000	-.0001
#2	.0601	-.0005	-.0003	.0127	-.00008	.0172	.0000	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.13	-.0002	.0003	.0002	.0000	.1501	-.0015	-.0010
#1	58.38	-.0004	.0005	.0003	.0001	.1549	-.0008	-.0004
#2	57.88	-.0001	.0002	.0001	-.0001	.1452	-.0021	-.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.870	.0499	.0047	.0009	.0048	8.075	.0021	1.468
#1	2.877	.0500	.0045	.0008	.0048	8.049	.0006	1.474
#2	2.862	.0497	.0049	.0010	.0048	8.101	.0036	1.462

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	13.69	.61612	-.0017	-.0002	.0010	.0005	.0014
#1	.0006	13.71	.61851	-.0038	.0001	.0012	.0010	.0016
#2	.0002	13.68	.61374	.0003	-.0005	.0008	.0000	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0013	-.0006	39.54
#1	.0013	-.0003	39.47
#2	.0014	-.0009	39.62

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2824.2	73397.	4706.6
#1	2821.6	73411.	4694.9
#2	2826.8	73382.	4718.3

Sample Name: K1409900-004 Acquired: 9/23/2014 14:20:11 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0283	.0018	.0023	.0191	-.00003	.0254	.0000	.0000
#1	.0282	.0013	.0018	.0193	.00000	.0266	-.0001	.0000
#2	.0284	.0023	.0028	.0189	-.00006	.0243	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	96.13	-.0008	-.0001	.0003	.0001	.0576	-.0007	-.0008
#1	96.22	-.0011	.0001	-.0002	.0001	.0593	-.0016	-.0011
#2	96.03	-.0004	-.0002	.0009	.0002	.0558	.0001	-.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.532	.0539	.0089	.0010	.0070	15.67	.0028	1.200
#1	4.529	.0538	.0087	.0010	.0068	15.75	.0023	1.203
#2	4.534	.0539	.0091	.0010	.0072	15.60	.0033	1.197

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	25.12	1.1864	-.0022	.0005	.0005	.0005	.0004
#1	-.0005	25.17	1.1918	-.0025	.0007	.0005	.0006	.0003
#2	-.0001	25.07	1.1810	-.0019	.0002	.0006	.0004	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	.0004	76.77
#1	.0003	.0001	76.71
#2	.0004	.0007	76.83

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2779.3	72395.	4708.7
#1	2779.7	72393.	4709.9
#2	2779.0	72397.	4707.5

Sample Name: K1409990-001 Acquired: 9/23/2014 14:22:35 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2932	-.0024	.0062	.1040	-.00007	.0146	.0007	.0008
#1	.2914	-.0040	.0065	.1040	-.00016	.0154	.0007	.0007
#2	.2950	-.0009	.0059	.1040	.00002	.0139	.0006	.0008

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	202.5	-.0005	.0120	.0033	.0029	39.13	-.0043	.0017
#1	202.3	-.0002	.0123	.0033	.0028	39.08	-.0039	.0017
#2	202.7	-.0008	.0118	.0033	.0031	39.18	-.0048	.0016

Elem	Mg2852	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.79	11.55	.0018	.0158	.0431	4.155	.0036	3.859
#1	11.75	11.50	.0018	.0157	.0428	4.152	.0037	3.833
#2	11.83	11.60	.0017	.0158	.0434	4.158	.0035	3.884

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	4.074	1.1740	-.0114	.0005	.0115	.0171	.0637
#1	-.0001	4.071	1.1731	-.0114	.0008	.0115	.0168	.0636
#2	-.0004	4.077	1.1749	-.0115	.0001	.0116	.0174	.0638

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0600	.0025	116.1
#1	.0600	.0014	116.3
#2	.0599	.0036	116.0

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2738.6	71793.	4750.2
#1	2742.8	71865.	4745.1
#2	2734.5	71720.	4755.3

Sample Name: K1410047-001 Acquired: 9/23/2014 14:25:09 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	-.0016	.0025	.0164	-.00013	.0149	.0000	.0000
#1	.0103	-.0025	.0024	.0172	-.00015	.0141	.0000	.0000
#2	.0107	-.0008	.0025	.0156	-.00012	.0158	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.31	.0000	.0002	.0001	.0002	.0310	-.0002	-.0026
#1	42.41	.0000	.0002	.0001	.0008	.0312	-.0006	-.0041
#2	38.22	-.0001	.0002	.0001	-.0004	.0308	.0001	-.0010

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.268	.0147	.0169	.0006	.0030	2.517	.0055	2.047
#1	3.439	.0148	.0168	.0008	.0032	2.568	.0067	2.075
#2	3.098	.0146	.0171	.0004	.0028	2.465	.0043	2.019

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	28.62	1.0575	-.0011	.0004	.0006	.0004	.0005
#1	.0007	29.11	1.1166	-.0011	.0000	.0005	.0003	.0006
#2	.0006	28.14	.99828	-.0011	.0008	.0006	.0004	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	-.0007	22.05
#1	.0005	-.0014	22.10
#2	.0004	.0001	22.00

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2828.5	73184.	4551.2
#1	2832.7	73271.	4369.8
#2	2824.3	73097.	4732.6

Sample Name: K1410047-001 Acquired: 9/23/2014 14:27:37 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: EM 092314A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085	.0000	.0003	.0157	-.00007	.0150	.0000	.0000
#1	.0082	-.0008	-.0005	.0156	-.00004	.0154	.0000	.0000
#2	.0087	.0008	.0011	.0158	-.00010	.0145	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.39	.0003	.0003	.0002	-.0001	.0130	-.0009	-.0010
#1	38.39	.0000	.0003	.0005	-.0004	.0142	-.0015	-.0021
#2	38.40	.0007	.0003	-.0002	.0003	.0118	-.0004	.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.121	.0141	.0176	.0005	.0027	2.512	.0054	2.024
#1	3.128	.0140	.0174	.0005	.0045	2.521	.0051	2.026
#2	3.115	.0142	.0179	.0005	.0008	2.503	.0057	2.022

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	28.48	1.0095	-.0011	.0001	.0008	.0006	.0013
#1	.0007	28.62	1.0101	.0005	.0000	.0006	.0007	.0014
#2	.0002	28.33	1.0089	-.0026	.0003	.0009	.0006	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0014	.0003	22.53
#1	.0015	-.0001	22.44
#2	.0014	.0007	22.62

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2780.2	73379.	4746.2
#1	2826.0	73439.	4760.4
#2	2734.3	73318.	4732.0

Sample Name: K1410119-001 Acquired: 9/23/2014 14:30:05 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1663	-.0002	.0021	.0219	-.00009	.0118	.0006	.0006
#1	.1667	-.0014	.0038	.0213	-.00010	.0111	.0005	.0007
#2	.1660	.0011	.0003	.0224	-.00009	.0125	.0006	.0006

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	162.5	.0002	.0010	.0023	.0031	.3975	-.0016	.0008
#1	162.6	.0003	.0009	.0021	.0032	.3977	-.0025	-.0013
#2	162.4	.0002	.0011	.0024	.0030	.3973	-.0007	.0030

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.739	.3613	.0028	.0048	.0185	3.490	.0025	2.172
#1	4.748	.3621	.0027	.0049	.0181	3.514	.0017	2.173
#2	4.730	.3605	.0029	.0047	.0188	3.465	.0033	2.172

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	4.594	1.0384	-.0012	.0001	.0035	.0026	.0415
#1	.0008	4.609	1.0403	-.0024	-.0001	.0034	.0026	.0412
#2	-.0001	4.580	1.0364	.0000	.0003	.0036	.0027	.0417

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0397	.0009	121.2
#1	.0396	-.0002	121.1
#2	.0398	.0021	121.3

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2784.1	72570.	4737.6
#1	2792.2	72768.	4744.6
#2	2776.0	72372.	4730.6

Sample Name: CCVB Acquired: 9/23/2014 14:32:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.844	9.985	-.0033	.9964	10.27	-.00008	-.0001	-.0001
Stddev	.007	.095	.0012	.0006	.06	.00001	.0008	.0000
%RSD	.0836	.9476	34.52	.0634	.6222	6.4233	1070.	27.09
#1	7.839	10.05	-.0042	.9960	10.32	-.00009	.0005	-.0001
#2	7.848	9.918	-.0025	.9968	10.23	-.00008	-.0006	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.16	9.592	.0001	.0001	-.0001	-.0005	10.17
Stddev	.000	.05	.078	.0001	.0002	.0001	.0005	.00
%RSD	357.3	.5219	.8119	65.77	173.0	72.01	93.28	.0456
#1	.0000	10.20	9.647	.0002	.0000	.0000	-.0008	10.17
#2	.0000	10.12	9.537	.0001	.0003	-.0001	-.0002	10.18
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.9887	10.24	9.607	9.720	.9976	.9962	.0000
Stddev	.0014	.0066	.01	.022	.018	.0029	.0078	.000
%RSD	95.94	.6684	.1243	.2335	.1800	.2878	.7837	10.26
#1	-.0025	.9840	10.23	9.623	9.708	.9996	.9907	.0000
#2	-.0005	.9934	10.25	9.591	9.733	.9955	1.002	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 14:32:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	10.27	9.786	.0049	9.800	.0002	9.912	1.0067
Stddev	.0000	.00	.005	.0015	.004	.0003	.009	.0001
%RSD	3.804	.0228	.0528	30.33	.0413	136.1	.0865	.00905
#1	.0005	10.26	9.790	.0038	9.797	.0005	9.918	1.0067
#2	.0005	10.27	9.783	.0059	9.802	.0000	9.906	1.0066
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	.0010	.0007	.0019	.0002	.0000	1.028	1.019
Stddev	.0003	.0010	.0001	.0000	.0001	.0001	.002	.004
%RSD	17.83	97.53	13.04	2.491	38.65	16950.	.1613	.4058
#1	-.0020	.0003	.0007	.0020	.0002	.0001	1.026	1.021
#2	-.0016	.0017	.0006	.0019	.0001	-.0001	1.029	1.016
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2848.5	73305.	4666.7
Stddev	1.7	231.	7.1
%RSD	.06078	.31573	.15268
#1	2849.7	73468.	4661.6
#2	2847.2	73141.	4671.7

Sample Name: CCVA Acquired: 9/23/2014 14:35:06 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2581	.2543	.2464	.2525	.2550	.24495	.2448	.2525
Stddev	.0002	.0049	.0004	.0024	.0008	.00072	.0002	.0004
%RSD	.0614	1.940	.1824	.9400	.3073	.29264	.0777	.1481
#1	.2583	.2578	.2461	.2509	.2544	.24546	.2449	.2527
#2	.2580	.2508	.2467	.2542	.2555	.24445	.2446	.2522
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2520	.5120	.4895	.2499	.2524	.2523	.2464	.2573
Stddev	.0006	.0082	.0013	.0010	.0003	.0004	.0016	.0046
%RSD	.2262	1.598	.2622	.3881	.1085	.1392	.6400	1.795
#1	.2524	.5062	.4904	.2492	.2526	.2525	.2475	.2541
#2	.2516	.5178	.4886	.2505	.2522	.2520	.2453	.2606
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2507	-.0020	.2599	.2474	.2468	.2482	.2466	.2500
Stddev	.0010	.0006	.0272	.0014	.0053	.0000	.0013	.0003
%RSD	.3846	30.00	10.46	.5685	2.148	.0054	.5132	.1140
#1	.2514	-.0016	.2406	.2464	.2506	.2482	.2475	.2498
#2	.2500	-.0024	.2791	.2484	.2431	.2482	.2457	.2502
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 14:35:06 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2510	.0026	2.464	.2483	.1343	.2447	.2656	.00016
Stddev	.0010	.0022	.018	.0003	.0039	.0001	.0121	.00002
%RSD	.4174	82.49	.7317	.1314	2.867	.0484	4.538	13.713
#1	.2517	.0041	2.477	.2481	.1316	.2448	.2571	.00018
#2	.2503	.0011	2.451	.2486	.1370	.2447	.2741	.00014
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2537	.2504	.2503	.2486	.2514	.2472	.0036	.0158
Stddev	.0018	.0003	.0009	.0003	.0004	.0001	.0028	.0006
%RSD	.7053	.1304	.3458	.1142	.1458	.0472	78.69	3.920
#1	.2524	.2507	.2509	.2484	.2516	.2472	.0016	.0154
#2	.2549	.2502	.2497	.2488	.2511	.2473	.0056	.0162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2882.0	74844.	4725.6
Stddev	.9	10.	22.3
%RSD	.03154	.01383	.47088
#1	2881.4	74851.	4741.3
#2	2882.6	74836.	4709.9

Sample Name: CCB Acquired: 9/23/2014 14:37:19 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0002	-.0017	.0020	-.0001	-.00007	.0005	.0000
Stddev	.000	.0024	.0018	.0009	.0000	.00004	.0006	.0001
%RSD	8452.	1098.	109.2	45.56	78.79	48.411	120.6	136.3
#1	.0001	.0015	-.0004	.0014	-.0001	-.00010	.0001	.0001
#2	-.0001	-.0019	-.0030	.0027	.0000	-.00005	.0009	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0010	-.0010	.0001	.0003	-.0004	.0001	.0056
Stddev	.0000	.0015	.0002	.0003	.0001	.0004	.0000	.0005
%RSD	3.106	146.2	21.88	543.2	42.56	120.3	34.19	9.088
#1	.0001	.0021	-.0008	.0003	.0002	-.0001	.0001	.0059
#2	.0001	.0000	-.0011	-.0001	.0004	-.0007	.0001	.0052
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0006	.0198	.0001	.0028	.0001	-.0001	.0002
Stddev	.0012	.0009	.0118	.0000	.0014	.0000	.0002	.0002
%RSD	100.1	143.3	59.62	62.62	50.62	4.881	134.0	84.99
#1	-.0021	-.0013	.0115	.0000	.0038	.0001	.0000	.0003
#2	-.0004	.0000	.0282	.0001	.0018	.0001	-.0002	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 14:37:19 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0022	-.0119	.0023	.0044	.0004	.0094	.00008
Stddev	.0001	.0029	.0047	.0009	.0056	.0012	.0064	.00007
%RSD	42.92	131.5	39.53	38.32	126.3	322.0	68.27	82.422
#1	.0002	.0043	-.0152	.0029	.0005	-.0005	.0139	.00013
#2	.0001	.0002	-.0086	.0017	.0083	.0012	.0049	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	-.0004	.0002	.0003	.0002	.0002	.0013	.0141
Stddev	.0015	.0012	.0002	.0002	.0001	.0001	.0032	.0032
%RSD	98.70	284.3	83.22	68.38	43.41	35.68	251.3	22.34
#1	-.0026	-.0013	.0001	.0002	.0002	.0001	-.0010	.0164
#2	-.0005	.0004	.0003	.0005	.0001	.0002	.0035	.0119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2892.9	75150.	4741.9
Stddev	5.2	150.	1.6
%RSD	.18077	.19968	.03281
#1	2889.2	75044.	4740.8
#2	2896.6	75256.	4743.0

Sample Name: KQ1411729-02 Acquired: 9/23/2014 14:49:15 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409921-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.3865	-.0112	F -.0302	.0000	-.00012	.0015	F -.0013
#1	-.1888	-.0025	-.0132	.0000	-.00003	.0010	-.0007
#2	-.5842	-.0199	-.0471	-.0001	-.00021	.0020	-.0019

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0018	F .0205	.0000	F .0045	.0010	-.0007	.0093
#1	.0009	.0205	.0003	.0031	.0005	-.0003	.0114
#2	.0027	.0205	-.0003	.0059	.0015	-.0011	.0071

Elem	Pb2203	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0093	.0004	.0027	.0002	-.0021	.0005	F .0582
#1	-.0048	.0004	.0027	.0002	-.0012	.0007	.0384
#2	-.0138	.0004	.0027	.0001	-.0030	.0004	.0781

Elem	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	.0157	.0059	.0010	.0258	.00013	F -.0858
#1	.0126	.0015	.0079	.0009	.0224	.00005	-.0549
#2	.0152	.0300	.0039	.0011	.0292	.00022	-.1167

Elem	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0272	.0002	-.0001	-.0002	.0007	-.0194	F .0947
#1	-.0109	.0000	.0000	.0005	.0012	-.0104	.0734
#2	-.0435	.0003	-.0003	-.0009	.0003	-.0283	.1160

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2544.5	74851.	4816.8
#1	2597.6	75602.	4814.5
#2	2491.5	74101.	4819.1

NR-see rerun
Gun
10/9/14

Sample Name: KQ1411729-01 Acquired: 9/23/2014 14:51:31 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409921-LCSS

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.80	.4478	.5046	1.504	.35645	.6929	.8445	.8333
#1	38.06	.4484	.5043	1.512	.35835	.6965	.8451	.8334
#2	37.53	.4473	.5049	1.497	.35455	.6892	.8440	.8332

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.84	.6654	.6119	.4686	.5052	57.49	.5285	.0372
#1	33.03	.6655	.6127	.4688	.5075	57.53	.5290	.0363
#2	32.65	.6653	.6111	.4685	.5029	57.45	.5281	.0382

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.20	1.597	.6732	.7169	2.481	13.97	.6886	14.02
#1	14.08	1.601	.6741	.7180	2.482	13.96	.6884	13.92
#2	14.31	1.594	.6722	.7158	2.481	13.98	.6887	14.12

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1946	14.25	.47485	.8321	.5023	1.425	.4864	.7496
#1	.1955	14.14	.47358	.8301	.5023	1.417	.4868	.7499
#2	.1938	14.36	.47612	.8341	.5022	1.432	.4861	.7493

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7455	-.0009	1.201
#1	.7467	.0012	1.201
#2	.7443	-.0029	1.202

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2950.5	76755.	4979.0
#1	2950.0	76840.	4958.5
#2	2950.9	76671.	4999.4

Sample Name: KQ1411729-02 Acquired: 9/23/2014 14:55:30 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409921-MB RERUN

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093	.0015	-.0002	-.0001	-.00018	.0027	-.0001	.0000
#1	.0093	.0014	-.0004	.0001	-.00021	.0030	-.0001	-.0001
#2	.0094	.0016	-.0001	-.0004	-.00014	.0025	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0213	.0000	-.0002	-.0005	-.0007	.0078	-.0006	.0007
#1	.0214	-.0003	-.0002	-.0007	-.0013	.0089	-.0013	-.0019
#2	.0213	.0003	-.0002	-.0002	-.0001	.0068	.0001	.0034

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0002	.0003	.0002	.0126	.0432	.0028	.0125
#1	.0028	.0002	.0003	.0002	.0116	.0265	.0041	.0153
#2	.0028	.0001	.0003	.0002	.0135	.0599	.0015	.0097

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0176	.00014	-.0024	.0125	.0005	.0001	.0020
#1	.0001	.0249	.00013	-.0022	.0123	.0005	.0002	.0022
#2	.0003	.0104	.00016	-.0025	.0126	.0004	.0001	.0018

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0023	.0002	.0055
#1	.0023	.0019	.0065
#2	.0023	-.0014	.0045

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2890.2	76394.	4772.7
#1	2887.5	76420.	4746.8
#2	2892.9	76369.	4798.6

Sample Name: K1409921-001 Acquired: 9/23/2014 14:57:56 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.10	-.0011	.0182	.3339	.00112	.0057	.0004	.0005
#1	69.47	-.0010	.0193	.3339	.00116	.0075	.0003	.0004
#2	68.73	-.0012	.0170	.3340	.00108	.0040	.0005	.0006

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.37	.1492	.0317	.0700	.0759	82.84	.0405	.0365
#1	15.37	.1494	.0318	.0707	.0758	82.83	.0394	.0370
#2	15.37	.1489	.0316	.0693	.0759	82.85	.0417	.0360

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.66	1.199	.0004	.1423	3.522	3.275	.0073	11.95
#1	20.61	1.203	.0000	.1424	3.519	3.264	.0068	11.75
#2	20.71	1.194	.0007	.1421	3.524	3.285	.0077	12.14

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	1.029	.09908	.0000	.0150	3.984	.2078	.1950
#1	.0011	1.028	.09887	.0017	.0146	4.000	.2088	.1950
#2	.0010	1.030	.09928	-.0016	.0154	3.968	.2069	.1950

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1946	.0047	.6855
#1	.1945	.0048	.6791
#2	.1947	.0045	.6919

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2987.6	76929.	5018.2
#1	2991.0	76849.	5003.1
#2	2984.3	77009.	5033.4

Sample Name: K1409921-001D Acquired: 9/23/2014 15:00:26 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	66.25	-.0006	.0166	.3275	.00100	.0047	.0004	.0006
#1	65.65	-.0021	.0180	.3290	.00094	.0035	.0003	.0005
#2	66.85	.0009	.0153	.3260	.00106	.0059	.0005	.0008

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.50	.1393	.0296	.0649	.0686	76.49	.0389	.0338
#1	13.54	.1382	.0288	.0630	.0683	76.58	.0377	.0349
#2	13.46	.1403	.0303	.0668	.0688	76.39	.0401	.0326

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.08	1.118	.0006	.1345	3.162	3.067	.0109	12.73
#1	18.97	1.110	.0006	.1314	3.104	3.055	.0090	12.69
#2	19.18	1.127	.0006	.1377	3.220	3.079	.0128	12.78

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	1.049	.09907	-.0003	.0161	3.702	.1892	.1830
#1	.0004	1.032	.09913	.0008	.0159	3.664	.1874	.1787
#2	.0002	1.066	.09901	-.0013	.0163	3.740	.1910	.1873

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1781	.0043	.5980
#1	.1770	.0035	.5971
#2	.1792	.0051	.5989

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2921.2	75629.	4957.0
#1	2960.8	76308.	4933.6
#2	2881.5	74949.	4980.4

Sample Name: K1409921-001S Acquired: 9/23/2014 15:02:56 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.87	.3257	.4865	1.313	.04771	.4524	.0463	.0463
#1	63.50	.3222	.4853	1.306	.04756	.4530	.0463	.0463
#2	64.24	.3293	.4877	1.319	.04786	.4518	.0463	.0463

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.88	.3269	.4899	.2905	.3078	74.49	.4912	.0291
#1	17.78	.3283	.4894	.2901	.3058	74.23	.4917	.0263
#2	17.98	.3254	.4904	.2910	.3098	74.74	.4908	.0319

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.33	1.664	.4795	.5843	3.208	8.107	.4307	15.52
#1	22.35	1.667	.4794	.5837	3.209	8.093	.4345	15.88
#2	22.31	1.660	.4796	.5849	3.207	8.121	.4268	15.15

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0466	6.133	.09225	.4440	.0155	3.780	.6577	.6398
#1	.0467	6.146	.09185	.4439	.0154	3.784	.6586	.6387
#2	.0465	6.119	.09265	.4442	.0156	3.776	.6569	.6409

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6267	.0091	.6224
#1	.6275	.0082	.6230
#2	.6259	.0100	.6218

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2920.2	75339.	4885.1
#1	2928.7	75080.	4900.4
#2	2911.7	75599.	4869.8

Sample Name: K1409921-001A Acquired: 9/23/2014 15:05:19 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 A=0.05/10mL CICV-1,3 + Sb 1000ppm

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	72.69	4.459	2.331	5.208	.11638	.0074	1.132	1.134
#1	72.63	4.466	2.334	5.208	.11645	.0085	1.130	1.134
#2	72.75	4.452	2.327	5.208	.11632	.0064	1.133	1.134

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.57	.6320	1.177	.6402	.6689	86.40	2.256	.0351
#1	27.58	.6337	1.176	.6398	.6697	86.48	2.253	.0334
#2	27.56	.6304	1.179	.6405	.6681	86.32	2.260	.0367

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.18	2.374	.0005	1.273	3.609	15.23	2.111	10.11
#1	32.21	2.374	.0004	1.271	3.616	15.25	2.109	9.944
#2	32.16	2.374	.0006	1.274	3.603	15.20	2.113	10.27

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5602	13.05	.10039	2.179	.0153	4.054	1.411	1.338
#1	.5614	13.04	.09999	2.180	.0153	4.049	1.414	1.335
#2	.5590	13.05	.10079	2.179	.0153	4.060	1.408	1.341

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.310	.0206	.6823
#1	1.310	.0201	.6794
#2	1.310	.0212	.6852

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2888.4	74593.	4860.9
#1	2889.1	74603.	4862.7
#2	2887.7	74582.	4859.0

Sample Name: K1409921-002 Acquired: 9/23/2014 15:07:37 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.04	.0003	.0205	.3142	.00098	.0064	.0004	.0004
#1	58.84	-.0016	.0198	.3133	.00105	.0046	.0004	.0004
#2	59.24	.0022	.0212	.3151	.00090	.0083	.0004	.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.44	.1389	.0270	.0614	.0653	72.77	.0364	.0297
#1	13.39	.1387	.0268	.0611	.0652	72.51	.0358	.0317
#2	13.48	.1392	.0272	.0616	.0654	73.02	.0371	.0278

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.55	1.457	.0004	.1237	2.684	3.352	.0096	10.73
#1	17.54	1.459	.0004	.1237	2.683	3.361	.0103	10.75
#2	17.55	1.456	.0004	.1238	2.685	3.343	.0090	10.72

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.9231	.10565	-.0016	.0148	3.612	.1708	.1708
#1	.0002	.9278	.10522	-.0028	.0141	3.615	.1714	.1705
#2	.0001	.9183	.10607	-.0004	.0156	3.608	.1702	.1711

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1697	.0033	.4599
#1	.1700	.0033	.4581
#2	.1694	.0034	.4618

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2966.0	76291.	4926.6
#1	2969.2	76018.	4932.7
#2	2962.7	76563.	4920.5

Sample Name: K1409921-003 Acquired: 9/23/2014 15:10:08 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.72	-.0035	.0051	.2614	.00112	.0069	.0000	.0002
#1	56.59	-.0032	.0058	.2613	.00109	.0084	.0000	.0001
#2	56.85	-.0039	.0044	.2615	.00115	.0053	.0001	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.84	.2326	.0222	.0470	.0491	57.04	.0105	.0409
#1	12.85	.2325	.0223	.0470	.0485	57.11	.0112	.0407
#2	12.83	.2326	.0222	.0471	.0498	56.97	.0098	.0410

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.23	.5237	.0004	.1089	.4715	3.925	.0092	9.829
#1	16.23	.5235	.0003	.1086	.4704	3.921	.0096	9.966
#2	16.23	.5240	.0006	.1092	.4725	3.930	.0089	9.692

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.8030	.08813	-.0005	.0147	4.138	.2604	.1367
#1	.0010	.8128	.08794	-.0001	.0150	4.144	.2594	.1368
#2	.0000	.7932	.08833	-.0009	.0143	4.131	.2614	.1367

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1339	.0045	.5277
#1	.1340	.0036	.5234
#2	.1338	.0053	.5321

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2940.2	75929.	4893.9
#1	2942.4	75921.	4889.0
#2	2938.0	75937.	4898.9

Sample Name: K1409921-004 Acquired: 9/23/2014 15:12:40 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	71.13	-.0039	.0184	.3739	.00095	.0069	.0004	.0004
#1	70.87	-.0048	.0169	.3748	.00103	.0068	.0004	.0004
#2	71.38	-.0029	.0198	.3731	.00088	.0069	.0003	.0005

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.40	.1572	.0353	.0684	.0723	78.84	.0306	.0347
#1	13.40	.1575	.0350	.0686	.0720	79.20	.0306	.0355
#2	13.40	.1570	.0356	.0683	.0726	78.48	.0306	.0340

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.11	1.010	.0004	.1764	2.273	3.268	.0090	14.35
#1	23.32	1.008	.0004	.1767	2.273	3.304	.0095	14.53
#2	22.89	1.011	.0004	.1761	2.273	3.232	.0086	14.18

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	1.153	.09370	-.0001	.0151	4.080	.1923	.1918
#1	.0012	1.162	.09414	.0007	.0142	4.079	.1924	.1912
#2	.0008	1.144	.09326	-.0009	.0160	4.081	.1922	.1924

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1880	.0056	.2508
#1	.1875	.0052	.2496
#2	.1885	.0060	.2519

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2927.2	75508.	4885.5
#1	2921.0	75535.	4903.9
#2	2933.5	75481.	4867.0

Sample Name: CCVB Acquired: 9/23/2014 15:15:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.729	10.02	-.0006	.9965	10.02	-.00006	.0012	.0000
Stddev	.003	.03	.0022	.0060	.10	.00002	.0014	.000
%RSD	.0370	.3230	393.8	.6007	.9693	31.391	120.0	22.10
#1	7.727	10.05	.0010	.9923	10.09	-.00008	.0002	.0000
#2	7.731	10.00	-.0021	1.001	9.953	-.00005	.0022	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	9.992	9.432	-.0001	.0003	-.0003	.0003	10.02
Stddev	.0001	.039	.010	.0001	.0001	.0001	.0011	.08
%RSD	135.5	.3899	.1069	41.47	19.83	36.58	397.2	.8432
#1	-.0001	9.965	9.425	-.0002	.0003	-.0003	.0010	9.965
#2	.0000	10.02	9.439	-.0001	.0004	-.0002	-.0005	10.08
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	.9895	9.954	9.398	9.745	.9797	.9767	-.0001
Stddev	.0016	.0039	.003	.075	.015	.0031	.0050	.0002
%RSD	79.20	.3967	.0248	.8028	.1526	.3125	.5159	178.1
#1	-.0031	.9923	9.952	9.451	9.755	.9819	.9803	.0000
#2	-.0009	.9867	9.956	9.345	9.734	.9776	.9731	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 15:15:11 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	10.10	9.943	.0019	9.786	.0005	9.947	.98640
Stddev	.0003	.00	.026	.0028	.034	.0001	.001	.00101
%RSD	82.95	.0477	.2592	145.8	.3449	28.14	.0050	.10235
#1	.0005	10.10	9.962	-.0001	9.762	.0004	9.947	.98711
#2	.0001	10.10	9.925	.0039	9.810	.0006	9.946	.98568
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	.0018	.0011	.0016	.0005	.0000	1.018	.9969
Stddev	.0008	.0005	.0003	.0003	.0000	.0000	.001	.0015
%RSD	56.59	26.70	22.64	18.99	9.646	104.8	.0906	.1537
#1	-.0019	.0022	.0013	.0019	.0005	.0000	1.019	.9958
#2	-.0008	.0015	.0009	.0014	.0006	.0000	1.018	.9980
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2896.2	74581.	4766.9
Stddev	2.7	162.	10.2
%RSD	.09324	.21690	.21444
#1	2898.1	74466.	4774.1
#2	2894.3	74695.	4759.7

Sample Name: CCVA Acquired: 9/23/2014 15:17:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2556	.2581	.2489	.2536	.2530	.24714	.2492	.2493
Stddev	.0006	.0029	.0004	.0042	.0003	.00039	.0009	.0001
%RSD	.2260	1.130	.1687	1.640	.1362	.15643	.3617	.0450
#1	.2560	.2602	.2486	.2507	.2527	.24741	.2498	.2494
#2	.2552	.2561	.2492	.2566	.2532	.24686	.2486	.2493
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2493	.5004	.4870	.2476	.2500	.2494	.2489	.2554
Stddev	.0005	.0016	.0014	.0001	.0000	.0005	.0009	.0034
%RSD	.1940	.3135	.2845	.0323	.0025	.1936	.3471	1.316
#1	.2490	.5015	.4860	.2476	.2500	.2490	.2483	.2530
#2	.2497	.4993	.4880	.2475	.2500	.2497	.2495	.2577
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2491	-.0028	.2541	.2452	.2515	.2471	.2444	.2489
Stddev	.0021	.0032	.0466	.0001	.0004	.0004	.0017	.0004
%RSD	.8605	115.2	18.32	.0264	.1568	.1707	.7138	.1452
#1	.2507	-.0050	.2212	.2452	.2518	.2474	.2456	.2492
#2	.2476	-.0005	.2870	.2453	.2512	.2468	.2431	.2487
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 15:17:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2490	.0037	2.514	.2509	.1344	.2487	.2849	.00018
Stddev	.0004	.0045	.008	.0002	.0062	.0007	.0188	.00009
%RSD	.1626	121.6	.3239	.0804	4.585	.2841	6.590	51.144
#1	.2487	.0005	2.520	.2507	.1387	.2492	.2982	.00024
#2	.2493	.0069	2.509	.2510	.1300	.2482	.2716	.00011
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2524	.2490	.2477	.2480	.2491	.2490	.0034	.0024
Stddev	.0002	.0003	.0005	.0004	.0002	.0001	.0010	.0022
%RSD	.0901	.1301	.1869	.1812	.0726	.0292	30.86	90.65
#1	.2523	.2488	.2480	.2477	.2490	.2491	.0041	.0009
#2	.2526	.2493	.2474	.2483	.2492	.2490	.0026	.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2918.5	76140.	4813.3
Stddev	1.5	45.	6.8
%RSD	.05064	.05937	.14180
#1	2917.5	76172.	4818.1
#2	2919.6	76108.	4808.5

Sample Name: CCB Acquired: 9/23/2014 15:19:59 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0010	-.0004	.0009	-.0001	-.00009	.0010	.0000
Stddev	.0000	.0010	.0021	.0005	.0003	.00000	.0012	.0000
%RSD	6.145	99.26	493.2	56.27	479.6	3.9847	122.1	297.0
#1	.0003	-.0003	-.0019	.0012	.0001	-.00009	.0001	.0000
#2	.0003	-.0018	.0011	.0005	-.0002	-.00009	.0018	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0047	.0006	-.0002	.0003	.0001	-.0005	.0036
Stddev	.0001	.0056	.0000	.0004	.0001	.0003	.0010	.0021
%RSD	209.3	118.7	5.608	252.0	35.36	238.5	212.1	56.76
#1	.0000	.0087	.0007	-.0005	.0003	.0003	.0002	.0022
#2	.0002	.0008	.0006	.0001	.0002	-.0001	-.0011	.0051
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0014	-.0083	.0001	.0003	.0001	.0000	.0004
Stddev	.0015	.0019	.0262	.0000	.0017	.0000	.0011	.0001
%RSD	120.2	130.8	315.9	35.90	580.3	37.57	3891.	29.87
#1	-.0023	-.0027	.0102	.0001	-.0009	.0001	-.0007	.0005
#2	-.0002	-.0001	-.0268	.0000	.0015	.0001	.0008	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 15:19:59 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0026	.0152	.0030	.0075	.0006	.0122	.00018
Stddev	.0002	.0009	.0204	.0018	.0062	.0002	.0212	.00001
%RSD	148.3	34.15	134.2	58.07	83.11	33.64	173.4	5.1384
#1	.0000	.0020	.0296	.0018	.0031	.0005	-.0028	.00017
#2	.0003	.0032	.0008	.0043	.0119	.0007	.0272	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	.0001	.0003	-.0002	.0001	.0000	-.0011	.0057
Stddev	.0012	.0001	.0001	.0003	.0001	.000	.0007	.0022
%RSD	58.02	140.1	44.21	182.6	86.36	104.8	64.99	37.86
#1	-.0029	.0000	.0002	-.0004	.0001	.0000	-.0016	.0042
#2	-.0012	.0001	.0004	.0001	.0000	.0000	-.0006	.0072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2881.6	75467.	4712.2
Stddev	6.3	376.	37.8
%RSD	.21959	.49770	.80219
#1	2877.1	75201.	4738.9
#2	2886.0	75733.	4685.5

Sample Name: K1409921-005 Acquired: 9/23/2014 15:22:26 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.97	.0056	.0288	.2271	.00038	.0186	.0019	.0020
#1	38.11	.0051	.0293	.2278	.00035	.0183	.0019	.0020
#2	37.84	.0061	.0284	.2264	.00041	.0190	.0019	.0020

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.15	.0897	.0202	.1708	.1825	61.02	.2163	.0238
#1	18.14	.0901	.0205	.1711	.1825	61.01	.2162	.0239
#2	18.15	.0892	.0199	.1705	.1824	61.02	.2164	.0237

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.57	.7175	.0125	.0742	2.237	2.758	.0050	12.83
#1	12.55	.7183	.0124	.0742	2.236	2.749	.0054	12.89
#2	12.60	.7166	.0126	.0742	2.238	2.767	.0047	12.77

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	2.618	.15130	-.0004	.0224	2.782	.1718	.5036
#1	.0004	2.616	.15093	.0005	.0225	2.788	.1717	.5028
#2	.0009	2.620	.15167	-.0014	.0223	2.777	.1719	.5043

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.4962	.0031	7.768
#1	.4956	.0030	7.744
#2	.4967	.0032	7.793

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2927.6	76236.	4951.6
#1	2925.4	76012.	4943.1
#2	2929.8	76460.	4960.1

Sample Name: K1409921-006 Acquired: 9/23/2014 15:24:50 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.97	-.0027	.0319	.2918	.00075	.0134	.0014	.0014
#1	57.47	-.0042	.0299	.2916	.00063	.0128	.0014	.0013
#2	56.47	-.0012	.0339	.2921	.00088	.0140	.0014	.0016

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.23	.1234	.0306	.1103	.1168	76.00	.1046	.0324
#1	24.19	.1247	.0307	.1099	.1160	76.13	.1050	.0319
#2	24.27	.1222	.0304	.1107	.1175	75.87	.1043	.0329

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.28	1.208	.0023	.1365	2.100	3.435	.0080	10.70
#1	20.31	1.207	.0025	.1364	2.104	3.452	.0092	10.79
#2	20.24	1.208	.0022	.1366	2.097	3.418	.0068	10.61

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	1.200	.11877	-.0013	.0180	3.599	.1853	.4889
#1	.0010	1.211	.11892	-.0015	.0177	3.599	.1849	.4881
#2	.0009	1.189	.11862	-.0011	.0184	3.599	.1857	.4898

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.4810	.0043	.6548
#1	.4816	.0032	.6537
#2	.4804	.0053	.6559

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2924.5	75450.	4875.4
#1	2922.5	75537.	4872.5
#2	2926.5	75363.	4878.2

Sample Name: K1409921-007 Acquired: 9/23/2014 15:27:19 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	80.14	.0398	.3299	.8319	.00149	.0358	.0180	.0182
#1	79.61	.0389	.3308	.8357	.00137	.0350	.0180	.0181
#2	80.67	.0407	.3291	.8281	.00161	.0366	.0180	.0182

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.50	.2082	.0523	.7044	.7659	117.9	1.106	.0485
#1	22.56	.2088	.0523	.7058	.7653	118.2	1.108	.0482
#2	22.45	.2076	.0523	.7030	.7666	117.7	1.103	.0487

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.30	1.237	.0297	.2436	2.497	4.697	.0113	12.24
#1	21.34	1.238	.0296	.2441	2.499	4.689	.0131	12.27
#2	21.26	1.236	.0298	.2430	2.494	4.705	.0095	12.21

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	1.898	.17144	-.0012	.0501	4.441	.2518	3.433
#1	.0019	1.925	.17191	-.0011	.0505	4.449	.2521	3.439
#2	.0010	1.871	.17098	-.0013	.0497	4.433	.2515	3.428

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	3.429	.0087	2.719
#1	3.432	.0091	2.718
#2	3.426	.0083	2.720

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2964.2	76182.	4988.7
#1	2963.6	76175.	4994.0
#2	2964.7	76190.	4983.4

Sample Name: K1409921-008 Acquired: 9/23/2014 15:29:45 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	75.13	.0239	.0827	1.043	.00127	.0468	.0212	.0213
#1	75.34	.0247	.0810	1.045	.00125	.0476	.0212	.0213
#2	74.92	.0231	.0844	1.041	.00130	.0461	.0211	.0212

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.98	.2204	.0505	1.043	1.117	120.5	1.778	.0435
#1	23.99	.2208	.0510	1.042	1.117	120.5	1.777	.0452
#2	23.98	.2201	.0500	1.043	1.116	120.5	1.779	.0418

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.43	2.197	.0264	.2738	4.205	4.231	.0143	12.22
#1	17.45	2.204	.0266	.2731	4.203	4.218	.0129	12.05
#2	17.42	2.190	.0262	.2746	4.207	4.244	.0157	12.39

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	1.690	.20865	-.0021	.0717	3.903	.2157	4.675
#1	.0053	1.698	.20850	-.0024	.0708	3.900	.2160	4.674
#2	.0054	1.682	.20880	-.0017	.0726	3.905	.2153	4.676

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0103	4.989
#1	4.624	.0127	4.991
#2	4.626	.0079	4.987

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2930.5	75802.	4925.6
#1	2929.2	75863.	4936.6
#2	2931.7	75741.	4914.6

Sample Name: K1409921-009 Acquired: 9/23/2014 15:32:08 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.33	.0212	.1231	.2883	.00068	.0203	.0045	.0047
#1	46.23	.0213	.1244	.2885	.00072	.0214	.0045	.0048
#2	46.43	.0210	.1218	.2880	.00065	.0192	.0045	.0046

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.85	.1334	.0306	.3752	.3960	96.41	.5307	.0337
#1	21.85	.1346	.0304	.3744	.3954	96.30	.5283	.0366
#2	21.85	.1323	.0309	.3760	.3967	96.51	.5330	.0308

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.15	.6276	.0200	.1074	2.956	3.613	.0119	15.33
#1	14.13	.6291	.0200	.1070	2.943	3.604	.0134	15.38
#2	14.18	.6261	.0200	.1077	2.969	3.622	.0104	15.28

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	3.944	.21909	.0001	.0329	3.422	.2354	1.209
#1	.0007	3.939	.21902	.0007	.0324	3.430	.2356	1.209
#2	.0016	3.949	.21916	-.0005	.0333	3.415	.2351	1.210

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.190	.0046	2.408
#1	1.191	.0049	2.409
#2	1.190	.0043	2.408

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2923.1	75487.	4880.3
#1	2927.1	75220.	4883.5
#2	2919.2	75754.	4877.0

Sample Name: K1409921-010 Acquired: 9/23/2014 15:34:30 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.82	.0149	.0348	.2176	.00057	.0350	.0058	.0058
#1	28.89	.0160	.0346	.2179	.00059	.0350	.0058	.0059
#2	28.76	.0137	.0349	.2173	.00056	.0350	.0058	.0057

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.70	.0791	.0201	.1319	.1416	49.20	.2144	.0191
#1	16.73	.0795	.0202	.1318	.1414	49.31	.2148	.0188
#2	16.67	.0787	.0201	.1320	.1418	49.09	.2139	.0195

Elem	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.477	8.041	.5843	.0057	.0798	1.468	1.604	.0099
#1	7.531	8.010	.5833	.0058	.0797	1.469	1.618	.0109
#2	7.424	8.072	.5853	.0055	.0799	1.466	1.589	.0089

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.706	.0009	1.016	.13088	-.0015	.0226	1.776	.1095
#1	8.617	.0006	1.004	.13087	-.0027	.0230	1.763	.1093
#2	8.795	.0012	1.029	.13088	-.0003	.0222	1.789	.1096

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.8814	.8777	.0036	6.656
#1	.8815	.8783	.0048	6.654
#2	.8813	.8771	.0024	6.658

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2949.4	76709.	4888.9
#1	2951.9	76606.	4873.9
#2	2946.9	76812.	4903.9

Sample Name: K1409921-011 Acquired: 9/23/2014 15:36:55 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.81	-.0010	.0285	.2184	.00053	.0070	.0010	.0011
#1	38.90	-.0005	.0281	.2192	.00053	.0066	.0009	.0010
#2	38.72	-.0016	.0289	.2177	.00053	.0073	.0010	.0012

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.45	.0851	.0249	.0792	.0827	63.66	.0632	.0207
#1	13.46	.0846	.0246	.0794	.0832	63.85	.0632	.0175
#2	13.45	.0857	.0251	.0790	.0822	63.48	.0632	.0239

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.38	1.666	.0017	.0808	1.863	2.705	.0092	4.383
#1	13.42	1.663	.0016	.0805	1.863	2.686	.0084	4.390
#2	13.34	1.669	.0018	.0812	1.864	2.724	.0100	4.377

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.9033	.10881	-.0027	.0166	2.641	.1334	.6726
#1	.0000	.9004	.10915	-.0023	.0170	2.637	.1324	.6731
#2	.0004	.9063	.10846	-.0031	.0163	2.646	.1344	.6722

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6633	.0013	1.111
#1	.6624	.0017	1.107
#2	.6643	.0008	1.115

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2930.2	75981.	4874.8
#1	2925.9	76249.	4872.8
#2	2934.5	75713.	4876.7

Sample Name: K1409966-002 Acquired: 9/23/2014 15:39:20 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.795	-.0046	.0134	.3579	.01333	.2273	-.0235	.0174
#1	7.733	-.0058	.0114	.3578	.01333	.2268	-.0236	.0175
#2	7.856	-.0035	.0153	.3580	.01333	.2278	-.0234	.0173

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.825	.1246	.0010	.0628	.0767	5.737	.0115	.1394
#1	3.806	.1223	.0009	.0630	.0768	5.715	.0105	.1394
#2	3.843	.1269	.0010	.0625	.0766	5.759	.0125	.1393

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7043	.3786	.0986	.2325	.1606	1.542	.0073	3.342
#1	.7045	.3782	.0987	.2322	.1596	1.541	.0058	3.321
#2	.7042	.3789	.0986	.2328	.1615	1.543	.0088	3.363

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.4005	.53658	-.0020	.0230	5.646	.0158	.3596
#1	.0006	.4083	.53620	-.0020	.0233	5.625	.0161	.3603
#2	.0013	.3927	.53695	-.0020	.0227	5.666	.0156	.3589

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3987	-.0368	.8937
#1	.3986	-.0365	.8879
#2	.3987	-.0371	.8995

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3311.1	86483.	5492.6
#1	3307.8	86235.	5508.1
#2	3314.4	86731.	5477.0

Sample Name: K1410080-001 Acquired: 9/23/2014 15:41:48 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.25	.0040	.0127	.7096	.00000	.0576	.0037	.0038
#1	35.40	.0037	.0122	.7078	-.00005	.0583	.0037	.0038
#2	35.10	.0042	.0132	.7113	.00005	.0570	.0038	.0039

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.56	.0860	.0118	.6028	.6423	44.67	.0966	.0061
#1	44.49	.0849	.0116	.6028	.6433	44.65	.0966	.0063
#2	44.63	.0871	.0120	.6027	.6413	44.70	.0966	.0059

Elem	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.609	7.985	.6316	.0120	.0701	42.14	8.212	.0204
#1	7.500	8.014	.6331	.0118	.0703	42.18	8.250	.0186
#2	7.717	7.957	.6301	.0121	.0700	42.10	8.175	.0221

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.163	.0107	1.754	.24657	-.0012	.0845	.8351	.0388
#1	8.218	.0115	1.760	.24627	-.0013	.0845	.8412	.0387
#2	8.108	.0099	1.747	.24688	-.0011	.0845	.8290	.0389

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	2.183	2.150	.0915	17.20
#1	2.184	2.151	.0905	17.21
#2	2.181	2.150	.0924	17.19

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2888.6	75624.	4864.3
#1	2886.9	75481.	4881.9
#2	2890.3	75766.	4846.7

Sample Name: 5ppm Ti Acquired: 9/23/2014 15:47:16 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: EM 092314A 0.05/10mL Ti 1000ppm MET2-40-E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0025	.0022	-.0002	-.00014	.0014	.0000	.0003
#1	.0012	-.0009	.0023	-.0002	-.00016	.0013	.0000	.0003
#2	.0011	-.0042	.0021	-.0003	-.00013	.0015	.0000	.0003

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0001	.0005	-.0003	.0003	.0084	-.0014	.0021
#1	.0013	.0003	.0005	-.0001	.0002	.0088	-.0016	.0018
#2	.0014	-.0001	.0004	-.0005	.0004	.0081	-.0011	.0024

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0001	.0023	.0023	-.0146	.0027	.0152
#1	.0002	.0001	.0002	.0025	.0009	-.0405	-.0005	.0147
#2	.0000	.0001	.0000	.0022	.0038	.0113	.0059	.0156

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0102	.00003	-.0003	-.0002	4.744	-.0005	.0002
#1	.0004	.0144	.00004	-.0005	-.0004	4.757	-.0002	.0002
#2	.0001	.0061	.00003	-.0001	.0000	4.730	-.0007	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	-.0012	-.0013	.0037
#1	-.0013	-.0023	.0070
#2	-.0012	-.0003	.0005

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2949.1	76648.	4813.4
#1	2949.0	76596.	4794.0
#2	2949.2	76700.	4832.7

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Sample Name: CCVB Acquired: 9/23/2014 15:49:50 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.850	10.00	-.0015	.9988	10.23	-.00009	.0012	.0000
Stddev	.010	.07	.0029	.0024	.04	.00001	.0003	.000
%RSD	.1324	.7237	201.3	.2423	.3932	15.953	22.14	59.26
#1	7.843	9.949	.0006	.9971	10.20	-.00010	.0014	.0000
#2	7.857	10.05	-.0035	1.001	10.26	-.00008	.0010	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.13	9.542	.0003	.0004	.0000	-.0008	10.18
Stddev	.0000	.03	.013	.0003	.0002	.0002	.0002	.01
%RSD	48.99	.3025	.1352	81.45	54.29	3483.	25.30	.1275
#1	-.0001	10.15	9.551	.0005	.0005	-.0001	-.0010	10.19
#2	-.0001	10.11	9.533	.0001	.0002	.0001	-.0007	10.17
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.9886	10.08	9.437	9.744	.9984	.9907	.0003
Stddev	.0004	.0053	.02	.104	.064	.0019	.0026	.0002
%RSD	54.28	.5353	.1801	1.100	.6583	.1917	.2607	79.20
#1	-.0004	.9849	10.10	9.510	9.699	.9970	.9925	.0001
#2	-.0009	.9924	10.07	9.363	9.790	.9997	.9889	.0005
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 15:49:50 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	10.28	9.859	.0026	9.789	.0005	9.954	1.0016
Stddev	.0000	.02	.060	.0017	.008	.0002	.081	.0041
%RSD	24.60	.1897	.6044	66.36	.0830	43.13	.8141	.40822
#1	.0001	10.26	9.816	.0014	9.783	.0003	9.896	.99868
#2	.0002	10.29	9.901	.0038	9.795	.0006	10.01	1.0045
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0017	.0014	.0019	.0003	.0000	1.025	.9919
Stddev	.0002	.0003	.0001	.0001	.0001	.000	.003	.0022
%RSD	10.97	19.39	7.384	6.683	48.46	19.15	.2691	.2171
#1	-.0015	.0019	.0013	.0018	.0002	.0000	1.023	.9934
#2	-.0017	.0014	.0015	.0020	.0004	.0000	1.027	.9904
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2858.0	73456.	4698.4
Stddev	1.7	258.	20.7
%RSD	.05785	.35158	.43970
#1	2859.2	73274.	4683.7
#2	2856.8	73639.	4713.0

Sample Name: CCVA Acquired: 9/23/2014 15:52:27 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2580	.2596	.2454	.2520	.2570	.24425	.2466	.2504
Stddev	.0008	.0031	.0015	.0036	.0001	.00113	.0001	.0002
%RSD	.3094	1.187	.5998	1.438	.0349	.46081	.0241	.0601
#1	.2575	.2618	.2444	.2495	.2570	.24345	.2466	.2503
#2	.2586	.2574	.2464	.2546	.2571	.24504	.2467	.2505
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2522	.5179	.4888	.2504	.2495	.2510	.2466	.2615
Stddev	.0001	.0066	.0009	.0015	.0001	.0005	.0007	.0042
%RSD	.0436	1.270	.1757	.6088	.0288	.2173	.2961	1.590
#1	.2522	.5132	.4882	.2493	.2495	.2507	.2461	.2586
#2	.2521	.5225	.4894	.2514	.2496	.2514	.2471	.2644
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2504	.0004	.2520	.2455	.2458	.2476	.2460	.2499
Stddev	.0014	.0022	.0023	.0007	.0047	.0007	.0037	.0002
%RSD	.5546	569.3	.9025	.3040	1.924	.3026	1.522	.0972
#1	.2514	-.0012	.2504	.2461	.2425	.2471	.2434	.2501
#2	.2494	.0020	.2536	.2450	.2492	.2482	.2487	.2497
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 15:52:27 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2508	.0011	2.496	.2481	.1311	.2478	.2624	.00014
Stddev	.0004	.0014	.023	.0007	.0072	.0003	.0041	.00018
%RSD	.1493	123.4	.9037	.3018	5.474	.1320	1.544	130.92
#1	.2506	.0021	2.481	.2476	.1362	.2480	.2595	.00027
#2	.2511	.0001	2.512	.2487	.1260	.2476	.2653	.00001
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2514	.2519	.2481	.2488	.2493	.2475	.0018	.0017
Stddev	.0008	.0020	.0004	.0001	.0008	.0009	.0015	.0018
%RSD	.3163	.8107	.1777	.0503	.3213	.3743	83.52	103.8
#1	.2520	.2505	.2484	.2489	.2488	.2469	.0029	.0030
#2	.2509	.2534	.2477	.2487	.2499	.2482	.0008	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2898.3	75206.	4739.9
Stddev	6.4	40.	33.2
%RSD	.22149	.05310	.70108
#1	2893.7	75235.	4716.4
#2	2902.8	75178.	4763.4

Sample Name: CCB Acquired: 9/23/2014 15:54:40 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0019	-.0033	.0010	.0001	-.00015	.0014	.0001
Stddev	.0003	.0045	.0010	.0003	.0004	.00005	.0002	.0000
%RSD	93.01	232.9	31.35	31.33	326.7	36.667	12.58	38.30
#1	.0006	.0051	-.0025	.0012	.0004	-.00018	.0013	.0001
#2	.0001	-.0013	-.0040	.0008	-.0001	-.00011	.0015	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0061	.0006	-.0004	-.0001	-.0001	-.0001	.0029
Stddev	.0000	.0018	.0000	.0007	.0001	.0005	.0001	.0011
%RSD	162.0	29.51	1.105	175.3	91.09	475.4	90.43	36.02
#1	.0000	.0074	.0006	-.0010	-.0002	-.0005	-.0001	.0022
#2	.0000	.0048	.0006	.0001	.0000	.0003	.0000	.0037
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0014	.0067	.0000	.0007	.0000	-.0001	.0003
Stddev	.0010	.0001	.0141	.0000	.0008	.0000	.0002	.0001
%RSD	79.94	4.412	209.3	265.3	120.0	71.99	115.2	18.85
#1	-.0020	-.0014	-.0032	.0001	.0001	.0000	-.0003	.0002
#2	-.0005	-.0015	.0167	.0000	.0013	.0000	.0000	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 15:54:40 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0004	.0096	.0005	.0104	.0002	.0015	.00017
Stddev	.0003	.0003	.0307	.0012	.0135	.0002	.0080	.00014
%RSD	121.4	81.56	320.0	264.7	129.8	71.40	543.4	79.305
#1	.0005	.0002	-.0121	.0013	.0199	.0001	.0071	.00008
#2	.0000	.0006	.0313	-.0004	.0008	.0003	-.0042	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0003	.0003	.0006	.0001	.0000	.0008	-.0001
Stddev	.0008	.0001	.0002	.0002	.0002	.0001	.0011	.0002
%RSD	161.5	39.39	61.69	33.16	141.2	612.9	142.8	328.4
#1	.0001	-.0002	.0002	.0007	.0002	.0001	.0000	.0001
#2	-.0011	-.0004	.0004	.0004	.0000	.0000	.0016	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2856.3	74320.	4682.5
Stddev	.2	289.	6.3
%RSD	.00623	.38905	.13490
#1	2856.4	74524.	4687.0
#2	2856.2	74115.	4678.0

Sample Name: K1409966-002 Acquired: 9/23/2014 15:57:09 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: Sample Type:
Comment: EM 092314A 1/5

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.040	-.0031	.0055	.1579	.00527	.0918	-.0101	.0076
#1	3.050	-.0032	.0041	.1576	.00519	.0913	-.0101	.0076
#2	3.030	-.0031	.0068	.1582	.00535	.0924	-.0100	.0077

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.674	.0540	.0007	.0277	.0298	2.505	.0051	.0545
#1	1.670	.0541	.0006	.0277	.0298	2.506	.0054	.0538
#2	1.678	.0539	.0007	.0276	.0298	2.504	.0048	.0552

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3056	.1645	.0427	.1014	.0713	.6431	.0035	1.306
#1	.3050	.1647	.0431	.1013	.0708	.6640	.0037	1.315
#2	.3062	.1643	.0424	.1015	.0717	.6221	.0033	1.297

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.1522	.22969	-.0010	.0096	2.429	.0067	.1569
#1	.0005	.1490	.22911	-.0012	.0094	2.438	.0068	.1570
#2	-.0001	.1553	.23027	-.0007	.0099	2.421	.0067	.1567

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1624	-.0169	.3603
#1	.1625	-.0181	.3601
#2	.1622	-.0157	.3605

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3057.0	79314.	5000.6
#1	3056.0	79100.	5020.4
#2	3058.0	79527.	4980.7

NR
GW
10/9/14

Sample Name: K1410083-001 Acquired: 9/23/2014 15:59:27 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.93	-.0058	.0218	.5190	.00162	.0038	-.0001	-.0002
#1	61.38	-.0035	.0213	.5195	.00157	.0037	-.0001	-.0002
#2	60.48	-.0081	.0223	.5186	.00167	.0040	-.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.61	.0870	.0582	.0799	.0882	115.5	.0136	.0246
#1	18.62	.0871	.0579	.0802	.0883	115.6	.0136	.0260
#2	18.60	.0869	.0585	.0795	.0881	115.4	.0135	.0232

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.49	1.602	.0010	.0864	2.901	2.917	.0106	9.301
#1	19.48	1.601	.0010	.0864	2.905	2.975	.0090	9.368
#2	19.50	1.604	.0010	.0865	2.898	2.859	.0122	9.234

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	1.811	.26050	-.0012	.0160	5.997	.3268	.2059
#1	.0004	1.818	.26139	-.0014	.0157	6.053	.3262	.2059
#2	.0012	1.803	.25961	-.0009	.0162	5.942	.3274	.2060

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2077	.0052	.2565
#1	.2077	.0072	.2571
#2	.2078	.0031	.2558

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3012.8	78215.	5045.5
#1	3009.7	78130.	5035.9
#2	3015.9	78300.	5055.0

Sample Name: K1410083-002 Acquired: 9/23/2014 16:02:01 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.34	-.0042	.0134	.4047	.00132	.0015	.0000	.0000
#1	47.21	-.0036	.0141	.4049	.00132	.0026	-.0001	.0001
#2	47.47	-.0047	.0126	.4046	.00131	.0004	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.40	.0702	.0553	.0654	.0711	104.8	.0096	.0218
#1	16.43	.0706	.0550	.0649	.0710	104.7	.0096	.0192
#2	16.36	.0699	.0556	.0659	.0711	104.9	.0097	.0243

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.62	1.193	.0008	.0774	2.909	3.223	.0100	5.952
#1	16.52	1.192	.0007	.0776	2.913	3.195	.0088	5.778
#2	16.71	1.193	.0010	.0773	2.904	3.252	.0112	6.126

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	1.553	.18886	-.0013	.0152	5.478	.2975	.1949
#1	.0004	1.544	.18847	-.0012	.0150	5.475	.2976	.1948
#2	-.0002	1.562	.18926	-.0013	.0153	5.481	.2974	.1950

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1955	.0052	.1739
#1	.1959	.0063	.1758
#2	.1952	.0041	.1720

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3001.3	78340.	5013.5
#1	3006.2	78181.	4996.5
#2	2996.3	78500.	5030.5

Sample Name: K1410083-003 Acquired: 9/23/2014 16:04:30 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.47	-.0044	.0131	.3287	.00100	.0008	.0000	-.0001
#1	40.46	-.0027	.0117	.3267	.00084	.0009	.0000	-.0001
#2	40.48	-.0062	.0145	.3307	.00117	.0006	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.96	.0651	.0555	.0557	.0609	100.2	.0068	.0193
#1	13.87	.0647	.0553	.0554	.0610	99.94	.0072	.0179
#2	14.05	.0655	.0556	.0561	.0608	100.4	.0063	.0206

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.75	1.034	.0005	.0815	2.545	2.754	.0098	3.366
#1	16.79	1.032	.0004	.0815	2.551	2.772	.0099	3.347
#2	16.71	1.036	.0007	.0815	2.539	2.736	.0097	3.385

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	1.325	.16807	-.0015	.0150	5.672	.3011	.1875
#1	.0007	1.331	.16795	-.0019	.0149	5.602	.3010	.1872
#2	.0009	1.320	.16819	-.0011	.0151	5.742	.3012	.1879

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1884	.0037	.0996
#1	.1887	.0048	.1015
#2	.1881	.0025	.0977

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3008.3	78411.	5033.1
#1	3010.8	78750.	5049.8
#2	3005.7	78072.	5016.4

Sample Name: K1410083-004 Acquired: 9/23/2014 16:14:50 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	55.43	-.0051	.0149	.4757	.00141	.0042	.0000	.0001
#1	55.52	-.0050	.0163	.4795	.00137	.0054	.0000	.0000
#2	55.34	-.0052	.0134	.4719	.00144	.0030	-.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.76	.0789	.0583	.0749	.0811	109.2	.0106	.0218
#1	18.85	.0792	.0583	.0746	.0809	110.0	.0095	.0227
#2	18.68	.0786	.0582	.0752	.0814	108.4	.0118	.0209

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.43	1.581	.0004	.0827	2.908	2.850	.0087	7.305
#1	17.43	1.578	.0003	.0828	2.900	2.836	.0081	7.412
#2	17.44	1.583	.0005	.0826	2.917	2.863	.0092	7.199

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	1.636	.22815	-.0006	.0150	5.589	.3101	.1987
#1	.0002	1.632	.22961	-.0022	.0151	5.558	.3093	.1983
#2	.0005	1.640	.22669	.0011	.0149	5.621	.3109	.1990

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1999	.0058	.2519
#1	.1992	.0066	.2508
#2	.2005	.0050	.2529

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2999.0	77787.	5026.0
#1	2996.3	77797.	4988.1
#2	3001.8	77777.	5064.0

Sample Name: K1410083-005 Acquired: 9/23/2014 16:17:25 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.04	-.0057	.0145	.4312	.00115	-.0001	-.0001	-.0001
#1	43.23	-.0071	.0137	.4310	.00115	.0003	-.0002	-.0002
#2	42.86	-.0044	.0153	.4315	.00114	-.0004	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.08	.0586	.0523	.0587	.0633	103.3	.0084	.0192
#1	16.04	.0589	.0520	.0590	.0631	103.4	.0091	.0195
#2	16.11	.0583	.0525	.0584	.0634	103.3	.0078	.0189

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.51	1.136	.0012	.0718	2.732	2.606	.0103	5.625
#1	14.54	1.139	.0015	.0720	2.735	2.635	.0117	5.647
#2	14.49	1.133	.0008	.0716	2.730	2.577	.0090	5.604

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	1.848	.22103	-.0006	.0162	5.448	.2831	.1849
#1	-.0001	1.858	.22150	-.0002	.0164	5.423	.2840	.1848
#2	.0005	1.838	.22056	-.0010	.0159	5.473	.2822	.1850

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1851	.0048	.0730
#1	.1851	.0042	.0713
#2	.1851	.0053	.0746

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2997.4	78090.	5020.2
#1	2996.8	77805.	5027.1
#2	2997.9	78374.	5013.3

Sample Name: KQ1411721-01 Acquired: 9/23/2014 16:19:57 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409898-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	-.0021	.0017	-.0002	-.00015	.0000	.0000	-.0001
#1	.0036	-.0009	.0019	-.0003	-.00012	.0001	.0000	-.0001
#2	.0034	-.0033	.0016	.0000	-.00019	.0000	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	.0000	.0001	-.0003	-.0002	.0125	-.0011	-.0014
#1	.0058	.0001	.0001	-.0003	.0006	.0099	-.0005	-.0026
#2	.0058	-.0002	.0001	-.0004	-.0011	.0152	-.0017	-.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0002	.0001	.0001	.0159	-.0092	.0011	.0128
#1	.0011	.0001	.0001	-.0003	.0170	-.0141	.0012	.0102
#2	.0010	.0002	.0001	.0005	.0148	-.0043	.0010	.0154

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0185	.00008	-.0020	.0186	.0007	.0003	.0023
#1	.0002	.0178	.00013	-.0027	.0183	.0008	.0001	.0024
#2	.0004	.0191	.00004	-.0012	.0189	.0006	.0005	.0022

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0024	-.0001	.0023
#1	.0023	.0003	.0009
#2	.0024	-.0006	.0037

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2909.2	76816.	4829.8
#1	2911.9	76639.	4830.0
#2	2906.4	76993.	4829.7

Sample Name: KQ1411721-02 Acquired: 9/23/2014 16:22:22 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409898-LCSW

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.945	1.985	.4714	.4949	1.157	.04674	.4674	.0492
#1	1.943	1.989	.4721	.4935	1.057	.04661	.4702	.0493
#2	1.948	1.980	.4708	.4962	1.258	.04687	.4647	.0492

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0499	5.336	.2078	.4999	.2456	.2444	1.191	.4974
#1	.0499	4.931	.2070	.4999	.2458	.2445	1.039	.4979
#2	.0500	5.740	.2086	.4999	.2454	.2443	1.343	.4969

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.547	5.351	.5001	.5163	.5000	2.579	5.124	.4441
#1	2.546	4.890	.4993	.5165	.5004	2.576	5.108	.4443
#2	2.547	5.811	.5008	.5162	.4996	2.582	5.140	.4439

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0357	.0484	5.150	2.7711	.4920	2.475	2.661	.5127
#1	.0189	.0483	5.130	2.5538	.4926	2.479	2.660	.5113
#2	.0524	.0485	5.169	2.9884	.4913	2.471	2.661	.5140

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4846	.4636	2.590	2.372
#1	.4851	.4628	2.592	2.377
#2	.4840	.4644	2.589	2.367

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2828.4	73578.	4380.0
#1	2824.6	73642.	4713.9
#2	2832.2	73515.	4046.1

Sample Name: KQ1411721-03 Acquired: 9/23/2014 16:24:32 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2 K1409898-DLCSW

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.951	1.988	.4785	.4972	1.069	.04716	.4717	.0491
#1	1.950	1.979	.4807	.4989	1.066	.04705	.4702	.0491
#2	1.951	1.998	.4762	.4955	1.073	.04726	.4733	.0492

Elem	Cd2265	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0500	4.946	.2088	.5020	.2475	.2481	1.050	.4966
#1	.0501	4.982	.2093	.5021	.2475	.2488	1.046	.4964
#2	.0499	4.910	.2083	.5018	.2475	.2475	1.055	.4967

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.501	4.918	.5022	.5181	.5005	2.567	5.129	.4473
#1	2.504	4.912	.5018	.5182	.5012	2.570	5.117	.4497
#2	2.497	4.923	.5026	.5180	.4998	2.564	5.141	.4450

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	.0483	5.130	2.5449	.4927	2.496	2.594	.5167
#1	.0096	.0479	5.113	2.5434	.4910	2.499	2.592	.5158
#2	.0181	.0488	5.147	2.5464	.4944	2.493	2.596	.5176

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	.4875	.4681	2.622	2.394
#1	.4881	.4681	2.621	2.391
#2	.4869	.4681	2.623	2.397

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2845.8	74200.	4718.9
#1	2846.8	74100.	4727.0
#2	2844.9	74299.	4710.8

Sample Name: K1409898-001 Acquired: 9/23/2014 16:26:42 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al1670	Sb2068 *	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7181	-.0214	.0094	.0763	-.00014	.0317	.0009	.0009
#1	.7184	-.0225	.0090	.0765	-.00020	.0313	.0008	.0009
#2	.7177	-.0204	.0099	.0761	-.00008	.0321	.0010	.0009

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.457	5.704	.1415	.2060	.1970	30.56	.0462	-.0012
#1	4.431	5.701	.1417	.2059	.1970	30.65	.0471	.0001
#2	4.483	5.707	.1414	.2061	.1971	30.46	.0454	-.0024

Elem	Mg2795	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.466	15.78	.1387	3.161	4.988	2.409	.0070	.7666
#1	4.487	15.79	.1390	3.163	4.983	2.424	.0068	.7738
#2	4.445	15.77	.1383	3.160	4.994	2.394	.0073	.7594

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	7.412	.03666	-.0140	.0484	.1528	.0736	.2632
#1	.0088	7.434	.03678	-.0146	.0478	.1538	.0734	.2631
#2	.0096	7.391	.03653	-.0134	.0490	.1517	.0738	.2632

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.2531	.0016	.7013
#1	.2536	.0010	.6982
#2	.2526	.0021	.7043

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2853.0	75600.	4822.4
#1	2858.7	75674.	4822.7
#2	2847.2	75527.	4822.1

* 1/5 dilution
am
10/9/14

Sample Name: CCVB Acquired: 9/23/2014 16:29:07 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.785	10.24	-.0013	1.011	10.20	-.00008	.0014	-.0001
Stddev	.002	.04	.0008	.002	.06	.00005	.0001	.0001
%RSD	.0287	.3457	55.92	.1541	.5889	61.908	7.059	157.9
#1	7.787	10.21	-.0008	1.010	10.24	-.00012	.0015	-.0001
#2	7.784	10.26	-.0019	1.012	10.16	-.00005	.0013	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.03	9.458	.0001	.0001	-.0002	-.0004	10.27
Stddev	.0000	.05	.064	.0001	.0000	.0007	.0002	.07
%RSD	40.88	.5030	.6711	82.17	40.62	421.0	61.12	.6915
#1	.0000	9.993	9.503	.0002	.0001	-.0007	-.0002	10.22
#2	-.0001	10.06	9.413	.0001	.0001	.0003	-.0005	10.32
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	1.018	10.09	9.474	10.02	1.002	1.010	.0000
Stddev	.0002	.012	.09	.075	.10	.001	.011	.0000
%RSD	59.58	1.164	.8672	.7885	1.000	.1090	1.104	36.71
#1	-.0002	1.010	10.03	9.527	9.952	1.001	1.002	.0000
#2	-.0006	1.026	10.15	9.422	10.09	1.002	1.018	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 16:29:07 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	10.31	10.08	.0023	10.09	.0005	10.31	1.0141
Stddev	.0001	.03	.14	.0009	.10	.0004	.10	.0048
%RSD	23.35	.2464	1.362	39.65	.9583	89.28	.9449	.47162
#1	.0005	10.29	9.981	.0029	10.02	.0007	10.24	1.0107
#2	.0004	10.33	10.18	.0016	10.16	.0002	10.37	1.0175
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	.0002	.0009	.0016	.0002	.0000	1.030	1.001
Stddev	.0007	.0002	.0002	.0004	.0001	.000	.000	.002
%RSD	20.66	107.7	24.67	27.46	39.02	207.0	.0084	.2164
#1	-.0028	.0001	.0011	.0013	.0002	.0000	1.030	1.002
#2	-.0037	.0004	.0008	.0019	.0001	.0000	1.030	.9991
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2871.3	74392.	4782.0
Stddev	.7	64.	35.7
%RSD	.02469	.08573	.74628
#1	2871.8	74347.	4756.8
#2	2870.8	74437.	4807.2

Sample Name: CCVA Acquired: 9/23/2014 16:31:44 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2536	.2606	.2498	.2552	.2551	.24715	.2492	.2475
Stddev	.0001	.0034	.0021	.0014	.0009	.00177	.0015	.0004
%RSD	.0198	1.304	.8329	.5496	.3386	.71648	.5954	.1716
#1	.2536	.2630	.2483	.2543	.2557	.24840	.2503	.2478
#2	.2536	.2582	.2513	.2562	.2545	.24590	.2482	.2472
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2496	.5009	.4878	.2509	.2469	.2473	.2493	.2633
Stddev	.0008	.0029	.0010	.0012	.0008	.0009	.0014	.0056
%RSD	.3135	.5775	.2060	.4827	.3154	.3547	.5674	2.116
#1	.2490	.4989	.4871	.2500	.2475	.2479	.2503	.2672
#2	.2501	.5030	.4885	.2517	.2464	.2467	.2483	.2594
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2492	-.0044	.2425	.2417	.2523	.2490	.2482	.2474
Stddev	.0018	.0002	.0054	.0000	.0046	.0001	.0042	.0002
%RSD	.7078	4.437	2.216	.0049	1.841	.0523	1.706	.0743
#1	.2479	-.0045	.2387	.2417	.2490	.2491	.2452	.2475
#2	.2504	-.0043	.2463	.2417	.2555	.2489	.2512	.2472
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 16:31:44 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2488	.0016	2.535	.2512	.1324	.2534	.2819	.00003
Stddev	.0004	.0012	.024	.0006	.0063	.0008	.0157	.00016
%RSD	.1741	78.89	.9360	.2358	4.762	.3302	5.585	585.67
#1	.2491	.0024	2.518	.2508	.1280	.2540	.2708	-.00009
#2	.2485	.0007	2.552	.2516	.1369	.2528	.2931	.00014
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	.2471	.2472	.2492	.2455	.2480	.0037	.0023
Stddev	.0016	.0007	.0005	.0003	.0008	.0001	.0007	.0011
%RSD	.6410	.2641	.1910	.1233	.3410	.0214	18.64	47.43
#1	.2481	.2467	.2469	.2494	.2461	.2481	.0042	.0015
#2	.2459	.2476	.2476	.2490	.2449	.2480	.0032	.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2926.9	76231.	4824.8
Stddev	7.6	355.	21.2
%RSD	.25905	.46578	.43976
#1	2921.5	76482.	4809.8
#2	2932.3	75980.	4839.8

Sample Name: CCB Acquired: 9/23/2014 16:33:56 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0004	-.0011	-.0005	-.0001	-.00011	.0016	.0000
Stddev	.0003	.0002	.0018	.0003	.0000	.00001	.0008	.000
%RSD	448.0	42.22	167.3	57.08	5.681	12.900	48.46	1446.
#1	-.0003	-.0005	.0002	-.0007	-.0002	-.00010	.0011	-.0001
#2	.0002	-.0003	-.0023	-.0003	-.0001	-.00012	.0022	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0010	.0002	-.0003	.0003	-.0003	-.0002	.0064
Stddev	.000	.0029	.0001	.0002	.0003	.0001	.0001	.0017
%RSD	34.96	279.3	29.79	70.55	84.64	45.55	23.58	26.12
#1	.0000	-.0010	.0003	-.0004	.0001	-.0002	-.0003	.0052
#2	.0000	.0031	.0002	-.0001	.0005	-.0004	-.0002	.0076
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	-.0058	.0002	.0000	-.0006	.0000	.0004	.0002
Stddev	.0008	.0017	.0139	.0000	.0015	.0000	.0002	.0000
%RSD	45.07	29.93	6422.	56.78	245.1	18.82	56.97	12.36
#1	-.0012	-.0045	-.0096	.0000	.0005	.0000	.0002	.0002
#2	-.0023	-.0070	.0101	.0000	-.0017	.0000	.0006	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 16:33:56 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0015	-.0032	.0013	.0107	.0001	.0152	.00006
Stddev	.0001	.0026	.0399	.0039	.0086	.0008	.0053	.00006
%RSD	44.07	181.9	1257.	287.6	79.85	686.2	34.95	99.908
#1	.0001	-.0004	-.0314	-.0014	.0168	-.0004	.0189	.00002
#2	.0003	.0033	.0251	.0041	.0047	.0007	.0114	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0000	.0001	.0002	-.0001	.0000	.0002	.0022
Stddev	.0013	.0006	.0000	.0001	.0000	.0000	.0012	.0008
%RSD	294.7	1375.	20.82	57.79	33.27	116.4	521.7	34.21
#1	-.0014	.0005	.0001	.0003	-.0001	.0000	-.0006	.0017
#2	.0005	-.0004	.0001	.0001	-.0001	.0001	.0011	.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2885.6	74952.	4768.7
Stddev	3.1	44.	12.3
%RSD	.10769	.05818	.25869
#1	2883.4	74983.	4777.4
#2	2887.8	74921.	4760.0

Sample Name: K1409898-002 Acquired: 9/23/2014 16:36:25 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 2 Test Type: Sample Type:
Comment: EM 092314A 1/2

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0339	-.0019	.0026	.0062	-.00010	.0003	.0000	.0000
#1	.0340	-.0014	.0027	.0062	-.00008	-.0005	.0000	.0000
#2	.0338	-.0025	.0024	.0063	-.00011	.0010	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8319	.0009	.0002	.0002	-.0001	.0421	-.0006	-.0035
#1	.8348	.0010	.0004	.0005	-.0008	.0434	-.0004	-.0041
#2	.8290	.0009	.0001	-.0001	.0007	.0407	-.0009	-.0029

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4801	.0051	.0002	.0011	.1823	.0530	.0048	.6172
#1	.4809	.0052	.0001	.0013	.1822	.0748	.0063	.6157
#2	.4792	.0051	.0003	.0009	.1825	.0313	.0032	.6188

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	1.326	.00691	-.0024	.0190	.0010	.0003	.0074
#1	.0008	1.340	.00693	-.0019	.0193	.0011	.0002	.0073
#2	.0001	1.312	.00689	-.0029	.0187	.0008	.0004	.0075

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0076	-.0006	.0972
#1	.0076	-.0011	.0981
#2	.0075	-.0002	.0963

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2907.9	76559.	4849.3
#1	2907.7	76669.	4845.8
#2	2908.0	76449.	4852.9

Sample Name: K1409898-001 Acquired: 9/23/2014 16:38:50 Type: Unk
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: Sample Type:
Comment: EM 092314A 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2933	-.0091	.0051	.0305	-.00013	.0120	.0003	.0004
#1	.2939	-.0091	.0034	.0307	-.00022	.0114	.0003	.0003
#2	.2928	-.0090	.0069	.0302	-.00004	.0125	.0004	.0004

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.784	2.298	.0567	.0831	.0782	12.26	.0187	.0009
#1	1.791	2.300	.0566	.0829	.0777	12.30	.0192	.0019
#2	1.778	2.297	.0569	.0833	.0787	12.21	.0182	-.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.785	6.288	.0546	1.276	1.993	.9366	.0058	.2907
#1	1.784	6.317	.0547	1.278	1.996	.8945	.0065	.2866
#2	1.786	6.260	.0544	1.273	1.990	.9787	.0051	.2948

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	2.942	.01429	-.0057	.0197	.0602	.0297	.1055
#1	.0044	2.926	.01433	-.0070	.0196	.0604	.0298	.1056
#2	.0037	2.958	.01425	-.0043	.0197	.0599	.0296	.1054

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1021	.0017	.2816
#1	.1021	.0019	.2838
#2	.1021	.0015	.2794

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2877.8	75264.	4789.1
#1	2880.2	75151.	4768.2
#2	2875.4	75378.	4810.1

Sample Name: CCVB Acquired: 9/23/2014 16:41:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.761	9.847	-.0003	.9986	10.20	-.00012	.0019	.0000
Stddev	.008	.025	.0001	.0007	.01	.00004	.0007	.0000
%RSD	.1074	.2523	28.92	.0695	.1383	32.706	37.82	80.37
#1	7.755	9.830	-.0003	.9981	10.19	-.00009	.0014	.0000
#2	7.767	9.865	-.0004	.9991	10.21	-.00015	.0024	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	9.966	9.326	.0003	.0000	.0001	-.0002	10.07
Stddev	.0000	.034	.068	.0002	.000	.0007	.0000	.04
%RSD	41.60	.3412	.7287	52.69	471.2	753.1	4.755	.3470
#1	-.0001	9.990	9.278	.0002	.0000	.0006	-.0002	10.05
#2	-.0001	9.942	9.374	.0004	-.0001	-.0004	-.0002	10.10
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	.9830	9.806	9.229	9.733	.9851	.9889	.0002
Stddev	.0001	.0146	.037	.160	.107	.0032	.0092	.0003
%RSD	7.419	1.486	.3774	1.737	1.099	.3233	.9337	178.1
#1	-.0010	.9727	9.780	9.343	9.657	.9828	.9823	-.0001
#2	-.0009	.9934	9.832	9.116	9.809	.9873	.9954	.0004
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/23/2014 16:41:31 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	10.25	9.960	.0029	9.871	.0006	10.01	.98228
Stddev	.0001	.01	.160	.0019	.079	.0003	.12	.00480
%RSD	25.05	.1341	1.606	65.42	.8035	41.96	1.230	.48885
#1	.0004	10.24	9.847	.0042	9.815	.0008	9.927	.97888
#2	.0003	10.26	10.07	.0015	9.927	.0004	10.10	.98567
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	.0015	.0006	.0017	.0003	.0000	1.016	.9890
Stddev	.0030	.0010	.0000	.0005	.0001	.0001	.001	.0050
%RSD	156.1	62.22	6.834	32.69	15.02	394.2	.1392	.5006
#1	-.0040	.0022	.0006	.0020	.0004	.0001	1.017	.9925
#2	.0002	.0009	.0006	.0013	.0003	.0000	1.015	.9855
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2876.2	74087.	4790.4
Stddev	3.6	189.	46.7
%RSD	.12656	.25564	.97531
#1	2878.8	73953.	4757.4
#2	2873.6	74221.	4823.4

Sample Name: CCVA Acquired: 9/23/2014 16:44:09 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2576	.2558	.2469	.2533	.2591	.24272	.2439	.2501
Stddev	.0001	.0064	.0022	.0006	.0003	.00067	.0020	.0006
%RSD	.0200	2.486	.8797	.2185	.1094	.27735	.7995	.2458
#1	.2576	.2603	.2484	.2537	.2589	.24319	.2453	.2505
#2	.2575	.2513	.2453	.2529	.2593	.24224	.2425	.2497
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2535	.5169	.4891	.2529	.2495	.2509	.2465	.2656
Stddev	.0005	.0089	.0005	.0001	.0005	.0008	.0022	.0005
%RSD	.2050	1.724	.0959	.0409	.1933	.3091	.8769	.1771
#1	.2538	.5232	.4895	.2530	.2498	.2515	.2480	.2659
#2	.2531	.5106	.4888	.2528	.2491	.2504	.2449	.2652
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2539	-.0024	.2272	.2442	.2477	.2486	.2477	.2501
Stddev	.0006	.0000	.0177	.0001	.0000	.0003	.0005	.0009
%RSD	.2278	1.696	7.790	.0549	.0072	.1236	.2181	.3722
#1	.2543	-.0024	.2397	.2441	.2477	.2488	.2481	.2507
#2	.2535	-.0025	.2147	.2443	.2478	.2484	.2473	.2494
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/23/2014 16:44:09 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2512	.0018	2.535	.2478	.1351	.2488	.2712	.00013
Stddev	.0006	.0015	.018	.0012	.0064	.0007	.0098	.00009
%RSD	.2493	80.62	.6910	.4898	4.742	.2882	3.619	67.759
#1	.2517	.0008	2.547	.2487	.1396	.2483	.2781	.00019
#2	.2508	.0028	2.522	.2470	.1305	.2493	.2642	.00007
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2506	.2491	.2481	.2497	.2483	.2471	.0035	.0039
Stddev	.0008	.0002	.0005	.0001	.0007	.0002	.0007	.0007
%RSD	.3221	.0901	.1911	.0254	.2984	.0736	19.30	17.14
#1	.2511	.2493	.2484	.2497	.2488	.2470	.0030	.0044
#2	.2500	.2489	.2478	.2496	.2478	.2472	.0040	.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2888.9	74938.	4769.5
Stddev	5.6	30.	1.7
%RSD	.19479	.03956	.03491
#1	2884.9	74959.	4770.7
#2	2892.8	74917.	4768.3

Sample Name: CCB Acquired: 9/23/2014 16:46:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0036	-.0004	-.0009	-.0003	-.00002	.0007	.0000
Stddev	.0000	.0013	.0013	.0002	.0003	.00003	.0003	.000
%RSD	22.70	37.20	341.9	24.07	106.5	113.54	45.60	116.4
#1	-.0002	.0026	-.0013	-.0010	-.0001	.00000	.0005	-.0001
#2	-.0002	.0045	.0005	-.0007	-.0005	-.00004	.0009	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0056	.0002	.0001	.0004	-.0003	.0003	.0017
Stddev	.0001	.0074	.0000	.0003	.0002	.0001	.0002	.0035
%RSD	89.94	132.9	22.20	399.2	38.92	34.61	63.54	201.6
#1	.0001	.0108	.0002	-.0001	.0003	-.0002	.0005	-.0007
#2	.0000	.0003	.0002	.0003	.0005	-.0003	.0002	.0042
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	-.0028	.0065	-.0001	-.0007	.0001	.0011	.0003
Stddev	.0013	.0027	.0048	.0001	.0003	.0000	.0001	.0000
%RSD	47.66	97.84	74.35	186.5	45.81	9.183	7.471	6.546
#1	-.0036	-.0047	.0031	.0000	-.0010	.0001	.0010	.0003
#2	-.0018	-.0008	.0099	-.0001	-.0005	.0002	.0011	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/23/2014 16:46:21 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0006	-.0050	.0022	.0114	.0002	.0246	.00004
Stddev	.000	.0015	.0225	.0013	.0024	.0009	.0020	.00013
%RSD	4291.	260.7	448.7	61.81	21.47	375.3	8.309	289.03
#1	.0002	-.0005	-.0209	.0012	.0096	.0008	.0261	-.00005
#2	-.0002	.0017	.0109	.0031	.0131	-.0004	.0232	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	-.0001	.0001	.0004	-.0001	.0000	-.0017	.0029
Stddev	.0004	.0006	.0000	.0000	.0000	.000	.0009	.0030
%RSD	20.29	528.8	26.82	1.109	11.14	1525.	51.30	105.2
#1	-.0022	-.0005	.0001	.0004	-.0001	-.0002	-.0011	.0050
#2	-.0017	.0003	.0002	.0004	-.0001	.0001	-.0023	.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2858.0	74566.	4738.5
Stddev	1.8	583.	.6
%RSD	.06184	.78149	.01200
#1	2859.3	74978.	4738.1
#2	2856.8	74154.	4738.9

Sample Name: CCB Acquired: 9/23/2014 16:48:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0018	-.0020	.0010	-.0004	-.00013	.0010	.0000
Stddev	.0000	.0022	.0034	.0006	.0000	.00001	.0005	.000
%RSD	86.89	122.0	174.7	58.50	5.165	5.9626	47.62	802.4
#1	.0000	.0003	-.0044	.0006	-.0004	-.00013	.0007	.0000
#2	.0001	.0034	.0005	.0014	-.0005	-.00012	.0014	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0000	.0002	-.0001	.0000	-.0004	.0001	.0030
Stddev	.0000	.008	.0001	.0003	.0001	.0001	.0001	.0012
%RSD	273.0	16390.	29.84	398.7	195.3	22.90	94.59	39.33
#1	.0000	.0057	.0003	.0001	.0001	-.0005	.0000	.0021
#2	.0000	-.0058	.0002	-.0003	.0000	-.0004	.0002	.0038
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0016	-.0003	-.0001	.0001	.0000	.0009	.0001
Stddev	.0007	.0018	.0094	.0001	.0002	.0000	.0001	.0000
%RSD	184.8	111.2	3089.	82.34	247.4	94.56	6.125	29.51
#1	.0001	-.0029	.0064	-.0001	.0002	.0001	.0008	.0001
#2	-.0009	-.0003	-.0070	.0000	-.0001	.0000	.0009	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

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Sample Name: CCB Acquired: 9/23/2014 16:48:47 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0021	.0191	.0019	.0074	.0008	.0069	.00013
Stddev	.0001	.0002	.0107	.0018	.0064	.0005	.0098	.00020
%RSD	16.90	11.43	55.77	92.36	86.40	72.93	140.5	156.37
#1	.0005	.0019	.0116	.0031	.0029	.0004	.0139	.00027
#2	.0006	.0022	.0267	.0007	.0119	.0011	.0000	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.0001	.0001	.0005	.0000	-.0001	.0001	.0005
Stddev	.0023	.0006	.0001	.0002	.000	.0001	.0005	.0001
%RSD	283.0	700.6	77.46	39.40	540.3	130.5	366.1	26.51
#1	-.0024	.0003	.0001	.0004	.0000	-.0002	.0005	.0004
#2	.0008	-.0005	.0000	.0007	.0000	.0000	-.0002	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2878.5	74711.	4731.8
Stddev	.6	87.	25.1
%RSD	.01998	.11663	.53019
#1	2878.1	74772.	4749.5
#2	2878.9	74649.	4714.0

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Sample Name: LLCCV Acquired: 9/23/2014 16:51:14 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0102	.0155	.0116	.0041	.00095	.0217	.0011
Stddev	.0001	.0022	.0004	.0010	.0001	.00004	.0007	.0000
%RSD	.7324	21.34	2.300	9.000	1.897	3.9560	3.069	1.067
#1	.0106	.0118	.0153	.0108	.0042	.00097	.0222	.0011
#2	.0107	.0087	.0158	.0123	.0041	.00092	.0212	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0288	.0214	.0041	.0023	.0040	.0042	.0257
Stddev	.0001	.0093	.0001	.0003	.0003	.0004	.0008	.0013
%RSD	6.961	32.46	.6903	7.368	11.59	8.956	18.10	5.171
#1	.0010	.0222	.0215	.0039	.0021	.0038	.0048	.0267
#2	.0011	.0354	.0213	.0043	.0025	.0043	.0037	.0248
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	.0166	.0105	.0051	.0066	.0011	.0018	.0041
Stddev	.0001	.0017	.0041	.0001	.0012	.0001	.0003	.0002
%RSD	1.523	10.32	39.11	1.935	17.81	9.287	19.55	5.640
#1	.0090	.0178	.0076	.0051	.0058	.0010	.0015	.0042
#2	.0089	.0154	.0134	.0052	.0075	.0012	.0020	.0039
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/23/2014 16:51:14 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0427	.1999	.0223	.2114	.0044	.2307	.00107
Stddev	.0005	.0003	.0003	.0014	.0048	.0001	.0071	.00002
%RSD	13.10	.6241	.1365	6.272	2.252	2.583	3.098	1.9329
#1	.0045	.0425	.1997	.0233	.2080	.0043	.2257	.00108
#2	.0038	.0429	.2001	.0213	.2148	.0044	.2358	.00105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093	.0201	.0023	.0048	.0042	.0043	.0203	.0431
Stddev	.0017	.0000	.0001	.0002	.0002	.0001	.0024	.0018
%RSD	18.35	.0313	6.083	4.010	4.049	1.635	11.87	4.073
#1	.0081	.0201	.0022	.0047	.0041	.0043	.0220	.0418
#2	.0105	.0201	.0024	.0049	.0043	.0042	.0186	.0443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2902.2	75622.	4792.2
Stddev	6.4	188.	11.2
%RSD	.21993	.24908	.23344
#1	2906.7	75755.	4800.2
#2	2897.7	75489.	4784.3

Sample Name: LLCCV Acquired: 9/23/2014 16:53:40 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0104	.0187	.0099	.0037	.00099	.0213	.0010
Stddev	.0002	.0000	.0013	.0007	.0000	.00007	.0011	.0000
%RSD	1.653	.4233	6.970	7.035	.1086	7.4691	5.012	4.260
#1	.0109	.0104	.0178	.0094	.0037	.00104	.0221	.0011
#2	.0106	.0105	.0196	.0104	.0037	.00094	.0206	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	F .0276	.0213	.0046	F .0027	.0042	.0041	.0253
Stddev	.0000	.0033	.0000	.0000	.0001	.0000	.0001	.0028
%RSD	.0330	11.93	.0843	.9729	3.530	.9808	1.669	11.03
#1	.0010	.0300	.0213	.0045	.0028	.0043	.0041	.0273
#2	.0010	.0253	.0213	.0046	.0026	.0042	.0042	.0233
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value		.0200			.0020			
Range		30.00%			30.00%			

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	.0196	.0142	.0050	.0036	.0011	.0030	.0042
Stddev	.0004	.0005	.0239	.0000	.0006	.0001	.0000	.0003
%RSD	4.072	2.327	167.9	.2730	15.35	5.861	.4155	6.996
#1	.0085	.0199	.0311	.0050	.0040	.0011	.0030	.0044
#2	.0090	.0193	-.0027	.0049	.0032	.0010	.0030	.0040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

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Sample Name: LLCCV Acquired: 9/23/2014 16:53:40 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0432	.2143	.0219	.2058	.0045	.2350	.00101
Stddev	.0002	.0013	.0177	.0008	.0094	.0001	.0014	.00009
%RSD	3.873	3.102	8.278	3.444	4.570	2.178	.5972	8.5509
#1	.0044	.0423	.2018	.0225	.2124	.0046	.2340	.00095
#2	.0041	.0442	.2268	.0214	.1991	.0045	.2360	.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	.0200	.0022	.0041	.0043	.0042	.0219	.0429
Stddev	.0003	.0004	.0000	.0002	.0002	.0000	.0015	.0023
%RSD	2.522	2.162	1.552	3.789	4.769	.8173	7.054	5.387
#1	.0099	.0203	.0022	.0042	.0042	.0043	.0229	.0413
#2	.0103	.0197	.0023	.0040	.0045	.0042	.0208	.0446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2924.0	76156.	4829.5
Stddev	5.2	284.	20.3
%RSD	.17728	.37318	.42021
#1	2920.3	76356.	4815.1
#2	2927.7	75955.	4843.8

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Sample Name: LLCCV,0.5 Acquired: 9/23/2014 16:56:05 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210	.0218	.0375	.0202	.0079	.00196	.0418	.0020
Stddev	.0001	.0007	.0002	.0016	.0000	.00007	.0001	.0000
%RSD	.3435	3.177	.5356	8.099	.3499	3.4945	.3476	1.177
#1	.0210	.0223	.0373	.0191	.0078	.00191	.0419	.0020
#2	.0209	.0213	.0376	.0214	.0079	.00201	.0417	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0428	.0402	.0087	.0047	.0081	.0080	.0430
Stddev	.0001	.0063	.0002	.0005	.0000	.0006	.0005	.0002
%RSD	5.699	14.70	.3827	5.596	.9051	7.863	5.925	.3771
#1	.0020	.0384	.0401	.0090	.0047	.0085	.0076	.0429
#2	.0021	.0473	.0403	.0084	.0047	.0076	.0083	.0431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0193	.0383	.0171	.0100	.0104	.0021	.0035	.0085
Stddev	.0006	.0006	.0079	.0000	.0000	.0000	.0001	.0001
%RSD	2.980	1.657	46.10	.2750	.1403	.1533	4.157	1.130
#1	.0189	.0379	.0115	.0100	.0104	.0021	.0037	.0085
#2	.0197	.0388	.0226	.0101	.0104	.0021	.0034	.0086
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/23/2014 16:56:05 Type: QC
Method: 2014B-ICP03(v39) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0843	.4162	.0430	.4084	.0085	.4302	.00202
Stddev	.0000	.0018	.0322	.0029	.0002	.0005	.0098	.00012
%RSD	.3510	2.171	7.740	6.669	.0521	5.963	2.281	6.0996
#1	.0082	.0830	.4390	.0410	.4083	.0088	.4372	.00193
#2	.0082	.0856	.3934	.0450	.4086	.0081	.4233	.00211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190	.0396	.0045	.0087	.0082	.0083	.0422	.0803
Stddev	.0007	.0009	.0001	.0001	.0003	.0002	.0010	.0001
%RSD	3.554	2.349	1.185	1.405	3.784	1.992	2.391	.1616
#1	.0186	.0389	.0044	.0087	.0085	.0084	.0414	.0802
#2	.0195	.0402	.0045	.0088	.0080	.0082	.0429	.0804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2929.7	76101.	4847.8
Stddev	4.5	69.	24.7
%RSD	.15379	.09008	.51040
#1	2932.8	76150.	4865.3
#2	2926.5	76053.	4830.3

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 218574
Team: Metals
Analyst: Anna Cheatley
Prep Workflow: MetDigAqICP
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 09/19/2014 14:30
Due Date: 10/03/2014
Hold Date: 03/14/2015

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1411597-02	Method Blank		50 mL	50 mL			Metals T	1%HNO3,5%HCl
KQ1411597-01	Lab Control Sample		50 mL	50 mL	0.25 mL 0.25 mL 0.125 mL 0.5 mL	66705 66708 74038 74138	Metals T	1%HNO3,5%HCl
KQ1411597-03	Lab Control Sample		50 mL	50 mL	0.5 mL	65132	Metals T	1%HNO3,5%HCl
K1409912-001	KCP INJ 1	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409912-001: KQ1411597-04	Duplicate	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409912-001: KQ1411597-05	Matrix Spike	.05	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	73162 73834 74138 74821	Metals T	1%HNO3,5%HCl
K1409912-001: KQ1411597-06	Matrix Spike	.05	50 mL	50 mL	0.5 mL	65132	Metals T	1%HNO3,5%HCl
K1409921-012	WS-091514-RB-SW03	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-013	WS-091514-RB-SW04	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-014	WS-091514-RB-SW05	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-015	WS-091514-RB-SW02	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-016	WS-091514-RB-SW01	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-017	WS-091514-RB-FD10	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl
K1409921-018	RINSE BLANK 9-15	.05	50 mL	50 mL			Metals T	1%HNO3,5%HCl

14 Total Samples consisting of 8 Client Samples, 3 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
Antimony 1000 ug/mL Sb	Spike	74038	9/1/2015
K-MET QCP-CICV-1	Spike	66705	2/1/2015
K-MET QCP-CICV-3	Spike	66708	2/1/2015
K-MET SS3	Spike	73162	10/1/2014
K-MET SS4	Spike	74138	2/24/2015
K-MET SS5	Spike	73834	12/1/2014
K-MET-SS1	Spike	74821	2/8/2015
Silicon 1000 ug/mL Si	Spike	65132	3/5/2015

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	63655
Digestion	K-MET HNO3	72657
Digestion	K-MET HCL	74685

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Corrected Temperature	97	deg C	Digestion	K-BlockDigester-06	Thermometer ID1135551		NONE
Digestion	K-BlockDigester-06	Correction Factor	0	deg C	Digestion	K-BlockDigester-06	Thermometer Location	43	NONE
Digestion	K-BlockDigester-06	Observed Temperature 211919567	97	deg C					

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	19-SEP-14 14:30	19-SEP-14 16:40	Anna Cheatley		N	

Comments

Review

Reviewed by: BJS Date: 9/22/14

Preparation Information Benchsheet

Prep Run: 218576
Team: Metals
Analyst: Anna Cheatley
Prep Workflow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: N/A
Status: Prepped
Current Step: Digestion
Prep Date: 09/19/2014 16:35
Due Date: 09/30/2014
Hold Date: 03/13/2015

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1411599-02	Method Blank		50 mL	50 mL			Metals T	1%HNO3 ULTREX
KQ1411599-01	Lab Control Sample		50 mL	50 mL	0.5 mL 0.1 mL 0.5 mL 0.5 mL	71264 71731 74464 74745	Metals T	1%HNO3 ULTREX
K1409907-001	L3a091514	.02	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1409907-001: KQ1411599-03	Duplicate	.02	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1409907-001: KQ1411599-04	Matrix Spike	.02	50 mL	50 mL	0.5 mL 0.1 mL 0.5 mL 0.5 mL	71264 71731 74464 74745	Metals D	1%HNO3 ULTREX
K1409921-012	WS-091514-RB-SW03	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-013	WS-091514-RB-SW04	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-014	WS-091514-RB-SW05	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-015	WS-091514-RB-SW02	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-016	WS-091514-RB-SW01	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-017	WS-091514-RB-FD10	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409921-018	RINSE BLANK 9-15	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1409963-025	CCP09-SC-RB-140914	.03	50 mL	50 mL			Metals T	1%HNO3 ULTREX

13 Total Samples consisting of 9 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Mo/U 10ppm	Spike	71731	10/1/2014	k-met 1/100 QCP-CICV-3	Spike	74745	2/1/2015
k-met 1/100 QCP CICV-1	Spike	74464	2/1/2015	k-met Sb 5ug/mL Sb	Spike	71264	10/1/2014

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	63655	Digestion	K-MET HNO3 ULTREX	70317

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-05	Corrected Temperature	96	deg C	Digestion	K-BlockDigester-05	Thermometer ID 1133904		NONE
	K-	Correction				K-	Thermometer		

Digestion	BlockDigester-05	Factor	0	deg C	Digestion	BlockDigester-05	Location	43	NONE
Digestion	K-BlockDigester-05	Observed Temperature 211918066	96	deg C					

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	19-SEP-14 16:35	19-SEP-14 18:35	Anna Cheatley		N	

Comments

Review

Reviewed by: RJS Date: 9/22/14

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1 *** Add after HNO3 and before cas cal -14 when making the solution	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb***	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
	Hg	6	500	12	
K-MET SS4	HNO3	25	500ml	-	
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

ICPMS LCSW AND SPIKING SOLUTIONS

5.00mL to 500mL Dilution of Inorganics Ventures QCP-CICV-1

K-Met 1/100 QCP-CCV-1

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Al	10000	100
Ba	10000	100
Co	2500	25
Mn	2500	25
Ni	2500	25
V	2500	25
Zn	2500	25
Cu	1250	12.5
Ag	1250	12.5
Cr	1000	10
Be	250	2.5

1.00mL to 200mL Dilution of 1,000 ppm Sb

K-Met Sb 10 ppm

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Sb	5000	50

5.00mL to 500mL Dilution of Inorganics Ventures QCP-CICV-3

K-Met 1/100 QCP-CICV-3

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
As	5000	50
Pb	5000	50
Se	5000	50
Tl	5000	50
Cd	2500	25

2.00mL to 200mL Dilution of 1,000 ppm Mo and 1,000 ppm U

K-Met Mo/U 10ppm

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Mo	10000	20
U	10000	20

Service Request # K1409121 Waters
Instrument ID# K-ICP-AES-04

ICP-OES 6010 Data Review Form

	Yes	No
1. Standardization completed	X	
2. ICV within 10 % of true value	X	
3. ICB below MRL	X	
4. CRI/LLICV standard analyzed.	X	
5. ICS standards within 20% of true value	X	
6. All preceding CCVs within 10 % of true value	X	
7. Following CCV within 10 % of true value	X	
8. Bracketing CCBs below MRL	X	
9. Method Blank below MRL	X	
10. MS (75-125), Dup (20) and LCS (80-120) within control limits	X	
11. All analytes within instrument linear range	X	
12. Adequate rinse out time allowed between samples to eliminate memory effect	X	
13. Run terminated early		X

Comments:
StarLIMS Run # 412327 Saved under 092014AICP04
6010C: NR S.
After 13:11: MRL=2X for Mg.

Primary Review by [signature] Date 9/20/14

Secondary Review by [signature] Date 9/22/14

Data Review Form

Service Request #: **K1409921**
Instrument ID#: **K-ICP-AES-04**
DataFile Name: **R:\ICP\WIP\DATA\K-ICP-AES-04\092014AICP04.txt**

There are no issues to report.

Primary Approver: 9/20/14
Secondary Approver: 9/22/14

Sample Name: BLK Acquired: 9/20/2014 10:39:33 Type: Cal
Method: 2014B-ICP04(v37) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0022	1.047	-.2089	-1.223	.0149	4.1617	-4.162
Stddev	.0001	16.07	.7479	.250	.0017	.5991	2.009
%RSD	3.481	1535.	358.1	20.42	11.44	14.396	48.27
#1	.0023	12.41	-.7377	-1.400	.0137	4.5853	-5.582
#2	.0022	-10.32	.3200	-1.047	.0162	3.7380	-2.741

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0007	.0000	.0015	.0485	.0002	-.0010	-.0002
Stddev	.0002	.0002	.0004	.0010	.0001	.0001	.0003
%RSD	23.36	997.4	28.78	2.010	31.89	9.398	121.0
#1	.0008	-.0002	.0012	.0492	.0003	-.0010	.0000
#2	.0006	.0002	.0018	.0478	.0002	-.0009	-.0005

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	26.29	.0007	-.0002	15.97	-.0001	.0009	1.300
Stddev	.95	.0004	.0002	16.07	.0006	.0000	2.192
%RSD	3.619	52.57	79.71	100.6	921.7	1.255	168.6
#1	25.62	.0009	-.0001	27.33	-.0005	.0009	2.850
#2	26.96	.0004	-.0003	4.604	.0003	.0009	-.2500

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0000	.0000	-.0005	-.0007	.0002	-9.210	-1.210
Stddev	.0000	.0000	.0003	.0003	.0000	4.004	.368
%RSD	11.42	113.3	64.53	41.80	21.14	43.47	30.47
#1	.0000	.0001	-.0003	-.0010	.0003	-12.04	-.9490
#2	.0000	.0000	-.0008	-.0005	.0002	-6.379	-1.470

Sample Name: BLK Acquired: 9/20/2014 10:39:33 Type: Cal
Method: 2014B-ICP04(v37) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.587	-28.38	-38.35	-.01553	-.0006	.0000	.0021
Stddev	1.703	4.69	18.20	.00035	.0002	.000	.0000
%RSD	65.81	16.51	47.46	2.2699	34.41	248.7	1.993
#1	3.792	-25.07	-51.23	-.01528	-.0004	.0000	.0021
#2	1.383	-31.70	-25.48	-.01578	-.0007	-.0001	.0021

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0004	.0001	.9649	.0006	19.93
Stddev	.0001	.0001	.5264	.0002	.17
%RSD	25.01	39.75	54.55	33.05	.8710
#1	-.0004	.0002	1.337	.0007	19.81
#2	-.0003	.0001	.5927	.0005	20.06

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2608.7	40412.	4018.8
Stddev	.1	234.	9.0
%RSD	.00422	.57933	.22316
#1	2608.6	40246.	4012.4
#2	2608.8	40577.	4025.1

AM
10/10/14

Sample Name: STD A Acquired: 9/20/2014 10:42:01 Type: Cal
Method: 2014B-ICP04(v37) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-11-C

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.2351	189.4	14780.	1589.	2.447	1.618	35.50	.1097
Stddev	.0006	1.4	43.	5.	.002	.001	.05	.0007
%RSD	.2591	.7160	.28915	.3048	.0853	.0837	.1368	.6675
#1	.2355	188.4	14810.	1585.	2.446	1.617	35.47	.1102
#2	.2346	190.4	14750.	1592.	2.449	1.619	35.54	.1092

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.7636	.4297	5777.	.1316	3.613	.7267	.4562	.7443
Stddev	.0007	.0002	4.	.0000	.003	.0004	.0011	.0002
%RSD	.0913	.0439	.0736	.0035	.0696	.0504	.2471	.0268
#1	.7631	.4299	5774.	.1316	3.611	.7270	.4570	.7442
#2	.7641	.4296	5780.	.1316	3.615	.7264	.4554	.7445

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	93.14	6157.	.0792	.1594	.6481	.1494	.7561	3227.
Stddev	1.37	4.	.0001	.0001	.0007	.0006	.0001	8.
%RSD	1.467	.0585	.1760	.0738	.1069	.4081	.0130	.2376
#1	92.17	6155.	.0793	.1593	.6486	.1499	.7561	3222.
#2	94.10	6160.	.0791	.1595	.6476	.1490	.7562	3232.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2610.1	40597.	4031.4
Stddev	3.3	117.	17.1
%RSD	.12705	.28859	.42482
#1	2607.7	40514.	4019.3
#2	2612.4	40680.	4043.5

Sample Name: STD B Acquired: 9/20/2014 10:44:12 Type: Cal
Method: 2014B-ICP04(v37) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-D

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	133200.	563.4	266.2	2.621	4.267	27050.	.5693
Stddev	537.	1.2	5.0	.029	.031	57.	.0039
%RSD	.4033	.2137	1.884	1.108	.7245	.2091	.6876
#1	133600.	564.3	262.7	2.600	4.245	27010.	.5666
#2	132800.	562.6	269.7	2.641	4.288	27090.	.5721

Elem	Mg2852	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	48790.	.1819	1.933	10220.	6196.	36650.	39.586
Stddev	22.	.0008	.003	10.	6.	71.	.224
%RSD	.0442	.4333	.1764	.0935	.0970	.1929	.56678
#1	48810.	.1825	1.930	10220.	6200.	36700.	39.427
#2	48780.	.1814	1.935	10210.	6192.	36600.	39.745

Elem	Bi2230	S_1820
Units	Cts/S	Cts/S
Avg	.5040	369.4
Stddev	.0007	1.1
%RSD	.1455	.3001
#1	.5035	368.6
#2	.5045	370.2

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2567.6	39378.	4013.0
Stddev	2.3	49.	32.5
%RSD	.09096	.12365	.80885
#1	2565.9	39344.	4035.9
#2	2569.2	39413.	3990.0

Sample Name: ICVB Acquired: 9/20/2014 10:46:48 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9842	1.013	-.0004	.0037	.0016	-.00003	2.027	.0001
Stddev	.0025	.013	.0001	.0006	.0002	.00003	.019	.0001
%RSD	.2508	1.236	30.42	15.92	10.84	84.118	.9399	36.95
#1	.9860	1.021	-.0003	.0041	.0017	-.00001	2.040	.0002
#2	.9825	1.004	-.0005	.0033	.0015	-.00005	2.013	.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	4.940	4.815	.0000	.0003	.0001	.0006	9.968
Stddev	.0001	.072	.024	.000	.0004	.0005	.0001	.050
%RSD	73.92	1.461	.5071	330.3	113.3	358.9	22.93	.5055
#1	-.0001	4.889	4.798	.0000	.0006	-.0002	.0007	9.932
#2	-.0003	4.991	4.833	-.0001	.0001	.0005	.0005	10.00
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	1.998	4.929	4.872	5.073	9.617	9.923	.0001
Stddev	.0011	.009	.019	.038	.029	.036	.050	.0003
%RSD	60.36	.4618	.3817	.7846	.5737	.3713	.4986	198.1
#1	-.0025	1.991	4.915	4.845	5.052	9.592	9.888	-.0001
#2	-.0010	2.004	4.942	4.899	5.094	9.642	9.958	.0004
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 9/20/2014 10:46:48 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	5.004	-.0033	-.0014	5.027	.0001	14.37	2.0002
Stddev	.0003	.006	.0161	.0004	.023	.0000	.05	.0126
%RSD	130.6	.1252	486.0	28.16	.4647	35.88	.3716	.62762
#1	.0004	5.008	-.0147	-.0011	5.011	.0002	14.33	1.9913
#2	.0000	5.000	.0081	-.0017	5.044	.0001	14.40	2.0090
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0110	4.897	.0003	.0089	.0002	.0003	5.117	4.985
Stddev	.0016	.005	.0001	.0006	.0001	.0001	.006	.008
%RSD	14.85	.1102	49.69	7.241	61.61	30.18	.1261	.1689
#1	-.0121	4.901	.0002	.0084	.0002	.0003	5.122	4.979
#2	-.0098	4.894	.0004	.0093	.0001	.0004	5.112	4.991
Check ?	None	Chk Pass	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2577.9	39710.	4033.2
Stddev	4.0	15.	6.6
%RSD	.15492	.03715	.16317
#1	2575.1	39721.	4037.8
#2	2580.8	39700.	4028.5

Sample Name: ICV Acquired: 9/20/2014 10:49:17 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.361	4.966	2.381	2.480	5.063	.12219	.0010	1.239
Stddev	.003	.012	.003	.009	.068	.00006	.0013	.002
%RSD	.0715	.2321	.1271	.3558	1.350	.05157	123.6	.1834
#1	4.363	4.958	2.383	2.486	5.015	.12215	.0001	1.241
#2	4.359	4.975	2.379	2.473	5.112	.12224	.0019	1.237
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.248	12.67	11.90	.5049	1.242	.6172	.6028	2.512
Stddev	.002	.02	.05	.0002	.002	.0009	.0011	.011
%RSD	.1731	.1669	.4613	.0355	.1689	.1501	.1779	.4463
#1	1.250	12.69	11.87	.5051	1.243	.6165	.6021	2.520
#2	1.247	12.66	11.94	.5048	1.241	.6178	.6036	2.504
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.466	-.0019	12.42	11.94	12.56	1.237	1.256	2.011
Stddev	.002	.0001	.01	.07	.05	.001	.005	.004
%RSD	.0743	3.230	.0844	.5927	.4024	.0543	.3855	.1975
#1	2.467	-.0018	12.43	11.99	12.60	1.237	1.259	2.014
#2	2.465	-.0019	12.41	11.89	12.52	1.236	1.252	2.008
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 9/20/2014 10:49:17 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-12-E

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.231	-.0006	12.35	2.370	.0134	.5942	12.50	.00059
Stddev	.001	.0012	.05	.005	.0019	.0005	.02	.00007
%RSD	.0395	183.3	.3972	.2002	13.92	.0770	.1975	11.466
#1	1.232	.0002	12.39	2.367	.0148	.5939	12.52	.00063
#2	1.231	-.0015	12.32	2.374	.0121	.5946	12.48	.00054
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.462	.0010	2.042	1.268	1.230	1.201	.0122	.0079
Stddev	.006	.0006	.001	.003	.005	.000	.0013	.0032
%RSD	.2271	63.44	.0650	.2086	.4117	.0327	10.94	40.11
#1	2.458	.0006	2.042	1.270	1.234	1.201	.0113	.0102
#2	2.466	.0015	2.043	1.266	1.227	1.201	.0132	.0057
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2546.0	39540.	4002.0
Stddev	1.7	29.	3.5
%RSD	.06700	.07310	.08767
#1	2544.8	39519.	3999.6
#2	2547.2	39560.	4004.5

Sample Name: ICB Acquired: 9/20/2014 10:51:40 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0036	.0014	.0032	.0002	.00004	.0022	.0000
Stddev	.0002	.0016	.0004	.0016	.0003	.00005	.0003	.000
%RSD	247.4	43.84	32.66	50.10	150.8	136.43	11.59	354.0
#1	.0001	.0048	.0011	.0021	.0000	.00008	.0020	.0000
#2	-.0002	.0025	.0017	.0043	.0004	.00000	.0024	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0047	.0003	.0002	.0002	-.0005	.0007	-.0011
Stddev	.000	.0040	.0000	.0003	.0002	.0007	.0004	.0016
%RSD	274.6	85.38	6.019	149.9	124.3	127.3	59.36	144.5
#1	.0000	-.0076	.0003	.0000	.0003	-.0001	.0004	.0000
#2	-.0001	-.0019	.0003	.0005	.0000	-.0010	.0011	-.0023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0014	.0157	.0001	-.0003	.0001	.0007	.0009
Stddev	.0010	.0007	.0033	.0001	.0016	.0000	.0012	.0000
%RSD	322.3	48.20	20.74	113.4	466.1	17.32	175.2	5.272
#1	-.0011	-.0009	.0134	.0001	.0008	.0001	-.0002	.0009
#2	.0004	-.0019	.0180	.0000	-.0015	.0001	.0016	.0010
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 9/20/2014 10:51:40 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0006	-.0347	.0037	-.0008	.0000	.0221	-.00004
Stddev	.0001	.0020	.0153	.0018	.0005	.001	.0009	.00013
%RSD	250.4	314.5	44.26	48.93	55.01	2015.	4.119	286.70
#1	.0001	.0008	-.0455	.0050	-.0005	.0006	.0228	-.00014
#2	.0000	-.0020	-.0238	.0024	-.0012	-.0007	.0215	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0005	.0003	.0002	-.0001	.0001	.0024	-.0147
Stddev	.0019	.0011	.0001	.0004	.0001	.0001	.0002	.0005
%RSD	93.98	218.7	24.36	185.4	192.2	161.5	9.621	3.407
#1	.0033	.0013	.0003	-.0001	-.0002	.0002	.0026	-.0151
#2	.0007	-.0003	.0002	.0006	.0000	.0000	.0023	-.0144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2612.6	40451.	4065.1
Stddev	1.2	140.	6.8
%RSD	.04502	.34601	.16800
#1	2611.7	40550.	4060.3
#2	2613.4	40352.	4070.0

Sample Name: LLICV Acquired: 9/20/2014 10:54:07 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090	.0100	.0165	.0100	.0039	.00087	.0187	.0009
Stddev	.0002	.0003	.0023	.0023	.0000	.00013	.0023	.0001
%RSD	2.522	2.948	13.95	22.96	.5028	14.893	12.56	8.874
#1	.0091	.0103	.0181	.0083	.0039	.00096	.0171	.0009
#2	.0088	.0098	.0148	.0116	.0039	.00078	.0204	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	F .0104	.0175	.0044	.0019	.0034	.0038	.0179
Stddev	.0001	.0041	.0000	.0004	.0000	.0000	.0008	.0012
%RSD	9.529	39.47	.2130	8.079	.4981	.2033	21.58	6.810
#1	.0007	.0133	.0175	.0046	.0019	.0034	.0044	.0187
#2	.0008	.0075	.0175	.0041	.0019	.0034	.0032	.0170
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0152	.0342	.0042	F .0034	.0007	.0003	.0039
Stddev	.0007	.0021	.0053	.0000	.0010	.0000	.0004	.0001
%RSD	7.232	13.82	15.38	.9937	28.96	4.209	111.1	3.164
#1	.0099	.0167	.0379	.0042	.0027	.0007	.0006	.0038
#2	.0089	.0137	.0304	.0042	.0041	.0008	.0001	.0040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value					.0050			
Range					-30.00%			

Sample Name: LLICV Acquired: 9/20/2014 10:54:07 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 0.5/50

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0331	.1867	.0175	.1618	.0041	.1929	.00081
Stddev	.0002	.0011	.0239	.0021	.0047	.0005	.0014	.00009
%RSD	6.541	3.323	12.82	12.20	2.936	11.69	.7483	10.685
#1	.0035	.0323	.2036	.0190	.1651	.0045	.1919	.00088
#2	.0032	.0339	.1698	.0160	.1584	.0038	.1939	.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102	.0184	.0023	.0039	.0038	.0037	.0191	F .0181
Stddev	.0005	.0013	.0001	.0002	.0003	.0002	.0018	.0040
%RSD	4.777	7.065	5.722	4.712	7.900	4.916	9.176	21.92
#1	.0106	.0193	.0024	.0041	.0040	.0036	.0179	.0210
#2	.0099	.0175	.0022	.0038	.0036	.0039	.0204	.0153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0400
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2612.5	40515.	4023.7
Stddev	4.0	144.	4.1
%RSD	.15474	.35441	.10156
#1	2615.3	40616.	4020.8
#2	2609.6	40413.	4026.6

Sample Name: LLICV Acquired: 9/20/2014 10:56:34 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0104	.0163	.0103	.0034	.00091	.0188	.0009
Stddev	.0002	.0057	.0018	.0024	.0003	.00012	.0016	.0001
%RSD	2.506	54.57	11.19	23.06	7.758	13.295	8.707	7.014
#1	.0088	.0064	.0176	.0086	.0036	.00082	.0176	.0010
#2	.0085	.0144	.0150	.0119	.0032	.00099	.0200	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	F .0082	.0177	.0039	.0019	.0032	.0044	.0153
Stddev	.0001	.0062	.0000	.0004	.0000	.0001	.0003	.0011
%RSD	12.50	76.26	.0346	10.40	2.419	2.252	6.223	7.104
#1	.0010	.0038	.0177	.0037	.0020	.0033	.0042	.0160
#2	.0008	.0125	.0177	.0042	.0019	.0032	.0046	.0145
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0161	.0206	.0043	.0038	.0008	.0011	.0038
Stddev	.0008	.0010	.0016	.0000	.0017	.0000	.0007	.0002
%RSD	9.542	6.047	7.761	.8505	43.34	3.878	63.21	6.006
#1	.0074	.0154	.0195	.0043	.0026	.0008	.0006	.0037
#2	.0085	.0168	.0217	.0044	.0050	.0008	.0016	.0040
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

NR
Gm
10/10/14

Sample Name: LLICV Acquired: 9/20/2014 10:56:34 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0366	.1776	.0212	.1625	.0040	.1918	.00078
Stddev	.0003	.0002	.0019	.0009	.0007	.0005	.0010	.00002
%RSD	7.903	.6546	1.058	4.195	.4609	12.34	.4960	2.5463
#1	.0032	.0368	.1789	.0218	.1620	.0037	.1925	.00080
#2	.0035	.0365	.1763	.0206	.1630	.0044	.1911	.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	.0176	.0020	.0035	.0037	.0035	.0195	F .0146
Stddev	.0019	.0001	.0001	.0002	.0002	.0001	.0011	.0058
%RSD	19.87	.3792	4.643	5.063	4.473	1.473	5.733	40.04
#1	.0109	.0176	.0020	.0037	.0036	.0035	.0203	.0187
#2	.0082	.0175	.0021	.0034	.0039	.0035	.0187	.0105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0400
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2612.0	40519.	4026.6
Stddev	4.8	228.	23.7
%RSD	.18430	.56264	.58895
#1	2608.6	40358.	4043.3
#2	2615.4	40680.	4009.8

NR
am
10/10/14

Sample Name: LLICV,0.5 Acquired: 9/20/2014 10:59:00 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 1/50

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177	.0197	.0341	.0193	.0072	.00177	.0363	.0018
Stddev	.0001	.0013	.0003	.0021	.0002	.00007	.0006	.0000
%RSD	.5796	6.531	.8325	10.78	2.121	3.7829	1.631	1.690
#1	.0176	.0188	.0339	.0179	.0071	.00173	.0367	.0018
#2	.0177	.0206	.0343	.0208	.0073	.00182	.0359	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	F .0278	.0339	.0072	.0042	.0072	.0072	.0353
Stddev	.0000	.0148	.0003	.0001	.0004	.0002	.0000	.0036
%RSD	.7733	53.33	.7494	1.844	9.749	3.067	.4157	10.09
#1	.0017	.0173	.0338	.0071	.0039	.0074	.0072	.0327
#2	.0017	.0383	.0341	.0073	.0045	.0071	.0071	.0378
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0400						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	.0343	.0270	.0087	.0105	.0016	F .0011	.0075
Stddev	.0003	.0002	.0216	.0000	.0001	.0001	.0002	.0001
%RSD	1.610	.4805	79.88	.0216	.9649	6.476	15.75	1.670
#1	.0167	.0345	.0423	.0087	.0106	.0015	.0013	.0076
#2	.0171	.0342	.0118	.0087	.0105	.0017	.0010	.0074
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.0020	
Range							-30.00%	

NR
Cm
12/2/14

Sample Name: LLICV,0.5 Acquired: 9/20/2014 10:59:00 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-13-D 1/50

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	.0674	.3489	.0430	.3429	.0074	.3503	.00172
Stddev	.0002	.0015	.0070	.0004	.0056	.0001	.0112	.00011
%RSD	2.339	2.238	2.020	1.032	1.646	1.598	3.203	6.6334
#1	.0067	.0663	.3440	.0427	.3389	.0073	.3582	.00180
#2	.0069	.0685	.3539	.0433	.3469	.0075	.3423	.00163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0353	.0039	.0074	.0070	.0072	.0395	F .0475
Stddev	.0009	.0007	.0001	.0001	.0002	.0001	.0038	.0071
%RSD	5.385	1.909	2.033	.7154	2.602	1.398	9.515	14.95
#1	.0167	.0358	.0040	.0073	.0071	.0071	.0368	.0425
#2	.0181	.0349	.0039	.0074	.0069	.0073	.0422	.0525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0800
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2611.8	40521.	4053.0
Stddev	.9	171.	4.3
%RSD	.03339	.42281	.10563
#1	2611.1	40400.	4049.9
#2	2612.4	40642.	4056.0

NR
Gm
10/10/14

Sample Name: CCVB1 Acquired: 9/20/2014 11:01:38 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.479	10.14	.0005	1.003	10.10	.00004	.0021	.0000
Stddev	.024	.05	.0016	.003	.05	.00006	.0014	.0001
%RSD	.3212	.4630	296.2	.3280	.4471	144.83	68.06	199.8
#1	7.492	10.20	.0002	1.006	10.06	.00010	.0014	.0000
#2	7.488	10.12	.0012	1.002	10.16	.00006	.0041	.0000
#3	7.444	10.14	-.0015	.9988	10.10	.00004	.0015	.0001
#4	7.494	10.09	.0023	1.004	10.06	-.00004	.0012	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.969	9.417	.0008	.0002	.0003	.0006	10.02
Stddev	.0001	.041	.104	.0002	.0001	.0005	.0005	.04
%RSD	52.94	.4142	1.102	28.92	66.84	185.4	73.11	.3742
#1	-.0003	9.910	9.552	.0009	.0001	.0002	.0012	10.01
#2	-.0001	9.974	9.432	.0005	.0001	.0009	.0002	10.03
#3	-.0003	10.00	9.378	.0011	.0001	.0004	.0003	10.06
#4	-.0001	9.992	9.306	.0009	.0003	-.0004	.0008	9.973
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Sample Name: CCVB1 Acquired: 9/20/2014 11:01:38 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	.9961	9.919	9.430	10.06	.9772	.9833	.0004
Stddev	.0007	.0027	.041	.067	.02	.0013	.0040	.0003
%RSD	70.29	.2707	.4122	.7124	.2281	.1356	.4085	58.41
#1	-.0020	.9958	9.907	9.516	10.05	.9776	.9776	.0001
#2	-.0007	.9985	9.953	9.440	10.05	.9787	.9871	.0004
#3	-.0004	.9924	9.950	9.411	10.05	.9771	.9845	.0006
#4	-.0007	.9977	9.866	9.354	10.10	.9755	.9840	.0007
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	9.992	9.882	-.0001	9.969	.0007	9.930	.98576
Stddev	.0003	.055	.025	.0029	.020	.0007	.015	.00462
%RSD	97.89	.5459	.2504	2050.	.2017	106.7	.1483	.46860
#1	.0000	10.03	9.861	-.0019	9.954	.0004	9.942	.98623
#2	-.0005	10.01	9.889	.0041	9.950	-.0002	9.920	.99006
#3	-.0005	9.911	9.865	-.0004	9.981	.0010	9.916	.98749
#4	-.0001	10.02	9.914	-.0023	9.991	.0015	9.944	.97925
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVB1 Acquired: 9/20/2014 11:01:38 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.0014	.0007	.0013	.0003	.0002	1.019	.9806
Stddev	.0005	.0004	.0001	.0001	.0001	.0002	.005	.0055
%RSD	30.72	26.12	8.745	7.578	16.44	75.58	.5445	.5617
#1	-.0024	.0019	.0007	.0011	.0003	.0004	1.017	.9787
#2	-.0015	.0013	.0006	.0014	.0004	.0000	1.020	.9880
#3	-.0011	.0010	.0007	.0013	.0003	.0002	1.012	.9749
#4	-.0019	.0015	.0007	.0012	.0003	.0002	1.026	.9808
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2589.2	40174.	4048.8
Stddev	6.1	81.	18.0
%RSD	.23680	.20183	.44519
#1	2588.0	40232.	4045.3
#2	2583.9	40057.	4035.7
#3	2598.0	40225.	4039.0
#4	2586.7	40183.	4075.1

Sample Name: CCVA1 Acquired: 9/20/2014 11:05:56 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2533	.2675	.2533	.2544	.2526	.25094	.2523	.2514
Stddev	.0014	.0032	.0007	.0034	.0012	.00073	.0021	.0009
%RSD	.5654	1.184	.2900	1.318	.4689	.28986	.8426	.3636
#1	.2541	.2662	.2543	.2494	.2534	.25142	.2540	.2519
#2	.2547	.2647	.2526	.2557	.2539	.24994	.2495	.2522
#3	.2531	.2670	.2535	.2562	.2515	.25088	.2538	.2514
#4	.2515	.2720	.2530	.2564	.2518	.25153	.2519	.2502
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538	.4982	.4897	.2516	.2515	.2517	.2515	.2513
Stddev	.0009	.0096	.0016	.0011	.0008	.0019	.0013	.0028
%RSD	.3545	1.922	.3210	.4243	.3179	.7358	.5258	1.124
#1	.2540	.4839	.4897	.2531	.2520	.2527	.2501	.2494
#2	.2549	.5019	.4917	.2518	.2519	.2528	.2511	.2510
#3	.2537	.5041	.4878	.2507	.2517	.2525	.2516	.2554
#4	.2527	.5029	.4894	.2510	.2503	.2490	.2532	.2494
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/20/2014 11:05:56 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2536	-.0016	.2647	.2466	.2549	.2499	.2449	.2495
Stddev	.0015	.0009	.0222	.0009	.0020	.0002	.0014	.0014
%RSD	.5829	59.81	8.398	.3741	.7832	.1000	.5618	.5791
#1	.2556	-.0002	.2873	.2471	.2575	.2500	.2444	.2503
#2	.2539	-.0020	.2365	.2475	.2528	.2498	.2467	.2507
#3	.2524	-.0024	.2584	.2455	.2541	.2496	.2451	.2495
#4	.2525	-.0018	.2766	.2461	.2552	.2502	.2435	.2474
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2523	-.0012	2.479	.2551	.1313	.2535	.2696	.00007
Stddev	.0012	.0043	.015	.0047	.0075	.0005	.0157	.00004
%RSD	.4951	372.1	.6137	1.848	5.740	.1813	5.828	63.955
#1	.2531	.0035	2.499	.2586	.1413	.2538	.2871	.00005
#2	.2534	-.0065	2.468	.2541	.1324	.2528	.2753	.00010
#3	.2521	-.0023	2.467	.2589	.1235	.2535	.2661	.00001
#4	.2506	.0008	2.482	.2488	.1281	.2538	.2498	.00011
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/20/2014 11:05:56 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2524	.2534	.2502	.2501	.2475	.2498	.0023	-.0223
Stddev	.0016	.0013	.0004	.0012	.0009	.0005	.0008	.0022
%RSD	.6343	.5259	.1473	.4984	.3454	.2179	34.25	9.757
#1	.2547	.2551	.2499	.2519	.2485	.2497	.0030	-.0200
#2	.2519	.2531	.2505	.2492	.2479	.2506	.0029	-.0250
#3	.2521	.2533	.2505	.2496	.2473	.2497	.0013	-.0211
#4	.2510	.2519	.2499	.2496	.2465	.2492	.0021	-.0229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2610.7	40756.	4067.2
Stddev	4.1	80.	11.7
%RSD	.15749	.19648	.28818
#1	2608.8	40725.	4056.0
#2	2609.3	40668.	4060.7
#3	2607.8	40857.	4082.6
#4	2616.8	40776.	4069.7

Sample Name: CCB Acquired: 9/20/2014 11:09:39 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0005	-.0004	.0017	.0000	-.00003	.0015	.0001
Stddev	.0001	.0000	.0001	.0038	.0003	.00003	.0006	.0000
%RSD	106.4	1.979	32.97	226.1	5622.	101.63	36.80	41.25
#1	.0001	.0005	-.0004	.0044	.0002	-.00005	.0011	.0001
#2	.0000	.0005	-.0003	-.0010	-.0002	-.00001	.0019	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0102	.0000	.0001	.0004	-.0001	.0004	.0007
Stddev	.000	.0050	.000	.0007	.0001	.0003	.0003	.0049
%RSD	386.1	49.22	272.5	608.7	21.71	605.4	89.78	725.3
#1	-.0002	-.0066	-.0001	-.0004	.0003	.0002	.0006	-.0028
#2	.0001	-.0137	.0000	.0006	.0005	-.0003	.0001	.0042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0015	.0260	-.0001	-.0014	.0000	.0000	.0005
Stddev	.0004	.0008	.0298	.0000	.0001	.000	.0005	.0002
%RSD	73.90	50.80	114.8	17.11	4.267	718.3	1367.	34.91
#1	-.0003	-.0021	.0049	-.0001	-.0014	.0001	.0004	.0007
#2	-.0009	-.0010	.0470	-.0001	-.0013	-.0001	-.0003	.0004
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 11:09:39 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0031	.0007	.0045	.0052	.0006	-.0016	.00004
Stddev	.0001	.0035	.0282	.0014	.0007	.0011	.0080	.00000
%RSD	267.2	112.6	4214.	32.21	14.20	203.1	498.3	12.032
#1	.0001	-.0056	-.0192	.0035	.0047	.0013	-.0072	.00004
#2	.0000	-.0006	.0206	.0055	.0058	-.0002	.0040	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0004	.0003	.0002	.0001	.0001	.0005	-.0259
Stddev	.0001	.0002	.0001	.0009	.0002	.0000	.0001	.0046
%RSD	29.00	53.32	18.67	453.5	138.3	55.48	15.71	17.71
#1	.0005	-.0006	.0004	.0008	.0000	.0001	.0005	-.0227
#2	.0003	-.0003	.0003	-.0004	.0002	.0001	.0006	-.0292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2607.2	40695.	4055.3
Stddev	1.7	101.	22.9
%RSD	.06532	.24913	.56443
#1	2608.4	40623.	4039.2
#2	2606.0	40767.	4071.5

Sample Name: ICSA Acquired: 9/20/2014 11:12:05 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.60	429.1	-.0043	-.0002	.0005	-.00046	.0277	.0005
Stddev	.08	3.1	.0004	.0050	.0000	.00004	.0007	.0001
%RSD	.3418	.7227	9.387	2642.	1.664	9.2599	2.492	16.97
#1	23.66	426.9	-.0046	.0033	.0005	-.00043	.0272	.0004
#2	23.54	431.3	-.0040	-.0037	.0005	-.00048	.0282	.0006
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	475.8	*****	.0044	-.0024	.0077	-.0015	185.8
Stddev	.0005	2.3	-----	.0002	.0002	.0004	.0007	1.1
%RSD	45.69	.4938	-----	3.616	6.636	5.415	43.18	.6169
#1	-.0007	474.2	-----	.0045	-.0025	.0080	-.0011	185.0
#2	-.0013	477.5	-----	.0043	-.0023	.0074	-.0020	186.6
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	.0038	516.5	*****	437.1	-.0012	.0147	-.0019
Stddev	.0014	.0003	2.9	-----	.2	.0000	.0006	.0000
%RSD	144.1	6.720	.5536	-----	.0507	1.536	4.297	.9611
#1	.0000	.0036	514.5	-----	437.0	-.0012	.0151	-.0019
#2	-.0019	.0040	518.5	180.1	437.3	-.0012	.0143	-.0019
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 9/20/2014 11:12:05 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP14-7-B

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0023	-.0092	-.0236	.0027	-.0009	.0497	.00326
Stddev	.0001	.0028	.0229	.0111	.0083	.0003	.0041	.00007
%RSD	2.810	120.9	250.0	46.96	307.1	33.09	8.170	2.1059
#1	.0034	.0043	-.0253	-.0315	-.0032	-.0012	.0468	.00321
#2	.0033	.0003	.0070	-.0158	.0085	-.0007	.0526	.00331
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0107	.0019	.0002	.0026	.0020	-.0005	.0159	-.0167
Stddev	.0014	.0007	.0003	.0004	.0005	.0002	.0012	.0072
%RSD	13.34	35.48	162.5	15.03	25.45	51.48	7.720	43.38
#1	-.0117	.0023	.0000	.0024	.0016	-.0003	.0150	-.0218
#2	-.0096	.0014	.0004	.0029	.0023	-.0007	.0168	-.0116
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2271.7	34556.	3834.3
Stddev	.3	221.	7.7
%RSD	.01531	.64081	.20072
#1	2271.4	34399.	3839.7
#2	2271.9	34712.	3828.8

Sample Name: ICSAB Acquired: 9/20/2014 11:14:45 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.72	430.7	.8717	-.0033	.5191	.47015	.0233	.9162
Stddev	.09	2.6	.0030	.0044	.0057	.00034	.0022	.0021
%RSD	.3694	.6017	.3423	132.9	1.106	.07134	9.635	.2243
#1	23.66	428.9	.8696	-.0064	.5150	.47039	.0217	.9148
#2	23.78	432.5	.8738	-.0002	.5232	.46991	.0249	.9177
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9144	475.2	*****	.5051	.4537	.4699	.4567	185.9
Stddev	.0037	4.9	-----	.0022	.0019	.0009	.0005	2.1
%RSD	.4007	1.034	-----	.4310	.4089	.1961	.1193	1.113
#1	.9118	471.7	-----	.5066	.4524	.4693	.4563	184.4
#2	.9169	478.7	-----	.5035	.4550	.4706	.4571	187.4
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8890	.0039	516.2	*****	439.5	.4833	.5402	-.0026
Stddev	.0058	.0004	5.1	-----	.3	.0027	.0018	.0000
%RSD	.6479	10.98	.9930	-----	.0661	.5615	.3250	1.531
#1	.8849	.0043	512.6	-----	439.7	.4852	.5390	-.0026
#2	.8930	.0036	519.9	180.9	439.3	.4814	.5415	-.0025
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: ICSAB Acquired: 9/20/2014 11:14:45 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8954	.0059	.0162	-.0252	.0017	.9100	.0299	.00323
Stddev	.0015	.0010	.0228	.0024	.0133	.0051	.0061	.00007
%RSD	.1703	16.75	140.6	9.654	807.7	.5553	20.25	2.0864
#1	.8943	.0052	.0324	-.0269	-.0078	.9065	.0256	.00327
#2	.8964	.0066	.0001	-.0235	.0111	.9136	.0342	.00318
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0115	.0014	-.0003	.5237	.8950	.8526	.0178	-.0264
Stddev	.0011	.0005	.0001	.0019	.0005	.0008	.0037	.0020
%RSD	9.293	33.60	32.88	.3646	.0565	.0884	20.93	7.437
#1	-.0107	.0011	-.0003	.5251	.8947	.8531	.0151	-.0250
#2	-.0122	.0018	-.0002	.5224	.8954	.8520	.0204	-.0278
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2255.3	34693.	3844.3
Stddev	4.7	154.	28.9
%RSD	.20870	.44249	.75307
#1	2258.6	34584.	3864.8
#2	2252.0	34801.	3823.8

Sample Name: KQ1411570-02 Acquired: 9/20/2014 11:28:04 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 K1409228-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0009	.0030	.0002	.00003	.0020	.0000	-.0002
#1	.0024	-.0013	.0034	.0000	.00010	.0012	.0000	-.0002
#2	.0021	-.0006	.0027	.0004	-.00004	.0027	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073	.0006	.0002	-.0005	.0002	.0011	.0000	-.0008
#1	.0072	.0010	.0001	-.0010	.0003	.0013	.0014	-.0003
#2	.0073	.0003	.0002	.0000	.0001	.0009	-.0014	-.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0001	.0004	.0002	.0085	.0521	.0038	-.0056
#1	.0008	.0001	.0008	.0002	.0101	.0397	.0028	-.0140
#2	.0009	.0000	.0000	.0001	.0068	.0644	.0048	.0028

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0140	.00001	.0001	.0147	.0002	.0003	.0030
#1	.0010	.0163	-.00003	-.0011	.0148	.0001	.0004	.0030
#2	.0001	.0118	.00006	.0014	.0145	.0002	.0003	.0029

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0031	-.0005	-.0284
#1	.0031	-.0011	-.0321
#2	.0031	.0002	-.0247

Sample Name: KQ1411570-02 Acquired: 9/20/2014 11:28:04 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 K1409228-MB

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2601.6	40800.	4066.4
#1	2598.8	40866.	4087.2
#2	2604.4	40734.	4045.7

Sample Name: KQ1411570-01 Acquired: 9/20/2014 11:30:30 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 LCSW, K1409228

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.20	.3226	.5248	1.565	.36511	.6653	.8772	.8793
#1	32.24	.3234	.5246	1.561	.36545	.6677	.8772	.8784
#2	32.17	.3218	.5251	1.569	.36478	.6629	.8772	.8803

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.92	.6918	.6386	.4923	.5186	50.83	.5624	.0342
#1	32.81	.6912	.6392	.4924	.5201	50.64	.5633	.0338
#2	33.04	.6924	.6379	.4921	.5171	51.03	.5614	.0346

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.22	1.546	.6643	.7518	2.494	13.27	.7131	2.519
#1	14.23	1.545	.6663	.7525	2.495	13.32	.7146	2.511
#2	14.22	1.547	.6622	.7511	2.493	13.22	.7117	2.528

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2039	14.64	.48068	.8562	.5226	1.169	.4850	.7525
#1	.2045	14.68	.47984	.8547	.5216	1.171	.4860	.7531
#2	.2033	14.61	.48152	.8577	.5236	1.167	.4839	.7519

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7647	.0024	1.212
#1	.7657	.0033	1.215
#2	.7636	.0015	1.209

Sample Name: KQ1411570-01 Acquired: 9/20/2014 11:30:30 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 LCSW, K1409228

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2641.8	41102.	4247.9
#1	2640.7	41078.	4261.5
#2	2642.8	41127.	4234.3

Sample Name: K1409228-001 Acquired: 9/20/2014 11:32:45 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.28	.0027	.0619	.8734	.00228	.0140	.0071	.0060
#1	73.15	.0001	.0609	.8704	.00242	.0133	.0071	.0061
#2	73.40	.0052	.0628	.8764	.00214	.0146	.0070	.0059

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.00	.0953	.0377	.0931	.0939	87.82	.3017	.0637
#1	14.97	.0958	.0376	.0929	.0945	87.54	.2993	.0654
#2	15.03	.0948	.0378	.0933	.0934	88.11	.3040	.0620

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.51	2.589	.0020	.0831	5.584	8.002	-.0008	3.464
#1	20.43	2.603	.0022	.0832	5.597	7.927	.0006	3.470
#2	20.58	2.575	.0018	.0830	5.571	8.078	-.0023	3.458

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.5168	.15392	-.0023	.0148	3.146	.1369	.5709
#1	.0002	.5235	.15345	-.0015	.0149	3.161	.1381	.5708
#2	-.0001	.5102	.15440	-.0031	.0147	3.132	.1356	.5710

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.5891	-.0007	1.119
#1	.5893	-.0013	1.121
#2	.5890	-.0001	1.117

Sample Name: K1409228-001 Acquired: 9/20/2014 11:32:45 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2673.7	41075.	4296.3
#1	2676.0	40834.	4297.0
#2	2671.5	41317.	4295.6

Sample Name: K1409228-001L Acquired: 9/20/2014 11:35:18 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 20 Test Type: Sample Type:
Comment: MMR 092014A 1/20

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.22	.0010	.0130	.1812	.00046	.0026	.0016	.0012
#1	15.19	.0005	.0099	.1812	.00048	.0037	.0016	.0013
#2	15.25	.0016	.0162	.1812	.00044	.0014	.0016	.0012

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.069	.0206	.0084	.0200	.0206	18.72	.0664	.0120
#1	3.128	.0205	.0083	.0200	.0206	18.81	.0666	.0128
#2	3.010	.0207	.0085	.0201	.0206	18.63	.0663	.0111

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.929	.5485	.0005	.0180	1.187	1.592	.0000	.6884
#1	3.946	.5476	.0004	.0180	1.189	1.589	-.0011	.6969
#2	3.912	.5495	.0005	.0179	1.185	1.595	.0011	.6799

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.1137	.03213	.0001	.0025	.6477	.0282	.1236
#1	-.0003	.1120	.03226	.0004	.0022	.6457	.0288	.1236
#2	.0000	.1154	.03200	-.0001	.0029	.6498	.0277	.1236

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1252	.0026	.2102
#1	.1251	.0024	.2144
#2	.1252	.0029	.2059

Sample Name: K1409228-001L Acquired: 9/20/2014 11:35:18 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 20 Test Type: Sample Type:
Comment: MMR 092014A 1/20

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2639.4**	**40836.**	**4138.3**
#1	2639.7	40811.	4112.0
#2	2639.1	40861.	4164.7

Sample Name: K1409228-001D Acquired: 9/20/2014 11:37:44 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	82.44	.0009	.0666	1.036	.00260	.0116	.0085	.0071
#1	81.38	.0034	.0637	1.034	.00262	.0104	.0085	.0071
#2	83.50	-.0016	.0695	1.038	.00258	.0128	.0085	.0071

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.47	.1075	.0442	.1086	.1123	99.22	.3608	.0715
#1	17.39	.1070	.0441	.1089	.1119	98.91	.3619	.0718
#2	17.56	.1080	.0444	.1084	.1126	99.53	.3597	.0713

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.40	3.035	.0022	.0967	6.612	9.164	-.0048	3.534
#1	23.31	3.042	.0022	.0969	6.609	9.170	-.0046	3.529
#2	23.48	3.028	.0023	.0964	6.614	9.158	-.0050	3.540

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.5410	.17870	-.0026	.0155	3.426	.1496	.6717
#1	.0010	.5453	.17776	-.0019	.0150	3.433	.1494	.6695
#2	.0006	.5366	.17964	-.0033	.0160	3.419	.1499	.6739

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6920	.0000	1.360
#1	.6920	.0012	1.354
#2	.6921	-.0012	1.366

Sample Name: K1409228-001D Acquired: 9/20/2014 11:37:44 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2678.7	41542.	4265.0
#1	2682.0	41501.	4261.4
#2	2675.5	41583.	4268.6

Sample Name: K1409228-001S Acquired: 9/20/2014 11:40:16 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.56	.0856	.3032	1.332	.02645	.2280	.0301	.0289
#1	69.94	.0826	.3042	1.318	.02641	.2255	.0301	.0292
#2	69.18	.0886	.3023	1.345	.02648	.2305	.0302	.0287

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.63	.1879	.2728	.2040	.2135	81.22	.5195	.0589
#1	16.38	.1888	.2723	.2034	.2143	80.36	.5191	.0587
#2	16.87	.1871	.2732	.2046	.2126	82.08	.5200	.0591

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.64	2.680	.2422	.3121	5.308	9.941	.2113	3.582
#1	21.51	2.690	.2423	.3114	5.301	9.875	.2111	3.539
#2	21.76	2.670	.2421	.3129	5.316	10.01	.2115	3.626

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236	3.046	.14780	.2230	.0140	2.997	.3702	.7722
#1	.0231	3.035	.14649	.2233	.0134	3.009	.3717	.7717
#2	.0241	3.057	.14912	.2226	.0145	2.985	.3687	.7727

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7867	.0038	1.068
#1	.7851	.0034	1.064
#2	.7882	.0041	1.071

Sample Name: K1409228-001S Acquired: 9/20/2014 11:40:16 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2655.7	41086.	4248.6
#1	2655.3	40997.	4262.0
#2	2656.1	41174.	4235.2

Sample Name: K1409228-001SD Acquired: 9/20/2014 11:42:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	76.43	.0851	.3050	1.377	.02679	.2289	.0306	.0295
#1	76.25	.0850	.3042	1.371	.02669	.2305	.0307	.0296
#2	76.62	.0852	.3059	1.382	.02690	.2273	.0304	.0294

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.51	.1934	.2765	.2101	.2200	86.05	.5344	.0636
#1	17.40	.1931	.2765	.2101	.2214	85.61	.5328	.0642
#2	17.63	.1937	.2765	.2100	.2186	86.49	.5360	.0631

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.78	2.813	.2453	.3185	5.545	10.39	.2194	3.274
#1	22.72	2.823	.2450	.3178	5.544	10.39	.2237	3.274
#2	22.84	2.802	.2456	.3192	5.547	10.39	.2150	3.274

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0245	3.117	.15596	.2251	.0142	3.113	.3827	.8030
#1	.0245	3.118	.15537	.2236	.0144	3.126	.3840	.8033
#2	.0244	3.115	.15654	.2265	.0139	3.099	.3813	.8027

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.8188	.0000	1.109
#1	.8188	-.0011	1.111
#2	.8189	.0010	1.106

Sample Name: K1409228-001SD Acquired: 9/20/2014 11:42:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2655.1	41032.	4240.7
#1	2654.8	40874.	4252.5
#2	2655.3	41190.	4228.9

Sample Name: K1409228-001A Acquired: 9/20/2014 11:45:07 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 A=0.05/10 CICV-1,3 + 1000ppm Sb

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	76.79	4.624	2.463	5.697	.12073	.0084	1.144	1.142
#1	77.54	4.622	2.458	5.692	.12090	.0087	1.143	1.139
#2	76.04	4.625	2.468	5.701	.12055	.0081	1.146	1.145

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.54	.5771	1.193	.6606	.6983	89.96	2.534	.0610
#1	26.16	.5783	1.193	.6599	.6980	89.10	2.536	.0608
#2	26.91	.5760	1.194	.6613	.6985	90.81	2.532	.0611

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.30	3.700	.0022	1.219	5.599	20.22	2.172	3.413
#1	32.12	3.709	.0021	1.217	5.598	20.11	2.158	3.389
#2	32.47	3.691	.0023	1.220	5.600	20.32	2.185	3.438

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5885	13.03	.15443	2.186	.0148	3.101	1.352	1.697
#1	.5895	12.96	.15313	2.183	.0159	3.105	1.357	1.697
#2	.5874	13.10	.15573	2.189	.0138	3.096	1.347	1.696

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.721	.0092	1.112
#1	1.721	.0084	1.108
#2	1.722	.0099	1.116

Sample Name: K1409228-001A Acquired: 9/20/2014 11:45:07 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4 A=0.05/10 CICV-1,3 + 1000ppm Sb

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2633.4	40629.	4193.1
#1	2632.5	40575.	4211.7
#2	2634.3	40682.	4174.5

Sample Name: K1409228-002 Acquired: 9/20/2014 11:47:33 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	102.5	.0023	.0595	.8923	.00327	.0100	.0032	.0017
#1	102.9	.0018	.0560	.8854	.00329	.0104	.0032	.0018
#2	102.1	.0028	.0630	.8991	.00326	.0095	.0031	.0017

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.47	.1045	.0419	.1266	.1336	97.13	.1450	.0769
#1	13.41	.1053	.0420	.1273	.1342	96.39	.1453	.0764
#2	13.53	.1037	.0418	.1259	.1331	97.87	.1447	.0773

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.39	2.447	.0025	.1091	6.230	9.365	-.0039	6.590
#1	23.27	2.452	.0023	.1086	6.230	9.305	-.0067	6.519
#2	23.51	2.442	.0027	.1095	6.229	9.425	-.0012	6.661

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.6344	.15873	-.0009	.0154	4.411	.1692	.3667
#1	.0006	.6213	.15772	-.0010	.0158	4.424	.1701	.3664
#2	.0011	.6476	.15973	-.0007	.0150	4.397	.1683	.3669

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3845	-.0012	.8336
#1	.3848	-.0035	.8358
#2	.3842	.0011	.8314

Sample Name: K1409228-002 Acquired: 9/20/2014 11:47:33 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2712.9	41879.	4329.0
#1	2714.4	41886.	4337.3
#2	2711.5	41872.	4320.7

Sample Name: K1409228-003 Acquired: 9/20/2014 11:50:04 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	74.45	.0144	.0869	.8286	.00247	.0220	.0241	.0232
#1	74.66	.0129	.0864	.8197	.00247	.0208	.0242	.0233
#2	74.24	.0160	.0874	.8374	.00248	.0233	.0240	.0232

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.95	.0906	.0320	.1212	.1254	78.47	.9158	.0599
#1	21.77	.0910	.0318	.1219	.1256	77.69	.9172	.0600
#2	22.14	.0902	.0322	.1206	.1253	79.24	.9144	.0597

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.35	2.451	.0038	.1036	13.22	10.18	-.0031	5.149
#1	19.24	2.464	.0037	.1036	13.24	10.08	-.0088	5.092
#2	19.47	2.438	.0038	.1037	13.21	10.27	.0025	5.206

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.5970	.18730	.0010	.0168	3.328	.1341	1.616
#1	.0012	.5882	.18522	-.0005	.0170	3.345	.1356	1.617
#2	.0008	.6058	.18939	.0026	.0166	3.311	.1325	1.615

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.661	.0040	2.705
#1	1.660	.0043	2.709
#2	1.663	.0036	2.702

Sample Name: K1409228-003 Acquired: 9/20/2014 11:50:04 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2652.9	41241.	4237.9
#1	2646.3	41114.	4254.8
#2	2659.4	41368.	4221.1

Sample Name: CCVB Acquired: 9/20/2014 11:52:38 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.516	10.34	.0019	1.015	10.01	.00005	.0018	.0001
Stddev	.001	.05	.0043	.001	.03	.00007	.0013	.0001
%RSD	.0072	.4987	227.6	.1158	.2843	154.05	72.07	66.76
#1	7.517	10.38	-.0011	1.016	10.03	.00009	.0028	.0002
#2	7.516	10.30	.0049	1.014	9.985	.00000	.0009	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.893	9.354	.0006	.0004	.0003	.0007	9.964
Stddev	.0002	.025	.033	.0001	.0002	.0002	.0007	.029
%RSD	146.9	.2474	.3514	14.56	40.65	55.84	100.8	.2918
#1	-.0003	9.876	9.331	.0005	.0003	.0002	.0002	9.943
#2	.0000	9.911	9.377	.0006	.0005	.0004	.0011	9.984
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.9966	9.909	9.380	10.06	.9856	.9921	.0003
Stddev	.0012	.0031	.027	.022	.04	.0019	.0000	.0000
%RSD	498.7	.3130	.2738	.2317	.3543	.1969	.0032	9.168
#1	-.0011	.9989	9.890	9.364	10.08	.9842	.9921	.0003
#2	.0006	.9944	9.929	9.395	10.03	.9870	.9922	.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/20/2014 11:52:38 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	10.05	9.947	.0005	9.984	.0004	9.931	.97928
Stddev	.0002	.01	.001	.0018	.057	.0003	.024	.00186
%RSD	42.04	.0508	.0123	376.9	.5660	83.18	.2383	.19016
#1	-.0006	10.04	9.947	.0018	10.02	.0006	9.948	.98060
#2	-.0003	10.05	9.948	-.0008	9.944	.0001	9.914	.97797
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0017	.0011	.0014	.0001	.0004	1.029	.9793
Stddev	.0020	.0006	.0002	.0006	.0005	.0000	.004	.0081
%RSD	555.3	33.16	16.74	40.43	357.5	5.717	.4123	.8289
#1	.0018	.0013	.0009	.0010	.0005	.0004	1.026	.9850
#2	-.0011	.0021	.0012	.0018	-.0002	.0004	1.032	.9735
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2595.8	40053.	4066.7
Stddev	4.7	94.	14.0
%RSD	.18258	.23386	.34339
#1	2599.1	40119.	4076.5
#2	2592.4	39986.	4056.8

Sample Name: CCVA Acquired: 9/20/2014 11:55:14 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2574	.2730	.2514	.2579	.2509	.25149	.2549	.2526
Stddev	.0030	.0019	.0004	.0007	.0024	.00051	.0007	.0020
%RSD	1.184	.6892	.1722	.2540	.9520	.20437	.2676	.7761
#1	.2595	.2743	.2511	.2584	.2526	.25185	.2545	.2540
#2	.2552	.2716	.2517	.2575	.2492	.25113	.2554	.2512
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.4877	.4896	.2524	.2521	.2525	.2516	.2515
Stddev	.0010	.0126	.0031	.0026	.0016	.0019	.0008	.0000
%RSD	.3870	2.577	.6276	1.017	.6175	.7379	.3143	.0011
#1	.2549	.4966	.4918	.2506	.2532	.2538	.2510	.2515
#2	.2535	.4788	.4874	.2542	.2510	.2512	.2522	.2515
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2564	-.0024	.2650	.2476	.2562	.2506	.2452	.2497
Stddev	.0026	.0012	.0329	.0027	.0009	.0013	.0006	.0032
%RSD	1.017	51.47	12.40	1.091	.3588	.5092	.2513	1.284
#1	.2583	-.0015	.2418	.2495	.2556	.2497	.2448	.2520
#2	.2546	-.0033	.2883	.2457	.2569	.2515	.2457	.2474
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/20/2014 11:55:14 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2523	.0037	2.448	.2515	.1289	.2533	.2677	.00015
Stddev	.0011	.0029	.000	.0008	.0034	.0012	.0010	.00006
%RSD	.4417	78.36	.0028	.3191	2.674	.4582	.3814	43.674
#1	.2531	.0017	2.448	.2521	.1314	.2525	.2684	.00019
#2	.2515	.0058	2.448	.2510	.1265	.2541	.2669	.00010
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2545	.2539	.2503	.2510	.2489	.2507	.0024	-.0329
Stddev	.0040	.0019	.0005	.0016	.0021	.0010	.0008	.0001
%RSD	1.566	.7497	.2009	.6527	.8367	.3877	35.81	.2565
#1	.2573	.2553	.2500	.2498	.2504	.2514	.0030	-.0328
#2	.2517	.2526	.2507	.2521	.2474	.2500	.0018	-.0329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2605.1	40633.	4061.2
Stddev	11.8	146.	42.5
%RSD	.45437	.35949	1.0458
#1	2596.7	40737.	4031.2
#2	2613.5	40530.	4091.2

Sample Name: CCB Acquired: 9/20/2014 11:57:29 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0031	.0003	.0014	.0000	.00008	.0012	.0000
Stddev	.0001	.0009	.0009	.0016	.000	.00017	.0011	.0000
%RSD	9.404	29.25	245.3	111.7	15470.	218.74	88.33	236.7
#1	.0015	.0025	.0010	.0025	.0002	-.00004	.0004	.0001
#2	.0017	.0037	-.0003	.0003	-.0002	.00020	.0019	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0023	.0010	.0006	.0002	.0002	.0008	.0014
Stddev	.000	.0009	.0001	.0002	.0005	.0002	.0001	.0020
%RSD	2021.	40.89	5.487	28.19	266.4	116.4	8.397	141.2
#1	.0001	-.0016	.0010	.0007	-.0002	.0000	.0008	.0000
#2	-.0001	-.0030	.0010	.0005	.0005	.0004	.0007	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0024	.0254	.0009	.0008	.0000	.0001	.0004
Stddev	.0001	.0006	.0333	.0001	.0008	.0000	.0003	.0001
%RSD	5.657	24.99	131.1	5.901	105.1	81.01	619.0	32.93
#1	.0012	-.0019	.0490	.0009	.0002	.0000	-.0002	.0004
#2	.0013	-.0028	.0018	.0009	.0014	.0001	.0003	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 11:57:29 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0005	.0029	.0024	-.0030	.0000	.0121	.00004
Stddev	.0001	.0014	.0273	.0009	.0079	.0001	.0066	.00001
%RSD	29.63	279.6	951.6	36.58	264.8	242.0	54.77	27.365
#1	-.0002	-.0015	-.0164	.0030	.0026	.0001	.0168	.00005
#2	-.0002	.0005	.0222	.0018	-.0085	.0000	.0074	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0001	.0002	.0007	.0000	.0000	.0019	-.0298
Stddev	.0014	.0006	.0001	.0002	.0003	.0001	.0012	.0015
%RSD	2259.	448.9	31.92	35.26	932.8	962.4	61.73	5.079
#1	-.0010	.0003	.0002	.0008	-.0002	.0001	.0028	-.0309
#2	.0009	-.0006	.0001	.0005	.0003	-.0001	.0011	-.0288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2601.4	40435.	4072.4
Stddev	10.3	26.	23.5
%RSD	.39761	.06468	.57603
#1	2594.1	40453.	4089.0
#2	2608.7	40416.	4055.8

Sample Name: K1409228-004 Acquired: 9/20/2014 11:59:58 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	109.4	.0008	.0641	1.038	.00338	.0156	.0087	.0076
#1	109.9	-.0003	.0648	1.034	.00342	.0159	.0088	.0077
#2	109.0	.0019	.0634	1.042	.00335	.0152	.0087	.0075

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.68	.1114	.0417	.1281	.1297	100.7	.3689	.0741
#1	22.66	.1119	.0418	.1274	.1297	100.3	.3686	.0729
#2	22.71	.1109	.0417	.1287	.1298	101.2	.3693	.0753

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.75	3.084	.0026	.2492	9.322	8.418	-.0099	6.936
#1	23.63	3.091	.0025	.2485	9.290	8.375	-.0117	6.905
#2	23.86	3.077	.0028	.2499	9.353	8.461	-.0080	6.968

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.6912	.20805	-.0042	.0160	4.554	.1735	.6350
#1	.0012	.6936	.20739	-.0025	.0151	4.568	.1743	.6342
#2	.0009	.6889	.20870	-.0060	.0168	4.540	.1726	.6358

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6574	.0007	1.723
#1	.6576	.0006	1.726
#2	.6572	.0008	1.721

Sample Name: K1409228-004 Acquired: 9/20/2014 11:59:58 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2666.1	41119.	4314.1
#1	2673.6	41078.	4311.5
#2	2658.7	41159.	4316.8

Sample Name: K1409228-005 Acquired: 9/20/2014 12:02:29 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	74.20	.0074	.0849	.7915	.00256	.0236	.0222	.0211
#1	74.63	.0080	.0839	.7805	.00265	.0228	.0222	.0212
#2	73.76	.0067	.0858	.8025	.00247	.0244	.0221	.0210

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.69	.1039	.0352	.1232	.1258	88.37	.7687	.0648
#1	23.42	.1046	.0350	.1231	.1256	87.30	.7681	.0645
#2	23.96	.1032	.0354	.1232	.1261	89.45	.7692	.0651

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.19	2.391	.0036	.1302	14.06	11.88	-.0009	4.154
#1	22.12	2.406	.0035	.1297	14.05	11.86	-.0003	4.170
#2	22.26	2.377	.0038	.1306	14.06	11.89	-.0016	4.138

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.5718	.19653	-.0011	.0175	3.330	.1511	1.540
#1	.0009	.5621	.19407	-.0018	.0176	3.348	.1523	1.540
#2	.0018	.5816	.19898	-.0005	.0174	3.312	.1500	1.540

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.589	.0041	2.725
#1	1.590	.0051	2.728
#2	1.589	.0030	2.722

Sample Name: K1409228-005 Acquired: 9/20/2014 12:02:29 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2657.2	41412.	4285.6
#1	2660.7	41221.	4326.0
#2	2653.7	41603.	4245.2

Sample Name: K1409228-006 Acquired: 9/20/2014 12:04:59 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	137.6	.0108	.1003	1.396	.00385	.0179	.0255	.0243
#1	137.9	.0054	.1024	1.391	.00377	.0154	.0254	.0246
#2	137.2	.0162	.0983	1.401	.00393	.0203	.0255	.0240

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.56	.0786	.0347	.2722	.2941	88.44	1.061	.0744
#1	23.43	.0786	.0345	.2722	.2925	88.01	1.061	.0752
#2	23.70	.0786	.0349	.2721	.2956	88.86	1.061	.0737

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.32	3.988	.0025	.0713	9.772	6.968	-.0021	5.123
#1	19.24	4.013	.0028	.0713	9.778	6.963	-.0027	5.090
#2	19.39	3.962	.0021	.0713	9.766	6.973	-.0016	5.157

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.7125	.20631	-.0014	.0189	5.509	.1486	1.244
#1	.0030	.7155	.20575	-.0018	.0193	5.521	.1481	1.247
#2	.0024	.7096	.20687	-.0010	.0185	5.497	.1490	1.240

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.306	.0045	1.549
#1	1.308	.0040	1.553
#2	1.305	.0050	1.545

Sample Name: K1409228-006 Acquired: 9/20/2014 12:04:59 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2700.0	41882.	4357.0
#1	2697.4	41619.	4360.9
#2	2702.7	42144.	4353.1

Sample Name: K1409228-007 Acquired: 9/20/2014 12:07:34 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	129.8	.0038	.0439	1.007	.00388	.0099	.0033	.0017
#1	131.2	.0037	.0456	.9973	.00393	.0091	.0034	.0018
#2	128.4	.0038	.0422	1.017	.00383	.0108	.0032	.0016

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.51	.1088	.0337	.1227	.1294	89.72	.1171	.0739
#1	18.35	.1090	.0336	.1228	.1301	88.76	.1179	.0739
#2	18.67	.1086	.0338	.1226	.1288	90.67	.1162	.0738

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.62	2.592	.0027	.0699	8.794	7.587	-.0058	5.162
#1	20.62	2.603	.0031	.0699	8.789	7.631	-.0088	5.185
#2	20.63	2.582	.0023	.0699	8.798	7.544	-.0028	5.140

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.8022	.16376	-.0036	.0161	5.381	.1583	.3743
#1	.0018	.8083	.16200	-.0052	.0156	5.370	.1593	.3746
#2	.0016	.7961	.16551	-.0019	.0166	5.392	.1574	.3741

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3973	-.0002	.9193
#1	.3967	-.0003	.9183
#2	.3980	-.0002	.9204

Sample Name: K1409228-007 Acquired: 9/20/2014 12:07:34 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2731.0	41979.	4370.7
#1	2725.1	41900.	4415.3
#2	2736.9	42058.	4326.1

Sample Name: K1409228-008 Acquired: 9/20/2014 12:10:13 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	108.6	.0484	.4355	1.257	.00304	.0198	.1350	.1346
#1	107.4	.0501	.4370	1.244	.00316	.0181	.1351	.1350
#2	109.9	.0467	.4340	1.269	.00293	.0215	.1348	.1343

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.78	.0675	.0307	.6897	.7545	77.32	5.193	.0659
#1	20.43	.0676	.0306	.6900	.7567	76.35	5.193	.0659
#2	21.13	.0674	.0309	.6895	.7523	78.28	5.193	.0659

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.72	3.689	.0045	.0620	10.55	8.502	-.0026	6.453
#1	16.74	3.707	.0047	.0625	10.57	8.521	.0006	6.464
#2	16.70	3.670	.0044	.0616	10.53	8.483	-.0058	6.443

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.6594	.16383	-.0005	.0276	4.469	.1245	4.893
#1	.0036	.6650	.16213	-.0003	.0271	4.491	.1253	4.899
#2	.0038	.6537	.16553	-.0007	.0281	4.447	.1238	4.886

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	5.032	.0192	2.052
#1	5.032	.0184	2.048
#2	5.032	.0200	2.057

Sample Name: K1409228-008 Acquired: 9/20/2014 12:10:13 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2671.4	41482.	4274.8
#1	2666.6	41356.	4327.3
#2	2676.1	41609.	4222.2

Sample Name: K1409228-009 Acquired: 9/20/2014 12:12:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	141.9	.0069	.0707	1.397	.00377	.0136	.0091	.0076
#1	143.0	.0088	.0726	1.393	.00388	.0142	.0091	.0078
#2	140.7	.0051	.0688	1.401	.00366	.0129	.0091	.0074

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.55	.0849	.0347	.1693	.1814	88.81	.3248	.0735
#1	29.38	.0848	.0348	.1690	.1814	88.49	.3203	.0735
#2	29.72	.0849	.0346	.1696	.1814	89.12	.3294	.0736

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.23	3.932	.0027	.0697	12.71	7.276	-.0058	5.530
#1	19.25	3.935	.0030	.0696	12.68	7.301	-.0039	5.527
#2	19.20	3.930	.0024	.0698	12.73	7.251	-.0078	5.533

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.7880	.23696	-.0029	.0150	5.432	.1450	.6585
#1	.0014	.7921	.23654	-.0025	.0153	5.433	.1459	.6559
#2	.0024	.7839	.23738	-.0032	.0147	5.431	.1441	.6612

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.6901	.0036	1.646
#1	.6901	.0033	1.649
#2	.6901	.0039	1.644

Sample Name: K1409228-009 Acquired: 9/20/2014 12:12:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2699.9**	**41986.**	**4310.7**
#1	2706.0	41997.	4328.9
#2	2693.9	41974.	4292.5

Sample Name: K1409228-010 Acquired: 9/20/2014 12:15:19 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	120.8	.0036	.0414	.9588	.00366	.0106	.0035	.0020
#1	120.9	.0008	.0410	.9541	.00354	.0105	.0035	.0020
#2	120.7	.0064	.0418	.9634	.00378	.0107	.0036	.0020

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.93	.1047	.0319	.1166	.1242	85.59	.1280	.0694
#1	17.92	.1040	.0322	.1165	.1244	85.22	.1291	.0693
#2	17.95	.1054	.0317	.1166	.1240	85.97	.1270	.0696

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.38	2.461	.0026	.0660	8.406	7.133	-.0047	6.129
#1	19.28	2.462	.0025	.0659	8.419	7.061	-.0027	6.089
#2	19.47	2.461	.0028	.0661	8.394	7.206	-.0066	6.169

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.7457	.16067	-.0015	.0155	5.008	.1491	.3702
#1	.0012	.7482	.16015	-.0020	.0156	4.976	.1499	.3706
#2	.0013	.7433	.16119	-.0009	.0154	5.039	.1484	.3699

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.3899	.0013	.8959
#1	.3894	.0024	.8941
#2	.3903	.0001	.8978

Sample Name: K1409228-010 Acquired: 9/20/2014 12:15:19 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2720.1	42230.	4334.5
#1	2713.6	42246.	4328.4
#2	2726.7	42214.	4340.5

Sample Name: K1409228-011 Acquired: 9/20/2014 12:17:58 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	112.7	.0172	.1599	1.104	.00308	.0137	.0465	.0456
#1	112.6	.0186	.1590	1.104	.00314	.0117	.0466	.0456
#2	112.8	.0158	.1608	1.104	.00303	.0157	.0465	.0455

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.89	.0765	.0329	.3322	.3580	82.03	2.368	.0667
#1	24.91	.0769	.0330	.3324	.3565	82.08	2.369	.0650
#2	24.86	.0760	.0327	.3319	.3594	81.99	2.368	.0684

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.18	3.038	.0030	.0653	8.395	6.240	-.0069	4.678
#1	18.21	3.044	.0027	.0657	8.394	6.258	-.0038	4.704
#2	18.15	3.032	.0032	.0650	8.396	6.222	-.0100	4.653

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	.6274	.21138	-.0023	.0239	4.834	.1404	1.739
#1	.0041	.6327	.21162	-.0042	.0247	4.840	.1412	1.741
#2	.0035	.6222	.21114	-.0004	.0231	4.829	.1396	1.738

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.795	.0087	1.538
#1	1.794	.0084	1.539
#2	1.795	.0090	1.536

Sample Name: K1409228-011 Acquired: 9/20/2014 12:17:58 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2670.5	41641.	4237.2
#1	2669.4	41584.	4240.2
#2	2671.5	41698.	4234.1

Sample Name: K1409228-012 Acquired: 9/20/2014 12:20:28 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	80.79	.0211	.1947	1.084	.00387	.0109	.0445	.0433
#1	80.55	.0230	.1942	1.077	.00395	.0105	.0445	.0434
#2	81.03	.0193	.1953	1.090	.00378	.0112	.0446	.0431

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.22	.2061	.0539	.2036	.2100	121.4	1.910	.0698
#1	23.16	.2070	.0533	.2036	.2107	120.9	1.911	.0689
#2	23.28	.2052	.0545	.2036	.2094	122.0	1.908	.0707

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.09	3.771	.0032	.1387	9.188	9.032	.0005	3.207
#1	35.81	3.787	.0031	.1383	9.184	8.944	.0003	3.204
#2	36.36	3.756	.0033	.1390	9.192	9.120	.0008	3.210

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.5276	.19848	-.0020	.0190	4.249	.2617	1.571
#1	.0003	.5225	.19768	-.0027	.0188	4.263	.2624	1.575
#2	.0004	.5328	.19927	-.0013	.0193	4.235	.2609	1.568

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.619	.0047	1.444
#1	1.622	.0030	1.449
#2	1.617	.0064	1.439

Sample Name: K1409228-012 Acquired: 9/20/2014 12:20:28 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2651.0	41386.	4251.5
#1	2652.8	41282.	4241.0
#2	2649.3	41489.	4262.0

Sample Name: K1409228-013 Acquired: 9/20/2014 12:22:56 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	55.01	-.0016	.0853	.6059	.00263	.0141	.0034	.0016
#1	55.71	-.0019	.0835	.6026	.00266	.0139	.0034	.0015
#2	54.31	-.0012	.0871	.6091	.00259	.0143	.0033	.0018

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.68	.2335	.0661	.1962	.2008	148.0	.1527	.0599
#1	34.49	.2321	.0660	.1968	.2009	147.4	.1522	.0581
#2	34.87	.2348	.0661	.1956	.2007	148.6	.1531	.0617

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.10	1.989	.0068	.1785	9.853	10.45	-.0031	3.300
#1	38.91	1.991	.0070	.1783	9.821	10.37	-.0043	3.310
#2	39.29	1.988	.0067	.1788	9.884	10.53	-.0019	3.291

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	1.193	.24167	-.0022	.0160	3.860	.3504	.8541
#1	-.0009	1.186	.24072	-.0049	.0157	3.860	.3503	.8540
#2	-.0005	1.199	.24263	.0005	.0163	3.861	.3504	.8542

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.8844	-.0034	.5896
#1	.8838	-.0038	.5844
#2	.8850	-.0031	.5948

Sample Name: K1409228-013 Acquired: 9/20/2014 12:22:56 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2652.5	41429.	4236.8
#1	2651.9	41403.	4234.5
#2	2653.1	41455.	4239.1

Sample Name: CCVB Acquired: 9/20/2014 12:25:25 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.541	10.19	.0005	1.003	10.06	.00012	.0014	.0001
Stddev	.016	.03	.0005	.007	.27	.00015	.0009	.0000
%RSD	.2087	.2500	88.88	.6838	2.724	124.46	63.94	.7616
#1	7.552	10.17	.0008	.9984	9.867	.00022	.0020	.0001
#2	7.529	10.21	.0002	1.008	10.25	.00001	.0007	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.07	9.544	.0008	.0002	.0006	.0006	10.06
Stddev	.0001	.05	.059	.0004	.0005	.0003	.0001	.07
%RSD	35.30	.4715	.6227	53.38	213.7	57.03	22.22	.6757
#1	-.0002	10.03	9.502	.0005	.0006	.0008	.0007	10.02
#2	-.0003	10.10	9.586	.0011	-.0001	.0004	.0005	10.11
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	1.002	9.915	9.444	10.10	.9804	.9903	.0000
Stddev	.0006	.001	.058	.059	.00	.0009	.0064	.000
%RSD	79.08	.0562	.5860	.6260	.0378	.0936	.6482	941.1
#1	-.0003	1.002	9.874	9.402	10.10	.9811	.9949	.0000
#2	-.0012	1.002	9.957	9.486	10.09	.9798	.9858	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/20/2014 12:25:25 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.08	9.916	-.0012	10.01	.0002	9.937	.98561
Stddev	.0003	.01	.037	.0009	.01	.0002	.013	.00775
%RSD	131.0	.0688	.3689	72.21	.0959	94.92	.1258	.78599
#1	-.0005	10.09	9.941	-.0018	10.000	.0001	9.946	.98013
#2	.0000	10.08	9.890	-.0006	10.01	.0004	9.928	.99109
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.0012	.0014	.0008	.0006	.0004	1.029	.9753
Stddev	.0001	.0004	.0000	.0005	.0000	.0000	.002	.0026
%RSD	3.347	30.45	.2418	61.37	3.099	6.085	.1570	.2626
#1	-.0017	.0015	.0014	.0012	.0006	.0004	1.028	.9735
#2	-.0017	.0010	.0014	.0005	.0006	.0003	1.030	.9771
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2588.1	40065.	4036.3
Stddev	3.2	43.	31.9
%RSD	.12463	.10787	.79012
#1	2585.8	40034.	4058.8
#2	2590.3	40095.	4013.7

Sample Name: CCVA Acquired: 9/20/2014 12:28:02 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2579	.2727	.2547	.2556	.2509	.25212	.2593	.2521
Stddev	.0026	.0031	.0001	.0013	.0010	.00022	.0002	.0010
%RSD	.9891	1.150	.0281	.5088	.4052	.08640	.0920	.4120
#1	.2597	.2705	.2547	.2565	.2516	.25196	.2594	.2529
#2	.2561	.2750	.2546	.2547	.2502	.25227	.2591	.2514
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2565	.5058	.4867	.2520	.2526	.2518	.2520	.2558
Stddev	.0014	.0024	.0009	.0004	.0017	.0019	.0015	.0010
%RSD	.5272	.4800	.1876	.1555	.6730	.7443	.5931	.3929
#1	.2574	.5041	.4874	.2517	.2538	.2531	.2530	.2565
#2	.2555	.5075	.4861	.2522	.2514	.2505	.2509	.2551
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2575	-.0025	.2668	.2469	.2560	.2488	.2440	.2482
Stddev	.0024	.0013	.0147	.0005	.0013	.0016	.0047	.0017
%RSD	.9215	51.73	5.516	.2197	.5140	.6474	1.946	.7033
#1	.2592	-.0034	.2564	.2465	.2569	.2476	.2407	.2494
#2	.2558	-.0016	.2772	.2473	.2550	.2499	.2474	.2469
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/20/2014 12:28:02 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538	.0002	2.496	.2604	.1289	.2566	.2771	.00009
Stddev	.0005	.0044	.013	.0006	.0079	.0001	.0081	.00001
%RSD	.1799	2732.	.5257	.2216	6.099	.0406	2.915	10.421
#1	.2542	.0033	2.487	.2608	.1344	.2567	.2828	.00009
#2	.2535	-.0030	2.506	.2600	.1233	.2565	.2714	.00010
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2545	.2535	.2502	.2511	.2470	.2509	.0013	-.0322
Stddev	.0017	.0034	.0019	.0007	.0007	.0002	.0018	.0056
%RSD	.6646	1.324	.7533	.2655	.2962	.0769	138.9	17.38
#1	.2533	.2559	.2489	.2507	.2476	.2510	.0026	-.0362
#2	.2557	.2511	.2515	.2516	.2465	.2507	.0000	-.0283
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2613.9	40962.	4079.7
Stddev	9.4	302.	10.3
%RSD	.36076	.73651	.25309
#1	2607.3	41176.	4072.4
#2	2620.6	40749.	4087.0

Sample Name: CCB Acquired: 9/20/2014 12:30:16 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0034	.0004	.0033	.0002	-.00005	.0017	.0001
Stddev	.0004	.0022	.0045	.0007	.0000	.00005	.0012	.0001
%RSD	11.52	66.42	1191.	20.27	17.02	102.28	67.39	54.60
#1	.0032	.0049	.0036	.0038	.0002	-.00001	.0025	.0001
#2	.0037	.0018	-.0028	.0028	.0001	-.00009	.0009	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0094	.0013	.0004	.0000	.0002	-.0003	.0000
Stddev	.000	.0093	.0001	.0000	.0001	.0003	.0004	.003
%RSD	93.11	98.28	8.302	11.02	615.4	181.5	128.3	29350.
#1	-.0001	-.0029	.0012	.0004	-.0001	.0004	-.0007	-.0022
#2	.0000	-.0160	.0014	.0005	.0001	-.0001	.0000	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0022	.0011	.0012	.0022	.0000	.0019	.0005
Stddev	.0001	.0003	.0170	.0002	.0006	.0000	.0006	.0000
%RSD	18.86	12.57	1509.	17.27	28.54	96.90	30.41	8.665
#1	.0003	-.0024	.0132	.0011	.0018	.0000	.0015	.0005
#2	.0004	-.0020	-.0109	.0014	.0027	.0001	.0023	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 12:30:16 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0021	-.0140	.0004	-.0094	.0005	.0106	-.00010
Stddev	.0003	.0025	.0084	.0004	.0078	.0000	.0098	.00010
%RSD	1128.	117.2	59.65	106.5	83.03	7.491	91.92	95.670
#1	-.0002	-.0004	-.0200	.0001	-.0039	.0005	.0175	-.00017
#2	.0002	-.0039	-.0081	.0006	-.0150	.0005	.0037	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0011	.0004	.0000	.0003	.0002	.0011	-.0342
Stddev	.0020	.0006	.0000	.000	.0002	.0001	.0020	.0047
%RSD	330.8	59.14	2.067	166.4	65.68	56.65	177.8	13.83
#1	.0020	.0015	.0004	-.0001	.0002	.0001	-.0003	-.0308
#2	-.0008	.0006	.0004	.0000	.0004	.0002	.0025	-.0375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2606.3	40582.	4041.0
Stddev	2.7	150.	21.9
%RSD	.10363	.36956	.54296
#1	2604.4	40688.	4056.5
#2	2608.2	40476.	4025.5

Sample Name: K1409228-014 Acquired: 9/20/2014 12:32:44 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.66	.0235	.1367	1.383	.00323	.0159	.0426	.0422
#1	59.37	.0222	.1390	1.381	.00330	.0154	.0427	.0422
#2	59.95	.0247	.1345	1.386	.00317	.0163	.0426	.0422

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	169.3	.1521	.0526	.2440	.2506	95.90	2.537	.0588
#1	168.6	.1530	.0531	.2447	.2510	95.54	2.538	.0596
#2	170.1	.1512	.0522	.2434	.2503	96.27	2.535	.0580

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.75	5.582	.0033	.0928	12.16	6.421	-.0058	2.288
#1	26.84	5.557	.0034	.0927	12.17	6.444	-.0068	2.296
#2	26.65	5.608	.0031	.0929	12.15	6.399	-.0047	2.280

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.6481	1.6860	-.0044	.0254	2.252	.1977	4.942
#1	.0015	.6544	1.6841	-.0044	.0260	2.253	.1987	4.951
#2	.0014	.6418	1.6879	-.0043	.0247	2.251	.1967	4.932

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	5.013	.0142	3.484
#1	5.009	.0145	3.488
#2	5.016	.0138	3.481

Sample Name: K1409228-014 Acquired: 9/20/2014 12:32:44 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2558.3	39955.	4206.2
#1	2551.5	39978.	4232.1
#2	2565.2	39932.	4180.3

Sample Name: K1409228-015 Acquired: 9/20/2014 12:35:15 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.28	-.0027	.0740	.5789	.00247	.0099	.0035	.0019
#1	53.22	-.0042	.0711	.5767	.00248	.0092	.0034	.0020
#2	53.33	-.0012	.0769	.5811	.00246	.0106	.0035	.0019

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.80	.2144	.0605	.1852	.1903	133.6	.1560	.0577
#1	32.68	.2152	.0609	.1841	.1901	133.1	.1575	.0579
#2	32.92	.2136	.0602	.1862	.1905	134.1	.1544	.0574

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.12	1.940	.0066	.1676	9.411	9.994	.0002	3.131
#1	37.07	1.944	.0067	.1684	9.403	10.000	-.0021	3.089
#2	37.18	1.937	.0064	.1669	9.418	9.987	.0026	3.174

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	1.092	.22398	-.0034	.0153	3.618	.3115	.9104
#1	-.0013	1.091	.22295	-.0055	.0157	3.621	.3119	.9090
#2	-.0013	1.092	.22501	-.0012	.0150	3.616	.3111	.9119

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9357	-.0039	.5645
#1	.9351	-.0045	.5606
#2	.9363	-.0033	.5683

Sample Name: K1409228-015 Acquired: 9/20/2014 12:35:15 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2644.5	41222.	4241.3
#1	2645.1	41117.	4254.8
#2	2643.8	41327.	4227.9

Sample Name: K1409228-016 Acquired: 9/20/2014 12:37:43 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.83	.0001	.0742	.7222	.00285	.0118	.0087	.0073
#1	51.37	.0019	.0735	.7159	.00291	.0104	.0088	.0074
#2	50.29	-.0018	.0750	.7286	.00278	.0132	.0087	.0073

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.42	.1803	.0508	.1962	.2040	109.8	.4059	.0558
#1	32.16	.1815	.0505	.1963	.2044	109.0	.4074	.0541
#2	32.68	.1791	.0511	.1961	.2036	110.7	.4043	.0575

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.13	2.701	.0052	.1336	8.610	7.852	-.0068	2.473
#1	31.88	2.702	.0053	.1337	8.608	7.830	-.0049	2.460
#2	32.39	2.701	.0052	.1336	8.611	7.874	-.0087	2.486

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.8687	.23143	-.0023	.0171	3.443	.2476	.6918
#1	.0004	.8583	.22941	-.0018	.0167	3.443	.2477	.6899
#2	.0001	.8791	.23345	-.0029	.0175	3.443	.2475	.6936

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7100	.0014	1.026
#1	.7105	.0028	1.023
#2	.7096	.0000	1.029

Sample Name: K1409228-016 Acquired: 9/20/2014 12:37:43 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2652.6	41046.	4248.9
#1	2653.2	41044.	4250.0
#2	2652.1	41047.	4247.8

Sample Name: K1409228-017 Acquired: 9/20/2014 12:40:11 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	71.96	.0271	.1230	1.385	.00321	.0191	.0515	.0510
#1	72.35	.0246	.1262	1.386	.00332	.0192	.0516	.0508
#2	71.58	.0296	.1199	1.383	.00310	.0190	.0514	.0511

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.11	.1600	.0539	.2487	.2615	105.4	2.469	.0562
#1	52.18	.1605	.0537	.2487	.2624	105.6	2.469	.0562
#2	52.04	.1594	.0542	.2487	.2605	105.2	2.469	.0563

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.30	5.185	.0036	.1065	14.71	8.341	-.0007	2.430
#1	29.28	5.201	.0038	.1064	14.73	8.334	-.0019	2.413
#2	29.32	5.169	.0034	.1066	14.70	8.347	.0004	2.448

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.8738	.30239	-.0046	.0222	3.479	.2329	3.466
#1	-.0001	.8771	.30320	-.0033	.0221	3.485	.2318	3.466
#2	.0014	.8706	.30158	-.0059	.0223	3.473	.2341	3.466

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	3.542	.0126	3.803
#1	3.546	.0120	3.808
#2	3.538	.0131	3.799

Sample Name: K1409228-017 Acquired: 9/20/2014 12:40:11 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2617.8	41015.	4242.7
#1	2620.5	41042.	4230.6
#2	2615.1	40988.	4254.7

Sample Name: K1409228-018 Acquired: 9/20/2014 12:42:39 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	64.42	.0130	.1114	1.127	.00313	.0164	.0402	.0394
#1	64.03	.0146	.1150	1.123	.00306	.0170	.0402	.0397
#2	64.81	.0113	.1078	1.131	.00321	.0159	.0403	.0390

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.92	.1840	.0475	.1809	.1860	118.4	1.732	.0610
#1	39.69	.1846	.0476	.1795	.1849	117.9	1.733	.0611
#2	40.14	.1835	.0475	.1824	.1871	118.9	1.732	.0608

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.10	4.105	.0067	.1224	9.185	9.927	-.0023	2.886
#1	28.04	4.121	.0067	.1225	9.190	9.947	.0008	2.898
#2	28.16	4.090	.0067	.1223	9.179	9.906	-.0055	2.875

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.4795	.29010	-.0023	.0265	3.527	.2515	1.852
#1	-.0001	.4889	.28948	-.0036	.0261	3.539	.2517	1.855
#2	-.0005	.4701	.29072	-.0009	.0268	3.515	.2512	1.849

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.904	.0044	2.172
#1	1.903	.0041	2.166
#2	1.905	.0047	2.177

Sample Name: K1409228-018 Acquired: 9/20/2014 12:42:39 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2633.9	41015.	4234.4
#1	2630.1	40911.	4244.6
#2	2637.7	41120.	4224.1

Sample Name: K1409228-019 Acquired: 9/20/2014 12:45:05 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	89.89	.0048	.0920	1.127	.00500	.0125	.0130	.0115
#1	89.39	.0059	.0924	1.120	.00508	.0101	.0130	.0118
#2	90.39	.0036	.0916	1.133	.00492	.0148	.0130	.0113

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.70	.2733	.0666	.2457	.2615	147.3	.5640	.0839
#1	35.51	.2749	.0663	.2456	.2622	146.4	.5611	.0829
#2	35.90	.2717	.0669	.2458	.2607	148.3	.5669	.0848

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.50	3.704	.0030	.1788	11.41	15.02	-.0094	2.807
#1	49.32	3.712	.0033	.1790	11.43	14.97	-.0065	2.789
#2	49.68	3.695	.0027	.1787	11.40	15.07	-.0124	2.825

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.7383	.29801	-.0048	.0284	4.839	.3612	.7319
#1	.0000	.7437	.29662	-.0043	.0284	4.851	.3634	.7310
#2	.0006	.7328	.29939	-.0052	.0284	4.828	.3590	.7328

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.7633	-.0033	2.140
#1	.7620	-.0031	2.138
#2	.7646	-.0036	2.143

Sample Name: K1409228-019 Acquired: 9/20/2014 12:45:05 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2676.7	41574.	4354.6
#1	2674.8	41525.	4366.7
#2	2678.7	41624.	4342.6

Sample Name: K1409228-020 Acquired: 9/20/2014 12:48:39 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	112.3	.0017	.0918	2.281	.00548	.0192	.0064	.0051
#1	113.3	.0022	.0926	2.275	.00562	.0200	.0064	.0053
#2	111.2	.0012	.0911	2.287	.00533	.0185	.0064	.0048

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.21	.1731	.0662	.2223	.2329	123.4	.2843	.0882
#1	42.04	.1737	.0666	.2224	.2312	123.0	.2835	.0889
#2	42.38	.1726	.0658	.2222	.2346	123.8	.2852	.0875

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.94	8.250	.0031	.1333	16.53	7.099	-.0029	3.268
#1	31.93	8.283	.0029	.1334	16.58	7.098	-.0044	3.285
#2	31.95	8.218	.0034	.1333	16.48	7.100	-.0015	3.251

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.5054	.48077	-.0110	.0212	4.283	.2603	.9451
#1	.0012	.5048	.48006	-.0098	.0210	4.284	.2598	.9467
#2	.0015	.5061	.48149	-.0121	.0214	4.282	.2609	.9436

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.9730	.0058	2.216
#1	.9730	.0048	2.219
#2	.9729	.0069	2.213

Sample Name: K1409228-020 Acquired: 9/20/2014 12:48:39 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 4 Test Type: Sample Type:
Comment: MMR 092014A 1/4

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2628.8	40918.	4255.9
#1	2625.9	40763.	4266.1
#2	2631.7	41073.	4245.7

Sample Name: KQ1411597-02 Acquired: 9/20/2014 12:56:03 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A K1409912-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0017	.0025	-.0002	.00006	.0013	.0001	-.0001
#1	.0030	.0008	.0025	.0002	.00009	.0014	.0002	-.0001
#2	.0036	.0027	.0026	-.0005	.00003	.0011	.0000	-.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	.0003	.0000	.0000	.0011	.0013	-.0016	-.0012
#1	.0051	.0007	.0002	.0000	.0012	.0056	-.0016	-.0011
#2	.0054	.0000	-.0001	.0001	.0010	-.0029	-.0015	-.0013

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0001	.0003	.0000	.0005	.0332	.0020	.0171
#1	.0012	.0001	.0005	-.0001	.0023	.0835	-.0001	.0229
#2	.0013	.0001	.0001	.0000	-.0013	-.0171	.0040	.0114

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0051	.00010	.0000	.0005	.0007	.0006	.0002
#1	.0014	-.0051	.00005	.0009	.0007	.0008	.0006	.0003
#2	.0001	.0153	.00015	-.0008	.0004	.0006	.0005	.0000

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	-.0007	-.0357
#1	.0003	.0010	-.0344
#2	.0003	-.0023	-.0370

Sample Name: KQ1411597-02 Acquired: 9/20/2014 12:56:03 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A K1409912-MB

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2610.6	40620.	4080.2
#1	2612.7	40604.	4080.3
#2	2608.6	40637.	4080.1

Sample Name: KQ1411597-01 Acquired: 9/20/2014 12:58:29 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A LCSW, K1409912

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.108	2.410	2.528	5.059	.12435	1.013	1.255	1.269
#1	5.077	2.413	2.519	5.082	.12381	1.009	1.260	1.275
#2	5.139	2.407	2.537	5.037	.12489	1.017	1.251	1.264

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.45	.5064	1.251	.6248	.6118	2.468	2.507	-.0018
#1	12.52	.5037	1.255	.6270	.6102	2.471	2.523	-.0013
#2	12.38	.5092	1.247	.6227	.6134	2.466	2.491	-.0023

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.55	1.235	1.007	1.240	-.0044	12.42	2.463	.0147
#1	12.58	1.229	1.009	1.245	-.0046	12.51	2.469	.0192
#2	12.52	1.241	1.004	1.235	-.0042	12.34	2.458	.0101

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6098	12.54	.00058	2.504	.0001	.0006	1.270	1.240
#1	.6095	12.58	.00059	2.509	-.0003	.0006	1.266	1.245
#2	.6101	12.49	.00057	2.499	.0005	.0006	1.275	1.236

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.228	.0089	-.0340
#1	1.229	.0082	-.0326
#2	1.226	.0096	-.0355

Sample Name: KQ1411597-01 Acquired: 9/20/2014 12:58:29 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A LCSW, K1409912

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2556.7	39919.	4068.9
#1	2551.6	39967.	4064.2
#2	2561.8	39871.	4073.6

Sample Name: KQ1411597-03 Acquired: 9/20/2014 13:00:51 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A LCSW Si, K1409912

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0024	.0033	.0000	-.00004	.0030	.0000	-.0001
#1	.0041	.0025	.0050	-.0001	-.00015	.0047	.0000	-.0001
#2	.0042	.0024	.0016	.0002	.00007	.0014	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	.0003	.0002	-.0002	.0001	.0024	-.0007	-.0014
#1	.0061	.0002	.0002	.0003	.0000	.0017	-.0004	-.0014
#2	.0056	.0004	.0001	-.0008	.0002	.0031	-.0011	-.0013

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0001	.0009	-.0001	-.0004	-.0093	-.0010	9.755
#1	.0018	.0001	.0009	-.0003	-.0021	-.0141	-.0013	9.713
#2	.0015	.0001	.0009	.0001	.0014	-.0046	-.0008	9.798

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	16.30	.00004	.0001	.0006	.0017	.0003	.0003
#1	.0012	16.30	.00004	-.0016	.0001	.0017	.0006	.0003
#2	.0010	16.29	.00004	.0018	.0011	.0018	.0000	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0003	.0001	-.0229
#1	.0003	.0009	-.0202
#2	.0003	-.0006	-.0257

Sample Name: KQ1411597-03 Acquired: 9/20/2014 13:00:51 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A LCSW Si, K1409912

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2596.0**	**40204.**	**4081.5**
#1	2599.4	40089.	4096.9
#2	2592.5	40320.	4066.2

Sample Name: CCVB Acquired: 9/20/2014 13:03:18 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.507	10.24	.0038	1.006	9.955	.00001	.0014	.0001
Stddev	.006	.06	.0001	.001	.058	.00001	.0004	.0000
%RSD	.0823	.5805	3.401	.0577	.5818	143.17	29.37	10.60
#1	7.502	10.20	.0037	1.006	9.914	.00000	.0016	.0001
#2	7.511	10.28	.0039	1.007	9.996	.00002	.0011	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	9.939	9.486	.0005	-.0001	.0005	.0005	9.964
Stddev	.0001	.084	.006	.0007	.0001	.0006	.0006	.053
%RSD	49.79	.8451	.0602	141.0	85.32	131.9	121.5	.5274
#1	-.0001	9.880	9.490	.0010	.0000	.0009	.0009	9.927
#2	-.0002	9.999	9.482	.0000	-.0002	.0000	.0001	10.00
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	1.002	9.904	9.391	10.05	.9840	.9947	.0004
Stddev	.0010	.000	.002	.045	.03	.0033	.0019	.0001
%RSD	526.4	.0414	.0172	.4848	.2946	.3310	.1935	30.37
#1	-.0009	1.002	9.906	9.359	10.03	.9863	.9961	.0004
#2	.0005	1.002	9.903	9.424	10.07	.9817	.9933	.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/20/2014 13:03:18 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	10.08	9.941	.0020	10.02	.0004	9.948	.98550
Stddev	.0001	.02	.033	.0005	.07	.0008	.034	.00378
%RSD	39.84	.1918	.3315	26.58	.6772	216.1	.3438	.38373
#1	-.0003	10.10	9.917	.0016	9.974	.0009	9.924	.98283
#2	-.0002	10.07	9.964	.0023	10.07	-.0002	9.972	.98817
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0018	.0009	.0015	.0004	.0005	1.030	.9757
Stddev	.0004	.0003	.0001	.0001	.0001	.0001	.004	.0070
%RSD	73.35	17.78	7.932	5.151	39.17	11.89	.4028	.7173
#1	-.0003	.0020	.0009	.0015	.0005	.0006	1.027	.9708
#2	-.0008	.0016	.0008	.0016	.0003	.0005	1.033	.9807
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2579.9	39845.	4050.7
Stddev	2.9	154.	4.9
%RSD	.11199	.38525	.12205
#1	2577.9	39736.	4054.2
#2	2582.0	39953.	4047.2

Sample Name: CCVA Acquired: 9/20/2014 13:05:55 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2562	.2713	.2514	.2574	.2513	.25133	.2518	.2522
Stddev	.0005	.0004	.0019	.0002	.0017	.00049	.0005	.0005
%RSD	.1904	.1571	.7423	.0843	.6761	.19531	.1934	.2144
#1	.2565	.2716	.2527	.2576	.2501	.25099	.2514	.2518
#2	.2559	.2710	.2500	.2572	.2525	.25168	.2521	.2526
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2534	.4962	.4919	.2526	.2520	.2519	.2513	.2530
Stddev	.0004	.0009	.0033	.0001	.0008	.0019	.0016	.0004
%RSD	.1689	.1737	.6675	.0253	.3056	.7488	.6466	.1633
#1	.2531	.4968	.4895	.2526	.2515	.2532	.2501	.2533
#2	.2537	.4956	.4942	.2526	.2526	.2505	.2524	.2527
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2533	-.0008	.2424	.2487	.2539	.2511	.2467	.2494
Stddev	.0007	.0005	.0092	.0012	.0042	.0009	.0005	.0000
%RSD	.2627	54.62	3.794	.4700	1.667	.3638	.2040	.0021
#1	.2529	-.0005	.2359	.2479	.2509	.2505	.2463	.2494
#2	.2538	-.0012	.2489	.2495	.2569	.2518	.2470	.2494
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/20/2014 13:05:55 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2516	.0010	2.490	.2568	.1360	.2527	.2716	.00019
Stddev	.0002	.0023	.010	.0013	.0115	.0019	.0005	.00000
%RSD	.0611	220.0	.4128	.4886	8.445	.7604	.1777	.43245
#1	.2517	-.0006	2.483	.2577	.1279	.2514	.2720	.00019
#2	.2515	.0027	2.497	.2559	.1441	.2541	.2713	.00019
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2520	.2533	.2516	.2516	.2496	.2510	.0008	-.0356
Stddev	.0002	.0006	.0004	.0013	.0000	.0001	.0021	.0022
%RSD	.0596	.2347	.1735	.5126	.0195	.0338	251.1	6.220
#1	.2522	.2528	.2513	.2507	.2495	.2510	.0023	-.0340
#2	.2519	.2537	.2519	.2525	.2496	.2511	-.0007	-.0371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2608.5	40441.	4067.0
Stddev	4.8	21.	5.6
%RSD	.18244	.05153	.13855
#1	2605.2	40426.	4063.0
#2	2611.9	40455.	4071.0

Sample Name: CCB Acquired: 9/20/2014 13:08:09 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0030	-.0004	.0024	.0005	.00008	.0019	.0000
Stddev	.0005	.0020	.0027	.0011	.0002	.00007	.0011	.0000
%RSD	14.69	65.89	633.1	43.68	42.44	84.929	58.10	155.3
#1	.0028	.0016	-.0023	.0017	.0003	.00003	.0027	.0000
#2	.0034	.0044	.0015	.0032	.0006	.00013	.0011	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0073	.0014	.0004	-.0001	-.0007	.0004	-.0001
Stddev	.0000	.0010	.0001	.0001	.0001	.0005	.0006	.0006
%RSD	153.5	13.45	5.532	11.85	199.8	76.79	159.1	418.6
#1	.0000	-.0080	.0014	.0004	-.0002	-.0011	.0008	.0003
#2	.0000	-.0066	.0015	.0005	.0000	-.0003	.0000	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0020	.0086	.0011	.0019	.0001	.0008	.0006
Stddev	.0003	.0017	.0342	.0001	.0018	.0000	.0002	.0003
%RSD	23.56	88.75	398.9	10.91	97.91	34.44	30.05	56.72
#1	-.0011	-.0032	.0328	.0010	.0006	.0001	.0009	.0008
#2	-.0015	-.0007	-.0156	.0012	.0032	.0001	.0006	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 13:08:09 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0005	-.0045	.0037	.0062	.0006	.0067	.00005
Stddev	.0001	.0008	.0310	.0014	.0033	.0005	.0159	.00001
%RSD	38.15	145.1	682.8	37.80	52.63	98.19	236.0	22.549
#1	.0002	.0000	.0174	.0046	.0085	.0002	-.0045	.00004
#2	.0001	-.0011	-.0264	.0027	.0039	.0009	.0180	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	.0003	.0000	.0001	.0002	.0014	-.0366
Stddev	.0002	.0004	.0001	.001	.0003	.0000	.0016	.0011
%RSD	8.026	658.3	18.85	2873.	263.7	17.71	119.4	2.924
#1	.0019	-.0002	.0004	-.0005	-.0001	.0002	.0002	-.0374
#2	.0021	.0004	.0003	.0005	.0003	.0001	.0025	-.0358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2594.8	40472.	4048.7
Stddev	1.9	207.	13.7
%RSD	.07296	.51077	.33904
#1	2593.4	40618.	4039.0
#2	2596.1	40326.	4058.4

Sample Name: LLCCV Acquired: 9/20/2014 13:11:23 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121	F .0141	.0175	.0100	.0038	.00093	.0187	.0009
Stddev	.0000	.0003	.0051	.0004	.0003	.00007	.0003	.0000
%RSD	.1001	2.481	29.34	3.997	7.153	7.5557	1.432	1.446
#1	.0120	.0143	.0211	.0097	.0036	.00098	.0189	.0009
#2	.0121	.0138	.0138	.0103	.0040	.00088	.0185	.0009
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0100						
Range		30.00%						

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0147	.0197	.0038	.0019	.0037	.0037	.0233
Stddev	.0000	.0022	.0000	.0004	.0003	.0001	.0008	.0012
%RSD	3.372	14.72	.1826	9.672	14.35	2.815	21.78	4.945
#1	.0009	.0162	.0197	.0035	.0017	.0038	.0043	.0241
#2	.0008	.0132	.0197	.0040	.0021	.0037	.0032	.0225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0151	.0079	.0061	.0046	.0009	.0006	.0040
Stddev	.0022	.0007	.0299	.0001	.0007	.0000	.0000	.0002
%RSD	29.44	4.719	380.7	1.002	16.13	.4060	1.720	5.435
#1	.0059	.0156	-.0133	.0062	.0051	.0009	.0006	.0042
#2	.0091	.0146	.0290	.0061	.0041	.0009	.0006	.0039
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/20/2014 13:11:23 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0314	.1842	.0225	.1744	.0041	.2067	.00084
Stddev	.0003	.0002	.0135	.0024	.0020	.0005	.0055	.00007
%RSD	8.219	.5502	7.347	10.45	1.174	13.08	2.641	8.1275
#1	.0035	.0315	.1746	.0209	.1730	.0037	.2029	.00079
#2	.0039	.0313	.1938	.0242	.1759	.0045	.2106	.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0174	.0021	.0037	.0038	.0037	.0204	F .0043
Stddev	.0013	.0011	.0001	.0005	.0003	.0002	.0003	.0007
%RSD	16.34	6.208	5.982	14.72	7.336	4.842	1.282	16.64
#1	.0089	.0166	.0022	.0033	.0036	.0036	.0202	.0038
#2	.0071	.0181	.0020	.0041	.0040	.0038	.0206	.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0400
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2599.8	40511.	4011.7
Stddev	1.1	28.	11.5
%RSD	.04363	.06820	.28767
#1	2600.6	40491.	4003.5
#2	2599.0	40530.	4019.8

Sample Name: K1409912-001 Acquired: 9/20/2014 13:14:01 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.0006	.0035	.0313	-.00005	2.252	.0000	-.0002
#1	.0117	.0012	.0060	.0309	-.00018	2.244	.0000	-.0002
#2	.0120	-.0001	.0010	.0318	.00009	2.260	.0000	-.0001

Elem	Ca3158 *	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	266.7	.0069	.0031	.0043	.0024	.2555	.0002	.0760
#1	265.7	.0074	.0032	.0046	.0023	.2528	.0004	.0768
#2	267.7	.0064	.0030	.0039	.0026	.2582	.0000	.0752

Elem	Mg2790 *	Mn2576	Mo2020	Ni2216	P_1782	K_7664 *	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>450.0	.3480	.0066	.0283	2.030	178.6	.0005	26.39
#1	594.3	.3487	.0067	.0283	2.032	180.2	-.0020	26.61
#2	597.9	.3473	.0066	.0283	2.027	176.9	.0031	26.18

Elem	Ag3280	Na5895 *	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	*****	6.5481	-.0033	.0014	-.0010	.0538	.0190
#1	.0004	-----	6.4873	-.0040	.0025	-.0010	.0546	.0190
#2	.0013	-----	6.6089	-.0026	.0003	-.0009	.0529	.0191

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0169	.0094	>450.0
#1	.0168	.0071	476.7
#2	.0170	.0117	475.6

* 1/50 dilution
GM
10/10/14

Sample Name: K1409912-001 Acquired: 9/20/2014 13:14:01 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	1952.2	29192.	3562.0
#1	1952.9	29143.	3588.2
#2	1951.5	29241.	3535.9

Sample Name: K1409912-001D Acquired: 9/20/2014 13:16:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120	-.0008	.0041	.0310	.00006	2.268	.0001	-.0004
#1	.0115	-.0006	.0023	.0309	.00001	2.262	.0000	-.0003
#2	.0125	-.0009	.0059	.0311	.00011	2.274	.0001	-.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	266.0	.0072	.0026	.0051	.0029	.2498	.0006	.0760
#1	264.9	.0066	.0024	.0043	.0035	.2523	.0005	.0762
#2	267.1	.0078	.0028	.0058	.0024	.2473	.0007	.0759

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>450.0	.3480	.0067	.0302	2.036	180.0	-.0027	26.55
#1	589.8	.3482	.0065	.0299	2.029	179.8	.0026	26.47
#2	594.3	.3478	.0070	.0306	2.042	180.2	-.0079	26.63

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	*****	6.4218	-.0021	-.0005	-.0011	.0536	.0194
#1	.0010	-----	6.4191	-.0018	-.0013	-.0007	.0537	.0196
#2	.0004	-----	6.4245	-.0024	.0002	-.0016	.0535	.0192

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0175	.0079	>450.0
#1	.0174	.0091	478.3
#2	.0176	.0067	478.9

* 1/50 am
10/10/14

Sample Name: K1409912-001D Acquired: 9/20/2014 13:16:42 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	1951.8	29263.	3588.8
#1	1950.2	29188.	3591.5
#2	1953.4	29337.	3586.2

Sample Name: K1409912-001S Acquired: 9/20/2014 13:19:23 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.675	.4116	.8693	1.033	.04413	3.033	.0449	.0445
#1	1.677	.4115	.8723	1.038	.04403	3.031	.0450	.0447
#2	1.674	.4117	.8662	1.028	.04424	3.034	.0449	.0443

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	276.0	.2035	.4416	.2258	.1940	1.193	.4238	.0766
#1	277.1	.2035	.4418	.2261	.1940	1.198	.4244	.0777
#2	274.8	.2035	.4413	.2256	.1941	1.189	.4231	.0754

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>450.0	.8295	.9606	.4629	2.021	190.4	.8008	26.41
#1	602.8	.8277	.9616	.4644	2.026	190.6	.8031	26.42
#2	596.2	.8313	.9597	.4615	2.016	190.1	.7986	26.40

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0442	*****	6.4440	.7296	-.0001	-.0008	.5720	.4599
#1	.0438	-----	6.4230	.7306	-.0005	-.0011	.5720	.4596
#2	.0445	-----	6.4650	.7286	.0003	-.0005	.5720	.4602

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.4114	.0138	>450.0
#1	.4115	.0141	476.3
#2	.4112	.0136	476.4

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Sample Name: K1409912-001S Acquired: 9/20/2014 13:19:23 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	1947.3	29336.	3594.0
#1	1945.0	29374.	3579.5
#2	1949.7	29297.	3608.6

Sample Name: K1409912-001S Acquired: 9/20/2014 13:21:53 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A Si

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126	-.0006	.0103	.0321	.00011	2.344	-.0001	-.0004
#1	.0119	.0006	.0097	.0322	.00016	2.354	-.0001	-.0004
#2	.0134	-.0017	.0110	.0320	.00006	2.334	-.0001	-.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	272.4	.0074	.0031	.0048	.0025	.2541	.0009	.0788
#1	273.5	.0081	.0030	.0042	.0019	.2550	.0018	.0796
#2	271.2	.0067	.0032	.0054	.0032	.2533	.0000	.0780

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>450.0	.3547	.0079	.0290	2.091	186.0	.0028	36.21
#1	604.1	.3550	.0080	.0294	2.093	184.6	.0038	36.09
#2	597.3	.3545	.0077	.0287	2.088	187.4	.0018	36.32

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	*****	6.6028	-.0057	-.0004	.0000	.0538	.0192
#1	-.0002	-----	6.6817	-.0014	.0006	.0000	.0539	.0194
#2	-.0002	-----	6.5239	-.0099	-.0014	.0000	.0538	.0190

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0175	.0114	>450.0
#1	.0175	.0123	490.6
#2	.0175	.0106	491.1

Sample Name: K1409912-001S Acquired: 9/20/2014 13:21:53 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A Si

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	1955.1	29361.	3610.3
#1	1953.5	29411.	3579.3
#2	1956.7	29311.	3641.3

Sample Name: K1409912-001A Acquired: 9/20/2014 13:25:10 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A A=0.05/10 CICV-1,3 + 1000ppm Sb

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.814	4.021	2.177	5.164	.11179	2.222	1.132	1.126
#1	3.832	4.017	2.170	5.171	.11221	2.225	1.133	1.126
#2	3.797	4.025	2.184	5.157	.11138	2.220	1.132	1.126

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	271.8	.5012	1.125	.5695	.4919	2.616	2.128	.0757
#1	272.3	.4994	1.124	.5698	.4931	2.604	2.132	.0749
#2	271.3	.5031	1.126	.5691	.4906	2.629	2.124	.0765

Elem	Mg2790	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	>450.0	1.541	.0069	1.132	2.084	191.0	2.027	25.77
#1	584.9	1.539	.0066	1.134	2.085	190.3	2.026	25.61
#2	583.9	1.543	.0071	1.131	2.083	191.7	2.028	25.94

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5404	*****	6.3603	1.857	.0000	-.0012	1.359	1.153
#1	.5412	-----	6.4107	1.859	-.0009	-.0014	1.359	1.155
#2	.5397	-----	6.3098	1.855	.0009	-.0011	1.358	1.151

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.029	.0156	>450.0
#1	1.029	.0147	469.0
#2	1.028	.0166	469.2

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Sample Name: K1409912-001A Acquired: 9/20/2014 13:25:10 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A A=0.05/10 CICV-1,3 + 1000ppm Sb

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**1953.8**	**29481.**	**3616.9**
#1	1953.9	29537.	3597.7
#2	1953.7	29425.	3636.1

Sample Name: K1409912-001 Acquired: 9/20/2014 13:32:19 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0021	-.0002	.0006	-.00002	.0629	.0001	-.0001
#1	.0050	-.0023	-.0009	.0005	-.00005	.0614	.0001	.0000
#2	.0050	-.0018	.0006	.0006	.00001	.0643	.0001	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.398	-.0002	.0003	.0004	.0008	.0046	-.0009	.0004
#1	5.343	.0003	.0003	.0001	.0013	.0048	.0001	.0005
#2	5.454	-.0006	.0003	.0006	.0003	.0045	-.0020	.0003

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.17	.0072	.0004	.0004	.0344	3.509	.0008	.5399
#1	11.18	.0073	.0004	.0010	.0333	3.481	.0038	.5406
#2	11.17	.0071	.0004	-.0002	.0354	3.538	-.0023	.5393

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	94.41	.13110	.0020	.0008	.0000	.0013	.0005
#1	.0008	94.54	.13107	.0008	.0015	.0000	.0013	.0008
#2	.0012	94.28	.13112	.0032	.0002	-.0001	.0013	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0004	.0013	11.13
#1	.0004	.0009	11.14
#2	.0005	.0017	11.12

Sample Name: K1409912-001 Acquired: 9/20/2014 13:32:19 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2505.4	38567.	3972.5
#1	2506.2	38546.	3979.1
#2	2504.7	38588.	3965.9

Sample Name: K1409912-001D Acquired: 9/20/2014 13:34:54 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	-.0015	.0027	.0007	-.00005	.0617	.0000	.0000
#1	.0051	.0009	.0022	.0007	-.00010	.0623	.0001	.0000
#2	.0052	-.0040	.0032	.0006	-.00001	.0610	-.0001	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.346	.0005	.0000	.0000	.0008	.0057	.0003	.0005
#1	5.343	.0002	.0002	.0001	.0005	.0044	-.0022	.0019
#2	5.349	.0008	-.0001	-.0001	.0011	.0071	.0028	-.0009

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.28	.0072	.0004	.0005	.0375	3.553	.0008	.5534
#1	11.28	.0072	.0001	.0006	.0367	3.535	.0015	.5465
#2	11.28	.0073	.0007	.0005	.0383	3.571	.0001	.5602

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	95.62	.13123	.0007	.0010	-.0002	.0007	.0009
#1	.0010	95.66	.13118	.0021	.0008	-.0004	.0008	.0012
#2	.0008	95.57	.13128	-.0006	.0012	-.0001	.0006	.0007

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0005	.0004	11.16
#1	.0006	.0033	11.18
#2	.0004	-.0026	11.14

Sample Name: K1409912-001D Acquired: 9/20/2014 13:34:54 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2508.4	38599.	4018.5
#1	2513.5	38609.	4018.5
#2	2503.4	38589.	4018.5

Sample Name: K1409912-001S Acquired: 9/20/2014 13:37:28 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0453	.0095	.0228	.0211	.00104	.0816	.0011	.0010
#1	.0458	.0069	.0203	.0207	.00109	.0801	.0010	.0009
#2	.0447	.0121	.0253	.0215	.00098	.0830	.0012	.0011

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.606	.0054	.0105	.0049	.0055	.0254	.0092	-.0003
#1	5.617	.0053	.0104	.0049	.0050	.0251	.0098	-.0010
#2	5.594	.0055	.0106	.0049	.0060	.0258	.0087	.0003

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.55	.0174	.0203	.0106	.0388	3.745	.0238	.5481
#1	11.49	.0173	.0203	.0103	.0411	3.699	.0258	.5447
#2	11.60	.0174	.0203	.0110	.0365	3.790	.0218	.5515

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	96.33	.13188	.0186	.0006	.0000	.0115	.0105
#1	.0014	95.80	.13168	.0202	.0009	.0001	.0112	.0105
#2	.0020	96.86	.13208	.0170	.0002	.0000	.0119	.0105

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0100	.0020	11.31
#1	.0100	.0022	11.31
#2	.0101	.0018	11.31

Sample Name: K1409912-001S Acquired: 9/20/2014 13:37:28 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2506.3	38797.	4020.6
#1	2506.4	38783.	3998.9
#2	2506.1	38811.	4042.4

Sample Name: K1409912-001A Acquired: 9/20/2014 13:40:03 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50 A=0.05/10 CICV-1,3 + 1000ppm Sb

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.717	4.734	2.484	5.037	.12049	.0597	1.235	1.241
#1	4.733	4.734	2.475	5.026	.12075	.0591	1.234	1.239
#2	4.701	4.735	2.492	5.048	.12022	.0603	1.235	1.242

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.90	.5085	1.229	.6132	.5808	2.429	2.411	-.0005
#1	17.94	.5077	1.228	.6135	.5829	2.444	2.409	-.0003
#2	17.87	.5094	1.230	.6130	.5787	2.414	2.413	-.0006

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.30	1.237	.0003	1.216	.0379	16.05	2.370	.5471
#1	23.43	1.235	.0002	1.215	.0380	16.15	2.358	.5591
#2	23.16	1.240	.0004	1.217	.0377	15.94	2.383	.5351

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5764	107.8	.13168	2.352	.0007	-.0002	1.286	1.237
#1	.5789	108.7	.13256	2.357	.0003	-.0004	1.285	1.238
#2	.5739	107.0	.13080	2.347	.0010	-.0001	1.287	1.236

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.193	.0087	11.08
#1	1.193	.0071	11.10
#2	1.193	.0103	11.07

Sample Name: K1409912-001A Acquired: 9/20/2014 13:40:03 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 50 Test Type: Sample Type:
Comment: MMR 092014A 1/50 A=0.05/10 CICV-1,3 + 1000ppm Sb

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2485.7	38323.	3994.2
#1	2484.8	38455.	4001.2
#2	2486.5	38190.	3987.2

Sample Name: K1409921-012 Acquired: 9/20/2014 13:47:45 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1612	.0059	.0019	.0254	.00003	.0346	.0000	-.0001
#1	.1611	.0052	.0003	.0253	-.00007	.0347	.0000	-.0001
#2	.1613	.0065	.0034	.0255	.00014	.0346	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	30.45	.0007	.0005	.0004	.0016	.7404	-.0002	.0014
#1	30.22	.0002	.0004	.0006	.0021	.7319	-.0008	.0004
#2	30.69	.0011	.0006	.0002	.0010	.7489	.0003	.0024

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.73	.2596	.0006	.0006	.0783	3.051	.0033	17.84
#1	17.74	.2596	.0006	.0008	.0791	3.057	.0043	17.85
#2	17.72	.2597	.0006	.0005	.0775	3.045	.0023	17.83

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	11.22	.17245	-.0005	.0001	.0077	.0023	.0109
#1	.0009	11.24	.17145	.0006	-.0004	.0077	.0022	.0111
#2	-.0011	11.20	.17345	-.0015	.0005	.0078	.0023	.0107

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0111	.0045	11.31
#1	.0111	.0036	11.31
#2	.0111	.0054	11.32

Sample Name: K1409921-012 Acquired: 9/20/2014 13:47:45 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2534.3	39591.	4050.4
#1	2532.6	39467.	4083.6
#2	2536.0	39715.	4017.2

Sample Name: CCVB Acquired: 9/20/2014 13:50:19 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.599	10.25	-.0016	1.017	10.30	.00012	.0032	.0000
Stddev	.020	.10	.0023	.002	.15	.00002	.0014	.0001
%RSD	.2628	.9859	143.8	.2356	1.491	20.536	44.24	351.8
#1	7.614	10.32	.0000	1.019	10.19	.00010	.0022	.0000
#2	7.585	10.18	-.0032	1.015	10.41	.00013	.0042	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	10.03	9.710	.0005	.0003	.0003	.0012	9.988
Stddev	.000	.07	.029	.0003	.0000	.0002	.0001	.028
%RSD	534.2	.7233	.3005	75.05	9.255	94.65	10.16	.2808
#1	.0000	9.976	9.689	.0007	.0003	.0001	.0011	9.968
#2	-.0001	10.08	9.731	.0002	.0002	.0004	.0013	10.01
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	1.017	9.949	9.560	10.03	1.002	.9943	.0003
Stddev	.0003	.003	.021	.122	.03	.001	.0062	.0001
%RSD	29.46	.2988	.2108	1.274	.3100	.0739	.6223	31.99
#1	-.0011	1.019	9.934	9.474	10.05	1.001	.9986	.0002
#2	-.0007	1.015	9.963	9.646	10.00	1.002	.9899	.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/20/2014 13:50:19 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	10.30	10.10	.0010	9.876	.0005	10.14	1.0137
Stddev	.0002	.03	.02	.0009	.051	.0007	.05	.0035
%RSD	402.5	.3155	.2418	83.56	.5121	153.5	.4797	.34824
#1	-.0002	10.28	10.12	.0016	9.912	.0000	10.17	1.0112
#2	.0001	10.32	10.08	.0004	9.841	.0010	10.11	1.0161
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.0013	.0006	.0012	.0002	.0003	1.052	.9866
Stddev	.0018	.0005	.0000	.0003	.0001	.0001	.005	.0043
%RSD	252.1	37.85	2.211	24.39	58.81	43.28	.5144	.4402
#1	-.0020	.0017	.0006	.0014	.0003	.0002	1.048	.9836
#2	.0006	.0010	.0007	.0010	.0001	.0004	1.055	.9897
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2547.8	39557.	4020.9
Stddev	2.0	37.	26.2
%RSD	.07802	.09284	.65233
#1	2546.4	39583.	4039.5
#2	2549.2	39531.	4002.4

Sample Name: CCVA Acquired: 9/20/2014 13:52:56 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.2675	.2488	.2522	.2522	.24769	.2526	.2519
Stddev	.0002	.0007	.0008	.0026	.0013	.00173	.0013	.0002
%RSD	.0741	.2618	.3340	1.013	.5133	.69694	.5257	.0606
#1	.2543	.2680	.2494	.2540	.2512	.24891	.2536	.2520
#2	.2541	.2670	.2483	.2504	.2531	.24647	.2517	.2518
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2530	.4901	.4945	.2517	.2519	.2523	.2485	.2442
Stddev	.0001	.0056	.0026	.0005	.0000	.0007	.0033	.0019
%RSD	.0256	1.145	.5291	.2153	.0142	.2615	1.341	.7920
#1	.2531	.4861	.4927	.2513	.2520	.2528	.2509	.2428
#2	.2530	.4941	.4964	.2520	.2519	.2518	.2462	.2456
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2536	.0001	.2641	.2468	.2520	.2522	.2429	.2494
Stddev	.0000	.0016	.0164	.0014	.0005	.0004	.0013	.0011
%RSD	.0148	2823.	6.207	.5873	.2001	.1447	.5378	.4442
#1	.2536	-.0011	.2525	.2458	.2517	.2524	.2438	.2486
#2	.2536	.0012	.2757	.2478	.2524	.2519	.2420	.2502
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/20/2014 13:52:56 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2512	-.0032	2.484	.2482	.1215	.2502	.3198	.00001
Stddev	.0009	.0004	.021	.0009	.0078	.0011	.0077	.00005
%RSD	.3672	11.33	.8273	.3738	6.391	.4492	2.409	596.43
#1	.2505	-.0029	2.469	.2476	.1160	.2510	.3144	.00004
#2	.2518	-.0034	2.498	.2489	.1270	.2494	.3253	-.00003
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2530	.2530	.2521	.2522	.2489	.2475	.0013	-.0345
Stddev	.0043	.0013	.0003	.0004	.0007	.0001	.0020	.0032
%RSD	1.689	.4964	.1122	.1729	.2999	.0518	154.6	9.218
#1	.2500	.2521	.2523	.2525	.2494	.2474	.0027	-.0368
#2	.2560	.2539	.2519	.2519	.2484	.2476	-.0001	-.0323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2577.0	40020.	4045.9
Stddev	1.6	135.	3.2
%RSD	.06152	.33839	.08026
#1	2575.8	40116.	4048.2
#2	2578.1	39924.	4043.7

Sample Name: CCB Acquired: 9/20/2014 13:55:10 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0026	.0011	.0016	.0004	.00003	.0025	.0001
Stddev	.0001	.0008	.0017	.0026	.0005	.00020	.0004	.0001
%RSD	4.714	31.42	162.0	161.4	109.8	776.19	16.91	131.1
#1	.0020	.0032	-.0002	-.0002	.0008	.00017	.0028	.0000
#2	.0019	.0020	.0023	.0034	.0001	-.00012	.0022	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0087	.0025	.0001	.0001	-.0002	.0003	.0004
Stddev	.0000	.0014	.0001	.0003	.0004	.0010	.0005	.0021
%RSD	64.83	15.84	2.966	385.6	366.9	427.3	167.5	563.9
#1	.0000	-.0077	.0026	-.0001	-.0002	-.0010	-.0001	.0019
#2	-.0001	-.0096	.0025	.0003	.0004	.0005	.0006	-.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0016	.0290	.0038	.0035	.0001	.0004	.0005
Stddev	.0010	.0012	.0208	.0000	.0015	.0000	.0001	.0002
%RSD	234.1	75.77	71.58	.6050	42.47	44.53	15.99	46.56
#1	-.0003	-.0025	.0143	.0038	.0025	.0001	.0004	.0003
#2	.0011	-.0008	.0437	.0038	.0046	.0001	.0004	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 13:55:10 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0013	.0465	.0063	-.0008	.0009	.0690	.00015
Stddev	.000	.0002	.0238	.0004	.0059	.0001	.0027	.00004
%RSD	214.8	14.32	51.17	6.175	716.9	6.210	3.972	25.429
#1	-.0001	.0011	.0297	.0060	.0033	.0009	.0671	.00012
#2	.0000	.0014	.0634	.0066	-.0050	.0008	.0709	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0000	.0002	.0001	.0001	.0000	.0024	-.0339
Stddev	.0006	.0006	.0000	.0003	.0001	.000	.0015	.0016
%RSD	100.6	1176.	.6696	313.7	78.43	362.0	62.24	4.704
#1	.0002	.0005	.0002	-.0001	.0001	.0000	.0013	-.0351
#2	.0010	-.0004	.0002	.0003	.0000	-.0001	.0034	-.0328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2571.1	39918.	4047.1
Stddev	5.9	223.	42.2
%RSD	.23123	.55799	1.0416
#1	2566.9	40076.	4076.9
#2	2575.3	39761.	4017.3

Sample Name: K1409921-013 Acquired: 9/20/2014 13:57:37 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1992	.0031	.0033	.0263	-.00003	.0350	.0000	.0000
#1	.1990	.0032	.0028	.0258	-.00006	.0343	.0000	-.0001
#2	.1993	.0029	.0038	.0267	.00001	.0358	.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	30.95	.0006	.0005	.0008	.0022	.8276	.0001	.0016
#1	30.63	.0008	.0006	.0000	.0029	.8185	.0009	.0018
#2	31.27	.0005	.0005	.0016	.0015	.8367	-.0007	.0014

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.90	.2706	.0008	.0012	.0812	3.100	.0038	18.03
#1	17.89	.2720	.0008	.0014	.0799	3.103	.0024	18.00
#2	17.92	.2693	.0009	.0011	.0826	3.097	.0053	18.05

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	11.32	.17550	-.0016	-.0002	.0104	.0031	.0124
#1	.0009	11.32	.17369	-.0021	.0003	.0103	.0030	.0123
#2	.0008	11.33	.17732	-.0011	-.0007	.0105	.0031	.0125

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0123	.0022	11.49
#1	.0124	.0011	11.49
#2	.0123	.0033	11.48

Sample Name: K1409921-013 Acquired: 9/20/2014 13:57:37 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2534.6	39155.	4040.1
#1	2532.1	39151.	4076.4
#2	2537.2	39160.	4003.7

Sample Name: K1409921-014 Acquired: 9/20/2014 14:00:08 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1214	.0017	.0056	.0142	.00006	.0200	.0000	.0000
#1	.1214	.0032	.0066	.0143	.00009	.0209	.0001	.0000
#2	.1214	.0003	.0045	.0141	.00003	.0190	-.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.19	.0009	.0006	.0026	.0037	.5358	.0016	.0008
#1	24.09	.0012	.0005	.0023	.0035	.5310	.0024	.0012
#2	24.28	.0007	.0007	.0028	.0038	.5405	.0008	.0005

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.29	.0829	.0009	.0009	.0464	2.450	.0042	16.50
#1	17.28	.0835	.0009	.0004	.0457	2.444	.0053	16.49
#2	17.29	.0824	.0009	.0014	.0470	2.456	.0030	16.52

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	9.482	.11152	-.0022	.0005	.0066	.0038	.0223
#1	.0004	9.525	.11112	-.0022	.0012	.0065	.0037	.0223
#2	.0000	9.438	.11192	-.0021	-.0002	.0067	.0039	.0224

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0221	.0001	9.587
#1	.0221	-.0001	9.589
#2	.0221	.0003	9.585

Sample Name: K1409921-014 Acquired: 9/20/2014 14:00:08 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2539.7	39300.	4065.8
#1	2540.2	39232.	4082.5
#2	2539.2	39367.	4049.0

Sample Name: K1409921-015 Acquired: 9/20/2014 14:02:41 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0551	-.0007	.0002	.0147	.00008	.0163	.0001	-.0001
#1	.0547	-.0012	-.0004	.0143	.00010	.0173	.0000	-.0001
#2	.0555	-.0002	.0008	.0151	.00007	.0153	.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.70	.0008	.0002	.0004	.0014	.3142	-.0001	.0021
#1	23.44	.0006	.0003	.0001	.0012	.3120	.0002	.0025
#2	23.95	.0010	.0000	.0006	.0016	.3164	-.0004	.0017

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.23	.0355	.0008	.0007	.0357	3.044	.0027	18.86
#1	16.15	.0359	.0006	.0007	.0357	3.026	.0033	18.75
#2	16.31	.0350	.0010	.0007	.0357	3.062	.0021	18.96

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	9.667	.10770	.0004	.0007	.0030	.0048	.0113
#1	.0007	9.613	.10667	-.0006	.0007	.0031	.0043	.0113
#2	.0000	9.720	.10874	.0013	.0008	.0029	.0052	.0113

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0113	.0032	9.574
#1	.0112	.0023	9.586
#2	.0114	.0040	9.562

Sample Name: K1409921-015 Acquired: 9/20/2014 14:02:41 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2535.8**	**39291.**	**4080.7**
#1	2533.9	39205.	4096.4
#2	2537.8	39377.	4064.9

Sample Name: K1409921-016 Acquired: 9/20/2014 14:05:15 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0498	.0015	.0059	.0105	.00006	.0144	.0000	.0000
#1	.0492	.0025	.0070	.0105	.00004	.0147	.0000	-.0001
#2	.0504	.0004	.0047	.0104	.00008	.0141	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.64	.0002	.0002	.0007	.0022	.2039	.0006	.0001
#1	23.45	.0000	.0001	.0009	.0024	.2038	-.0002	.0007
#2	23.83	.0005	.0003	.0006	.0020	.2041	.0015	-.0006

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.18	.0589	.0007	.0003	.0314	2.192	.0030	16.15
#1	17.18	.0591	.0008	.0005	.0336	2.183	.0026	16.15
#2	17.18	.0587	.0006	.0001	.0292	2.201	.0034	16.14

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	8.873	.10662	.0009	.0013	.0029	.0032	.0130
#1	.0006	8.890	.10602	-.0006	.0021	.0028	.0030	.0129
#2	-.0005	8.856	.10723	.0023	.0006	.0031	.0035	.0131

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0129	.0019	9.447
#1	.0129	.0023	9.451
#2	.0129	.0015	9.443

Sample Name: K1409921-016 Acquired: 9/20/2014 14:05:15 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2528.7	39307.	4034.7
#1	2529.2	39262.	4068.7
#2	2528.1	39352.	4000.8

Sample Name: K1409921-017 Acquired: 9/20/2014 14:07:48 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1432	.0023	.0080	.0151	-.00001	.0202	.0001	.0000
#1	.1434	.0031	.0084	.0148	-.00007	.0206	.0001	.0000
#2	.1429	.0015	.0076	.0153	.00006	.0197	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.06	.0007	.0003	.0040	.0052	.5922	.0024	.0016
#1	23.88	.0004	.0003	.0034	.0052	.5895	.0016	.0012
#2	24.25	.0010	.0002	.0045	.0052	.5949	.0032	.0019

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.22	.0872	.0007	.0006	.0467	2.453	.0013	16.61
#1	17.23	.0872	.0009	.0007	.0447	2.457	.0012	16.64
#2	17.21	.0873	.0005	.0005	.0487	2.450	.0015	16.57

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	9.354	.10982	-.0026	-.0002	.0081	.0042	.0287
#1	-.0003	9.363	.10918	-.0026	.0004	.0082	.0036	.0287
#2	.0001	9.345	.11046	-.0025	-.0007	.0081	.0048	.0286

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0285	.0025	9.466
#1	.0285	.0027	9.459
#2	.0284	.0024	9.472

Sample Name: K1409921-017 Acquired: 9/20/2014 14:07:48 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2537.3	39272.	4078.3
#1	2538.3	39179.	4109.5
#2	2536.4	39364.	4047.1

Sample Name: K1409921-018 Acquired: 9/20/2014 14:10:22 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0010	.0020	.0000	-.00006	.0035	.0000	-.0001
#1	.0029	.0003	.0009	-.0001	-.00012	.0017	.0001	-.0002
#2	.0023	-.0023	.0030	.0000	.00000	.0054	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0010	.0002	-.0001	.0005	.0026	.0009	-.0021
#1	.0083	.0015	.0003	-.0002	.0002	.0022	.0001	-.0036
#2	.0081	.0005	.0000	.0000	.0008	.0030	.0017	-.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	.0000	.0000	.0002	.0016	.0422	.0059	.0136
#1	.0041	.0001	.0000	.0002	.0007	.0263	.0076	.0243
#2	.0038	.0000	.0001	.0002	.0025	.0580	.0043	.0030

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0589	.00012	.0003	.0003	.0005	.0002	.0004
#1	.0005	.0611	.00017	.0005	.0003	.0004	.0005	.0005
#2	.0003	.0567	.00008	.0001	.0002	.0006	.0000	.0004

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0005	.0004	-.0347
#1	.0004	.0005	-.0358
#2	.0006	.0003	-.0337

Sample Name: K1409921-018 Acquired: 9/20/2014 14:10:22 Type: Unk
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092014A

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2562.7	40393.	4069.3
#1	2549.2	40624.	4058.1
#2	2576.1	40162.	4080.5

Sample Name: CCVB Acquired: 9/20/2014 14:12:50 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.461	10.09	-.0009	.9911	9.900	-.00003	.0021	.0001
Stddev	.011	.10	.0035	.0007	.058	.00009	.0010	.0000
%RSD	.1470	.9461	396.8	.0656	.5860	283.60	48.92	8.509
#1	7.468	10.16	.0016	.9906	9.859	.00003	.0014	.0001
#2	7.453	10.02	-.0034	.9915	9.942	-.00009	.0028	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	9.705	9.405	.0007	.0004	.0005	.0001	9.624
Stddev	.000	.039	.012	.0003	.0000	.0006	.0008	.025
%RSD	261.0	.3989	.1222	44.35	9.193	127.0	1258.	.2622
#1	.0000	9.732	9.413	.0010	.0005	.0001	-.0005	9.642
#2	-.0001	9.677	9.397	.0005	.0004	.0010	.0006	9.606
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.9995	9.315	9.202	9.831	.9829	.9773	.0002
Stddev	.0000	.0013	.360	.073	.016	.0022	.0101	.0002
%RSD	2.286	.1301	3.865	.7946	.1594	.2269	1.037	103.9
#1	.0012	1.000	9.060	9.254	9.843	.9813	.9701	.0003
#2	.0012	.9986	9.570	9.151	9.820	.9845	.9845	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/20/2014 14:12:50 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	10.07	9.894	.0014	9.684	-.0001	9.961	.97809
Stddev	.0003	.00	.013	.0018	.052	.0004	.009	.00221
%RSD	106.7	.0381	.1339	133.1	.5326	729.5	.0936	.22595
#1	-.0006	10.07	9.884	.0001	9.648	-.0004	9.968	.97965
#2	-.0001	10.06	9.903	.0026	9.720	.0003	9.954	.97653
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.0007	.0006	.0011	.0002	.0003	1.029	.9604
Stddev	.0001	.0009	.0000	.0010	.0002	.0001	.001	.0051
%RSD	12.60	119.6	4.769	96.09	87.27	17.83	.0568	.5318
#1	-.0011	.0001	.0006	.0018	.0001	.0003	1.029	.9640
#2	-.0013	.0014	.0006	.0003	.0004	.0004	1.029	.9568
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2548.8	39373.	4078.1
Stddev	9.5	186.	7.6
%RSD	.37296	.47202	.18711
#1	2542.0	39505.	4072.7
#2	2555.5	39242.	4083.5

Sample Name: CCVA Acquired: 9/20/2014 14:15:23 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2548	.2703	.2490	.2521	.2504	.24771	.2532	.2516
Stddev	.0000	.0008	.0021	.0003	.0004	.00084	.0018	.0003
%RSD	.0127	.2954	.8427	.1151	.1714	.34097	.7181	.1204
#1	.2548	.2697	.2505	.2518	.2507	.24831	.2519	.2514
#2	.2548	.2709	.2475	.2523	.2501	.24712	.2544	.2518
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.4934	.4927	.2508	.2523	.2518	.2492	.2424
Stddev	.0005	.0128	.0001	.0004	.0003	.0002	.0004	.0006
%RSD	.1858	2.585	.0201	.1445	.1036	.0881	.1438	.2455
#1	.2545	.5025	.4927	.2510	.2521	.2516	.2494	.2428
#2	.2539	.4844	.4926	.2505	.2525	.2519	.2489	.2420
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2546	-.0014	.2381	.2443	.2550	.2511	.2425	.2495
Stddev	.0005	.0003	.0143	.0004	.0001	.0005	.0016	.0007
%RSD	.1984	24.34	6.013	.1484	.0423	.1938	.6639	.2801
#1	.2542	-.0011	.2482	.2440	.2549	.2507	.2414	.2490
#2	.2549	-.0016	.2279	.2446	.2550	.2514	.2436	.2500
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/20/2014 14:15:23 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2523	.0003	2.476	.2523	.1195	.2509	.3213	.00029
Stddev	.0010	.0029	.008	.0058	.0039	.0008	.0024	.00003
%RSD	.3968	1059.	.3150	2.314	3.240	.3178	.7507	10.088
#1	.2516	.0023	2.470	.2564	.1222	.2503	.3196	.00027
#2	.2531	-.0018	2.481	.2481	.1167	.2514	.3230	.00031
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	.2526	.2521	.2507	.2476	.2485	.0033	-.0340
Stddev	.0007	.0007	.0008	.0009	.0006	.0001	.0011	.0051
%RSD	.2725	.2770	.3302	.3733	.2477	.0345	33.31	15.07
#1	.2547	.2531	.2515	.2514	.2480	.2486	.0040	-.0376
#2	.2537	.2521	.2527	.2500	.2472	.2484	.0025	-.0304
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2572.9	40182.	4108.8
Stddev	1.7	120.	22.8
%RSD	.06532	.29831	.55531
#1	2574.1	40267.	4125.0
#2	2571.7	40097.	4092.7

Sample Name: CCB Acquired: 9/20/2014 14:17:37 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0022	.0003	-.0012	.0002	-.00001	.0023	.0000
Stddev	.0001	.0033	.0026	.0026	.0004	.00010	.0009	.0000
%RSD	9.470	148.7	894.1	218.4	211.8	820.19	41.75	68.85
#1	.0014	.0045	-.0016	-.0030	-.0001	.00006	.0016	.0000
#2	.0013	-.0001	.0021	.0006	.0005	-.00009	.0029	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0060	.0034	.0008	.0003	.0003	.0003	.0001
Stddev	.0000	.0114	.0001	.0000	.0002	.0005	.0019	.0011
%RSD	69.54	189.3	1.668	2.103	55.10	161.0	562.1	1149.
#1	-.0001	-.0141	.0034	.0008	.0002	.0000	.0017	-.0007
#2	.0000	.0020	.0033	.0008	.0004	.0006	-.0010	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0021	.0397	.0045	.0043	.0000	.0006	.0006
Stddev	.0009	.0015	.0132	.0001	.0009	.000	.0002	.0001
%RSD	957.1	71.87	33.35	2.156	20.59	722.1	36.33	17.27
#1	.0007	-.0010	.0491	.0045	.0037	-.0001	.0008	.0007
#2	-.0006	-.0031	.0304	.0044	.0049	.0001	.0005	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/20/2014 14:17:37 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0015	.0219	-.0003	.0074	.0009	.0620	.00004
Stddev	.000	.0027	.0149	.0028	.0062	.0002	.0085	.00001
%RSD	134.0	175.0	67.77	951.8	84.07	24.27	13.65	23.944
#1	-.0001	.0035	.0324	-.0022	.0030	.0007	.0680	.00005
#2	.0000	-.0004	.0114	.0017	.0118	.0010	.0560	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0000	.0003	.0002	-.0001	.0002	.0022	-.0392
Stddev	.0001	.000	.0002	.0002	.0001	.0002	.0020	.0010
%RSD	5.378	2122.	50.77	106.2	200.5	87.46	90.43	2.595
#1	.0015	-.0003	.0002	.0004	-.0002	.0001	.0036	-.0399
#2	.0016	.0003	.0004	.0001	.0000	.0003	.0008	-.0385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2566.7	39974.	4046.7
Stddev	.7	81.	3.1
%RSD	.02706	.20256	.07608
#1	2566.2	40032.	4044.5
#2	2567.2	39917.	4048.8

Sample Name: CCB Acquired: 9/20/2014 14:20:04 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0010	-.0014	.0002	.0000	-.00009	.0031	.0000
Stddev	.0005	.0023	.0015	.0027	.000	.00008	.0005	.0000
%RSD	31.76	228.4	108.0	1404.	1777.	93.068	15.94	128.2
#1	.0018	-.0006	-.0025	-.0017	.0001	-.00015	.0028	.0001
#2	.0011	.0026	-.0003	.0021	-.0001	-.00003	.0035	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0070	.0029	-.0002	.0000	-.0005	.0002	.0004
Stddev	.000	.0046	.0000	.0001	.0002	.0003	.0001	.0018
%RSD	13.49	65.96	.7305	32.83	2406.	47.69	59.29	467.6
#1	.0000	.0037	.0029	-.0002	.0001	-.0004	.0002	.0017
#2	.0000	.0102	.0029	-.0001	-.0001	-.0007	.0001	-.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0003	.0120	.0038	.0035	.0001	.0003	.0003
Stddev	.0000	.0004	.0234	.0001	.0000	.0000	.0007	.0000
%RSD	18.09	125.9	195.0	1.513	1.230	41.46	224.3	2.744
#1	.0001	.0000	.0285	.0038	.0035	.0000	-.0002	.0003
#2	.0001	-.0005	-.0045	.0039	.0036	.0001	.0008	.0003
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

NR
GM
10/10/14

Sample Name: CCB Acquired: 9/20/2014 14:20:04 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0015	-.0067	.0040	-.0076	.0002	.0561	.00021
Stddev	.0000	.0005	.0274	.0035	.0067	.0002	.0049	.00004
%RSD	33.80	32.27	410.7	88.76	88.12	99.81	8.667	17.371
#1	.0001	-.0019	-.0260	.0065	-.0124	.0004	.0596	.00018
#2	.0001	-.0012	.0127	.0015	-.0029	.0001	.0527	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.0008	.0001	.0009	.0001	.0001	.0004	-.0349
Stddev	.0008	.0006	.0002	.0005	.0000	.0001	.0002	.0051
%RSD	65.00	76.95	173.4	54.13	4.005	76.53	62.51	14.73
#1	-.0006	.0004	.0000	.0012	.0001	.0002	.0005	-.0313
#2	-.0017	.0012	.0003	.0005	.0001	.0001	.0002	-.0386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2568.0	40210.	4067.6
Stddev	8.4	153.	18.0
%RSD	.32690	.38037	.44221
#1	2562.0	40318.	4080.3
#2	2573.9	40102.	4054.8

NR
AW
10/10/14

Sample Name: LLCCV Acquired: 9/20/2014 14:22:32 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0105	.0158	.0098	.0034	.00088	.0186
Stddev	.0004	.0027	.0005	.0013	.0001	.00005	.0010
%RSD	3.328	26.04	3.074	13.68	3.116	5.8644	5.535
#1	.0108	.0086	.0154	.0088	.0035	.00091	.0179
#2	.0103	.0124	.0161	.0107	.0034	.00084	.0194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0009	F .0058	.0199	.0040	.0021	.0030
Stddev	.0001	.0001	.0033	.0001	.0005	.0001	.0001
%RSD	11.13	10.42	56.32	.5209	11.61	6.950	2.292
#1	.0009	.0009	.0035	.0199	.0044	.0022	.0029
#2	.0008	.0010	.0081	.0200	.0037	.0020	.0030
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0200				
Range			-30.00%				

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795 *	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0161	.0088	.0150	.0171	F .0079	F .0083
Stddev	.0000	.0002	.0004	.0009	.0194	.0000	.0011
%RSD	.1053	1.320	4.197	6.017	113.6	.2908	13.46
#1	.0037	.0162	.0086	.0144	.0034	.0079	.0091
#2	.0037	.0159	.0091	.0156	.0308	.0079	.0075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	Chk Fail
Value						.0050	.0050
Range						30.00%	30.00%

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10/1/14

Sample Name: LLCCV Acquired: 9/20/2014 14:22:32 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0014	.0034	.0032	.0342	.1776	.0185
Stddev	.0000	.0003	.0005	.0004	.0009	.0095	.0034
%RSD	3.282	18.60	13.80	13.81	2.568	5.374	18.59
#1	.0009	.0015	.0030	.0029	.0348	.1708	.0160
#2	.0009	.0012	.0037	.0035	.0336	.1843	.0209
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1617	.0042	.2453	.00094	.0096	.0175	.0021
Stddev	.0203	.0010	.0021	.00004	.0016	.0016	.0001
%RSD	12.53	23.26	.8562	4.2352	17.11	8.869	5.277
#1	.1474	.0049	.2438	.00097	.0107	.0164	.0022
#2	.1760	.0035	.2468	.00091	.0084	.0186	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0039	.0039	.0209	F -.0031
Stddev	.0005	.0001	.0004	.0008	.0024
%RSD	11.51	3.834	9.338	3.702	75.43
#1	.0038	.0038	.0036	.0214	-.0015
#2	.0045	.0040	.0041	.0203	-.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value					.0400
Range					-30.00%

Sample Name: LLCCV Acquired: 9/20/2014 14:22:32 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2574.2	40253.	4070.7
Stddev	2.2	76.	10.6
%RSD	.08404	.18833	.25933
#1	2575.7	40199.	4063.3
#2	2572.7	40306.	4078.2

Sample Name: LLCCV Acquired: 9/20/2014 14:24:58 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0125	.0177	.0078	.0034	.00088	.0192	.0009
Stddev	.0004	.0016	.0023	.0016	.0001	.00015	.0022	.0000
%RSD	3.974	13.01	13.14	20.48	1.587	17.270	11.41	1.210
#1	.0111	.0113	.0161	.0090	.0034	.00077	.0208	.0009
#2	.0105	.0136	.0194	.0067	.0035	.00098	.0177	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	F .0109	.0203	.0036	.0021	.0035	.0040	.0199
Stddev	.0000	.0114	.0000	.0003	.0003	.0001	.0004	.0059
%RSD	2.083	105.1	.1828	7.569	15.24	2.271	10.14	29.58
#1	.0009	.0028	.0203	.0035	.0024	.0036	.0043	.0157
#2	.0009	.0190	.0202	.0038	.0019	.0034	.0037	.0240
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0200						
Range		-30.00%						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0171	.0350	F .0082	F .0079	.0009	.0015	.0038
Stddev	.0011	.0003	.0033	.0004	.0036	.0000	.0002	.0002
%RSD	11.00	1.477	9.323	4.415	45.31	2.520	12.27	5.186
#1	.0105	.0173	.0373	.0084	.0105	.0009	.0016	.0039
#2	.0090	.0169	.0327	.0079	.0054	.0009	.0014	.0036
Check ?	Chk Pass	Chk Pass	None	Chk Fail	Chk Fail	Chk Pass	None	Chk Pass
Value				.0050	.0050			
Range				30.00%	30.00%			

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10/10/14

Sample Name: LLCCV Acquired: 9/20/2014 14:24:58 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.0335	.1994	.0186	.1746	.0035	.2534	.00100
Stddev	.0000	.0007	.0222	.0029	.0097	.0005	.0119	.00006
%RSD	.6282	2.029	11.11	15.82	5.564	14.64	4.681	5.7643
#1	.0035	.0340	.2150	.0166	.1677	.0038	.2618	.00104
#2	.0035	.0330	.1837	.0207	.1815	.0031	.2450	.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0175	.0022	.0037	.0038	.0037	.0208	F .0010
Stddev	.0004	.0008	.0002	.0000	.0001	.0001	.0009	.0011
%RSD	5.324	4.376	6.867	.0516	2.134	1.705	4.507	115.4
#1	.0079	.0170	.0021	.0037	.0038	.0037	.0201	.0018
#2	.0085	.0180	.0023	.0037	.0037	.0038	.0215	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0400
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2573.6	40259.	4079.6
Stddev	.2	134.	33.1
%RSD	.00665	.33176	.81211
#1	2573.7	40353.	4103.1
#2	2573.5	40164.	4056.2

NR
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10/10/14

Sample Name: LLCCV,0.5 Acquired: 9/20/2014 14:27:25 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	.0201	.0348	.0181	.0073	.00183	.0388	.0018
Stddev	.0004	.0028	.0006	.0003	.0004	.00001	.0037	.0001
%RSD	2.284	13.83	1.590	1.840	5.135	.69742	9.466	5.484
#1	.0200	.0182	.0352	.0184	.0070	.00182	.0414	.0017
#2	.0193	.0221	.0344	.0179	.0076	.00184	.0362	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0338	.0361	.0069	.0039	.0073	.0077	.0356
Stddev	.0001	.0102	.0001	.0001	.0001	.0000	.0000	.0005
%RSD	5.772	30.17	.2495	2.072	2.591	.2857	.3810	1.426
#1	.0018	.0410	.0361	.0070	.0039	.0073	.0078	.0360
#2	.0016	.0266	.0362	.0068	.0038	.0073	.0077	.0353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0334	.0219	.0117	.0116	.0017	F .0029	.0074
Stddev	.0020	.0004	.0027	.0001	.0005	.0000	.0002	.0000
%RSD	11.56	1.283	12.38	.6504	4.642	.4941	5.357	.0420
#1	.0160	.0331	.0238	.0117	.0112	.0017	.0030	.0074
#2	.0189	.0337	.0200	.0118	.0119	.0017	.0028	.0074
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							.0020	
Range							30.00%	

Sample Name: LLCCV,0.5 Acquired: 9/20/2014 14:27:25 Type: QC
Method: 2014B-ICP04(v37) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	.0714	.3585	.0383	.3400	.0077	.4062	.00182
Stddev	.0003	.0021	.0503	.0018	.0098	.0005	.0125	.00000
%RSD	3.976	2.938	14.03	4.796	2.877	6.454	3.073	.22464
#1	.0068	.0700	.3230	.0396	.3331	.0081	.4150	.00182
#2	.0072	.0729	.3941	.0370	.3469	.0074	.3974	.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0175	.0353	.0039	.0072	.0072	.0071	.0376	F .0319
Stddev	.0018	.0001	.0000	.0006	.0001	.0000	.0019	.0001
%RSD	10.18	.2710	.4040	8.578	1.961	.3143	5.144	.3677
#1	.0163	.0353	.0039	.0076	.0073	.0071	.0389	.0318
#2	.0188	.0354	.0039	.0068	.0071	.0071	.0362	.0320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0800
Range								-30.00%

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2573.8	40410.	4111.5
Stddev	2.2	1.	19.7
%RSD	.08363	.00279	.47833
#1	2572.3	40411.	4097.6
#2	2575.3	40410.	4125.4

Service Request # K1409921
Calibration 100114DMS04
QC in calibration 100114DMS04
QC Service Request # K1409907
STARLIMS run # 414299

6020A ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control (+/-10%)	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control (+/-20%)	X		
7. Spike (+/-20%) and duplicate (<20%) in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control (70-125%)	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. LLICV run (70-130%)	X		
14. Cd Correction Applied	X	X	
15. ICSA and ICSAB (+/-20%) in control	X		
16. Serial dilution run	X		
17. Post spike in control (+/-20%)	X		
18. Was run stop prematurely, If so why?		X	

Comments:

Primary Review By: JDB Date: 10/2/14
Secondary Review By: [signature] Date: 10/2/14

R:\icp\misc\data review forms\icpms review form

Dataset Report

User Name: ALKLS.ALKLSXP373
Computer Name: ALKLSXP373
Dataset File Path: C:\NexION Data\DataSet\100114D\
Report Date/Time: Thursday, October 02, 2014 10:31:54

The Dataset

Sample ID	Date and Time	Read Type	Description	Samp. File Name
RINSE	16:15:14 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\RINSE.001
Blank	16:20:21 Wed 01-Oct-14	Blank		C:\NexION Data\DataSet\100114D\Blank.002
Standard 1	16:25:28 Wed 01-Oct-14	Standard #1		C:\NexION Data\DataSet\100114D\Standard 1.(
ICV	16:30:35 Wed 01-Oct-14	QC Std #1		C:\NexION Data\DataSet\100114D\ICV.004
CCV	16:35:49 Wed 01-Oct-14	QC Std #2		C:\NexION Data\DataSet\100114D\CCV.005
ICB	16:40:57 Wed 01-Oct-14	QC Std #3		C:\NexION Data\DataSet\100114D\ICB.006
ICB	16:45:37 Wed 01-Oct-14	QC Std #3		C:\NexION Data\DataSet\100114D\ICB.007
CCB	16:50:45 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.008
LLICVW	16:55:53 Wed 01-Oct-14	QC Std #5		C:\NexION Data\DataSet\100114D\LLICVW.00
ICSA	17:01:00 Wed 01-Oct-14	QC Std #7		C:\NexION Data\DataSet\100114D\ICSA.010
ICSAB	17:06:08 Wed 01-Oct-14	QC Std #8		C:\NexION Data\DataSet\100114D\ICSAB.011
RINSE	17:11:16 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\RINSE.012
KQ1411738-03	17:16:23 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1411738
KQ1411738-01	17:21:30 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1411738
KQ1411738-02	17:26:37 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1411738
K1409787-001	17:31:44 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-002	17:36:52 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-003	17:41:58 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
CCV	17:47:07 Wed 01-Oct-14	QC Std #2		C:\NexION Data\DataSet\100114D\CCV.019
CCB	17:52:14 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.020
CCB	17:57:15 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.021
K1409787-004	18:02:25 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-005	18:07:31 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-006	18:12:38 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-007	18:17:45 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-008	18:22:53 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-009	18:28:00 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-010	18:33:07 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-011	18:38:14 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-012	18:43:21 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-013	18:48:29 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
CCV	18:53:37 Wed 01-Oct-14	QC Std #2		C:\NexION Data\DataSet\100114D\CCV.032
CCB	18:58:45 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.033
CCB	19:03:49 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.034
LLCCVW	19:08:56 Wed 01-Oct-14	QC Std #6		C:\NexION Data\DataSet\100114D\LLCCVW.03
K1409787-014	19:14:04 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-015	19:19:12 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-016	19:24:19 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-017	19:29:26 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1409787-0
KQ1412142-03	19:34:33 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1412142
KQ1412142-01	19:39:40 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1412142
KQ1412142-02	19:44:47 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\KQ1412142
K1410208-001	19:49:54 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1410208-0
K1410208-002	19:55:01 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1410208-0
K1410208-003	20:00:08 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1410208-0
CCV	20:05:16 Wed 01-Oct-14	QC Std #2		C:\NexION Data\DataSet\100114D\CCV.046
CCB	20:10:23 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.047
CCB	20:15:24 Wed 01-Oct-14	QC Std #4		C:\NexION Data\DataSet\100114D\CCB.048
K1410208-004	20:20:32 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1410208-0
K1410311-001	20:25:39 Wed 01-Oct-14	Sample		C:\NexION Data\DataSet\100114D\K1410311-0

K1410311-002	20:30:46 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-003	20:35:54 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-004	20:41:01 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-005	20:46:08 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-006	20:51:15 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-007	20:56:22 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-008	21:01:29 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-009	21:06:36 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
CCV	21:11:43 Wed 01-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.059
CCB	21:16:51 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.060
CCB	21:21:52 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.061
LLCCVW	21:26:59 Wed 01-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.06
LLCCVW	21:32:01 Wed 01-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.06
K1410311-010	21:37:08 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-011	21:42:15 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-012	21:47:22 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-013	21:52:29 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-014	21:57:37 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-015	22:02:44 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1410311-016	22:07:51 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410311-0
K1409787-001L	22:12:58 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409787-0
K1409787-001A	22:18:05 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409787-0
K1410208-001L	22:23:13 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410208-0
CCV	22:28:21 Wed 01-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.074
CCB	22:33:29 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.075
CCB	22:38:31 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.076
K1410208-001A	22:43:40 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410208-0
KQ1411599-02	22:48:47 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\KQ1411599
KQ1411599-01	22:53:54 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\KQ1411599
K1409907-001	22:59:01 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409907-0
K1409907-001D	23:04:08 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409907-0
K1409907-001L	23:09:15 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409907-0
K1409907-001A	23:14:22 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409907-0
K1409907-001S	23:19:30 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409907-0
K1409921-012	23:24:37 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409921-013	23:29:44 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
CCV	23:34:52 Wed 01-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.087
CCB	23:40:00 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.088
CCB	23:45:00 Wed 01-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.089
LLCCVW	23:50:08 Wed 01-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.09
K1409921-014	23:55:16 Wed 01-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409921-015	00:00:23 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409921-016	00:05:30 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409921-017	00:10:37 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409921-018	00:15:46 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409921-0
K1409963-025	00:20:53 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1409963-0
KQ1412145-04	00:26:00 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\KQ1412145
KQ1412145-03	00:31:08 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\KQ1412145
K1410232-001	00:36:15 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410232-0
K1410424-001	00:41:22 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
CCV	00:46:31 Thu 02-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.101
CCB	00:51:38 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.102
CCB	00:56:38 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.103
K1410424-002	01:01:45 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-003	01:06:51 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-004	01:11:56 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-005	01:17:02 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-005D	01:22:07 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-005L	01:27:13 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-005A	01:32:19 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0

K1410424-005S	01:37:24 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-006	01:42:30 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-007	01:47:35 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
CCV	01:52:42 Thu 02-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.114
CCB	01:57:48 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.115
CCB	02:02:42 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.116
LLCCVW	02:07:48 Thu 02-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.11
K1410424-008	02:12:54 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-009	02:18:00 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-009D	02:23:06 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-009L	02:28:11 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-009A	02:33:17 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-009S	02:38:22 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-010	02:43:28 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-011	02:48:34 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
K1410424-012	02:53:39 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\K1410424-0
50ppb Mo Std	02:58:46 Thu 02-Oct-14	Sample	C:\NexION Data\DataSet\100114D\50ppb Mo S
CCV	03:03:52 Thu 02-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.128
CCV	03:08:45 Thu 02-Oct-14	QC Std #2	C:\NexION Data\DataSet\100114D\CCV.129
CCB	03:13:51 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.130
CCB	03:18:45 Thu 02-Oct-14	QC Std #4	C:\NexION Data\DataSet\100114D\CCB.131
LLCCVW	03:23:51 Thu 02-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.13
LLCCVW	03:28:45 Thu 02-Oct-14	QC Std #6	C:\NexION Data\DataSet\100114D\LLCCVW.13

LABWORKS - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, October 01, 2014 16:20:21
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\Blank.002
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	308117.074			ppb
Be-KED1	9	6.000			ppb
Al-KED1	27	1523.415			ppb
V-KED3	51	7.333			ppb
Cr-KED3	52	8.000			ppb
Cr-KED3	53	4.667			ppb
Co-KED3	59	1.333			ppb
Ni-KED3	60	6.000			ppb
Ni-KED3	62	0.667			ppb
Cu-KED3	63	13.333			ppb
Cu-KED3	65	6.000			ppb
Zn-KED3	66	14.000			ppb
Ge-KED3	72	14613.473			ppb
Ge-KED2	72	47330.621			ppb
As-KED2	75	5.222			ppb
Se-KED2	77	1.667			ppb
Se-KED2	78	17.262			ppb
Se-KED2	82	-1.936			ppb
Mo-KED2	95	5.333			ppb
Mo-KED2	97	4.000			ppb
Mo-KED2	98	9.114			ppb
Cd-KED2	111	1.333			ppb
Cd-KED2	112	1.746			ppb
Cd-KED2	114	3.494			ppb
In-KED2	115	33498.143			ppb
Rh-KED3	103	103329.075			ppb
Ag-KED3	107	4.667			ppb
Ag-KED3	109	5.333			ppb
In-KED1	115	375443.396			ppb
Sb-KED1	121	13.333			ppb
Sb-KED1	123	11.580			ppb
Ba-KED1	135	72.667			ppb
Ba-KED1	137	30.667			ppb
Lu-KED1	175	419527.318			ppb
Tl-KED1	203	17.333			ppb
Tl-KED1	205	43.333			ppb
Pb-KED1	208	126.667			ppb
U-KED1	238	13.333			ppb
Th-KED1	232	213622.407			ppb
Mn-STD1	55	806.689			ppb
Ge-STD1	72	673095.075			ppb

LABWORKS - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, October 01, 2014 16:25:28
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\Standard 1.003
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	307416.329			ppb
Be-KED1	9	72606.768	25.00000	1.2	ppb
Al-KED1	27	618577.752	25.00000	2.2	ppb
V-KED3	51	13268.162	25.00000	5.1	ppb
Cr-KED3	52	18942.551	25.00000	3.9	ppb
Cr-KED3	53	2341.525	25.00000	7.0	ppb
Co-KED3	59	45999.339	25.00000	0.5	ppb
Ni-KED3	60	13476.357	25.00000	1.4	ppb
Ni-KED3	62	2219.506	25.00000	2.0	ppb
Cu-KED3	63	41618.549	25.00000	1.7	ppb
Cu-KED3	65	20099.473	25.00000	3.8	ppb
Zn-KED3	66	3890.530	25.00000	6.9	ppb
Ge-KED3	72	14684.883			ppb
Ge-KED2	72	48312.894			ppb
As-KED2	75	5269.750	25.00000	0.8	ppb
Se-KED2	77	194.112	25.00000	7.6	ppb
Se-KED2	78	664.398	25.00000	1.6	ppb
Se-KED2	82	329.182	25.00000	4.1	ppb
Mo-KED2	95	28773.616	25.00000	1.2	ppb
Mo-KED2	97	18485.286	25.00000	2.4	ppb
Mo-KED2	98	47986.870	25.00000	3.0	ppb
Cd-KED2	111	14809.339	25.00000	2.1	ppb
Cd-KED2	112	27852.147	25.00000	0.6	ppb
Cd-KED2	114	34517.595	25.00000	1.6	ppb
In-KED2	115	33365.232			ppb
Rh-KED3	103	102619.318			ppb
Ag-KED3	107	66384.571	25.00000	0.6	ppb
Ag-KED3	109	63603.991	25.00000	2.2	ppb
In-KED1	115	393357.647			ppb
Sb-KED1	121	262597.592	25.00000	2.7	ppb
Sb-KED1	123	201814.575	25.00000	3.0	ppb
Ba-KED1	135	61760.608	25.00000	2.2	ppb
Ba-KED1	137	100024.303	25.00000	2.1	ppb
Lu-KED1	175	424374.680			ppb
Tl-KED1	203	185959.332	25.00000	1.3	ppb
Tl-KED1	205	441687.604	25.00000	1.0	ppb
Pb-KED1	208	603417.572	25.00000	1.1	ppb
U-KED1	238	693243.586	25.00000	0.3	ppb
Th-KED1	232	217370.095			ppb
Mn-STD1	55	836044.749	25.00000	1.8	ppb
Ge-STD1	72	706180.522			ppb

LABWORKS - Summary Report

Sample ID: ICV
Sample Date/Time: Wednesday, October 01, 2014 16:30:35
Sample Description:
Autosampler Position: 3
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\ICV.004
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	312086.582			ppb
Be-KED1	9	7304.535	2.47639	3.3	ppb
Al-KED1	27	2539646.365	101.34494	3.4	ppb
V-KED3	51	13177.408	24.78159	3.1	ppb
Cr-KED3	52	7609.360	10.02276	5.3	ppb
Cr-KED3	53	956.032	10.15044	2.1	ppb
Co-KED3	59	46264.151	25.13297	5.1	ppb
Ni-KED3	60	13230.795	24.53100	6.0	ppb
Ni-KED3	62	2164.831	24.35509	3.9	ppb
Cu-KED3	63	20275.056	12.16728	6.4	ppb
Cu-KED3	65	10131.596	12.59050	7.4	ppb
Zn-KED3	66	4123.929	26.45400	5.4	ppb
Ge-KED3	72	14706.904			ppb
Ge-KED2	72	47778.785			ppb
As-KED2	75	5517.176	26.47397	2.1	ppb
Se-KED2	77	214.446	27.95681	3.5	ppb
Se-KED2	78	712.690	27.19745	6.1	ppb
Se-KED2	82	349.253	26.81500	2.7	ppb
Mo-KED2	95	30568.699	26.51530	7.9	ppb
Mo-KED2	97	19258.983	26.00696	8.3	ppb
Mo-KED2	98	50273.891	26.12309	5.0	ppb
Cd-KED2	111	7515.644	12.65793	6.2	ppb
Cd-KED2	112	14137.068	12.65732	4.6	ppb
Cd-KED2	114	17747.631	12.81726	4.1	ppb
In-KED2	115	33496.083			ppb
Rh-KED3	103	103082.626			ppb
Ag-KED3	107	32402.051	12.14528	1.0	ppb
Ag-KED3	109	32039.931	12.53225	3.0	ppb
In-KED1	115	395900.885			ppb
Sb-KED1	121	272099.137	25.73335	2.2	ppb
Sb-KED1	123	208571.688	25.65592	2.7	ppb
Ba-KED1	135	242923.528	97.80094	2.3	ppb
Ba-KED1	137	401703.682	99.77239	1.9	ppb
Lu-KED1	175	423010.250			ppb
Tl-KED1	203	195871.668	26.41819	0.9	ppb
Tl-KED1	205	462963.590	26.28871	1.1	ppb
Pb-KED1	208	601294.154	24.99175	0.8	ppb
U-KED1	238	680759.931	24.22345	1.0	ppb
Th-KED1	232	220324.367			ppb
Mn-STD1	55	839378.687	26.00891	4.2	ppb
Ge-STD1	72	681915.936			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9	99			
	Al-KED1	27	101			
	V-KED3	51	99			
	Cr-KED3	52	100			
	Cr-KED3	53	102			
	Co-KED3	59	101			
	Ni-KED3	60	98			
	Ni-KED3	62	97			
	Cu-KED3	63	97			
	Cu-KED3	65	101			
	Zn-KED3	66	106			
>	Ge-KED3	72		101		
>	Ge-KED2	72		101		
	As-KED2	75	106			
	Se-KED2	77	112			
	Se-KED2	78	109			
	Se-KED2	82	107			
	Mo-KED2	95	106			
	Mo-KED2	97	104			
	Mo-KED2	98	104			
	Cd-KED2	111	101			
	Cd-KED2	112	101			
	Cd-KED2	114	103			
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107	97			
	Ag-KED3	109	100			
>	In-KED1	115		105		
	Sb-KED1	121	103			
	Sb-KED1	123	103			
	Ba-KED1	135	98			
	Ba-KED1	137	100			
>	Lu-KED1	175		101		
	Tl-KED1	203	106			
	Tl-KED1	205	105			
	Pb-KED1	208	100			
	U-KED1	238	97			
>	Th-KED1	232		103		
	Mn-STD1	55	104			
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Se-KED2	77	Out of Control

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 16:35:49
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.005
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	321586.190			ppb
Be-KED1	9	72505.628	23.86309	1.0	ppb
Al-KED1	27	628824.808	24.28707	1.9	ppb
V-KED3	51	13406.960	25.29468	1.9	ppb
Cr-KED3	52	18741.642	24.76609	3.8	ppb
Cr-KED3	53	2363.529	25.25660	2.2	ppb
Co-KED3	59	45141.877	24.60202	1.7	ppb
Ni-KED3	60	13291.515	24.72357	3.1	ppb
Ni-KED3	62	2244.843	25.34403	6.1	ppb
Cu-KED3	63	41113.748	24.75147	0.7	ppb
Cu-KED3	65	20329.790	25.34176	2.3	ppb
Zn-KED3	66	3919.872	25.22141	4.2	ppb
Ge-KED3	72	14648.174			ppb
Ge-KED2	72	48367.408			ppb
As-KED2	75	5286.534	25.05129	1.2	ppb
Se-KED2	77	198.890	25.59405	4.2	ppb
Se-KED2	78	649.411	24.39364	2.0	ppb
Se-KED2	82	327.852	24.87001	4.0	ppb
Mo-KED2	95	29217.183	24.86074	0.8	ppb
Mo-KED2	97	18789.683	24.88358	1.1	ppb
Mo-KED2	98	48818.255	24.90443	0.7	ppb
Cd-KED2	111	14670.863	24.25882	3.0	ppb
Cd-KED2	112	27762.073	24.40940	1.7	ppb
Cd-KED2	114	35083.142	24.88368	1.0	ppb
In-KED2	115	34069.613			ppb
Rh-KED3	103	102023.131			ppb
Ag-KED3	107	67153.562	25.44457	3.6	ppb
Ag-KED3	109	64471.247	25.48410	1.1	ppb
In-KED1	115	392970.190			ppb
Sb-KED1	121	261976.566	24.95508	0.8	ppb
Sb-KED1	123	201213.827	24.94487	2.3	ppb
Ba-KED1	135	61986.877	25.11645	2.3	ppb
Ba-KED1	137	100878.350	25.23075	1.8	ppb
Lu-KED1	175	420849.486			ppb
Tl-KED1	203	186005.134	25.21958	1.7	ppb
Tl-KED1	205	440152.184	25.12063	1.1	ppb
Pb-KED1	208	605288.845	25.28847	1.5	ppb
U-KED1	238	688227.799	24.70871	0.3	ppb
Th-KED1	232	218340.208			ppb
Mn-STD1	55	830039.025	25.26393	3.6	ppb
Ge-STD1	72	693787.248			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		104		
	Be-KED1	9	95			
	Al-KED1	27	97			
	V-KED3	51	101			
	Cr-KED3	52	99			
	Cr-KED3	53	101			
	Co-KED3	59	98			
	Ni-KED3	60	99			
	Ni-KED3	62	101			
	Cu-KED3	63	99			
	Cu-KED3	65	101			
	Zn-KED3	66	101			
>	Ge-KED3	72		100		
>	Ge-KED2	72		102		
	As-KED2	75	100			
	Se-KED2	77	102			
	Se-KED2	78	98			
	Se-KED2	82	99			
	Mo-KED2	95	99			
	Mo-KED2	97	100			
	Mo-KED2	98	100			
	Cd-KED2	111	97			
	Cd-KED2	112	98			
	Cd-KED2	114	100			
>	In-KED2	115		102		
>	Rh-KED3	103		99		
	Ag-KED3	107	102			
	Ag-KED3	109	102			
>	In-KED1	115		105		
	Sb-KED1	121	100			
	Sb-KED1	123	100			
	Ba-KED1	135	100			
	Ba-KED1	137	101			
>	Lu-KED1	175		100		
	Tl-KED1	203	101			
	Tl-KED1	205	100			
	Pb-KED1	208	101			
	U-KED1	238	99			
>	Th-KED1	232		102		
	Mn-STD1	55	101			
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: ICB
Sample Date/Time: Wednesday, October 01, 2014 16:40:57
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\ICB.006
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	320535.558			ppb
	Be-KED1	9	6.667	0.00017	665.4	ppb
	Al-KED1	27	1660.763	0.00300	115.5	ppb
	V-KED3	51	5.333	-0.00385	109.8	ppb
	Cr-KED3	52	10.000	0.00261	103.2	ppb
	Cr-KED3	53	2.667	-0.02149	59.3	ppb
	Co-KED3	59	9.333	0.00435	14.7	ppb
	Ni-KED3	60	6.667	0.00128	894.0	ppb
	Ni-KED3	62	0.000	-0.00754	0.0	ppb
	Cu-KED3	63	6.667	-0.00402	47.0	ppb
	Cu-KED3	65	6.667	0.00080	359.3	ppb
	Zn-KED3	66	12.000	-0.01339	160.1	ppb
>	Ge-KED3	72	14672.198			ppb
>	Ge-KED2	72	47957.369			ppb
	As-KED2	75	5.889	0.00288	136.1	ppb
	Se-KED2	77	2.333	0.08429	50.2	ppb
	Se-KED2	78	18.804	0.05159	162.6	ppb
	Se-KED2	82	-1.828	0.01107	2784.9	ppb
	Mo-KED2	95	86.667	0.07055	19.3	ppb
	Mo-KED2	97	56.667	0.07105	26.8	ppb
	Mo-KED2	98	146.969	0.07168	20.9	ppb
	Cd-KED2	111	4.000	0.00450	1.2	ppb
	Cd-KED2	112	2.732	0.00089	176.8	ppb
	Cd-KED2	114	3.031	-0.00033	257.6	ppb
>	In-KED2	115	33439.099			ppb
>	Rh-KED3	103	103277.561			ppb
	Ag-KED3	107	6.667	0.00076	118.7	ppb
	Ag-KED3	109	11.333	0.00234	13.5	ppb
>	In-KED1	115	383779.585			ppb
	Sb-KED1	121	83.334	0.00680	22.1	ppb
	Sb-KED1	123	63.245	0.00652	9.7	ppb
	Ba-KED1	135	58.000	-0.00678	62.4	ppb
	Ba-KED1	137	23.333	-0.00206	98.5	ppb
>	Lu-KED1	175	413179.310			ppb
	Tl-KED1	203	26.000	0.00123	5.5	ppb
	Tl-KED1	205	62.667	0.00116	22.2	ppb
	Pb-KED1	208	149.334	0.00106	130.9	ppb
	U-KED1	238	30.000	0.00061	20.0	ppb
>	Th-KED1	232	213696.491			ppb
	Mn-STD1	55	1021.370	0.00531	15.1	ppb
>	Ge-STD1	72	704405.425			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		104		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mo-KED2	95	Out of Control
QC Std 3	Mo-KED2	97	Out of Control
QC Std 3	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: ICB
Sample Date/Time: Wednesday, October 01, 2014 16:45:37
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\ICB.007
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	317141.833			ppb
	Be-KED1	9	7.333	0.00038	260.8	ppb
	Al-KED1	27	1668.764	0.00396	15.3	ppb
	V-KED3	51	4.667	-0.00519	82.6	ppb
	Cr-KED3	52	6.000	-0.00277	95.2	ppb
	Cr-KED3	53	3.333	-0.01489	163.2	ppb
	Co-KED3	59	5.333	0.00214	76.5	ppb
	Ni-KED3	60	7.333	0.00228	245.5	ppb
	Ni-KED3	62	0.000	-0.00754	0.0	ppb
	Cu-KED3	63	10.667	-0.00170	177.2	ppb
	Cu-KED3	65	2.667	-0.00422	89.1	ppb
	Zn-KED3	66	12.000	-0.01405	327.6	ppb
>	Ge-KED3	72	14835.032			ppb
>	Ge-KED2	72	47874.436			ppb
	As-KED2	75	6.222	0.00457	149.0	ppb
	Se-KED2	77	1.889	0.02641	573.4	ppb
	Se-KED2	78	14.740	-0.10448	154.0	ppb
	Se-KED2	82	1.962	0.29666	53.1	ppb
	Mo-KED2	95	32.667	0.02418	62.1	ppb
	Mo-KED2	97	25.333	0.02927	22.3	ppb
	Mo-KED2	98	67.708	0.03100	15.1	ppb
	Cd-KED2	111	1.667	0.00064	325.7	ppb
	Cd-KED2	112	1.893	0.00017	420.2	ppb
	Cd-KED2	114	2.700	-0.00052	380.2	ppb
>	In-KED2	115	33018.981			ppb
>	Rh-KED3	103	101237.146			ppb
	Ag-KED3	107	8.667	0.00157	31.6	ppb
	Ag-KED3	109	5.333	0.00007	2518.9	ppb
>	In-KED1	115	385340.196			ppb
	Sb-KED1	121	40.667	0.00261	28.3	ppb
	Sb-KED1	123	25.329	0.00170	24.6	ppb
	Ba-KED1	135	49.333	-0.01045	29.2	ppb
	Ba-KED1	137	26.000	-0.00142	116.2	ppb
>	Lu-KED1	175	415581.863			ppb
	Tl-KED1	203	20.000	0.00039	245.1	ppb
	Tl-KED1	205	44.000	0.00007	1447.3	ppb
	Pb-KED1	208	136.000	0.00044	121.7	ppb
	U-KED1	238	32.000	0.00068	18.9	ppb
>	Th-KED1	232	214087.087			ppb
	Mn-STD1	55	1053.372	0.00707	15.0	ppb
>	Ge-STD1	72	687343.608			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		103		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 16:50:45
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.008
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	313698.660			ppb
Be-KED1	9	7.333	0.00040	769.9	ppb
Al-KED1	27	1746.774	0.00768	83.2	ppb
V-KED3	51	6.667	-0.00094	473.0	ppb
Cr-KED3	52	9.333	0.00216	269.9	ppb
Cr-KED3	53	2.667	-0.02115	154.4	ppb
Co-KED3	59	6.000	0.00268	126.8	ppb
Ni-KED3	60	7.333	0.00281	200.5	ppb
Ni-KED3	62	1.333	0.00753	346.7	ppb
Cu-KED3	63	9.333	-0.00224	118.8	ppb
Cu-KED3	65	6.000	0.00028	1635.9	ppb
Zn-KED3	66	18.000	0.02928	52.9	ppb
Ge-KED3	72	14225.082			ppb
Ge-KED2	72	47523.924			ppb
As-KED2	75	6.556	0.00629	161.1	ppb
Se-KED2	77	2.444	0.10090	130.6	ppb
Se-KED2	78	16.252	-0.04295	158.1	ppb
Se-KED2	82	-0.938	0.07663	165.8	ppb
Mo-KED2	95	28.000	0.02005	52.3	ppb
Mo-KED2	97	15.333	0.01563	61.3	ppb
Mo-KED2	98	25.854	0.00894	24.9	ppb
Cd-KED2	111	1.000	-0.00053	328.1	ppb
Cd-KED2	112	4.479	0.00252	60.5	ppb
Cd-KED2	114	2.312	-0.00083	128.8	ppb
In-KED2	115	32887.965			ppb
Rh-KED3	103	99799.719			ppb
Ag-KED3	107	3.333	-0.00043	389.4	ppb
Ag-KED3	109	2.667	-0.00099	50.8	ppb
In-KED1	115	389062.809			ppb
Sb-KED1	121	74.667	0.00591	62.1	ppb
Sb-KED1	123	47.329	0.00452	134.0	ppb
Ba-KED1	135	56.667	-0.00755	91.2	ppb
Ba-KED1	137	44.000	0.00326	348.0	ppb
Lu-KED1	175	408506.584			ppb
Tl-KED1	203	41.333	0.00337	107.3	ppb
Tl-KED1	205	97.334	0.00318	175.7	ppb
Pb-KED1	208	224.668	0.00430	133.2	ppb
U-KED1	238	100.667	0.00326	160.3	ppb
Th-KED1	232	212745.940			ppb
Mn-STD1	55	1070.707	0.00610	17.3	ppb
Ge-STD1	72	720108.637			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		102		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		107		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLICVW
Sample Date/Time: Wednesday, October 01, 2014 16:55:53
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLICVW.009
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	310575.843			ppb
|	Be-KED1	9	52.000	0.01564	29.2	ppb
⌊	Al-KED1	27	50687.121	1.97173	3.5	ppb
⌈	V-KED3	51	112.667	0.19631	13.5	ppb
|	Cr-KED3	52	173.334	0.21563	31.2	ppb
|	Cr-KED3	53	17.333	0.13358	33.7	ppb
|	Co-KED3	59	43.333	0.02264	20.6	ppb
|	Ni-KED3	60	117.334	0.20482	18.8	ppb
|	Ni-KED3	62	17.333	0.18617	25.7	ppb
|	Cu-KED3	63	163.334	0.08917	6.0	ppb
|	Cu-KED3	65	92.667	0.10667	8.5	ppb
|	Zn-KED3	66	88.000	0.47091	6.1	ppb
⌊>	Ge-KED3	72	14816.346			ppb
⌈>	Ge-KED2	72	47083.810			ppb
|	As-KED2	75	111.889	0.52016	5.5	ppb
|	Se-KED2	77	10.111	1.12596	19.1	ppb
|	Se-KED2	78	44.551	1.08739	12.4	ppb
⌊	Se-KED2	82	12.053	1.08292	9.9	ppb
⌈	Mo-KED2	95	80.667	0.06544	19.1	ppb
|	Mo-KED2	97	42.000	0.05143	47.6	ppb
|	Mo-KED2	98	112.083	0.05368	24.1	ppb
|	Cd-KED2	111	14.333	0.02190	30.3	ppb
|	Cd-KED2	112	22.437	0.01856	4.8	ppb
|	Cd-KED2	114	26.589	0.01671	19.6	ppb
⌊>	In-KED2	115	33395.093			ppb
⌈>	Rh-KED3	103	101932.469			ppb
|	Ag-KED3	107	64.667	0.02279	37.7	ppb
⌊	Ag-KED3	109	41.333	0.01420	40.0	ppb
⌈>	In-KED1	115	382700.953			ppb
|	Sb-KED1	121	586.012	0.05597	5.3	ppb
|	Sb-KED1	123	458.171	0.05681	4.6	ppb
|	Ba-KED1	135	156.668	0.03440	1.0	ppb
⌊	Ba-KED1	137	234.002	0.05205	11.4	ppb
⌈>	Lu-KED1	175	415886.901			ppb
|	Tl-KED1	203	168.001	0.02070	20.4	ppb
|	Tl-KED1	205	443.340	0.02313	5.5	ppb
⌊	Pb-KED1	208	615.339	0.02071	4.9	ppb
⌈	U-KED1	238	574.678	0.02067	3.6	ppb
⌊>	Th-KED1	232	212883.170			ppb
⌈	Mn-STD1	55	2726.927	0.05884	8.8	ppb
⌊>	Ge-STD1	72	685192.531			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9	78			
	Al-KED1	27	99			
	V-KED3	51	98			
	Cr-KED3	52	108			
	Cr-KED3	53	67			
	Co-KED3	59	113			
	Ni-KED3	60	102			
	Ni-KED3	62	93			
	Cu-KED3	63	89			
	Cu-KED3	65	107			
	Zn-KED3	66	94			
>	Ge-KED3	72		101		
>	Ge-KED2	72		99		
	As-KED2	75	104			
	Se-KED2	77	113			
	Se-KED2	78	109			
	Se-KED2	82	108			
	Mo-KED2	95	131			
	Mo-KED2	97	103			
	Mo-KED2	98	107			
	Cd-KED2	111	109			
	Cd-KED2	112	93			
	Cd-KED2	114	84			
>	In-KED2	115		100		
>	Rh-KED3	103		99		
	Ag-KED3	107	114			
	Ag-KED3	109	71			
>	In-KED1	115		102		
	Sb-KED1	121	112			
	Sb-KED1	123	114			
	Ba-KED1	135	69			
	Ba-KED1	137	104			
>	Lu-KED1	175		99		
	Tl-KED1	203	104			
	Tl-KED1	205	116			
	Pb-KED1	208	104			
	U-KED1	238	103			
>	Th-KED1	232		100		
	Mn-STD1	55	118			
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Cr-KED3	53	Out of Control
QC Std 5	Mo-KED2	95	Out of Control
QC Std 5	Ba-KED1	135	Out of Control

LABWORKS - Summary Report

Sample ID: ICSA
Sample Date/Time: Wednesday, October 01, 2014 17:01:00
Sample Description:
Autosampler Position: 5
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\ICSA.010
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	284778.786			ppb
|	Be-KED1	9	43.333	0.01410	12.6	ppb
⌊	Al-KED1	27	442786426.158	19410.95995	6.5	ppb
⌈	V-KED3	51	22.667	0.03468	25.4	ppb
|	Cr-KED3	52	159.334	0.22860	8.7	ppb
|	Cr-KED3	53	486.008	5.85658	7.7	ppb
|	Co-KED3	59	388.672	0.23969	9.7	ppb
|	Ni-KED3	60	158.668	0.32373	3.9	ppb
|	Ni-KED3	62	28.000	0.35066	25.3	ppb
|	Cu-KED3	63	437.340	0.29078	3.6	ppb
|	Cu-KED3	65	210.668	0.29075	7.5	ppb
|	Zn-KED3	66	60.000	0.34875	13.8	ppb
⌊>	Ge-KED3	72	12905.161			ppb
⌈>	Ge-KED2	72	41777.331			ppb
|	As-KED2	75	22.889	0.10039	10.8	ppb
|	Se-KED2	77	5.778	0.64710	4.5	ppb
|	Se-KED2	78	17.474	0.09980	136.4	ppb
⌊	Se-KED2	82	-1.827	-0.01068	3166.8	ppb
⌈	Mo-KED2	95	56597.923	54.97999	2.8	ppb
|	Mo-KED2	97	36179.093	54.69541	2.0	ppb
|	Mo-KED2	98	94698.365	55.14783	0.9	ppb
|	Cd-KED2	111	55.333	0.10212	8.3	ppb
|	Cd-KED2	112	96.039	0.09479	4.5	ppb
|	Cd-KED2	114	133.453	0.10559	11.0	ppb
⌊>	In-KED2	115	29847.029			ppb
⌈>	Rh-KED3	103	87001.137			ppb
|	Ag-KED3	107	66.667	0.02760	40.6	ppb
⌊	Ag-KED3	109	73.334	0.03181	13.0	ppb
⌈>	In-KED1	115	340558.480			ppb
|	Sb-KED1	121	2364.862	0.25864	2.1	ppb
|	Sb-KED1	123	1759.437	0.25022	6.6	ppb
|	Ba-KED1	135	406.006	0.15934	11.8	ppb
⌊	Ba-KED1	137	559.344	0.15341	3.6	ppb
⌈>	Lu-KED1	175	401964.026			ppb
|	Tl-KED1	203	58.000	0.00588	25.3	ppb
|	Tl-KED1	205	152.667	0.00664	12.4	ppb
⌊	Pb-KED1	208	2048.724	0.08431	2.6	ppb
⌈	U-KED1	238	84.000	0.00258	6.6	ppb
⌊>	Th-KED1	232	214830.665			ppb
⌈	Mn-STD1	55	42771.310	1.41931	4.5	ppb
⌊>	Ge-STD1	72	625937.157			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		92		
	Be-KED1	9				
	Al-KED1	27	97			
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		88		
>	Ge-KED2	72		88		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		89		
>	Rh-KED3	103		84		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		91		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: ICSAB
Sample Date/Time: Wednesday, October 01, 2014 17:06:08
Sample Description:
Autosampler Position: 6
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\ICSAB.011
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	274164.249			ppb
|	Be-KED1	9	31.333	0.01006	24.1	ppb
⌊	Al-KED1	27	454225690.842	20630.04523	5.4	ppb
⌈	V-KED3	51	23861.914	51.98994	4.8	ppb
|	Cr-KED3	52	32559.729	49.67900	3.6	ppb
|	Cr-KED3	53	4619.414	57.05159	5.0	ppb
|	Co-KED3	59	77007.003	48.42630	4.1	ppb
|	Ni-KED3	60	21552.247	46.25483	3.7	ppb
|	Ni-KED3	62	3505.764	45.64344	1.5	ppb
|	Cu-KED3	63	61664.806	42.84387	3.8	ppb
|	Cu-KED3	65	31358.391	45.10791	4.5	ppb
|	Zn-KED3	66	2977.644	22.07621	0.9	ppb
⌊>	Ge-KED3	72	12704.318			ppb
⌈>	Ge-KED2	72	41521.606			ppb
|	As-KED2	75	4616.857	25.49192	2.1	ppb
|	Se-KED2	77	163.112	24.43487	1.5	ppb
|	Se-KED2	78	542.750	23.73168	1.9	ppb
⌊	Se-KED2	82	278.380	24.59286	2.8	ppb
⌈	Mo-KED2	95	55737.872	54.45613	0.8	ppb
|	Mo-KED2	97	36094.212	54.88459	0.8	ppb
|	Mo-KED2	98	94023.198	55.06915	2.6	ppb
|	Cd-KED2	111	11698.457	22.20131	2.1	ppb
|	Cd-KED2	112	22588.702	22.80229	1.9	ppb
|	Cd-KED2	114	28053.407	22.84703	2.0	ppb
⌊>	In-KED2	115	29673.726			ppb
⌈>	Rh-KED3	103	87960.155			ppb
|	Ag-KED3	107	26445.129	11.62027	1.1	ppb
⌊	Ag-KED3	109	25529.460	11.71140	2.7	ppb
⌈>	In-KED1	115	355374.200			ppb
|	Sb-KED1	121	2480.882	0.26008	4.6	ppb
|	Sb-KED1	123	1835.866	0.25015	1.9	ppb
|	Ba-KED1	135	378.672	0.13904	7.2	ppb
⌊	Ba-KED1	137	595.346	0.15663	6.9	ppb
⌈>	Lu-KED1	175	402508.691			ppb
|	Tl-KED1	203	66.667	0.00709	12.4	ppb
|	Tl-KED1	205	128.001	0.00516	13.7	ppb
⌊	Pb-KED1	208	2077.391	0.08545	0.4	ppb
⌈	U-KED1	238	90.667	0.00274	19.2	ppb
⌊>	Th-KED1	232	219816.573			ppb
⌈	Mn-STD1	55	1532112.516	51.97902	6.0	ppb
⌊>	Ge-STD1	72	623331.654			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		89		
	Be-KED1	9				
	Al-KED1	27	103			
	V-KED3	51	104			
	Cr-KED3	52	99			
	Cr-KED3	53	114			
	Co-KED3	59	97			
	Ni-KED3	60	93			
	Ni-KED3	62	91			
	Cu-KED3	63	86			
	Cu-KED3	65	90			
	Zn-KED3	66	88			
>	Ge-KED3	72		87		
>	Ge-KED2	72		88		
	As-KED2	75	102			
	Se-KED2	77	98			
	Se-KED2	78	95			
	Se-KED2	82	98			
	Mo-KED2	95	109			
	Mo-KED2	97	110			
	Mo-KED2	98	110			
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		89		
>	Rh-KED3	103		85		
	Ag-KED3	107	93			
	Ag-KED3	109	94			
>	In-KED1	115		95		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55	104			
>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: RINSE
Sample Date/Time: Wednesday, October 01, 2014 17:11:16
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\RINSE.012
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	282656.897			ppb
|	Be-KED1	9	5.333	-0.00006	782.5	ppb
⌊	Al-KED1	27	8762.024	0.32481	7.9	ppb
⌈	V-KED3	51	6.667	-0.00097	803.8	ppb
|	Cr-KED3	52	7.333	-0.00052	1076.4	ppb
|	Cr-KED3	53	1.333	-0.03498	37.5	ppb
|	Co-KED3	59	4.667	0.00194	69.8	ppb
|	Ni-KED3	60	7.333	0.00279	335.5	ppb
|	Ni-KED3	62	0.667	0.00014	9296.1	ppb
|	Cu-KED3	63	4.667	-0.00506	41.0	ppb
|	Cu-KED3	65	2.667	-0.00411	94.7	ppb
|	Zn-KED3	66	19.333	0.04029	203.7	ppb
⌊>	Ge-KED3	72	14051.582			ppb
⌈>	Ge-KED2	72	45697.007			ppb
|	As-KED2	75	7.111	0.01034	24.6	ppb
|	Se-KED2	77	2.111	0.06718	161.1	ppb
|	Se-KED2	78	15.420	-0.05005	156.7	ppb
⌊	Se-KED2	82	0.299	0.17459	66.4	ppb
⌈	Mo-KED2	95	127.334	0.10749	15.3	ppb
|	Mo-KED2	97	81.334	0.10606	12.3	ppb
|	Mo-KED2	98	260.377	0.13265	11.8	ppb
|	Cd-KED2	111	2.000	0.00116	387.6	ppb
|	Cd-KED2	112	0.746	-0.00088	103.8	ppb
|	Cd-KED2	114	2.161	-0.00093	48.8	ppb
⌊>	In-KED2	115	32947.529			ppb
⌈>	Rh-KED3	103	99956.663			ppb
|	Ag-KED3	107	4.667	0.00007	1777.5	ppb
⌊	Ag-KED3	109	2.667	-0.00098	129.4	ppb
⌈>	In-KED1	115	381767.739			ppb
|	Sb-KED1	121	28.000	0.00141	10.2	ppb
|	Sb-KED1	123	20.914	0.00118	74.5	ppb
|	Ba-KED1	135	47.333	-0.01109	7.3	ppb
⌊	Ba-KED1	137	18.000	-0.00341	37.9	ppb
⌈>	Lu-KED1	175	428199.427			ppb
|	Tl-KED1	203	20.000	0.00031	234.1	ppb
|	Tl-KED1	205	56.667	0.00071	77.8	ppb
⌊	Pb-KED1	208	150.667	0.00086	198.9	ppb
⌈	U-KED1	238	14.000	0.00000	11777.8	ppb
⌊>	Th-KED1	232	222877.744			ppb
⌈	Mn-STD1	55	1175.383	0.01176	60.8	ppb
⌊>	Ge-STD1	72	669771.479			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		92		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		96		
>	Ge-KED2	72		97		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1411738-03
Sample Date/Time: Wednesday, October 01, 2014 17:16:23
Sample Description:
Autosampler Position: 301
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1411738-03.013
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	293386.787			ppb
|	Be-KED1	9	6.667	0.00037	494.8	ppb
⌊	Al-KED1	27	8630.607	0.30502	3.0	ppb
⌈	V-KED3	51	7.333	0.00045	1342.3	ppb
|	Cr-KED3	52	9.333	0.00211	149.2	ppb
|	Cr-KED3	53	2.667	-0.02048	66.2	ppb
|	Co-KED3	59	7.333	0.00344	98.2	ppb
|	Ni-KED3	60	8.667	0.00539	228.3	ppb
|	Ni-KED3	62	1.333	0.00758	345.6	ppb
|	Cu-KED3	63	12.667	-0.00022	1130.8	ppb
|	Cu-KED3	65	4.667	-0.00155	185.9	ppb
|	Zn-KED3	66	19.333	0.03814	57.3	ppb
⌊>	Ge-KED3	72	14220.411			ppb
⌈>	Ge-KED2	72	46768.785			ppb
|	As-KED2	75	6.889	0.00852	124.8	ppb
|	Se-KED2	77	2.444	0.10831	101.5	ppb
|	Se-KED2	78	20.201	0.12529	95.8	ppb
⌊	Se-KED2	82	0.855	0.21432	71.7	ppb
⌈	Mo-KED2	95	49.333	0.03955	27.6	ppb
|	Mo-KED2	97	33.333	0.04099	54.7	ppb
|	Mo-KED2	98	67.489	0.03148	21.0	ppb
|	Cd-KED2	111	2.333	0.00181	146.0	ppb
|	Cd-KED2	112	2.106	0.00039	168.7	ppb
|	Cd-KED2	114	3.179	-0.00015	971.1	ppb
⌊>	In-KED2	115	32402.293			ppb
⌈>	Rh-KED3	103	98747.492			ppb
|	Ag-KED3	107	7.333	0.00112	76.6	ppb
⌊	Ag-KED3	109	2.667	-0.00099	48.6	ppb
⌈>	In-KED1	115	395757.296			ppb
|	Sb-KED1	121	30.667	0.00157	56.2	ppb
|	Sb-KED1	123	26.583	0.00177	42.0	ppb
|	Ba-KED1	135	62.667	-0.00559	74.5	ppb
⌊	Ba-KED1	137	30.000	-0.00058	227.7	ppb
⌈>	Lu-KED1	175	433832.426			ppb
|	Tl-KED1	203	14.000	-0.00052	146.4	ppb
|	Tl-KED1	205	34.000	-0.00060	57.7	ppb
⌊	Pb-KED1	208	91.333	-0.00161	19.1	ppb
⌈	U-KED1	238	18.000	0.00014	135.1	ppb
⌊>	Th-KED1	232	225198.660			ppb
⌈	Mn-STD1	55	1053.372	0.00803	29.6	ppb
⌊>	Ge-STD1	72	668267.949			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		96		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1411738-01
Sample Date/Time: Wednesday, October 01, 2014 17:21:30
Sample Description:
Autosampler Position: 302
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1411738-01.014
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	288547.284			ppb
Be-KED1	9	7099.764	2.60329	2.6	ppb
Al-KED1	27	2473438.560	106.69569	1.6	ppb
V-KED3	51	12085.778	23.11397	2.0	ppb
Cr-KED3	52	7173.137	9.59986	3.4	ppb
Cr-KED3	53	925.363	9.99645	4.1	ppb
Co-KED3	59	43251.512	23.87967	4.9	ppb
Ni-KED3	60	13230.125	24.93086	0.7	ppb
Ni-KED3	62	2120.157	24.25544	1.5	ppb
Cu-KED3	63	19219.592	11.72185	2.5	ppb
Cu-KED3	65	10066.214	12.71022	2.3	ppb
Zn-KED3	66	4048.574	26.40043	1.1	ppb
Ge-KED3	72	14453.976			ppb
Ge-KED2	72	47539.636			ppb
As-KED2	75	10943.412	52.78847	1.2	ppb
Se-KED2	77	402.561	52.93211	4.7	ppb
Se-KED2	78	1356.653	52.61543	2.4	ppb
Se-KED2	82	704.525	54.19321	2.8	ppb
Mo-KED2	95	22806.860	19.75029	1.3	ppb
Mo-KED2	97	14554.078	19.61517	1.5	ppb
Mo-KED2	98	37702.047	19.57534	4.2	ppb
Cd-KED2	111	14846.713	24.97965	2.2	ppb
Cd-KED2	112	28104.766	25.14892	0.8	ppb
Cd-KED2	114	36039.729	26.01724	2.3	ppb
In-KED2	115	33470.983			ppb
Rh-KED3	103	99596.708			ppb
Ag-KED3	107	32532.345	12.62592	3.3	ppb
Ag-KED3	109	31461.943	12.74096	1.2	ppb
In-KED1	115	392881.535			ppb
Sb-KED1	121	565146.863	53.85272	1.6	ppb
Sb-KED1	123	430812.050	53.41346	1.2	ppb
Ba-KED1	135	250310.623	101.53530	1.6	ppb
Ba-KED1	137	412150.229	103.17549	4.2	ppb
Lu-KED1	175	436407.593			ppb
Tl-KED1	203	416332.270	54.42947	0.2	ppb
Tl-KED1	205	981614.737	54.02944	0.8	ppb
Pb-KED1	208	1275339.788	51.38481	0.6	ppb
U-KED1	238	576058.223	19.69718	0.1	ppb
Th-KED1	232	229255.198			ppb
Mn-STD1	55	824469.006	25.16949	1.7	ppb
Ge-STD1	72	691634.772			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		96		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		107		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1411738-02
Sample Date/Time: Wednesday, October 01, 2014 17:26:37
Sample Description:
Autosampler Position: 303
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1411738-02.015
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	300704.597			ppb
Be-KED1	9	7071.085	2.48821	2.9	ppb
Al-KED1	27	2577841.599	106.88451	6.0	ppb
V-KED3	51	12485.457	23.06072	4.1	ppb
Cr-KED3	52	7729.430	9.99478	6.9	ppb
Cr-KED3	53	954.699	9.94309	10.0	ppb
Co-KED3	59	44836.345	23.91860	5.9	ppb
Ni-KED3	60	13570.445	24.69340	2.7	ppb
Ni-KED3	62	2165.497	23.92888	4.2	ppb
Cu-KED3	63	20094.793	11.83752	3.8	ppb
Cu-KED3	65	10083.562	12.29406	4.4	ppb
Zn-KED3	66	4280.641	26.96242	3.8	ppb
Ge-KED3	72	14971.844			ppb
Ge-KED2	72	47566.063			ppb
As-KED2	75	11095.307	53.49620	1.3	ppb
Se-KED2	77	410.673	53.95961	4.2	ppb
Se-KED2	78	1382.470	53.60498	1.8	ppb
Se-KED2	82	716.201	55.07735	4.9	ppb
Mo-KED2	95	23528.027	20.45892	1.2	ppb
Mo-KED2	97	15446.347	20.90389	1.3	ppb
Mo-KED2	98	39689.375	20.69278	2.3	ppb
Cd-KED2	111	15242.127	25.74973	0.8	ppb
Cd-KED2	112	28712.006	25.79806	2.2	ppb
Cd-KED2	114	36285.022	26.30076	0.4	ppb
In-KED2	115	33334.006			ppb
Rh-KED3	103	103544.665			ppb
Ag-KED3	107	33876.133	12.64208	1.0	ppb
Ag-KED3	109	31677.113	12.33620	2.3	ppb
In-KED1	115	400893.605			ppb
Sb-KED1	121	578241.050	54.01863	3.0	ppb
Sb-KED1	123	444101.947	53.99148	3.5	ppb
Ba-KED1	135	254172.889	101.05550	1.7	ppb
Ba-KED1	137	419952.627	103.02955	2.7	ppb
Lu-KED1	175	432425.499			ppb
Tl-KED1	203	421299.521	55.58445	0.6	ppb
Tl-KED1	205	995701.726	55.30839	1.2	ppb
Pb-KED1	208	1291299.941	52.50906	1.0	ppb
U-KED1	238	586271.269	20.11231	0.7	ppb
Th-KED1	232	228488.596			ppb
Mn-STD1	55	872827.600	26.52194	3.2	ppb
Ge-STD1	72	695051.793			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		107		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		107		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-001
Sample Date/Time: Wednesday, October 01, 2014 17:31:44
Sample Description:
Autosampler Position: 304
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-001.016
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	304381.279			ppb
Be-KED1	9	14.667	0.00303	56.4	ppb
Al-KED1	27	3014033.161	123.27037	1.8	ppb
V-KED3	51	162.668	0.29292	20.3	ppb
Cr-KED3	52	210.002	0.26673	5.4	ppb
Cr-KED3	53	30.000	0.26965	34.6	ppb
Co-KED3	59	140.001	0.07548	10.5	ppb
Ni-KED3	60	2374.864	4.40242	6.8	ppb
Ni-KED3	62	376.672	4.24197	8.2	ppb
Cu-KED3	63	412.673	0.24027	7.6	ppb
Cu-KED3	65	222.002	0.26873	3.5	ppb
Zn-KED3	66	505.342	3.16673	1.4	ppb
Ge-KED3	72	14670.864			ppb
Ge-KED2	72	47582.148			ppb
As-KED2	75	30.444	0.12118	17.8	ppb
Se-KED2	77	3.222	0.20308	51.0	ppb
Se-KED2	78	19.296	0.07757	161.4	ppb
Se-KED2	82	1.962	0.29857	21.9	ppb
Mo-KED2	95	335.337	0.28624	14.2	ppb
Mo-KED2	97	230.002	0.30529	11.9	ppb
Mo-KED2	98	561.792	0.28746	7.6	ppb
Cd-KED2	111	18.000	0.02809	15.9	ppb
Cd-KED2	112	23.493	0.01948	16.0	ppb
Cd-KED2	114	30.655	0.01965	10.5	ppb
In-KED2	115	33420.871			ppb
Rh-KED3	103	101730.399			ppb
Ag-KED3	107	12.000	0.00279	97.2	ppb
Ag-KED3	109	12.000	0.00272	91.7	ppb
In-KED1	115	392307.170			ppb
Sb-KED1	121	334.004	0.03058	6.7	ppb
Sb-KED1	123	225.582	0.02651	5.7	ppb
Ba-KED1	135	5405.023	2.16590	2.7	ppb
Ba-KED1	137	8680.637	2.16893	3.5	ppb
Lu-KED1	175	439678.443			ppb
Tl-KED1	203	46.667	0.00370	27.6	ppb
Tl-KED1	205	129.334	0.00459	20.0	ppb
Pb-KED1	208	25397.993	1.01054	1.3	ppb
U-KED1	238	637.348	0.02150	3.9	ppb
Th-KED1	232	227155.183			ppb
Mn-STD1	55	158483.911	4.80658	3.9	ppb
Ge-STD1	72	693188.198			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		106		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-002
Sample Date/Time: Wednesday, October 01, 2014 17:36:52
Sample Description:
Autosampler Position: 305
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-002.017
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	305545.655			ppb
|	Be-KED1	9	7.333	0.00048	75.9	ppb
⌊	Al-KED1	27	252044.271	10.20975	2.6	ppb
⌈	V-KED3	51	37.333	0.05750	22.1	ppb
|	Cr-KED3	52	450.007	0.59629	11.4	ppb
|	Cr-KED3	53	58.000	0.58084	5.5	ppb
|	Co-KED3	59	90.667	0.04939	20.1	ppb
|	Ni-KED3	60	280.669	0.52139	14.4	ppb
|	Ni-KED3	62	43.333	0.49109	19.5	ppb
|	Cu-KED3	63	966.033	0.58305	4.5	ppb
|	Cu-KED3	65	462.007	0.57888	3.8	ppb
|	Zn-KED3	66	19140.148	125.72142	3.3	ppb
⌊>	Ge-KED3	72	14399.929			ppb
⌈>	Ge-KED2	72	48418.597			ppb
|	As-KED2	75	13.667	0.03949	10.8	ppb
|	Se-KED2	77	1.778	0.00973	293.9	ppb
|	Se-KED2	78	18.268	0.02442	526.0	ppb
⌊	Se-KED2	82	-0.045	0.14691	68.5	ppb
⌈	Mo-KED2	95	116.667	0.09585	11.8	ppb
|	Mo-KED2	97	78.000	0.09920	29.1	ppb
|	Mo-KED2	98	175.563	0.08593	10.4	ppb
|	Cd-KED2	111	7.000	0.00951	48.2	ppb
|	Cd-KED2	112	10.570	0.00785	41.4	ppb
|	Cd-KED2	114	8.453	0.00356	52.1	ppb
⌊>	In-KED2	115	33700.077			ppb
⌈>	Rh-KED3	103	101917.343			ppb
|	Ag-KED3	107	7.333	0.00101	143.2	ppb
⌊	Ag-KED3	109	6.667	0.00065	339.8	ppb
⌈>	In-KED1	115	390362.932			ppb
|	Sb-KED1	121	171.334	0.01510	2.4	ppb
|	Sb-KED1	123	138.001	0.01570	15.0	ppb
|	Ba-KED1	135	2547.560	1.00958	2.7	ppb
⌊	Ba-KED1	137	4364.001	1.09143	5.7	ppb
⌈>	Lu-KED1	175	432126.349			ppb
|	Tl-KED1	203	26.000	0.00107	41.7	ppb
|	Tl-KED1	205	68.667	0.00134	24.7	ppb
⌊	Pb-KED1	208	4021.555	0.15834	1.7	ppb
⌈	U-KED1	238	63.333	0.00175	4.2	ppb
⌊>	Th-KED1	232	221852.463			ppb
⌈	Mn-STD1	55	48135.628	1.42781	1.0	ppb
⌊>	Ge-STD1	72	700101.285			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		101		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-003
Sample Date/Time: Wednesday, October 01, 2014 17:41:58
Sample Description:
Autosampler Position: 306
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-003.018
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	301725.196			ppb
Be-KED1	9	4.000	-0.00066	7.0	ppb
Al-KED1	27	57742.828	2.31995	3.8	ppb
V-KED3	51	12.000	0.00912	112.7	ppb
Cr-KED3	52	227.335	0.29501	12.7	ppb
Cr-KED3	53	37.333	0.35455	15.8	ppb
Co-KED3	59	14.000	0.00699	12.7	ppb
Ni-KED3	60	2900.962	5.46370	4.9	ppb
Ni-KED3	62	481.341	5.51304	9.0	ppb
Cu-KED3	63	88.667	0.04606	23.4	ppb
Cu-KED3	65	36.667	0.03887	7.6	ppb
Zn-KED3	66	148.667	0.88408	9.0	ppb
Ge-KED3	72	14443.302			ppb
Ge-KED2	72	47805.207			ppb
As-KED2	75	6.222	0.00455	100.0	ppb
Se-KED2	77	2.667	0.12981	102.1	ppb
Se-KED2	78	19.157	0.06774	170.4	ppb
Se-KED2	82	0.621	0.19793	92.1	ppb
Mo-KED2	95	74.000	0.06013	2.9	ppb
Mo-KED2	97	45.333	0.05639	32.0	ppb
Mo-KED2	98	109.124	0.05261	21.1	ppb
Cd-KED2	111	3.333	0.00346	125.6	ppb
Cd-KED2	112	6.093	0.00396	47.1	ppb
Cd-KED2	114	6.943	0.00256	108.5	ppb
In-KED2	115	33135.521			ppb
Rh-KED3	103	102021.084			ppb
Ag-KED3	107	6.000	0.00055	286.0	ppb
Ag-KED3	109	5.333	0.00003	4393.5	ppb
In-KED1	115	389523.742			ppb
Sb-KED1	121	40.000	0.00252	27.7	ppb
Sb-KED1	123	34.331	0.00279	13.1	ppb
Ba-KED1	135	196.668	0.04963	24.0	ppb
Ba-KED1	137	218.002	0.04693	15.0	ppb
Lu-KED1	175	428328.495			ppb
Tl-KED1	203	42.667	0.00333	30.3	ppb
Tl-KED1	205	123.334	0.00443	22.4	ppb
Pb-KED1	208	462.669	0.01369	6.1	ppb
U-KED1	238	30.000	0.00057	80.7	ppb
Th-KED1	232	222702.484			ppb
Mn-STD1	55	5714.479	0.14727	4.6	ppb
Ge-STD1	72	699392.308			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 17:47:07
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.019
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	309034.265			ppb
Be-KED1	9	70616.797	24.18754	0.9	ppb
Al-KED1	27	615264.684	24.72536	7.0	ppb
V-KED3	51	13471.024	25.05514	3.1	ppb
Cr-KED3	52	18866.457	24.60486	4.9	ppb
Cr-KED3	53	2314.187	24.39355	3.2	ppb
Co-KED3	59	46685.515	25.08300	1.9	ppb
Ni-KED3	60	13426.313	24.60752	1.8	ppb
Ni-KED3	62	2178.833	24.26058	3.8	ppb
Cu-KED3	63	40108.277	23.79636	0.6	ppb
Cu-KED3	65	20512.723	25.20329	1.0	ppb
Zn-KED3	66	3877.193	24.58774	1.7	ppb
Ge-KED3	72	14861.733			ppb
Ge-KED2	72	48107.879			ppb
As-KED2	75	5264.748	25.08816	2.3	ppb
Se-KED2	77	188.779	24.40802	4.1	ppb
Se-KED2	78	663.274	25.06391	2.8	ppb
Se-KED2	82	330.512	25.21624	5.3	ppb
Mo-KED2	95	28713.502	24.73967	2.0	ppb
Mo-KED2	97	18818.390	25.23336	1.7	ppb
Mo-KED2	98	48565.395	25.08763	1.2	ppb
Cd-KED2	111	14842.708	24.84469	1.3	ppb
Cd-KED2	112	27980.077	24.91109	3.3	ppb
Cd-KED2	114	35109.291	25.21428	0.8	ppb
In-KED2	115	33642.826			ppb
Rh-KED3	103	104444.780			ppb
Ag-KED3	107	67521.262	24.99219	1.8	ppb
Ag-KED3	109	64919.195	25.08415	2.4	ppb
In-KED1	115	406719.244			ppb
Sb-KED1	121	266379.486	24.52294	1.7	ppb
Sb-KED1	123	206444.803	24.73148	1.9	ppb
Ba-KED1	135	63964.888	25.05393	3.0	ppb
Ba-KED1	137	104419.573	25.25144	3.4	ppb
Lu-KED1	175	432484.505			ppb
Tl-KED1	203	192517.934	25.39599	0.3	ppb
Tl-KED1	205	453057.338	25.16238	0.7	ppb
Pb-KED1	208	628194.077	25.53875	1.1	ppb
U-KED1	238	712071.878	24.82748	1.4	ppb
Th-KED1	232	224851.880			ppb
Mn-STD1	55	846919.027	25.28592	0.7	ppb
Ge-STD1	72	707075.018			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9	97			
	Al-KED1	27	99			
	V-KED3	51	100			
	Cr-KED3	52	98			
	Cr-KED3	53	98			
	Co-KED3	59	100			
	Ni-KED3	60	98			
	Ni-KED3	62	97			
	Cu-KED3	63	95			
	Cu-KED3	65	101			
	Zn-KED3	66	98			
>	Ge-KED3	72		102		
>	Ge-KED2	72		102		
	As-KED2	75	100			
	Se-KED2	77	98			
	Se-KED2	78	100			
	Se-KED2	82	101			
	Mo-KED2	95	99			
	Mo-KED2	97	101			
	Mo-KED2	98	100			
	Cd-KED2	111	99			
	Cd-KED2	112	100			
	Cd-KED2	114	101			
>	In-KED2	115		100		
>	Rh-KED3	103		101		
	Ag-KED3	107	100			
	Ag-KED3	109	100			
>	In-KED1	115		108		
	Sb-KED1	121	98			
	Sb-KED1	123	99			
	Ba-KED1	135	100			
	Ba-KED1	137	101			
>	Lu-KED1	175		103		
	Tl-KED1	203	102			
	Tl-KED1	205	101			
	Pb-KED1	208	102			
	U-KED1	238	99			
>	Th-KED1	232		105		
	Mn-STD1	55	101			
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 17:52:14
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.020
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	305271.316			ppb
Be-KED1	9	4.667	-0.00044	245.9	ppb
Al-KED1	27	1548.084	0.00162	234.5	ppb
V-KED3	51	5.333	-0.00380	120.2	ppb
Cr-KED3	52	8.000	-0.00007	3865.1	ppb
Cr-KED3	53	2.000	-0.02872	73.7	ppb
Co-KED3	59	5.333	0.00216	103.4	ppb
Ni-KED3	60	4.000	-0.00382	95.0	ppb
Ni-KED3	62	2.000	0.01472	151.7	ppb
Cu-KED3	63	7.333	-0.00365	19.7	ppb
Cu-KED3	65	2.667	-0.00420	32.9	ppb
Zn-KED3	66	9.333	-0.03091	83.3	ppb
Ge-KED3	72	14721.583			ppb
Ge-KED2	72	46440.079			ppb
As-KED2	75	7.111	0.00988	70.0	ppb
Se-KED2	77	2.000	0.04926	178.5	ppb
Se-KED2	78	19.282	0.09751	184.6	ppb
Se-KED2	82	-0.820	0.08182	248.4	ppb
Mo-KED2	95	68.000	0.05501	12.5	ppb
Mo-KED2	97	54.000	0.06820	20.4	ppb
Mo-KED2	98	117.261	0.05686	11.8	ppb
Cd-KED2	111	1.000	-0.00056	298.7	ppb
Cd-KED2	112	2.319	0.00052	311.8	ppb
Cd-KED2	114	4.537	0.00077	252.2	ppb
In-KED2	115	33103.748			ppb
Rh-KED3	103	101733.046			ppb
Ag-KED3	107	13.333	0.00330	90.5	ppb
Ag-KED3	109	10.000	0.00191	113.0	ppb
In-KED1	115	401713.258			ppb
Sb-KED1	121	52.000	0.00351	23.3	ppb
Sb-KED1	123	44.079	0.00384	43.9	ppb
Ba-KED1	135	57.333	-0.00807	56.5	ppb
Ba-KED1	137	16.000	-0.00411	0.8	ppb
Lu-KED1	175	422029.253			ppb
Tl-KED1	203	24.667	0.00098	71.8	ppb
Tl-KED1	205	50.667	0.00041	279.3	ppb
Pb-KED1	208	107.333	-0.00083	177.0	ppb
U-KED1	238	35.333	0.00076	28.9	ppb
Th-KED1	232	222113.712			ppb
Mn-STD1	55	998.702	0.00520	60.7	ppb
Ge-STD1	72	693171.180			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		107		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	97	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 17:57:15
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.021
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	301253.508			ppb
Be-KED1	9	5.333	-0.00019	193.3	ppb
Al-KED1	27	1600.090	0.00455	35.1	ppb
V-KED3	51	6.000	-0.00280	125.9	ppb
Cr-KED3	52	5.333	-0.00375	139.9	ppb
Cr-KED3	53	2.667	-0.02243	140.0	ppb
Co-KED3	59	6.000	0.00245	112.4	ppb
Ni-KED3	60	8.000	0.00348	215.1	ppb
Ni-KED3	62	3.333	0.02968	217.2	ppb
Cu-KED3	63	8.000	-0.00331	63.4	ppb
Cu-KED3	65	2.667	-0.00423	34.1	ppb
Zn-KED3	66	14.667	0.00179	2384.1	ppb
Ge-KED3	72	14940.477			ppb
Ge-KED2	72	47659.702			ppb
As-KED2	75	6.333	0.00516	133.7	ppb
Se-KED2	77	1.667	-0.00143	5353.6	ppb
Se-KED2	78	19.195	0.07109	53.8	ppb
Se-KED2	82	1.187	0.23972	90.7	ppb
Mo-KED2	95	30.667	0.02238	9.4	ppb
Mo-KED2	97	26.000	0.03023	0.4	ppb
Mo-KED2	98	52.822	0.02315	22.7	ppb
Cd-KED2	111	2.667	0.00231	112.4	ppb
Cd-KED2	112	3.306	0.00144	131.5	ppb
Cd-KED2	114	3.421	-0.00001	18141.0	ppb
In-KED2	115	32940.141			ppb
Rh-KED3	103	101975.408			ppb
Ag-KED3	107	4.667	0.00002	2107.5	ppb
Ag-KED3	109	4.667	-0.00024	497.3	ppb
In-KED1	115	386380.841			ppb
Sb-KED1	121	24.000	0.00100	118.9	ppb
Sb-KED1	123	23.832	0.00146	125.1	ppb
Ba-KED1	135	55.333	-0.00793	93.3	ppb
Ba-KED1	137	19.333	-0.00314	43.5	ppb
Lu-KED1	175	428864.392			ppb
Tl-KED1	203	20.000	0.00031	234.2	ppb
Tl-KED1	205	40.000	-0.00024	41.0	ppb
Pb-KED1	208	103.333	-0.00107	49.2	ppb
U-KED1	238	18.667	0.00016	257.5	ppb
Th-KED1	232	223657.344			ppb
Mn-STD1	55	994.035	0.00444	43.8	ppb
Ge-STD1	72	706142.393			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-004
Sample Date/Time: Wednesday, October 01, 2014 18:02:25
Sample Description:
Autosampler Position: 307
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-004.022
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	295219.883			ppb
|	Be-KED1	9	6.667	0.00034	335.3	ppb
⌊	Al-KED1	27	99687.460	4.14344	1.5	ppb
⌈	V-KED3	51	15.333	0.01488	28.1	ppb
|	Cr-KED3	52	105.334	0.12802	21.7	ppb
|	Cr-KED3	53	12.000	0.07800	99.6	ppb
|	Co-KED3	59	16.000	0.00794	27.1	ppb
|	Ni-KED3	60	42.000	0.06638	30.2	ppb
|	Ni-KED3	62	7.333	0.07491	46.6	ppb
|	Cu-KED3	63	121.334	0.06462	11.3	ppb
|	Cu-KED3	65	36.667	0.03793	16.2	ppb
|	Zn-KED3	66	110.667	0.61920	11.9	ppb
⌊>	Ge-KED3	72	14737.598			ppb
⌈>	Ge-KED2	72	48518.261			ppb
|	As-KED2	75	9.444	0.01931	21.9	ppb
|	Se-KED2	77	1.778	0.00909	555.7	ppb
|	Se-KED2	78	16.851	-0.03281	149.2	ppb
⌊	Se-KED2	82	0.184	0.16323	17.8	ppb
⌈	Mo-KED2	95	12.000	0.00578	49.4	ppb
|	Mo-KED2	97	15.333	0.01538	13.2	ppb
|	Mo-KED2	98	39.927	0.01601	24.5	ppb
|	Cd-KED2	111	5.000	0.00623	83.6	ppb
|	Cd-KED2	112	4.946	0.00290	42.4	ppb
|	Cd-KED2	114	8.843	0.00385	51.8	ppb
⌊>	In-KED2	115	33368.022			ppb
⌈>	Rh-KED3	103	101144.151			ppb
|	Ag-KED3	107	8.667	0.00157	56.8	ppb
⌊	Ag-KED3	109	7.333	0.00085	56.9	ppb
⌈>	In-KED1	115	389152.932			ppb
|	Sb-KED1	121	33.333	0.00187	45.0	ppb
|	Sb-KED1	123	25.748	0.00172	3.5	ppb
|	Ba-KED1	135	481.342	0.16680	19.1	ppb
⌊	Ba-KED1	137	774.688	0.18772	2.4	ppb
⌈>	Lu-KED1	175	432899.836			ppb
|	Tl-KED1	203	20.667	0.00036	342.2	ppb
|	Tl-KED1	205	36.000	-0.00048	89.0	ppb
⌊	Pb-KED1	208	2360.742	0.09060	2.0	ppb
⌈	U-KED1	238	39.333	0.00090	20.6	ppb
⌊>	Th-KED1	232	222456.050			ppb
⌈	Mn-STD1	55	5981.919	0.15424	0.9	ppb
⌊>	Ge-STD1	72	704051.063			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101		
>	Ge-KED2	72		103		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-005
Sample Date/Time: Wednesday, October 01, 2014 18:07:31
Sample Description:
Autosampler Position: 308
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-005.023
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	309440.010			ppb
|	Be-KED1	9	4.667	-0.00047	463.5	ppb
⌊	Al-KED1	27	117786.705	4.68176	5.5	ppb
⌈	V-KED3	51	16.667	0.01732	55.2	ppb
|	Cr-KED3	52	41.333	0.04353	40.3	ppb
|	Cr-KED3	53	10.000	0.05606	100.4	ppb
|	Co-KED3	59	3.333	0.00108	59.9	ppb
|	Ni-KED3	60	15.333	0.01697	75.4	ppb
|	Ni-KED3	62	3.333	0.02934	114.7	ppb
|	Cu-KED3	63	70.667	0.03412	13.0	ppb
|	Cu-KED3	65	26.000	0.02459	17.5	ppb
|	Zn-KED3	66	60.667	0.29696	7.6	ppb
⌊>	Ge-KED3	72	14797.661			ppb
⌈>	Ge-KED2	72	48192.150			ppb
|	As-KED2	75	7.000	0.00801	68.9	ppb
|	Se-KED2	77	2.111	0.05387	304.9	ppb
|	Se-KED2	78	17.087	-0.01891	570.0	ppb
⌊	Se-KED2	82	-0.368	0.12130	116.3	ppb
⌈	Mo-KED2	95	16.667	0.00975	60.5	ppb
|	Mo-KED2	97	12.000	0.01062	26.9	ppb
|	Mo-KED2	98	12.301	0.00154	143.1	ppb
|	Cd-KED2	111	3.667	0.00386	67.1	ppb
|	Cd-KED2	112	3.946	0.00198	122.0	ppb
|	Cd-KED2	114	2.176	-0.00095	168.4	ppb
⌊>	In-KED2	115	33861.527			ppb
⌈>	Rh-KED3	103	102885.941			ppb
|	Ag-KED3	107	7.333	0.00100	83.2	ppb
⌊	Ag-KED3	109	4.000	-0.00052	145.5	ppb
⌈>	In-KED1	115	395829.148			ppb
|	Sb-KED1	121	36.000	0.00208	42.8	ppb
|	Sb-KED1	123	21.748	0.00118	22.2	ppb
|	Ba-KED1	135	171.334	0.03817	9.5	ppb
⌊	Ba-KED1	137	234.669	0.05031	13.8	ppb
⌈>	Lu-KED1	175	431069.701			ppb
|	Tl-KED1	203	11.333	-0.00086	45.6	ppb
|	Tl-KED1	205	34.000	-0.00059	39.0	ppb
⌊	Pb-KED1	208	435.336	0.01246	14.7	ppb
⌈	U-KED1	238	17.333	0.00012	37.9	ppb
⌊>	Th-KED1	232	223168.381			ppb
⌈	Mn-STD1	55	3471.755	0.07898	4.8	ppb
⌊>	Ge-STD1	72	703494.324			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		101		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-006
Sample Date/Time: Wednesday, October 01, 2014 18:12:38
Sample Description:
Autosampler Position: 309
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-006.024
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	310224.018			ppb
	Be-KED1	9	20.000	0.00476	61.7	ppb
	Al-KED1	27	3690334.145	148.11926	3.8	ppb
	V-KED3	51	102.000	0.17539	15.0	ppb
	Cr-KED3	52	2084.819	2.69861	5.8	ppb
	Cr-KED3	53	249.336	2.57364	9.1	ppb
	Co-KED3	59	192.001	0.10207	21.0	ppb
	Ni-KED3	60	1360.732	2.47616	5.2	ppb
	Ni-KED3	62	197.335	2.18151	9.5	ppb
	Cu-KED3	63	2229.507	1.31118	1.4	ppb
	Cu-KED3	65	1127.378	1.37360	4.8	ppb
	Zn-KED3	66	728.685	4.53179	2.7	ppb
>	Ge-KED3	72	14907.107			ppb
>	Ge-KED2	72	48625.964			ppb
	As-KED2	75	25.667	0.09588	13.0	ppb
	Se-KED2	77	2.889	0.15234	45.0	ppb
	Se-KED2	78	17.491	-0.00947	1026.4	ppb
	Se-KED2	82	-0.712	0.09437	161.5	ppb
	Mo-KED2	95	226.668	0.19133	10.1	ppb
	Mo-KED2	97	134.667	0.17577	7.3	ppb
	Mo-KED2	98	363.639	0.18376	8.4	ppb
	Cd-KED2	111	22.000	0.03469	19.1	ppb
	Cd-KED2	112	31.945	0.02697	8.1	ppb
	Cd-KED2	114	43.828	0.02906	2.3	ppb
>	In-KED2	115	33535.381			ppb
>	Rh-KED3	103	103035.699			ppb
	Ag-KED3	107	10.667	0.00226	39.6	ppb
	Ag-KED3	109	6.667	0.00053	82.7	ppb
>	In-KED1	115	397300.086			ppb
	Sb-KED1	121	297.336	0.02667	6.9	ppb
	Sb-KED1	123	243.582	0.02837	5.8	ppb
	Ba-KED1	135	13286.178	5.29869	0.8	ppb
	Ba-KED1	137	21969.557	5.42736	1.2	ppb
>	Lu-KED1	175	440242.746			ppb
	Tl-KED1	203	33.333	0.00196	9.2	ppb
	Tl-KED1	205	61.333	0.00086	65.7	ppb
	Pb-KED1	208	25157.916	0.99968	1.0	ppb
	U-KED1	238	225.335	0.00727	6.0	ppb
>	Th-KED1	232	227736.918			ppb
	Mn-STD1	55	232974.693	6.96268	2.8	ppb
>	Ge-STD1	72	704729.197			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		103		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		106		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		107		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-007
Sample Date/Time: Wednesday, October 01, 2014 18:17:45
Sample Description:
Autosampler Position: 310
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-007.025
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	305270.654			ppb
|	Be-KED1	9	3.333	-0.00091	41.4	ppb
⌊	Al-KED1	27	112509.067	4.52763	1.5	ppb
⌈	V-KED3	51	12.667	0.00993	73.6	ppb
|	Cr-KED3	52	71.334	0.08346	15.6	ppb
|	Cr-KED3	53	8.000	0.03690	162.3	ppb
|	Co-KED3	59	6.667	0.00299	113.6	ppb
|	Ni-KED3	60	56.000	0.09336	20.6	ppb
|	Ni-KED3	62	10.000	0.10446	39.1	ppb
|	Cu-KED3	63	190.001	0.10670	11.1	ppb
|	Cu-KED3	65	95.334	0.11190	20.2	ppb
|	Zn-KED3	66	78.000	0.41224	19.9	ppb
⌊>	Ge-KED3	72	14648.850			ppb
⌈>	Ge-KED2	72	46879.461			ppb
|	As-KED2	75	7.556	0.01167	43.6	ppb
|	Se-KED2	77	2.000	0.04673	287.1	ppb
|	Se-KED2	78	16.164	-0.03758	432.6	ppb
⌊	Se-KED2	82	0.401	0.18063	54.4	ppb
⌈	Mo-KED2	95	10.000	0.00411	73.4	ppb
|	Mo-KED2	97	6.000	0.00275	97.8	ppb
|	Mo-KED2	98	15.635	0.00344	105.9	ppb
|	Cd-KED2	111	3.000	0.00284	3.0	ppb
|	Cd-KED2	112	8.000	0.00564	31.6	ppb
|	Cd-KED2	114	5.106	0.00120	96.2	ppb
⌊>	In-KED2	115	33228.156			ppb
⌈>	Rh-KED3	103	100266.730			ppb
|	Ag-KED3	107	4.667	0.00006	3134.0	ppb
⌊	Ag-KED3	109	7.333	0.00085	138.0	ppb
⌈>	In-KED1	115	394437.557			ppb
|	Sb-KED1	121	51.333	0.00353	33.1	ppb
|	Sb-KED1	123	34.415	0.00274	63.5	ppb
|	Ba-KED1	135	362.671	0.11579	11.1	ppb
⌊	Ba-KED1	137	504.676	0.11767	8.4	ppb
⌈>	Lu-KED1	175	423006.425			ppb
|	Tl-KED1	203	15.333	-0.00029	122.0	ppb
|	Tl-KED1	205	27.333	-0.00092	63.4	ppb
⌊	Pb-KED1	208	1828.712	0.07072	1.2	ppb
⌈	U-KED1	238	31.333	0.00061	63.2	ppb
⌊>	Th-KED1	232	223228.566			ppb
⌈	Mn-STD1	55	6236.694	0.16511	1.7	ppb
⌊>	Ge-STD1	72	692238.291			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-008
Sample Date/Time: Wednesday, October 01, 2014 18:22:53
Sample Description:
Autosampler Position: 311
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-008.026
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	311382.075			ppb
Be-KED1	9	8.000	0.00066	106.8	ppb
Al-KED1	27	238897.487	9.49621	4.0	ppb
V-KED3	51	19.333	0.02293	83.8	ppb
Cr-KED3	52	41.333	0.04444	57.8	ppb
Cr-KED3	53	7.333	0.03037	157.4	ppb
Co-KED3	59	8.667	0.00403	60.0	ppb
Ni-KED3	60	19.333	0.02527	28.3	ppb
Ni-KED3	62	4.667	0.04638	59.0	ppb
Cu-KED3	63	214.668	0.12316	4.2	ppb
Cu-KED3	65	91.334	0.10812	10.5	ppb
Zn-KED3	66	77.334	0.41770	26.9	ppb
Ge-KED3	72	14423.281			ppb
Ge-KED2	72	48539.665			ppb
As-KED2	75	8.778	0.01618	22.7	ppb
Se-KED2	77	1.778	0.00800	1318.8	ppb
Se-KED2	78	18.380	0.02662	472.8	ppb
Se-KED2	82	-0.379	0.11987	92.9	ppb
Mo-KED2	95	9.333	0.00346	204.4	ppb
Mo-KED2	97	6.667	0.00351	85.7	ppb
Mo-KED2	98	15.781	0.00343	104.6	ppb
Cd-KED2	111	3.333	0.00330	126.0	ppb
Cd-KED2	112	2.413	0.00059	275.2	ppb
Cd-KED2	114	6.267	0.00199	107.7	ppb
In-KED2	115	33718.210			ppb
Rh-KED3	103	101531.905			ppb
Ag-KED3	107	6.000	0.00054	138.3	ppb
Ag-KED3	109	4.000	-0.00051	261.7	ppb
In-KED1	115	393378.576			ppb
Sb-KED1	121	25.333	0.00109	47.2	ppb
Sb-KED1	123	16.830	0.00057	133.0	ppb
Ba-KED1	135	356.671	0.11389	36.5	ppb
Ba-KED1	137	421.340	0.09728	4.2	ppb
Lu-KED1	175	423788.251			ppb
Tl-KED1	203	10.000	-0.00101	79.2	ppb
Tl-KED1	205	34.000	-0.00055	38.3	ppb
Pb-KED1	208	1622.036	0.06200	1.5	ppb
U-KED1	238	26.000	0.00042	49.7	ppb
Th-KED1	232	223141.266			ppb
Mn-STD1	55	7164.464	0.19410	4.0	ppb
Ge-STD1	72	690037.282			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		103		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		101		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-009
Sample Date/Time: Wednesday, October 01, 2014 18:28:00
Sample Description:
Autosampler Position: 312
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-009.027
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	308873.855			ppb
|	Be-KED1	9	7.333	0.00046	103.2	ppb
⌊	Al-KED1	27	110505.122	4.39963	4.9	ppb
⌈	V-KED3	51	15.333	0.01445	56.8	ppb
|	Cr-KED3	52	26.000	0.02344	25.8	ppb
|	Cr-KED3	53	3.333	-0.01362	337.9	ppb
|	Co-KED3	59	4.000	0.00141	202.7	ppb
|	Ni-KED3	60	7.333	0.00223	240.5	ppb
|	Ni-KED3	62	4.000	0.03771	64.2	ppb
|	Cu-KED3	63	84.667	0.04248	23.4	ppb
|	Cu-KED3	65	48.667	0.05242	14.3	ppb
|	Zn-KED3	66	93.334	0.50336	10.8	ppb
⌊>	Ge-KED3	72	14848.389			ppb
⌈>	Ge-KED2	72	48160.043			ppb
|	As-KED2	75	8.778	0.01650	38.4	ppb
|	Se-KED2	77	3.333	0.21343	0.7	ppb
|	Se-KED2	78	16.865	-0.02710	217.5	ppb
⌊	Se-KED2	82	-0.813	0.08779	166.2	ppb
⌈	Mo-KED2	95	4.000	-0.00117	251.3	ppb
|	Mo-KED2	97	6.000	0.00269	196.9	ppb
|	Mo-KED2	98	10.009	0.00045	706.5	ppb
|	Cd-KED2	111	3.333	0.00337	26.4	ppb
|	Cd-KED2	112	5.226	0.00312	18.0	ppb
|	Cd-KED2	114	5.700	0.00160	75.6	ppb
⌊>	In-KED2	115	33379.804			ppb
⌈>	Rh-KED3	103	105173.095			ppb
|	Ag-KED3	107	2.667	-0.00076	150.4	ppb
⌊	Ag-KED3	109	6.667	0.00048	334.0	ppb
⌈>	In-KED1	115	392146.614			ppb
|	Sb-KED1	121	34.000	0.00192	32.5	ppb
|	Sb-KED1	123	22.415	0.00129	43.9	ppb
|	Ba-KED1	135	336.004	0.10587	11.4	ppb
⌊	Ba-KED1	137	500.675	0.11746	9.3	ppb
⌈>	Lu-KED1	175	425122.857			ppb
|	Tl-KED1	203	14.000	-0.00048	246.5	ppb
|	Tl-KED1	205	32.000	-0.00067	16.8	ppb
⌊	Pb-KED1	208	1622.702	0.06181	0.4	ppb
⌈	U-KED1	238	23.333	0.00033	51.2	ppb
⌊>	Th-KED1	232	222990.337			ppb
⌈	Mn-STD1	55	3669.805	0.08483	5.4	ppb
⌊>	Ge-STD1	72	704555.352			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		102		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-010
Sample Date/Time: Wednesday, October 01, 2014 18:33:07
Sample Description:
Autosampler Position: 313
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-010.028
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	300124.131			ppb
Be-KED1	9	4.667	-0.00043	246.3	ppb
Al-KED1	27	960189.993	39.78514	0.9	ppb
V-KED3	51	30.667	0.04411	24.7	ppb
Cr-KED3	52	423.340	0.55049	17.9	ppb
Cr-KED3	53	48.667	0.47244	13.8	ppb
Co-KED3	59	34.000	0.01787	7.4	ppb
Ni-KED3	60	209.335	0.38008	16.2	ppb
Ni-KED3	62	36.000	0.40020	25.7	ppb
Cu-KED3	63	358.005	0.20824	8.4	ppb
Cu-KED3	65	187.335	0.22678	4.7	ppb
Zn-KED3	66	120.667	0.69041	7.3	ppb
Ge-KED3	72	14601.459			ppb
Ge-KED2	72	48210.217			ppb
As-KED2	75	9.444	0.01957	50.4	ppb
Se-KED2	77	1.556	-0.01938	631.4	ppb
Se-KED2	78	14.743	-0.11020	36.9	ppb
Se-KED2	82	0.851	0.21384	45.0	ppb
Mo-KED2	95	45.333	0.03458	8.6	ppb
Mo-KED2	97	32.000	0.03770	25.6	ppb
Mo-KED2	98	76.521	0.03497	20.4	ppb
Cd-KED2	111	3.333	0.00336	29.3	ppb
Cd-KED2	112	7.826	0.00543	8.1	ppb
Cd-KED2	114	6.094	0.00186	125.8	ppb
In-KED2	115	33543.376			ppb
Rh-KED3	103	103547.973			ppb
Ag-KED3	107	4.000	-0.00025	309.1	ppb
Ag-KED3	109	3.333	-0.00078	117.0	ppb
In-KED1	115	383767.439			ppb
Sb-KED1	121	41.333	0.00271	43.3	ppb
Sb-KED1	123	33.664	0.00276	9.6	ppb
Ba-KED1	135	2182.167	0.87649	5.9	ppb
Ba-KED1	137	3401.071	0.86401	4.1	ppb
Lu-KED1	175	426177.656			ppb
Tl-KED1	203	17.333	-0.00004	1533.1	ppb
Tl-KED1	205	37.333	-0.00038	167.5	ppb
Pb-KED1	208	1537.366	0.05813	2.3	ppb
U-KED1	238	29.333	0.00056	4.5	ppb
Th-KED1	232	219978.326			ppb
Mn-STD1	55	26102.494	0.76840	2.4	ppb
Ge-STD1	72	695228.466			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-011
Sample Date/Time: Wednesday, October 01, 2014 18:38:14
Sample Description:
Autosampler Position: 314
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-011.029
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	298401.404			ppb
|	Be-KED1	9	4.667	-0.00041	93.3	ppb
⌊	Al-KED1	27	254058.563	10.54755	5.5	ppb
⌈	V-KED3	51	16.000	0.01630	144.4	ppb
|	Cr-KED3	52	80.667	0.09619	10.1	ppb
|	Cr-KED3	53	11.333	0.07130	45.5	ppb
|	Co-KED3	59	20.667	0.01054	15.8	ppb
|	Ni-KED3	60	53.333	0.08814	16.4	ppb
|	Ni-KED3	62	12.667	0.13550	38.2	ppb
|	Cu-KED3	63	184.001	0.10287	15.0	ppb
|	Cu-KED3	65	84.000	0.09731	13.6	ppb
|	Zn-KED3	66	7589.349	48.94693	2.3	ppb
⌊>	Ge-KED3	72	14636.160			ppb
⌈>	Ge-KED2	72	48961.096			ppb
|	As-KED2	75	7.556	0.01004	82.8	ppb
|	Se-KED2	77	2.333	0.07805	108.5	ppb
|	Se-KED2	78	17.026	-0.03174	43.6	ppb
⌊	Se-KED2	82	-0.939	0.08025	219.7	ppb
⌈	Mo-KED2	95	36.000	0.02617	44.4	ppb
|	Mo-KED2	97	16.000	0.01588	69.9	ppb
|	Mo-KED2	98	50.521	0.02127	26.3	ppb
|	Cd-KED2	111	4.333	0.00495	68.2	ppb
|	Cd-KED2	112	5.038	0.00286	172.6	ppb
|	Cd-KED2	114	7.786	0.00304	124.2	ppb
⌊>	In-KED2	115	33698.597			ppb
⌈>	Rh-KED3	103	101655.747			ppb
|	Ag-KED3	107	5.333	0.00028	158.5	ppb
⌊	Ag-KED3	109	4.000	-0.00049	282.1	ppb
⌈>	In-KED1	115	389892.837			ppb
|	Sb-KED1	121	32.667	0.00180	38.8	ppb
|	Sb-KED1	123	18.914	0.00087	116.0	ppb
|	Ba-KED1	135	436.673	0.14752	7.0	ppb
⌊	Ba-KED1	137	582.679	0.13907	8.6	ppb
⌈>	Lu-KED1	175	431081.990			ppb
|	Tl-KED1	203	12.667	-0.00069	157.2	ppb
|	Tl-KED1	205	38.667	-0.00033	249.9	ppb
⌊	Pb-KED1	208	1132.684	0.04087	7.9	ppb
⌈	U-KED1	238	28.667	0.00052	39.6	ppb
⌊>	Th-KED1	232	221830.504			ppb
⌈	Mn-STD1	55	10360.423	0.28433	6.7	ppb
⌊>	Ge-STD1	72	708515.859			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		103		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		101		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-012
Sample Date/Time: Wednesday, October 01, 2014 18:43:21
Sample Description:
Autosampler Position: 315
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-012.030
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	304819.203			ppb
|	Be-KED1	9	6.000	0.00002	7730.8	ppb
⌊	Al-KED1	27	763353.872	31.13844	3.0	ppb
⌈	V-KED3	51	45.333	0.06974	15.0	ppb
|	Cr-KED3	52	316.004	0.39759	10.2	ppb
|	Cr-KED3	53	33.333	0.29811	22.8	ppb
|	Co-KED3	59	55.333	0.02870	21.7	ppb
|	Ni-KED3	60	160.668	0.28100	8.5	ppb
|	Ni-KED3	62	30.000	0.32358	11.7	ppb
|	Cu-KED3	63	230.002	0.12738	3.2	ppb
|	Cu-KED3	65	98.000	0.11195	1.8	ppb
|	Zn-KED3	66	6574.181	41.40663	4.3	ppb
⌊>	Ge-KED3	72	14984.523			ppb
⌈>	Ge-KED2	72	48527.632			ppb
|	As-KED2	75	9.000	0.01728	66.7	ppb
|	Se-KED2	77	2.444	0.09449	91.9	ppb
|	Se-KED2	78	19.258	0.06057	86.8	ppb
⌊	Se-KED2	82	-1.603	0.02980	382.0	ppb
⌈	Mo-KED2	95	31.333	0.02212	32.5	ppb
|	Mo-KED2	97	19.333	0.02025	26.7	ppb
|	Mo-KED2	98	40.374	0.01590	42.3	ppb
|	Cd-KED2	111	4.333	0.00493	50.7	ppb
|	Cd-KED2	112	6.678	0.00432	46.3	ppb
|	Cd-KED2	114	8.313	0.00339	70.9	ppb
⌊>	In-KED2	115	34005.063			ppb
⌈>	Rh-KED3	103	101960.052			ppb
|	Ag-KED3	107	5.333	0.00025	602.1	ppb
⌊	Ag-KED3	109	8.667	0.00134	87.5	ppb
⌈>	In-KED1	115	394308.948			ppb
|	Sb-KED1	121	66.000	0.00496	15.6	ppb
|	Sb-KED1	123	45.166	0.00412	30.3	ppb
|	Ba-KED1	135	1222.719	0.46366	2.6	ppb
⌊	Ba-KED1	137	1966.802	0.48337	7.4	ppb
⌈>	Lu-KED1	175	432190.905			ppb
|	Tl-KED1	203	24.667	0.00090	73.2	ppb
|	Tl-KED1	205	32.667	-0.00067	41.9	ppb
⌊	Pb-KED1	208	4509.609	0.17818	1.1	ppb
⌈	U-KED1	238	69.334	0.00195	17.2	ppb
⌊>	Th-KED1	232	223304.517			ppb
⌈	Mn-STD1	55	49569.859	1.49217	0.2	ppb
⌊>	Ge-STD1	72	690331.732			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		103		
>	Ge-KED2	72		103		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		102		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-013
Sample Date/Time: Wednesday, October 01, 2014 18:48:29
Sample Description:
Autosampler Position: 316
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-013.031
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	305472.348			ppb
Be-KED1	9	8.667	0.00096	120.9	ppb
Al-KED1	27	1465886.973	59.74133	3.2	ppb
V-KED3	51	45.333	0.07247	35.1	ppb
Cr-KED3	52	188.001	0.23978	8.7	ppb
Cr-KED3	53	31.333	0.28762	3.7	ppb
Co-KED3	59	54.667	0.02922	10.3	ppb
Ni-KED3	60	112.667	0.19989	5.5	ppb
Ni-KED3	62	21.333	0.23484	14.6	ppb
Cu-KED3	63	414.006	0.24306	7.8	ppb
Cu-KED3	65	198.668	0.24173	5.9	ppb
Zn-KED3	66	329.337	2.05016	6.0	ppb
Ge-KED3	72	14553.411			ppb
Ge-KED2	72	48056.713			ppb
As-KED2	75	12.111	0.03262	29.7	ppb
Se-KED2	77	2.667	0.12663	88.5	ppb
Se-KED2	78	16.710	-0.03158	149.0	ppb
Se-KED2	82	-0.935	0.07810	115.8	ppb
Mo-KED2	95	28.000	0.01959	53.1	ppb
Mo-KED2	97	22.667	0.02523	34.1	ppb
Mo-KED2	98	46.082	0.01932	23.9	ppb
Cd-KED2	111	6.333	0.00840	62.4	ppb
Cd-KED2	112	11.879	0.00912	31.4	ppb
Cd-KED2	114	16.025	0.00907	16.1	ppb
In-KED2	115	33385.146			ppb
Rh-KED3	103	103310.884			ppb
Ag-KED3	107	3.333	-0.00050	173.4	ppb
Ag-KED3	109	6.667	0.00052	173.7	ppb
In-KED1	115	397051.416			ppb
Sb-KED1	121	73.334	0.00559	11.5	ppb
Sb-KED1	123	62.247	0.00613	19.9	ppb
Ba-KED1	135	1756.108	0.67420	3.4	ppb
Ba-KED1	137	2814.945	0.68870	5.5	ppb
Lu-KED1	175	426485.181			ppb
Tl-KED1	203	20.000	0.00032	1.2	ppb
Tl-KED1	205	48.667	0.00026	91.5	ppb
Pb-KED1	208	5821.797	0.23473	1.1	ppb
U-KED1	238	156.668	0.00505	8.1	ppb
Th-KED1	232	221936.758			ppb
Mn-STD1	55	51467.895	1.55760	2.8	ppb
Ge-STD1	72	687526.150			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		106		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 18:53:37
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.032
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	309172.458			ppb
Be-KED1	9	70525.675	24.16069	2.7	ppb
Al-KED1	27	612553.444	24.61653	1.5	ppb
V-KED3	51	13420.968	25.19173	3.4	ppb
Cr-KED3	52	18485.287	24.30080	2.6	ppb
Cr-KED3	53	2410.203	25.64301	6.9	ppb
Co-KED3	59	45408.073	24.62106	5.3	ppb
Ni-KED3	60	13407.623	24.80130	3.9	ppb
Ni-KED3	62	2188.834	24.57160	4.1	ppb
Cu-KED3	63	39887.609	23.88419	3.4	ppb
Cu-KED3	65	19925.896	24.68444	0.8	ppb
Zn-KED3	66	3843.184	24.57498	1.6	ppb
Ge-KED3	72	14736.936			ppb
Ge-KED2	72	47318.907			ppb
As-KED2	75	5310.876	25.72725	2.5	ppb
Se-KED2	77	189.446	24.91619	5.1	ppb
Se-KED2	78	639.522	24.56304	3.7	ppb
Se-KED2	82	325.852	25.26487	3.3	ppb
Mo-KED2	95	29213.175	25.76310	1.5	ppb
Mo-KED2	97	18339.100	25.17017	1.8	ppb
Mo-KED2	98	48256.489	25.51627	1.5	ppb
Cd-KED2	111	14530.053	24.89327	1.2	ppb
Cd-KED2	112	27957.481	25.47532	2.1	ppb
Cd-KED2	114	35011.382	25.73675	0.8	ppb
In-KED2	115	32869.377			ppb
Rh-KED3	103	102337.250			ppb
Ag-KED3	107	66996.098	25.29825	1.5	ppb
Ag-KED3	109	65037.761	25.63466	2.8	ppb
In-KED1	115	402780.135			ppb
Sb-KED1	121	266131.475	24.74681	3.4	ppb
Sb-KED1	123	203747.458	24.65748	4.6	ppb
Ba-KED1	135	62335.042	24.65385	3.8	ppb
Ba-KED1	137	102363.454	24.99436	3.8	ppb
Lu-KED1	175	426020.447			ppb
Tl-KED1	203	192206.582	25.73996	1.5	ppb
Tl-KED1	205	455561.614	25.68388	1.2	ppb
Pb-KED1	208	622419.859	25.68690	1.1	ppb
U-KED1	238	710545.217	24.70873	0.4	ppb
Th-KED1	232	225421.636			ppb
Mn-STD1	55	849860.502	25.57573	1.1	ppb
Ge-STD1	72	701565.985			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9	97			
	Al-KED1	27	98			
	V-KED3	51	101			
	Cr-KED3	52	97			
	Cr-KED3	53	103			
	Co-KED3	59	98			
	Ni-KED3	60	99			
	Ni-KED3	62	98			
	Cu-KED3	63	96			
	Cu-KED3	65	99			
	Zn-KED3	66	98			
>	Ge-KED3	72		101		
>	Ge-KED2	72		100		
	As-KED2	75	103			
	Se-KED2	77	100			
	Se-KED2	78	98			
	Se-KED2	82	101			
	Mo-KED2	95	103			
	Mo-KED2	97	101			
	Mo-KED2	98	102			
	Cd-KED2	111	100			
	Cd-KED2	112	102			
	Cd-KED2	114	103			
>	In-KED2	115		98		
>	Rh-KED3	103		99		
	Ag-KED3	107	101			
	Ag-KED3	109	103			
>	In-KED1	115		107		
	Sb-KED1	121	99			
	Sb-KED1	123	99			
	Ba-KED1	135	99			
	Ba-KED1	137	100			
>	Lu-KED1	175		102		
	Tl-KED1	203	103			
	Tl-KED1	205	103			
	Pb-KED1	208	103			
	U-KED1	238	99			
>	Th-KED1	232		106		
	Mn-STD1	55	102			
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 18:58:45
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.033
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	301746.894			ppb
Be-KED1	9	10.000	0.00149	251.4	ppb
Al-KED1	27	1555.418	0.00260	51.8	ppb
V-KED3	51	1.333	-0.01133	38.9	ppb
Cr-KED3	52	6.000	-0.00259	177.0	ppb
Cr-KED3	53	0.667	-0.04293	28.9	ppb
Co-KED3	59	6.667	0.00297	44.1	ppb
Ni-KED3	60	5.333	-0.00108	534.0	ppb
Ni-KED3	62	0.000	-0.00754	0.0	ppb
Cu-KED3	63	10.667	-0.00152	52.8	ppb
Cu-KED3	65	4.667	-0.00158	98.7	ppb
Zn-KED3	66	13.333	-0.00290	988.4	ppb
Ge-KED3	72	14423.278			ppb
Ge-KED2	72	47782.445			ppb
As-KED2	75	6.111	0.00401	300.5	ppb
Se-KED2	77	2.111	0.05621	195.0	ppb
Se-KED2	78	14.598	-0.11022	102.3	ppb
Se-KED2	82	-2.157	-0.01545	998.2	ppb
Mo-KED2	95	60.000	0.04802	29.7	ppb
Mo-KED2	97	39.333	0.04837	29.2	ppb
~~Mo-KED2~~	~~98~~	~~104.229~~	~~0.05001~~	~~18.7~~	ppb
Cd-KED2	111	0.333	-0.00168	57.7	ppb
Cd-KED2	112	3.853	0.00190	197.6	ppb
Cd-KED2	114	3.673	0.00017	421.1	ppb
In-KED2	115	33064.723			ppb
Rh-KED3	103	100738.659			ppb
Ag-KED3	107	7.333	0.00108	179.8	ppb
Ag-KED3	109	6.000	0.00034	635.7	ppb
In-KED1	115	391041.557			ppb
Sb-KED1	121	58.667	0.00427	21.0	ppb
Sb-KED1	123	35.413	0.00292	33.2	ppb
Ba-KED1	135	61.333	-0.00585	11.2	ppb
Ba-KED1	137	18.000	-0.00351	36.4	ppb
Lu-KED1	175	418931.712			ppb
Tl-KED1	203	28.667	0.00154	69.8	ppb
Tl-KED1	205	56.000	0.00073	70.5	ppb
Pb-KED1	208	128.000	0.00005	1856.2	ppb
U-KED1	238	54.000	0.00144	31.0	ppb
Th-KED1	232	219507.007			ppb
Mn-STD1	55	851.359	0.00070	635.1	ppb
Ge-STD1	72	690960.636			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 19:03:49
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.034
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	292815.394			ppb
	Be-KED1	9	9.333	0.00132	85.9	ppb
	Al-KED1	27	1584.755	0.00582	9.0	ppb
	V-KED3	51	2.000	-0.01005	38.3	ppb
	Cr-KED3	52	6.667	-0.00157	109.6	ppb
	Cr-KED3	53	2.000	-0.02820	1.4	ppb
	Co-KED3	59	6.000	0.00260	85.0	ppb
	Ni-KED3	60	7.333	0.00270	209.8	ppb
	Ni-KED3	62	2.667	0.02285	151.8	ppb
	Cu-KED3	63	4.000	-0.00558	22.8	ppb
	Cu-KED3	65	4.000	-0.00234	221.9	ppb
	Zn-KED3	66	13.333	-0.00280	1770.2	ppb
>	Ge-KED3	72	14331.854			ppb
>	Ge-KED2	72	47164.403			ppb
	As-KED2	75	7.333	0.01030	106.9	ppb
	Se-KED2	77	1.778	0.01550	597.2	ppb
	Se-KED2	78	19.174	0.07831	36.4	ppb
	Se-KED2	82	-0.041	0.14453	124.6	ppb
	Mo-KED2	95	20.000	0.01314	67.1	ppb
	Mo-KED2	97	9.333	0.00764	45.6	ppb
	Mo-KED2	98	35.489	0.01422	35.1	ppb
	Cd-KED2	111	1.000	-0.00051	338.7	ppb
	Cd-KED2	112	0.680	-0.00093	169.7	ppb
	Cd-KED2	114	1.115	-0.00170	29.2	ppb
>	In-KED2	115	32431.672			ppb
>	Rh-KED3	103	102193.039			ppb
	Ag-KED3	107	5.333	0.00025	680.1	ppb
	Ag-KED3	109	6.000	0.00030	280.5	ppb
>	In-KED1	115	382359.951			ppb
	Sb-KED1	121	19.333	0.00057	142.3	ppb
	Sb-KED1	123	13.832	0.00026	192.2	ppb
	Ba-KED1	135	51.333	-0.00947	50.8	ppb
	Ba-KED1	137	20.000	-0.00288	79.3	ppb
>	Lu-KED1	175	422261.373			ppb
	Tl-KED1	203	22.667	0.00070	180.6	ppb
	Tl-KED1	205	38.000	-0.00032	135.9	ppb
	Pb-KED1	208	144.667	0.00072	63.7	ppb
	U-KED1	238	18.667	0.00017	101.9	ppb
>	Th-KED1	232	221918.457			ppb
	Mn-STD1	55	865.360	0.00160	116.8	ppb
>	Ge-STD1	72	679079.110			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCVW
Sample Date/Time: Wednesday, October 01, 2014 19:08:56
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLCCVW.035
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	299857.855			ppb
|	Be-KED1	9	61.333	0.01958	4.5	ppb
⌊	Al-KED1	27	48686.440	1.95933	5.3	ppb
⌈	V-KED3	51	105.334	0.18832	5.6	ppb
|	Cr-KED3	52	158.001	0.20236	26.4	ppb
|	Cr-KED3	53	18.667	0.15327	53.7	ppb
|	Co-KED3	59	34.667	0.01846	17.4	ppb
|	Ni-KED3	60	113.334	0.20316	9.1	ppb
|	Ni-KED3	62	16.667	0.18453	39.4	ppb
|	Cu-KED3	63	192.001	0.10955	0.7	ppb
|	Cu-KED3	65	86.667	0.10234	8.2	ppb
|	Zn-KED3	66	100.000	0.56554	13.3	ppb
⌊>	Ge-KED3	72	14400.589			ppb
⌈>	Ge-KED2	72	47756.030			ppb
|	As-KED2	75	110.778	0.50677	6.1	ppb
|	Se-KED2	77	9.556	1.03506	16.1	ppb
|	Se-KED2	78	42.585	0.98477	8.3	ppb
⌊	Se-KED2	82	9.062	0.84009	31.8	ppb
⌈	Mo-KED2	95	72.667	0.05944	17.4	ppb
|	Mo-KED2	97	44.667	0.05594	25.3	ppb
|	Mo-KED2	98	104.676	0.05055	3.3	ppb
|	Cd-KED2	111	12.333	0.01885	9.3	ppb
|	Cd-KED2	112	21.130	0.01767	0.7	ppb
|	Cd-KED2	114	33.274	0.02191	11.3	ppb
⌊>	In-KED2	115	32906.306			ppb
⌈>	Rh-KED3	103	100616.028			ppb
|	Ag-KED3	107	58.667	0.02083	14.1	ppb
⌊	Ag-KED3	109	61.333	0.02253	13.4	ppb
⌈>	In-KED1	115	389314.382			ppb
|	Sb-KED1	121	599.346	0.05626	8.2	ppb
|	Sb-KED1	123	430.505	0.05238	4.9	ppb
|	Ba-KED1	135	167.334	0.03764	8.2	ppb
⌊	Ba-KED1	137	208.002	0.04447	6.6	ppb
⌈>	Lu-KED1	175	421558.575			ppb
|	Tl-KED1	203	171.334	0.02085	15.8	ppb
|	Tl-KED1	205	420.673	0.02148	9.2	ppb
⌊	Pb-KED1	208	604.672	0.01992	6.9	ppb
⌈	U-KED1	238	559.344	0.01961	1.1	ppb
⌊>	Th-KED1	232	218134.199			ppb
⌈	Mn-STD1	55	2597.570	0.05584	7.3	ppb
⌊>	Ge-STD1	72	676735.623			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9	98			
	Al-KED1	27	98			
	V-KED3	51	94			
	Cr-KED3	52	101			
	Cr-KED3	53	77			
	Co-KED3	59	92			
	Ni-KED3	60	102			
	Ni-KED3	62	92			
	Cu-KED3	63	110			
	Cu-KED3	65	102			
	Zn-KED3	66	113			
>	Ge-KED3	72		99		
>	Ge-KED2	72		101		
	As-KED2	75	101			
	Se-KED2	77	104			
	Se-KED2	78	98			
	Se-KED2	82	84			
	Mo-KED2	95	119			
	Mo-KED2	97	112			
	Mo-KED2	98	101			
	Cd-KED2	111	94			
	Cd-KED2	112	88			
	Cd-KED2	114	110			
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107	104			
	Ag-KED3	109	113			
>	In-KED1	115		104		
	Sb-KED1	121	113			
	Sb-KED1	123	105			
	Ba-KED1	135	75			
	Ba-KED1	137	89			
>	Lu-KED1	175		100		
	Tl-KED1	203	104			
	Tl-KED1	205	107			
	Pb-KED1	208	100			
	U-KED1	238	98			
>	Th-KED1	232		102		
	Mn-STD1	55	112			
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-014
Sample Date/Time: Wednesday, October 01, 2014 19:14:04
Sample Description:
Autosampler Position: 317
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-014.036
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	305896.342			ppb
|	Be-KED1	9	6.000	0.00002	3101.0	ppb
⌊	Al-KED1	27	49072.174	1.93727	4.3	ppb
⌈	V-KED3	51	12.667	0.01001	107.1	ppb
|	Cr-KED3	52	709.351	0.93005	3.8	ppb
|	Cr-KED3	53	86.667	0.87969	9.0	ppb
|	Co-KED3	59	8.000	0.00364	51.7	ppb
|	Ni-KED3	60	1468.742	2.72799	1.8	ppb
|	Ni-KED3	62	236.669	2.67061	8.5	ppb
|	Cu-KED3	63	36.667	0.01409	27.4	ppb
|	Cu-KED3	65	15.333	0.01164	31.5	ppb
|	Zn-KED3	66	35.333	0.13766	79.6	ppb
⌊>	Ge-KED3	72	14612.804			ppb
⌈>	Ge-KED2	72	47706.190			ppb
|	As-KED2	75	7.222	0.00942	39.8	ppb
|	Se-KED2	77	2.889	0.15918	63.9	ppb
|	Se-KED2	78	16.881	-0.02038	605.3	ppb
⌊	Se-KED2	82	-2.615	-0.05069	253.6	ppb
⌈	Mo-KED2	95	16.000	0.00920	79.8	ppb
|	Mo-KED2	97	13.333	0.01269	55.8	ppb
|	Mo-KED2	98	19.488	0.00539	30.1	ppb
|	Cd-KED2	111	2.333	0.00172	154.4	ppb
|	Cd-KED2	112	4.426	0.00242	63.9	ppb
|	Cd-KED2	114	2.609	-0.00063	229.0	ppb
⌊>	In-KED2	115	33417.847			ppb
⌈>	Rh-KED3	103	102219.485			ppb
|	Ag-KED3	107	4.000	-0.00023	27.6	ppb
⌊	Ag-KED3	109	4.667	-0.00021	619.8	ppb
⌈>	In-KED1	115	387142.949			ppb
|	Sb-KED1	121	14.667	0.00009	251.0	ppb
|	Sb-KED1	123	17.082	0.00064	112.2	ppb
|	Ba-KED1	135	100.000	0.01036	58.9	ppb
⌊	Ba-KED1	137	116.667	0.02158	7.2	ppb
⌈>	Lu-KED1	175	422212.815			ppb
|	Tl-KED1	203	16.667	-0.00010	925.1	ppb
|	Tl-KED1	205	22.667	-0.00119	34.4	ppb
⌊	Pb-KED1	208	144.000	0.00069	59.4	ppb
⌈	U-KED1	238	19.333	0.00019	142.5	ppb
⌊>	Th-KED1	232	222616.596			ppb
⌈	Mn-STD1	55	2258.845	0.04547	5.6	ppb
⌊>	Ge-STD1	72	674600.328			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-015
Sample Date/Time: Wednesday, October 01, 2014 19:19:12
Sample Description:
Autosampler Position: 318
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-015.037
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	297027.729			ppb
Be-KED1	9	8.000	0.00082	310.6	ppb
Al-KED1	27	59352.494	2.42808	4.9	ppb
V-KED3	51	12.667	0.01036	22.4	ppb
Cr-KED3	52	34.000	0.03493	33.0	ppb
Cr-KED3	53	5.333	0.00774	159.0	ppb
Co-KED3	59	4.667	0.00185	34.1	ppb
Ni-KED3	60	15.333	0.01772	12.7	ppb
Ni-KED3	62	1.333	0.00772	171.2	ppb
Cu-KED3	63	84.667	0.04362	11.9	ppb
Cu-KED3	65	39.333	0.04217	8.6	ppb
Zn-KED3	66	69.334	0.36287	3.8	ppb
Ge-KED3	72	14457.979			ppb
Ge-KED2	72	48057.705			ppb
As-KED2	75	5.667	0.00173	328.7	ppb
Se-KED2	77	1.889	0.02585	199.3	ppb
Se-KED2	78	17.208	-0.01253	318.1	ppb
Se-KED2	82	1.079	0.23075	70.9	ppb
Mo-KED2	95	6.000	0.00070	264.7	ppb
Mo-KED2	97	14.000	0.01388	21.7	ppb
Mo-KED2	98	12.447	0.00191	199.6	ppb
Cd-KED2	111	3.333	0.00348	142.5	ppb
Cd-KED2	112	3.919	0.00200	72.1	ppb
Cd-KED2	114	4.491	0.00080	102.5	ppb
In-KED2	115	32826.755			ppb
Rh-KED3	103	101549.710			ppb
Ag-KED3	107	2.000	-0.00098	78.0	ppb
Ag-KED3	109	3.333	-0.00077	116.2	ppb
In-KED1	115	386210.608			ppb
Sb-KED1	121	16.000	0.00021	636.8	ppb
Sb-KED1	123	12.247	0.00004	1908.7	ppb
Ba-KED1	135	132.001	0.02368	19.4	ppb
Ba-KED1	137	179.334	0.03757	9.7	ppb
Lu-KED1	175	422109.468			ppb
Tl-KED1	203	15.333	-0.00029	358.4	ppb
Tl-KED1	205	35.333	-0.00047	75.9	ppb
Pb-KED1	208	1441.362	0.05473	6.2	ppb
U-KED1	238	21.333	0.00026	57.6	ppb
Th-KED1	232	221660.120			ppb
Mn-STD1	55	2383.533	0.05057	10.0	ppb
Ge-STD1	72	664237.272			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-016
Sample Date/Time: Wednesday, October 01, 2014 19:24:19
Sample Description:
Autosampler Position: 319
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-016.038
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	298856.869			ppb
|	Be-KED1	9	6.667	0.00032	362.7	ppb
⌊	Al-KED1	27	83534.304	3.42215	4.7	ppb
⌈	V-KED3	51	13.333	0.01190	125.1	ppb
|	Cr-KED3	52	403.339	0.53345	1.3	ppb
|	Cr-KED3	53	59.333	0.59953	25.7	ppb
|	Co-KED3	59	56.667	0.03072	12.9	ppb
|	Ni-KED3	60	6740.257	12.77952	3.6	ppb
|	Ni-KED3	62	1085.375	12.49480	3.3	ppb
|	Cu-KED3	63	294.670	0.17284	8.0	ppb
|	Cu-KED3	65	139.334	0.16970	2.9	ppb
|	Zn-KED3	66	880.027	5.70990	10.6	ppb
⌊>	Ge-KED3	72	14362.551			ppb
⌈>	Ge-KED2	72	47566.417			ppb
|	As-KED2	75	7.556	0.01112	116.4	ppb
|	Se-KED2	77	2.000	0.04379	182.4	ppb
|	Se-KED2	78	16.373	-0.03947	216.4	ppb
⌊	Se-KED2	82	-0.491	0.10952	189.2	ppb
⌈	Mo-KED2	95	418.006	0.36289	4.5	ppb
|	Mo-KED2	97	260.669	0.35130	8.1	ppb
|	Mo-KED2	98	698.172	0.36329	5.6	ppb
|	Cd-KED2	111	3.333	0.00345	57.3	ppb
|	Cd-KED2	112	3.679	0.00178	200.1	ppb
|	Cd-KED2	114	5.995	0.00188	187.8	ppb
⌊>	In-KED2	115	32977.674			ppb
⌈>	Rh-KED3	103	100709.753			ppb
|	Ag-KED3	107	4.667	0.00005	967.1	ppb
⌊	Ag-KED3	109	6.667	0.00059	80.2	ppb
⌈>	In-KED1	115	388695.613			ppb
|	Sb-KED1	121	69.334	0.00536	39.1	ppb
|	Sb-KED1	123	39.832	0.00349	12.4	ppb
|	Ba-KED1	135	593.346	0.21247	2.5	ppb
⌊	Ba-KED1	137	948.032	0.23171	6.6	ppb
⌈>	Lu-KED1	175	418339.038			ppb
|	Tl-KED1	203	17.333	0.00000	14628.8	ppb
|	Tl-KED1	205	48.000	0.00027	98.1	ppb
⌊	Pb-KED1	208	691.340	0.02376	3.3	ppb
⌈	U-KED1	238	24.667	0.00038	44.2	ppb
⌊>	Th-KED1	232	222199.410			ppb
⌈	Mn-STD1	55	71102.562	2.23185	1.9	ppb
⌊>	Ge-STD1	72	665780.551			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-017
Sample Date/Time: Wednesday, October 01, 2014 19:29:26
Sample Description:
Autosampler Position: 320
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-017.039
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	297287.556			ppb
|	Be-KED1	9	2.667	-0.00111	74.5	ppb
⌊	Al-KED1	27	41424.657	1.67393	2.5	ppb
⌈	V-KED3	51	15.333	0.01557	92.0	ppb
|	Cr-KED3	52	58.667	0.06854	20.8	ppb
|	Cr-KED3	53	10.667	0.06651	100.5	ppb
|	Co-KED3	59	4.000	0.00148	128.1	ppb
|	Ni-KED3	60	22.000	0.03057	33.8	ppb
|	Ni-KED3	62	4.667	0.04582	125.4	ppb
|	Cu-KED3	63	27.333	0.00874	36.5	ppb
|	Cu-KED3	65	11.333	0.00690	42.1	ppb
|	Zn-KED3	66	34.000	0.13328	27.4	ppb
⌊>	Ge-KED3	72	14373.895			ppb
⌈>	Ge-KED2	72	46783.483			ppb
|	As-KED2	75	6.333	0.00576	104.1	ppb
|	Se-KED2	77	1.889	0.03317	397.9	ppb
|	Se-KED2	78	16.625	-0.01725	699.2	ppb
⌊	Se-KED2	82	0.628	0.19683	118.1	ppb
⌈	Mo-KED2	95	6.667	0.00127	75.0	ppb
|	Mo-KED2	97	1.333	-0.00353	91.0	ppb
|	Mo-KED2	98	15.927	0.00370	104.4	ppb
|	Cd-KED2	111	1.333	0.00005	2119.8	ppb
|	Cd-KED2	112	3.879	0.00199	62.6	ppb
|	Cd-KED2	114	3.691	0.00020	744.5	ppb
⌊>	In-KED2	115	32821.506			ppb
⌈>	Rh-KED3	103	102862.346			ppb
|	Ag-KED3	107	6.000	0.00051	145.0	ppb
⌊	Ag-KED3	109	4.667	-0.00025	490.8	ppb
⌈>	In-KED1	115	382552.677			ppb
|	Sb-KED1	121	17.333	0.00037	161.0	ppb
|	Sb-KED1	123	14.998	0.00039	289.7	ppb
|	Ba-KED1	135	133.334	0.02473	21.4	ppb
⌊	Ba-KED1	137	174.001	0.03663	30.5	ppb
⌈>	Lu-KED1	175	416977.142			ppb
|	Tl-KED1	203	12.000	-0.00071	102.1	ppb
|	Tl-KED1	205	30.000	-0.00074	91.8	ppb
⌊	Pb-KED1	208	220.667	0.00402	29.8	ppb
⌈	U-KED1	238	13.333	-0.00002	1285.2	ppb
⌊>	Th-KED1	232	220206.486			ppb
⌈	Mn-STD1	55	1954.801	0.03511	11.0	ppb
⌊>	Ge-STD1	72	683921.435			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1412142-03
Sample Date/Time: Wednesday, October 01, 2014 19:34:33
Sample Description:
Autosampler Position: 321
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1412142-03.040
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	291130.248			ppb
	Be-KED1	9	6.000	0.00011	1249.5	ppb
	Al-KED1	27	6251.371	0.20587	8.0	ppb
	V-KED3	51	4.667	-0.00488	165.4	ppb
	Cr-KED3	52	5.333	-0.00338	44.2	ppb
	Cr-KED3	53	2.667	-0.02061	165.7	ppb
	Co-KED3	59	2.000	0.00040	281.1	ppb
	Ni-KED3	60	8.667	0.00540	110.9	ppb
	Ni-KED3	62	1.333	0.00800	336.5	ppb
	Cu-KED3	63	11.333	-0.00105	61.1	ppb
	Cu-KED3	65	2.667	-0.00408	36.8	ppb
	Zn-KED3	66	16.667	0.01998	392.5	ppb
>	Ge-KED3	72	14272.461			ppb
>	Ge-KED2	72	47350.012			ppb
	As-KED2	75	7.333	0.01021	40.5	ppb
	Se-KED2	77	2.000	0.04367	439.2	ppb
	Se-KED2	78	17.810	0.02073	525.7	ppb
	Se-KED2	82	0.173	0.16428	186.1	ppb
	Mo-KED2	95	7.333	0.00182	221.3	ppb
	Mo-KED2	97	3.333	-0.00076	754.8	ppb
	Mo-KED2	98	8.374	-0.00031	146.1	ppb
	Cd-KED2	111	1.667	0.00063	165.1	ppb
	Cd-KED2	112	2.386	0.00061	90.2	ppb
	Cd-KED2	114	4.143	0.00053	216.6	ppb
>	In-KED2	115	32889.395			ppb
>	Rh-KED3	103	100685.581			ppb
	Ag-KED3	107	5.333	0.00030	390.5	ppb
	Ag-KED3	109	2.667	-0.00101	121.5	ppb
>	In-KED1	115	384580.796			ppb
	Sb-KED1	121	14.667	0.00009	620.5	ppb
	Sb-KED1	123	14.415	0.00032	158.9	ppb
	Ba-KED1	135	61.333	-0.00545	99.1	ppb
	Ba-KED1	137	36.667	0.00135	27.4	ppb
>	Lu-KED1	175	421778.144			ppb
	Tl-KED1	203	18.667	0.00016	564.3	ppb
	Tl-KED1	205	24.667	-0.00107	55.0	ppb
	Pb-KED1	208	91.333	-0.00150	43.7	ppb
	U-KED1	238	19.333	0.00020	110.7	ppb
>	Th-KED1	232	220198.968			ppb
	Mn-STD1	55	706.684	-0.00268	65.6	ppb
>	Ge-STD1	72	660469.423			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1412142-01
Sample Date/Time: Wednesday, October 01, 2014 19:39:40
Sample Description:
Autosampler Position: 322
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1412142-01.041
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	302577.237			ppb
Be-KED1	9	6953.025	2.43407	5.1	ppb
Al-KED1	27	2418145.353	99.62411	5.5	ppb
V-KED3	51	12598.899	23.98988	7.8	ppb
Cr-KED3	52	7223.159	9.62407	3.9	ppb
Cr-KED3	53	951.365	10.22338	3.3	ppb
Co-KED3	59	44519.931	24.45922	1.9	ppb
Ni-KED3	60	12931.851	24.24732	2.5	ppb
Ni-KED3	62	2176.166	24.78104	6.2	ppb
Cu-KED3	63	19789.041	12.01044	4.9	ppb
Cu-KED3	65	10012.842	12.57839	2.8	ppb
Zn-KED3	66	3954.548	25.66265	4.9	ppb
Ge-KED3	72	14532.057			ppb
Ge-KED2	72	47617.266			ppb
As-KED2	75	10551.007	50.83017	2.4	ppb
Se-KED2	77	380.338	49.94076	3.6	ppb
Se-KED2	78	1336.109	51.75330	3.7	ppb
Se-KED2	82	681.971	52.39281	2.0	ppb
Mo-KED2	95	21637.040	18.93090	0.7	ppb
Mo-KED2	97	13926.785	18.96317	0.3	ppb
Mo-KED2	98	37066.476	19.44362	0.3	ppb
Cd-KED2	111	14347.535	24.38890	0.9	ppb
Cd-KED2	112	27643.565	24.99379	2.4	ppb
Cd-KED2	114	34311.382	25.02477	1.2	ppb
In-KED2	115	33129.315			ppb
Rh-KED3	103	101997.946			ppb
Ag-KED3	107	32025.209	12.13811	1.6	ppb
Ag-KED3	109	31779.326	12.57232	2.3	ppb
In-KED1	115	391551.661			ppb
Sb-KED1	121	531408.263	50.81025	0.8	ppb
Sb-KED1	123	409610.357	50.98628	2.6	ppb
Ba-KED1	135	243330.305	99.10750	3.3	ppb
Ba-KED1	137	399877.030	100.45454	2.5	ppb
Lu-KED1	175	433108.167			ppb
Tl-KED1	203	399135.882	52.58094	1.2	ppb
Tl-KED1	205	941703.142	52.22732	1.3	ppb
Pb-KED1	208	1208850.000	49.07707	0.9	ppb
U-KED1	238	560622.685	19.52608	0.5	ppb
Th-KED1	232	225077.468			ppb
Mn-STD1	55	810428.282	24.38491	0.9	ppb
Ge-STD1	72	701612.463			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1412142-02
Sample Date/Time: Wednesday, October 01, 2014 19:44:47
Sample Description:
Autosampler Position: 323
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1412142-02.042
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	302600.810			ppb
|	Be-KED1	9	7159.797	2.50186	4.2	ppb
⌊	Al-KED1	27	2547164.789	104.83289	4.4	ppb
⌈	V-KED3	51	12449.423	23.80179	2.1	ppb
|	Cr-KED3	52	7682.069	10.28281	5.4	ppb
|	Cr-KED3	53	992.034	10.71278	3.1	ppb
|	Co-KED3	59	45910.345	25.34417	1.9	ppb
|	Ni-KED3	60	13408.296	25.25901	3.7	ppb
|	Ni-KED3	62	2150.829	24.59542	1.8	ppb
|	Cu-KED3	63	20158.891	12.29136	3.6	ppb
|	Cu-KED3	65	10289.039	12.98755	2.1	ppb
|	Zn-KED3	66	4104.590	26.75931	2.7	ppb
⌊>	Ge-KED3	72	14457.979			ppb
⌈>	Ge-KED2	72	48104.859			ppb
|	As-KED2	75	10983.999	52.36267	0.8	ppb
|	Se-KED2	77	396.228	51.49216	4.2	ppb
|	Se-KED2	78	1354.680	51.91263	2.3	ppb
⌊	Se-KED2	82	709.643	53.94747	1.5	ppb
⌈	Mo-KED2	95	22604.538	19.73220	0.2	ppb
|	Mo-KED2	97	14757.625	20.04952	3.2	ppb
|	Mo-KED2	98	38251.448	20.02336	2.0	ppb
|	Cd-KED2	111	14511.368	24.61541	2.5	ppb
|	Cd-KED2	112	28377.533	25.59968	1.9	ppb
|	Cd-KED2	114	35628.853	25.92457	0.8	ppb
⌊>	In-KED2	115	33204.111			ppb
⌈>	Rh-KED3	103	101989.507			ppb
|	Ag-KED3	107	33244.668	12.59549	2.9	ppb
⌊	Ag-KED3	109	32637.279	12.90876	4.5	ppb
⌈>	In-KED1	115	385882.264			ppb
|	Sb-KED1	121	558814.214	54.22986	3.9	ppb
|	Sb-KED1	123	417684.403	52.73704	3.8	ppb
|	Ba-KED1	135	248980.530	102.83962	2.2	ppb
⌊	Ba-KED1	137	412722.485	105.19473	3.6	ppb
⌈>	Lu-KED1	175	430016.496			ppb
|	Tl-KED1	203	407857.582	54.11587	0.3	ppb
|	Tl-KED1	205	959928.587	53.62210	0.4	ppb
⌊	Pb-KED1	208	1252136.775	51.20703	1.5	ppb
⌈	U-KED1	238	573427.940	20.15291	0.0	ppb
⌊>	Th-KED1	232	223047.824			ppb
⌈	Mn-STD1	55	842713.882	25.44468	4.1	ppb
⌊>	Ge-STD1	72	699344.240			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-001
Sample Date/Time: Wednesday, October 01, 2014 19:49:54
Sample Description:
Autosampler Position: 324
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410208-001.043
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	307971.827			ppb
|	Be-KED1	9	4.000	-0.00067	182.6	ppb
⌊	Al-KED1	27	1090590.237	44.06472	3.0	ppb
⌈	V-KED3	51	20.667	0.02505	5.5	ppb
|	Cr-KED3	52	29.333	0.02797	59.1	ppb
|	Cr-KED3	53	6.667	0.02082	149.3	ppb
|	Co-KED3	59	22.667	0.01163	31.8	ppb
|	Ni-KED3	60	110.000	0.19288	7.8	ppb
|	Ni-KED3	62	28.667	0.31611	19.2	ppb
|	Cu-KED3	63	540.677	0.31660	9.2	ppb
|	Cu-KED3	65	270.669	0.32945	4.5	ppb
|	Zn-KED3	66	288.003	1.76662	5.3	ppb
⌊>	Ge-KED3	72	14674.202			ppb
⌈>	Ge-KED2	72	48114.916			ppb
|	As-KED2	75	17.000	0.05545	60.6	ppb
|	Se-KED2	77	2.111	0.05611	458.8	ppb
|	Se-KED2	78	16.632	-0.03528	122.6	ppb
⌊	Se-KED2	82	2.185	0.31841	80.8	ppb
⌈	Mo-KED2	95	102.000	0.08591	0.7	ppb
|	Mo-KED2	97	66.667	0.08661	25.1	ppb
|	Mo-KED2	98	170.229	0.08588	7.9	ppb
|	Cd-KED2	111	5.000	0.00637	46.2	ppb
|	Cd-KED2	112	6.985	0.00485	19.0	ppb
|	Cd-KED2	114	11.976	0.00635	35.1	ppb
⌊>	In-KED2	115	32666.285			ppb
⌈>	Rh-KED3	103	102551.048			ppb
|	Ag-KED3	107	9.333	0.00177	62.6	ppb
⌊	Ag-KED3	109	9.333	0.00162	81.3	ppb
⌈>	In-KED1	115	389830.476			ppb
|	Sb-KED1	121	232.002	0.02094	7.7	ppb
|	Sb-KED1	123	177.833	0.02073	18.2	ppb
|	Ba-KED1	135	875.360	0.32707	1.0	ppb
⌊	Ba-KED1	137	1346.730	0.33160	3.5	ppb
⌈>	Lu-KED1	175	421017.901			ppb
|	Tl-KED1	203	31.333	0.00189	56.0	ppb
|	Tl-KED1	205	54.667	0.00064	91.3	ppb
⌊	Pb-KED1	208	8341.608	0.34312	1.9	ppb
⌈	U-KED1	238	103.334	0.00315	17.0	ppb
⌊>	Th-KED1	232	222413.353			ppb
⌈	Mn-STD1	55	27664.786	0.80929	3.7	ppb
⌊>	Ge-STD1	72	700477.230			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-002
Sample Date/Time: Wednesday, October 01, 2014 19:55:01
Sample Description:
Autosampler Position: 325
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410208-002.044
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	309686.741			ppb
Be-KED1	9	10.667	0.00158	131.5	ppb
Al-KED1	27	1784766.788	71.70874	4.6	ppb
V-KED3	51	47.333	0.07747	30.6	ppb
Cr-KED3	52	61.333	0.07245	34.2	ppb
Cr-KED3	53	16.000	0.12461	25.6	ppb
Co-KED3	59	47.333	0.02537	5.1	ppb
Ni-KED3	60	70.667	0.12296	22.0	ppb
Ni-KED3	62	12.667	0.13725	6.9	ppb
Cu-KED3	63	799.356	0.47976	3.8	ppb
Cu-KED3	65	444.007	0.55429	11.8	ppb
Zn-KED3	66	657.348	4.22311	10.4	ppb
Ge-KED3	72	14466.003			ppb
Ge-KED2	72	48287.828			ppb
As-KED2	75	25.778	0.09737	20.3	ppb
Se-KED2	77	1.556	-0.01744	775.2	ppb
Se-KED2	78	16.625	-0.03759	281.4	ppb
Se-KED2	82	-0.150	0.13596	111.3	ppb
Mo-KED2	95	46.000	0.03545	39.8	ppb
Mo-KED2	97	25.333	0.02881	38.7	ppb
Mo-KED2	98	74.375	0.03407	18.8	ppb
Cd-KED2	111	20.333	0.03212	32.0	ppb
Cd-KED2	112	36.159	0.03096	20.2	ppb
Cd-KED2	114	42.534	0.02829	11.0	ppb
In-KED2	115	33383.224			ppb
Rh-KED3	103	101313.466			ppb
Ag-KED3	107	14.000	0.00373	100.3	ppb
Ag-KED3	109	12.667	0.00292	54.0	ppb
In-KED1	115	388567.918			ppb
Sb-KED1	121	365.338	0.03390	14.3	ppb
Sb-KED1	123	284.003	0.03411	11.5	ppb
Ba-KED1	135	3057.661	1.22336	2.6	ppb
Ba-KED1	137	5081.570	1.27763	1.3	ppb
Lu-KED1	175	425393.288			ppb
Tl-KED1	203	26.667	0.00123	58.9	ppb
Tl-KED1	205	74.667	0.00174	10.2	ppb
Pb-KED1	208	39059.944	1.60944	1.1	ppb
U-KED1	238	244.669	0.00812	13.2	ppb
Th-KED1	232	222783.044			ppb
Mn-STD1	55	55163.704	1.65666	0.8	ppb
Ge-STD1	72	693014.487			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-003
Sample Date/Time: Wednesday, October 01, 2014 20:00:08
Sample Description:
Autosampler Position: 326
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410208-003.045
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	312685.998			ppb
Be-KED1	9	8.000	0.00061	276.6	ppb
Al-KED1	27	402025.435	15.96233	5.8	ppb
V-KED3	51	29.333	0.04065	20.9	ppb
Cr-KED3	52	25.333	0.02214	93.9	ppb
Cr-KED3	53	3.333	-0.01463	306.1	ppb
Co-KED3	59	15.333	0.00754	55.3	ppb
Ni-KED3	60	29.333	0.04249	28.1	ppb
Ni-KED3	62	9.333	0.09662	28.3	ppb
Cu-KED3	63	470.008	0.27124	5.7	ppb
Cu-KED3	65	218.668	0.26168	10.3	ppb
Zn-KED3	66	186.001	1.09681	21.3	ppb
Ge-KED3	72	14856.390			ppb
Ge-KED2	72	48506.922			ppb
As-KED2	75	9.667	0.02061	53.4	ppb
Se-KED2	77	2.556	0.10951	17.9	ppb
Se-KED2	78	19.296	0.06235	111.8	ppb
Se-KED2	82	0.184	0.16435	48.9	ppb
Mo-KED2	95	18.000	0.01088	16.1	ppb
Mo-KED2	97	10.667	0.00894	149.0	ppb
Mo-KED2	98	37.114	0.01442	23.0	ppb
Cd-KED2	111	2.667	0.00221	115.1	ppb
Cd-KED2	112	6.226	0.00398	59.2	ppb
Cd-KED2	114	9.700	0.00443	46.7	ppb
In-KED2	115	33685.515			ppb
Rh-KED3	103	103896.464			ppb
Ag-KED3	107	6.000	0.00048	263.6	ppb
Ag-KED3	109	2.667	-0.00105	42.7	ppb
In-KED1	115	392015.586			ppb
Sb-KED1	121	110.667	0.00924	9.3	ppb
Sb-KED1	123	88.998	0.00957	19.9	ppb
Ba-KED1	135	602.013	0.21392	3.0	ppb
Ba-KED1	137	993.368	0.24118	4.7	ppb
Lu-KED1	175	423475.650			ppb
Tl-KED1	203	22.667	0.00070	90.8	ppb
Tl-KED1	205	59.333	0.00088	147.8	ppb
Pb-KED1	208	4991.007	0.20195	1.9	ppb
U-KED1	238	40.667	0.00095	47.5	ppb
Th-KED1	232	221702.681			ppb
Mn-STD1	55	19108.104	0.56457	3.0	ppb
Ge-STD1	72	684870.354			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		101		
>	Rh-KED3	103		101		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 20:05:16
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.046
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	303179.070			ppb
Be-KED1	9	70505.656	24.62252	1.0	ppb
Al-KED1	27	617414.319	25.31626	2.4	ppb
V-KED3	51	13067.309	24.48508	3.8	ppb
Cr-KED3	52	18672.198	24.51007	3.7	ppb
Cr-KED3	53	2311.521	24.52251	4.2	ppb
Co-KED3	59	45166.708	24.43854	5.3	ppb
Ni-KED3	60	13274.843	24.51911	6.9	ppb
Ni-KED3	62	2217.506	24.83732	1.7	ppb
Cu-KED3	63	40122.289	23.98520	4.4	ppb
Cu-KED3	65	20142.865	24.92535	3.9	ppb
Zn-KED3	66	3955.881	25.26640	3.0	ppb
Ge-KED3	72	14758.288			ppb
Ge-KED2	72	48149.384			ppb
As-KED2	75	5275.641	25.12800	3.3	ppb
Se-KED2	77	191.112	24.70884	3.8	ppb
Se-KED2	78	645.047	24.35703	4.9	ppb
Se-KED2	82	337.955	25.74125	2.9	ppb
Mo-KED2	95	28817.714	25.07932	1.9	ppb
Mo-KED2	97	18271.681	24.75489	3.3	ppb
Mo-KED2	98	49064.270	25.60668	2.1	ppb
Cd-KED2	111	14631.155	24.74168	2.0	ppb
Cd-KED2	112	27664.643	24.88537	3.6	ppb
Cd-KED2	114	34618.105	25.11431	2.5	ppb
In-KED2	115	33308.550			ppb
Rh-KED3	103	101784.012			ppb
Ag-KED3	107	66471.063	25.23503	2.6	ppb
Ag-KED3	109	64108.298	25.40171	2.8	ppb
In-KED1	115	392276.920			ppb
Sb-KED1	121	263934.585	25.18616	2.6	ppb
Sb-KED1	123	202673.465	25.16446	0.7	ppb
Ba-KED1	135	61997.628	25.15936	1.1	ppb
Ba-KED1	137	100607.703	25.21194	2.0	ppb
Lu-KED1	175	421131.225			ppb
Tl-KED1	203	188996.070	25.60470	1.5	ppb
Tl-KED1	205	442564.850	25.24264	1.8	ppb
Pb-KED1	208	609945.499	25.46529	1.9	ppb
U-KED1	238	700935.541	24.67201	1.0	ppb
Th-KED1	232	222728.010			ppb
Mn-STD1	55	841508.673	26.10209	1.1	ppb
Ge-STD1	72	680717.319			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9	98			
	Al-KED1	27	101			
	V-KED3	51	98			
	Cr-KED3	52	98			
	Cr-KED3	53	98			
	Co-KED3	59	98			
	Ni-KED3	60	98			
	Ni-KED3	62	99			
	Cu-KED3	63	96			
	Cu-KED3	65	100			
	Zn-KED3	66	101			
>	Ge-KED3	72		101		
>	Ge-KED2	72		102		
	As-KED2	75	101			
	Se-KED2	77	99			
	Se-KED2	78	97			
	Se-KED2	82	103			
	Mo-KED2	95	100			
	Mo-KED2	97	99			
	Mo-KED2	98	102			
	Cd-KED2	111	99			
	Cd-KED2	112	100			
	Cd-KED2	114	100			
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107	101			
	Ag-KED3	109	102			
>	In-KED1	115		104		
	Sb-KED1	121	101			
	Sb-KED1	123	101			
	Ba-KED1	135	101			
	Ba-KED1	137	101			
>	Lu-KED1	175		100		
	Tl-KED1	203	102			
	Tl-KED1	205	101			
	Pb-KED1	208	102			
	U-KED1	238	99			
>	Th-KED1	232		104		
	Mn-STD1	55	104			
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 20:10:23
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.047
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	299810.013			ppb
	Be-KED1	9	6.667	0.00029	600.9	ppb
	Al-KED1	27	1767.445	0.01175	98.3	ppb
	V-KED3	51	6.667	-0.00108	399.9	ppb
	Cr-KED3	52	4.667	-0.00434	93.4	ppb
	Cr-KED3	53	2.667	-0.02112	237.6	ppb
	Co-KED3	59	9.333	0.00446	14.9	ppb
	Ni-KED3	60	3.333	-0.00481	166.7	ppb
	Ni-KED3	62	0.667	0.00023	5826.2	ppb
	Cu-KED3	63	6.667	-0.00397	34.8	ppb
	Cu-KED3	65	4.000	-0.00236	289.0	ppb
	Zn-KED3	66	12.000	-0.01183	287.6	ppb
>	Ge-KED3	72	14370.558			ppb
>	Ge-KED2	72	46974.104			ppb
	As-KED2	75	6.444	0.00616	14.8	ppb
	Se-KED2	77	2.222	0.07586	32.5	ppb
	Se-KED2	78	16.484	-0.02570	261.7	ppb
	Se-KED2	82	-1.603	0.02496	523.0	ppb
	Mo-KED2	95	67.333	0.05487	26.2	ppb
	Mo-KED2	97	43.333	0.05418	39.9	ppb
	Mo-KED2	98	115.854	0.05682	20.3	ppb
	Cd-KED2	111	1.667	0.00064	317.4	ppb
	Cd-KED2	112	1.079	-0.00057	85.9	ppb
	Cd-KED2	114	1.600	-0.00134	5.2	ppb
>	In-KED2	115	32748.960			ppb
>	Rh-KED3	103	101126.929			ppb
	Ag-KED3	107	10.667	0.00229	129.3	ppb
	Ag-KED3	109	6.667	0.00054	358.7	ppb
>	In-KED1	115	387979.897			ppb
	Sb-KED1	121	73.334	0.00577	83.7	ppb
	Sb-KED1	123	50.746	0.00489	88.1	ppb
	Ba-KED1	135	65.333	-0.00397	191.1	ppb
	Ba-KED1	137	31.333	-0.00005	15119.6	ppb
>	Lu-KED1	175	412817.076			ppb
	Tl-KED1	203	44.000	0.00373	173.5	ppb
	Tl-KED1	205	102.667	0.00350	129.7	ppb
	Pb-KED1	208	172.001	0.00202	277.9	ppb
	U-KED1	238	73.334	0.00218	118.9	ppb
>	Th-KED1	232	218262.515			ppb
	Mn-STD1	55	769.354	-0.00097	230.7	ppb
>	Ge-STD1	72	667418.788			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	97	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 20:15:24
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.048
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	295860.363			ppb
Be-KED1	9	4.667	-0.00039	285.1	ppb
Al-KED1	27	1470.742	0.00037	824.3	ppb
V-KED3	51	0.667	-0.01264	16.9	ppb
Cr-KED3	52	8.667	0.00072	770.5	ppb
Cr-KED3	53	2.000	-0.02889	74.0	ppb
Co-KED3	59	14.000	0.00678	16.2	ppb
Ni-KED3	60	5.333	-0.00143	387.7	ppb
Ni-KED3	62	0.667	-0.00003	45154.4	ppb
Cu-KED3	63	7.333	-0.00369	49.4	ppb
Cu-KED3	65	3.333	-0.00338	112.4	ppb
Zn-KED3	66	11.333	-0.01861	77.9	ppb
Ge-KED3	72	14884.418			ppb
Ge-KED2	72	47035.977			ppb
As-KED2	75	5.444	0.00133	1157.4	ppb
Se-KED2	77	2.333	0.09049	147.2	ppb
Se-KED2	78	19.147	0.07926	49.4	ppb
Se-KED2	82	-0.715	0.09317	111.9	ppb
Mo-KED2	95	23.333	0.01564	28.0	ppb
Mo-KED2	97	16.000	0.01622	16.5	ppb
Mo-KED2	98	29.269	0.01050	21.0	ppb
Cd-KED2	111	0.333	-0.00167	58.9	ppb
Cd-KED2	112	3.373	0.00147	75.9	ppb
Cd-KED2	114	4.800	0.00096	135.7	ppb
In-KED2	115	33409.922			ppb
Rh-KED3	103	100470.067			ppb
Ag-KED3	107	6.000	0.00056	273.8	ppb
Ag-KED3	109	3.333	-0.00075	163.8	ppb
In-KED1	115	383852.418			ppb
Sb-KED1	121	26.000	0.00120	35.6	ppb
Sb-KED1	123	11.496	-0.00005	1423.7	ppb
Ba-KED1	135	54.000	-0.00827	70.0	ppb
Ba-KED1	137	14.000	-0.00446	16.5	ppb
Lu-KED1	175	418717.197			ppb
Tl-KED1	203	16.000	-0.00018	161.7	ppb
Tl-KED1	205	50.000	0.00039	46.7	ppb
Pb-KED1	208	114.667	-0.00050	77.6	ppb
U-KED1	238	21.333	0.00028	91.9	ppb
Th-KED1	232	216946.315			ppb
Mn-STD1	55	732.685	-0.00230	18.6	ppb
Ge-STD1	72	672478.595			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-004
Sample Date/Time: Wednesday, October 01, 2014 20:20:32
Sample Description:
Autosampler Position: 327
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410208-004.049
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	305245.533			ppb
Be-KED1	9	10.000	0.00136	126.4	ppb
Al-KED1	27	503597.964	20.51562	4.9	ppb
V-KED3	51	18.667	0.02067	40.8	ppb
Cr-KED3	52	32.000	0.03061	18.5	ppb
Cr-KED3	53	7.333	0.02591	196.4	ppb
Co-KED3	59	19.333	0.00957	35.3	ppb
Ni-KED3	60	30.000	0.04340	48.1	ppb
Ni-KED3	62	12.667	0.13225	11.5	ppb
Cu-KED3	63	718.685	0.41464	5.8	ppb
Cu-KED3	65	364.671	0.43689	8.1	ppb
Zn-KED3	66	272.003	1.62190	9.3	ppb
Ge-KED3	72	15005.881			ppb
Ge-KED2	72	47736.635			ppb
As-KED2	75	13.111	0.03772	14.1	ppb
Se-KED2	77	2.000	0.04094	382.9	ppb
Se-KED2	78	18.083	0.02563	341.5	ppb
Se-KED2	82	0.298	0.17069	90.7	ppb
Mo-KED2	95	17.333	0.01049	24.7	ppb
Mo-KED2	97	17.333	0.01819	97.8	ppb
Mo-KED2	98	42.895	0.01770	4.8	ppb
Cd-KED2	111	8.333	0.01186	32.5	ppb
Cd-KED2	112	15.346	0.01225	40.1	ppb
Cd-KED2	114	19.555	0.01168	21.3	ppb
In-KED2	115	33251.425			ppb
Rh-KED3	103	103609.951			ppb
Ag-KED3	107	5.333	0.00025	183.2	ppb
Ag-KED3	109	8.667	0.00132	99.2	ppb
In-KED1	115	376835.081			ppb
Sb-KED1	121	154.668	0.01404	5.3	ppb
Sb-KED1	123	131.749	0.01557	11.3	ppb
Ba-KED1	135	975.367	0.38121	7.0	ppb
Ba-KED1	137	1606.090	0.41172	6.7	ppb
Lu-KED1	175	415903.145			ppb
Tl-KED1	203	26.000	0.00122	44.6	ppb
Tl-KED1	205	60.667	0.00104	103.5	ppb
Pb-KED1	208	8482.971	0.35347	2.1	ppb
U-KED1	238	61.333	0.00173	27.5	ppb
Th-KED1	232	217274.398			ppb
Mn-STD1	55	29885.903	0.90553	1.4	ppb
Ge-STD1	72	678676.469			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		103		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-001
Sample Date/Time: Wednesday, October 01, 2014 20:25:39
Sample Description:
Autosampler Position: 328
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-001.050
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	309777.942			ppb
|	Be-KED1	9	4.000	-0.00068	106.5	ppb
⌊	Al-KED1	27	171609.433	6.84830	7.8	ppb
⌈	V-KED3	51	13.333	0.01177	24.5	ppb
|	Cr-KED3	52	43.333	0.04771	15.6	ppb
|	Cr-KED3	53	4.000	-0.00652	18.9	ppb
|	Co-KED3	59	7.333	0.00331	48.2	ppb
|	Ni-KED3	60	14.667	0.01667	39.2	ppb
|	Ni-KED3	62	2.667	0.02284	53.6	ppb
|	Cu-KED3	63	54.000	0.02505	8.6	ppb
|	Cu-KED3	65	24.000	0.02293	29.7	ppb
|	Zn-KED3	66	68.000	0.35640	20.9	ppb
⌊>	Ge-KED3	72	14409.267			ppb
⌈>	Ge-KED2	72	47467.397			ppb
|	As-KED2	75	6.889	0.00799	62.4	ppb
|	Se-KED2	77	2.222	0.07284	35.0	ppb
|	Se-KED2	78	17.265	-0.00172	5447.2	ppb
⌊	Se-KED2	82	0.732	0.20542	44.0	ppb
⌈	Mo-KED2	95	15.333	0.00884	50.8	ppb
|	Mo-KED2	97	5.333	0.00188	79.9	ppb
|	Mo-KED2	98	17.260	0.00436	52.6	ppb
|	Cd-KED2	111	3.000	0.00282	157.5	ppb
|	Cd-KED2	112	4.586	0.00260	52.3	ppb
|	Cd-KED2	114	7.158	0.00269	54.1	ppb
⌊>	In-KED2	115	33065.303			ppb
⌈>	Rh-KED3	103	101992.205			ppb
|	Ag-KED3	107	2.000	-0.00098	79.1	ppb
⌊	Ag-KED3	109	4.000	-0.00050	155.2	ppb
⌈>	In-KED1	115	393325.399			ppb
|	Sb-KED1	121	32.667	0.00179	38.5	ppb
|	Sb-KED1	123	27.166	0.00186	64.4	ppb
|	Ba-KED1	135	136.667	0.02438	42.4	ppb
⌊	Ba-KED1	137	130.667	0.02464	8.1	ppb
⌈>	Lu-KED1	175	419543.029			ppb
|	Tl-KED1	203	24.667	0.00100	89.9	ppb
|	Tl-KED1	205	44.000	0.00004	1027.9	ppb
⌊	Pb-KED1	208	898.678	0.03239	7.3	ppb
⌈	U-KED1	238	25.333	0.00041	97.0	ppb
⌊>	Th-KED1	232	219471.787			ppb
⌈	Mn-STD1	55	2588.235	0.05368	3.0	ppb
⌊>	Ge-STD1	72	692313.934			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-002
Sample Date/Time: Wednesday, October 01, 2014 20:30:46
Sample Description:
Autosampler Position: 329
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-002.051
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	306909.183			ppb
	Be-KED1	9	8.667	0.00092	82.5	ppb
	Al-KED1	27	151444.484	6.08429	6.9	ppb
	V-KED3	51	20.000	0.02510	86.7	ppb
	Cr-KED3	52	166.668	0.21707	7.7	ppb
	Cr-KED3	53	17.333	0.14136	31.0	ppb
	Co-KED3	59	15.333	0.00790	21.8	ppb
	Ni-KED3	60	181.335	0.33783	22.9	ppb
	Ni-KED3	62	26.667	0.30329	10.7	ppb
	Cu-KED3	63	218.002	0.12760	10.8	ppb
	Cu-KED3	65	114.667	0.14007	11.4	ppb
	Zn-KED3	66	1304.726	8.61139	0.7	ppb
>	Ge-KED3	72	14179.034			ppb
>	Ge-KED2	72	48098.882			ppb
	As-KED2	75	9.667	0.02078	12.3	ppb
	Se-KED2	77	1.111	-0.07604	32.3	ppb
	Se-KED2	78	16.588	-0.03637	164.3	ppb
	Se-KED2	82	-1.271	0.05218	124.3	ppb
	Mo-KED2	95	79.334	0.06555	5.7	ppb
	Mo-KED2	97	60.667	0.07830	20.1	ppb
	Mo-KED2	98	145.042	0.07199	19.8	ppb
	Cd-KED2	111	3.667	0.00402	63.1	ppb
	Cd-KED2	112	6.519	0.00440	24.3	ppb
	Cd-KED2	114	6.779	0.00247	41.3	ppb
>	In-KED2	115	32803.682			ppb
>	Rh-KED3	103	101865.260			ppb
	Ag-KED3	107	5.333	0.00027	424.0	ppb
	Ag-KED3	109	5.333	0.00002	9255.9	ppb
>	In-KED1	115	386418.134			ppb
	Sb-KED1	121	50.667	0.00358	16.8	ppb
	Sb-KED1	123	46.415	0.00435	48.2	ppb
	Ba-KED1	135	563.344	0.20152	4.6	ppb
	Ba-KED1	137	857.359	0.21007	7.6	ppb
>	Lu-KED1	175	420714.826			ppb
	Tl-KED1	203	25.333	0.00109	64.3	ppb
	Tl-KED1	205	52.667	0.00052	19.9	ppb
	Pb-KED1	208	3166.134	0.12706	2.5	ppb
	U-KED1	238	32.000	0.00065	58.9	ppb
>	Th-KED1	232	218935.681			ppb
	Mn-STD1	55	16061.025	0.47237	2.9	ppb
>	Ge-STD1	72	682103.669			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-003
Sample Date/Time: Wednesday, October 01, 2014 20:35:54
Sample Description:
Autosampler Position: 330
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-003.052
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	305017.541			ppb
Be-KED1	9	8.667	0.00094	81.9	ppb
Al-KED1	27	73022.305	2.92002	3.4	ppb
V-KED3	51	20.667	0.02539	12.4	ppb
Cr-KED3	52	126.667	0.15764	15.8	ppb
Cr-KED3	53	19.333	0.15743	29.6	ppb
Co-KED3	59	9.333	0.00437	57.2	ppb
Ni-KED3	60	711.351	1.31847	1.4	ppb
Ni-KED3	62	120.667	1.35958	11.7	ppb
Cu-KED3	63	55.333	0.02548	23.7	ppb
Cu-KED3	65	28.667	0.02871	56.8	ppb
Zn-KED3	66	47.333	0.21597	18.0	ppb
Ge-KED3	72	14577.439			ppb
Ge-KED2	72	47495.844			ppb
As-KED2	75	5.444	0.00094	558.9	ppb
Se-KED2	77	2.000	0.04390	308.3	ppb
Se-KED2	78	15.875	-0.05571	243.8	ppb
Se-KED2	82	0.412	0.18106	57.8	ppb
Mo-KED2	95	29.333	0.02091	6.0	ppb
Mo-KED2	97	18.667	0.01989	20.8	ppb
Mo-KED2	98	44.749	0.01858	16.2	ppb
Cd-KED2	111	4.000	0.00449	63.7	ppb
Cd-KED2	112	2.133	0.00034	650.7	ppb
Cd-KED2	114	3.303	-0.00013	575.8	ppb
In-KED2	115	33332.660			ppb
Rh-KED3	103	100655.498			ppb
Ag-KED3	107	4.667	0.00004	986.7	ppb
Ag-KED3	109	4.000	-0.00046	465.4	ppb
In-KED1	115	378804.095			ppb
Sb-KED1	121	19.333	0.00058	98.0	ppb
Sb-KED1	123	16.415	0.00059	145.7	ppb
Ba-KED1	135	145.334	0.03034	8.6	ppb
Ba-KED1	137	170.001	0.03607	3.5	ppb
Lu-KED1	175	418491.984			ppb
Tl-KED1	203	22.667	0.00073	112.7	ppb
Tl-KED1	205	42.000	-0.00007	1096.0	ppb
Pb-KED1	208	425.336	0.01256	3.2	ppb
U-KED1	238	16.667	0.00011	100.7	ppb
Th-KED1	232	218806.272			ppb
Mn-STD1	55	2848.285	0.06163	8.1	ppb
Ge-STD1	72	692245.555			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-004
Sample Date/Time: Wednesday, October 01, 2014 20:41:01
Sample Description:
Autosampler Position: 331
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100114D\K1410311-004.053
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	302065.405			ppb
Be-KED1	9	4.000	-0.00067	102.5	ppb
Al-KED1	27	71377.928	2.88472	5.2	ppb
V-KED3	51	14.000	0.01290	24.9	ppb
Cr-KED3	52	40.000	0.04297	19.7	ppb
Cr-KED3	53	6.667	0.02281	153.6	ppb
Co-KED3	59	5.333	0.00221	26.3	ppb
Ni-KED3	60	21.333	0.02890	42.8	ppb
Ni-KED3	62	4.667	0.04555	56.2	ppb
Cu-KED3	63	64.667	0.03151	14.5	ppb
Cu-KED3	65	29.333	0.02977	49.2	ppb
Zn-KED3	66	69.334	0.36631	45.3	ppb
Ge-KED3	72	14431.956			ppb
Ge-KED2	72	47508.215			ppb
As-KED2	75	6.889	0.00795	7.6	ppb
Se-KED2	77	1.889	0.02907	188.7	ppb
Se-KED2	78	18.622	0.05097	239.6	ppb
Se-KED2	82	0.182	0.16083	127.9	ppb
Mo-KED2	95	7.333	0.00184	145.5	ppb
Mo-KED2	97	8.667	0.00647	63.3	ppb
Mo-KED2	98	13.936	0.00264	61.4	ppb
Cd-KED2	111	4.667	0.00576	95.6	ppb
Cd-KED2	112	4.359	0.00239	58.9	ppb
Cd-KED2	114	5.564	0.00158	118.9	ppb
In-KED2	115	32947.068			ppb
Rh-KED3	103	100174.055			ppb
Ag-KED3	107	4.667	0.00006	803.6	ppb
Ag-KED3	109	9.333	0.00166	119.0	ppb
In-KED1	115	389556.795			ppb
Sb-KED1	121	28.000	0.00135	33.8	ppb
Sb-KED1	123	20.914	0.00112	71.9	ppb
Ba-KED1	135	234.669	0.06534	21.1	ppb
Ba-KED1	137	324.670	0.07404	14.5	ppb
Lu-KED1	175	424656.887			ppb
Tl-KED1	203	20.000	0.00034	327.6	ppb
Tl-KED1	205	56.000	0.00068	111.8	ppb
Pb-KED1	208	757.341	0.02606	8.4	ppb
U-KED1	238	18.667	0.00018	81.5	ppb
Th-KED1	232	217748.288			ppb
Mn-STD1	55	2420.205	0.05003	3.8	ppb
Ge-STD1	72	678842.609			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		98		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		99		
⌈>	Ge-KED2	72		100		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		98		
⌈>	Rh-KED3	103		97		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		104		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		101		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		102		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-005
Sample Date/Time: Wednesday, October 01, 2014 20:46:08
Sample Description:
Autosampler Position: 332
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-005.054
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	301526.600			ppb
|	Be-KED1	9	6.000	0.00005	1376.2	ppb
⌊	Al-KED1	27	32986.039	1.30131	2.3	ppb
⌈	V-KED3	51	13.333	0.01115	50.1	ppb
|	Cr-KED3	52	55.333	0.06215	38.5	ppb
|	Cr-KED3	53	7.333	0.02855	162.0	ppb
|	Co-KED3	59	10.000	0.00472	26.1	ppb
|	Ni-KED3	60	20.667	0.02706	51.8	ppb
|	Ni-KED3	62	4.000	0.03776	61.4	ppb
|	Cu-KED3	63	32.667	0.01137	86.5	ppb
|	Cu-KED3	65	18.000	0.01481	57.3	ppb
|	Zn-KED3	66	36.000	0.14119	47.6	ppb
⌊>	Ge-KED3	72	14713.578			ppb
⌈>	Ge-KED2	72	46817.929			ppb
|	As-KED2	75	7.667	0.01222	51.0	ppb
|	Se-KED2	77	0.778	-0.11680	21.8	ppb
|	Se-KED2	78	20.333	0.12985	49.1	ppb
⌊	Se-KED2	82	0.638	0.19882	12.8	ppb
⌈	Mo-KED2	95	9.333	0.00374	101.2	ppb
|	Mo-KED2	97	7.333	0.00484	68.8	ppb
|	Mo-KED2	98	10.228	0.00074	309.3	ppb
|	Cd-KED2	111	2.333	0.00179	200.0	ppb
|	Cd-KED2	112	1.559	-0.00010	1824.7	ppb
|	Cd-KED2	114	4.034	0.00047	382.6	ppb
⌊>	In-KED2	115	32413.250			ppb
⌈>	Rh-KED3	103	103235.692			ppb
|	Ag-KED3	107	2.667	-0.00075	115.8	ppb
⌊	Ag-KED3	109	3.333	-0.00078	151.8	ppb
⌈>	In-KED1	115	384327.752			ppb
|	Sb-KED1	121	26.000	0.00120	40.8	ppb
|	Sb-KED1	123	25.748	0.00176	40.4	ppb
|	Ba-KED1	135	163.334	0.03680	27.8	ppb
⌊	Ba-KED1	137	205.335	0.04441	12.2	ppb
⌈>	Lu-KED1	175	415631.809			ppb
|	Tl-KED1	203	18.000	0.00011	641.9	ppb
|	Tl-KED1	205	58.000	0.00088	152.4	ppb
⌊	Pb-KED1	208	388.002	0.01111	6.2	ppb
⌈	U-KED1	238	14.000	0.00001	2472.1	ppb
⌊>	Th-KED1	232	219842.036			ppb
⌈	Mn-STD1	55	2189.502	0.04258	13.1	ppb
⌊>	Ge-STD1	72	681902.128			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-006
Sample Date/Time: Wednesday, October 01, 2014 20:51:15
Sample Description:
Autosampler Position: 333
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-006.055
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	302316.761			ppb
|	Be-KED1	9	4.000	-0.00066	107.7	ppb
⌊	Al-KED1	27	105290.001	4.27633	2.4	ppb
⌈	V-KED3	51	24.000	0.03128	44.2	ppb
|	Cr-KED3	52	111.334	0.13574	4.7	ppb
|	Cr-KED3	53	18.667	0.14757	57.3	ppb
|	Co-KED3	59	4.000	0.00147	133.2	ppb
|	Ni-KED3	60	33.333	0.05070	28.6	ppb
|	Ni-KED3	62	7.333	0.07486	45.5	ppb
|	Cu-KED3	63	44.667	0.01861	27.1	ppb
|	Cu-KED3	65	25.333	0.02386	13.1	ppb
|	Zn-KED3	66	61.333	0.30288	14.6	ppb
⌊>	Ge-KED3	72	14730.928			ppb
⌈>	Ge-KED2	72	47953.051			ppb
|	As-KED2	75	7.556	0.01099	78.2	ppb
|	Se-KED2	77	1.667	-0.00182	4342.3	ppb
|	Se-KED2	78	17.329	-0.00579	938.6	ppb
⌊	Se-KED2	82	0.304	0.17223	52.6	ppb
⌈	Mo-KED2	95	9.333	0.00365	70.7	ppb
|	Mo-KED2	97	7.333	0.00472	118.8	ppb
|	Mo-KED2	98	17.342	0.00449	42.5	ppb
|	Cd-KED2	111	3.667	0.00407	121.1	ppb
|	Cd-KED2	112	3.399	0.00155	94.7	ppb
|	Cd-KED2	114	7.258	0.00286	51.4	ppb
⌊>	In-KED2	115	32620.332			ppb
⌈>	Rh-KED3	103	102099.616			ppb
|	Ag-KED3	107	2.667	-0.00074	117.1	ppb
⌊	Ag-KED3	109	4.667	-0.00022	755.2	ppb
⌈>	In-KED1	115	385412.526			ppb
|	Sb-KED1	121	48.000	0.00333	21.1	ppb
|	Sb-KED1	123	36.163	0.00307	37.3	ppb
|	Ba-KED1	135	163.334	0.03675	28.5	ppb
⌊	Ba-KED1	137	174.668	0.03650	11.7	ppb
⌈>	Lu-KED1	175	419350.292			ppb
|	Tl-KED1	203	15.333	-0.00027	220.5	ppb
|	Tl-KED1	205	53.333	0.00058	144.2	ppb
⌊	Pb-KED1	208	1248.688	0.04707	4.2	ppb
⌈	U-KED1	238	22.667	0.00032	110.3	ppb
⌊>	Th-KED1	232	219781.901			ppb
⌈	Mn-STD1	55	4281.309	0.10657	5.3	ppb
⌊>	Ge-STD1	72	685712.948			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		98		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		101		
⌈>	Ge-KED2	72		101		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		97		
⌈>	Rh-KED3	103		99		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		103		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		100		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		103		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-007
Sample Date/Time: Wednesday, October 01, 2014 20:56:22
Sample Description:
Autosampler Position: 334
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-007.056
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	304327.583			ppb
|	Be-KED1	9	16.667	0.00372	23.3	ppb
⌊	Al-KED1	27	128331.365	5.18705	7.1	ppb
⌈	V-KED3	51	14.000	0.01313	77.5	ppb
|	Cr-KED3	52	92.667	0.11461	12.5	ppb
|	Cr-KED3	53	16.000	0.12498	34.7	ppb
|	Co-KED3	59	11.333	0.00559	30.7	ppb
|	Ni-KED3	60	45.333	0.07501	10.6	ppb
|	Ni-KED3	62	6.000	0.06158	64.3	ppb
|	Cu-KED3	63	168.001	0.09533	6.6	ppb
|	Cu-KED3	65	97.334	0.11655	6.9	ppb
|	Zn-KED3	66	73.334	0.39322	13.2	ppb
⌊>	Ge-KED3	72	14331.185			ppb
⌈>	Ge-KED2	72	47031.670			ppb
|	As-KED2	75	8.333	0.01532	63.6	ppb
|	Se-KED2	77	1.444	-0.02738	526.6	ppb
|	Se-KED2	78	15.976	-0.04626	78.6	ppb
⌊	Se-KED2	82	0.410	0.18330	67.0	ppb
⌈	Mo-KED2	95	14.000	0.00763	43.6	ppb
|	Mo-KED2	97	8.000	0.00551	149.1	ppb
|	Mo-KED2	98	19.041	0.00535	130.2	ppb
|	Cd-KED2	111	6.000	0.00796	41.3	ppb
|	Cd-KED2	112	6.319	0.00419	79.0	ppb
|	Cd-KED2	114	9.203	0.00419	34.0	ppb
⌊>	In-KED2	115	33060.645			ppb
⌈>	Rh-KED3	103	101975.125			ppb
|	Ag-KED3	107	10.667	0.00234	71.7	ppb
⌊	Ag-KED3	109	13.333	0.00315	44.5	ppb
⌈>	In-KED1	115	388846.074			ppb
|	Sb-KED1	121	78.000	0.00618	18.1	ppb
|	Sb-KED1	123	59.166	0.00589	28.7	ppb
|	Ba-KED1	135	271.336	0.08040	6.8	ppb
⌊	Ba-KED1	137	342.671	0.07855	14.0	ppb
⌈>	Lu-KED1	175	418035.228			ppb
|	Tl-KED1	203	63.333	0.00630	29.9	ppb
|	Tl-KED1	205	115.334	0.00416	30.9	ppb
⌊	Pb-KED1	208	1250.688	0.04732	2.4	ppb
⌈	U-KED1	238	78.667	0.00232	25.5	ppb
⌊>	Th-KED1	232	218775.910			ppb
⌈	Mn-STD1	55	4029.235	0.09941	1.2	ppb
⌊>	Ge-STD1	72	682533.475			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-008
Sample Date/Time: Wednesday, October 01, 2014 21:01:29
Sample Description:
Autosampler Position: 335
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-008.057
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	307466.162			ppb
|	Be-KED1	9	10.667	0.00152	208.7	ppb
⌊	Al-KED1	27	549012.340	22.19794	5.4	ppb
⌈	V-KED3	51	18.667	0.02135	17.3	ppb
|	Cr-KED3	52	148.667	0.18658	13.5	ppb
|	Cr-KED3	53	19.333	0.15688	19.1	ppb
|	Co-KED3	59	13.333	0.00655	10.2	ppb
|	Ni-KED3	60	68.667	0.11674	3.1	ppb
|	Ni-KED3	62	8.000	0.08255	24.8	ppb
|	Cu-KED3	63	140.667	0.07669	5.3	ppb
|	Cu-KED3	65	65.333	0.07412	14.5	ppb
|	Zn-KED3	66	60.667	0.30154	1.7	ppb
⌊>	Ge-KED3	72	14632.159			ppb
⌈>	Ge-KED2	72	47413.223			ppb
|	As-KED2	75	9.111	0.01871	45.2	ppb
|	Se-KED2	77	1.778	0.01429	173.6	ppb
|	Se-KED2	78	17.413	0.00473	1464.7	ppb
⌊	Se-KED2	82	0.297	0.17045	138.3	ppb
⌈	Mo-KED2	95	20.000	0.01297	70.0	ppb
|	Mo-KED2	97	27.333	0.03215	11.4	ppb
|	Mo-KED2	98	56.749	0.02528	15.6	ppb
|	Cd-KED2	111	8.000	0.01149	2.1	ppb
|	Cd-KED2	112	18.572	0.01540	19.2	ppb
|	Cd-KED2	114	15.816	0.00908	58.6	ppb
⌊>	In-KED2	115	32827.750			ppb
⌈>	Rh-KED3	103	102847.836			ppb
|	Ag-KED3	107	12.667	0.00299	98.4	ppb
⌊	Ag-KED3	109	11.333	0.00238	24.4	ppb
⌈>	In-KED1	115	393070.813			ppb
|	Sb-KED1	121	130.001	0.01109	18.0	ppb
|	Sb-KED1	123	85.497	0.00910	18.1	ppb
|	Ba-KED1	135	236.002	0.06501	13.5	ppb
⌊	Ba-KED1	137	330.004	0.07437	11.8	ppb
⌈>	Lu-KED1	175	416056.365			ppb
|	Tl-KED1	203	72.000	0.00752	3.9	ppb
|	Tl-KED1	205	160.668	0.00679	21.1	ppb
⌊	Pb-KED1	208	1996.720	0.07908	4.6	ppb
⌈	U-KED1	238	163.334	0.00535	7.8	ppb
⌊>	Th-KED1	232	219165.977			ppb
⌈	Mn-STD1	55	7015.057	0.18988	3.6	ppb
⌊>	Ge-STD1	72	688778.392			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-009
Sample Date/Time: Wednesday, October 01, 2014 21:06:36
Sample Description:
Autosampler Position: 336
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-009.058
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	293074.302			ppb
|	Be-KED1	9	6.000	0.00016	1271.8	ppb
⌊	Al-KED1	27	328030.174	13.88454	1.8	ppb
⌈	V-KED3	51	16.667	0.01782	83.5	ppb
|	Cr-KED3	52	365.338	0.47838	24.7	ppb
|	Cr-KED3	53	45.333	0.43939	46.8	ppb
|	Co-KED3	59	14.000	0.00698	86.9	ppb
|	Ni-KED3	60	228.002	0.41795	5.8	ppb
|	Ni-KED3	62	32.000	0.35906	24.9	ppb
|	Cu-KED3	63	197.335	0.11229	8.1	ppb
|	Cu-KED3	65	101.334	0.12003	24.5	ppb
|	Zn-KED3	66	77.334	0.41426	5.8	ppb
⌊>	Ge-KED3	72	14477.334			ppb
⌈>	Ge-KED2	72	46956.726			ppb
|	As-KED2	75	9.444	0.02076	31.9	ppb
|	Se-KED2	77	1.556	-0.01276	547.3	ppb
|	Se-KED2	78	18.030	0.03606	88.0	ppb
⌊	Se-KED2	82	3.312	0.40695	17.4	ppb
⌈	Mo-KED2	95	24.667	0.01721	42.2	ppb
|	Mo-KED2	97	19.333	0.02121	30.0	ppb
|	Mo-KED2	98	36.895	0.01484	24.0	ppb
|	Cd-KED2	111	6.000	0.00808	77.3	ppb
|	Cd-KED2	112	6.266	0.00416	3.4	ppb
|	Cd-KED2	114	7.500	0.00300	48.4	ppb
⌊>	In-KED2	115	32794.342			ppb
⌈>	Rh-KED3	103	99913.530			ppb
|	Ag-KED3	107	17.333	0.00495	38.3	ppb
⌊	Ag-KED3	109	22.667	0.00707	40.4	ppb
⌈>	In-KED1	115	385387.543			ppb
|	Sb-KED1	121	119.334	0.01022	23.0	ppb
|	Sb-KED1	123	81.748	0.00883	1.0	ppb
|	Ba-KED1	135	588.012	0.21246	5.4	ppb
⌊	Ba-KED1	137	912.696	0.22490	2.3	ppb
⌈>	Lu-KED1	175	413515.119			ppb
|	Tl-KED1	203	22.000	0.00068	84.8	ppb
|	Tl-KED1	205	63.333	0.00120	7.7	ppb
⌊	Pb-KED1	208	7340.057	0.30686	1.4	ppb
⌈	U-KED1	238	22.000	0.00030	103.7	ppb
⌊>	Th-KED1	232	218147.268			ppb
⌈	Mn-STD1	55	13036.613	0.39121	0.3	ppb
⌊>	Ge-STD1	72	661403.301			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 21:11:43
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.059
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	304126.197			ppb
|	Be-KED1	9	68751.069	23.93997	2.3	ppb
⌊	Al-KED1	27	596859.924	24.41033	5.5	ppb
⌈	V-KED3	51	13113.352	25.47162	4.3	ppb
|	Cr-KED3	52	18345.123	24.93589	1.7	ppb
|	Cr-KED3	53	2334.191	25.64886	4.4	ppb
|	Co-KED3	59	44471.156	24.93284	3.2	ppb
|	Ni-KED3	60	13004.588	24.87663	2.6	ppb
|	Ni-KED3	62	2162.831	25.15698	10.7	ppb
|	Cu-KED3	63	38634.920	23.94152	6.2	ppb
|	Cu-KED3	65	19636.823	25.19600	4.5	ppb
|	Zn-KED3	66	3925.206	25.98330	1.9	ppb
⌊>	Ge-KED3	72	14242.436			ppb
⌈>	Ge-KED2	72	47604.187			ppb
|	As-KED2	75	5188.386	24.98036	0.8	ppb
|	Se-KED2	77	188.890	24.68172	4.2	ppb
|	Se-KED2	78	625.292	23.84936	0.6	ppb
⌊	Se-KED2	82	318.405	24.54064	2.1	ppb
⌈	Mo-KED2	95	28225.858	25.06760	0.8	ppb
|	Mo-KED2	97	18404.518	25.43914	2.2	ppb
|	Mo-KED2	98	47743.665	25.42295	1.1	ppb
|	Cd-KED2	111	14237.091	24.56416	1.2	ppb
|	Cd-KED2	112	27290.197	25.04202	0.9	ppb
|	Cd-KED2	114	34190.495	25.31008	1.2	ppb
⌊>	In-KED2	115	32638.569			ppb
⌈>	Rh-KED3	103	101146.191			ppb
|	Ag-KED3	107	66098.641	25.25813	3.2	ppb
⌊	Ag-KED3	109	64088.324	25.55407	4.5	ppb
⌈>	In-KED1	115	383089.725			ppb
|	Sb-KED1	121	257996.135	25.21787	3.3	ppb
|	Sb-KED1	123	198601.527	25.25917	3.2	ppb
|	Ba-KED1	135	60395.451	25.10209	2.6	ppb
⌊	Ba-KED1	137	99693.561	25.57369	1.9	ppb
⌈>	Lu-KED1	175	419507.361			ppb
|	Tl-KED1	203	186037.635	25.30004	0.7	ppb
|	Tl-KED1	205	439827.469	25.18170	0.5	ppb
⌊	Pb-KED1	208	606568.160	25.42091	1.0	ppb
⌈	U-KED1	238	698887.063	24.68423	0.8	ppb
⌊>	Th-KED1	232	221931.439			ppb
⌈	Mn-STD1	55	822886.076	25.92230	5.1	ppb
⌊>	Ge-STD1	72	670799.939			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		99		
|	Be-KED1	9	96			
⌊	Al-KED1	27	98			
⌈	V-KED3	51	102			
|	Cr-KED3	52	100			
|	Cr-KED3	53	103			
|	Co-KED3	59	100			
|	Ni-KED3	60	100			
|	Ni-KED3	62	101			
|	Cu-KED3	63	96			
|	Cu-KED3	65	101			
|	Zn-KED3	66	104			
⌊>	Ge-KED3	72		97		
⌈>	Ge-KED2	72		101		
|	As-KED2	75	100			
|	Se-KED2	77	99			
|	Se-KED2	78	95			
⌊	Se-KED2	82	98			
⌈	Mo-KED2	95	100			
|	Mo-KED2	97	102			
|	Mo-KED2	98	102			
|	Cd-KED2	111	98			
|	Cd-KED2	112	100			
|	Cd-KED2	114	101			
⌊>	In-KED2	115		97		
⌈>	Rh-KED3	103		98		
|	Ag-KED3	107	101			
⌊	Ag-KED3	109	102			
⌈>	In-KED1	115		102		
|	Sb-KED1	121	101			
|	Sb-KED1	123	101			
|	Ba-KED1	135	100			
⌊	Ba-KED1	137	102			
⌈>	Lu-KED1	175		100		
|	Tl-KED1	203	101			
|	Tl-KED1	205	101			
⌊	Pb-KED1	208	102			
⌈	U-KED1	238	99			
⌊>	Th-KED1	232		104		
⌈	Mn-STD1	55	104			
⌊>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 21:16:51
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.060
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	303069.262			ppb
Be-KED1	9	6.000	0.00006	4534.0	ppb
Al-KED1	27	1598.757	0.00405	100.0	ppb
V-KED3	51	4.000	-0.00616	64.7	ppb
Cr-KED3	52	8.667	0.00100	297.7	ppb
Cr-KED3	53	1.333	-0.03540	35.9	ppb
Co-KED3	59	2.667	0.00073	172.6	ppb
Ni-KED3	60	3.333	-0.00491	43.6	ppb
Ni-KED3	62	0.000	-0.00754	0.0	ppb
Cu-KED3	63	7.333	-0.00358	52.1	ppb
Cu-KED3	65	2.667	-0.00415	69.8	ppb
Zn-KED3	66	10.667	-0.02081	70.4	ppb
Ge-KED3	72	14439.297			ppb
Ge-KED2	72	46853.061			ppb
As-KED2	75	7.889	0.01337	34.7	ppb
Se-KED2	77	2.333	0.09178	85.4	ppb
Se-KED2	78	15.619	-0.05971	228.7	ppb
Se-KED2	82	-0.708	0.09513	81.0	ppb
Mo-KED2	95	66.000	0.05443	11.0	ppb
Mo-KED2	97	38.000	0.04751	19.9	ppb
Mo-KED2	98	109.708	0.05408	15.0	ppb
Cd-KED2	111	3.000	0.00295	154.7	ppb
Cd-KED2	112	1.679	-0.00000	42000.7	ppb
Cd-KED2	114	3.222	-0.00011	1547.4	ppb
In-KED2	115	32399.806			ppb
Rh-KED3	103	100221.665			ppb
Ag-KED3	107	7.333	0.00108	109.4	ppb
Ag-KED3	109	13.333	0.00329	37.9	ppb
In-KED1	115	384488.072			ppb
Sb-KED1	121	58.000	0.00432	21.2	ppb
Sb-KED1	123	31.827	0.00254	86.7	ppb
Ba-KED1	135	42.000	-0.01344	2.2	ppb
Ba-KED1	137	14.667	-0.00430	48.5	ppb
Lu-KED1	175	410686.176			ppb
Tl-KED1	203	18.667	0.00023	290.2	ppb
Tl-KED1	205	50.000	0.00044	297.3	ppb
Pb-KED1	208	116.667	-0.00032	248.4	ppb
U-KED1	238	32.667	0.00070	106.5	ppb
Th-KED1	232	214942.281			ppb
Mn-STD1	55	657.348	-0.00463	11.9	ppb
Ge-STD1	72	671445.808			ppb

SB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 21:21:52
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.061
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	296521.155			ppb
	Be-KED1	9	9.333	0.00125	80.8	ppb
	Al-KED1	27	1616.759	0.00625	120.8	ppb
	V-KED3	51	2.000	-0.01002	38.4	ppb
	Cr-KED3	52	10.000	0.00302	239.3	ppb
	Cr-KED3	53	4.000	-0.00604	362.9	ppb
	Co-KED3	59	5.333	0.00224	125.0	ppb
	Ni-KED3	60	10.000	0.00791	45.9	ppb
	Ni-KED3	62	2.000	0.01567	147.1	ppb
	Cu-KED3	63	6.667	-0.00391	19.7	ppb
	Cu-KED3	65	4.667	-0.00150	199.0	ppb
	Zn-KED3	66	10.667	-0.01962	108.1	ppb
>	Ge-KED3	72	14245.767			ppb
>	Ge-KED2	72	46516.632			ppb
	As-KED2	75	7.111	0.00975	49.4	ppb
	Se-KED2	77	1.333	-0.04136	103.6	ppb
	Se-KED2	78	17.976	0.04171	194.3	ppb
	Se-KED2	82	0.299	0.17104	123.7	ppb
	Mo-KED2	95	12.000	0.00630	52.2	ppb
	Mo-KED2	97	16.000	0.01720	3.3	ppb
	Mo-KED2	98	28.228	0.01059	13.4	ppb
	Cd-KED2	111	1.667	0.00067	292.7	ppb
	Cd-KED2	112	1.640	-0.00003	481.8	ppb
	Cd-KED2	114	2.421	-0.00070	211.0	ppb
>	In-KED2	115	31982.316			ppb
>	Rh-KED3	103	100410.516			ppb
	Ag-KED3	107	6.000	0.00059	240.8	ppb
	Ag-KED3	109	6.000	0.00031	234.3	ppb
>	In-KED1	115	383759.513			ppb
	Sb-KED1	121	23.333	0.00095	216.9	ppb
	Sb-KED1	123	17.995	0.00078	270.1	ppb
	Ba-KED1	135	51.333	-0.00953	47.8	ppb
	Ba-KED1	137	20.000	-0.00292	105.2	ppb
>	Lu-KED1	175	406680.927			ppb
	Tl-KED1	203	23.333	0.00090	357.0	ppb
	Tl-KED1	205	81.334	0.00231	150.9	ppb
	Pb-KED1	208	177.334	0.00235	123.2	ppb
	U-KED1	238	72.000	0.00212	157.4	ppb
>	Th-KED1	232	216005.500			ppb
	Mn-STD1	55	665.349	-0.00439	13.0	ppb
>	Ge-STD1	72	671822.157			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCVW
Sample Date/Time: Wednesday, October 01, 2014 21:26:59
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLCCVW.062
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	292907.809			ppb
	Be-KED1	9	65.333	0.02174	35.8	ppb
	Al-KED1	27	48228.638	1.99188	5.9	ppb
	V-KED3	51	120.001	0.21690	3.0	ppb
	Cr-KED3	52	144.667	0.18427	4.0	ppb
	Cr-KED3	53	20.000	0.16849	24.5	ppb
	Co-KED3	59	40.667	0.02205	35.8	ppb
	Ni-KED3	60	106.000	0.19030	14.2	ppb
	Ni-KED3	62	24.000	0.26703	18.3	ppb
	Cu-KED3	63	160.001	0.09045	21.1	ppb
	Cu-KED3	65	96.000	0.11446	14.5	ppb
	Zn-KED3	66	74.667	0.40244	22.6	ppb
>	Ge-KED3	72	14387.249			ppb
>	Ge-KED2	72	46344.772			ppb
	As-KED2	75	105.445	0.49728	5.8	ppb
	Se-KED2	77	9.111	1.01371	9.9	ppb
	Se-KED2	78	43.595	1.07653	20.1	ppb
	Se-KED2	82	11.620	1.06111	15.5	ppb
	Mo-KED2	95	66.667	0.05426	33.7	ppb
	Mo-KED2	97	47.333	0.06004	20.4	ppb
	Mo-KED2	98	135.261	0.06719	9.3	ppb
	Cd-KED2	111	9.333	0.01381	31.2	ppb
	Cd-KED2	112	24.690	0.02098	26.5	ppb
	Cd-KED2	114	29.429	0.01913	39.4	ppb
>	In-KED2	115	32718.627			ppb
>	Rh-KED3	103	98693.377			ppb
	Ag-KED3	107	54.000	0.01950	24.1	ppb
	Ag-KED3	109	61.333	0.02293	15.1	ppb
>	In-KED1	115	374040.695			ppb
	Sb-KED1	121	614.680	0.06021	6.3	ppb
	Sb-KED1	123	454.506	0.05766	4.3	ppb
	Ba-KED1	135	172.001	0.04248	17.2	ppb
	Ba-KED1	137	224.002	0.05082	6.0	ppb
>	Lu-KED1	175	411491.116			ppb
	Tl-KED1	203	168.668	0.02104	14.0	ppb
	Tl-KED1	205	435.340	0.02293	12.1	ppb
	Pb-KED1	208	592.005	0.01999	4.6	ppb
	U-KED1	238	573.345	0.02042	10.4	ppb
>	Th-KED1	232	215018.766			ppb
	Mn-STD1	55	2302.186	0.04714	6.8	ppb
>	Ge-STD1	72	671109.017			ppb

SB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9	109			
	Al-KED1	27	100			
	V-KED3	51	108			
	Cr-KED3	52	92			
	Cr-KED3	53	84			
	Co-KED3	59	110			
	Ni-KED3	60	95			
	Ni-KED3	62	134			
	Cu-KED3	63	90			
	Cu-KED3	65	114			
	Zn-KED3	66	80			
>	Ge-KED3	72		98		
>	Ge-KED2	72		98		
	As-KED2	75	99			
	Se-KED2	77	101			
	Se-KED2	78	108			
	Se-KED2	82	106			
	Mo-KED2	95	109			
	Mo-KED2	97	120			
	Mo-KED2	98	134			
	Cd-KED2	111	69			
	Cd-KED2	112	105			
	Cd-KED2	114	96			
>	In-KED2	115		98		
>	Rh-KED3	103		96		
	Ag-KED3	107	98			
	Ag-KED3	109	115			
>	In-KED1	115		100		
	Sb-KED1	121	120			
	Sb-KED1	123	115			
	Ba-KED1	135	85			
	Ba-KED1	137	102			
>	Lu-KED1	175		98		
	Tl-KED1	203	105			
	Tl-KED1	205	115			
	Pb-KED1	208	100			
	U-KED1	238	102			
>	Th-KED1	232		101		
	Mn-STD1	55	94			
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Ni-KED3	62	Out of Control
QC Std 6	Mo-KED2	98	Out of Control
QC Std 6	Cd-KED2	111	Out of Control

LABWORKS - Summary Report

Sample ID: LLCCVW
Sample Date/Time: Wednesday, October 01, 2014 21:32:01
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLCCVW.063
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	299771.977			ppb
|	Be-KED1	9	52.667	0.01654	37.4	ppb
⌊	Al-KED1	27	50049.651	2.01766	4.7	ppb
⌈	V-KED3	51	110.667	0.19961	8.1	ppb
|	Cr-KED3	52	146.667	0.18798	9.9	ppb
|	Cr-KED3	53	20.667	0.17634	8.7	ppb
|	Co-KED3	59	40.000	0.02163	24.3	ppb
|	Ni-KED3	60	106.667	0.19146	15.1	ppb
|	Ni-KED3	62	16.667	0.18554	27.7	ppb
|	Cu-KED3	63	168.668	0.09582	6.6	ppb
|	Cu-KED3	65	94.000	0.11223	10.7	ppb
|	Zn-KED3	66	96.000	0.54202	24.3	ppb
⌊>	Ge-KED3	72	14325.848			ppb
⌈>	Ge-KED2	72	46306.606			ppb
|	As-KED2	75	112.000	0.52951	2.6	ppb
|	Se-KED2	77	9.444	1.06126	27.0	ppb
|	Se-KED2	78	44.935	1.13159	14.0	ppb
⌊	Se-KED2	82	12.288	1.11816	12.9	ppb
⌈	Mo-KED2	95	74.000	0.06129	7.2	ppb
|	Mo-KED2	97	42.667	0.05374	20.5	ppb
|	Mo-KED2	98	128.749	0.06401	11.2	ppb
|	Cd-KED2	111	13.000	0.02025	0.5	ppb
|	Cd-KED2	112	26.437	0.02277	10.6	ppb
|	Cd-KED2	114	28.150	0.01839	16.0	ppb
⌊>	In-KED2	115	32547.255			ppb
⌈>	Rh-KED3	103	99383.186			ppb
|	Ag-KED3	107	53.333	0.01897	24.1	ppb
⌊	Ag-KED3	109	52.000	0.01902	4.5	ppb
⌈>	In-KED1	115	380703.509			ppb
|	Sb-KED1	121	576.012	0.05535	8.2	ppb
|	Sb-KED1	123	458.338	0.05717	4.8	ppb
|	Ba-KED1	135	180.668	0.04495	24.0	ppb
⌊	Ba-KED1	137	198.668	0.04327	12.8	ppb
⌈>	Lu-KED1	175	415895.744			ppb
|	Tl-KED1	203	164.001	0.02014	10.8	ppb
|	Tl-KED1	205	398.672	0.02055	2.4	ppb
⌊	Pb-KED1	208	612.005	0.02057	2.0	ppb
⌈	U-KED1	238	576.678	0.02022	10.8	ppb
⌊>	Th-KED1	232	218221.956			ppb
⌈	Mn-STD1	55	2288.183	0.04855	11.9	ppb
⌊>	Ge-STD1	72	656395.450			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9	83			
	Al-KED1	27	101			
	V-KED3	51	100			
	Cr-KED3	52	94			
	Cr-KED3	53	88			
	Co-KED3	59	108			
	Ni-KED3	60	96			
	Ni-KED3	62	93			
	Cu-KED3	63	96			
	Cu-KED3	65	112			
	Zn-KED3	66	108			
>	Ge-KED3	72		98		
>	Ge-KED2	72		98		
	As-KED2	75	106			
	Se-KED2	77	106			
	Se-KED2	78	113			
	Se-KED2	82	112			
	Mo-KED2	95	123			
	Mo-KED2	97	107			
	Mo-KED2	98	128			
	Cd-KED2	111	101			
	Cd-KED2	112	114			
	Cd-KED2	114	92			
>	In-KED2	115		97		
>	Rh-KED3	103		96		
	Ag-KED3	107	95			
	Ag-KED3	109	95			
>	In-KED1	115		101		
	Sb-KED1	121	111			
	Sb-KED1	123	114			
	Ba-KED1	135	90			
	Ba-KED1	137	87			
>	Lu-KED1	175		99		
	Tl-KED1	203	101			
	Tl-KED1	205	103			
	Pb-KED1	208	103			
	U-KED1	238	101			
>	Th-KED1	232		102		
	Mn-STD1	55	97			
>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-010
Sample Date/Time: Wednesday, October 01, 2014 21:37:08
Sample Description:
Autosampler Position: 337
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-010.064
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	300410.671			ppb
|	Be-KED1	9	6.000	0.00006	1265.6	ppb
⌊	Al-KED1	27	611490.214	25.29003	3.4	ppb
⌈	V-KED3	51	12.000	0.00876	43.2	ppb
|	Cr-KED3	52	112.000	0.13748	15.1	ppb
|	Cr-KED3	53	17.333	0.13533	17.7	ppb
|	Co-KED3	59	26.000	0.01343	21.5	ppb
|	Ni-KED3	60	91.334	0.15862	3.3	ppb
|	Ni-KED3	62	14.000	0.15043	15.1	ppb
|	Cu-KED3	63	214.668	0.12114	2.1	ppb
|	Cu-KED3	65	109.334	0.12870	6.7	ppb
|	Zn-KED3	66	14940.478	96.28616	1.7	ppb
⌊>	Ge-KED3	72	14658.851			ppb
⌈>	Ge-KED2	72	46968.098			ppb
|	As-KED2	75	16.111	0.05346	26.9	ppb
|	Se-KED2	77	1.556	-0.01366	348.8	ppb
|	Se-KED2	78	15.363	-0.07088	86.3	ppb
⌊	Se-KED2	82	-0.050	0.14440	181.0	ppb
⌈	Mo-KED2	95	20.667	0.01349	38.6	ppb
|	Mo-KED2	97	18.000	0.01914	41.4	ppb
|	Mo-KED2	98	33.489	0.01291	10.0	ppb
|	Cd-KED2	111	8.333	0.01196	21.0	ppb
|	Cd-KED2	112	16.051	0.01299	4.0	ppb
|	Cd-KED2	114	18.007	0.01065	12.4	ppb
⌊>	In-KED2	115	33025.786			ppb
⌈>	Rh-KED3	103	100642.806			ppb
|	Ag-KED3	107	5.333	0.00031	389.7	ppb
⌊	Ag-KED3	109	6.667	0.00064	420.2	ppb
⌈>	In-KED1	115	383867.621			ppb
|	Sb-KED1	121	180.668	0.01632	12.1	ppb
|	Sb-KED1	123	164.164	0.01934	3.8	ppb
|	Ba-KED1	135	916.029	0.34955	6.0	ppb
⌊	Ba-KED1	137	1589.422	0.39926	4.8	ppb
⌈>	Lu-KED1	175	417261.783			ppb
|	Tl-KED1	203	26.667	0.00129	127.1	ppb
|	Tl-KED1	205	60.667	0.00101	61.8	ppb
⌊	Pb-KED1	208	15061.780	0.62944	0.5	ppb
⌈	U-KED1	238	27.333	0.00049	24.0	ppb
⌊>	Th-KED1	232	219402.843			ppb
⌈	Mn-STD1	55	19055.368	0.57164	2.3	ppb
⌊>	Ge-STD1	72	674718.579			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-011
Sample Date/Time: Wednesday, October 01, 2014 21:42:15
Sample Description:
Autosampler Position: 338
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-011.065
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	300274.951			ppb
|	Be-KED1	9	6.000	0.00007	2697.4	ppb
⌊	Al-KED1	27	89439.794	3.64853	1.5	ppb
⌈	V-KED3	51	16.000	0.01755	87.3	ppb
|	Cr-KED3	52	49.333	0.05751	53.8	ppb
|	Cr-KED3	53	6.000	0.01720	344.5	ppb
|	Co-KED3	59	9.333	0.00459	38.7	ppb
|	Ni-KED3	60	894.028	1.72782	4.9	ppb
|	Ni-KED3	62	146.667	1.72227	8.9	ppb
|	Cu-KED3	63	77.334	0.04068	13.3	ppb
|	Cu-KED3	65	42.667	0.04790	42.0	ppb
|	Zn-KED3	66	43.333	0.20176	9.0	ppb
⌊>	Ge-KED3	72	14012.203			ppb
⌈>	Ge-KED2	72	47545.688			ppb
|	As-KED2	75	7.000	0.00845	114.6	ppb
|	Se-KED2	77	2.556	0.11574	37.0	ppb
|	Se-KED2	78	21.181	0.15093	130.6	ppb
⌊	Se-KED2	82	-0.261	0.12821	111.8	ppb
⌈	Mo-KED2	95	24.667	0.01710	37.9	ppb
|	Mo-KED2	97	10.667	0.00935	49.7	ppb
|	Mo-KED2	98	37.854	0.01521	43.3	ppb
|	Cd-KED2	111	2.667	0.00235	47.4	ppb
|	Cd-KED2	112	4.106	0.00220	51.2	ppb
|	Cd-KED2	114	9.285	0.00428	31.2	ppb
⌊>	In-KED2	115	32873.611			ppb
⌈>	Rh-KED3	103	101143.559			ppb
|	Ag-KED3	107	4.667	0.00003	4149.8	ppb
⌊	Ag-KED3	109	4.667	-0.00020	1049.6	ppb
⌈>	In-KED1	115	385288.734			ppb
|	Sb-KED1	121	58.000	0.00430	16.8	ppb
|	Sb-KED1	123	46.499	0.00437	30.1	ppb
|	Ba-KED1	135	165.334	0.03750	13.4	ppb
⌊	Ba-KED1	137	203.335	0.04385	11.1	ppb
⌈>	Lu-KED1	175	416171.755			ppb
|	Tl-KED1	203	24.000	0.00093	147.5	ppb
|	Tl-KED1	205	45.333	0.00014	692.7	ppb
⌊	Pb-KED1	208	550.004	0.01793	5.8	ppb
⌈	U-KED1	238	20.667	0.00026	74.2	ppb
⌊>	Th-KED1	232	217370.759			ppb
⌈	Mn-STD1	55	2182.834	0.04097	10.0	ppb
⌊>	Ge-STD1	72	696455.006			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		96		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-012
Sample Date/Time: Wednesday, October 01, 2014 21:47:22
Sample Description:
Autosampler Position: 339
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-012.066
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	305627.945			ppb
|	Be-KED1	9	10.000	0.00142	54.4	ppb
⌊	Al-KED1	27	155433.809	6.27617	2.4	ppb
⌈	V-KED3	51	21.333	0.02591	9.3	ppb
|	Cr-KED3	52	47.333	0.05120	12.2	ppb
|	Cr-KED3	53	4.667	-0.00043	5879.9	ppb
|	Co-KED3	59	53.333	0.02795	10.4	ppb
|	Ni-KED3	60	10014.175	18.38875	1.6	ppb
|	Ni-KED3	62	1601.423	17.85720	4.1	ppb
|	Cu-KED3	63	576.012	0.33429	6.6	ppb
|	Cu-KED3	65	278.669	0.33545	8.3	ppb
|	Zn-KED3	66	1175.382	7.39790	4.8	ppb
⌊>	Ge-KED3	72	14834.367			ppb
⌈>	Ge-KED2	72	47861.059			ppb
|	As-KED2	75	13.444	0.03910	17.6	ppb
|	Se-KED2	77	1.889	0.02850	550.0	ppb
|	Se-KED2	78	18.871	0.05361	291.5	ppb
⌊	Se-KED2	82	0.078	0.15574	41.1	ppb
⌈	Mo-KED2	95	2044.813	1.77602	1.5	ppb
|	Mo-KED2	97	1362.732	1.84151	1.4	ppb
|	Mo-KED2	98	3451.458	1.79719	2.2	ppb
|	Cd-KED2	111	6.333	0.00845	40.7	ppb
|	Cd-KED2	112	7.839	0.00550	46.3	ppb
|	Cd-KED2	114	6.997	0.00255	65.6	ppb
⌊>	In-KED2	115	33294.918			ppb
⌈>	Rh-KED3	103	102856.414			ppb
|	Ag-KED3	107	8.000	0.00126	5.4	ppb
⌊	Ag-KED3	109	4.667	-0.00026	158.7	ppb
⌈>	In-KED1	115	388037.920			ppb
|	Sb-KED1	121	107.334	0.00903	4.9	ppb
|	Sb-KED1	123	63.748	0.00649	19.3	ppb
|	Ba-KED1	135	287.336	0.08705	8.8	ppb
⌊	Ba-KED1	137	390.005	0.09084	4.3	ppb
⌈>	Lu-KED1	175	414338.364			ppb
|	Tl-KED1	203	33.333	0.00224	94.5	ppb
|	Tl-KED1	205	60.000	0.00100	77.2	ppb
⌊	Pb-KED1	208	4209.573	0.17335	0.4	ppb
⌈	U-KED1	238	65.333	0.00184	7.3	ppb
⌊>	Th-KED1	232	219428.643			ppb
⌈	Mn-STD1	55	133772.847	4.03250	3.4	ppb
⌊>	Ge-STD1	72	696991.188			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		99		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		102		
⌈>	Ge-KED2	72		101		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		99		
⌈>	Rh-KED3	103		100		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		103		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		99		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		103		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		104		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-013
Sample Date/Time: Wednesday, October 01, 2014 21:52:29
Sample Description:
Autosampler Position: 340
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-013.067
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	303622.103			ppb
|	Be-KED1	9	6.667	0.00025	971.4	ppb
⌊	Al-KED1	27	193462.508	7.87208	4.0	ppb
⌈	V-KED3	51	15.333	0.01514	17.8	ppb
|	Cr-KED3	52	61.333	0.07047	15.1	ppb
|	Cr-KED3	53	10.000	0.05752	76.5	ppb
|	Co-KED3	59	20.667	0.01055	6.8	ppb
|	Ni-KED3	60	1808.115	3.35674	4.4	ppb
|	Ni-KED3	62	296.003	3.33114	16.5	ppb
|	Cu-KED3	63	212.668	0.12002	9.0	ppb
|	Cu-KED3	65	118.667	0.14074	15.4	ppb
|	Zn-KED3	66	631.347	3.98741	9.3	ppb
⌊>	Ge-KED3	72	14632.158			ppb
⌈>	Ge-KED2	72	47852.353			ppb
|	As-KED2	75	8.556	0.01569	27.5	ppb
|	Se-KED2	77	2.556	0.11533	120.1	ppb
|	Se-KED2	78	17.491	0.00271	6147.7	ppb
⌊	Se-KED2	82	-1.156	0.06170	171.1	ppb
⌈	Mo-KED2	95	181.334	0.15321	6.1	ppb
|	Mo-KED2	97	132.001	0.17345	6.9	ppb
|	Mo-KED2	98	303.419	0.15348	8.2	ppb
|	Cd-KED2	111	2.333	0.00169	152.2	ppb
|	Cd-KED2	112	7.719	0.00536	70.4	ppb
|	Cd-KED2	114	5.688	0.00160	24.9	ppb
⌊>	In-KED2	115	33324.164			ppb
⌈>	Rh-KED3	103	102406.491			ppb
|	Ag-KED3	107	9.333	0.00178	26.7	ppb
⌊	Ag-KED3	109	9.333	0.00160	114.8	ppb
⌈>	In-KED1	115	388226.519			ppb
|	Sb-KED1	121	92.000	0.00751	17.6	ppb
|	Sb-KED1	123	62.667	0.00639	16.7	ppb
|	Ba-KED1	135	338.671	0.10882	24.8	ppb
⌊	Ba-KED1	137	468.674	0.11098	11.7	ppb
⌈>	Lu-KED1	175	418840.695			ppb
|	Tl-KED1	203	24.000	0.00091	207.3	ppb
|	Tl-KED1	205	48.667	0.00030	274.1	ppb
⌊	Pb-KED1	208	3712.187	0.15056	3.2	ppb
⌈	U-KED1	238	42.667	0.00103	38.4	ppb
⌊>	Th-KED1	232	220328.841			ppb
⌈	Mn-STD1	55	35437.251	1.06009	3.1	ppb
⌊>	Ge-STD1	72	690055.676			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-014
Sample Date/Time: Wednesday, October 01, 2014 21:57:37
Sample Description:
Autosampler Position: 341
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-014.068
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	297457.144			ppb
|	Be-KED1	9	8.000	0.00078	88.6	ppb
⌊	Al-KED1	27	104104.693	4.29696	0.9	ppb
⌈	V-KED3	51	13.333	0.01189	102.3	ppb
|	Cr-KED3	52	49.333	0.05650	8.4	ppb
|	Cr-KED3	53	10.667	0.06768	39.4	ppb
|	Co-KED3	59	2.000	0.00040	283.6	ppb
|	Ni-KED3	60	28.667	0.04383	36.9	ppb
|	Ni-KED3	62	5.333	0.05499	90.6	ppb
|	Cu-KED3	63	122.001	0.06755	5.7	ppb
|	Cu-KED3	65	60.667	0.07027	20.5	ppb
|	Zn-KED3	66	75.334	0.40935	41.8	ppb
⌊>	Ge-KED3	72	14232.421			ppb
⌈>	Ge-KED2	72	47884.475			ppb
|	As-KED2	75	6.556	0.00616	89.1	ppb
|	Se-KED2	77	2.889	0.15786	17.9	ppb
|	Se-KED2	78	16.511	-0.03621	244.1	ppb
⌊	Se-KED2	82	0.071	0.15383	34.6	ppb
⌈	Mo-KED2	95	11.333	0.00529	76.1	ppb
|	Mo-KED2	97	7.333	0.00463	149.0	ppb
|	Mo-KED2	98	11.927	0.00151	110.9	ppb
|	Cd-KED2	111	3.667	0.00400	161.2	ppb
|	Cd-KED2	112	5.146	0.00311	94.4	ppb
|	Cd-KED2	114	5.979	0.00183	149.0	ppb
⌊>	In-KED2	115	33165.942			ppb
⌈>	Rh-KED3	103	102734.774			ppb
|	Ag-KED3	107	6.000	0.00051	4.5	ppb
⌊	Ag-KED3	109	3.333	-0.00077	154.0	ppb
⌈>	In-KED1	115	384004.228			ppb
|	Sb-KED1	121	50.000	0.00356	28.3	ppb
|	Sb-KED1	123	30.331	0.00234	14.0	ppb
|	Ba-KED1	135	249.336	0.07282	11.7	ppb
⌊	Ba-KED1	137	333.337	0.07742	12.5	ppb
⌈>	Lu-KED1	175	423326.598			ppb
|	Tl-KED1	203	15.333	-0.00029	287.8	ppb
|	Tl-KED1	205	35.333	-0.00048	78.6	ppb
⌊	Pb-KED1	208	2329.407	0.09147	4.4	ppb
⌈	U-KED1	238	25.333	0.00042	59.8	ppb
⌊>	Th-KED1	232	218994.546			ppb
⌈	Mn-STD1	55	5973.916	0.16417	3.1	ppb
⌊>	Ge-STD1	72	666393.796			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-015
Sample Date/Time: Wednesday, October 01, 2014 22:02:44
Sample Description:
Autosampler Position: 342
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-015.069
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	297750.680			ppb
|	Be-KED1	9	7.333	0.00054	266.1	ppb
⌊	Al-KED1	27	387963.945	16.17523	3.5	ppb
⌈	V-KED3	51	17.333	0.01935	70.7	ppb
|	Cr-KED3	52	150.001	0.19008	12.4	ppb
|	Cr-KED3	53	21.333	0.18202	40.7	ppb
|	Co-KED3	59	38.667	0.02049	15.3	ppb
|	Ni-KED3	60	76.667	0.13333	14.0	ppb
|	Ni-KED3	62	8.667	0.09098	35.7	ppb
|	Cu-KED3	63	214.002	0.12234	12.6	ppb
|	Cu-KED3	65	106.000	0.12622	22.0	ppb
|	Zn-KED3	66	15388.951	100.36737	3.1	ppb
⌊>	Ge-KED3	72	14496.691			ppb
⌈>	Ge-KED2	72	47282.457			ppb
|	As-KED2	75	9.111	0.01897	59.1	ppb
|	Se-KED2	77	2.889	0.16273	42.8	ppb
|	Se-KED2	78	17.470	0.00917	497.8	ppb
⌊	Se-KED2	82	-2.939	-0.07680	137.5	ppb
⌈	Mo-KED2	95	27.333	0.01936	11.6	ppb
|	Mo-KED2	97	14.667	0.01458	52.4	ppb
|	Mo-KED2	98	40.447	0.01658	11.4	ppb
|	Cd-KED2	111	2.333	0.00177	151.8	ppb
|	Cd-KED2	112	6.758	0.00458	34.7	ppb
|	Cd-KED2	114	7.262	0.00277	79.6	ppb
⌊>	In-KED2	115	33013.227			ppb
⌈>	Rh-KED3	103	100524.068			ppb
|	Ag-KED3	107	10.667	0.00230	148.1	ppb
⌊	Ag-KED3	109	5.333	0.00005	812.0	ppb
⌈>	In-KED1	115	383738.511			ppb
|	Sb-KED1	121	86.000	0.00711	29.8	ppb
|	Sb-KED1	123	72.914	0.00770	29.9	ppb
|	Ba-KED1	135	320.004	0.10228	8.5	ppb
⌊	Ba-KED1	137	463.341	0.11079	4.6	ppb
⌈>	Lu-KED1	175	423594.488			ppb
|	Tl-KED1	203	18.000	0.00009	1722.5	ppb
|	Tl-KED1	205	41.333	-0.00014	510.9	ppb
⌊	Pb-KED1	208	4432.269	0.17874	2.0	ppb
⌈	U-KED1	238	37.333	0.00084	31.8	ppb
⌊>	Th-KED1	232	220882.535			ppb
⌈	Mn-STD1	55	11498.626	0.32928	2.9	ppb
⌊>	Ge-STD1	72	685549.658			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		97		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		99		
⌈>	Ge-KED2	72		100		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		99		
⌈>	Rh-KED3	103		97		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		102		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		101		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		103		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410311-016
Sample Date/Time: Wednesday, October 01, 2014 22:07:51
Sample Description:
Autosampler Position: 343
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410311-016.070
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	300187.971			ppb
|	Be-KED1	9	4.667	-0.00042	98.1	ppb
⌊	Al-KED1	27	90648.923	3.69868	2.7	ppb
⌈	V-KED3	51	16.000	0.01638	39.7	ppb
|	Cr-KED3	52	54.667	0.06193	35.2	ppb
|	Cr-KED3	53	6.000	0.01438	301.7	ppb
|	Co-KED3	59	8.000	0.00364	30.6	ppb
|	Ni-KED3	60	783.355	1.44929	3.7	ppb
|	Ni-KED3	62	124.667	1.40130	20.9	ppb
|	Cu-KED3	63	64.000	0.03053	23.3	ppb
|	Cu-KED3	65	33.333	0.03409	36.9	ppb
|	Zn-KED3	66	42.667	0.18514	20.8	ppb
⌊>	Ge-KED3	72	14619.477			ppb
⌈>	Ge-KED2	72	47048.376			ppb
|	As-KED2	75	6.889	0.00837	82.4	ppb
|	Se-KED2	77	2.111	0.05932	161.4	ppb
|	Se-KED2	78	17.147	0.00078	21425.4	ppb
⌊	Se-KED2	82	-0.826	0.08616	94.2	ppb
⌈	Mo-KED2	95	18.667	0.01190	22.4	ppb
|	Mo-KED2	97	18.667	0.02032	31.2	ppb
|	Mo-KED2	98	21.708	0.00679	29.7	ppb
|	Cd-KED2	111	2.333	0.00177	56.0	ppb
|	Cd-KED2	112	2.772	0.00097	209.3	ppb
|	Cd-KED2	114	3.725	0.00023	380.5	ppb
⌊>	In-KED2	115	32757.870			ppb
⌈>	Rh-KED3	103	101741.798			ppb
|	Ag-KED3	107	4.000	-0.00023	333.7	ppb
⌊	Ag-KED3	109	5.333	0.00005	2452.9	ppb
⌈>	In-KED1	115	383788.626			ppb
|	Sb-KED1	121	43.333	0.00291	29.9	ppb
|	Sb-KED1	123	37.664	0.00326	33.9	ppb
|	Ba-KED1	135	219.335	0.06027	11.3	ppb
⌊	Ba-KED1	137	310.670	0.07157	3.2	ppb
⌈>	Lu-KED1	175	417553.727			ppb
|	Tl-KED1	203	7.333	-0.00135	51.5	ppb
|	Tl-KED1	205	23.333	-0.00114	27.6	ppb
⌊	Pb-KED1	208	1304.690	0.04963	5.5	ppb
⌈	U-KED1	238	36.000	0.00080	47.2	ppb
⌊>	Th-KED1	232	219026.946			ppb
⌈	Mn-STD1	55	4910.178	0.12583	2.4	ppb
⌊>	Ge-STD1	72	686361.785			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-001L
Sample Date/Time: Wednesday, October 01, 2014 22:12:58
Sample Description:
Autosampler Position: 344
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-001L.071
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	295038.214			ppb
	Be-KED1	9	9.333	0.00129	116.3	ppb
	Al-KED1	27	553995.827	23.32339	4.5	ppb
	V-KED3	51	36.667	0.05686	29.2	ppb
	Cr-KED3	52	47.333	0.05326	4.5	ppb
	Cr-KED3	53	9.333	0.05173	46.3	ppb
	Co-KED3	59	22.667	0.01187	4.2	ppb
	Ni-KED3	60	458.674	0.85991	8.2	ppb
	Ni-KED3	62	80.000	0.91459	6.0	ppb
	Cu-KED3	63	94.000	0.04979	20.8	ppb
	Cu-KED3	65	51.333	0.05771	23.7	ppb
	Zn-KED3	66	134.667	0.79554	18.4	ppb
>	Ge-KED3	72	14353.875			ppb
>	Ge-KED2	72	47228.966			ppb
	As-KED2	75	10.444	0.02543	14.2	ppb
	Se-KED2	77	2.444	0.10268	133.0	ppb
	Se-KED2	78	16.966	-0.00984	293.9	ppb
	Se-KED2	82	-0.926	0.07829	181.4	ppb
	Mo-KED2	95	48.667	0.03896	8.6	ppb
	Mo-KED2	97	39.333	0.04944	15.1	ppb
	Mo-KED2	98	111.781	0.05525	5.7	ppb
	Cd-KED2	111	3.667	0.00409	104.9	ppb
	Cd-KED2	112	8.306	0.00611	7.8	ppb
	Cd-KED2	114	11.421	0.00598	39.1	ppb
>	In-KED2	115	32402.250			ppb
>	Rh-KED3	103	100728.554			ppb
	Ag-KED3	107	5.333	0.00030	390.6	ppb
	Ag-KED3	109	4.000	-0.00048	166.2	ppb
>	In-KED1	115	380533.773			ppb
	Sb-KED1	121	56.000	0.00418	33.6	ppb
	Sb-KED1	123	31.832	0.00257	18.6	ppb
	Ba-KED1	135	1049.372	0.40866	4.7	ppb
	Ba-KED1	137	1638.761	0.41531	3.9	ppb
>	Lu-KED1	175	419269.068			ppb
	Tl-KED1	203	14.000	-0.00045	258.7	ppb
	Tl-KED1	205	30.667	-0.00072	41.6	ppb
	Pb-KED1	208	4812.982	0.19654	1.8	ppb
	U-KED1	238	124.667	0.00399	1.5	ppb
>	Th-KED1	232	218010.953			ppb
	Mn-STD1	55	32405.403	0.98529	1.5	ppb
>	Ge-STD1	72	677518.016			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		100		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409787-001A
Sample Date/Time: Wednesday, October 01, 2014 22:18:05
Sample Description:
Autosampler Position: 345
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409787-001A.072
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	307338.223			ppb
|	Be-KED1	9	56610.624	19.50425	2.4	ppb
⌊	Al-KED1	27	3419395.671	138.57453	3.1	ppb
⌈	V-KED3	51	10546.560	19.67658	3.2	ppb
|	Cr-KED3	52	14870.404	19.43390	1.8	ppb
|	Cr-KED3	53	1932.797	20.41226	1.3	ppb
|	Co-KED3	59	35782.767	19.27775	1.3	ppb
|	Ni-KED3	60	13112.016	24.11173	3.0	ppb
|	Ni-KED3	62	2099.488	23.42157	0.6	ppb
|	Cu-KED3	63	32622.569	19.41963	4.2	ppb
|	Cu-KED3	65	16215.871	19.98006	2.9	ppb
|	Zn-KED3	66	3679.808	23.38587	1.8	ppb
⌊>	Ge-KED3	72	14819.020			ppb
⌈>	Ge-KED2	72	48350.017			ppb
|	As-KED2	75	4376.782	20.74447	2.6	ppb
|	Se-KED2	77	161.668	20.76768	1.1	ppb
|	Se-KED2	78	541.602	20.23873	0.4	ppb
⌊	Se-KED2	82	271.288	20.61015	1.2	ppb
⌈	Mo-KED2	95	23622.185	20.37914	1.8	ppb
|	Mo-KED2	97	15294.851	20.53684	2.0	ppb
|	Mo-KED2	98	40393.403	20.89427	1.1	ppb
|	Cd-KED2	111	11524.647	19.31576	1.5	ppb
|	Cd-KED2	112	21742.272	19.38227	2.4	ppb
|	Cd-KED2	114	27146.547	19.52111	1.3	ppb
⌊>	In-KED2	115	33598.699			ppb
⌈>	Rh-KED3	103	102185.618			ppb
|	Ag-KED3	107	26083.805	9.86354	2.1	ppb
⌊	Ag-KED3	109	25013.218	9.87560	3.4	ppb
⌈>	In-KED1	115	389610.690			ppb
|	Sb-KED1	121	213916.718	20.56013	3.8	ppb
|	Sb-KED1	123	165504.562	20.69514	2.7	ppb
|	Ba-KED1	135	54242.138	22.16919	3.7	ppb
⌊	Ba-KED1	137	88598.653	22.35813	4.1	ppb
⌈>	Lu-KED1	175	422202.627			ppb
|	Tl-KED1	203	154805.611	20.91882	0.4	ppb
|	Tl-KED1	205	367624.761	20.91307	0.4	ppb
⌊	Pb-KED1	208	508803.391	21.18665	0.3	ppb
⌈	U-KED1	238	561335.365	19.54864	1.0	ppb
⌊>	Th-KED1	232	225105.084			ppb
⌈	Mn-STD1	55	824757.888	24.74735	3.1	ppb
⌊>	Ge-STD1	72	703907.478			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101		
>	Ge-KED2	72		102		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		100		
>	Rh-KED3	103		99		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		105		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-001L
Sample Date/Time: Wednesday, October 01, 2014 22:23:13
Sample Description:
Autosampler Position: 346
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100114D\K1410208-001L.073
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	302842.693			ppb
|	Be-KED1	9	5.333	-0.00020	203.4	ppb
⌊	Al-KED1	27	215455.335	8.80489	4.8	ppb
⌈	V-KED3	51	8.667	0.00301	139.2	ppb
|	Cr-KED3	52	11.333	0.00487	55.8	ppb
|	Cr-KED3	53	2.000	-0.02813	76.6	ppb
|	Co-KED3	59	8.667	0.00420	57.7	ppb
|	Ni-KED3	60	30.667	0.04813	26.0	ppb
|	Ni-KED3	62	5.333	0.05549	91.5	ppb
|	Cu-KED3	63	122.001	0.06824	17.2	ppb
|	Cu-KED3	65	52.667	0.06053	27.2	ppb
|	Zn-KED3	66	78.000	0.43076	5.7	ppb
⌊>	Ge-KED3	72	14140.999			ppb
⌈>	Ge-KED2	72	46702.572			ppb
|	As-KED2	75	8.667	0.01730	43.1	ppb
|	Se-KED2	77	1.667	0.00086	17292.7	ppb
|	Se-KED2	78	15.649	-0.05737	295.6	ppb
⌊	Se-KED2	82	0.634	0.19882	34.8	ppb
⌈	Mo-KED2	95	63.333	0.05143	22.2	ppb
|	Mo-KED2	97	49.333	0.06266	26.2	ppb
|	Mo-KED2	98	108.375	0.05287	33.1	ppb
|	Cd-KED2	111	3.000	0.00292	59.6	ppb
|	Cd-KED2	112	3.119	0.00129	76.0	ppb
|	Cd-KED2	114	2.067	-0.00100	167.7	ppb
⌊>	In-KED2	115	32761.551			ppb
⌈>	Rh-KED3	103	99853.826			ppb
|	Ag-KED3	107	8.667	0.00156	94.4	ppb
⌊	Ag-KED3	109	9.333	0.00161	138.4	ppb
⌈>	In-KED1	115	382475.271			ppb
|	Sb-KED1	121	32.667	0.00187	24.1	ppb
|	Sb-KED1	123	29.748	0.00230	68.9	ppb
|	Ba-KED1	135	233.335	0.06638	11.8	ppb
⌊	Ba-KED1	137	280.003	0.06394	2.7	ppb
⌈>	Lu-KED1	175	411517.801			ppb
|	Tl-KED1	203	19.333	0.00032	259.1	ppb
|	Tl-KED1	205	36.667	-0.00034	158.2	ppb
⌊	Pb-KED1	208	1703.373	0.06749	2.6	ppb
⌈	U-KED1	238	46.000	0.00119	54.2	ppb
⌊>	Th-KED1	232	215282.062			ppb
⌈	Mn-STD1	55	5803.179	0.15371	1.5	ppb
⌊>	Ge-STD1	72	685020.416			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		98		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 22:28:21
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.074
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	296624.129			ppb
Be-KED1	9	68966.814	24.62686	2.1	ppb
Al-KED1	27	611588.115	25.64383	3.4	ppb
V-KED3	51	13463.009	25.64980	0.7	ppb
Cr-KED3	52	18730.289	24.99512	3.9	ppb
Cr-KED3	53	2244.176	24.21346	2.9	ppb
Co-KED3	59	45339.870	24.94494	2.6	ppb
Ni-KED3	60	13177.410	24.73842	1.0	ppb
Ni-KED3	62	2174.832	24.78703	1.7	ppb
Cu-KED3	63	39942.450	24.27814	2.5	ppb
Cu-KED3	65	20148.889	25.35044	4.4	ppb
Zn-KED3	66	3826.513	24.85595	3.5	ppb
Ge-KED3	72	14508.031			ppb
Ge-KED2	72	47215.920			ppb
As-KED2	75	5183.385	25.16057	1.0	ppb
Se-KED2	77	181.001	23.83967	3.8	ppb
Se-KED2	78	628.289	24.17745	3.2	ppb
Se-KED2	82	318.849	24.75840	5.0	ppb
Mo-KED2	95	28916.577	25.65706	0.8	ppb
Mo-KED2	97	18244.317	25.19551	3.0	ppb
Mo-KED2	98	47738.012	25.40150	2.3	ppb
Cd-KED2	111	14442.964	24.89806	0.7	ppb
Cd-KED2	112	27346.090	25.07422	1.4	ppb
Cd-KED2	114	34175.339	25.27604	0.6	ppb
In-KED2	115	32667.758			ppb
Rh-KED3	103	101695.396			ppb
Ag-KED3	107	66168.909	25.14431	0.4	ppb
Ag-KED3	109	64933.914	25.75641	1.7	ppb
In-KED1	115	388658.477			ppb
Sb-KED1	121	268389.992	25.85125	1.1	ppb
Sb-KED1	123	203364.178	25.48416	1.6	ppb
Ba-KED1	135	60995.307	24.98419	0.7	ppb
Ba-KED1	137	100983.010	25.54441	2.7	ppb
Lu-KED1	175	416426.211			ppb
Tl-KED1	203	186041.613	25.48844	1.0	ppb
Tl-KED1	205	438124.666	25.27062	1.1	ppb
Pb-KED1	208	607700.504	25.65662	0.4	ppb
U-KED1	238	698420.172	24.72817	0.7	ppb
Th-KED1	232	221408.832			ppb
Mn-STD1	55	827745.462	25.50340	3.2	ppb
Ge-STD1	72	685411.245			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9	99			
	Al-KED1	27	103			
	V-KED3	51	103			
	Cr-KED3	52	100			
	Cr-KED3	53	97			
	Co-KED3	59	100			
	Ni-KED3	60	99			
	Ni-KED3	62	99			
	Cu-KED3	63	97			
	Cu-KED3	65	101			
	Zn-KED3	66	99			
>	Ge-KED3	72		99		
>	Ge-KED2	72		100		
	As-KED2	75	101			
	Se-KED2	77	95			
	Se-KED2	78	97			
	Se-KED2	82	99			
	Mo-KED2	95	103			
	Mo-KED2	97	101			
	Mo-KED2	98	102			
	Cd-KED2	111	100			
	Cd-KED2	112	100			
	Cd-KED2	114	101			
>	In-KED2	115		98		
>	Rh-KED3	103		98		
	Ag-KED3	107	101			
	Ag-KED3	109	103			
>	In-KED1	115		104		
	Sb-KED1	121	103			
	Sb-KED1	123	102			
	Ba-KED1	135	100			
	Ba-KED1	137	102			
>	Lu-KED1	175		99		
	Tl-KED1	203	102			
	Tl-KED1	205	101			
	Pb-KED1	208	103			
	U-KED1	238	99			
>	Th-KED1	232		104		
	Mn-STD1	55	102			
>	Ge-STD1	72		102		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 22:33:29
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.075
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	298278.476			ppb
	Be-KED1	9	2.000	-0.00135	2.4	ppb
	Al-KED1	27	1534.749	0.00248	155.1	ppb
	V-KED3	51	10.000	0.00529	74.0	ppb
	Cr-KED3	52	9.333	0.00194	214.8	ppb
	Cr-KED3	53	4.000	-0.00663	13.0	ppb
	Co-KED3	59	13.333	0.00666	42.2	ppb
	Ni-KED3	60	6.667	0.00138	871.6	ppb
	Ni-KED3	62	1.333	0.00806	335.2	ppb
	Cu-KED3	63	10.667	-0.00151	133.3	ppb
	Cu-KED3	65	8.667	0.00342	107.1	ppb
	Zn-KED3	66	13.333	-0.00341	403.7	ppb
>	Ge-KED3	72	14441.965			ppb
>	Ge-KED2	72	46281.853			ppb
	As-KED2	75	6.667	0.00774	22.4	ppb
	Se-KED2	77	1.889	0.03447	527.1	ppb
	Se-KED2	78	15.080	-0.07298	178.2	ppb
	Se-KED2	82	1.408	0.26011	15.5	ppb
	Mo-KED2	95	61.333	0.05038	8.1	ppb
	Mo-KED2	97	32.667	0.04029	19.1	ppb
	Mo-KED2	98	105.854	0.05232	24.9	ppb
	Cd-KED2	111	4.000	0.00471	72.4	ppb
	Cd-KED2	112	0.306	-0.00128	6.5	ppb
	Cd-KED2	114	2.861	-0.00040	571.4	ppb
>	In-KED2	115	32319.614			ppb
>	Rh-KED3	103	99852.437			ppb
	Ag-KED3	107	18.667	0.00549	106.7	ppb
	Ag-KED3	109	24.000	0.00761	74.4	ppb
>	In-KED1	115	384089.589			ppb
	Sb-KED1	121	55.333	0.00406	12.6	ppb
	Sb-KED1	123	41.828	0.00380	21.2	ppb
	Ba-KED1	135	41.333	-0.01371	6.3	ppb
	Ba-KED1	137	13.333	-0.00460	46.4	ppb
>	Lu-KED1	175	405004.413			ppb
	Tl-KED1	203	25.333	0.00120	95.0	ppb
	Tl-KED1	205	50.000	0.00048	102.8	ppb
	Pb-KED1	208	125.334	0.00013	419.0	ppb
	U-KED1	238	26.000	0.00046	101.2	ppb
>	Th-KED1	232	216825.425			ppb
	Mn-STD1	55	672.016	-0.00438	8.8	ppb
>	Ge-STD1	72	678105.451			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		96		
>	Rh-KED3	103		97		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 22:38:31
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.076
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	301782.361			ppb
	Be-KED1	9	3.333	-0.00089	91.5	ppb
	Al-KED1	27	4405.236	0.11782	166.5	ppb
	V-KED3	51	4.667	-0.00470	98.4	ppb
	Cr-KED3	52	10.667	0.00401	76.6	ppb
	Cr-KED3	53	2.667	-0.02022	127.9	ppb
	Co-KED3	59	5.333	0.00228	76.0	ppb
	Ni-KED3	60	7.333	0.00285	403.9	ppb
	Ni-KED3	62	0.667	0.00012	10714.1	ppb
	Cu-KED3	63	8.000	-0.00306	147.8	ppb
	Cu-KED3	65	2.000	-0.00496	88.8	ppb
	Zn-KED3	66	18.000	0.02956	112.9	ppb
>	Ge-KED3	72	14128.317			ppb
>	Ge-KED2	72	46605.572			ppb
	As-KED2	75	5.444	0.00147	221.6	ppb
	Se-KED2	77	1.667	0.00284	4669.7	ppb
	Se-KED2	78	16.164	-0.03385	197.9	ppb
	Se-KED2	82	-1.377	0.04069	402.6	ppb
	Mo-KED2	95	26.667	0.01929	19.2	ppb
	Mo-KED2	97	16.000	0.01697	49.9	ppb
	Mo-KED2	98	51.187	0.02278	22.6	ppb
	Cd-KED2	111	2.000	0.00125	140.6	ppb
	Cd-KED2	112	3.973	0.00213	160.4	ppb
	Cd-KED2	114	6.088	0.00204	151.4	ppb
>	In-KED2	115	32329.749			ppb
>	Rh-KED3	103	101038.056			ppb
	Ag-KED3	107	6.667	0.00081	146.6	ppb
	Ag-KED3	109	3.333	-0.00075	120.6	ppb
>	In-KED1	115	380286.369			ppb
	Sb-KED1	121	15.333	0.00019	412.9	ppb
	Sb-KED1	123	11.082	-0.00009	621.9	ppb
	Ba-KED1	135	52.667	-0.00883	60.1	ppb
	Ba-KED1	137	16.000	-0.00390	25.8	ppb
>	Lu-KED1	175	410875.599			ppb
	Tl-KED1	203	14.000	-0.00041	243.2	ppb
	Tl-KED1	205	42.000	-0.00003	1841.4	ppb
	Pb-KED1	208	136.000	0.00051	92.9	ppb
	U-KED1	238	18.667	0.00018	61.3	ppb
>	Th-KED1	232	218366.395			ppb
	Mn-STD1	55	634.681	-0.00530	21.0	ppb
>	Ge-STD1	72	669529.617			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		98		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410208-001A
Sample Date/Time: Wednesday, October 01, 2014 22:43:40
Sample Description:
Autosampler Position: 347
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410208-001A.077
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	298405.353			ppb
|	Be-KED1	9	56147.512	19.92982	2.5	ppb
⌊	Al-KED1	27	1543512.803	64.46969	5.8	ppb
⌈	V-KED3	51	10461.833	20.77837	6.6	ppb
|	Cr-KED3	52	14159.681	19.68814	3.4	ppb
|	Cr-KED3	53	1786.112	20.07016	6.1	ppb
|	Co-KED3	59	35902.408	20.58519	5.0	ppb
|	Ni-KED3	60	10866.133	21.24128	0.4	ppb
|	Ni-KED3	62	1695.434	20.12309	1.9	ppb
|	Cu-KED3	63	31081.140	19.68204	5.1	ppb
|	Cu-KED3	65	15934.219	20.88064	2.3	ppb
|	Zn-KED3	66	3277.711	22.13575	4.8	ppb
⌊>	Ge-KED3	72	13933.462			ppb
⌈>	Ge-KED2	72	46924.276			ppb
|	As-KED2	75	4311.095	21.05247	0.7	ppb
|	Se-KED2	77	164.112	21.73182	4.7	ppb
|	Se-KED2	78	532.073	20.49626	0.9	ppb
⌊	Se-KED2	82	265.962	20.81337	5.5	ppb
⌈	Mo-KED2	95	23588.133	20.71639	3.7	ppb
|	Mo-KED2	97	15039.251	20.54607	1.8	ppb
|	Mo-KED2	98	39472.702	20.77835	1.0	ppb
|	Cd-KED2	111	11381.533	19.41540	1.6	ppb
|	Cd-KED2	112	21585.636	19.58707	2.4	ppb
|	Cd-KED2	114	26971.573	19.74368	2.3	ppb
⌊>	In-KED2	115	33015.656			ppb
⌈>	Rh-KED3	103	98860.985			ppb
|	Ag-KED3	107	25874.750	10.11625	2.8	ppb
⌊	Ag-KED3	109	25448.652	10.38630	3.7	ppb
⌈>	In-KED1	115	375714.950			ppb
|	Sb-KED1	121	218514.678	21.78021	3.0	ppb
|	Sb-KED1	123	167162.403	21.66927	1.4	ppb
|	Ba-KED1	135	49035.360	20.77605	1.4	ppb
⌊	Ba-KED1	137	81641.310	21.36229	2.3	ppb
⌈>	Lu-KED1	175	417976.143			ppb
|	Tl-KED1	203	155530.098	21.23068	1.7	ppb
|	Tl-KED1	205	368652.075	21.18559	1.1	ppb
⌊	Pb-KED1	208	495997.582	20.86268	0.5	ppb
⌈	U-KED1	238	562821.581	20.11799	1.7	ppb
⌊>	Th-KED1	232	219317.392			ppb
⌈	Mn-STD1	55	710845.357	21.61532	3.0	ppb
⌊>	Ge-STD1	72	694552.225			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		97		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		95		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		99		
>	Rh-KED3	103		96		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1411599-02
Sample Date/Time: Wednesday, October 01, 2014 22:48:47
Sample Description:
Autosampler Position: 348
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1411599-02.078
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	302495.052			ppb
|	Be-KED1	9	4.000	-0.00065	115.1	ppb
⌊	Al-KED1	27	6486.141	0.20546	4.3	ppb
⌈	V-KED3	51	6.667	-0.00079	1057.1	ppb
|	Cr-KED3	52	6.000	-0.00253	210.6	ppb
|	Cr-KED3	53	0.667	-0.04297	28.7	ppb
|	Co-KED3	59	4.667	0.00194	140.0	ppb
|	Ni-KED3	60	4.667	-0.00209	442.8	ppb
|	Ni-KED3	62	7.333	0.07671	91.4	ppb
|	Cu-KED3	63	6.000	-0.00430	60.2	ppb
|	Cu-KED3	65	0.667	-0.00665	22.1	ppb
|	Zn-KED3	66	29.333	0.10342	13.6	ppb
⌊>	Ge-KED3	72	14275.134			ppb
⌈>	Ge-KED2	72	47625.946			ppb
|	As-KED2	75	7.889	0.01262	41.5	ppb
|	Se-KED2	77	1.889	0.02808	243.9	ppb
|	Se-KED2	78	16.019	-0.05183	225.8	ppb
⌊	Se-KED2	82	-2.386	-0.03350	278.3	ppb
⌈	Mo-KED2	95	69.334	0.05705	16.7	ppb
|	Mo-KED2	97	39.333	0.04886	25.2	ppb
|	Mo-KED2	98	124.822	0.06173	2.5	ppb
|	Cd-KED2	111	3.333	0.00350	26.7	ppb
|	Cd-KED2	112	2.692	0.00092	228.1	ppb
|	Cd-KED2	114	3.004	-0.00030	240.3	ppb
⌊>	In-KED2	115	32654.612			ppb
⌈>	Rh-KED3	103	99484.144			ppb
|	Ag-KED3	107	4.667	0.00008	657.3	ppb
⌊	Ag-KED3	109	5.333	0.00006	1880.3	ppb
⌈>	In-KED1	115	382150.135			ppb
|	Sb-KED1	121	21.333	0.00077	85.8	ppb
|	Sb-KED1	123	16.415	0.00060	112.8	ppb
|	Ba-KED1	135	56.667	-0.00715	57.2	ppb
⌊	Ba-KED1	137	38.667	0.00193	88.5	ppb
⌈>	Lu-KED1	175	409232.618			ppb
|	Tl-KED1	203	26.000	0.00126	94.4	ppb
|	Tl-KED1	205	42.667	0.00003	2341.0	ppb
⌊	Pb-KED1	208	88.000	-0.00153	23.5	ppb
⌈	U-KED1	238	37.333	0.00085	11.1	ppb
⌊>	Th-KED1	232	218371.183			ppb
⌈	Mn-STD1	55	586.012	-0.00661	19.9	ppb
⌊>	Ge-STD1	72	662053.393			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		101		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		96		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1411599-01
Sample Date/Time: Wednesday, October 01, 2014 22:53:54
Sample Description:
Autosampler Position: 349
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1411599-01.079
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	294003.920			ppb
	Be-KED1	9	6992.378	2.51570	0.1	ppb
	Al-KED1	27	2477057.241	104.89025	2.6	ppb
	V-KED3	51	12489.461	23.91361	5.4	ppb
	Cr-KED3	52	7387.911	9.89843	3.3	ppb
	Cr-KED3	53	901.362	9.74817	7.0	ppb
	Co-KED3	59	44550.742	24.63812	6.1	ppb
	Ni-KED3	60	12997.244	24.51723	3.8	ppb
	Ni-KED3	62	2035.479	23.29163	3.7	ppb
	Cu-KED3	63	19598.115	11.95631	3.0	ppb
	Cu-KED3	65	10110.911	12.77445	2.4	ppb
	Zn-KED3	66	4098.588	26.75309	5.5	ppb
>	Ge-KED3	72	14449.308			ppb
>	Ge-KED2	72	47081.458			ppb
	As-KED2	75	10667.315	51.95560	0.4	ppb
	Se-KED2	77	390.450	51.83816	0.9	ppb
	Se-KED2	78	1331.472	52.13901	2.0	ppb
	Se-KED2	82	698.980	54.29357	2.2	ppb
	Mo-KED2	95	22272.691	19.83939	2.1	ppb
	Mo-KED2	97	14410.601	19.97957	2.4	ppb
	Mo-KED2	98	37426.689	19.98938	1.9	ppb
	Cd-KED2	111	14703.229	25.44876	1.0	ppb
	Cd-KED2	112	27549.257	25.35707	1.9	ppb
	Cd-KED2	114	34860.726	25.88716	0.4	ppb
>	In-KED2	115	32538.131			ppb
>	Rh-KED3	103	103556.689			ppb
	Ag-KED3	107	32344.586	12.06883	1.5	ppb
	Ag-KED3	109	31377.096	12.21894	1.1	ppb
>	In-KED1	115	387067.067			ppb
	Sb-KED1	121	541909.852	52.41387	1.0	ppb
	Sb-KED1	123	416813.871	52.45854	1.3	ppb
	Ba-KED1	135	239113.642	98.39332	2.7	ppb
	Ba-KED1	137	394070.213	100.09498	1.0	ppb
>	Lu-KED1	175	423251.458			ppb
	Tl-KED1	203	393997.451	53.10951	1.0	ppb
	Tl-KED1	205	927659.997	52.64697	0.8	ppb
	Pb-KED1	208	1207855.469	50.17906	0.5	ppb
	U-KED1	238	557854.306	19.77573	0.8	ppb
>	Th-KED1	232	221131.670			ppb
	Mn-STD1	55	832428.176	25.74730	1.6	ppb
>	Ge-STD1	72	682512.921			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99		
>	Ge-KED2	72		99		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		100		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409907-001
Sample Date/Time: Wednesday, October 01, 2014 22:59:01
Sample Description:
Autosampler Position: 350
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409907-001.080
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	266450.836			ppb
|	Be-KED1	9	8.000	0.00112	74.3	ppb
⌊	Al-KED1	27	79696.489	3.66394	3.4	ppb
⌈	V-KED3	51	39.333	0.07728	28.4	ppb
|	Cr-KED3	52	133.334	0.20591	9.0	ppb
|	Cr-KED3	53	101.334	1.28015	14.0	ppb
|	Co-KED3	59	380.672	0.25389	7.7	ppb
|	Ni-KED3	60	1737.439	3.95877	5.2	ppb
|	Ni-KED3	62	291.336	4.03070	11.2	ppb
|	Cu-KED3	63	640.681	0.46572	3.8	ppb
|	Cu-KED3	65	361.338	0.54549	0.6	ppb
|	Zn-KED3	66	3237.034	25.56697	5.1	ppb
⌊>	Ge-KED3	72	11932.983			ppb
⌈>	Ge-KED2	72	40031.015			ppb
|	As-KED2	75	85.334	0.46362	4.8	ppb
|	Se-KED2	77	2.444	0.16338	77.6	ppb
|	Se-KED2	78	20.039	0.25404	72.6	ppb
⌊	Se-KED2	82	4.842	0.58995	74.6	ppb
⌈	Mo-KED2	95	330.671	0.32792	5.5	ppb
|	Mo-KED2	97	199.335	0.30678	14.1	ppb
|	Mo-KED2	98	556.239	0.33061	4.3	ppb
|	Cd-KED2	111	13.333	0.02383	29.6	ppb
|	Cd-KED2	112	22.731	0.02200	44.9	ppb
|	Cd-KED2	114	26.577	0.01976	10.0	ppb
⌊>	In-KED2	115	28833.844			ppb
⌈>	Rh-KED3	103	83925.908			ppb
|	Ag-KED3	107	15.333	0.00530	33.8	ppb
⌊	Ag-KED3	109	8.000	0.00175	50.6	ppb
⌈>	In-KED1	115	339003.029			ppb
|	Sb-KED1	121	1390.068	0.15215	3.1	ppb
|	Sb-KED1	123	1090.620	0.15514	3.3	ppb
|	Ba-KED1	135	155111.046	72.90006	1.8	ppb
⌊	Ba-KED1	137	253884.377	73.62305	2.8	ppb
⌈>	Lu-KED1	175	397214.595			ppb
|	Tl-KED1	203	37.333	0.00301	45.7	ppb
|	Tl-KED1	205	76.667	0.00216	55.7	ppb
⌊	Pb-KED1	208	178.000	0.00257	41.4	ppb
⌈	U-KED1	238	3305.716	0.12109	3.2	ppb
⌊>	Th-KED1	232	213159.936			ppb
⌈	Mn-STD1	55	15648655.425	551.68562	1.0	ppb
⌊>	Ge-STD1	72	599494.904			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		86		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		82		
>	Ge-KED2	72		85		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		86		
>	Rh-KED3	103		81		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		90		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		95		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		89		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409907-001D
Sample Date/Time: Wednesday, October 01, 2014 23:04:08
Sample Description:
Autosampler Position: 351
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409907-001D.081
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	267039.505			ppb
|	Be-KED1	9	10.667	0.00215	74.4	ppb
⌊	Al-KED1	27	86653.375	3.98206	2.5	ppb
⌈	V-KED3	51	38.000	0.07276	30.7	ppb
|	Cr-KED3	52	130.001	0.19631	11.8	ppb
|	Cr-KED3	53	102.000	1.26413	5.4	ppb
|	Co-KED3	59	378.005	0.24767	18.3	ppb
|	Ni-KED3	60	1756.108	3.92297	2.6	ppb
|	Ni-KED3	62	275.336	3.73699	6.4	ppb
|	Cu-KED3	63	694.684	0.49549	8.4	ppb
|	Cu-KED3	65	348.671	0.51528	8.3	ppb
|	Zn-KED3	66	3382.401	26.19927	3.0	ppb
⌊>	Ge-KED3	72	12166.513			ppb
⌈>	Ge-KED2	72	40508.036			ppb
|	As-KED2	75	82.778	0.44383	5.7	ppb
|	Se-KED2	77	4.222	0.43170	27.1	ppb
|	Se-KED2	78	16.346	0.07129	184.1	ppb
⌊	Se-KED2	82	3.057	0.42453	29.7	ppb
⌈	Mo-KED2	95	288.670	0.28957	9.9	ppb
|	Mo-KED2	97	193.335	0.30111	14.4	ppb
|	Mo-KED2	98	494.684	0.29733	6.6	ppb
|	Cd-KED2	111	16.000	0.02939	23.6	ppb
|	Cd-KED2	112	23.558	0.02324	10.7	ppb
|	Cd-KED2	114	26.792	0.02025	24.5	ppb
⌊>	In-KED2	115	28460.702			ppb
⌈>	Rh-KED3	103	83069.520			ppb
|	Ag-KED3	107	8.000	0.00197	44.5	ppb
⌊	Ag-KED3	109	9.333	0.00241	182.1	ppb
⌈>	In-KED1	115	344373.448			ppb
|	Sb-KED1	121	1386.734	0.14932	4.3	ppb
|	Sb-KED1	123	1087.622	0.15235	6.1	ppb
|	Ba-KED1	135	157240.314	72.74898	2.2	ppb
⌊	Ba-KED1	137	259548.282	74.07060	1.5	ppb
⌈>	Lu-KED1	175	403744.794			ppb
|	Tl-KED1	203	20.667	0.00057	155.7	ppb
|	Tl-KED1	205	42.667	0.00006	826.6	ppb
⌊	Pb-KED1	208	170.667	0.00212	17.0	ppb
⌈	U-KED1	238	3355.061	0.12026	4.3	ppb
⌊>	Th-KED1	232	217776.816			ppb
⌈	Mn-STD1	55	15119342.125	527.75565	3.1	ppb
⌊>	Ge-STD1	72	605664.795			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		87		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		83		
>	Ge-KED2	72		86		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		85		
>	Rh-KED3	103		80		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		92		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		90		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409907-001L
Sample Date/Time: Wednesday, October 01, 2014 23:09:15
Sample Description:
Autosampler Position: 352
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409907-001L.082
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	288428.050			ppb
|	Be-KED1	9	4.667	-0.00036	228.4	ppb
⌊	Al-KED1	27	22575.845	0.91408	6.7	ppb
⌈	V-KED3	51	10.667	0.00754	152.5	ppb
|	Cr-KED3	52	30.000	0.03186	63.7	ppb
|	Cr-KED3	53	22.667	0.20987	25.5	ppb
|	Co-KED3	59	74.667	0.04256	23.6	ppb
|	Ni-KED3	60	400.672	0.78383	4.2	ppb
|	Ni-KED3	62	70.000	0.83529	6.7	ppb
|	Cu-KED3	63	174.001	0.10398	16.1	ppb
|	Cu-KED3	65	98.000	0.12238	29.0	ppb
|	Zn-KED3	66	804.023	5.45080	2.5	ppb
⌊>	Ge-KED3	72	13725.260			ppb
⌈>	Ge-KED2	72	45523.426			ppb
|	As-KED2	75	22.111	0.08610	11.4	ppb
|	Se-KED2	77	1.444	-0.02234	303.0	ppb
|	Se-KED2	78	17.077	0.01971	299.0	ppb
⌊	Se-KED2	82	1.407	0.26256	46.3	ppb
⌈	Mo-KED2	95	82.000	0.07048	15.4	ppb
|	Mo-KED2	97	43.333	0.05626	12.1	ppb
|	Mo-KED2	98	114.229	0.05803	23.9	ppb
|	Cd-KED2	111	3.667	0.00430	126.8	ppb
|	Cd-KED2	112	5.413	0.00358	89.1	ppb
|	Cd-KED2	114	7.934	0.00351	48.8	ppb
⌊>	In-KED2	115	31704.945			ppb
⌈>	Rh-KED3	103	93460.184			ppb
|	Ag-KED3	107	4.667	0.00016	1308.8	ppb
⌊	Ag-KED3	109	5.333	0.00021	452.6	ppb
⌈>	In-KED1	115	381211.894			ppb
|	Sb-KED1	121	318.004	0.02988	10.0	ppb
|	Sb-KED1	123	260.585	0.03179	6.4	ppb
|	Ba-KED1	135	33751.174	14.07966	1.9	ppb
⌊	Ba-KED1	137	56006.930	14.43418	0.9	ppb
⌈>	Lu-KED1	175	426143.886			ppb
|	Tl-KED1	203	12.667	-0.00066	59.6	ppb
|	Tl-KED1	205	41.333	-0.00015	239.1	ppb
⌊	Pb-KED1	208	122.667	-0.00025	176.0	ppb
⌈	U-KED1	238	735.352	0.02498	7.0	ppb
⌊>	Th-KED1	232	226391.796			ppb
⌈	Mn-STD1	55	3246833.660	101.32151	3.9	ppb
⌊>	Ge-STD1	72	677546.919			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		94		
>	Ge-KED2	72		96		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		106		
	Mn-STD1	55				
>	Ge-STD1	72		101		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409907-001A
Sample Date/Time: Wednesday, October 01, 2014 23:14:22
Sample Description:
Autosampler Position: 353
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409907-001A.083
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	262871.776			ppb
|	Be-KED1	9	45123.869	18.17521	3.9	ppb
⌊	Al-KED1	27	489139.535	23.11041	1.4	ppb
⌈	V-KED3	51	9454.463	21.39683	2.2	ppb
|	Cr-KED3	52	12736.344	20.19180	0.9	ppb
|	Cr-KED3	53	1746.107	22.36106	7.0	ppb
|	Co-KED3	59	30370.249	19.85250	1.4	ppb
|	Ni-KED3	60	10293.708	22.96516	2.7	ppb
|	Ni-KED3	62	1695.434	22.96574	4.8	ppb
|	Cu-KED3	63	24979.823	18.03617	0.6	ppb
|	Cu-KED3	65	12376.027	18.49842	0.9	ppb
|	Zn-KED3	66	5383.682	41.59481	3.0	ppb
⌊>	Ge-KED3	72	12211.885			ppb
⌈>	Ge-KED2	72	40027.683			ppb
|	As-KED2	75	3848.852	22.03766	1.8	ppb
|	Se-KED2	77	126.778	19.65784	2.3	ppb
|	Se-KED2	78	449.673	20.29426	2.2	ppb
⌊	Se-KED2	82	219.389	20.15349	5.9	ppb
⌈	Mo-KED2	95	21440.077	22.16521	1.4	ppb
|	Mo-KED2	97	14093.616	22.67595	1.5	ppb
|	Mo-KED2	98	36957.612	22.90869	2.5	ppb
|	Cd-KED2	111	9304.696	18.68683	0.4	ppb
|	Cd-KED2	112	17578.793	18.77726	1.1	ppb
|	Cd-KED2	114	22147.196	19.08425	2.0	ppb
⌊>	In-KED2	115	28039.360			ppb
⌈>	Rh-KED3	103	83575.889			ppb
|	Ag-KED3	107	20182.247	9.33573	2.8	ppb
⌊	Ag-KED3	109	19320.393	9.32450	1.7	ppb
⌈>	In-KED1	115	343291.959			ppb
|	Sb-KED1	121	191191.246	20.84791	1.1	ppb
|	Sb-KED1	123	146141.323	20.73874	1.8	ppb
|	Ba-KED1	135	200291.292	92.94917	0.7	ppb
⌊	Ba-KED1	137	330487.037	94.64657	1.0	ppb
⌈>	Lu-KED1	175	411098.018			ppb
|	Tl-KED1	203	140738.552	19.53124	0.8	ppb
|	Tl-KED1	205	331510.475	19.36911	1.1	ppb
⌊	Pb-KED1	208	418706.565	17.90545	0.8	ppb
⌈	U-KED1	238	548146.578	19.71699	1.3	ppb
⌊>	Th-KED1	232	217931.041			ppb
⌈	Mn-STD1	55	15701324.794	537.95902	2.6	ppb
⌊>	Ge-STD1	72	617140.803			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		85		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		84		
>	Ge-KED2	72		85		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		84		
>	Rh-KED3	103		81		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		91		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		92		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409907-001S
Sample Date/Time: Wednesday, October 01, 2014 23:19:30
Sample Description:
Autosampler Position: 354
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409907-001S.084
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	261535.296			ppb
Be-KED1	9	5661.789	2.29043	1.8	ppb
Al-KED1	27	2153274.647	102.67800	9.9	ppb
V-KED3	51	11461.268	26.39773	4.9	ppb
Cr-KED3	52	6801.620	10.96616	3.9	ppb
Cr-KED3	53	960.032	12.49311	3.9	ppb
Co-KED3	59	37632.197	25.02899	4.0	ppb
Ni-KED3	60	11979.688	27.19380	3.5	ppb
Ni-KED3	62	1923.463	26.49743	4.2	ppb
Cu-KED3	63	15471.044	11.36310	3.7	ppb
Cu-KED3	65	7892.180	12.00422	3.8	ppb
Zn-KED3	66	6043.945	47.54588	3.9	ppb
Ge-KED3	72	12008.382			ppb
Ge-KED2	72	39452.742			ppb
As-KED2	75	9443.120	54.89714	1.9	ppb
Se-KED2	77	327.115	51.82971	4.1	ppb
Se-KED2	78	1097.630	51.28086	1.7	ppb
Se-KED2	82	570.185	52.84278	3.0	ppb
Mo-KED2	95	21667.088	22.08575	0.5	ppb
Mo-KED2	97	14178.368	22.49109	1.0	ppb
Mo-KED2	98	37097.761	22.67050	1.2	ppb
Cd-KED2	111	11812.549	23.39467	1.4	ppb
Cd-KED2	112	22290.819	23.48218	2.4	ppb
Cd-KED2	114	27923.313	23.72663	1.2	ppb
In-KED2	115	28436.280			ppb
Rh-KED3	103	81659.412			ppb
Ag-KED3	107	25379.194	12.00928	0.6	ppb
Ag-KED3	109	24371.440	12.03781	2.1	ppb
In-KED1	115	342324.477			ppb
Sb-KED1	121	491972.765	53.79081	0.4	ppb
Sb-KED1	123	375440.295	53.41144	0.8	ppb
Ba-KED1	135	384813.361	179.15994	1.7	ppb
Ba-KED1	137	638014.468	183.20493	0.5	ppb
Lu-KED1	175	403643.718			ppb
Tl-KED1	203	351241.601	49.64687	0.4	ppb
Tl-KED1	205	831312.462	49.46959	1.3	ppb
Pb-KED1	208	1044600.182	45.50320	0.7	ppb
U-KED1	238	548071.945	19.70404	0.3	ppb
Th-KED1	232	218037.641			ppb
Mn-STD1	55	15507856.253	548.46234	4.0	ppb
Ge-STD1	72	597777.074			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		85		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		82		
>	Ge-KED2	72		83		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		85		
>	Rh-KED3	103		79		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		91		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		89		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-012
Sample Date/Time: Wednesday, October 01, 2014 23:24:37
Sample Description:
Autosampler Position: 355
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-012.085
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	290755.755			ppb
	Be-KED1	9	22.667	0.00617	21.9	ppb
	Al-KED1	27	3626638.337	155.43043	4.0	ppb
	V-KED3	51	966.699	2.01479	6.7	ppb
	Cr-KED3	52	274.003	0.39276	10.3	ppb
	Cr-KED3	53	44.000	0.46905	16.0	ppb
	Co-KED3	59	509.342	0.30659	1.1	ppb
	Ni-KED3	60	661.349	1.35465	6.1	ppb
	Ni-KED3	62	100.000	1.24828	14.0	ppb
	Cu-KED3	63	1659.430	1.10456	9.9	ppb
	Cu-KED3	65	810.023	1.11460	7.0	ppb
	Zn-KED3	66	1570.086	11.16600	5.9	ppb
>	Ge-KED3	72	13228.819			ppb
>	Ge-KED2	72	44798.141			ppb
	As-KED2	75	266.225	1.33842	2.4	ppb
	Se-KED2	77	3.000	0.19982	121.9	ppb
	Se-KED2	78	17.518	0.05053	284.7	ppb
	Se-KED2	82	1.628	0.28057	41.8	ppb
	Mo-KED2	95	522.676	0.48616	3.6	ppb
	Mo-KED2	97	350.671	0.50739	7.2	ppb
	Mo-KED2	98	887.288	0.49483	4.4	ppb
	Cd-KED2	111	19.667	0.03364	2.4	ppb
	Cd-KED2	112	43.372	0.04050	6.8	ppb
	Cd-KED2	114	40.452	0.02914	9.8	ppb
>	In-KED2	115	30869.869			ppb
>	Rh-KED3	103	90395.529			ppb
	Ag-KED3	107	14.667	0.00460	62.6	ppb
	Ag-KED3	109	18.667	0.00628	31.8	ppb
>	In-KED1	115	386805.852			ppb
	Sb-KED1	121	3025.654	0.29157	2.1	ppb
	Sb-KED1	123	2415.864	0.30274	1.2	ppb
	Ba-KED1	135	62247.346	25.62723	2.4	ppb
	Ba-KED1	137	100381.476	25.51974	3.6	ppb
>	Lu-KED1	175	426198.578			ppb
	Tl-KED1	203	37.333	0.00263	49.8	ppb
	Tl-KED1	205	84.667	0.00230	43.0	ppb
	Pb-KED1	208	24221.282	0.99413	0.7	ppb
	U-KED1	238	2891.626	0.10091	1.0	ppb
>	Th-KED1	232	223534.175			ppb
	Mn-STD1	55	8620666.530	275.77999	0.3	ppb
>	Ge-STD1	72	660548.379			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		91		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		92		
>	Rh-KED3	103		87		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-013
Sample Date/Time: Wednesday, October 01, 2014 23:29:44
Sample Description:
Autosampler Position: 356
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-013.086
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	289210.202			ppb
|	Be-KED1	9	20.000	0.00525	55.2	ppb
⌊	Al-KED1	27	4639991.913	199.77567	4.1	ppb
⌈	V-KED3	51	1014.036	2.06149	7.7	ppb
|	Cr-KED3	52	323.337	0.45290	11.7	ppb
|	Cr-KED3	53	54.667	0.58204	32.9	ppb
|	Co-KED3	59	554.011	0.32663	11.0	ppb
|	Ni-KED3	60	669.349	1.33718	2.9	ppb
|	Ni-KED3	62	114.667	1.39623	11.8	ppb
|	Cu-KED3	63	1894.792	1.22825	3.6	ppb
|	Cu-KED3	65	996.702	1.33967	9.6	ppb
|	Zn-KED3	66	1750.107	12.15004	2.9	ppb
⌊>	Ge-KED3	72	13523.733			ppb
⌈>	Ge-KED2	72	45129.171			ppb
|	As-KED2	75	274.225	1.36876	1.2	ppb
|	Se-KED2	77	3.778	0.30434	72.0	ppb
|	Se-KED2	78	19.043	0.10658	174.4	ppb
⌊	Se-KED2	82	0.287	0.17246	41.5	ppb
⌈	Mo-KED2	95	510.676	0.48207	5.1	ppb
|	Mo-KED2	97	299.336	0.43826	5.2	ppb
|	Mo-KED2	98	818.471	0.46303	6.5	ppb
|	Cd-KED2	111	19.333	0.03346	37.7	ppb
|	Cd-KED2	112	42.572	0.04034	6.8	ppb
|	Cd-KED2	114	54.589	0.04082	7.8	ppb
⌊>	In-KED2	115	30435.342			ppb
⌈>	Rh-KED3	103	91489.438			ppb
|	Ag-KED3	107	7.333	0.00135	34.1	ppb
⌊	Ag-KED3	109	8.000	0.00145	61.7	ppb
⌈>	In-KED1	115	377971.908			ppb
|	Sb-KED1	121	2908.296	0.28670	0.4	ppb
|	Sb-KED1	123	2354.940	0.30220	4.7	ppb
|	Ba-KED1	135	61089.008	25.74553	3.5	ppb
⌊	Ba-KED1	137	101754.516	26.46593	2.4	ppb
⌈>	Lu-KED1	175	408217.785			ppb
|	Tl-KED1	203	41.333	0.00341	27.4	ppb
|	Tl-KED1	205	74.667	0.00192	29.4	ppb
⌊	Pb-KED1	208	26929.795	1.15530	3.0	ppb
⌈	U-KED1	238	2796.941	0.10144	4.4	ppb
⌊>	Th-KED1	232	215108.078			ppb
⌈	Mn-STD1	55	8452120.591	265.27412	6.7	ppb
⌊>	Ge-STD1	72	673535.272			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		93		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		91		
>	Rh-KED3	103		89		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Wednesday, October 01, 2014 23:34:52
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.087
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	288071.341			ppb
|	Be-KED1	9	67047.665	24.63830	1.3	ppb
⌊	Al-KED1	27	592257.042	25.54685	1.3	ppb
⌈	V-KED3	51	12374.697	24.09907	2.4	ppb
|	Cr-KED3	52	17679.601	24.13310	2.2	ppb
|	Cr-KED3	53	2299.518	25.38415	4.0	ppb
|	Co-KED3	59	43345.688	24.38415	2.1	ppb
|	Ni-KED3	60	12872.468	24.71235	3.1	ppb
|	Ni-KED3	62	2070.150	24.12760	3.0	ppb
|	Cu-KED3	63	38205.798	23.75605	6.7	ppb
|	Cu-KED3	65	18857.105	24.26741	2.2	ppb
|	Zn-KED3	66	3789.169	25.17278	3.3	ppb
⌊>	Ge-KED3	72	14189.045			ppb
⌈>	Ge-KED2	72	46929.323			ppb
|	As-KED2	75	5015.658	24.50972	3.5	ppb
|	Se-KED2	77	176.779	23.45093	7.1	ppb
|	Se-KED2	78	622.882	24.12025	3.6	ppb
⌊	Se-KED2	82	316.414	24.73337	5.6	ppb
⌈	Mo-KED2	95	27504.460	25.03389	3.8	ppb
|	Mo-KED2	97	17728.330	25.10439	1.9	ppb
|	Mo-KED2	98	46465.165	25.34680	0.8	ppb
|	Cd-KED2	111	13782.313	24.36285	2.0	ppb
|	Cd-KED2	112	26428.377	24.84866	1.8	ppb
|	Cd-KED2	114	33118.425	25.12092	1.9	ppb
⌊>	In-KED2	115	31861.097			ppb
⌈>	Rh-KED3	103	99794.057			ppb
|	Ag-KED3	107	64238.117	24.87645	0.5	ppb
⌊	Ag-KED3	109	61005.474	24.64972	3.1	ppb
⌈>	In-KED1	115	391299.117			ppb
|	Sb-KED1	121	262776.164	25.14650	2.5	ppb
|	Sb-KED1	123	205420.268	25.58102	3.1	ppb
|	Ba-KED1	135	60402.119	24.58014	2.4	ppb
⌊	Ba-KED1	137	98374.914	24.71444	1.8	ppb
⌈>	Lu-KED1	175	409315.663			ppb
|	Tl-KED1	203	180381.031	25.14544	1.2	ppb
|	Tl-KED1	205	424134.096	24.89348	1.7	ppb
⌊	Pb-KED1	208	586576.068	25.20051	1.8	ppb
⌈	U-KED1	238	678501.761	24.56112	0.9	ppb
⌊>	Th-KED1	232	216547.709			ppb
⌈	Mn-STD1	55	795098.203	25.70708	5.7	ppb
⌊>	Ge-STD1	72	653545.425			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		93		
	Be-KED1	9	99			
	Al-KED1	27	102			
	V-KED3	51	96			
	Cr-KED3	52	97			
	Cr-KED3	53	102			
	Co-KED3	59	98			
	Ni-KED3	60	99			
	Ni-KED3	62	97			
	Cu-KED3	63	95			
	Cu-KED3	65	97			
	Zn-KED3	66	101			
>	Ge-KED3	72		97		
>	Ge-KED2	72		99		
	As-KED2	75	98			
	Se-KED2	77	94			
	Se-KED2	78	96			
	Se-KED2	82	99			
	Mo-KED2	95	100			
	Mo-KED2	97	100			
	Mo-KED2	98	101			
	Cd-KED2	111	97			
	Cd-KED2	112	99			
	Cd-KED2	114	100			
>	In-KED2	115		95		
>	Rh-KED3	103		97		
	Ag-KED3	107	100			
	Ag-KED3	109	99			
>	In-KED1	115		104		
	Sb-KED1	121	101			
	Sb-KED1	123	102			
	Ba-KED1	135	98			
	Ba-KED1	137	99			
>	Lu-KED1	175		98		
	Tl-KED1	203	101			
	Tl-KED1	205	100			
	Pb-KED1	208	101			
	U-KED1	238	98			
>	Th-KED1	232		101		
	Mn-STD1	55	103			
>	Ge-STD1	72		97		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 23:40:00
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.088
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	285575.609			ppb
	Be-KED1	9	4.667	-0.00036	515.4	ppb
	Al-KED1	27	1610.091	0.00868	60.1	ppb
	V-KED3	51	6.000	-0.00165	236.6	ppb
	Cr-KED3	52	2.667	-0.00676	26.1	ppb
	Cr-KED3	53	2.000	-0.02709	83.5	ppb
	Co-KED3	59	4.667	0.00200	65.7	ppb
	Ni-KED3	60	6.667	0.00230	282.2	ppb
	Ni-KED3	62	1.333	0.00851	163.4	ppb
	Cu-KED3	63	4.000	-0.00544	1.3	ppb
	Cu-KED3	65	2.667	-0.00399	152.4	ppb
	Zn-KED3	66	12.667	-0.00179	1331.6	ppb
>	Ge-KED3	72	13550.426			ppb
>	Ge-KED2	72	45402.702			ppb
	As-KED2	75	4.778	-0.00119	563.2	ppb
	Se-KED2	77	2.333	0.10167	136.0	ppb
	Se-KED2	78	16.437	-0.00481	2537.1	ppb
	Se-KED2	82	0.192	0.16499	89.8	ppb
	Mo-KED2	95	74.000	0.06360	19.7	ppb
	Mo-KED2	97	38.000	0.04900	29.0	ppb
	Mo-KED2	98	98.895	0.05008	25.9	ppb
	Cd-KED2	111	1.667	0.00075	140.3	ppb
	Cd-KED2	112	1.746	0.00009	1612.1	ppb
	Cd-KED2	114	3.600	0.00027	770.3	ppb
>	In-KED2	115	31438.025			ppb
>	Rh-KED3	103	93484.986			ppb
	Ag-KED3	107	8.667	0.00188	158.3	ppb
	Ag-KED3	109	12.000	0.00307	80.9	ppb
>	In-KED1	115	383856.753			ppb
	Sb-KED1	121	52.000	0.00374	14.7	ppb
	Sb-KED1	123	33.497	0.00274	36.2	ppb
	Ba-KED1	135	35.333	-0.01619	22.4	ppb
	Ba-KED1	137	15.333	-0.00410	8.6	ppb
>	Lu-KED1	175	407191.917			ppb
	Tl-KED1	203	19.333	0.00035	182.3	ppb
	Tl-KED1	205	36.667	-0.00032	205.6	ppb
	Pb-KED1	208	123.334	0.00001	4799.4	ppb
	U-KED1	238	31.333	0.00065	26.6	ppb
>	Th-KED1	232	215458.779			ppb
	Mn-STD1	55	647.348	-0.00402	44.8	ppb
>	Ge-STD1	72	642397.233			ppb

JS 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		93		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		93		
>	Ge-KED2	72		96		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		94		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		95		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Wednesday, October 01, 2014 23:45:00
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.089
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	288161.047			ppb
	Be-KED1	9	6.000	0.00015	512.3	ppb
	Al-KED1	27	1499.412	0.00325	62.4	ppb
	V-KED3	51	3.333	-0.00718	32.5	ppb
	Cr-KED3	52	4.000	-0.00491	61.2	ppb
	Cr-KED3	53	4.667	0.00308	431.1	ppb
	Co-KED3	59	2.667	0.00082	82.1	ppb
	Ni-KED3	60	3.333	-0.00455	53.9	ppb
	Ni-KED3	62	2.000	0.01620	143.3	ppb
	Cu-KED3	63	5.333	-0.00466	29.0	ppb
	Cu-KED3	65	1.333	-0.00570	27.4	ppb
	Zn-KED3	66	15.333	0.01519	209.8	ppb
>	Ge-KED3	72	13779.314			ppb
>	Ge-KED2	72	43760.592			ppb
	As-KED2	75	5.778	0.00496	253.7	ppb
	Se-KED2	77	1.889	0.04998	147.4	ppb
	Se-KED2	78	15.299	-0.02841	167.6	ppb
	Se-KED2	82	0.296	0.17477	154.6	ppb
	Mo-KED2	95	26.000	0.01979	16.7	ppb
	Mo-KED2	97	17.333	0.01990	44.4	ppb
	Mo-KED2	98	43.415	0.01969	4.5	ppb
	Cd-KED2	111	2.667	0.00260	105.7	ppb
	Cd-KED2	112	1.720	0.00011	1789.3	ppb
	Cd-KED2	114	2.809	-0.00033	234.2	ppb
>	In-KED2	115	30897.948			ppb
>	Rh-KED3	103	95598.179			ppb
	Ag-KED3	107	5.333	0.00043	478.3	ppb
	Ag-KED3	109	8.000	0.00130	131.8	ppb
>	In-KED1	115	380506.392			ppb
	Sb-KED1	121	14.667	0.00011	910.9	ppb
	Sb-KED1	123	12.247	0.00006	558.2	ppb
	Ba-KED1	135	36.667	-0.01548	28.1	ppb
	Ba-KED1	137	14.667	-0.00424	13.1	ppb
>	Lu-KED1	175	407567.546			ppb
	Tl-KED1	203	18.667	0.00026	226.4	ppb
	Tl-KED1	205	48.667	0.00038	89.2	ppb
	Pb-KED1	208	129.334	0.00027	297.7	ppb
	U-KED1	238	18.000	0.00016	163.5	ppb
>	Th-KED1	232	217404.031			ppb
	Mn-STD1	55	650.015	-0.00539	35.1	ppb
>	Ge-STD1	72	693014.405			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		94		
>	Ge-KED2	72		92		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		92		
>	Rh-KED3	103		93		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		103		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCVW
Sample Date/Time: Wednesday, October 01, 2014 23:50:08
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLCCVW.090
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	280392.676			ppb
|	Be-KED1	9	56.667	0.01931	14.1	ppb
⌊	Al-KED1	27	46853.535	2.02078	6.8	ppb
⌈	V-KED3	51	112.000	0.21115	3.4	ppb
|	Cr-KED3	52	134.667	0.17890	8.6	ppb
|	Cr-KED3	53	20.667	0.18696	63.5	ppb
|	Co-KED3	59	43.333	0.02437	15.4	ppb
|	Ni-KED3	60	109.334	0.20515	17.5	ppb
|	Ni-KED3	62	16.667	0.19254	5.1	ppb
|	Cu-KED3	63	175.334	0.10443	15.0	ppb
|	Cu-KED3	65	80.000	0.09854	6.0	ppb
|	Zn-KED3	66	84.667	0.49107	3.5	ppb
⌊>	Ge-KED3	72	13767.299			ppb
⌈>	Ge-KED2	72	45249.551			ppb
|	As-KED2	75	105.111	0.50763	0.5	ppb
|	Se-KED2	77	8.778	0.99664	37.6	ppb
|	Se-KED2	78	39.151	0.93466	5.2	ppb
⌊	Se-KED2	82	12.397	1.14885	19.4	ppb
⌈	Mo-KED2	95	73.334	0.06370	1.8	ppb
|	Mo-KED2	97	46.667	0.06233	27.9	ppb
|	Mo-KED2	98	101.635	0.05200	20.2	ppb
|	Cd-KED2	111	13.667	0.02250	9.9	ppb
|	Cd-KED2	112	23.370	0.02094	40.9	ppb
|	Cd-KED2	114	22.771	0.01516	24.1	ppb
⌊>	In-KED2	115	31122.061			ppb
⌈>	Rh-KED3	103	96041.875			ppb
|	Ag-KED3	107	58.000	0.02158	6.0	ppb
⌊	Ag-KED3	109	44.000	0.01642	31.6	ppb
⌈>	In-KED1	115	381098.941			ppb
|	Sb-KED1	121	596.679	0.05731	4.2	ppb
|	Sb-KED1	123	445.503	0.05545	2.5	ppb
|	Ba-KED1	135	160.001	0.03608	24.2	ppb
⌊	Ba-KED1	137	240.002	0.05387	6.7	ppb
⌈>	Lu-KED1	175	408580.221			ppb
|	Tl-KED1	203	174.001	0.02197	19.1	ppb
|	Tl-KED1	205	396.672	0.02083	14.3	ppb
⌊	Pb-KED1	208	614.672	0.02115	6.5	ppb
⌈	U-KED1	238	584.679	0.02084	9.0	ppb
⌊>	Th-KED1	232	215030.363			ppb
⌈	Mn-STD1	55	2119.491	0.04382	6.6	ppb
⌊>	Ge-STD1	72	648159.907			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		91		
	Be-KED1	9	97			
	Al-KED1	27	101			
	V-KED3	51	106			
	Cr-KED3	52	89			
	Cr-KED3	53	93			
	Co-KED3	59	122			
	Ni-KED3	60	103			
	Ni-KED3	62	96			
	Cu-KED3	63	104			
	Cu-KED3	65	99			
	Zn-KED3	66	98			
>	Ge-KED3	72		94		
>	Ge-KED2	72		96		
	As-KED2	75	102			
	Se-KED2	77	100			
	Se-KED2	78	93			
	Se-KED2	82	115			
	Mo-KED2	95	127			
	Mo-KED2	97	125			
	Mo-KED2	98	104			
	Cd-KED2	111	112			
	Cd-KED2	112	105			
	Cd-KED2	114	76			
>	In-KED2	115		93		
>	Rh-KED3	103		93		
	Ag-KED3	107	108			
	Ag-KED3	109	82			
>	In-KED1	115		102		
	Sb-KED1	121	115			
	Sb-KED1	123	111			
	Ba-KED1	135	72			
	Ba-KED1	137	108			
>	Lu-KED1	175		97		
	Tl-KED1	203	110			
	Tl-KED1	205	104			
	Pb-KED1	208	106			
	U-KED1	238	104			
>	Th-KED1	232		101		
	Mn-STD1	55	88			
>	Ge-STD1	72		96		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-014
Sample Date/Time: Wednesday, October 01, 2014 23:55:16
Sample Description:
Autosampler Position: 357
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-014.091
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	295889.325			ppb
|	Be-KED1	9	16.000	0.00365	50.7	ppb
⌊	Al-KED1	27	5467235.215	230.11854	5.0	ppb
⌈	V-KED3	51	1706.769	3.39379	5.7	ppb
|	Cr-KED3	52	445.340	0.61252	6.1	ppb
|	Cr-KED3	53	73.334	0.77806	19.0	ppb
|	Co-KED3	59	260.669	0.14950	4.0	ppb
|	Ni-KED3	60	514.676	1.00130	2.6	ppb
|	Ni-KED3	62	61.333	0.71993	37.9	ppb
|	Cu-KED3	63	4171.276	2.64898	4.4	ppb
|	Cu-KED3	65	2110.823	2.77228	3.9	ppb
|	Zn-KED3	66	3140.346	21.33277	2.4	ppb
⌊>	Ge-KED3	72	13858.055			ppb
⌈>	Ge-KED2	72	44798.131			ppb
|	As-KED2	75	1200.939	6.12531	1.6	ppb
|	Se-KED2	77	3.889	0.32413	44.5	ppb
|	Se-KED2	78	16.363	0.00110	4582.4	ppb
⌊	Se-KED2	82	0.728	0.20873	79.2	ppb
⌈	Mo-KED2	95	641.348	0.60861	7.8	ppb
|	Mo-KED2	97	420.006	0.61975	15.3	ppb
|	Mo-KED2	98	1026.484	0.58348	2.7	ppb
|	Cd-KED2	111	45.000	0.08129	8.3	ppb
|	Cd-KED2	112	103.465	0.10054	5.5	ppb
|	Cd-KED2	114	99.062	0.07645	14.1	ppb
⌊>	In-KED2	115	30340.535			ppb
⌈>	Rh-KED3	103	93495.755			ppb
|	Ag-KED3	107	32.000	0.01145	16.1	ppb
⌊	Ag-KED3	109	20.000	0.00658	37.8	ppb
⌈>	In-KED1	115	380608.246			ppb
|	Sb-KED1	121	13534.411	1.33045	4.0	ppb
|	Sb-KED1	123	10188.294	1.30276	2.4	ppb
|	Ba-KED1	135	34022.469	14.22321	3.0	ppb
⌊	Ba-KED1	137	56372.344	14.55795	2.5	ppb
⌈>	Lu-KED1	175	408498.671			ppb
|	Tl-KED1	203	30.667	0.00194	68.8	ppb
|	Tl-KED1	205	73.334	0.00184	42.0	ppb
⌊	Pb-KED1	208	62764.674	2.69730	1.6	ppb
⌈	U-KED1	238	5956.575	0.21373	0.6	ppb
⌊>	Th-KED1	232	217981.216			ppb
⌈	Mn-STD1	55	2750697.708	89.54946	2.0	ppb
⌊>	Ge-STD1	72	649112.960			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		95		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		91		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		96		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-015
Sample Date/Time: Thursday, October 02, 2014 00:00:23
Sample Description:
Autosampler Position: 358
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-015.092
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	303432.606			ppb
	Be-KED1	9	14.667	0.00313	66.3	ppb
	Al-KED1	27	1111849.138	45.65203	5.1	ppb
	V-KED3	51	2138.160	4.28300	9.2	ppb
	Cr-KED3	52	336.671	0.46263	5.5	ppb
	Cr-KED3	53	46.000	0.47346	21.0	ppb
	Co-KED3	59	158.668	0.09142	16.2	ppb
	Ni-KED3	60	408.006	0.79712	11.6	ppb
	Ni-KED3	62	66.667	0.79165	9.0	ppb
	Cu-KED3	63	1764.109	1.12180	5.7	ppb
	Cu-KED3	65	859.359	1.13284	9.1	ppb
	Zn-KED3	66	1625.426	11.06208	4.9	ppb
>	Ge-KED3	72	13786.653			ppb
>	Ge-KED2	72	45431.478			ppb
	As-KED2	75	441.785	2.20550	1.7	ppb
	Se-KED2	77	4.111	0.34689	5.8	ppb
	Se-KED2	78	20.407	0.15598	118.0	ppb
	Se-KED2	82	2.517	0.34927	43.9	ppb
	Mo-KED2	95	526.010	0.48210	3.5	ppb
	Mo-KED2	97	393.339	0.56108	6.8	ppb
	Mo-KED2	98	922.925	0.50736	5.4	ppb
	Cd-KED2	111	26.667	0.04571	22.6	ppb
	Cd-KED2	112	51.718	0.04788	14.8	ppb
	Cd-KED2	114	64.128	0.04695	27.3	ppb
>	In-KED2	115	31331.205			ppb
>	Rh-KED3	103	93515.283			ppb
	Ag-KED3	107	11.333	0.00294	17.2	ppb
	Ag-KED3	109	17.333	0.00540	10.4	ppb
>	In-KED1	115	389029.715			ppb
	Sb-KED1	121	4786.135	0.45953	4.1	ppb
	Sb-KED1	123	3749.821	0.46818	2.6	ppb
	Ba-KED1	135	34690.738	14.18922	2.9	ppb
	Ba-KED1	137	57080.498	14.42345	3.3	ppb
>	Lu-KED1	175	413325.567			ppb
	Tl-KED1	203	29.333	0.00170	68.4	ppb
	Tl-KED1	205	63.333	0.00120	41.4	ppb
	Pb-KED1	208	28691.763	1.21549	1.0	ppb
	U-KED1	238	3849.185	0.13757	0.5	ppb
>	Th-KED1	232	218571.446			ppb
	Mn-STD1	55	1122817.319	35.39709	2.5	ppb
>	Ge-STD1	72	669929.888			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		94		
>	Ge-KED2	72		96		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		94		
>	Rh-KED3	103		91		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		100		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-016
Sample Date/Time: Thursday, October 02, 2014 00:05:30
Sample Description:
Autosampler Position: 359
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-016.093
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	292572.506			ppb
Be-KED1	9	12.667	0.00253	60.7	ppb
Al-KED1	27	1095928.150	46.59851	3.3	ppb
V-KED3	51	1662.763	3.35624	2.7	ppb
Cr-KED3	52	440.674	0.61537	13.3	ppb
Cr-KED3	53	54.667	0.57887	30.5	ppb
Co-KED3	59	156.001	0.09055	10.4	ppb
Ni-KED3	60	292.003	0.57198	10.8	ppb
Ni-KED3	62	48.000	0.57414	7.2	ppb
Cu-KED3	63	2229.507	1.43310	2.1	ppb
Cu-KED3	65	1072.707	1.42806	6.1	ppb
Zn-KED3	66	1789.445	12.31041	2.3	ppb
Ge-KED3	72	13647.182			ppb
Ge-KED2	72	45616.076			ppb
As-KED2	75	685.572	3.42496	4.7	ppb
Se-KED2	77	2.556	0.13080	21.8	ppb
Se-KED2	78	20.147	0.14533	82.9	ppb
Se-KED2	82	-0.492	0.10928	39.7	ppb
Mo-KED2	95	517.343	0.48058	0.9	ppb
Mo-KED2	97	289.336	0.41674	4.5	ppb
Mo-KED2	98	808.772	0.44972	5.4	ppb
Cd-KED2	111	12.333	0.02023	18.6	ppb
Cd-KED2	112	23.266	0.02091	31.9	ppb
Cd-KED2	114	21.834	0.01453	18.5	ppb
In-KED2	115	30916.168			ppb
Rh-KED3	103	92482.465			ppb
Ag-KED3	107	12.000	0.00326	67.2	ppb
Ag-KED3	109	5.333	0.00022	786.4	ppb
In-KED1	115	376797.499			ppb
Sb-KED1	121	13830.025	1.37251	1.1	ppb
Sb-KED1	123	10612.105	1.37020	2.2	ppb
Ba-KED1	135	24741.410	10.43514	2.0	ppb
Ba-KED1	137	40852.331	10.65033	0.8	ppb
Lu-KED1	175	401292.976			ppb
Tl-KED1	203	26.000	0.00134	76.9	ppb
Tl-KED1	205	69.334	0.00167	35.3	ppb
Pb-KED1	208	10350.789	0.44828	1.1	ppb
U-KED1	238	6615.532	0.24142	3.4	ppb
Th-KED1	232	214398.892			ppb
Mn-STD1	55	1906097.517	62.41041	0.9	ppb
Ge-STD1	72	645175.491			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		93		
>	Ge-KED2	72		96		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		92		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		96		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-017
Sample Date/Time: Thursday, October 02, 2014 00:10:37
Sample Description:
Autosampler Position: 360
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-017.094
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	292379.048			ppb
Be-KED1	9	12.667	0.00252	108.4	ppb
Al-KED1	27	3375526.486	143.72880	2.0	ppb
V-KED3	51	1762.776	3.49130	4.5	ppb
Cr-KED3	52	566.678	0.77913	7.5	ppb
Cr-KED3	53	74.667	0.79254	11.9	ppb
Co-KED3	59	344.671	0.19706	14.6	ppb
Ni-KED3	60	540.010	1.04786	7.7	ppb
Ni-KED3	62	92.000	1.08684	17.5	ppb
Cu-KED3	63	4870.163	3.08122	3.0	ppb
Cu-KED3	65	2428.874	3.18004	7.8	ppb
Zn-KED3	66	4246.632	28.76538	3.2	ppb
Ge-KED3	72	13912.775			ppb
Ge-KED2	72	45737.777			ppb
As-KED2	75	1060.039	5.29300	2.9	ppb
Se-KED2	77	3.444	0.25142	26.7	ppb
Se-KED2	78	17.632	0.03891	205.3	ppb
Se-KED2	82	2.407	0.34116	29.4	ppb
Mo-KED2	95	616.013	0.56915	3.2	ppb
Mo-KED2	97	348.004	0.49929	2.2	ppb
Mo-KED2	98	983.669	0.54407	5.1	ppb
Cd-KED2	111	47.333	0.08322	16.5	ppb
Cd-KED2	112	82.651	0.07827	24.1	ppb
Cd-KED2	114	113.962	0.08601	5.4	ppb
In-KED2	115	31126.855			ppb
Rh-KED3	103	92629.357			ppb
Ag-KED3	107	20.667	0.00688	39.6	ppb
Ag-KED3	109	20.000	0.00661	33.3	ppb
In-KED1	115	383722.125			ppb
Sb-KED1	121	12922.513	1.25905	1.2	ppb
Sb-KED1	123	9921.021	1.25851	3.9	ppb
Ba-KED1	135	33946.285	14.07425	2.4	ppb
Ba-KED1	137	55505.637	14.21436	1.3	ppb
Lu-KED1	175	404544.471			ppb
Tl-KED1	203	34.667	0.00254	29.9	ppb
Tl-KED1	205	84.000	0.00251	20.4	ppb
Pb-KED1	208	80019.946	3.47358	1.4	ppb
U-KED1	238	5841.862	0.21383	3.8	ppb
Th-KED1	232	213703.946			ppb
Mn-STD1	55	2884799.384	93.07399	1.2	ppb
Ge-STD1	72	654881.448			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		95		
>	Ge-KED2	72		97		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		93		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		97		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409921-018
Sample Date/Time: Thursday, October 02, 2014 00:15:46
Sample Description:
Autosampler Position: 101
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409921-018.095
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	295226.480			ppb
Be-KED1	9	6.000	0.00008	1478.2	ppb
Al-KED1	27	18811.712	0.73245	3.9	ppb
V-KED3	51	7.333	0.00044	1331.9	ppb
Cr-KED3	52	132.667	0.17127	21.7	ppb
Cr-KED3	53	18.667	0.15708	7.2	ppb
Co-KED3	59	8.000	0.00379	30.5	ppb
Ni-KED3	60	81.334	0.14570	11.4	ppb
Ni-KED3	62	13.333	0.14885	40.4	ppb
Cu-KED3	63	25.333	0.00780	66.6	ppb
Cu-KED3	65	21.333	0.02009	33.1	ppb
Zn-KED3	66	84.000	0.47183	9.5	ppb
Ge-KED3	72	14130.319			ppb
Ge-KED2	72	46023.780			ppb
As-KED2	75	6.667	0.00784	37.5	ppb
Se-KED2	77	2.000	0.04856	256.9	ppb
Se-KED2	78	16.632	-0.00643	1031.8	ppb
Se-KED2	82	-0.593	0.10253	93.0	ppb
Mo-KED2	95	9.333	0.00389	53.7	ppb
Mo-KED2	97	3.333	-0.00066	652.9	ppb
Mo-KED2	98	18.374	0.00531	62.3	ppb
Cd-KED2	111	2.000	0.00130	135.8	ppb
Cd-KED2	112	3.786	0.00201	98.1	ppb
Cd-KED2	114	3.961	0.00049	234.4	ppb
In-KED2	115	31787.802			ppb
Rh-KED3	103	97113.664			ppb
Ag-KED3	107	6.000	0.00064	121.4	ppb
Ag-KED3	109	5.333	0.00013	971.3	ppb
In-KED1	115	390634.315			ppb
Sb-KED1	121	15.333	0.00014	211.5	ppb
Sb-KED1	123	19.748	0.00096	119.3	ppb
Ba-KED1	135	61.333	-0.00582	137.7	ppb
Ba-KED1	137	61.333	0.00741	25.9	ppb
Lu-KED1	175	403091.461			ppb
Tl-KED1	203	9.333	-0.00103	58.5	ppb
Tl-KED1	205	20.000	-0.00129	25.8	ppb
Pb-KED1	208	102.000	-0.00085	55.8	ppb
U-KED1	238	13.333	0.00000	7976.0	ppb
Th-KED1	232	212712.792			ppb
Mn-STD1	55	1772.777	0.03284	15.2	ppb
Ge-STD1	72	644755.596			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		97		
>	Ge-KED2	72		97		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		94		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		96		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		96		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1409963-025
Sample Date/Time: Thursday, October 02, 2014 00:20:53
Sample Description:
Autosampler Position: 102
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1409963-025.096
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	302421.154			ppb
|	Be-KED1	9	5.333	-0.00020	194.9	ppb
⌊	Al-KED1	27	39485.160	1.56468	1.6	ppb
⌈	V-KED3	51	28.000	0.04129	20.2	ppb
|	Cr-KED3	52	59.333	0.07114	19.1	ppb
|	Cr-KED3	53	10.667	0.06922	105.0	ppb
|	Co-KED3	59	4.000	0.00153	126.2	ppb
|	Ni-KED3	60	14.667	0.01725	68.9	ppb
|	Ni-KED3	62	4.667	0.04731	103.8	ppb
|	Cu-KED3	63	68.667	0.03512	24.1	ppb
|	Cu-KED3	65	34.667	0.03760	23.0	ppb
|	Zn-KED3	66	99.334	0.57742	17.8	ppb
⌊>	Ge-KED3	72	14049.572			ppb
⌈>	Ge-KED2	72	45627.753			ppb
|	As-KED2	75	7.778	0.01379	55.8	ppb
|	Se-KED2	77	3.444	0.25353	59.6	ppb
|	Se-KED2	78	18.198	0.06379	342.8	ppb
⌊	Se-KED2	82	-0.701	0.09309	76.7	ppb
⌈	Mo-KED2	95	6.000	0.00085	208.3	ppb
|	Mo-KED2	97	4.667	0.00125	135.3	ppb
|	Mo-KED2	98	15.562	0.00380	79.5	ppb
|	Cd-KED2	111	2.333	0.00192	193.2	ppb
|	Cd-KED2	112	1.773	0.00011	1427.1	ppb
|	Cd-KED2	114	3.285	-0.00002	8498.3	ppb
⌊>	In-KED2	115	31776.108			ppb
⌈>	Rh-KED3	103	98813.917			ppb
|	Ag-KED3	107	2.667	-0.00070	129.8	ppb
⌊	Ag-KED3	109	4.667	-0.00019	1085.4	ppb
⌈>	In-KED1	115	389636.846			ppb
|	Sb-KED1	121	16.000	0.00019	540.3	ppb
|	Sb-KED1	123	16.499	0.00055	138.9	ppb
|	Ba-KED1	135	156.001	0.03304	29.0	ppb
⌊	Ba-KED1	137	192.001	0.04037	5.9	ppb
⌈>	Lu-KED1	175	405282.748			ppb
|	Tl-KED1	203	14.667	-0.00030	194.2	ppb
|	Tl-KED1	205	34.000	-0.00047	116.5	ppb
⌊	Pb-KED1	208	232.667	0.00479	10.4	ppb
⌈	U-KED1	238	20.667	0.00027	57.7	ppb
⌊>	Th-KED1	232	214162.733			ppb
⌈	Mn-STD1	55	17151.627	0.51807	2.0	ppb
⌊>	Ge-STD1	72	667050.758			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		96		
>	Ge-KED2	72		96		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		96		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1412145-04
Sample Date/Time: Thursday, October 02, 2014 00:26:00
Sample Description:
Autosampler Position: 103
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1412145-04.097
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	294587.515			ppb
|	Be-KED1	9	7.333	0.00057	142.5	ppb
⌊	Al-KED1	27	5913.893	0.18845	6.7	ppb
⌈	V-KED3	51	4.667	-0.00454	49.3	ppb
|	Cr-KED3	52	5.333	-0.00300	293.3	ppb
|	Cr-KED3	53	1.333	-0.03482	38.0	ppb
|	Co-KED3	59	3.333	0.00122	147.6	ppb
|	Ni-KED3	60	7.333	0.00320	180.3	ppb
|	Ni-KED3	62	2.667	0.02428	54.8	ppb
|	Cu-KED3	63	12.000	-0.00042	885.8	ppb
|	Cu-KED3	65	6.000	0.00044	38.4	ppb
|	Zn-KED3	66	22.000	0.06011	5.3	ppb
⌊>	Ge-KED3	72	13808.673			ppb
⌈>	Ge-KED2	72	46334.693			ppb
|	As-KED2	75	5.889	0.00385	89.0	ppb
|	Se-KED2	77	1.778	0.01883	682.2	ppb
|	Se-KED2	78	15.632	-0.05018	292.7	ppb
⌊	Se-KED2	82	-0.371	0.11878	136.7	ppb
⌈	Mo-KED2	95	7.333	0.00216	53.4	ppb
|	Mo-KED2	97	4.667	0.00131	331.2	ppb
|	Mo-KED2	98	9.854	0.00075	530.9	ppb
|	Cd-KED2	111	2.333	0.00195	58.1	ppb
|	Cd-KED2	112	2.813	0.00112	83.8	ppb
|	Cd-KED2	114	4.206	0.00070	160.2	ppb
⌊>	In-KED2	115	31439.836			ppb
⌈>	Rh-KED3	103	94360.638			ppb
|	Ag-KED3	107	2.000	-0.00093	87.2	ppb
⌊	Ag-KED3	109	6.667	0.00078	257.9	ppb
⌈>	In-KED1	115	390361.846			ppb
|	Sb-KED1	121	19.333	0.00052	123.3	ppb
|	Sb-KED1	123	9.664	-0.00030	9.8	ppb
|	Ba-KED1	135	50.667	-0.01013	38.8	ppb
⌊	Ba-KED1	137	28.667	-0.00079	219.7	ppb
⌈>	Lu-KED1	175	409437.077			ppb
|	Tl-KED1	203	14.000	-0.00040	125.6	ppb
|	Tl-KED1	205	38.667	-0.00021	184.5	ppb
⌊	Pb-KED1	208	112.667	-0.00046	167.3	ppb
⌈	U-KED1	238	18.000	0.00018	173.0	ppb
⌊>	Th-KED1	232	212957.761			ppb
⌈	Mn-STD1	55	578.012	-0.00616	21.6	ppb
⌊>	Ge-STD1	72	637638.121			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		94		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		94		
>	Rh-KED3	103		91		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		95		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: KQ1412145-03
Sample Date/Time: Thursday, October 02, 2014 00:31:08
Sample Description:
Autosampler Position: 104
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\KQ1412145-03.098
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	294606.461			ppb
|	Be-KED1	9	6632.206	2.38163	2.7	ppb
⌊	Al-KED1	27	2476342.874	104.63777	2.6	ppb
⌈	V-KED3	51	11951.667	24.01251	4.2	ppb
|	Cr-KED3	52	7180.471	10.09957	3.3	ppb
|	Cr-KED3	53	868.026	9.83951	4.4	ppb
|	Co-KED3	59	42323.298	24.54245	1.3	ppb
|	Ni-KED3	60	12635.586	25.00803	0.9	ppb
|	Ni-KED3	62	2070.817	24.87474	2.2	ppb
|	Cu-KED3	63	18927.874	12.12111	2.2	ppb
|	Cu-KED3	65	9576.542	12.69939	0.5	ppb
|	Zn-KED3	66	3872.525	26.52322	4.6	ppb
⌊>	Ge-KED3	72	13762.627			ppb
⌈>	Ge-KED2	72	46316.642			ppb
|	As-KED2	75	10453.379	51.75902	0.7	ppb
|	Se-KED2	77	386.005	52.12590	6.0	ppb
|	Se-KED2	78	1292.913	51.45457	0.6	ppb
⌊	Se-KED2	82	685.424	54.11410	0.3	ppb
⌈	Mo-KED2	95	21721.839	19.71747	4.1	ppb
|	Mo-KED2	97	13930.790	19.67834	3.5	ppb
|	Mo-KED2	98	37222.891	20.25208	2.7	ppb
|	Cd-KED2	111	14118.974	24.89060	1.7	ppb
|	Cd-KED2	112	27373.314	25.66869	3.1	ppb
|	Cd-KED2	114	33688.863	25.47871	0.9	ppb
⌊>	In-KED2	115	31950.622			ppb
⌈>	Rh-KED3	103	97492.510			ppb
|	Ag-KED3	107	31260.173	12.39855	3.2	ppb
⌊	Ag-KED3	109	30050.260	12.44229	4.9	ppb
⌈>	In-KED1	115	383248.285			ppb
|	Sb-KED1	121	549375.724	53.64680	1.2	ppb
|	Sb-KED1	123	426347.476	54.18466	0.5	ppb
|	Ba-KED1	135	246282.281	102.38959	0.4	ppb
⌊	Ba-KED1	137	407282.487	104.47768	1.3	ppb
⌈>	Lu-KED1	175	414632.516			ppb
|	Tl-KED1	203	394643.845	54.30275	0.8	ppb
|	Tl-KED1	205	928897.223	53.81223	0.4	ppb
⌊	Pb-KED1	208	1205636.621	51.12788	1.1	ppb
⌈	U-KED1	238	558084.283	20.15189	1.5	ppb
⌊>	Th-KED1	232	217113.523			ppb
⌈	Mn-STD1	55	809932.304	25.81332	1.1	ppb
⌊>	Ge-STD1	72	662436.565			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		96		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		94		
⌈>	Ge-KED2	72		98		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		95		
⌈>	Rh-KED3	103		94		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		102		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		99		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		102		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		98		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410232-001
Sample Date/Time: Thursday, October 02, 2014 00:36:15
Sample Description:
Autosampler Position: 105
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410232-001.099
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	279908.364			ppb
|	Be-KED1	9	8.000	0.00092	119.0	ppb
⌊	Al-KED1	27	80154.940	3.51152	4.7	ppb
⌈	V-KED3	51	1608.091	3.28514	1.5	ppb
|	Cr-KED3	52	4109.259	5.89640	6.5	ppb
|	Cr-KED3	53	497.342	5.73734	2.5	ppb
|	Co-KED3	59	2397.535	1.41859	2.7	ppb
|	Ni-KED3	60	48330.284	97.68611	1.2	ppb
|	Ni-KED3	62	7806.132	95.77681	2.7	ppb
|	Cu-KED3	63	27931.948	18.26882	1.2	ppb
|	Cu-KED3	65	14175.700	19.19064	0.9	ppb
|	Zn-KED3	66	3287.045	22.96749	1.2	ppb
⌊>	Ge-KED3	72	13482.360			ppb
⌈>	Ge-KED2	72	44294.231			ppb
|	As-KED2	75	52.445	0.24633	2.1	ppb
|	Se-KED2	77	4.889	0.47193	6.7	ppb
|	Se-KED2	78	23.184	0.29654	17.5	ppb
⌊	Se-KED2	82	6.406	0.67692	17.2	ppb
⌈	Mo-KED2	95	3991.225	3.78828	4.1	ppb
|	Mo-KED2	97	2532.891	3.74079	3.1	ppb
|	Mo-KED2	98	6668.451	3.79591	2.3	ppb
|	Cd-KED2	111	6.333	0.00940	47.0	ppb
|	Cd-KED2	112	17.744	0.01587	11.7	ppb
|	Cd-KED2	114	17.132	0.01106	14.7	ppb
⌊>	In-KED2	115	30508.093			ppb
⌈>	Rh-KED3	103	92690.482			ppb
|	Ag-KED3	107	50.000	0.01915	21.9	ppb
⌊	Ag-KED3	109	47.333	0.01852	19.2	ppb
⌈>	In-KED1	115	360055.355			ppb
|	Sb-KED1	121	422085.094	44.01524	7.3	ppb
|	Sb-KED1	123	323538.075	43.90590	7.6	ppb
|	Ba-KED1	135	301275.116	133.72950	7.0	ppb
⌊	Ba-KED1	137	494927.096	135.64077	9.0	ppb
⌈>	Lu-KED1	175	400299.253			ppb
|	Tl-KED1	203	61.333	0.00637	33.9	ppb
|	Tl-KED1	205	132.667	0.00550	42.1	ppb
⌊	Pb-KED1	208	609354.058	26.78785	4.0	ppb
⌈	U-KED1	238	1836.118	0.06826	6.0	ppb
⌊>	Th-KED1	232	209706.651			ppb
⌈	Mn-STD1	55	341293.522	11.34394	3.7	ppb
⌊>	Ge-STD1	72	634708.534			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		91		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		92		
>	Ge-KED2	72		94		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		91		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		95		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		98		
	Mn-STD1	55				
>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-001
Sample Date/Time: Thursday, October 02, 2014 00:41:22
Sample Description:
Autosampler Position: 106
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-001.100
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	282966.911			ppb
|	Be-KED1	9	12.000	0.00244	35.4	ppb
⌊	Al-KED1	27	393899.044	17.27396	4.8	ppb
⌈	V-KED3	51	50.000	0.08892	20.6	ppb
|	Cr-KED3	52	262.669	0.36805	9.0	ppb
|	Cr-KED3	53	90.000	0.99901	27.6	ppb
|	Co-KED3	59	57.333	0.03333	41.5	ppb
|	Ni-KED3	60	207.335	0.40932	13.5	ppb
|	Ni-KED3	62	28.000	0.33694	0.6	ppb
|	Cu-KED3	63	312.003	0.19667	1.9	ppb
|	Cu-KED3	65	161.334	0.21173	19.0	ppb
|	Zn-KED3	66	138.001	0.87984	12.0	ppb
⌊>	Ge-KED3	72	13442.989			ppb
⌈>	Ge-KED2	72	44531.972			ppb
|	As-KED2	75	808.134	4.13849	4.4	ppb
|	Se-KED2	77	3.556	0.28021	42.0	ppb
|	Se-KED2	78	15.514	-0.03136	477.0	ppb
⌊	Se-KED2	82	1.628	0.28113	73.5	ppb
⌈	Mo-KED2	95	952.032	0.89726	4.4	ppb
|	Mo-KED2	97	658.682	0.96573	6.6	ppb
|	Mo-KED2	98	1652.251	0.93371	3.3	ppb
|	Cd-KED2	111	3.333	0.00387	52.8	ppb
|	Cd-KED2	112	3.839	0.00221	112.3	ppb
|	Cd-KED2	114	8.331	0.00404	46.9	ppb
⌊>	In-KED2	115	30616.942			ppb
⌈>	Rh-KED3	103	92567.063			ppb
|	Ag-KED3	107	8.667	0.00184	136.5	ppb
⌊	Ag-KED3	109	6.000	0.00056	326.1	ppb
⌈>	In-KED1	115	382203.319			ppb
|	Sb-KED1	121	202.668	0.01852	0.9	ppb
|	Sb-KED1	123	149.749	0.01758	15.9	ppb
|	Ba-KED1	135	386121.853	161.03367	1.4	ppb
⌊	Ba-KED1	137	639456.541	164.50158	1.7	ppb
⌈>	Lu-KED1	175	406981.439			ppb
|	Tl-KED1	203	24.000	0.00101	76.4	ppb
|	Tl-KED1	205	47.333	0.00031	118.3	ppb
⌊	Pb-KED1	208	1703.374	0.06834	10.5	ppb
⌈	U-KED1	238	474.008	0.01661	7.1	ppb
⌊>	Th-KED1	232	217458.777			ppb
⌈	Mn-STD1	55	89630458.008	2928.91530	2.3	ppb
⌊>	Ge-STD1	72	646951.652			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		92		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		92		
>	Ge-KED2	72		94		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		91		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		96		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Thursday, October 02, 2014 00:46:31
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.101
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	292548.102			ppb
Be-KED1	9	66783.841	24.17634	2.4	ppb
Al-KED1	27	595099.405	25.30849	5.2	ppb
V-KED3	51	12099.789	24.52646	2.0	ppb
Cr-KED3	52	17103.567	24.28944	2.8	ppb
Cr-KED3	53	2188.834	25.12673	1.0	ppb
Co-KED3	59	42677.003	24.98251	3.2	ppb
Ni-KED3	60	12479.452	24.92945	4.0	ppb
Ni-KED3	62	2104.155	25.51239	6.3	ppb
Cu-KED3	63	37154.924	24.02284	0.4	ppb
Cu-KED3	65	18451.915	24.70699	4.0	ppb
Zn-KED3	66	3577.782	24.71026	3.0	ppb
Ge-KED3	72	13638.508			ppb
Ge-KED2	72	45010.477			ppb
As-KED2	75	4937.409	25.14466	1.9	ppb
Se-KED2	77	184.112	25.46361	3.3	ppb
Se-KED2	78	610.642	24.65600	0.4	ppb
Se-KED2	82	312.410	25.47496	5.0	ppb
Mo-KED2	95	27651.407	25.48009	1.0	ppb
Mo-KED2	97	17755.700	25.46438	2.4	ppb
Mo-KED2	98	46228.534	25.54409	1.6	ppb
Cd-KED2	111	13743.610	24.60628	2.4	ppb
Cd-KED2	112	26201.687	24.94956	1.6	ppb
Cd-KED2	114	32648.694	25.07623	1.6	ppb
In-KED2	115	31455.429			ppb
Rh-KED3	103	96895.594			ppb
Ag-KED3	107	62706.103	25.01061	3.2	ppb
Ag-KED3	109	61431.279	25.56779	3.0	ppb
In-KED1	115	389602.514			ppb
Sb-KED1	121	267879.918	25.73466	1.2	ppb
Sb-KED1	123	203718.444	25.46543	0.5	ppb
Ba-KED1	135	61882.419	25.28528	1.4	ppb
Ba-KED1	137	100430.451	25.33301	0.5	ppb
Lu-KED1	175	410789.606			ppb
Tl-KED1	203	183137.780	25.44015	2.0	ppb
Tl-KED1	205	435208.065	25.44988	1.2	ppb
Pb-KED1	208	599941.328	25.68373	2.4	ppb
U-KED1	238	696893.548	24.66225	0.3	ppb
Th-KED1	232	221511.511			ppb
Mn-STD1	55	797518.442	25.68152	0.9	ppb
Ge-STD1	72	655712.165			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		95		
	Be-KED1	9	97			
	Al-KED1	27	101			
	V-KED3	51	98			
	Cr-KED3	52	97			
	Cr-KED3	53	101			
	Co-KED3	59	100			
	Ni-KED3	60	100			
	Ni-KED3	62	102			
	Cu-KED3	63	96			
	Cu-KED3	65	99			
	Zn-KED3	66	99			
>	Ge-KED3	72		93		
>	Ge-KED2	72		95		
	As-KED2	75	101			
	Se-KED2	77	102			
	Se-KED2	78	99			
	Se-KED2	82	102			
	Mo-KED2	95	102			
	Mo-KED2	97	102			
	Mo-KED2	98	102			
	Cd-KED2	111	98			
	Cd-KED2	112	100			
	Cd-KED2	114	100			
>	In-KED2	115		94		
>	Rh-KED3	103		94		
	Ag-KED3	107	100			
	Ag-KED3	109	102			
>	In-KED1	115		104		
	Sb-KED1	121	103			
	Sb-KED1	123	102			
	Ba-KED1	135	101			
	Ba-KED1	137	101			
>	Lu-KED1	175		98		
	Tl-KED1	203	102			
	Tl-KED1	205	102			
	Pb-KED1	208	103			
	U-KED1	238	99			
>	Th-KED1	232		104		
	Mn-STD1	55	103			
>	Ge-STD1	72		97		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Thursday, October 02, 2014 00:51:38
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.102
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	281724.384			ppb
|	Be-KED1	9	4.000	-0.00052	267.6	ppb
⌊	Al-KED1	27	1477.410	0.00369	137.9	ppb
⌈	V-KED3	51	4.667	-0.00445	56.0	ppb
|	Cr-KED3	52	6.000	-0.00215	129.5	ppb
|	Cr-KED3	53	2.000	-0.02723	1.6	ppb
|	Co-KED3	59	4.667	0.00198	31.4	ppb
|	Ni-KED3	60	2.667	-0.00586	103.5	ppb
|	Ni-KED3	62	1.333	0.00868	161.9	ppb
|	Cu-KED3	63	6.000	-0.00420	29.4	ppb
|	Cu-KED3	65	4.667	-0.00122	459.9	ppb
|	Zn-KED3	66	19.333	0.04215	133.7	ppb
⌊>	Ge-KED3	72	13727.260			ppb
⌈>	Ge-KED2	72	44982.380			ppb
|	As-KED2	75	7.444	0.01266	51.2	ppb
|	Se-KED2	77	1.667	0.01147	1073.9	ppb
|	Se-KED2	78	16.195	-0.00874	134.8	ppb
⌊	Se-KED2	82	2.187	0.32663	42.9	ppb
⌈	Mo-KED2	95	66.000	0.05566	14.7	ppb
|	Mo-KED2	97	43.333	0.05621	5.3	ppb
|	Mo-KED2	98	109.708	0.05532	24.5	ppb
|	Cd-KED2	111	1.667	0.00072	144.0	ppb
|	Cd-KED2	112	1.652	0.00000	42269.2	ppb
|	Cd-KED2	114	0.537	-0.00211	1.7	ppb
⌊>	In-KED2	115	31737.311			ppb
⌈>	Rh-KED3	103	95027.842			ppb
|	Ag-KED3	107	6.667	0.00098	132.8	ppb
⌊	Ag-KED3	109	9.333	0.00191	133.7	ppb
⌈>	In-KED1	115	372685.165			ppb
|	Sb-KED1	121	48.000	0.00349	14.1	ppb
|	Sb-KED1	123	39.413	0.00365	7.5	ppb
|	Ba-KED1	135	36.000	-0.01551	22.8	ppb
⌊	Ba-KED1	137	20.000	-0.00267	137.9	ppb
⌈>	Lu-KED1	175	397298.401			ppb
|	Tl-KED1	203	14.667	-0.00024	360.6	ppb
|	Tl-KED1	205	37.333	-0.00022	93.9	ppb
⌊	Pb-KED1	208	87.333	-0.00145	28.2	ppb
⌈	U-KED1	238	22.667	0.00034	45.1	ppb
⌊>	Th-KED1	232	214521.724			ppb
⌈	Mn-STD1	55	832.691	0.00221	51.6	ppb
⌊>	Ge-STD1	72	638901.929			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		91		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		94		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		92		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		99		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		95		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		100		
	Mn-STD1	55				
>	Ge-STD1	72		95		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	97	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Thursday, October 02, 2014 00:56:38
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.103
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	281992.744			ppb
Be-KED1	9	3.333	-0.00082	99.9	ppb
Al-KED1	27	1427.405	0.00161	518.2	ppb
V-KED3	51	2.667	-0.00841	28.3	ppb
Cr-KED3	52	4.667	-0.00393	83.0	ppb
Cr-KED3	53	2.667	-0.01879	191.6	ppb
Co-KED3	59	1.333	0.00005	2748.5	ppb
Ni-KED3	60	5.333	-0.00047	1278.1	ppb
Ni-KED3	62	0.667	0.00073	1966.3	ppb
Cu-KED3	63	5.333	-0.00457	43.4	ppb
Cu-KED3	65	5.333	-0.00027	612.8	ppb
Zn-KED3	66	11.333	-0.01104	199.8	ppb
Ge-KED3	72	13497.040			ppb
Ge-KED2	72	44526.619			ppb
As-KED2	75	5.778	0.00438	394.6	ppb
Se-KED2	77	2.333	0.10810	45.2	ppb
Se-KED2	78	16.178	-0.00288	3037.5	ppb
Se-KED2	82	-0.373	0.11878	80.1	ppb
Mo-KED2	95	26.667	0.02042	34.5	ppb
Mo-KED2	97	14.667	0.01607	74.0	ppb
Mo-KED2	98	30.749	0.01257	36.3	ppb
Cd-KED2	111	3.333	0.00384	28.0	ppb
Cd-KED2	112	1.120	-0.00047	324.6	ppb
Cd-KED2	114	3.855	0.00049	319.5	ppb
In-KED2	115	30870.578			ppb
Rh-KED3	103	95100.208			ppb
Ag-KED3	107	7.333	0.00122	231.2	ppb
Ag-KED3	109	6.667	0.00075	67.6	ppb
In-KED1	115	382287.583			ppb
Sb-KED1	121	28.000	0.00141	24.0	ppb
Sb-KED1	123	20.998	0.00118	81.8	ppb
Ba-KED1	135	43.333	-0.01273	36.0	ppb
Ba-KED1	137	26.000	-0.00133	122.3	ppb
Lu-KED1	175	412644.602			ppb
Tl-KED1	203	18.000	0.00013	343.3	ppb
Tl-KED1	205	35.333	-0.00042	80.1	ppb
Pb-KED1	208	112.000	-0.00054	105.7	ppb
U-KED1	238	13.333	-0.00000	3285.6	ppb
Th-KED1	232	215318.248			ppb
Mn-STD1	55	691.350	-0.00229	32.5	ppb
Ge-STD1	72	634196.133			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		92		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		92		
>	Ge-KED2	72		94		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		92		
>	Rh-KED3	103		92		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		98		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-002
Sample Date/Time: Thursday, October 02, 2014 01:01:45
Sample Description:
Autosampler Position: 107
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-002.104
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	278687.608			ppb
	Be-KED1	9	67.334	0.02351	32.5	ppb
	Al-KED1	27	7223923.201	322.67053	2.4	ppb
	V-KED3	51	415.339	0.87163	9.2	ppb
	Cr-KED3	52	1160.047	1.72038	7.7	ppb
	Cr-KED3	53	155.334	1.82486	6.8	ppb
	Co-KED3	59	719.352	0.44135	7.9	ppb
	Ni-KED3	60	1330.062	2.77997	1.4	ppb
	Ni-KED3	62	213.335	2.70739	20.0	ppb
	Cu-KED3	63	1708.102	1.15307	5.5	ppb
	Cu-KED3	65	834.024	1.16633	6.4	ppb
	Zn-KED3	66	496.675	3.52607	1.8	ppb
>	Ge-KED3	72	12985.901			ppb
>	Ge-KED2	72	42248.050			ppb
	As-KED2	75	189.557	1.00392	2.2	ppb
	Se-KED2	77	7.778	0.93484	37.1	ppb
	Se-KED2	78	20.693	0.23333	55.0	ppb
	Se-KED2	82	0.838	0.22227	49.5	ppb
	Mo-KED2	95	670.016	0.65335	9.4	ppb
	Mo-KED2	97	430.673	0.65308	1.1	ppb
	Mo-KED2	98	1096.051	0.64103	5.3	ppb
	Cd-KED2	111	8.333	0.01368	45.5	ppb
	Cd-KED2	112	16.479	0.01516	2.5	ppb
	Cd-KED2	114	15.858	0.01046	3.3	ppb
>	In-KED2	115	29513.708			ppb
>	Rh-KED3	103	87583.033			ppb
	Ag-KED3	107	3.333	-0.00027	678.8	ppb
	Ag-KED3	109	9.333	0.00222	26.7	ppb
>	In-KED1	115	360750.013			ppb
	Sb-KED1	121	515.343	0.05221	7.8	ppb
	Sb-KED1	123	435.419	0.05729	4.1	ppb
	Ba-KED1	135	228168.397	100.82231	2.4	ppb
	Ba-KED1	137	375792.804	102.44425	2.5	ppb
>	Lu-KED1	175	416547.839			ppb
	Tl-KED1	203	56.000	0.00532	11.2	ppb
	Tl-KED1	205	107.334	0.00371	25.5	ppb
	Pb-KED1	208	21633.018	0.90806	2.5	ppb
	U-KED1	238	104576.713	3.70037	1.2	ppb
>	Th-KED1	232	221526.433			ppb
	Mn-STD1	55	1102819.804	38.52921	3.8	ppb
>	Ge-STD1	72	604791.762			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		90		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		89		
>	Ge-KED2	72		89		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		88		
>	Rh-KED3	103		85		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		104		
	Mn-STD1	55				
>	Ge-STD1	72		90		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-003
Sample Date/Time: Thursday, October 02, 2014 01:06:51
Sample Description:
Autosampler Position: 108
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-003.105
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	303220.194			ppb
|	Be-KED1	9	5.333	-0.00019	230.8	ppb
⌊	Al-KED1	27	21131.624	0.80652	2.5	ppb
⌈	V-KED3	51	16.000	0.01881	71.2	ppb
|	Cr-KED3	52	58.000	0.07346	21.3	ppb
|	Cr-KED3	53	10.667	0.07435	63.9	ppb
|	Co-KED3	59	1.333	0.00003	4329.8	ppb
|	Ni-KED3	60	31.333	0.05279	19.2	ppb
|	Ni-KED3	62	7.333	0.08223	40.9	ppb
|	Cu-KED3	63	47.333	0.02375	47.8	ppb
|	Cu-KED3	65	20.667	0.02100	46.0	ppb
|	Zn-KED3	66	64.667	0.36816	9.8	ppb
⌊>	Ge-KED3	72	13309.552			ppb
⌈>	Ge-KED2	72	45675.571			ppb
|	As-KED2	75	8.444	0.01709	36.2	ppb
|	Se-KED2	77	1.111	-0.06820	103.7	ppb
|	Se-KED2	78	18.083	0.05833	174.3	ppb
⌊	Se-KED2	82	0.631	0.19935	80.5	ppb
⌈	Mo-KED2	95	15.333	0.00943	97.6	ppb
|	Mo-KED2	97	14.000	0.01451	17.5	ppb
|	Mo-KED2	98	33.114	0.01344	21.5	ppb
|	Cd-KED2	111	2.667	0.00253	150.1	ppb
|	Cd-KED2	112	2.613	0.00089	262.8	ppb
|	Cd-KED2	114	5.070	0.00133	113.9	ppb
⌊>	In-KED2	115	31711.361			ppb
⌈>	Rh-KED3	103	93578.053			ppb
|	Ag-KED3	107	4.667	0.00021	485.5	ppb
⌊	Ag-KED3	109	4.000	-0.00038	214.3	ppb
⌈>	In-KED1	115	392045.906			ppb
|	Sb-KED1	121	17.333	0.00033	183.2	ppb
|	Sb-KED1	123	15.166	0.00039	411.9	ppb
|	Ba-KED1	135	138.001	0.02526	14.0	ppb
⌊	Ba-KED1	137	215.335	0.04601	11.4	ppb
⌈>	Lu-KED1	175	417362.419			ppb
|	Tl-KED1	203	18.000	0.00011	298.0	ppb
|	Tl-KED1	205	34.000	-0.00052	77.3	ppb
⌊	Pb-KED1	208	238.667	0.00475	16.6	ppb
⌈	U-KED1	238	21.333	0.00028	103.2	ppb
⌊>	Th-KED1	232	216599.153			ppb
⌈	Mn-STD1	55	1274.724	0.01778	14.2	ppb
⌊>	Ge-STD1	72	625379.459			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		91		
>	Ge-KED2	72		97		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		91		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		101		
	Mn-STD1	55				
>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-004
Sample Date/Time: Thursday, October 02, 2014 01:11:56
Sample Description:
Autosampler Position: 109
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-004.106
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	290975.559			ppb
	Be-KED1	9	10.667	0.00182	24.6	ppb
	Al-KED1	27	187394.317	7.96021	3.3	ppb
	V-KED3	51	129.334	0.25882	13.3	ppb
	Cr-KED3	52	11050.940	16.32667	2.1	ppb
	Cr-KED3	53	1378.067	16.44750	4.7	ppb
	Co-KED3	59	114.667	0.06916	10.8	ppb
	Ni-KED3	60	440.673	0.90507	2.3	ppb
	Ni-KED3	62	83.334	1.04386	17.7	ppb
	Cu-KED3	63	1312.727	0.87589	6.7	ppb
	Cu-KED3	65	696.684	0.96366	4.2	ppb
	Zn-KED3	66	194.668	1.31365	5.2	ppb
>	Ge-KED3	72	13106.010			ppb
>	Ge-KED2	72	43047.763			ppb
	As-KED2	75	110.667	0.56455	6.2	ppb
	Se-KED2	77	3.889	0.34639	53.6	ppb
	Se-KED2	78	21.178	0.23715	50.3	ppb
	Se-KED2	82	4.404	0.52362	60.2	ppb
	Mo-KED2	95	202.001	0.19039	15.9	ppb
	Mo-KED2	97	142.667	0.20903	10.6	ppb
	Mo-KED2	98	368.973	0.20860	10.7	ppb
	Cd-KED2	111	7.333	0.01151	94.1	ppb
	Cd-KED2	112	9.039	0.00744	18.6	ppb
	Cd-KED2	114	18.906	0.01267	22.9	ppb
>	In-KED2	115	30044.009			ppb
>	Rh-KED3	103	89428.558			ppb
	Ag-KED3	107	24.000	0.00861	24.3	ppb
	Ag-KED3	109	20.000	0.00701	51.0	ppb
>	In-KED1	115	367223.423			ppb
	Sb-KED1	121	904.696	0.09087	11.7	ppb
	Sb-KED1	123	644.429	0.08396	2.6	ppb
	Ba-KED1	135	223116.289	96.81211	1.6	ppb
	Ba-KED1	137	368918.829	98.75274	0.4	ppb
>	Lu-KED1	175	414319.868			ppb
	Tl-KED1	203	28.667	0.00160	87.5	ppb
	Tl-KED1	205	71.334	0.00166	35.6	ppb
	Pb-KED1	208	836.010	0.03016	9.2	ppb
	U-KED1	238	42214.950	1.52196	1.3	ppb
>	Th-KED1	232	217380.834			ppb
	Mn-STD1	55	821776.116	28.47143	3.3	ppb
>	Ge-STD1	72	609404.139			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		94		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		90		
>	Ge-KED2	72		91		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		90		
>	Rh-KED3	103		87		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		98		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		102		
	Mn-STD1	55				
>	Ge-STD1	72		91		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-005
Sample Date/Time: Thursday, October 02, 2014 01:17:02
Sample Description:
Autosampler Position: 110
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-005.107
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	303863.705			ppb
Be-KED1	9	6.000	0.00003	4209.5	ppb
Al-KED1	27	32448.833	1.26850	3.6	ppb
V-KED3	51	62.667	0.11464	8.0	ppb
Cr-KED3	52	443.340	0.62632	8.6	ppb
Cr-KED3	53	61.333	0.66162	23.7	ppb
Co-KED3	59	26.667	0.01504	11.1	ppb
Ni-KED3	60	144.667	0.28041	14.6	ppb
Ni-KED3	62	26.667	0.31889	41.2	ppb
Cu-KED3	63	388.672	0.24611	11.1	ppb
Cu-KED3	65	201.335	0.26502	2.2	ppb
Zn-KED3	66	76.000	0.44209	0.9	ppb
Ge-KED3	72	13491.704			ppb
Ge-KED2	72	44967.685			ppb
As-KED2	75	34.556	0.15101	2.1	ppb
Se-KED2	77	3.556	0.27600	22.5	ppb
Se-KED2	78	17.019	0.02494	215.8	ppb
Se-KED2	82	-1.497	0.02833	388.1	ppb
Mo-KED2	95	149.334	0.13613	14.8	ppb
Mo-KED2	97	105.334	0.14926	6.7	ppb
Mo-KED2	98	274.898	0.15090	4.7	ppb
Cd-KED2	111	4.333	0.00571	20.8	ppb
Cd-KED2	112	6.199	0.00448	25.6	ppb
Cd-KED2	114	5.349	0.00169	69.1	ppb
In-KED2	115	30717.832			ppb
Rh-KED3	103	93421.269			ppb
Ag-KED3	107	7.333	0.00128	33.0	ppb
Ag-KED3	109	6.000	0.00052	172.5	ppb
In-KED1	115	375723.856			ppb
Sb-KED1	121	386.672	0.03719	12.0	ppb
Sb-KED1	123	287.998	0.03585	8.4	ppb
Ba-KED1	135	124194.895	52.65264	0.1	ppb
Ba-KED1	137	199507.545	52.19532	1.4	ppb
Lu-KED1	175	418390.591			ppb
Tl-KED1	203	16.667	-0.00008	728.6	ppb
Tl-KED1	205	40.000	-0.00018	61.6	ppb
Pb-KED1	208	215.334	0.00375	12.5	ppb
U-KED1	238	8582.578	0.30492	3.4	ppb
Th-KED1	232	220388.138			ppb
Mn-STD1	55	2812.277	0.06989	9.3	ppb
Ge-STD1	72	624768.085			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		99		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		92		
⌈>	Ge-KED2	72		95		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		92		
⌈>	Rh-KED3	103		90		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		100		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		100		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		103		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-005D
Sample Date/Time: Thursday, October 02, 2014 01:22:07
Sample Description:
Autosampler Position: 111
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-005D.108
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	292670.734			ppb
Be-KED1	9	4.667	-0.00039	204.7	ppb
Al-KED1	27	33056.875	1.34605	3.8	ppb
V-KED3	51	60.000	0.10981	47.7	ppb
Cr-KED3	52	456.674	0.65025	5.1	ppb
Cr-KED3	53	59.333	0.64454	16.8	ppb
Co-KED3	59	34.000	0.01952	17.1	ppb
Ni-KED3	60	152.001	0.29821	11.6	ppb
Ni-KED3	62	21.333	0.25551	35.5	ppb
Cu-KED3	63	437.340	0.28007	6.3	ppb
Cu-KED3	65	244.669	0.32630	14.3	ppb
Zn-KED3	66	99.334	0.61060	16.8	ppb
Ge-KED3	72	13382.266			ppb
Ge-KED2	72	44856.647			ppb
As-KED2	75	34.333	0.15029	6.7	ppb
Se-KED2	77	2.667	0.15232	92.4	ppb
Se-KED2	78	18.140	0.07416	83.3	ppb
Se-KED2	82	0.950	0.22650	54.5	ppb
Mo-KED2	95	138.001	0.12379	12.5	ppb
Mo-KED2	97	114.667	0.16061	4.9	ppb
Mo-KED2	98	287.638	0.15567	8.1	ppb
Cd-KED2	111	1.333	0.00016	1302.0	ppb
Cd-KED2	112	6.600	0.00478	3.5	ppb
Cd-KED2	114	4.394	0.00088	275.7	ppb
In-KED2	115	31163.481			ppb
Rh-KED3	103	91965.077			ppb
Ag-KED3	107	4.667	0.00022	224.1	ppb
Ag-KED3	109	8.667	0.00172	59.9	ppb
In-KED1	115	380442.995			ppb
Sb-KED1	121	403.339	0.03839	9.1	ppb
Sb-KED1	123	300.250	0.03689	7.3	ppb
Ba-KED1	135	127111.803	53.23068	0.9	ppb
Ba-KED1	137	204230.866	52.79133	2.8	ppb
Lu-KED1	175	420125.153			ppb
Tl-KED1	203	22.000	0.00062	224.8	ppb
Tl-KED1	205	39.333	-0.00023	49.5	ppb
Pb-KED1	208	255.334	0.00538	7.8	ppb
U-KED1	238	8444.496	0.30018	2.3	ppb
Th-KED1	232	220165.765			ppb
Mn-STD1	55	2883.625	0.07100	4.7	ppb
Ge-STD1	72	632538.735			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		95		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		92		
⌈>	Ge-KED2	72		95		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		93		
⌈>	Rh-KED3	103		89		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		101		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		100		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		103		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-005L
Sample Date/Time: Thursday, October 02, 2014 01:27:13
Sample Description:
Autosampler Position: 112
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-005L.109
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	310476.417			ppb
|	Be-KED1	9	6.667	0.00023	630.4	ppb
⌊	Al-KED1	27	14638.833	0.52564	2.0	ppb
⌈	V-KED3	51	9.333	0.00535	273.5	ppb
|	Cr-KED3	52	104.667	0.13873	12.2	ppb
|	Cr-KED3	53	17.333	0.15000	38.6	ppb
|	Co-KED3	59	10.000	0.00519	80.8	ppb
|	Ni-KED3	60	45.333	0.07973	11.0	ppb
|	Ni-KED3	62	4.000	0.04126	60.4	ppb
|	Cu-KED3	63	72.667	0.03925	15.1	ppb
|	Cu-KED3	65	48.667	0.05834	43.8	ppb
|	Zn-KED3	66	24.667	0.08200	74.9	ppb
⌊>	Ge-KED3	72	13576.450			ppb
⌈>	Ge-KED2	72	46409.942			ppb
|	As-KED2	75	12.000	0.03412	35.9	ppb
|	Se-KED2	77	2.667	0.13975	86.0	ppb
|	Se-KED2	78	19.164	0.09061	111.5	ppb
⌊	Se-KED2	82	-0.155	0.13718	48.9	ppb
⌈	Mo-KED2	95	35.333	0.02699	27.4	ppb
|	Mo-KED2	97	27.333	0.03267	21.2	ppb
|	Mo-KED2	98	59.041	0.02695	14.9	ppb
|	Cd-KED2	111	1.333	0.00007	1339.4	ppb
|	Cd-KED2	112	3.520	0.00169	110.4	ppb
|	Cd-KED2	114	4.233	0.00064	349.7	ppb
⌊>	In-KED2	115	32399.314			ppb
⌈>	Rh-KED3	103	95486.167			ppb
|	Ag-KED3	107	4.667	0.00015	810.6	ppb
⌊	Ag-KED3	109	2.667	-0.00096	47.4	ppb
⌈>	In-KED1	115	391214.226			ppb
|	Sb-KED1	121	72.667	0.00562	2.7	ppb
|	Sb-KED1	123	85.581	0.00915	25.9	ppb
|	Ba-KED1	135	26063.760	10.58952	2.6	ppb
⌊	Ba-KED1	137	42123.394	10.57890	4.0	ppb
⌈>	Lu-KED1	175	428116.952			ppb
|	Tl-KED1	203	10.667	-0.00094	16.8	ppb
|	Tl-KED1	205	13.333	-0.00173	32.7	ppb
⌊	Pb-KED1	208	114.667	-0.00060	46.0	ppb
⌈	U-KED1	238	1774.777	0.06176	4.3	ppb
⌊>	Th-KED1	232	223555.687			ppb
⌈	Mn-STD1	55	1014.703	0.00695	9.1	ppb
⌊>	Ge-STD1	72	664571.190			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		101		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		93		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		92		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		99		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-005A
Sample Date/Time: Thursday, October 02, 2014 01:32:19
Sample Description:
Autosampler Position: 113
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-005A.110
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	298924.204			ppb
|	Be-KED1	9	53301.978	18.87593	3.0	ppb
⌊	Al-KED1	27	479564.373	19.91662	5.3	ppb
⌈	V-KED3	51	9998.833	20.23891	4.5	ppb
|	Cr-KED3	52	13817.348	19.58315	2.2	ppb
|	Cr-KED3	53	1804.781	20.69162	5.7	ppb
|	Co-KED3	59	32914.552	19.23759	3.9	ppb
|	Ni-KED3	60	9668.605	19.28895	5.1	ppb
|	Ni-KED3	62	1549.417	18.75745	4.9	ppb
|	Cu-KED3	63	27670.784	17.85825	2.4	ppb
|	Cu-KED3	65	14031.562	18.73861	1.0	ppb
|	Zn-KED3	66	2745.597	18.91264	1.8	ppb
⌊>	Ge-KED3	72	13666.539			ppb
⌈>	Ge-KED2	72	44159.148			ppb
|	As-KED2	75	4134.265	21.45557	1.6	ppb
|	Se-KED2	77	154.223	21.69731	4.9	ppb
|	Se-KED2	78	495.048	20.25324	4.1	ppb
⌊	Se-KED2	82	258.733	21.51485	3.9	ppb
⌈	Mo-KED2	95	23257.594	21.68946	2.8	ppb
|	Mo-KED2	97	14819.690	21.50575	2.9	ppb
|	Mo-KED2	98	38504.956	21.52778	1.6	ppb
|	Cd-KED2	111	10521.540	19.06205	0.7	ppb
|	Cd-KED2	112	19823.856	19.10163	1.8	ppb
|	Cd-KED2	114	25180.622	19.57383	0.9	ppb
⌊>	In-KED2	115	31081.824			ppb
⌈>	Rh-KED3	103	92859.499			ppb
|	Ag-KED3	107	23688.981	9.85596	3.5	ppb
⌊	Ag-KED3	109	22896.346	9.94256	2.7	ppb
⌈>	In-KED1	115	373811.566			ppb
|	Sb-KED1	121	209852.286	21.01387	1.1	ppb
|	Sb-KED1	123	161098.318	20.99278	1.9	ppb
|	Ba-KED1	135	171264.332	73.00486	3.1	ppb
⌊	Ba-KED1	137	279185.736	73.42015	1.9	ppb
⌈>	Lu-KED1	175	419975.912			ppb
|	Tl-KED1	203	149637.629	20.32992	1.7	ppb
|	Tl-KED1	205	357135.186	20.42547	0.6	ppb
⌊	Pb-KED1	208	459228.232	19.22578	1.6	ppb
⌈	U-KED1	238	567171.447	19.97708	0.9	ppb
⌊>	Th-KED1	232	222567.849			ppb
⌈	Mn-STD1	55	608439.229	20.60040	3.6	ppb
⌊>	Ge-STD1	72	623436.431			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		97		
|	Be-KED1	9				
⌊	Al-KED1	27				
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		94		
⌈>	Ge-KED2	72		93		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
⌊	Se-KED2	82				
⌈	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
|	Cd-KED2	114				
⌊>	In-KED2	115		93		
⌈>	Rh-KED3	103		90		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		100		
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		100		
|	Tl-KED1	203				
|	Tl-KED1	205				
⌊	Pb-KED1	208				
⌈	U-KED1	238				
⌊>	Th-KED1	232		104		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-005S
Sample Date/Time: Thursday, October 02, 2014 01:37:24
Sample Description:
Autosampler Position: 114
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-005S.111
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	296834.393			ppb
Be-KED1	9	6884.993	2.45359	2.2	ppb
Al-KED1	27	2521043.535	105.76115	2.7	ppb
V-KED3	51	12949.868	26.58735	0.8	ppb
Cr-KED3	52	7802.133	11.21746	5.0	ppb
Cr-KED3	53	996.702	11.56958	7.4	ppb
Co-KED3	59	43308.974	25.67169	3.8	ppb
Ni-KED3	60	12460.771	25.20443	2.7	ppb
Ni-KED3	62	1960.801	24.07596	1.9	ppb
Cu-KED3	63	18444.569	12.07600	0.8	ppb
Cu-KED3	65	9586.553	12.99219	3.1	ppb
Zn-KED3	66	3747.825	26.24162	3.4	ppb
Ge-KED3	72	13463.008			ppb
Ge-KED2	72	44936.901			ppb
As-KED2	75	10228.328	52.19797	1.9	ppb
Se-KED2	77	358.449	49.85057	1.3	ppb
Se-KED2	78	1231.578	50.50599	1.8	ppb
Se-KED2	82	649.201	52.83647	1.7	ppb
Mo-KED2	95	21994.920	20.09214	0.5	ppb
Mo-KED2	97	14134.323	20.09483	1.2	ppb
Mo-KED2	98	37174.013	20.36085	0.9	ppb
Cd-KED2	111	13594.799	24.12747	0.4	ppb
Cd-KED2	112	25969.504	24.51278	0.4	ppb
Cd-KED2	114	32417.782	24.68483	0.5	ppb
In-KED2	115	31730.372			ppb
Rh-KED3	103	92928.750			ppb
Ag-KED3	107	30930.797	12.86668	3.4	ppb
Ag-KED3	109	30116.387	13.07961	4.3	ppb
In-KED1	115	383035.750			ppb
Sb-KED1	121	537604.649	52.54110	2.4	ppb
Sb-KED1	123	410875.855	52.25097	2.2	ppb
Ba-KED1	135	382392.976	159.09617	1.1	ppb
Ba-KED1	137	620006.426	159.11326	0.2	ppb
Lu-KED1	175	418837.978			ppb
Tl-KED1	203	382782.165	52.14379	1.2	ppb
Tl-KED1	205	907422.931	52.04163	1.4	ppb
Pb-KED1	208	1172125.405	49.20889	1.5	ppb
U-KED1	238	570104.856	19.94335	0.4	ppb
Th-KED1	232	224092.402			ppb
Mn-STD1	55	820002.833	27.58016	2.1	ppb
Ge-STD1	72	627848.758			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		96		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		92		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		90		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		93		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-006
Sample Date/Time: Thursday, October 02, 2014 01:42:30
Sample Description:
Autosampler Position: 115
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-006.112
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	307888.575			ppb
|	Be-KED1	9	8.667	0.00092	189.1	ppb
⌊	Al-KED1	27	44394.925	1.73438	3.8	ppb
⌈	V-KED3	51	84.000	0.15383	8.1	ppb
|	Cr-KED3	52	237.335	0.32196	5.0	ppb
|	Cr-KED3	53	29.333	0.27984	37.9	ppb
|	Co-KED3	59	42.000	0.02344	37.1	ppb
|	Ni-KED3	60	76.000	0.13868	8.1	ppb
|	Ni-KED3	62	11.333	0.12780	20.6	ppb
|	Cu-KED3	63	386.672	0.23863	5.2	ppb
|	Cu-KED3	65	204.001	0.26179	8.8	ppb
|	Zn-KED3	66	74.667	0.41944	17.8	ppb
⌊>	Ge-KED3	72	13840.707			ppb
⌈>	Ge-KED2	72	45759.512			ppb
|	As-KED2	75	32.333	0.13665	13.2	ppb
|	Se-KED2	77	1.667	0.00752	604.1	ppb
|	Se-KED2	78	18.501	0.07398	98.7	ppb
⌊	Se-KED2	82	-0.709	0.09182	104.9	ppb
⌈	Mo-KED2	95	248.002	0.22088	11.9	ppb
|	Mo-KED2	97	158.668	0.21915	6.0	ppb
|	Mo-KED2	98	386.754	0.20609	6.7	ppb
|	Cd-KED2	111	4.333	0.00544	114.8	ppb
|	Cd-KED2	112	5.106	0.00324	19.0	ppb
|	Cd-KED2	114	6.619	0.00251	82.1	ppb
⌊>	In-KED2	115	31895.372			ppb
⌈>	Rh-KED3	103	95267.266			ppb
|	Ag-KED3	107	13.333	0.00367	133.5	ppb
⌊	Ag-KED3	109	18.000	0.00554	85.1	ppb
⌈>	In-KED1	115	382608.429			ppb
|	Sb-KED1	121	444.007	0.04214	6.9	ppb
|	Sb-KED1	123	372.504	0.04595	10.8	ppb
|	Ba-KED1	135	125056.513	52.06718	1.5	ppb
⌊	Ba-KED1	137	207096.623	53.20636	0.6	ppb
⌈>	Lu-KED1	175	427055.295			ppb
|	Tl-KED1	203	14.000	-0.00049	107.4	ppb
|	Tl-KED1	205	42.667	-0.00008	538.2	ppb
⌊	Pb-KED1	208	207.334	0.00323	2.4	ppb
⌈	U-KED1	238	8674.633	0.30140	0.6	ppb
⌊>	Th-KED1	232	225245.299			ppb
⌈	Mn-STD1	55	1736.106	0.03209	13.6	ppb
⌊>	Ge-STD1	72	640163.912			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		95		
>	Ge-KED2	72		97		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		95		
>	Rh-KED3	103		92		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		105		
	Mn-STD1	55				
>	Ge-STD1	72		95		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1410424-007
Sample Date/Time: Thursday, October 02, 2014 01:47:35
Sample Description:
Autosampler Position: 116
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\K1410424-007.113
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	301846.383			ppb
Be-KED1	9	254.002	0.08706	2.0	ppb
Al-KED1	27	39610875.864	1636.07633	5.1	ppb
V-KED3	51	1272.057	2.58766	3.4	ppb
Cr-KED3	52	1564.753	2.22990	6.7	ppb
Cr-KED3	53	239.335	2.72441	7.4	ppb
Co-KED3	59	1884.124	1.11140	1.5	ppb
Ni-KED3	60	1224.052	2.45509	2.4	ppb
Ni-KED3	62	196.001	2.39160	14.9	ppb
Cu-KED3	63	4131.931	2.68709	1.9	ppb
Cu-KED3	65	2101.488	2.83096	1.1	ppb
Zn-KED3	66	3891.197	27.12835	1.5	ppb
Ge-KED3	72	13521.063			ppb
Ge-KED2	72	43822.138			ppb
As-KED2	75	241.002	1.23713	6.1	ppb
Se-KED2	77	14.889	1.91252	3.8	ppb
Se-KED2	78	24.271	0.35515	39.2	ppb
Se-KED2	82	4.371	0.51031	31.2	ppb
Mo-KED2	95	201.335	0.18547	8.2	ppb
Mo-KED2	97	122.667	0.17476	18.9	ppb
Mo-KED2	98	356.826	0.19717	5.7	ppb
Cd-KED2	111	16.333	0.02769	15.9	ppb
Cd-KED2	112	28.222	0.02596	31.7	ppb
Cd-KED2	114	33.536	0.02387	15.2	ppb
In-KED2	115	30711.211			ppb
Rh-KED3	103	89771.872			ppb
Ag-KED3	107	16.000	0.00517	59.6	ppb
Ag-KED3	109	8.667	0.00182	104.4	ppb
In-KED1	115	366926.613			ppb
Sb-KED1	121	705.351	0.07051	17.2	ppb
Sb-KED1	123	514.172	0.06675	11.0	ppb
Ba-KED1	135	310260.117	134.73647	0.3	ppb
Ba-KED1	137	514317.094	137.78569	1.6	ppb
Lu-KED1	175	422763.511			ppb
Tl-KED1	203	258.002	0.03246	2.6	ppb
Tl-KED1	205	556.011	0.02911	8.2	ppb
Pb-KED1	208	55527.818	2.30454	0.7	ppb
U-KED1	238	53867.371	1.67828	1.5	ppb
Th-KED1	232	251562.414			ppb
Mn-STD1	55	1031814.347	34.45462	5.5	ppb
Ge-STD1	72	633270.068			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		93		
>	Ge-KED2	72		93		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		92		
>	Rh-KED3	103		87		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		98		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		118		
	Mn-STD1	55				
>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Thursday, October 02, 2014 01:52:42
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCV.114
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	307897.739			ppb
Be-KED1	9	69583.772	23.92700	1.5	ppb
Al-KED1	27	592640.745	23.93045	4.6	ppb
V-KED3	51	12436.747	24.60917	2.6	ppb
Cr-KED3	52	17830.458	24.71588	2.0	ppb
Cr-KED3	53	2296.851	25.74585	2.5	ppb
Co-KED3	59	43044.133	24.60159	4.4	ppb
Ni-KED3	60	12614.904	24.60039	3.4	ppb
Ni-KED3	62	1891.459	22.38971	2.4	ppb
Cu-KED3	63	36890.939	23.28239	2.2	ppb
Cu-KED3	65	18843.756	24.62476	1.1	ppb
Zn-KED3	66	3805.840	25.67796	2.6	ppb
Ge-KED3	72	13969.494			ppb
Ge-KED2	72	46038.446			ppb
As-KED2	75	5111.359	25.45699	2.0	ppb
Se-KED2	77	179.446	24.26822	5.9	ppb
Se-KED2	78	624.296	24.67129	5.3	ppb
Se-KED2	82	314.517	25.08433	4.3	ppb
Mo-KED2	95	28074.897	24.85352	1.4	ppb
Mo-KED2	97	18116.815	24.96094	1.5	ppb
Mo-KED2	98	47002.854	24.94837	2.1	ppb
Cd-KED2	111	14291.480	24.58114	2.4	ppb
Cd-KED2	112	26885.993	24.59260	0.7	ppb
Cd-KED2	114	33853.691	24.98073	1.1	ppb
In-KED2	115	32743.778			ppb
Rh-KED3	103	97689.037			ppb
Ag-KED3	107	64887.761	25.66993	0.6	ppb
Ag-KED3	109	61571.821	25.41994	1.0	ppb
In-KED1	115	396207.178			ppb
Sb-KED1	121	270202.855	25.52610	3.6	ppb
Sb-KED1	123	203119.526	24.96746	4.1	ppb
Ba-KED1	135	63225.605	25.40302	0.2	ppb
Ba-KED1	137	103177.331	25.59286	2.0	ppb
Lu-KED1	175	420520.662			ppb
Tl-KED1	203	189301.305	25.68939	2.0	ppb
Tl-KED1	205	446451.638	25.50583	1.6	ppb
Pb-KED1	208	616488.862	25.78315	2.4	ppb
U-KED1	238	708157.479	24.64896	1.0	ppb
Th-KED1	232	225220.203			ppb
Mn-STD1	55	783364.761	25.25320	4.6	ppb
Ge-STD1	72	655059.306			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		100		
	Be-KED1	9	96			
	Al-KED1	27	96			
	V-KED3	51	98			
	Cr-KED3	52	99			
	Cr-KED3	53	103			
	Co-KED3	59	98			
	Ni-KED3	60	98			
	Ni-KED3	62	90			
	Cu-KED3	63	93			
	Cu-KED3	65	98			
	Zn-KED3	66	103			
>	Ge-KED3	72		96		
>	Ge-KED2	72		97		
	As-KED2	75	102			
	Se-KED2	77	97			
	Se-KED2	78	99			
	Se-KED2	82	100			
	Mo-KED2	95	99			
	Mo-KED2	97	100			
	Mo-KED2	98	100			
	Cd-KED2	111	98			
	Cd-KED2	112	98			
	Cd-KED2	114	100			
>	In-KED2	115		98		
>	Rh-KED3	103		95		
	Ag-KED3	107	103			
	Ag-KED3	109	102			
>	In-KED1	115		106		
	Sb-KED1	121	102			
	Sb-KED1	123	100			
	Ba-KED1	135	102			
	Ba-KED1	137	102			
>	Lu-KED1	175		100		
	Tl-KED1	203	103			
	Tl-KED1	205	102			
	Pb-KED1	208	103			
	U-KED1	238	99			
>	Th-KED1	232		105		
	Mn-STD1	55	101			
>	Ge-STD1	72		97		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Ni-KED3	62	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Thursday, October 02, 2014 01:57:48
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.115
User: JDB

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	304767.769			ppb
	Be-KED1	9	8.667	0.00094	167.7	ppb
	Al-KED1	27	1752.108	0.01002	18.9	ppb
	V-KED3	51	7.333	0.00040	2857.9	ppb
	Cr-KED3	52	8.000	0.00042	2003.5	ppb
	Cr-KED3	53	2.667	-0.02069	62.5	ppb
	Co-KED3	59	6.000	0.00264	44.4	ppb
	Ni-KED3	60	2.667	-0.00610	72.2	ppb
	Ni-KED3	62	2.000	0.01596	146.4	ppb
	Cu-KED3	63	6.667	-0.00392	19.1	ppb
	Cu-KED3	65	2.667	-0.00409	72.2	ppb
	Zn-KED3	66	9.333	-0.02811	113.3	ppb
>	Ge-KED3	72	14256.447			ppb
>	Ge-KED2	72	46212.003			ppb
	As-KED2	75	6.889	0.00856	280.0	ppb
	Se-KED2	77	1.778	0.01851	581.7	ppb
	Se-KED2	78	18.262	0.05705	128.7	ppb
	Se-KED2	82	-2.269	-0.02895	268.9	ppb
	Mo-KED2	95	73.334	0.06062	26.0	ppb
	Mo-KED2	97	49.333	0.06296	26.6	ppb
	Mo-KED2	98	114.229	0.05651	18.4	ppb
	Cd-KED2	111	3.667	0.00404	232.4	ppb
	Cd-KED2	112	8.466	0.00612	207.0	ppb
	Cd-KED2	114	8.410	0.00368	200.8	ppb
>	In-KED2	115	32491.947			ppb
>	Rh-KED3	103	98340.717			ppb
	Ag-KED3	107	6.667	0.00086	188.1	ppb
	Ag-KED3	109	10.000	0.00201	187.4	ppb
>	In-KED1	115	382449.224			ppb
	Sb-KED1	121	46.667	0.00325	37.8	ppb
	Sb-KED1	123	40.993	0.00374	31.5	ppb
	Ba-KED1	135	38.000	-0.01490	50.6	ppb
	Ba-KED1	137	16.667	-0.00371	65.6	ppb
>	Lu-KED1	175	421060.528			ppb
	Tl-KED1	203	25.333	0.00108	82.0	ppb
	Tl-KED1	205	58.000	0.00083	11.9	ppb
	Pb-KED1	208	120.667	-0.00027	38.9	ppb
	U-KED1	238	22.000	0.00029	43.1	ppb
>	Th-KED1	232	220080.334			ppb
	Mn-STD1	55	574.012	-0.00609	21.2	ppb
>	Ge-STD1	72	631437.638			ppb

JB 10/2/14

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		99		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		98		
>	Ge-KED2	72		98		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		97		
>	Rh-KED3	103		95		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Mo-KED2	95	Out of Control
QC Std 4	Mo-KED2	97	Out of Control
QC Std 4	Mo-KED2	98	Out of Control

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Thursday, October 02, 2014 02:02:42
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\CCB.116
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	302764.117			ppb
Be-KED1	9	5.333	-0.00019	249.6	ppb
Al-KED1	27	1650.096	0.00647	109.5	ppb
V-KED3	51	5.333	-0.00279	231.4	ppb
Cr-KED3	52	10.000	0.00393	268.8	ppb
Cr-KED3	53	4.667	0.00414	635.8	ppb
Co-KED3	59	5.333	0.00245	75.5	ppb
Ni-KED3	60	3.333	-0.00441	142.8	ppb
Ni-KED3	62	2.667	0.02529	150.6	ppb
Cu-KED3	63	7.333	-0.00320	87.2	ppb
Cu-KED3	65	2.667	-0.00381	83.7	ppb
Zn-KED3	66	14.667	0.01349	317.0	ppb
Ge-KED3	72	13421.638			ppb
Ge-KED2	72	45178.998			ppb
As-KED2	75	6.333	0.00681	152.6	ppb
Se-KED2	77	2.222	0.08782	32.3	ppb
Se-KED2	78	17.050	0.02328	857.9	ppb
Se-KED2	82	0.067	0.15443	78.8	ppb
Mo-KED2	95	24.000	0.01747	68.0	ppb
Mo-KED2	97	18.667	0.02141	9.7	ppb
Mo-KED2	98	32.374	0.01315	40.9	ppb
Cd-KED2	111	2.000	0.00132	231.0	ppb
Cd-KED2	112	3.586	0.00187	113.0	ppb
Cd-KED2	114	4.052	0.00060	88.8	ppb
In-KED2	115	31451.778			ppb
Rh-KED3	103	95813.059			ppb
Ag-KED3	107	6.000	0.00064	321.1	ppb
Ag-KED3	109	6.000	0.00045	497.8	ppb
In-KED1	115	387907.055			ppb
Sb-KED1	121	21.333	0.00073	45.1	ppb
Sb-KED1	123	19.166	0.00090	154.6	ppb
Ba-KED1	135	47.333	-0.01143	18.4	ppb
Ba-KED1	137	19.333	-0.00312	20.8	ppb
Lu-KED1	175	418114.797			ppb
Tl-KED1	203	21.333	0.00056	242.8	ppb
Tl-KED1	205	34.000	-0.00053	95.7	ppb
Pb-KED1	208	114.000	-0.00051	92.2	ppb
U-KED1	238	13.333	-0.00002	462.0	ppb
Th-KED1	232	220287.258			ppb
Mn-STD1	55	568.678	-0.00639	10.7	ppb
Ge-STD1	72	634744.336			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
>	Li-KED1	6		98		
	Be-KED1	9				
	Al-KED1	27				
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		92		
>	Ge-KED2	72		95		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	In-KED2	115		94		
>	Rh-KED3	103		93		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103		
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	U-KED1	238				
>	Th-KED1	232		103		
	Mn-STD1	55				
>	Ge-STD1	72		94		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCVW
Sample Date/Time: Thursday, October 02, 2014 02:07:48
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100114D\LLCCVW.117
User: JDB

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	301886.823			ppb
Be-KED1	9	60.000	0.01902	24.1	ppb
Al-KED1	27	46793.871	1.86954	3.8	ppb
V-KED3	51	92.000	0.17022	12.6	ppb
Cr-KED3	52	162.668	0.21717	9.7	ppb
Cr-KED3	53	22.667	0.20735	25.5	ppb
Co-KED3	59	30.000	0.01658	20.1	ppb
Ni-KED3	60	95.334	0.17682	8.9	ppb
Ni-KED3	62	16.667	0.19221	19.8	ppb
Cu-KED3	63	162.001	0.09555	14.7	ppb
Cu-KED3	65	83.334	0.10240	17.6	ppb
Zn-KED3	66	94.667	0.55865	34.3	ppb
Ge-KED3	72	13817.348			ppb
Ge-KED2	72	45544.841			ppb
As-KED2	75	115.334	0.55608	5.5	ppb
Se-KED2	77	9.111	1.03249	27.4	ppb
Se-KED2	78	44.639	1.14957	17.2	ppb
Se-KED2	82	14.187	1.28218	16.0	ppb
Mo-KED2	95	76.667	0.06506	15.8	ppb
Mo-KED2	97	46.667	0.06050	5.7	ppb
Mo-KED2	98	115.708	0.05818	16.7	ppb
Cd-KED2	111	11.667	0.01835	39.2	ppb
Cd-KED2	112	28.464	0.02511	8.9	ppb
Cd-KED2	114	32.168	0.02181	1.0	ppb
In-KED2	115	31942.573			ppb
Rh-KED3	103	95639.450			ppb
Ag-KED3	107	53.333	0.01983	7.6	ppb
Ag-KED3	109	50.667	0.01947	39.8	ppb
In-KED1	115	381791.667			ppb
Sb-KED1	121	590.679	0.05658	2.4	ppb
Sb-KED1	123	457.005	0.05679	3.5	ppb
Ba-KED1	135	172.001	0.04094	10.3	ppb
Ba-KED1	137	214.668	0.04726	9.2	ppb
Lu-KED1	175	416605.766			ppb
Tl-KED1	203	179.334	0.02219	6.2	ppb
Tl-KED1	205	406.006	0.02092	10.3	ppb
Pb-KED1	208	634.005	0.02144	7.8	ppb
U-KED1	238	563.344	0.01946	4.1	ppb
Th-KED1	232	221316.510			ppb
Mn-STD1	55	2046.147	0.04220	12.1	ppb
Ge-STD1	72	641289.304			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference
⌈>	Li-KED1	6		98		
|	Be-KED1	9	95			
⌊	Al-KED1	27	93			
⌈	V-KED3	51	85			
|	Cr-KED3	52	109			
|	Cr-KED3	53	104			
|	Co-KED3	59	83			
|	Ni-KED3	60	88			
|	Ni-KED3	62	96			
|	Cu-KED3	63	96			
|	Cu-KED3	65	102			
|	Zn-KED3	66	112			
⌊>	Ge-KED3	72		95		
⌈>	Ge-KED2	72		96		
|	As-KED2	75	111			
|	Se-KED2	77	103			
|	Se-KED2	78	115			
⌊	Se-KED2	82	128			
⌈	Mo-KED2	95	130			
|	Mo-KED2	97	121			
|	Mo-KED2	98	116			
|	Cd-KED2	111	92			
|	Cd-KED2	112	126			
|	Cd-KED2	114	109			
⌊>	In-KED2	115		95		
⌈>	Rh-KED3	103		93		
|	Ag-KED3	107	99			
⌊	Ag-KED3	109	97			
⌈>	In-KED1	115		102		
|	Sb-KED1	121	113			
|	Sb-KED1	123	114			
|	Ba-KED1	135	82			
⌊	Ba-KED1	137	95			
⌈>	Lu-KED1	175		99		
|	Tl-KED1	203	111			
|	Tl-KED1	205	105			
⌊	Pb-KED1	208	107			
⌈	U-KED1	238	97			
⌊>	Th-KED1	232		104		
⌈	Mn-STD1	55	84			
⌊>	Ge-STD1	72		95		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mo-KED2	95	Out of Control

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information

Group ID:	KWG1413413	**Prep Method:**	EPA 3541	**Prep Date:**	09/25/14 12:35
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1409921-004	SE-091514-RB-SD11	8081B Pest OC	SEDIMENT	20.051g	10mL	
K1409921-005	SE-091514-RB-SD10	8081B Pest OC	SEDIMENT	20.143g	10mL	
K1409921-006	SE-091514-RB-SD09	8081B Pest OC	SEDIMENT	20.026g	10mL	
K1409921-007	SE-091514-RB-SD08	8081B Pest OC	SEDIMENT	20.087g	10mL	
K1409921-008	SE-091514-RB-SD07	8081B Pest OC	SEDIMENT	20.104g	10mL	
K1409921-009	SE-091514-RB-SD06	8081B Pest OC	SEDIMENT	20.109g	10mL	
K1409921-010	SE-091514-RB-SD05	8081B Pest OC	SEDIMENT	20.298g	10mL	
K1409921-011	SE-091514-RB-SD12	8081B Pest OC	SEDIMENT	20.388g	10mL	
KWG1413413-1	Matrix Spike	8081B Pest OC	SEDIMENT	20.283g	10mL	
KWG1413413-2	Duplicate Matrix Spike	8081B Pest OC	SEDIMENT	20.410g	10mL	
KWG1413413-3	Lab Control Sample	8081B Pest OC	SEDIMENT	10.000g	10mL	
KWG1413413-4	Method Blank	8081B Pest OC	SEDIMENT	20.410g	10mL	

Lab Code	Parent Lab Code	Comments
KWG1413413-1	K1409921-004	KQ1411615-01
KWG1413413-2	K1409921-004	KQ1411615-02
KWG1413413-3		KQ1411615-03
KWG1413413-4		KQ1411615-07

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1409921-004	1380546					HSteele
K1409921-005	1380547					HSteele
K1409921-006	1380548					HSteele
K1409921-007	1380549					HSteele
K1409921-008	1380550					HSteele
K1409921-009	1380551					HSteele
K1409921-010	1380552					HSteele
K1409921-011	1380545					HSteele
KWG1413413-1	1380541					HSteele
KWG1413413-2	1380542					HSteele
KWG1413413-3	1380543					HSteele
KWG1413413-4	1380544					HSteele

Comments:

Started By: CHarvey Assisted By: Training Yes / No

Completed By: KMiller Assisted By: Yes / No

Reviewed By: KL Date: 10/3/14 Storage:

Chain of Custody

Relinquished By: Date: 10-2-14

Received By: Date: Extracts Examined Yes / No

Preparation Information Benchsheet

Prep Run: 218585 **Prep Workflow:** OrgExtS (14) **Status:** Draft **Prep Date:** 09/25/2014 ~~09/19/2014~~ EE KC
Team: Semivoa GC **Prep Method:** EPA 3541 **Current Step:** Extraction ~~11:58~~ ~~12:35~~ 10/3/14
Analyst: JJOHNSON **Rush/NPDES:** N/A [redacted] **Due Date:** 09/22/2014
Hold Date: 09/29/2014

Lab Code	Client ID	Bottle #	✓	Target Amt	Initial Amount g	Inter. Volume mL	Final Volume mL	Surr Amt uL	Spike Amt uL	TestNo List
K1409921-004	SE-091514-RB-SD11 S,W	~~.02~~ .03	✓	10.00 g	20.051	10	10	500	—	PCB, Pest OC
K1409921-005	SE-091514-RB-SD10 W,R,S,O	.02	✓	10.00 g	20.143	10	10		—	PCB, Pest OC
K1409921-006	SE-091514-RB-SD09 S,O,R	.02	✓	10.00 g	20.026	10	10		—	PCB, Pest OC
K1409921-007	SE-091514-RB-SD08 O,R	~~.02~~ .03	✓	10.00 g	20.087	10	10		—	PCB, Pest OC
K1409921-008	SE-091514-RB-SD07 R,W	.02	✓	10.00 g	20.104	10	10		—	PCB, Pest OC
K1409921-009	SE-091514-RB-SD06 O,W	~~.02~~ .03	✓	10.00 g	20.109	10	10		—	PCB, Pest OC
K1409921-010	SE-091514-RB-SD05 W,O	.02	✓	10.00 g	20.298	10	10		—	PCB, Pest OC
K1409921-011	SE-091514-RB-SD12 S,W,O	.02	✓	10.00 g	20.388	10	10		—	PCB, Pest OC
K1409921-004: KQ1411615-01	Matrix Spike 8L S,W	~~.02~~ .03	✓	10.00 g	20.283	10	10		250	Pest OC
K1409921-004: KQ1411615-02	Duplicate Matrix Spike S,W	~~.02~~ .03	✓	10.00 g	20.410	10	10			Pest OC
KQ1411615-03	Lab Control Sample			10.00 g	10.000 ~~20.153~~ ~~20.104~~ EE 9/25/14 TS	10	10			Pest OC
K1409921-004: KQ1411615-04	Matrix Spike 1660 S,W ☆	~~.02~~ .03	✓	10 g		10	10		250	PCB
K1409921-004: KQ1411615-05	Duplicate Matrix Spike S,W ☆	~~.02~~ .03	✓	10 g	20.116	10	10			PCB
KQ1411615-06	Lab Control Sample ☆			10 g	10.000	10	10			PCB
KQ1411615-07	Method Blank			10 g	20.410	10	10		—	PCB, Pest OC

15 Total Samples consisting of 8 Client Samples, 4 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions **Witness:** H Stark 9-25-14
☆: TS Jackson 9/25/14

Surr: PCB-51D, 2ug/mL, exp 2/28/15, 500uL, 3Bepp
Spike: CRPST-84L, 4ppm, exp 10/10/14, 250uL, Zepp
PCB-47K, 40ug/mL, exp 2/5/15, 250uL, Zepp

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	9/25/14		C. Harvey			
Final Volume		10-2-14	KM			

Comments

S=Sandy Sample matrix, W= Water visible in sample, R=Rocks, O=Organic matter in sample

GPC RUNLOG

Run Date: 9/29/2014 **Calibration Date:** 9/23/2014

GPC #: 7 **Program Number:** 2

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	P/P	4 ML TO 10 ML	NA
K11615 LCS 82	2	P/P	4 ML TO 10 ML	NA
K11615 LCS 81	3	P/P	4 ML TO 10 ML	NA
K11615 MB	4	P/P	4 ML TO 10 ML	NA
9921-4	5	P/P	4 ML TO 10 ML	NA
9921-5	6	P/P	4 ML TO 10 ML	NA
9921-6	7	P/P	4 ML TO 10 ML	NA
9921-7	8	P/P	4 ML TO 10 ML	NA
9921-8	9	P/P	4 ML TO 10 ML	NA
9921-9	10	P/P	4 ML TO 10 ML	NA
9921-10	11	P/P	4 ML TO 10 ML	NA
9921-11	12	P/P	4 ML TO 10 ML	NA
9921-4 MS 81	13	P/P	4 ML TO 10 ML	NA
9921-4 DMS 81	14	P/P	4 ML TO 10 ML	NA
9921-4 MS 82	15	P/P	4 ML TO 10 ML	NA
9921-4 DMS 82	16	P/P	4 ML TO 10 ML	NA
	17			
	18			
	19			
	20			
	21			
	22			
	23			

Final Volume Calculation

Intermediate Volume before GPC: 10 mL

Aliquot taken from intermediate volume: 4 mL

Aliquot diluted up to.... 10 mL

Volume Injected onto column: 5 mL

GPC'd Extract brought to the Final Volume of: 2 mL

Calculated True Final Volume: 10 mL

Operator Date and Initial: 09/29/2014 KM

Additional Prep Information For Pest/PCB Soils by EPA 3541

Service Request # K1409921 **Work Group #** 218585

Solvents/Reagents used:

Date/Time/Initials Weighed: 9/19/14 1530 JJ **Balance ID:** K-Bal-3 **Calibration Verified** ☒

Storage Location (if not extracted same day): 309-R-06

DCM Lot # DL130 **Sulfate Lot #** K21000l **Matrix Sand Lot #** 061913

Soxtherm Start (Time/Date/Initial): 1235 | 9-25-14 | CH

Soxtherm Stop (Time/Date/Initial): 815 | 9/26/14 | LL

Cleanups:

N-Evap (Date/Time/Initial): 9-29-14 7:30 K **N-Evap Thermometer ID:** XSVM001

Temp as measured: 35 °C **Correction factor:** 0 °C **Adjusted temp:** 35 °C

GPC Clean-up (3640) (Time/Date/Initial): 10:00 9-29-14 K **(all samples) Filter Lot #:** 21829780

Solvent Exchanged To Hexane (Time/Date/Initial): 8:45 10-2-14 K **Hexane lot#:** 78258

S-Evap Thermometer ID: XSVM006 **S-Evap (Date/Time/Initial):** 10-2-14 8:45 K

Temp as measured: 75 °C Correction factor: 0 °C Adjusted temp: 75 °C

N-Evap (Date/Time/Initial): 11:00 10-2-14 K **N-Evap Thermometer ID:** XSVM001

Temp as measured: 35 °C **Correction factor:** 0 °C **Adjusted temp:** 35 °C

Sulfuric Acid Clean-up (3665) (Time/Date/Initial): 2:30 10-2-14 K **Acid Lot #:** 53232

Clean-up #3: Carbon 10-2-14 K ☒ **all samples** ☐ **some samples:** Lot 31154 EXT002-30F

Pest Vial: Yellow **Vial Storage:** Greeney A1-B2

PCB Vial: Green **Vial Storage:** Ludwig C1-D2

Archived Extract Storage: FYQYQR

Comments/Observations:

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☐	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Exception Report

Data File: J:\GC23\DATA\100314\1003F011.D
Lab ID: K1409921-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 11:59
Date Quantitated: 10/03/2014 17:28
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: 10/6/14

Secondary Review:

Printed: 10/04/2014 10:06:43
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F011.D\1003F011C.D
Lab ID: K1409921-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 11:59
Date Quantitated: 10/03/2014 17:28
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: AM 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F011.D\1003F011c.d			**Vial:**	48
Acqu Date:	10/03/2014 11:59	**Quant Date:**	10/03/2014 17:28	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380546	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2632613	955525	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1530252	596928	48.46		47.34				48	OK
							%Recovery =	48	OK	47	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.30		16.87	+0.01	1550662	603008	55.18		56.42				56	OK
							%Recovery =	55	OK	56	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.45		8.34	+0.02	3966	1029	0.0980	0.0680	0.35U	0.35U	0.35U
1	beta-BHC			9.56	-0.04	0	1069	0.0000	0.1530	0.50U	0.50U	0.50U
1	gamma-BHC (Lindane)	10.12		9.04	-0.02	2429	1458	0.0650	0.1040	0.45U	0.45U	0.45U
1	delta-BHC					0	0	0.0000	0.0000	0.37U	0.37U	0.37U
1	Heptachlor	11.32	+0.01	9.75	+0.01	2721	3968	0.0750	0.3030	0.83U	0.83U	0.83U
1	4,4'-DDE	13.48		12.33	+0.01	3964	1176	0.1200	0.0900	1.6U	1.6U	1.6U
1	4,4'-DDD	14.32	+0.01	13.21	+0.01	3364	1770	0.1240	0.1740	1.0U	1.0U	1.0U
1	Endrin Aldehyde	14.69	+0.04	13.77	+0.04	3776	2216	0.2020	0.2660	1.4U	1.4U	1.4U
1	4,4'-DDT	14.83	+0.03	13.61	-0.01	10418	1667m	0.4330	0.1730	0.85U	0.85U	0.85U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.051 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F011.D\1003F011c.d			**Vial:**	48
Acqu Date:	10/03/2014 11:59	**Quant Date:**	10/03/2014 17:28	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 78.5 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F011.D\ECD1A.CH Vial: 48
Signal #2 : J:\GC23\DATA\100314\1003F011.D\ECD2B.CH
Acq On : 03 Oct 2014 11:59 am Operator: SMURRAY
Sample : K1409921-004 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:27:56 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2-nitrob	5.90	5.34	2632613	955525	100.000	100.000	
29)		1-Bromo-2-nitrob	5.90	5.34	2632613	955525	100.000	100.000	
36)		1-Bromo-2-nitrob	5.90	5.34	2632613	955525	100.000	100.000	
43)		1-Bromo-2-nitrob	5.90	5.34	2632613	955525	100.000	100.000	
		System Monitoring Compounds							
2)	s	Tetrachloro-m-xy	8.62	7.10	1530252	596928	48.463	47.340	
28)	s	Decachlorobiphen	18.30	16.87	1550662	603008	55.182	56.418	
		Target Compounds							
3)		alpha-BHC	9.45	8.34	3966	1029	0.098	0.068	#
5)		beta-BHC	0.00	9.56f	0	1069	N.D.	0.153	#
6)		gamma-BHC (Linda	10.12	9.04f	2429	1458	0.065	0.104	#
8)		Heptachlor	11.32	9.75	2721	3968	0.075	0.303	#
9)		Aldrin	11.87f	0.00	1773	0	0.048	N.D.	#
10)		Isodrin	12.41	11.16f	2789	3523	0.090	0.294	#
11)		Heptachlor Epoxi	12.57f	0.00	1690	0	0.050	N.D.	#
12)		gamma-Chlordane	13.13	11.86f	2750	1458	0.080	0.108	#
13)		Endosulfan I	13.27	0.00	5028	0	0.163	N.D.	#
14)		alpha-Chlordane	13.19	11.97	4613	1229	0.135	0.093	#
15)		Dieldrin	13.64f	12.48	5648	1605	0.171	0.122	#
16)		4,4'-DDE	13.48	12.33	3964	1176	0.120	0.090	
17)		Endrin	0.00	12.95	0	719	N.D.	0.064	#
18)		Endosulfan II	14.49	0.00	29766	0	1.046	N.D.	d#
19)		4,4'-DDD	14.32	13.21	3364	1770	0.124	0.174	#
20)		Endrin Aldehyde	14.69f	13.77	3776	2216	0.202	0.266	#
21)		Endosulfan Sulfa	15.17f	0.00	2660	0	0.106	N.D.	#
22)		4,4'-DDT	14.83	13.61	10418	1667	0.433	0.173	m#
23)		Endrin Ketone	0.00	15.01	0	5654	N.D.	0.456	#
24)		Methoxychlor	15.61f	14.72	18225	934	1.428	0.190	#
25)		2,4'-DDE	12.95f	11.86	1718	1458	0.078	0.173	#
26)		2,4'-DDD	13.64	12.65	5648	6739	0.282	0.876	#
27)		2,4'-DDT	14.15	13.05	4439	3627	0.213	0.444	#
30)		Toxaphene	14.42	13.47f	1714	962	9.854	5.175	#
31)		Toxaphene {2}	14.49	13.52	29766	722	116.036	9.854	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC23\DATA\100314\1003F011.D\ECD1A.CH Vial: 48
Signal #2 : J:\GC23\DATA\100314\1003F011.D\ECD2B.CH
Acq On : 03 Oct 2014 11:59 am Operator: SMURRAY
Sample : K1409921-004 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:27:56 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
32)	Toxaphene {3}	14.57f	13.77	4440	2216	7.390	22.418	#
33)	Toxaphene {4}	14.69	14.13	3776	1520	9.873	12.656	#
34)	Toxaphene {5}	15.00	14.50	6181	2144	15.847	9.584	#
35)	Toxaphene {6}	15.88	14.72f	5763	934	11.166	5.730	#
37)	Chlordane	10.94f	0.00	29780	0	18.955	N.D.	#
38)	Chlordane {2}	11.32	9.75	2721	3968	1.520	6.346	#
39)	Chlordane {3}	11.95	11.86	1639	1458	BelowCal	1.046	
40)	Chlordane {4}	13.13	11.86f	2750	1458	0.668	1.741	#
41)	Chlordane {5}	13.19f	11.94	4613	1364	1.516	2.911	#
42)	Chlordane {6}	13.27f	11.97	5028	1229	2.277	1.080	#
45)	Oxychlordane	12.57	11.16f	1690	3523	0.060	0.322	#
46)	cis-Nonachlor	14.32	13.05	3364	3627	0.100	0.264	#
47)	trans-Nonachlor	13.27	11.86	5028	1458	0.149	0.109	#
49)	HCE	3.94	3.33	2408	2308	0.039	0.104	#
50)	HCBD	4.67	3.89	3426	6278	0.072	0.354	#

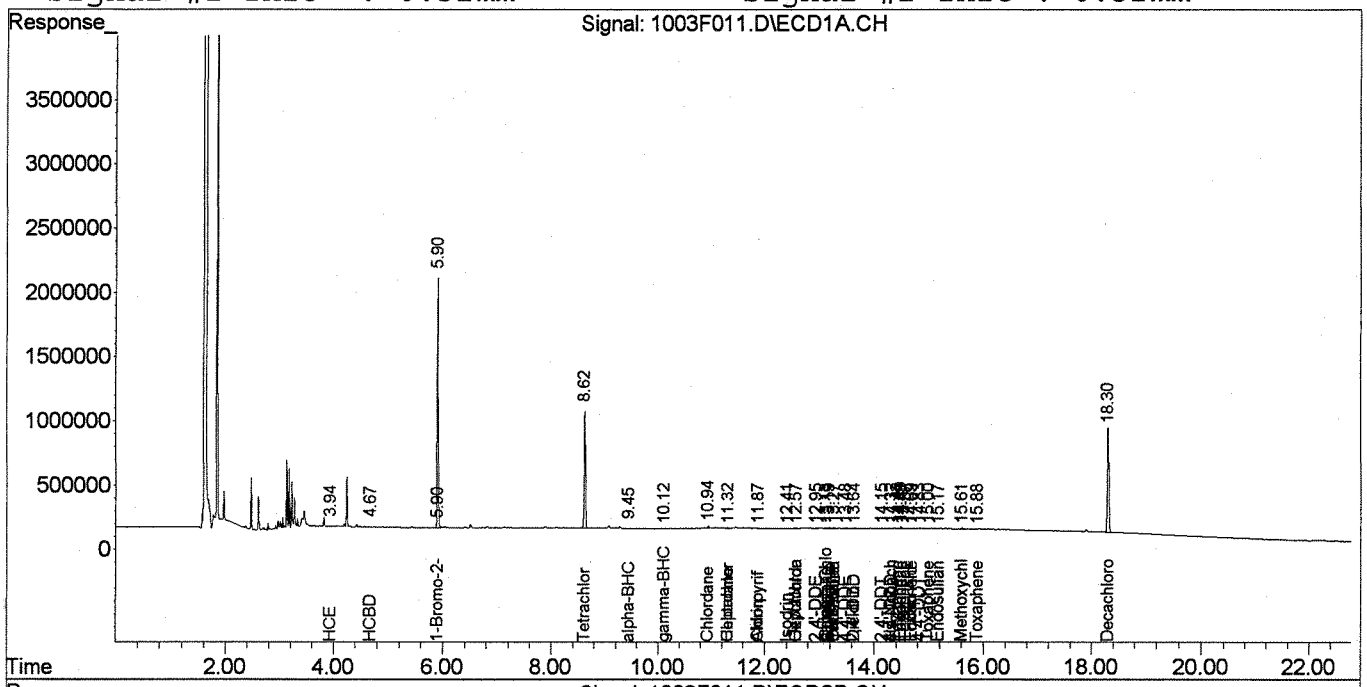
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

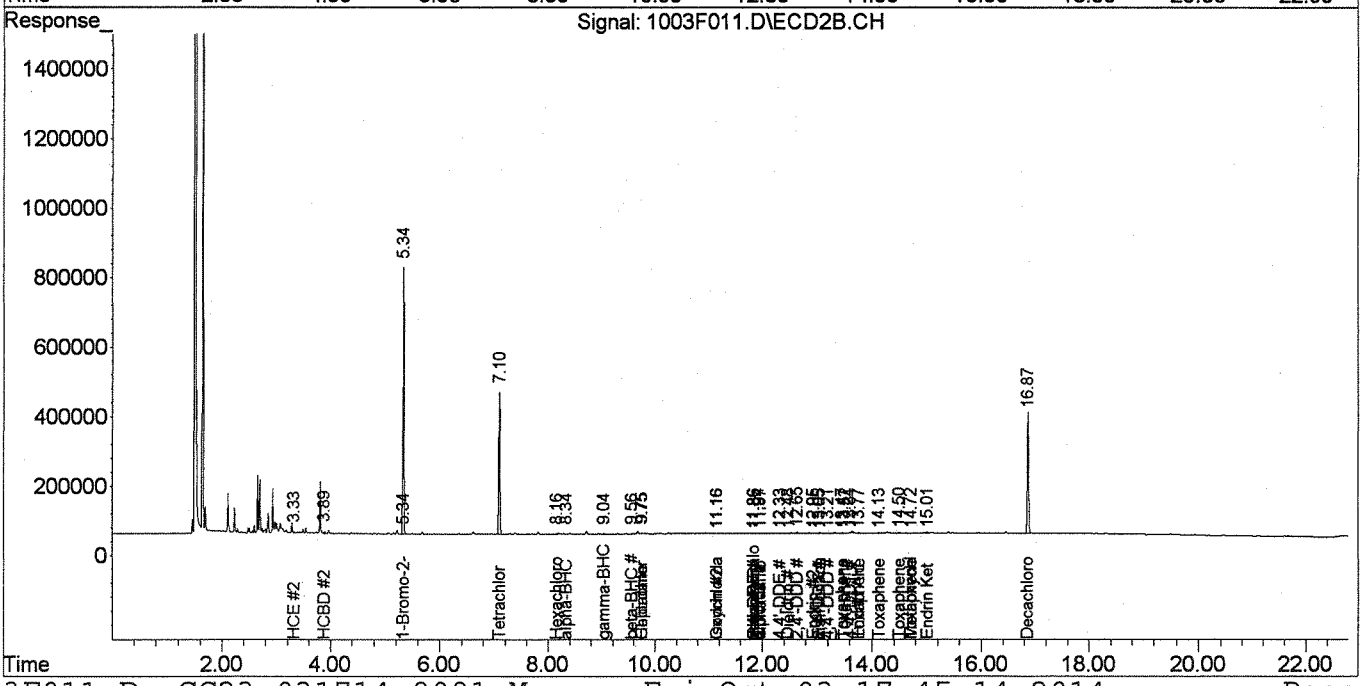
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F011.D\ECD1A.CH Vial: 48
Signal #2 : J:\GC23\DATA\100314\1003F011.D\ECD2B.CH
Acq On : 03 Oct 2014 11:59 am Operator: SMURRAY
Sample : K1409921-004 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

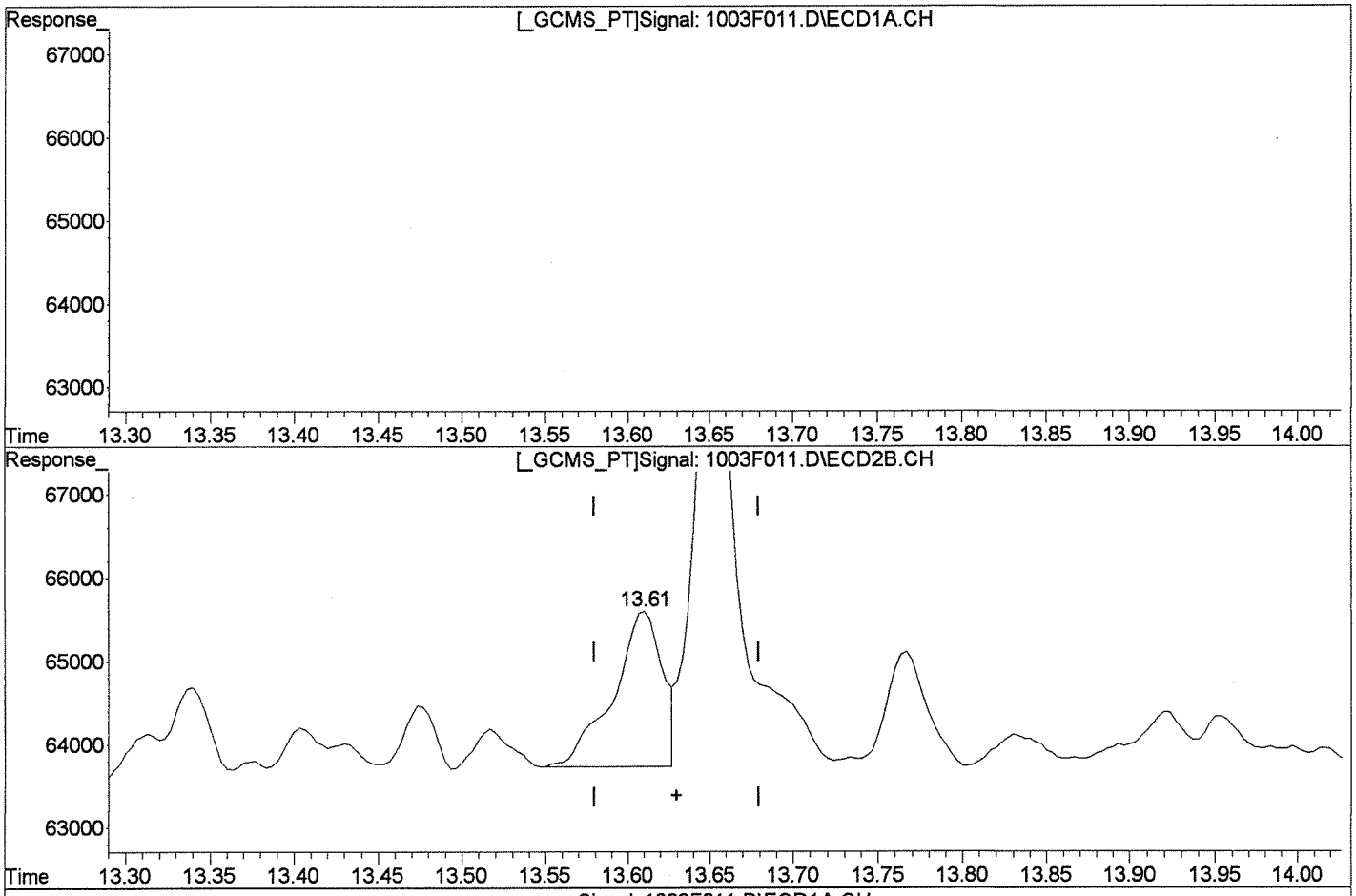




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F011.D\ECD1A.CH Vial: 48
Signal #2 : J:\GC23\DATA\100314\1003F011.D\ECD2B.CH
Acq On : 03 Oct 2014 11:59 am Operator: SMURRAY
Sample : K1409921-004 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:27 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

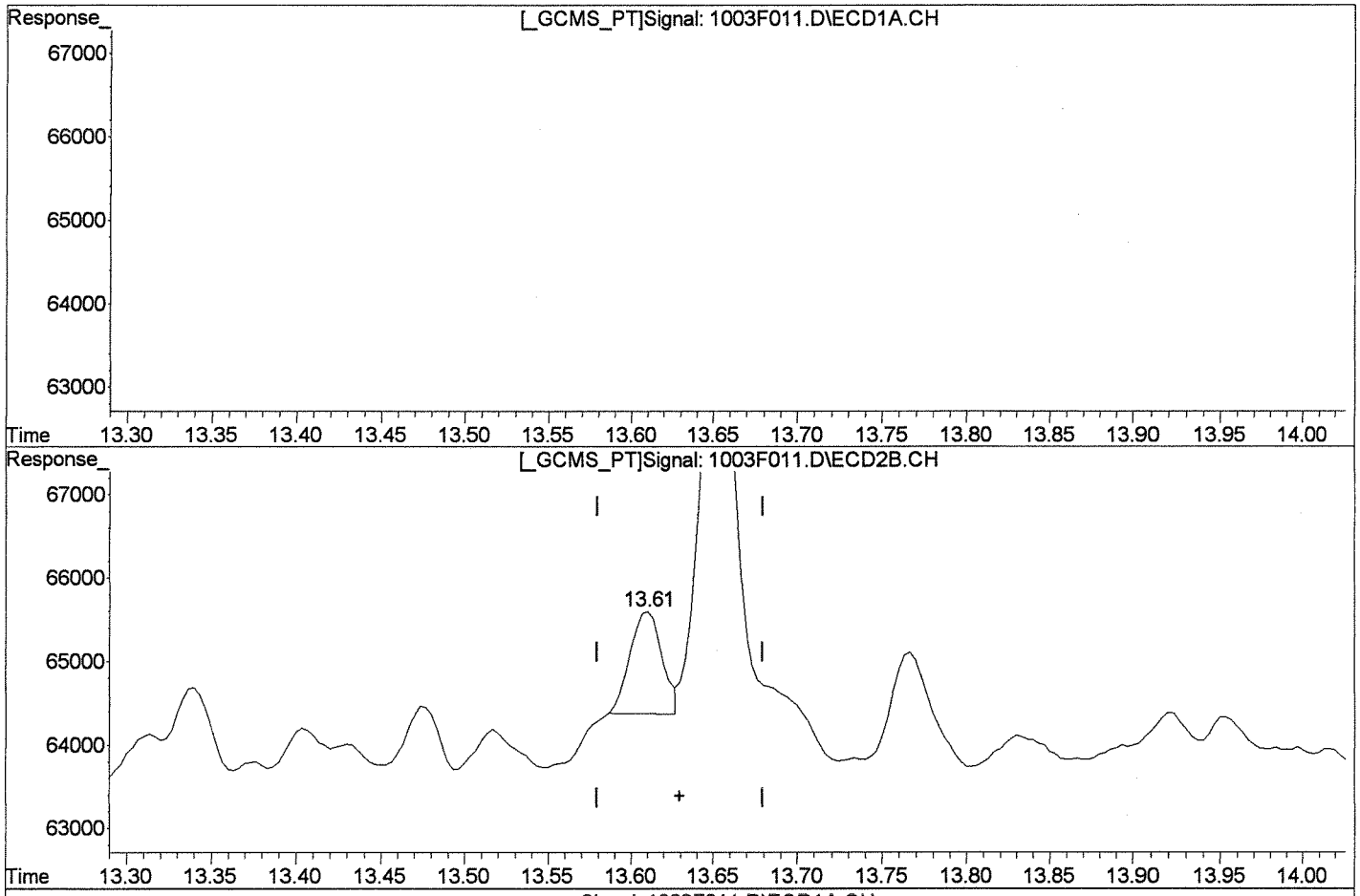


(+) = Expected Retention Time
1003F011.D GC23-031714-8081.M Fri Oct 03 17:28:52 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F011.D\ECD1A.CH Vial: 48
Signal #2 : J:\GC23\DATA\100314\1003F011.D\ECD2B.CH
Acq On : 03 Oct 2014 11:59 am Operator: SMURRAY
Sample : K1409921-004 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:27 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F011.D\ECD1A.CH

(22) 4,4'-DDT
14.83min 0.433ug/L
response 10418

(22) 4,4'-DDT #2
13.61min 0.173ug/L m
response 1667

Manual Integration:
After
Baseline/Shoulder
10/03/14

(+) = Expected Retention Time
1003F011.D GC23-031714-8081.M Fri Oct 03 17:28:55 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F014.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 13:28
Date Quantitated: 10/03/2014 17:30
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	J

Primary Review: 10/6/14

Secondary Review:

Exception Report

Data File: J:\GC23\DATA\100314\1003F014.D\1003F014C.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 13:28
Date Quantitated: 10/03/2014 17:30
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F014.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F014.D\1003F014c.d			**Vial:**	51
Acqu Date:	10/03/2014 13:28	**Quant Date:**	10/03/2014 17:30	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-005				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380547	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2780782	972991	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1669084	631399	50.07		49.18				50	OK
							%Recovery =	50	OK	49	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.30		16.86		1682378	692617	56.76		63.64				64	OK
							%Recovery =	57	OK	64	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			8.31	-0.01	0	6086	0.0000	0.3930	0.35U	0.35U	0.35U
1	beta-BHC			9.61	+0.01	0	39819	0.0000	5.59	0.50U	4.4	0.50U
1	gamma-BHC (Lindane)	10.13	+0.01	9.05	-0.01	4630	4692	0.1170	0.3290	0.45U	0.45U	0.45U
1	delta-BHC	11.25	+0.03	10.12		5347	2526m	0.1390	0.1800	0.37U	0.37U	0.37U
1	Heptachlor	11.31		9.75	+0.01	5052	6162	0.1320	0.4620	0.83U	0.83U	0.83U
1	4,4'-DDE	13.49	+0.01	12.33	+0.01	52097	5748	1.49	0.4330	1.6U	1.6U	1.6U
1	4,4'-DDD	14.31		13.21	+0.01	17344	10185	0.6070	0.9840	1.0U	1.0U	1.0U
1	Endrin Aldehyde	14.67	+0.02	13.76	+0.03	12950	14368	0.6570	1.70	1.4U	1.4U	1.4U
1	4,4'-DDT	14.83	+0.03	13.61	-0.01	184414	34654m	7.26	3.53	5.8Ui	2.8Ui	2.8Ui

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.143 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F014.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F014.D\1003F014c.d			**Vial:**	51
Acqu Date:	10/03/2014 13:28	**Quant Date:**	10/03/2014 17:30	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-005				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 63 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:28:03 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2780782	972991	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1669084	631399	50.068	49.175
28)	s	Decachlorobiphen	18.30	16.86	1682378	692617	56.760	63.639
		Target Compounds						
3)		alpha-BHC	0.00	8.31	0	6086	N.D.	0.393 #
5)		beta-BHC	0.00	9.61	0	39819	N.D.	5.594 #
6)		gamma-BHC (Linda	10.13	9.05	4630	4692	0.117	0.329 #
7)		delta-BHC	11.25	10.12	5347	2526	0.139	0.180m#
8)		Heptachlor	11.31	9.75	5052	6162	0.132	0.462 #
9)		Aldrin	11.87f	10.37f	15020	268974	0.384	18.259 #
10)		Isodrin	0.00	11.14	0	4899	N.D.	0.401 #
11)		Heptachlor Epoxi	0.00	11.45f	0	8586	N.D.	0.655 #
12)		gamma-Chlordane	13.12	11.86f	188907	20807	5.181	1.520 #
13)		Endosulfan I	13.27	12.04	19789	6074	0.609	0.513
14)		alpha-Chlordane	13.18	11.93f	10309	16253	0.287	1.212 #
15)		Dieldrin	13.64f	12.46	116796	19385	3.354	1.451 #
16)		4,4'-DDE	13.49	12.33	52097	5748	1.488	0.433 #
17)		Endrin	14.03	12.95	3903	8612	0.129	0.749 #
18)		Endosulfan II	14.49	13.40	237738	17759	7.908	1.615m#
19)		4,4'-DDD	14.31	13.21	17344	10185	0.607	0.984 #
20)		Endrin Aldehyde	14.67	13.76	12950	14368	0.657	1.695 #
21)		Endosulfan Sulfa	15.13	14.06	6423	3352	0.241	0.327 #
22)		4,4'-DDT	14.83	13.61	184414	34654	7.256	3.534m#
23)		Endrin Ketone	0.00	15.01	0	16281	N.D.	1.289 #
24)		Methoxychlor	15.60f	14.71	33906	14485	2.514	2.893
25)		2,4'-DDE	12.95f	11.86	12763	20807	0.549	2.419 #
26)		2,4'-DDD	13.64	12.64	116796	1292821	5.521	164.991 #
27)		2,4'-DDT	14.14	13.05	82478	41163	3.743	4.945 #

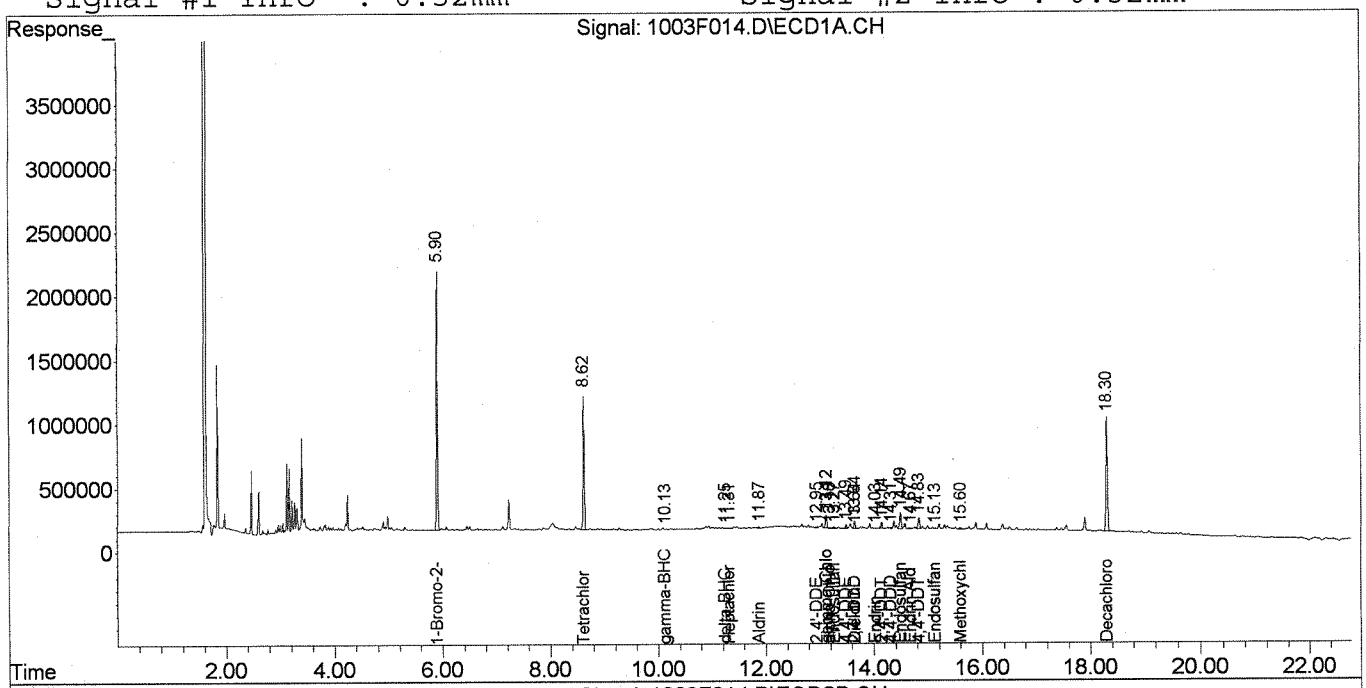
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

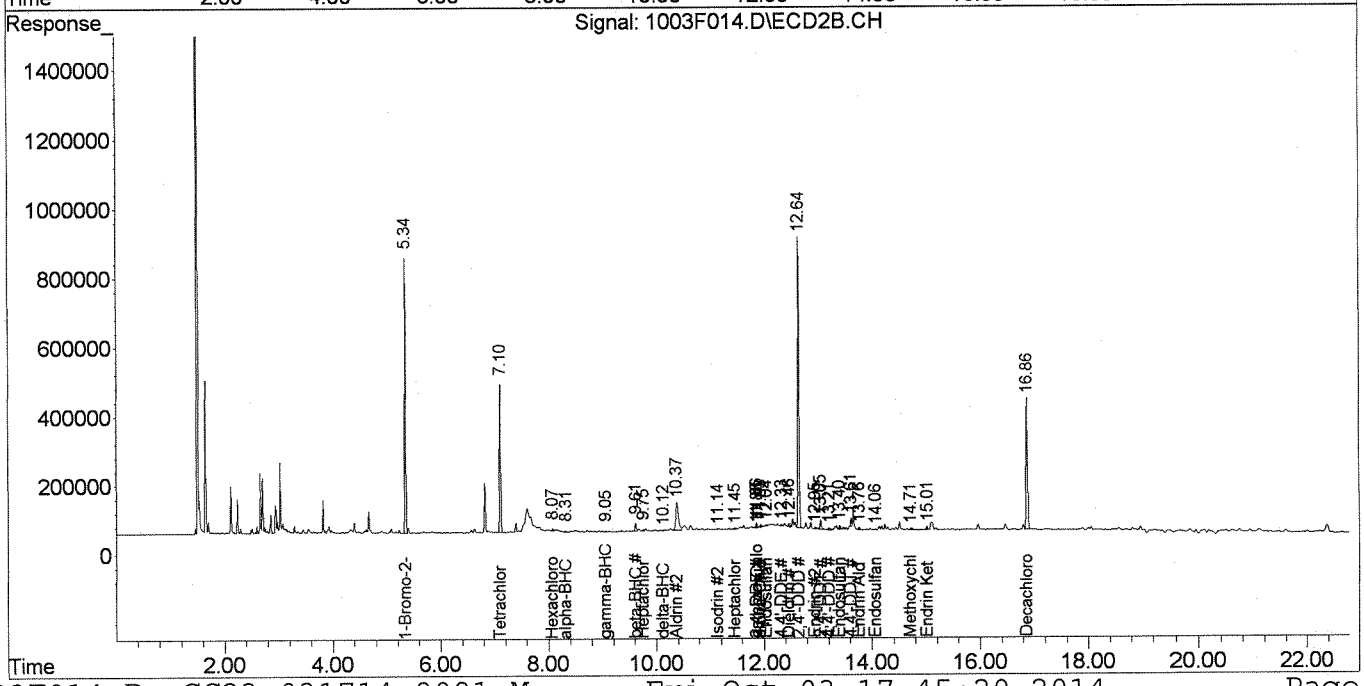
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:30 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

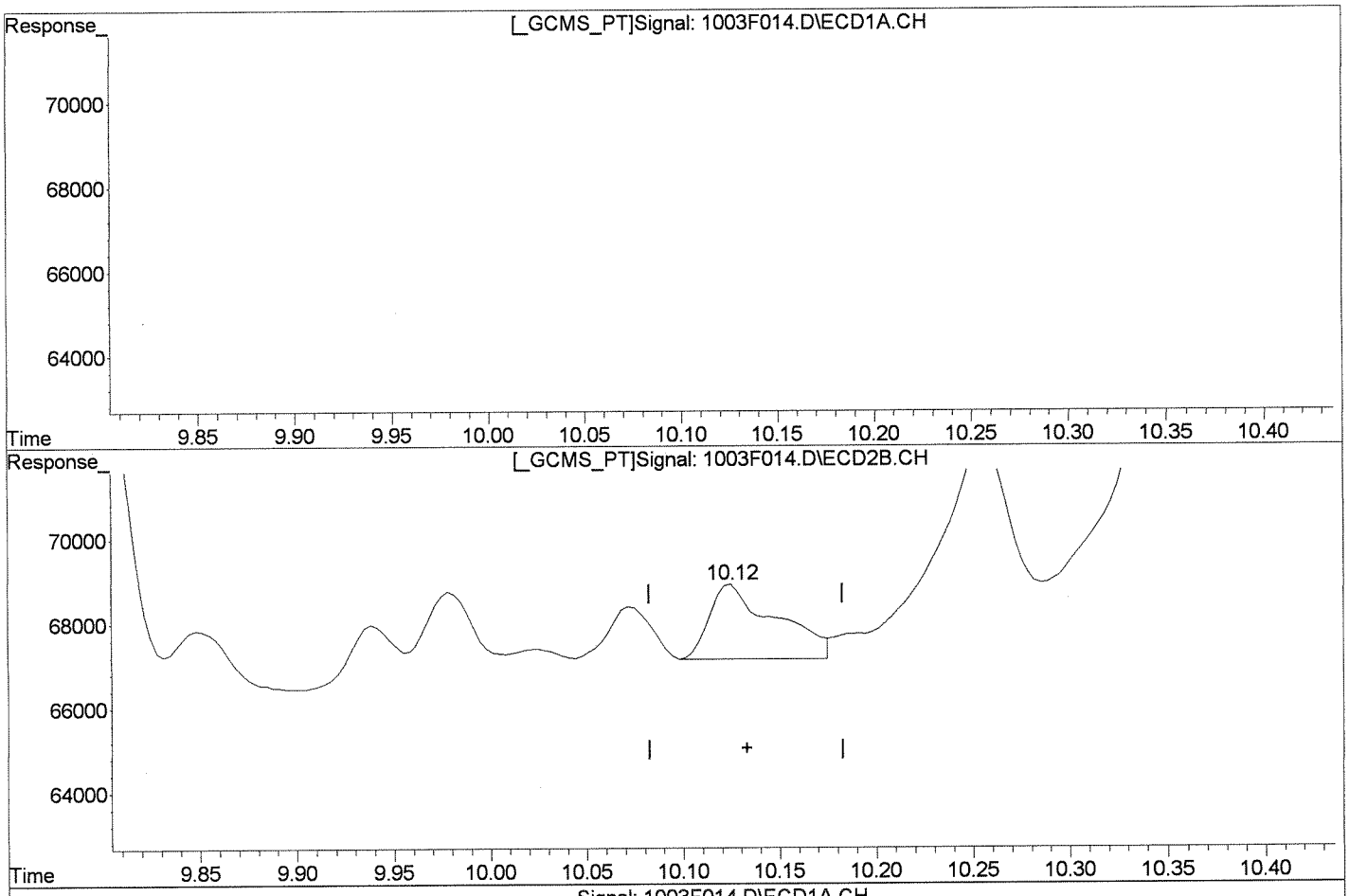




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F014.D\ECD1A.CH

(7) delta-BHC

11.25min 0.139ug/L

response 5347

(7) delta-BHC #2

10.12min 0.306ug/L

response 4287

Manual Integration:

Before

10/03/14

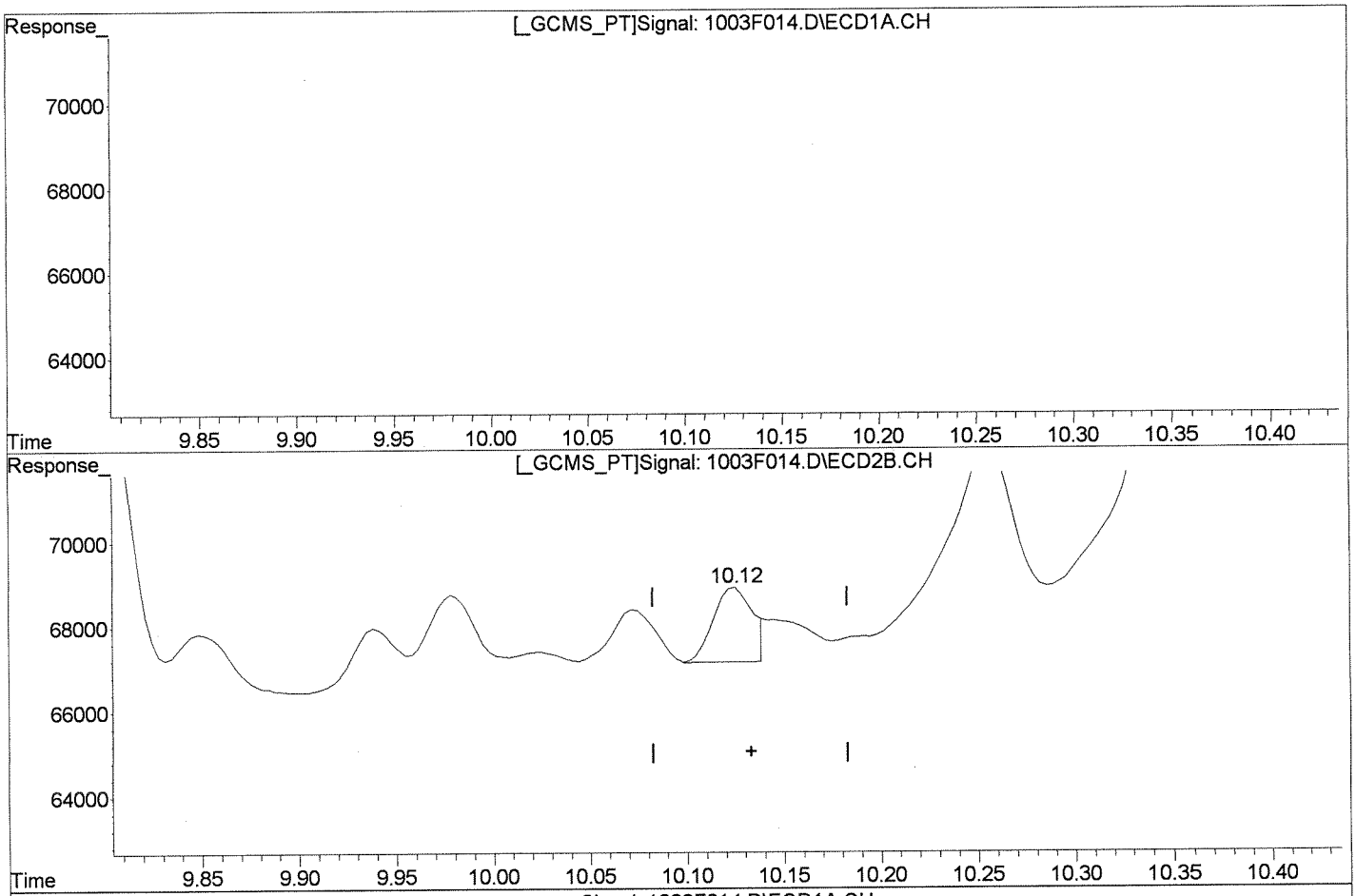
(+) = Expected Retention Time

1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:12 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F014.D\ECD1A.CH

(7) delta-BHC
11.25min 0.139ug/L
response 5347

Manual Integration:
After
Baseline/Shoulder
10/03/14

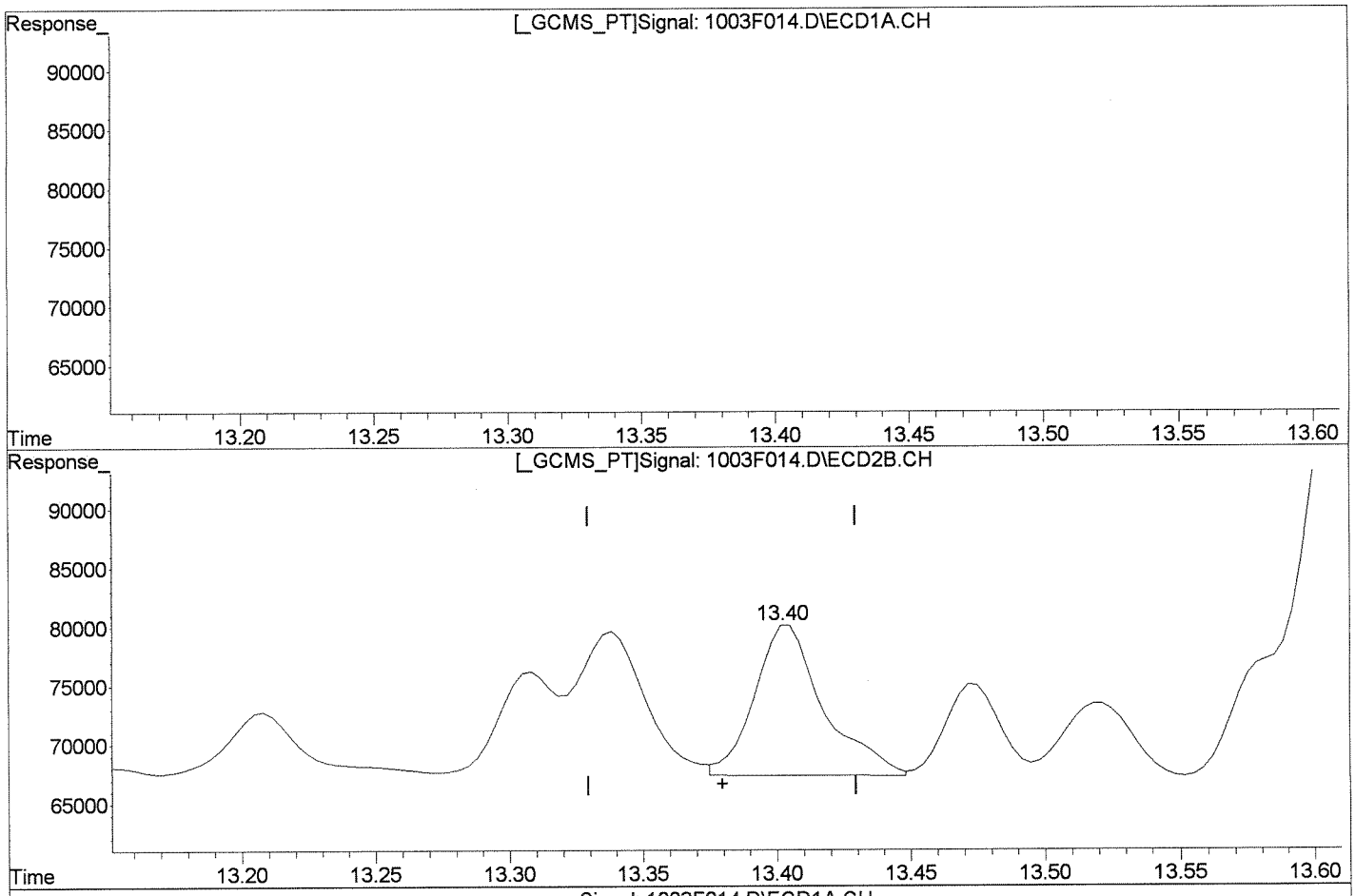
(7) delta-BHC #2
10.12min 0.180ug/L m
response 2526

(+) = Expected Retention Time
1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:16 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F014.D\ECD1A.CH

(18) Endosulfan II

14.49min 7.908ug/L

response 237738

Manual Integration:

Before

10/03/14

(18) Endosulfan II #2

13.40min 2.063ug/L

response 22682

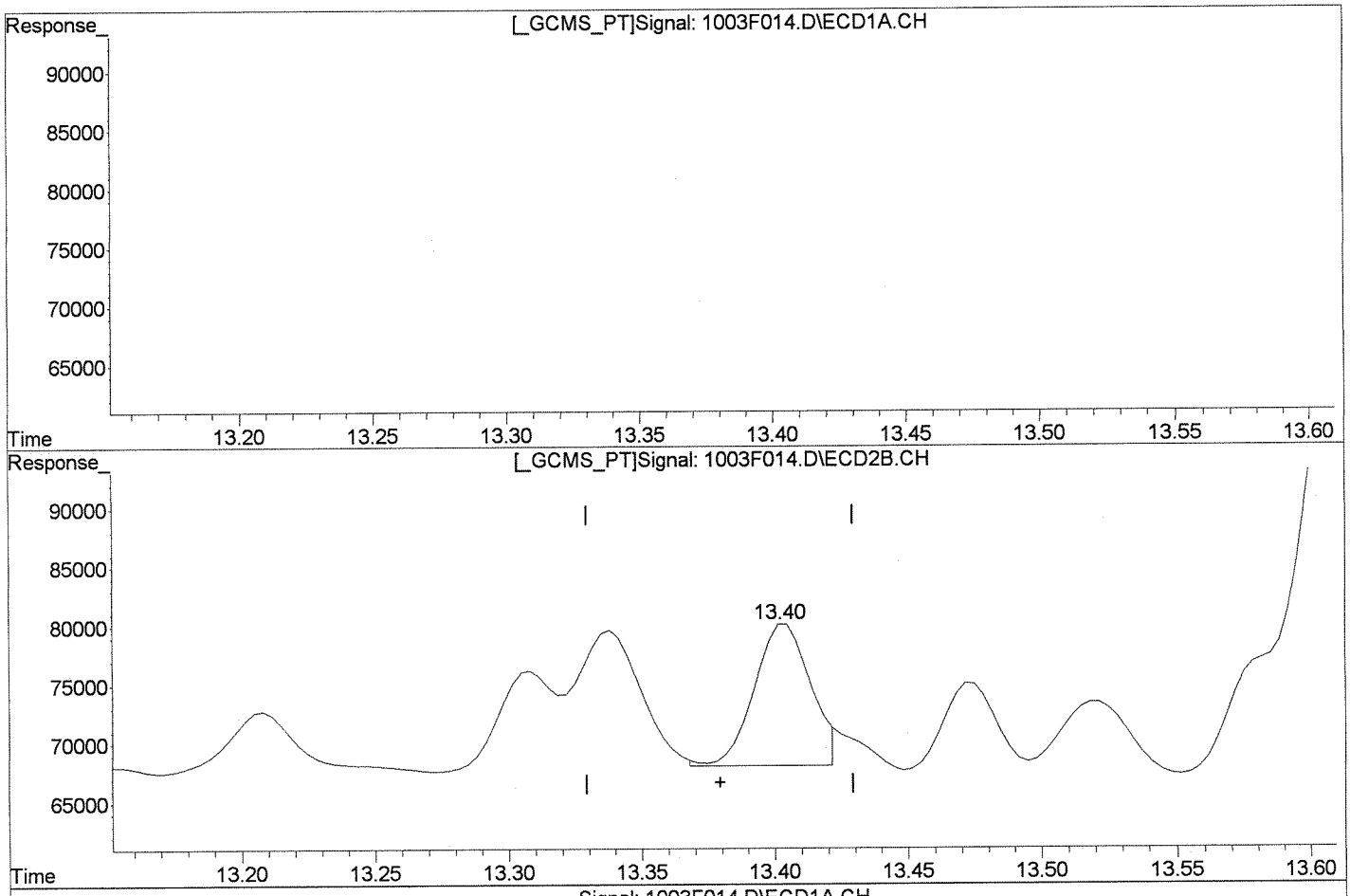
(+) = Expected Retention Time

1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:37 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

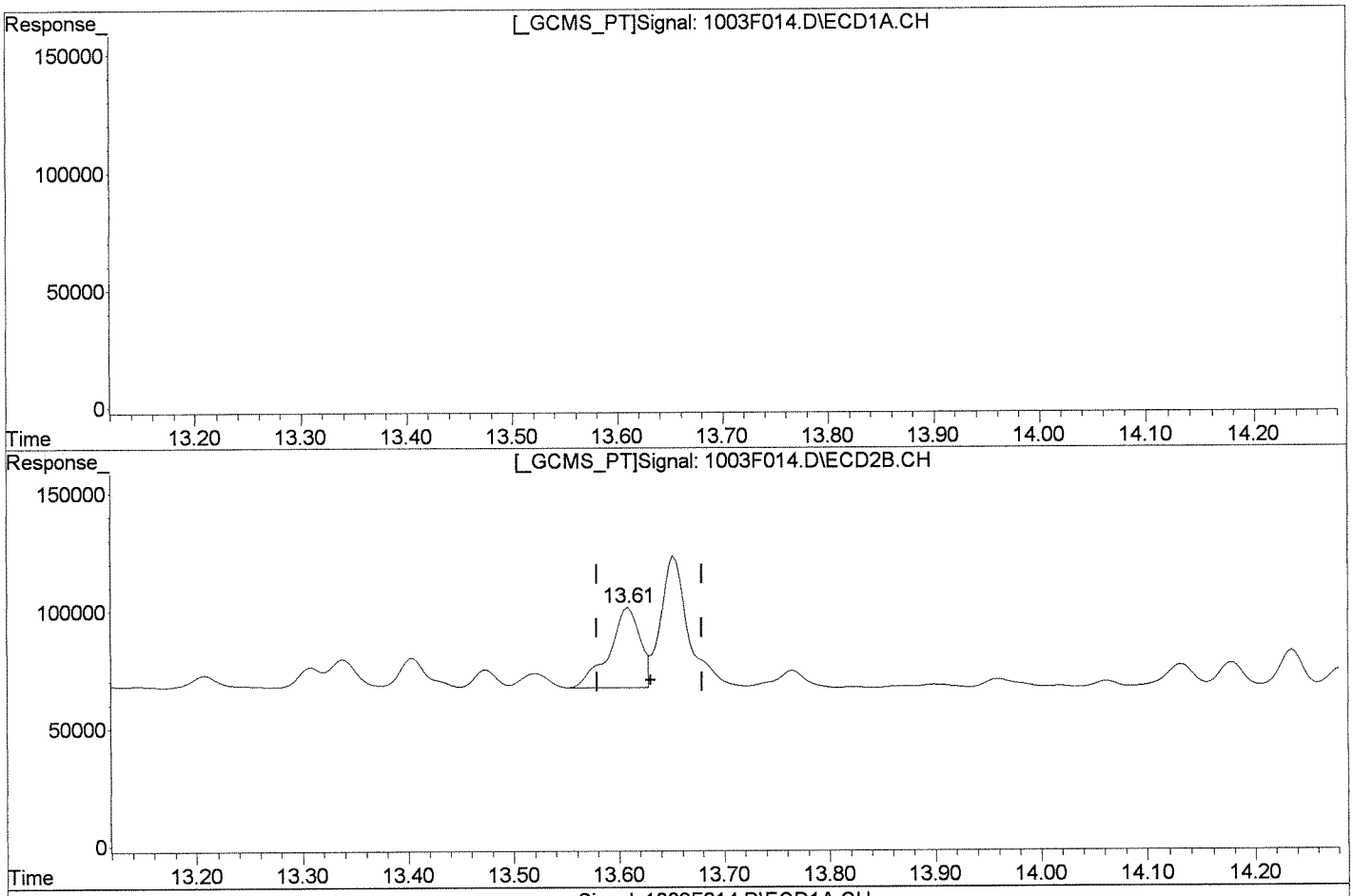


(+) = Expected Retention Time
1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:40 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F014.D\ECD1A.CH

(22) 4,4'-DDT

14.83min 7.256ug/L

response 184414

(22) 4,4'-DDT #2

13.61min 7.268ug/L

response 71268

Manual Integration:

Before

10/03/14

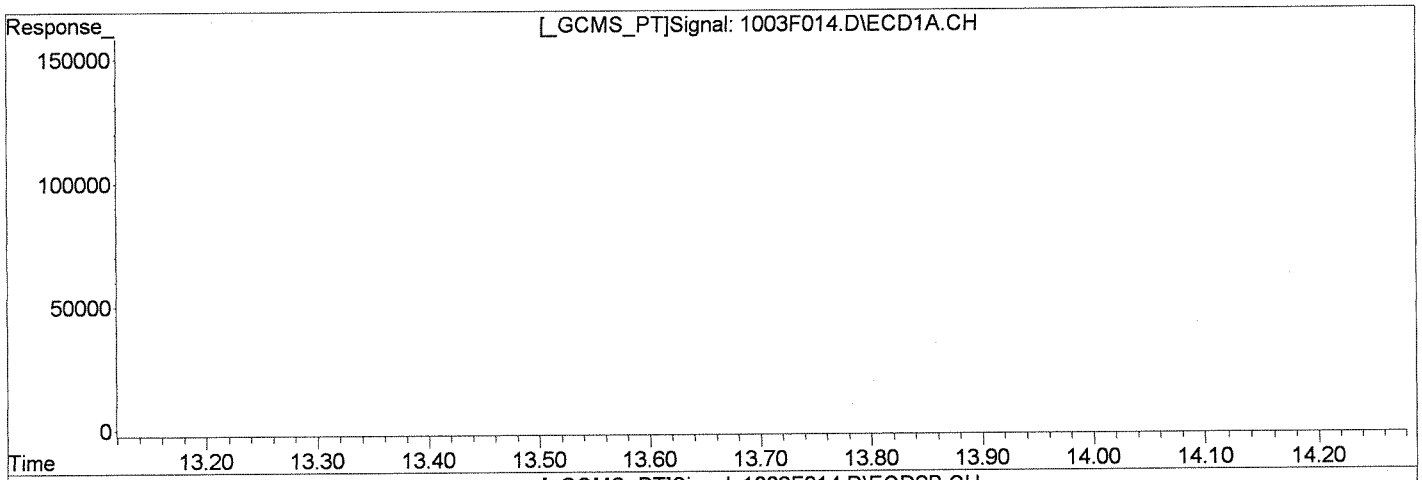
(+) = Expected Retention Time

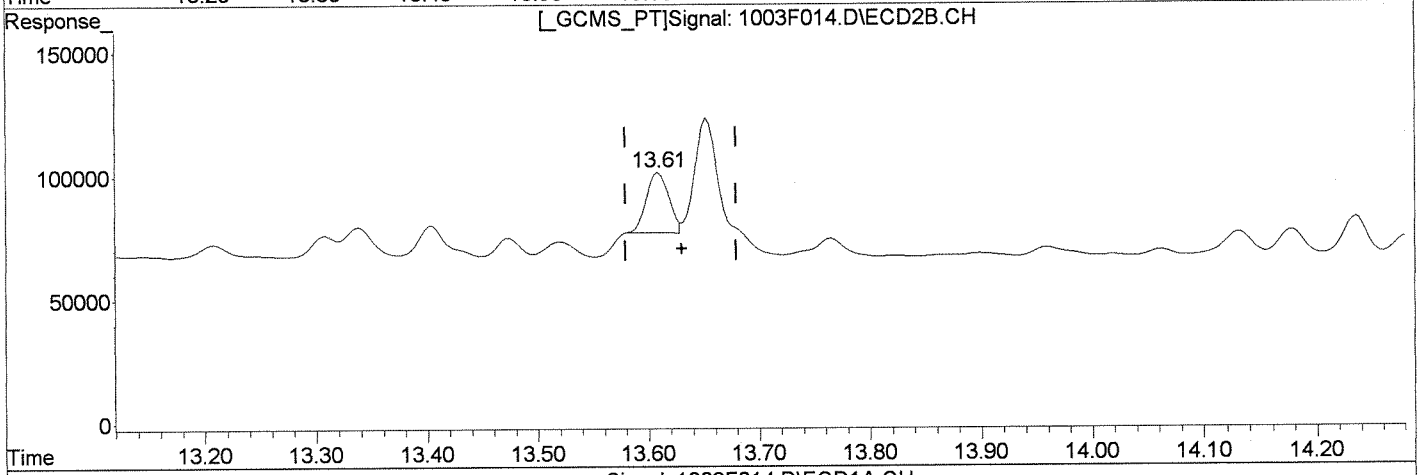
1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:53 2014

Quantitation Report (QuArt)

Signal #1 : J:\GC23\DATA\100314\1003F014.D\ECD1A.CH Vial: 51
Signal #2 : J:\GC23\DATA\100314\1003F014.D\ECD2B.CH
Acq On : 03 Oct 2014 1:28 pm Operator: SMURRAY
Sample : K1409921-005 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F014.D\ECD1A.CH

(22) 4,4'-DDT
14.83min 7.256ug/L
response 184414

Manual Integration:
After
Baseline/Shoulder
10/03/14

(22) 4,4'-DDT #2
13.61min 3.534ug/L m
response 34654

(+) = Expected Retention Time
1003F014.D GC23-031714-8081.M Fri Oct 03 17:30:57 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F015.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 13:58
Date Quantitated: 10/03/2014 17:32
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	d

Primary Review: am 10/6/14

Secondary Review: [signature] 10/7/14

Printed: 10/04/2014 10:07:07
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F015.D\1003F015C.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 13:58
Date Quantitated: 10/03/2014 17:32
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: AM 10/6/14

Secondary Review: [signature] 10/7/14

Printed: 10/04/2014 10:07:10
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F015.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F015.D\1003F015c.d			**Vial:**	52
Acqu Date:	10/03/2014 13:58	**Quant Date:**	10/03/2014 17:32	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-006				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380548	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2871725	1014125	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1923372	723678	55.96		54.08				56	OK
						%Recovery =		56	OK	54	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1880765	754218	61.71		66.49				66	OK
						%Recovery =		62	OK	66	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.44	-0.01	8.35	+0.03	9694	1022	0.2190	0.0630	0.35U	0.35U	0.35U
1	beta-BHC	10.73		9.61	+0.01	5204	966	0.2840	0.1300	0.50U	0.50U	0.50U
1	gamma-BHC (Lindane)	10.13	+0.01	9.06		2764	2320	0.0680	0.1560	0.45U	0.45U	0.45U
1	delta-BHC	11.25	+0.03	10.13	+0.01	2733	483m	0.0690	0.0330	0.37U	0.37U	0.37U
1	Heptachlor	11.32	+0.01	9.76	+0.02	4161	3757	0.1050	0.2700	0.83U	0.83U	0.83U
1	4,4'-DDE	13.49	+0.01	12.33	+0.01	10642	2521	0.2940	0.1820	1.6U	1.6U	1.6U
1	4,4'-DDD			13.21	+0.01	0d	1176	0.0000	0.1090	1.0U	1.0U	1.0U
1	Endrin Aldehyde			13.77	+0.04	0	2728	0.0000	0.3090	1.4U	1.4U	1.4U
1	4,4'-DDT	14.81	+0.01	13.62		13853m	10156	0.5280	0.9940	0.85U	0.85U	0.85U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.026 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F015.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F015.D\1003F015c.d			**Vial:**	52
Acqu Date:	10/03/2014 13:58	**Quant Date:**	10/03/2014 17:32	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-006				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 74.6 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:28:05 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2871725	1014125	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1923372	723678	55.955	54.076
28)	s	Decachlorobiphen	18.31	16.87	1880765	754218	61.710	66.488
		Target Compounds						
3)		alpha-BHC	9.44	8.35	9694	1022	0.219	0.063 #
5)		beta-BHC	10.73	9.61	5204	966	0.284	0.130 #
6)		gamma-BHC (Linda	10.13	9.06	2764	2320	0.068	0.156 #
7)		delta-BHC	11.25	10.13	2733	483	0.069	0.033m#
8)		Heptachlor	11.32	9.76	4161	3757	0.105	0.270 #
9)		Aldrin	0.00	10.37f	0	1668	N.D.	0.109 #
10)		Isodrin	0.00	11.16f	0	3052	N.D.	0.240 #
11)		Heptachlor Epoxi	0.00	11.46f	0	1381	N.D.	0.101 #
12)		gamma-Chlordane	13.13	11.80f	4680	4966	0.124	0.348 #
13)		Endosulfan I	13.28f	12.04	5209	551	0.155	0.045m#
14)		alpha-Chlordane	13.19	11.96	5294	1735	0.143	0.124
15)		Dieldrin	13.64f	12.48	14299	1246	0.398	0.089m#
16)		4,4'-DDE	13.49	12.33	10642	2521	0.294	0.182 #
17)		Endrin	0.00	12.99f	0	9075	N.D.	0.758 #
18)		Endosulfan II	14.49	0.00	43462	0	1.400	N.D. d#
19)		4,4'-DDD	0.00	13.21	0	1176	N.D. d	0.109
20)		Endrin Aldehyde	0.00	13.77	0	2728	N.D.	0.309 #
22)		4,4'-DDT	14.81	13.62	13853	10156	0.528m	0.994 #
23)		Endrin Ketone	0.00	15.01	0	4087	N.D.	0.310 #
24)		Methoxychlor	15.61f	14.74	8345	3320	0.599	0.636
25)		2,4'-DDE	0.00	11.86	0	2884	N.D.	0.322 #
26)		2,4'-DDD	13.64	12.65	14299	6269	0.655	0.768
27)		2,4'-DDT	14.15	13.05	14078	4622	0.619	0.533

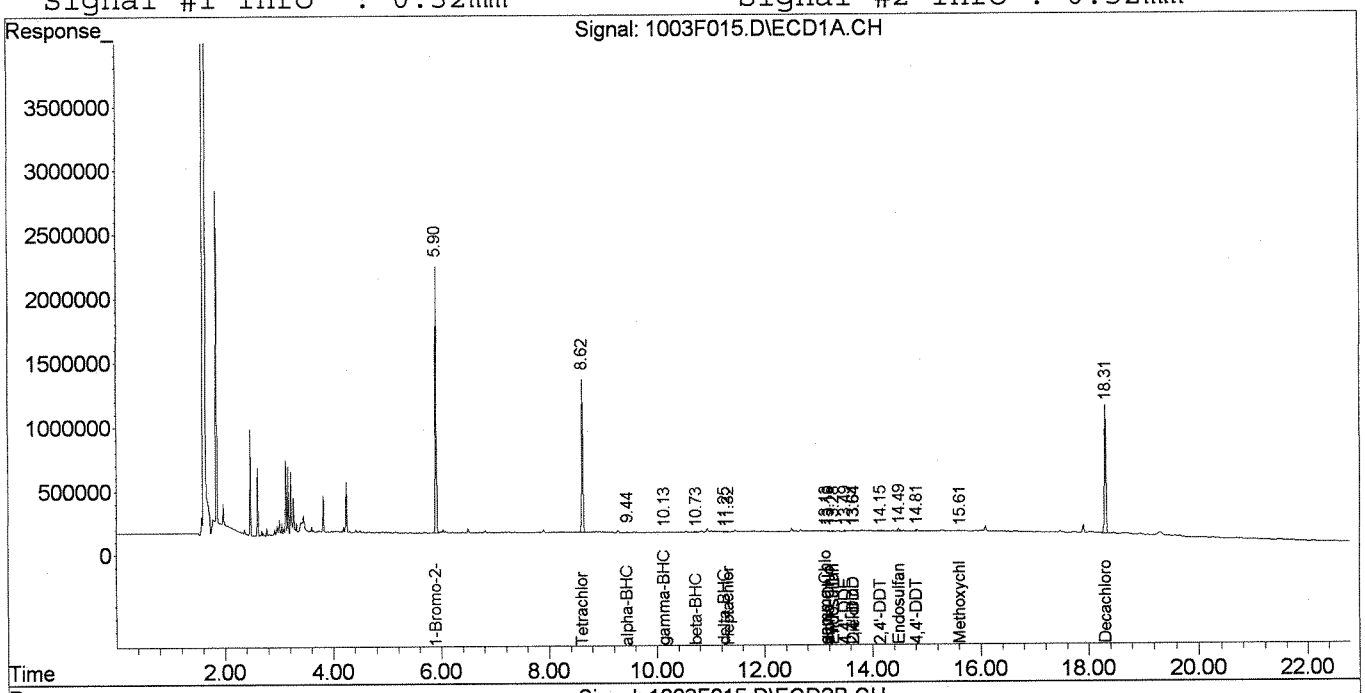
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

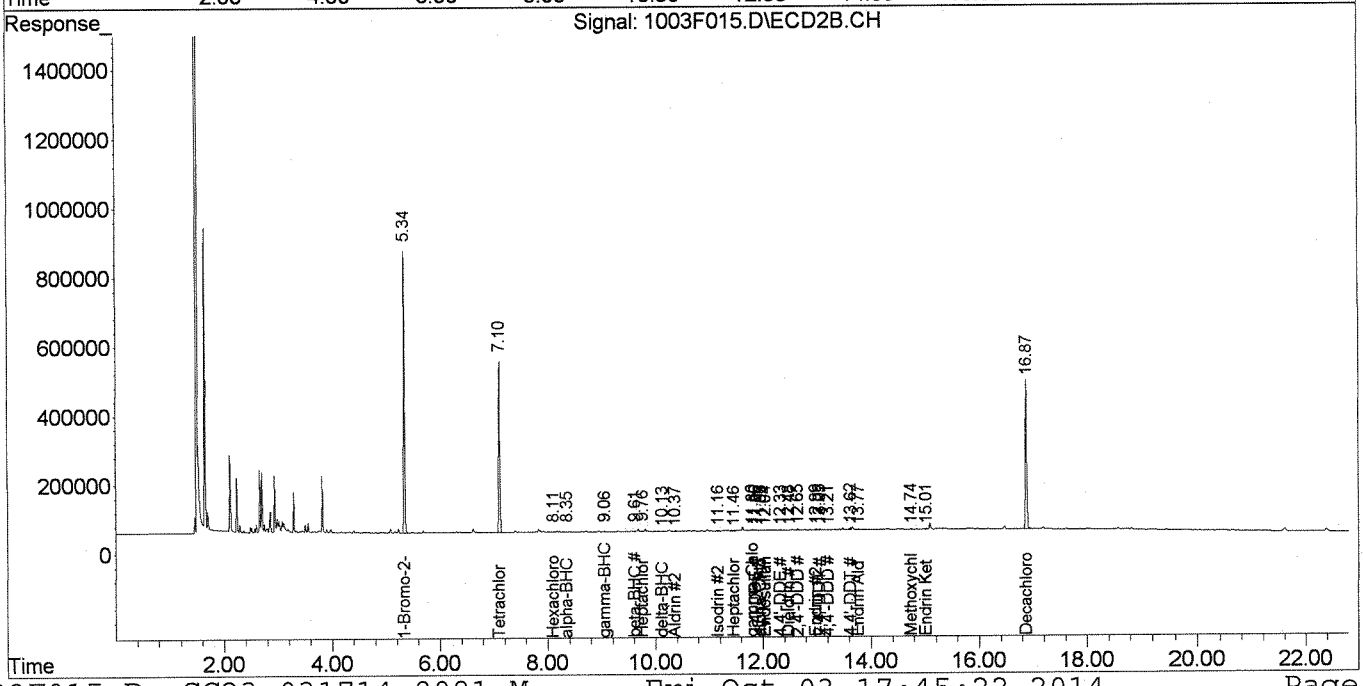
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:32 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

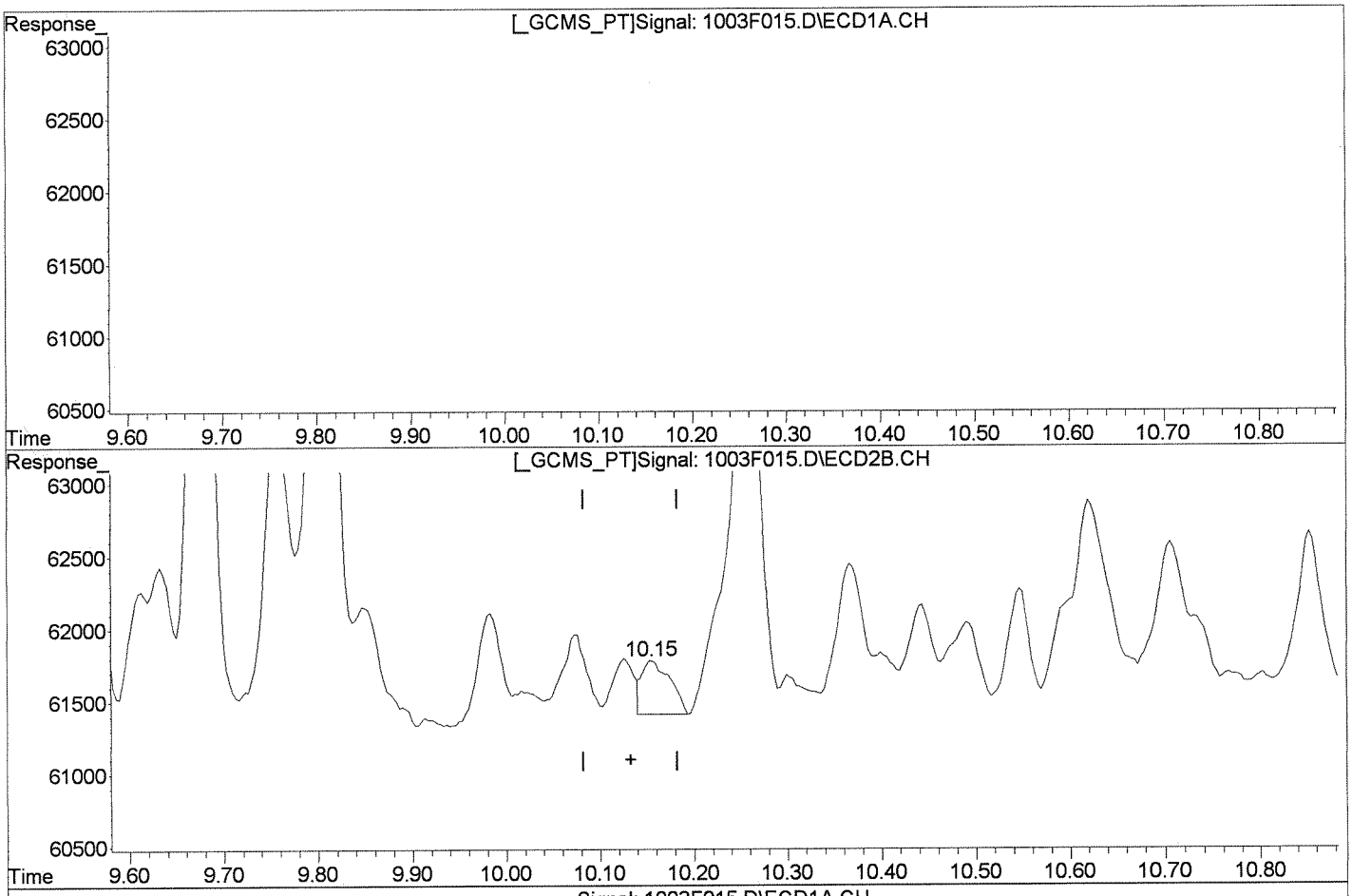




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

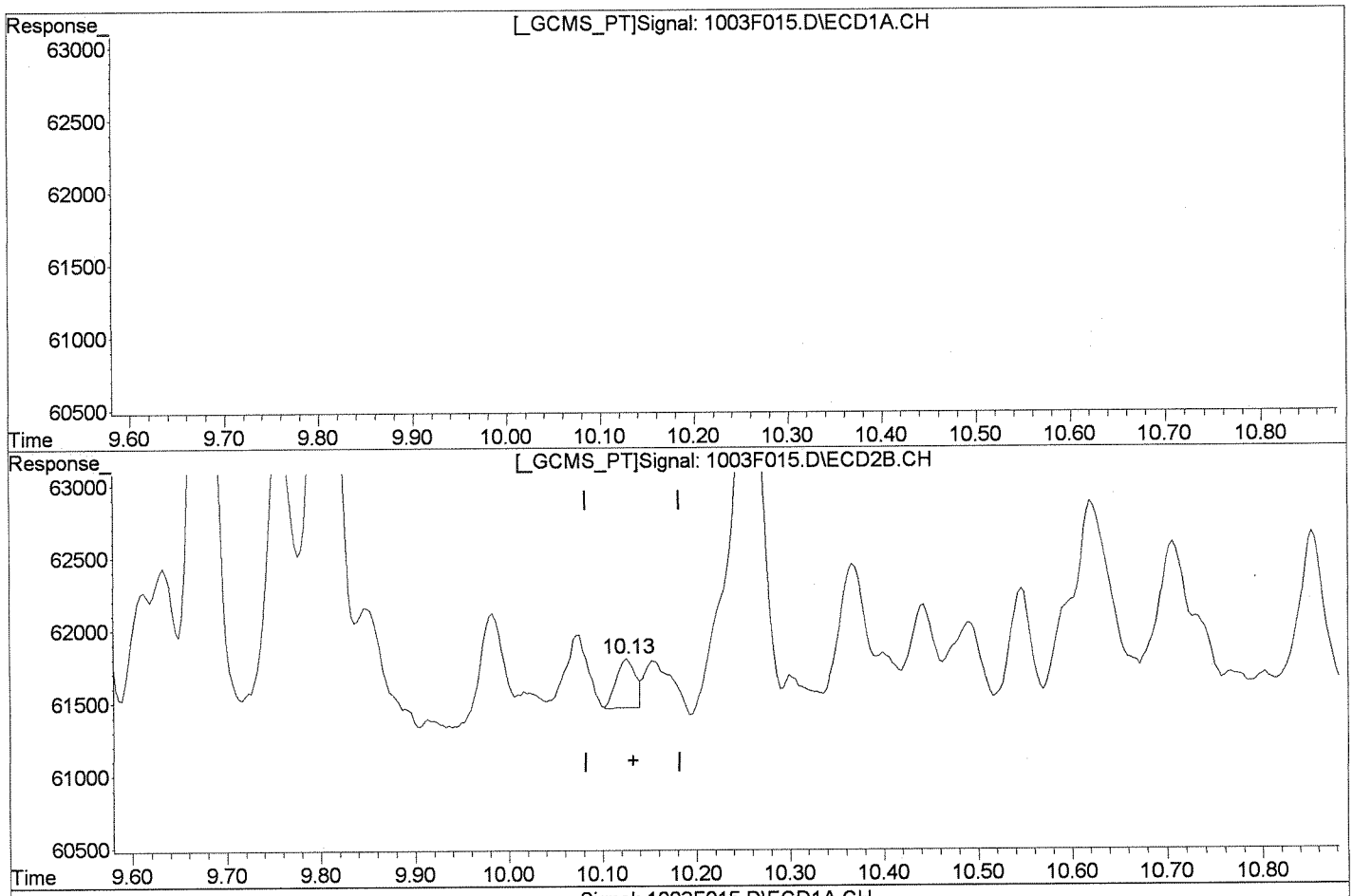


(+) = Expected Retention Time
1003F015.D GC23-031714-8081.M Fri Oct 03 17:31:26 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F015.D\ECD1A.CH

(7) delta-BHC

11.25min 0.069ug/L

response 2733

(7) delta-BHC #2

10.13min 0.033ug/L m

response 483

Manual Integration:

After

Wrong Peak

10/03/14

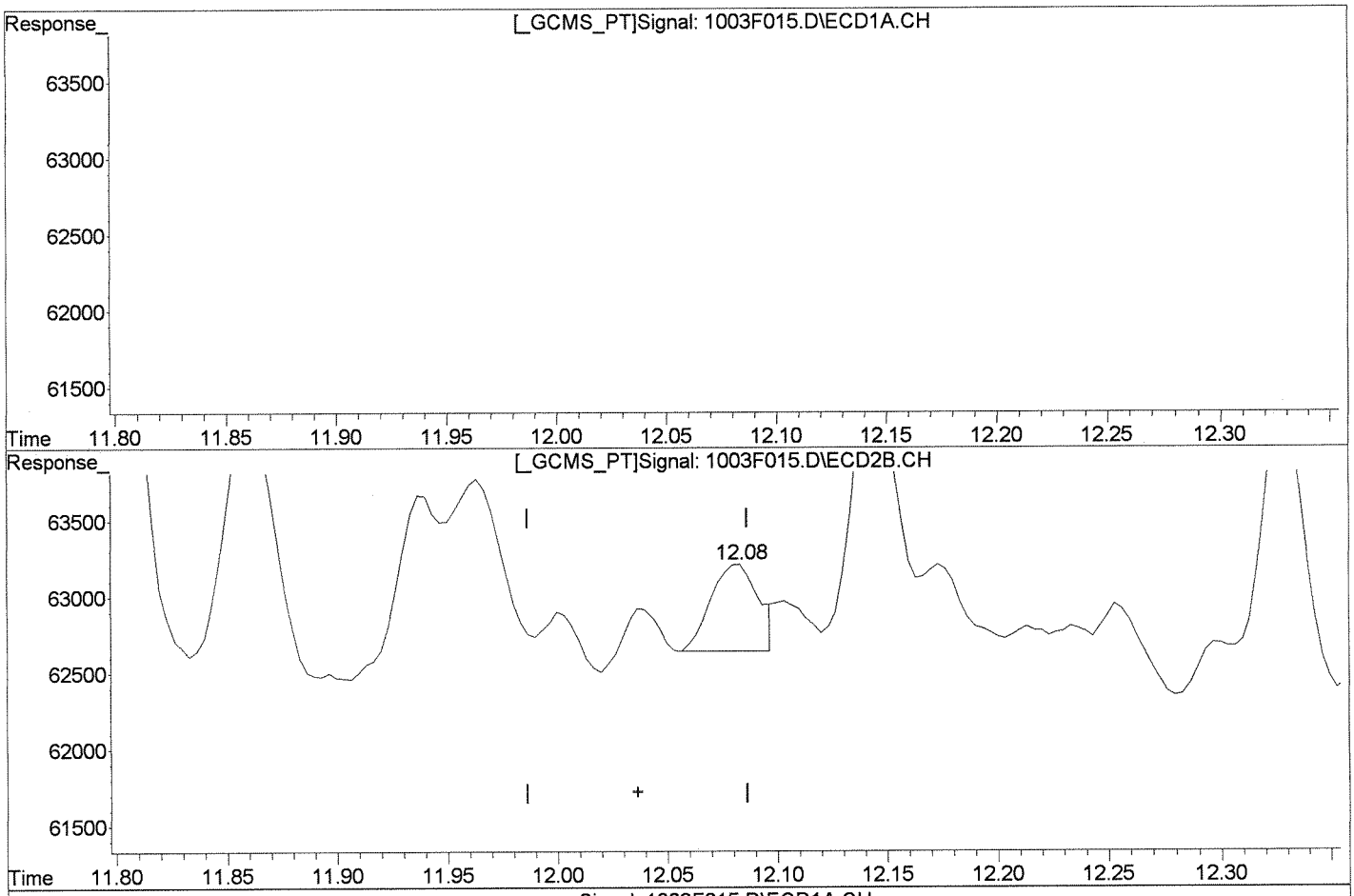
(+) = Expected Retention Time

1003F015.D GC23-031714-8081.M Fri Oct 03 17:31:29 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F015.D\ECD1A.CH

(13) Endosulfan I

13.28min 0.155ug/L

response 5209

(13) Endosulfan I #2

12.08min 0.070ug/L

response 865

Manual Integration:

Before

10/03/14

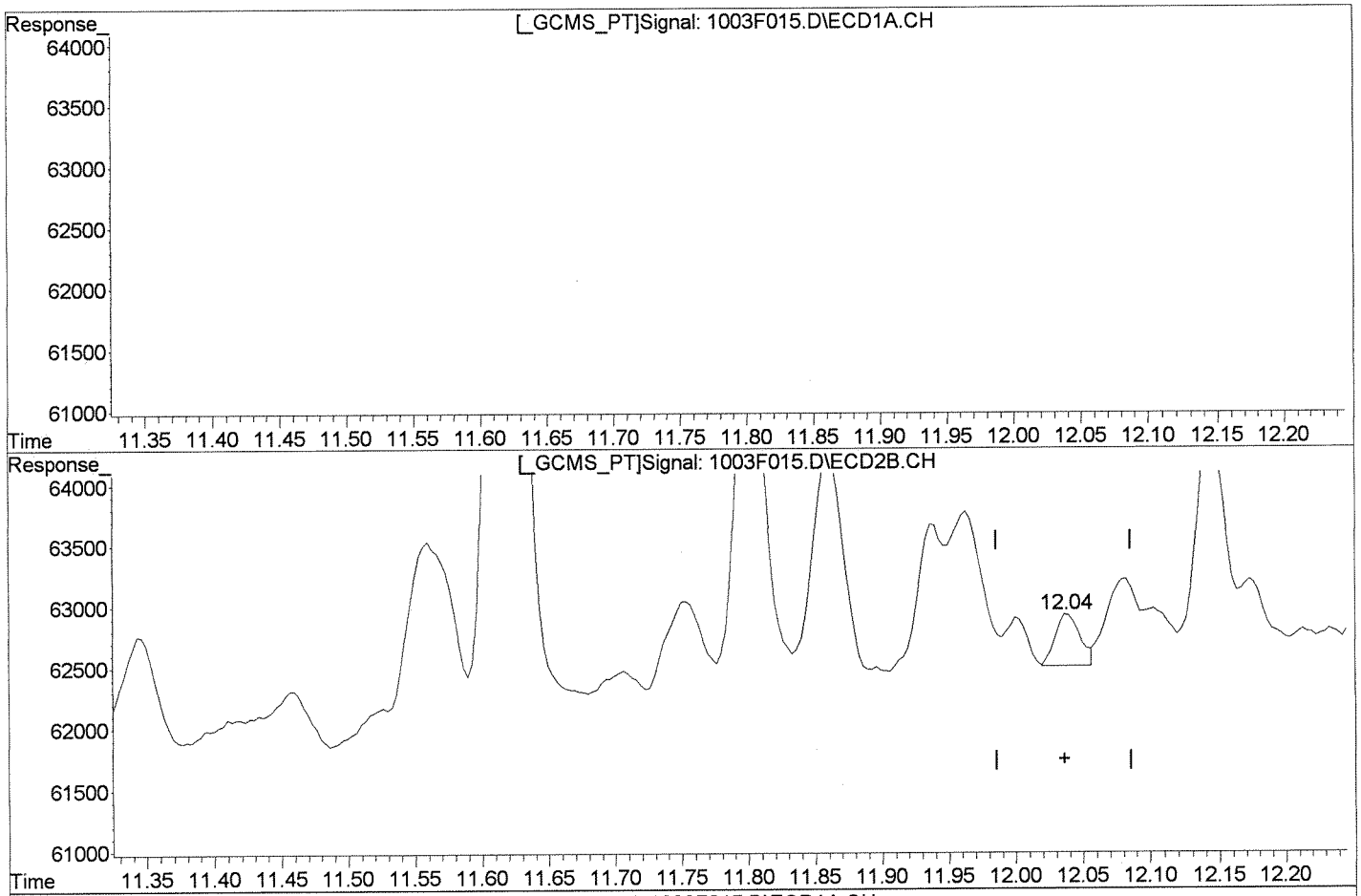
(+) = Expected Retention Time

1003F015.D GC23-031714-8081.M Fri Oct 03 17:31:38 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



(13) Endosulfan I

13.28min 0.155ug/L

response 5209

Manual Integration:

After

Baseline/Shoulder

10/03/14

(13) Endosulfan I #2

12.04min 0.045ug/L m

response 551

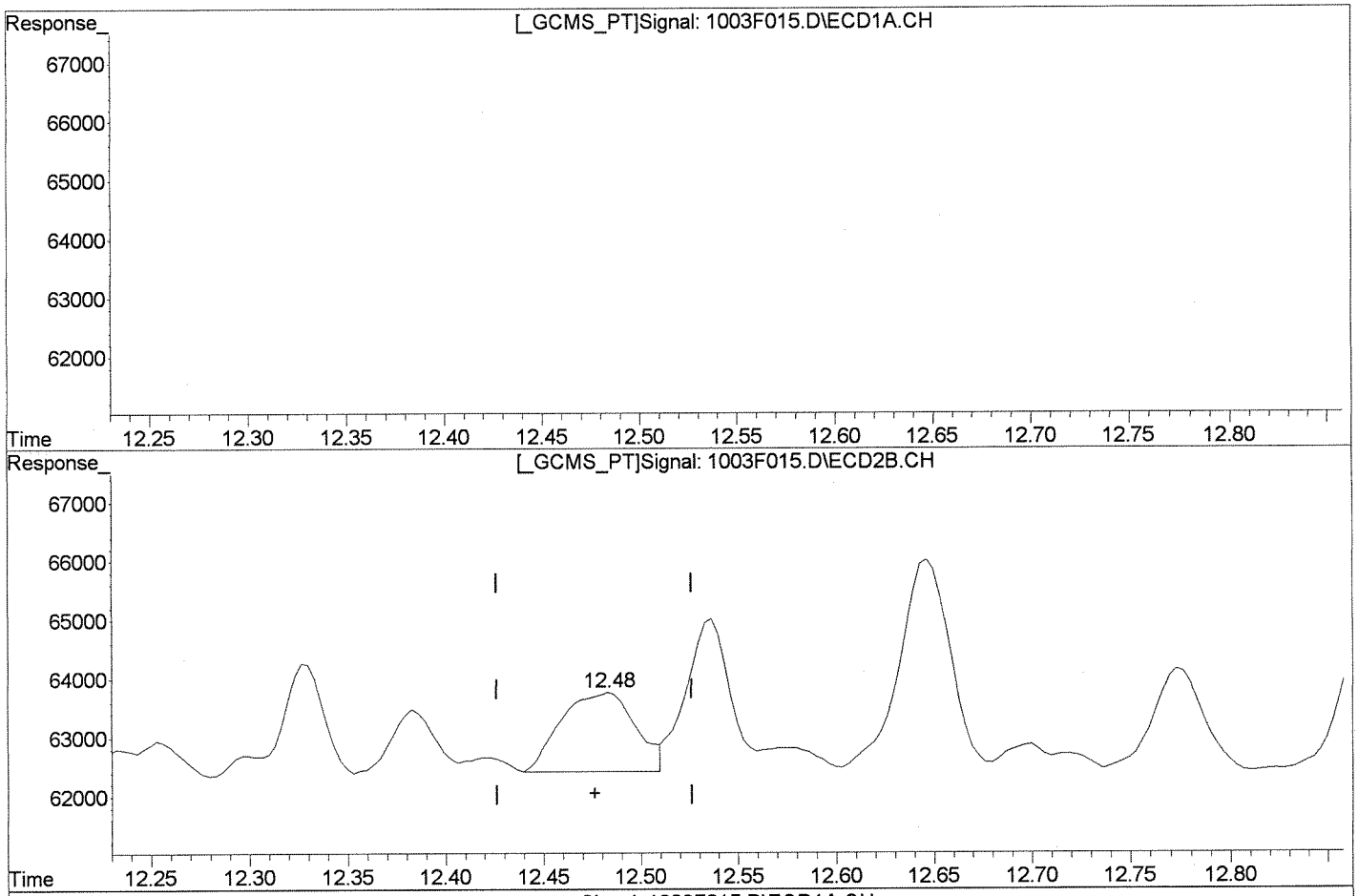
(+) = Expected Retention Time

1003F015.D GC23-031714-8081.M Fri Oct 03 17:31:48 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

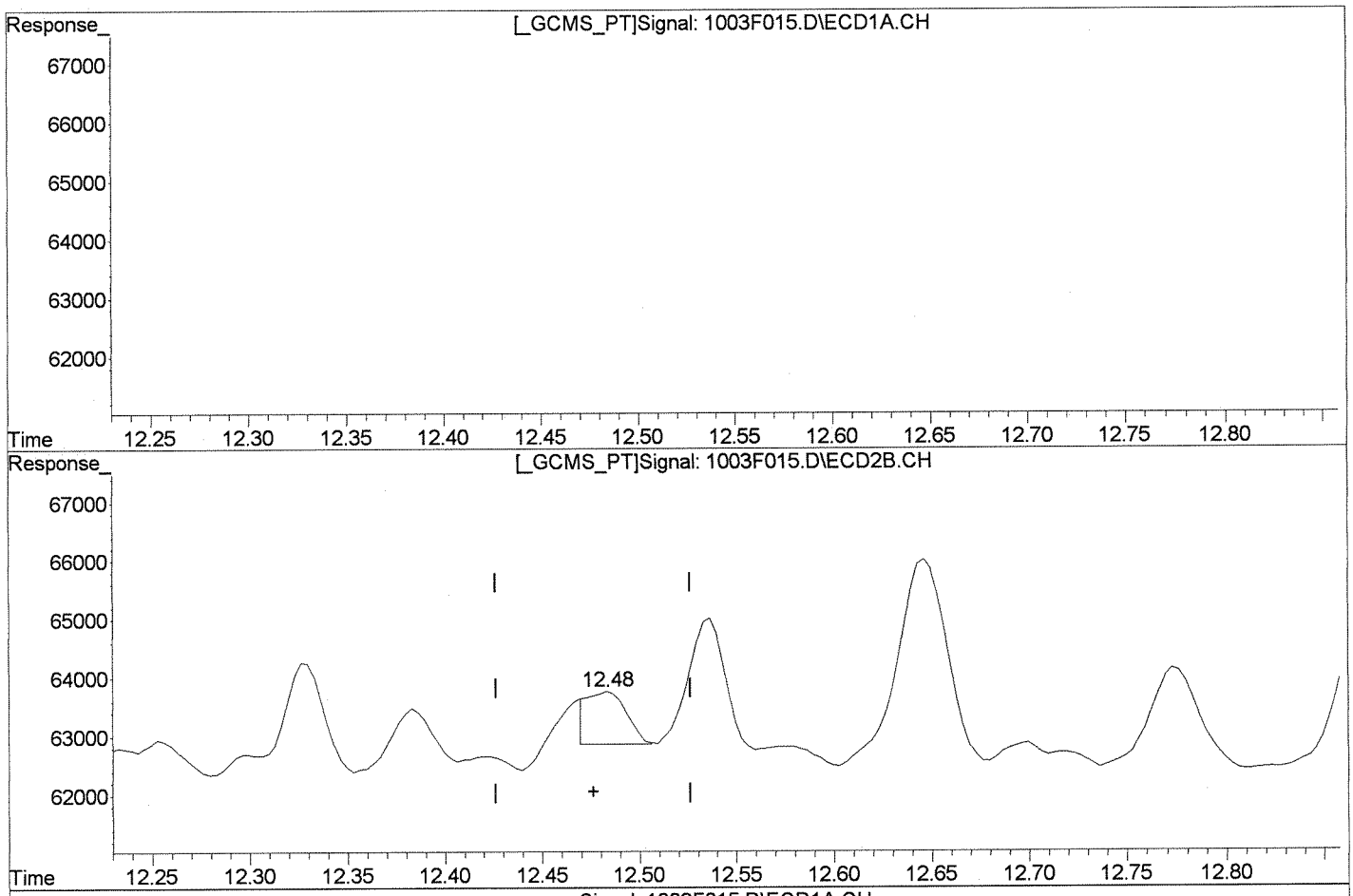


(+) = Expected Retention Time
1003F015.D GC23-031714-8081.M Fri Oct 03 17:31:57 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F015.D\ECD1A.CH

(15) Dieldrin

13.64min 0.398ug/L

response 14299

(15) Dieldrin #2

12.48min 0.089ug/L m

response 1246

Manual Integration:

After

Baseline/Shoulder

10/03/14

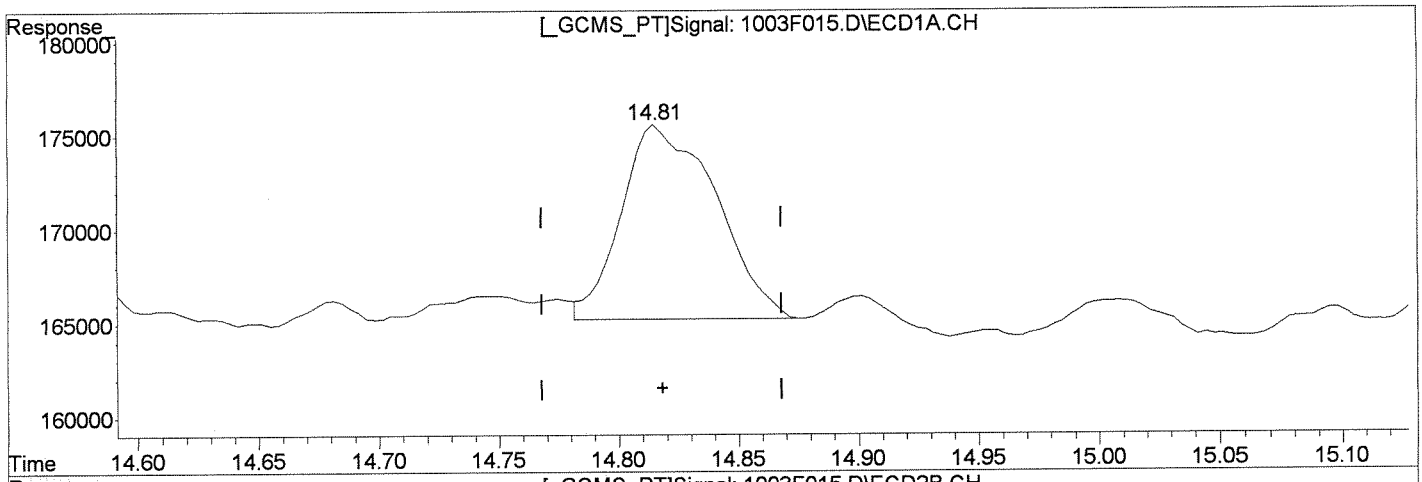
(+) = Expected Retention Time

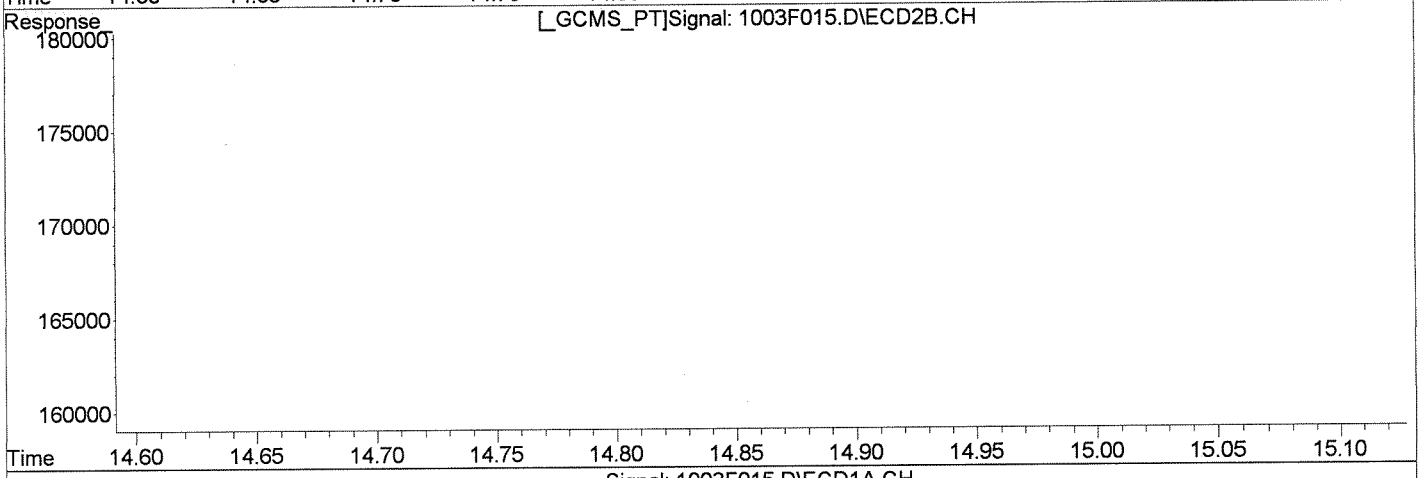
1003F015.D GC23-031714-8081.M Fri Oct 03 17:32:05 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F015.D\ECD1A.CH

(22) 4,4'-DDT

14.81min 1.080ug/L

response 28348

(22) 4,4'-DDT #2

13.62min 0.994ug/L

response 10156

Manual Integration:

Before

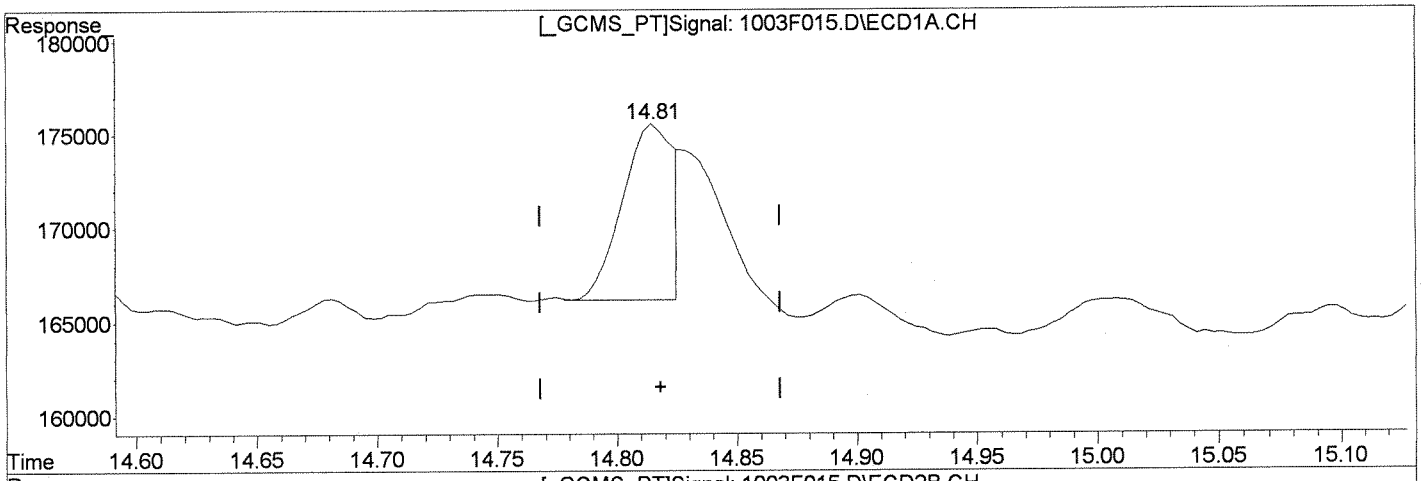
10/03/14

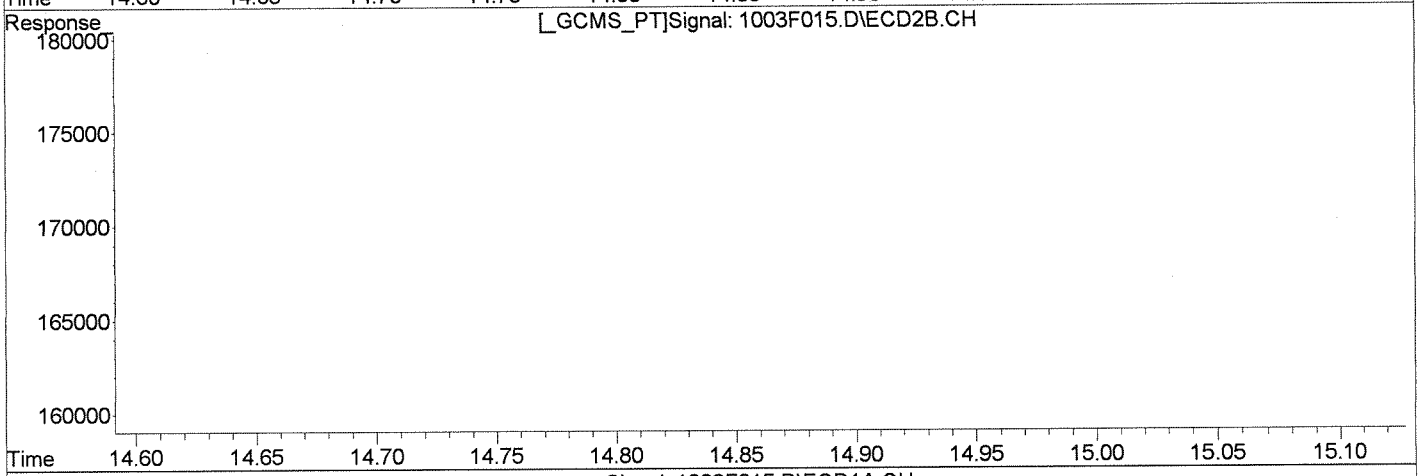
(+) = Expected Retention Time
1003F015.D GC23-031714-8081.M Fri Oct 03 17:32:17 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F015.D\ECD1A.CH Vial: 52
Signal #2 : J:\GC23\DATA\100314\1003F015.D\ECD2B.CH
Acq On : 03 Oct 2014 1:58 pm Operator: SMURRAY
Sample : K1409921-006 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:28 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F015.D\ECD1A.CH

(22) 4,4'-DDT
14.81min 0.528ug/L m
response 13853

(22) 4,4'-DDT #2
13.62min 0.994ug/L
response 10156

Manual Integration:
After
Baseline/Shoulder
10/03/14

(+) = Expected Retention Time
1003F015.D GC23-031714-8081.M Fri Oct 03 17:32:20 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F016.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 14:27
Date Quantitated: 10/03/2014 17:37
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RO
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: Am 10/6/14

Secondary Review:

Exception Report

Data File: J:\GC23\DATA\100314\1003F016.D\1003F016C.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 14:27
Date Quantitated: 10/03/2014 17:37
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: am 10/6/14

Secondary Review: [signature] 10/7/14

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F016.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F016.D\1003F016c.d			**Vial:**	53
Acqu Date:	10/03/2014 14:27	**Quant Date:**	10/03/2014 17:37	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-007				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380549	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.91	-0.25	5.34	-0.21	2841953	998478	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1825043	683053	53.62		51.84				54	OK
							%Recovery =	54	OK	52	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1814536	735346	60.08		65.84				66	OK
							%Recovery =	60	OK	66	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			8.32		0	7622	0.0000	0.4800	0.35U	0.38J	0.35U
1	beta-BHC			9.61	+0.01	0	12681	0.0000	1.74	0.50U	1.4J	0.50U
1	gamma-BHC (Lindane)	10.13	+0.01	9.06		19781	4116m	0.4900	0.2810	0.45U	0.45U	0.45U
1	delta-BHC	11.20	-0.02	10.14	+0.02	12178	1133m	0.3110	0.0790	0.37U	0.37U	0.37U
1	Heptachlor			9.76	+0.02	0	11759	0.0000	0.8600	0.83U	0.83U	0.83U
1	4,4'-DDE	13.49	+0.01	12.33	+0.01	188728	10528	5.27	0.7740	4.2	1.6U	1.6U
1	4,4'-DDD	14.32	+0.01	13.21	+0.01	63555	27093	2.18	2.55	1.7J	2.0	1.7J
1	Endrin Aldehyde	14.68	+0.03	13.75	+0.02	59785	18857m	2.97 CCV	2.17	2.4J	1.7J	1.7J
1	4,4'-DDT	14.84	+0.04	13.61	-0.01	854624m	305706m	32.90	30.38	27Ui	25Ui	25Ui

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.087 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F016.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F016.D\1003F016c.d			**Vial:**	53
Acqu Date:	10/03/2014 14:27	**Quant Date:**	10/03/2014 17:37	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-007				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 62.6 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 16:58:51 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.91	5.34	2841953	998478	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1825043	683053	53.620	51.840
28)	s	Decachlorobiphen	18.31	16.87	1814536	735346	60.076	65.840
		Target Compounds						
3)		alpha-BHC	0.00	8.32	0	7622	N.D.	0.480 #
5)		beta-BHC	0.00	9.61	0	12681	N.D.	1.736 #
6)		gamma-BHC (Linda	10.13	9.06	19781	4116	0.490	0.281m#
7)		delta-BHC	11.20f	10.14	12178	1133	0.311	0.079m#
8)		Heptachlor	0.00	9.76	0	11759	N.D.	0.860 #
9)		Aldrin	11.88f	10.37f	22535	41678	0.564	2.757 #
10)		Isodrin	0.00	11.12	0	6516	N.D.	0.520 #
11)		Heptachlor Epoxi	0.00	11.46f	0	8793	N.D.	0.654 #
12)		gamma-Chlordane	13.14	11.80	149139	41778	4.002	2.975 #
13)		Endosulfan I	13.28	12.04	42032	35783	1.265	2.944 #
14)		alpha-Chlordane	13.21	11.94f	26479	65987	0.720	4.797 #
15)		Dieldrin	13.65f	12.47	528659	73631	14.854	5.371 #
16)		4,4'-DDE	13.49	12.33	188728	10528	5.274	0.774 #
17)		Endrin	14.03	12.95	10110	49886	0.327	4.230 #
18)		Endosulfan II	14.50	13.41f	661305	54060	21.525	4.792m#
19)		4,4'-DDD	14.32	13.21	63555	27093	2.175	2.550
20)		Endrin Aldehyde	14.68	13.75	59785	18857	2.967	2.168m#
21)		Endosulfan Sulfa	15.14	14.07	6214	4603	0.228m	0.438m#
22)		4,4'-DDT	14.84	13.61	854624	305706	32.903m	30.380m
23)		Endrin Ketone	15.83	15.02	38810	108967	1.130	8.405 #
24)		Methoxychlor	15.60f	14.73	95868	19538	6.957	3.802 #
25)		2,4'-DDE	12.88f	11.86	21154	100484	0.891	11.385 #
26)		2,4'-DDD	13.65	12.65	528659	260829	24.452	32.438 #
27)		2,4'-DDT	14.15	13.05	257412	192781	11.429	22.569 #

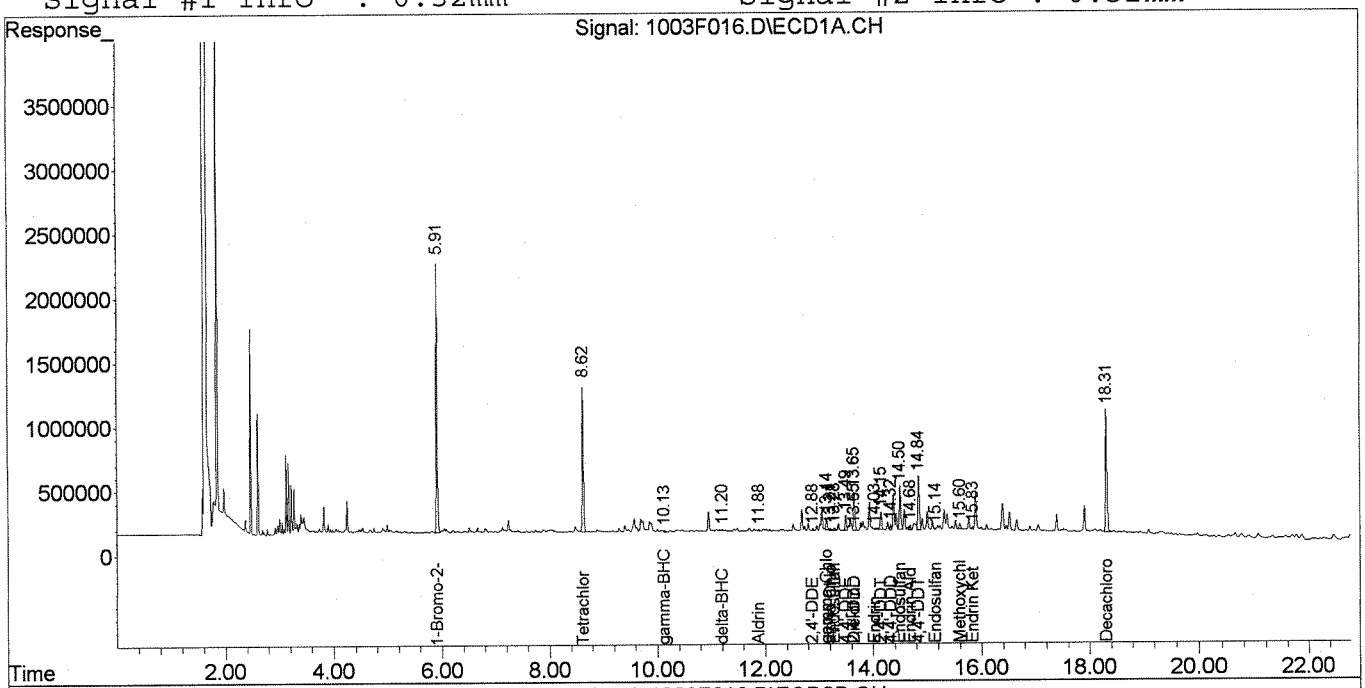
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

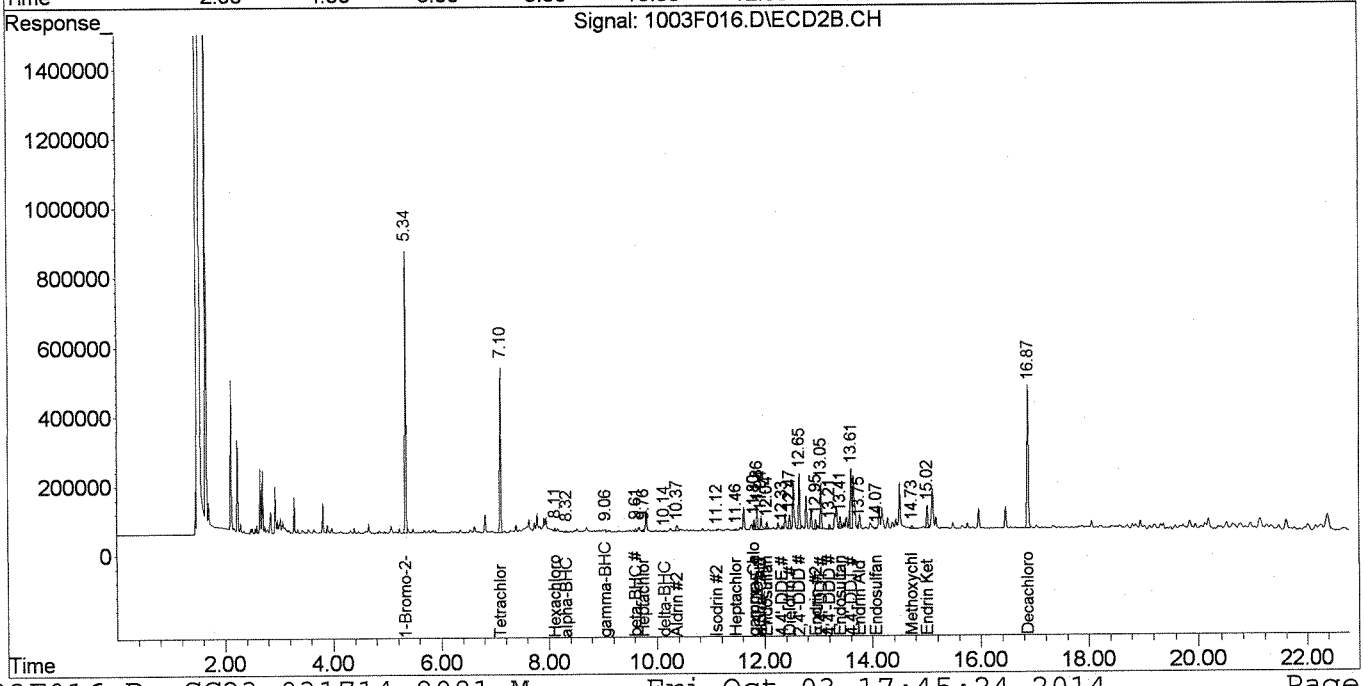
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:37 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

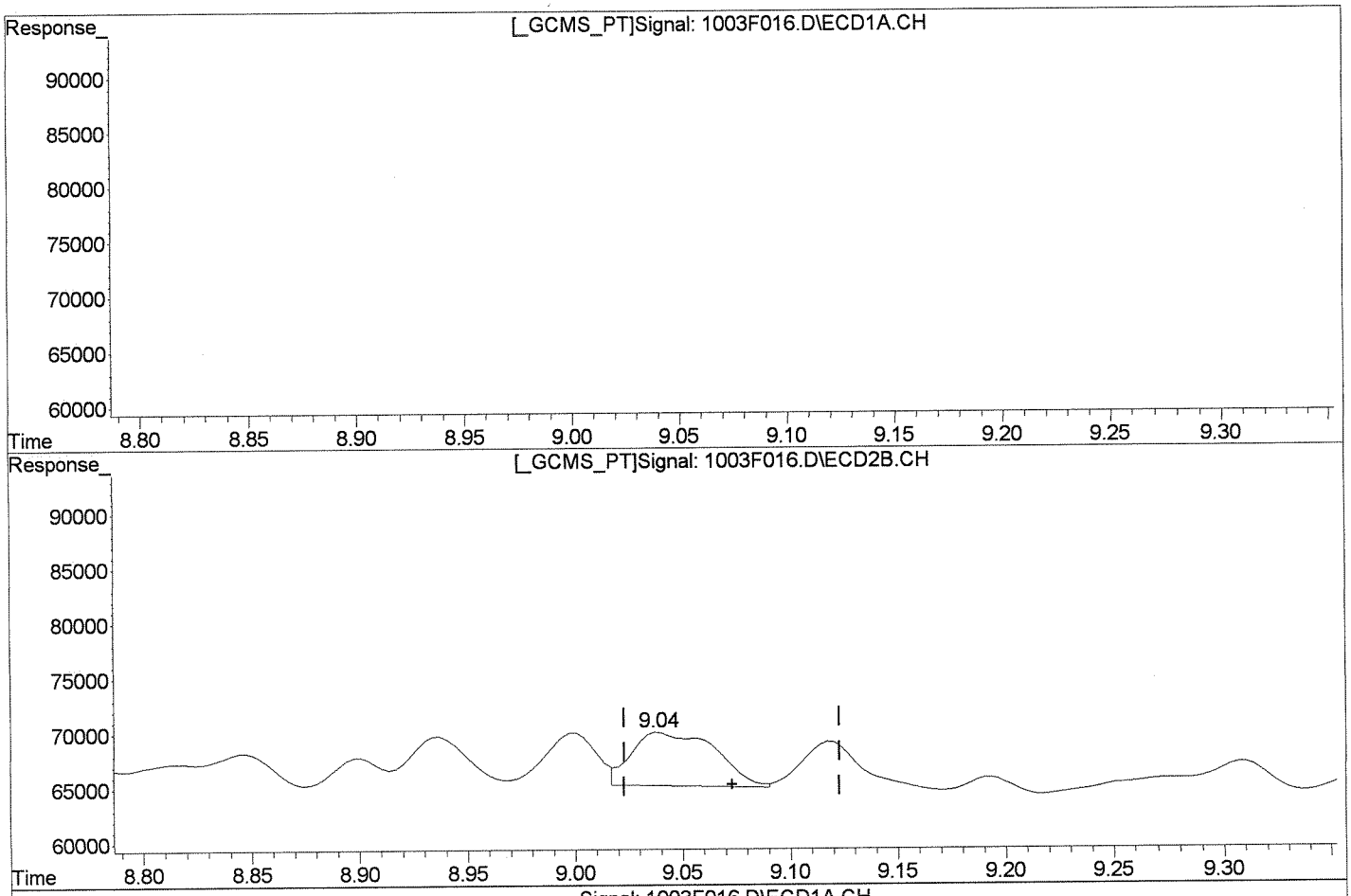




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.13min 0.490ug/L

response 19781

(6) gamma-BHC (Lindane) #2

9.04min 0.891ug/L

response 13053

Manual Integration:

Before

10/03/14

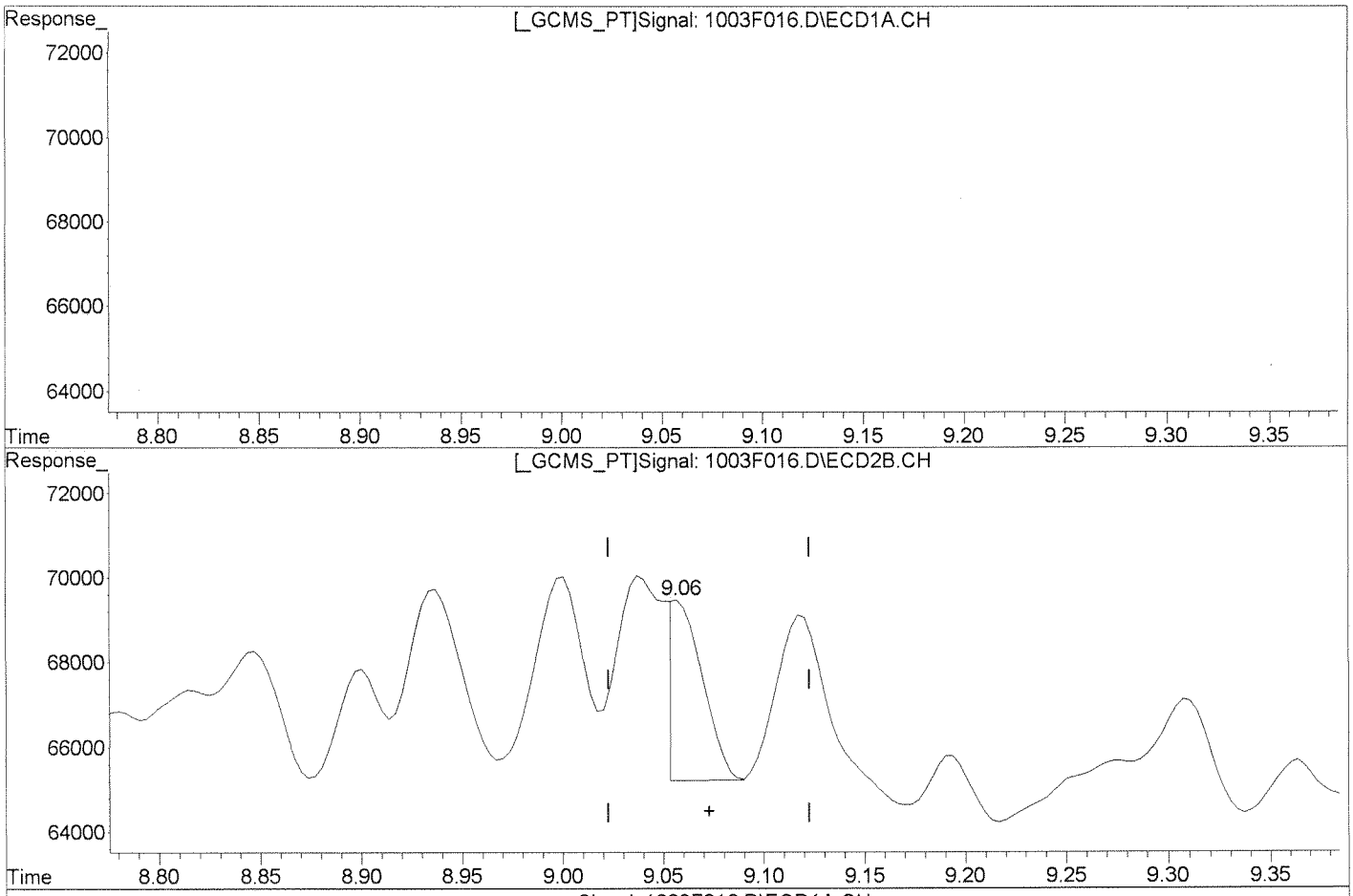
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:35:48 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:37 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



(6) gamma-BHC (Lindane)

10.13min 0.490ug/L

response 19781

Manual Integration:

After

Wrong Peak

10/06/14

(6) gamma-BHC (Lindane) #2

9.06min 0.281ug/L m

response 4116

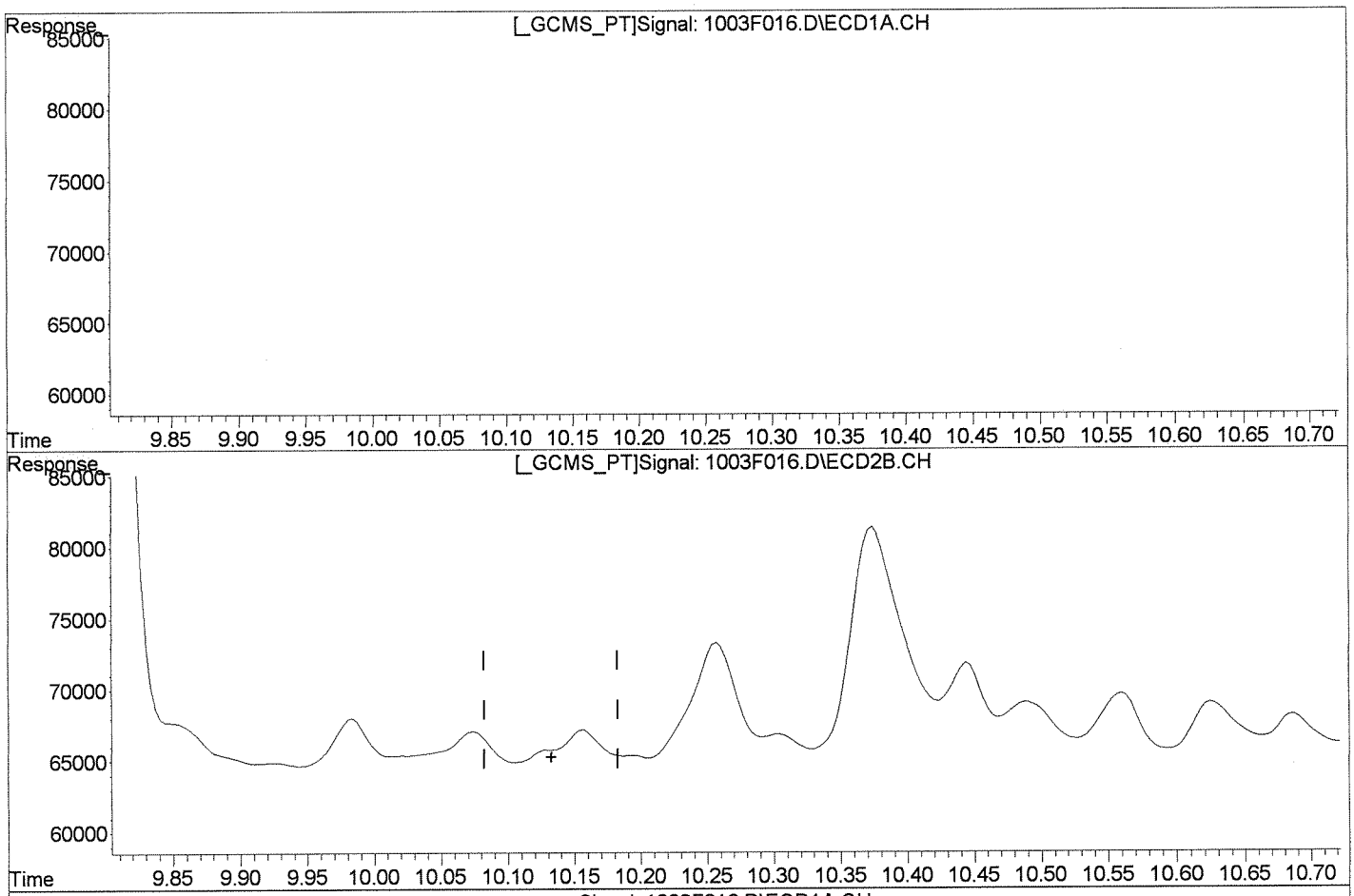
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Mon Oct 06 10:02:28 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(7) delta-BHC

11.20min 0.311ug/L

response 12178

(7) delta-BHC #2

0.00min 0.000ug/L

response 0

Manual Integration:

Before

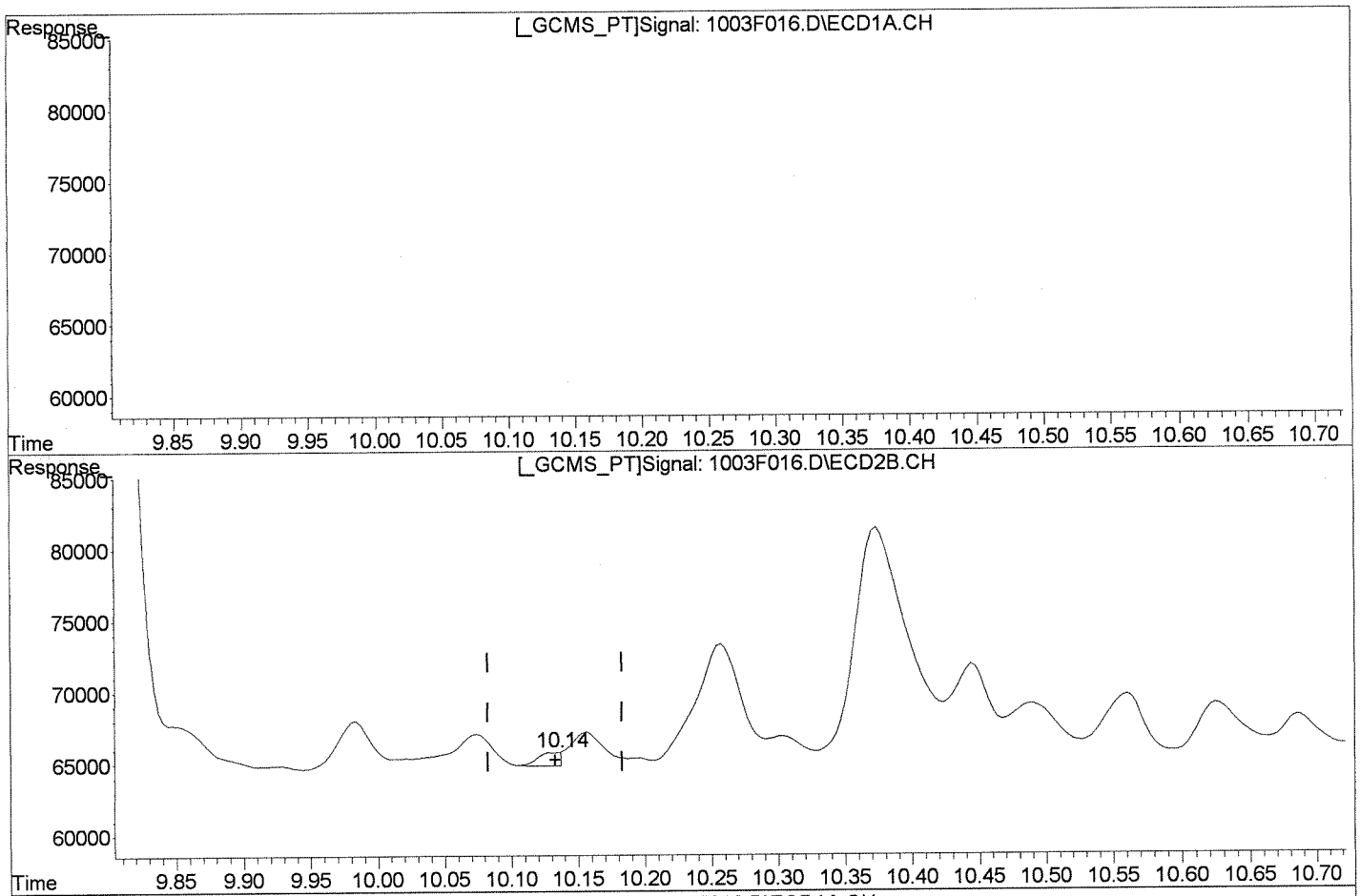
10/03/14

(+) = Expected Retention Time
1003F016.D GC23-031714-8081.M Fri Oct 03 17:35:57 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(7) delta-BHC

11.20min 0.311ug/L

response 12178

(7) delta-BHC #2

10.14min 0.079ug/L m

response 1133

Manual Integration:

After

Missed Peak

10/03/14

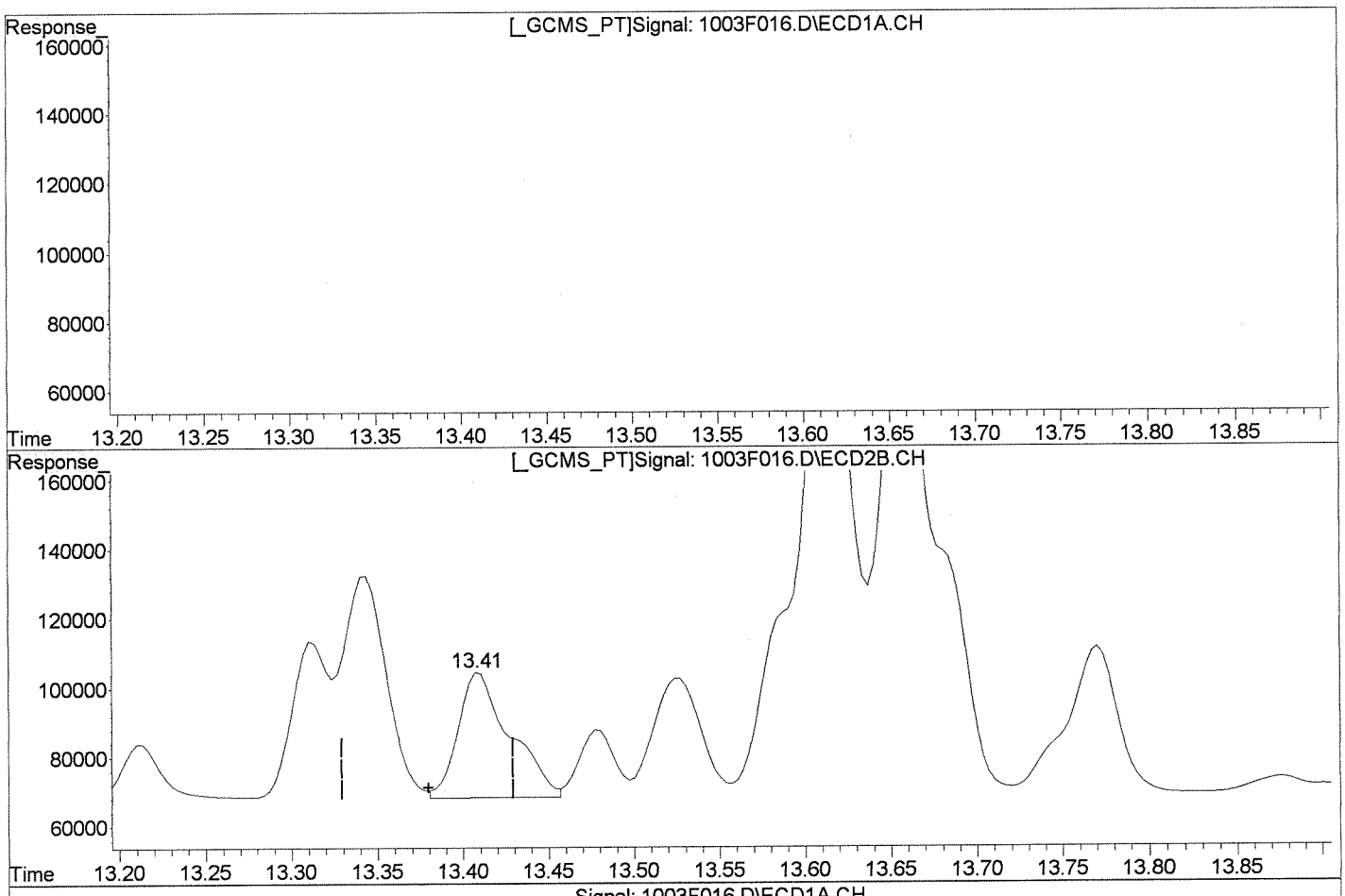
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:01 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(18) Endosulfan II

14.50min 21.525ug/L

response 661305

Manual Integration:

Before

10/03/14

(18) Endosulfan II #2

13.41min 6.795ug/L

response 76653

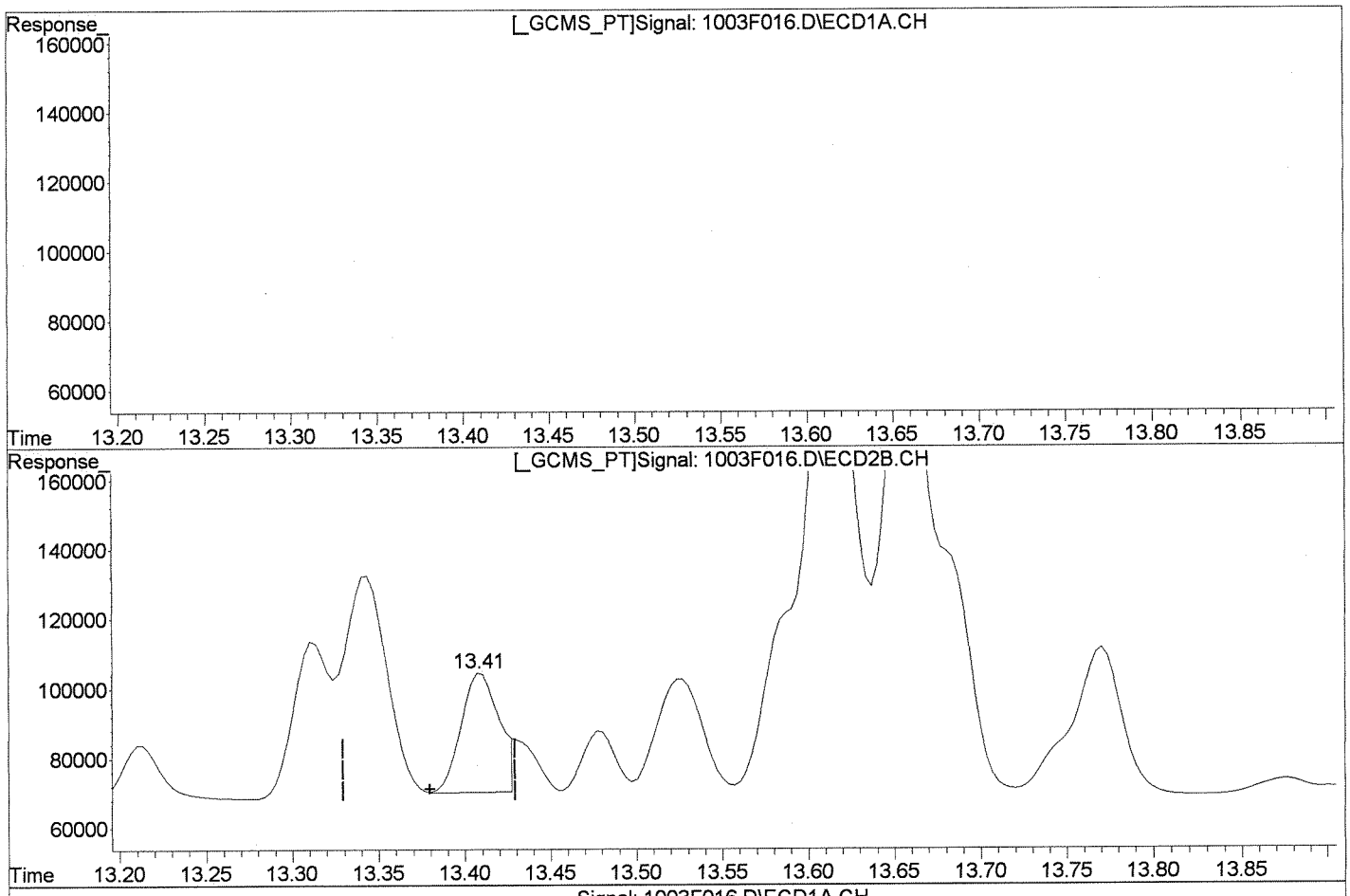
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:17 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(18) Endosulfan II

14.50min 21.525ug/L

response 661305

Manual Integration:

After

Baseline/Shoulder

10/03/14

(18) Endosulfan II #2

13.41min 4.792ug/L m

response 54060

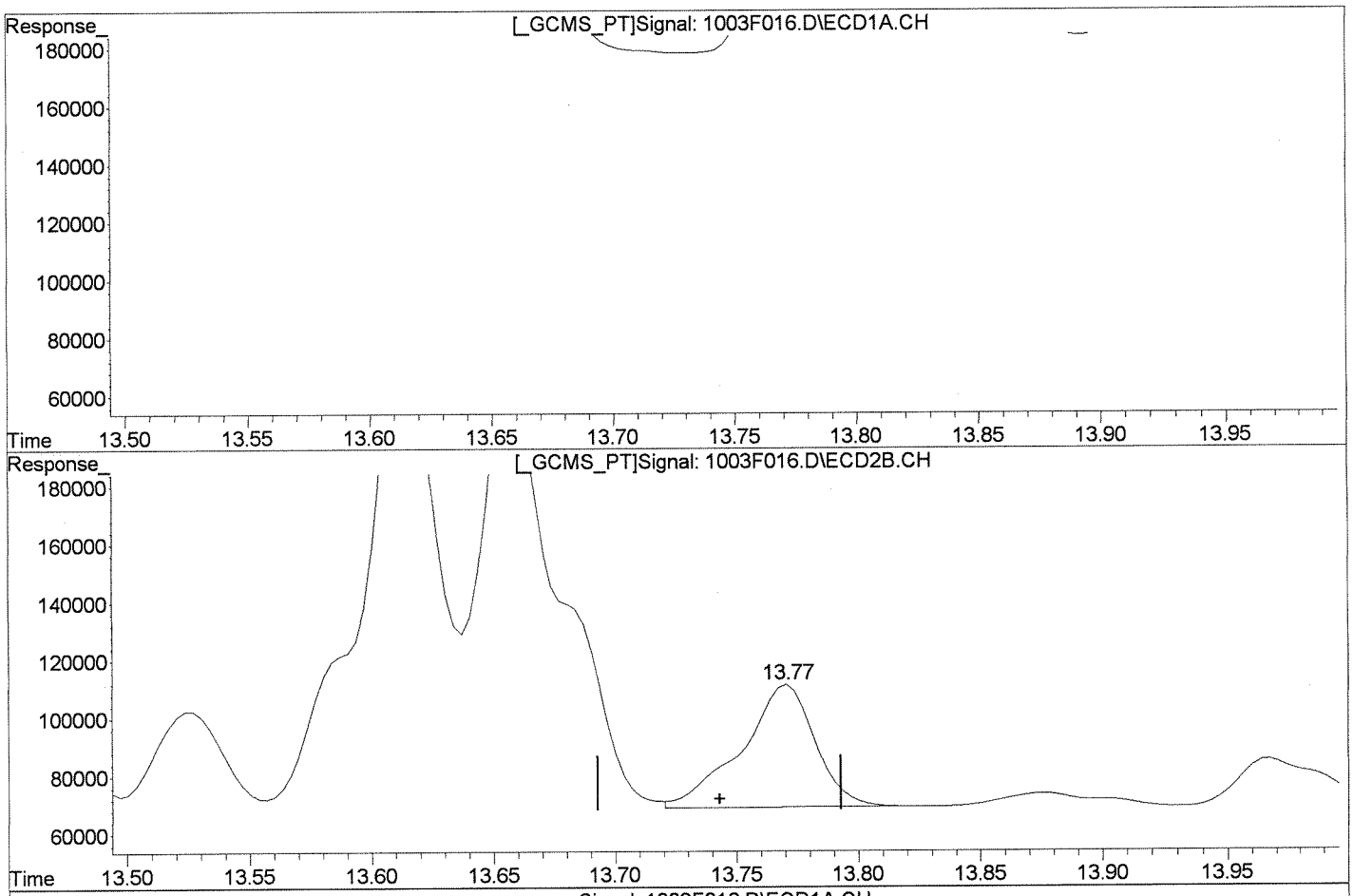
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:20 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(20) Endrin Aldehyde

14.68min 2.967ug/L

response 59785

(20) Endrin Aldehyde #2

13.77min 10.170ug/L

response 88473

Manual Integration:

Before

10/03/14

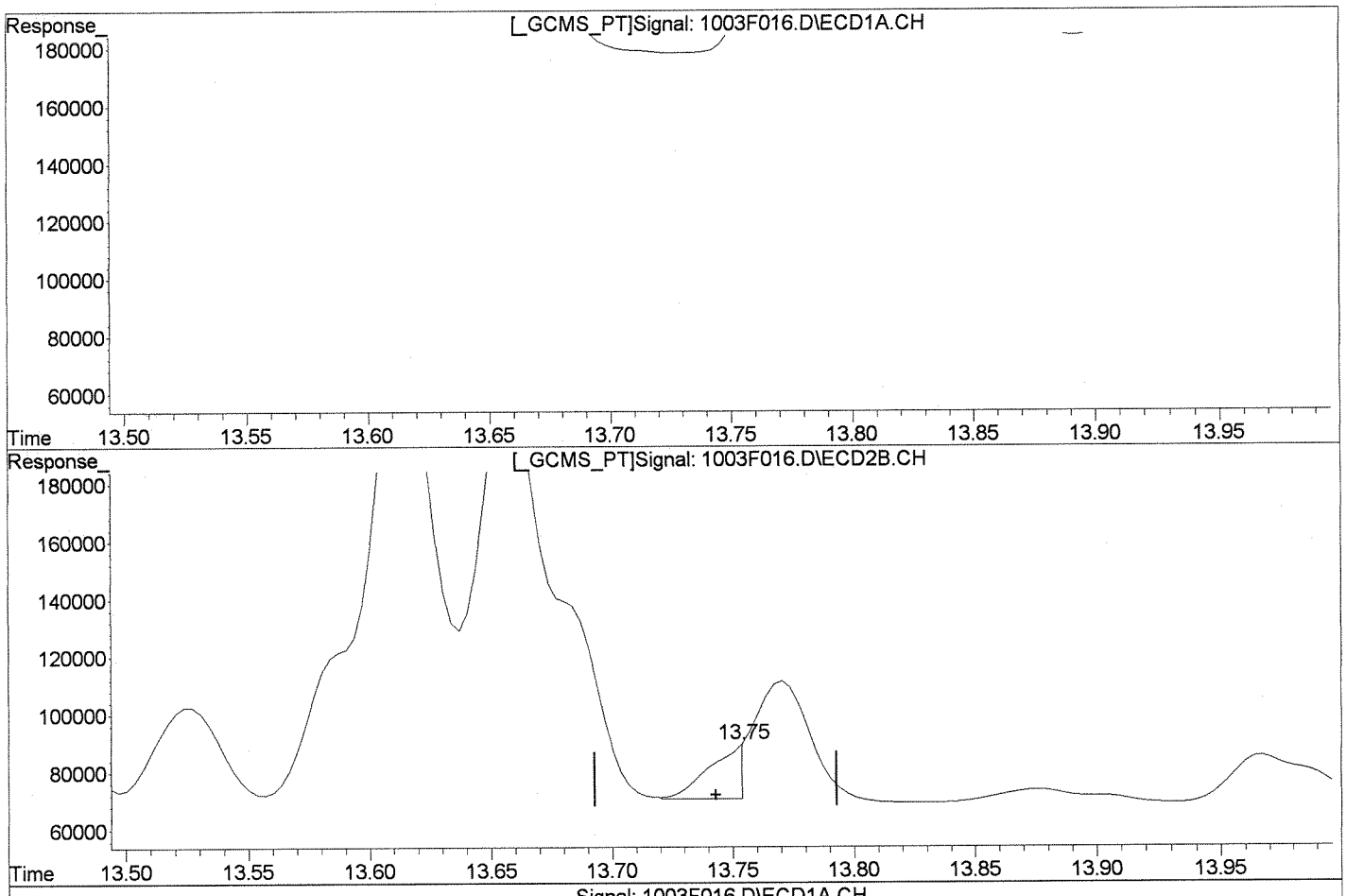
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:31 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



(20) Endrin Aldehyde
14.68min 2.967ug/L
response 59785

Manual Integration:
After
Wrong Peak
10/03/14

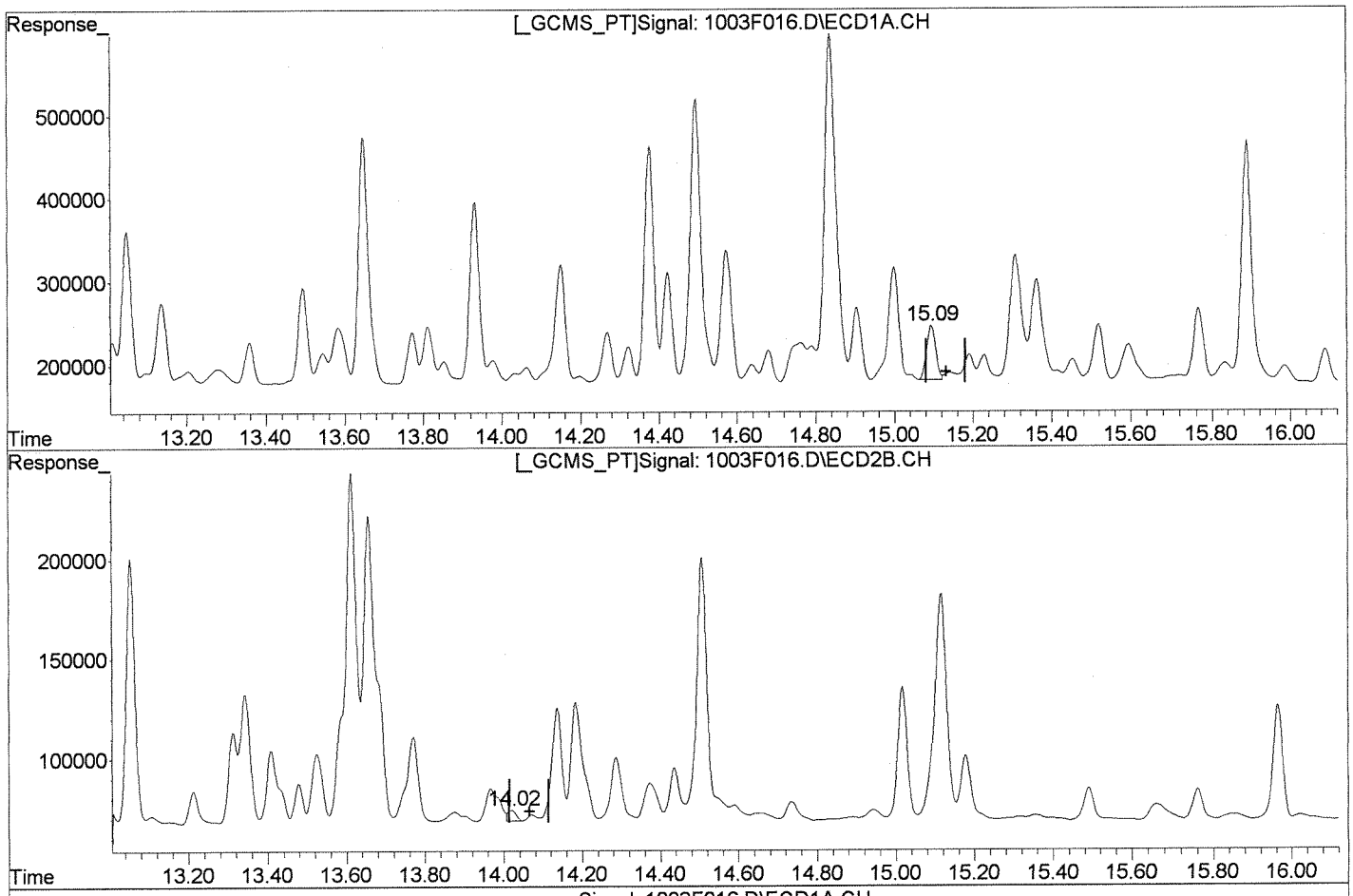
(20) Endrin Aldehyde #2
13.75min 2.168ug/L m
response 18857

(+) = Expected Retention Time
1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:36 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(21) Endosulfan Sulfate

15.09min 3.887ug/L

response 105780

Manual Integration:

Before

10/03/14

(21) Endosulfan Sulfate #2

14.02min 0.706ug/L

response 7428

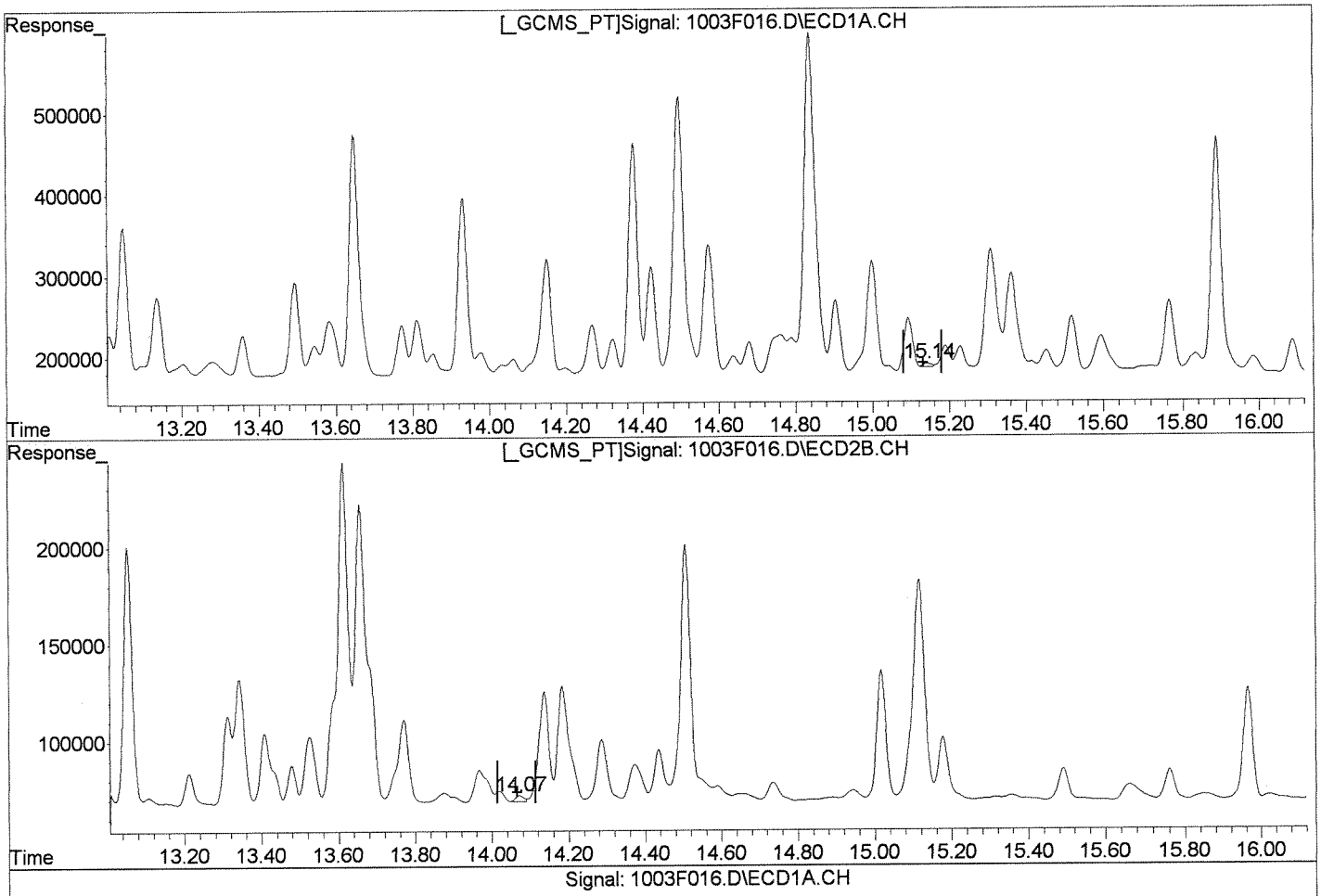
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:40 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(21) Endosulfan Sulfate

15.14min 0.228ug/L m

response 6214

(21) Endosulfan Sulfate #2

14.07min 0.438ug/L m

response 4603

Manual Integration:

After

Wrong Peak

10/03/14

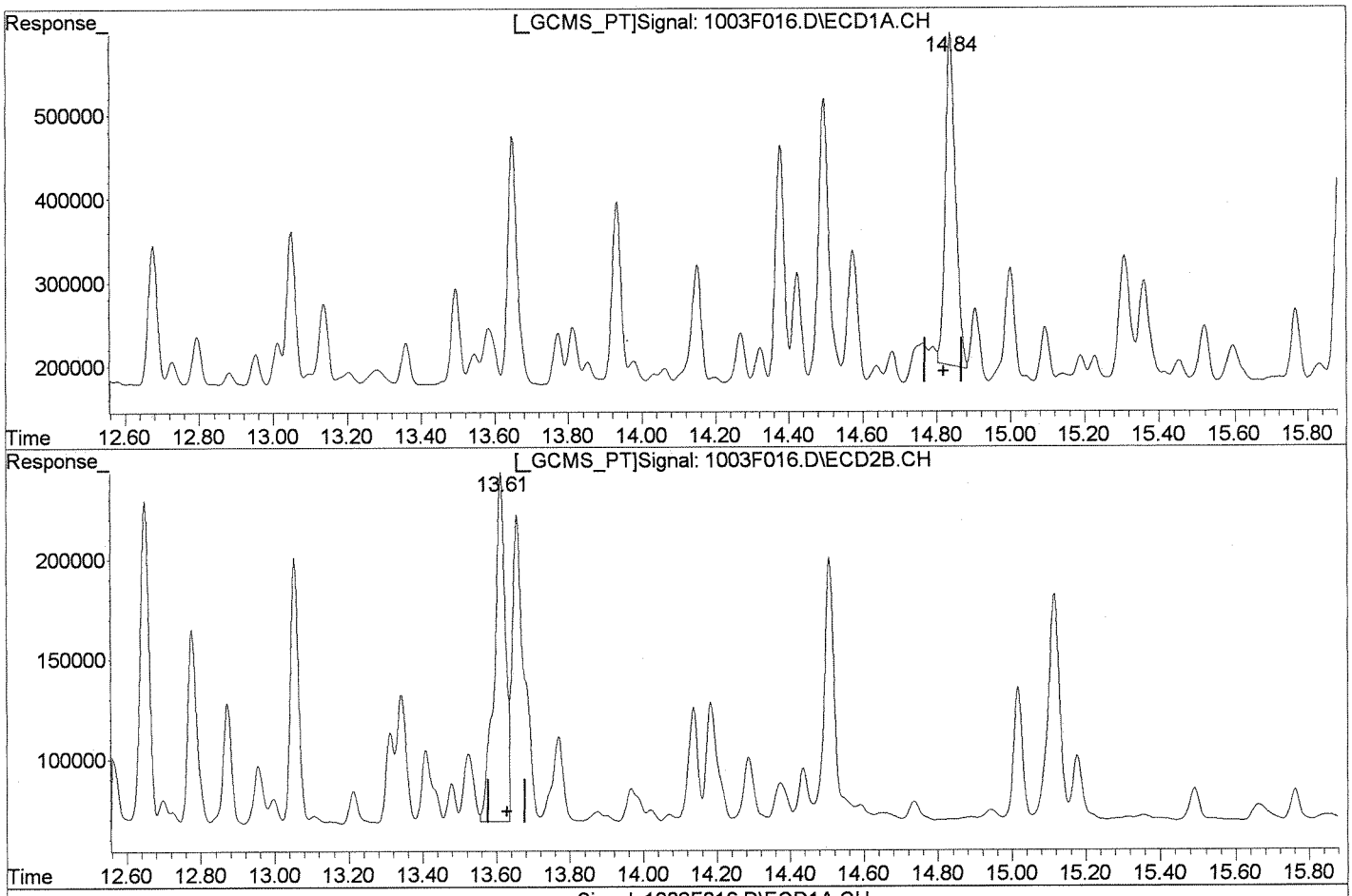
(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:36:49 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F016.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 29.398ug/L

response 763572

(22) 4,4'-DDT #2

13.61min 36.865ug/L

response 370966

Manual Integration:

Before

10/03/14

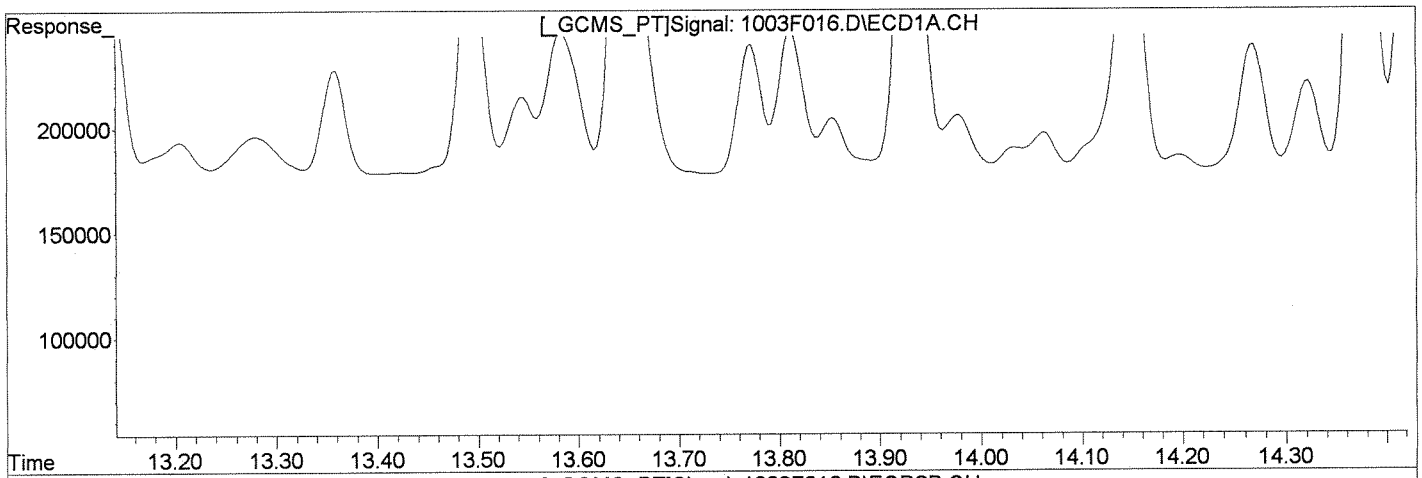
(+) = Expected Retention Time

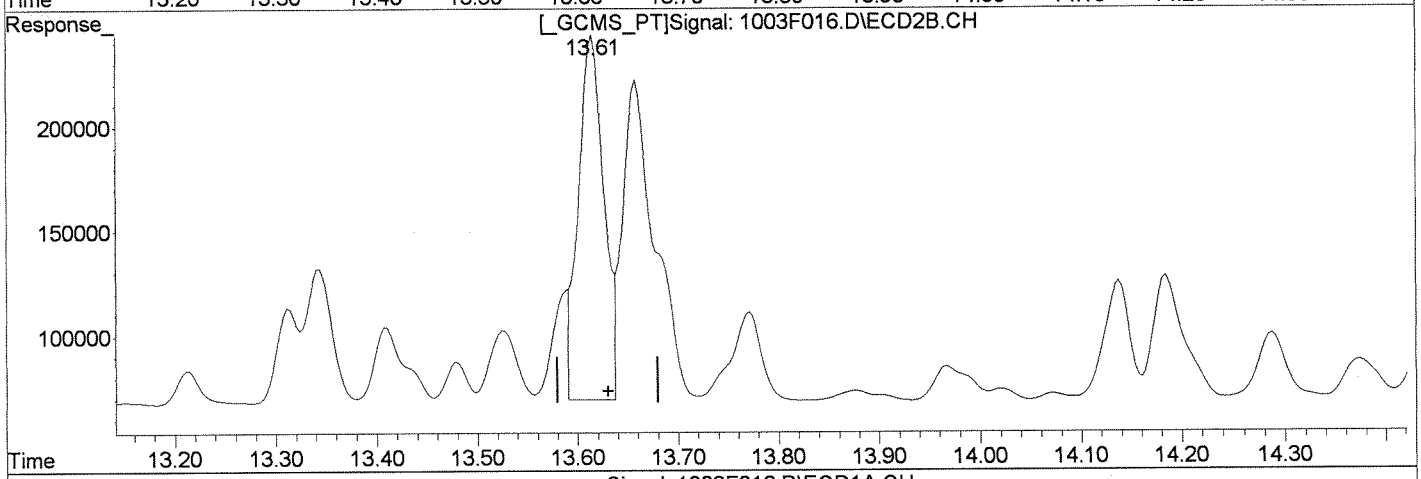
1003F016.D GC23-031714-8081.M Fri Oct 03 17:37:01 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F016.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 32.903ug/L m

response 854624

(22) 4,4'-DDT #2

13.61min 30.380ug/L m

response 305706

Manual Integration:

After

Baseline/Shoulder

10/03/14

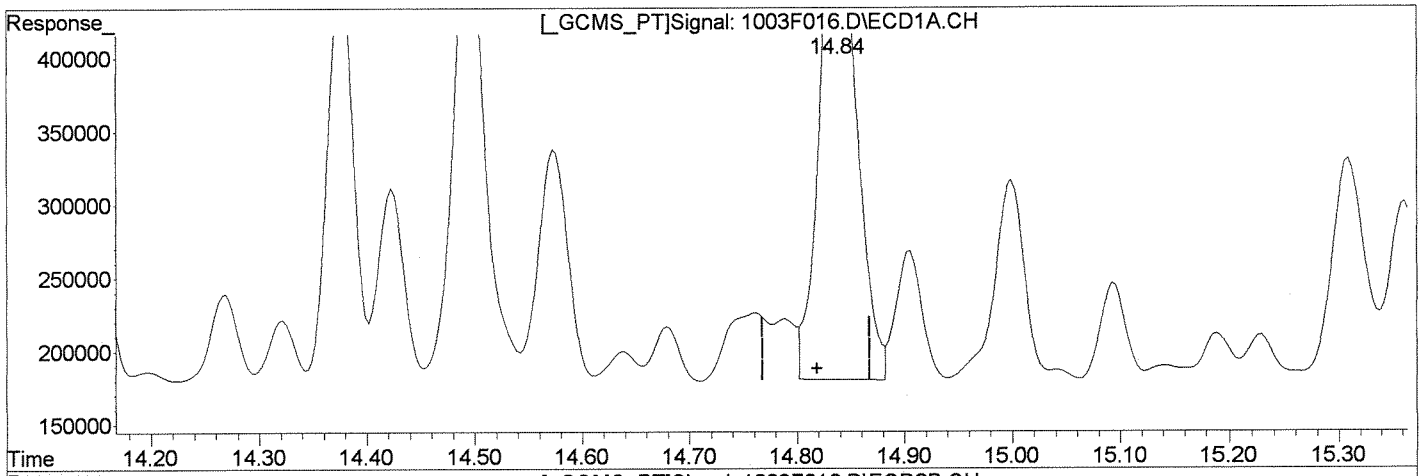
(+) = Expected Retention Time

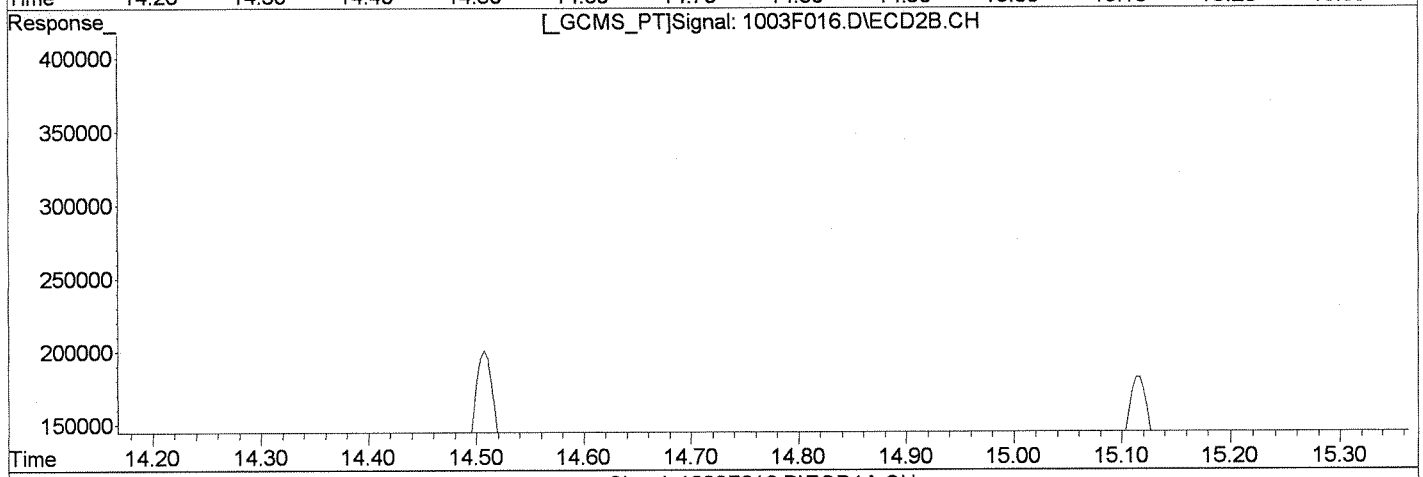
1003F016.D GC23-031714-8081.M Fri Oct 03 17:37:20 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F016.D\ECD1A.CH Vial: 53
Signal #2 : J:\GC23\DATA\100314\1003F016.D\ECD2B.CH
Acq On : 03 Oct 2014 2:27 pm Operator: SMURRAY
Sample : K1409921-007 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F016.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 32.903ug/L m

response 854624

(22) 4,4'-DDT #2

13.61min 30.380ug/L m

response 305706

Manual Integration:

After

Baseline/Shoulder

10/03/14

(+) = Expected Retention Time

1003F016.D GC23-031714-8081.M Fri Oct 03 17:37:23 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F017.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 14:56
Date Quantitated: 10/03/2014 17:39
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RD
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: Am 10/6/14

Secondary Review: [signature]

Printed: 10/04/2014 10:07:19
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F017.D\1003F017C.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 14:56
Date Quantitated: 10/03/2014 17:39
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Qm 10/6/14

Secondary Review: [signature] 10/7/14

Printed: 10/04/2014 10:07:22
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F017.D\1003F017c.d			**Vial:**	54
Acqu Date:	10/03/2014 14:56	**Quant Date:**	10/06/2014 10:05	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-008				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380550	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.91	-0.25	5.34	-0.21	2816584	1006174	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.63	+0.02	7.11	+0.02	1930447	694587	57.28	52.31			57 OK
							%Recovery =	57 OK	52 OK	Limits =	21-112	
1	Decachlorobiphenyl	18.32	+0.02	16.88	+0.02	1858954	1037853	62.22	92.22			92 OK
							%Recovery =	62 OK	92 OK	Limits =	15-130	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			8.32		0	10926	0.0000	0.6830	0.35U	0.53J	0.35U
1	beta-BHC			9.62	+0.02	0d	60338	0.0000	8.20	0.50U	6.4	0.50U
1	gamma-BHC (Lindane)	10.12		9.06		85850m	16745m	2.15	1.13	1.7Ui	0.89Ui	0.89Ui
1	delta-BHC	11.26	+0.04	10.16	+0.04	20218	20801	0.5200	1.44	0.41J	1.1J	**0.41**JP
1	Heptachlor	11.30	-0.01	9.77	+0.03	23187	11734m	0.5970	0.8510	0.83U	0.83U	0.83U
1	4,4'-DDE	13.50	+0.02	12.34	+0.02	661211	49435	18.65	3.61	15Ui	2.9Ui	2.9Ui
1	4,4'-DDD	14.33	+0.02	13.22	+0.02	313737	116520	10.84	10.88	8.5	8.5	**8.5**
1	Endrin Aldehyde	14.65		13.76	+0.03	64224	45991m	3.22	5.25	2.6Ui	4.1Ui	4.1Ui
1	4,4'-DDT	14.84	+0.04	13.62		2246728	795177m	87.28	78.42	68	61	**61**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.104 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F017.D\1003F017c.d			**Vial:**	54
Acqu Date:	10/03/2014 14:56	**Quant Date:**	10/06/2014 10:05	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-008				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 63.7 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 16:58:53 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.91	5.34	2816584	1006174	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.63	7.11	1930447	694587	57.278	52.312
28)	s	Decachlorobiphen	18.32	16.88	1858954	1037853	62.215	92.215 #
		Target Compounds						
3)		alpha-BHC	0.00	8.32	0	10926	N.D.	0.683 #
4)		Hexachlorobenzen	9.62	8.11	209183	73732	4.228	4.801
5)		beta-BHC	0.00	9.62	0	60338	N.D. d	8.197
6)		gamma-BHC (Linda	10.12	9.06	85850	16745	2.146m	1.134m#
7)		delta-BHC	11.26	10.16f	20218	20801	0.520	1.435 #
8)		Heptachlor	11.30f	9.77	23187	11734	0.597	0.851m#
9)		Aldrin	11.88	10.38f	73044	171387	1.846m	11.251 #
10)		Isodrin	12.44	11.15	44141	49894	1.333	3.948 #
11)		Heptachlor Epoxi	12.62	11.43	18632	9969	0.510	0.736m#
12)		gamma-Chlordane	13.14	11.83	461575	28527	12.498	2.016 #
13)		Endosulfan I	13.28f	12.05	181393	93720	5.509	7.652 #
14)		alpha-Chlordane	13.21	11.94f	114201	239848	3.134	17.302 #
15)		Dieldrin	13.66	12.47	1546397	237195	43.842	17.168 #
16)		4,4'-DDE	13.50	12.34	661211	49435	18.645	3.605 #
17)		Endrin	14.04	12.96	20119	114022	0.657m	9.595 #
18)		Endosulfan II	14.50	13.35f	1230728	296809	40.420	26.108 #
19)		4,4'-DDD	14.33	13.22	313737	116520	10.836	10.884
20)		Endrin Aldehyde	14.65	13.76	64224	45991	3.216	5.246m#
21)		Endosulfan Sulfa	15.14	14.08	63804	27926	2.366	2.635
22)		4,4'-DDT	14.84	13.62	2246728	795177	87.279	78.417m
23)		Endrin Ketone	15.77f	15.02	368959	362583	10.842	27.754 #
24)		Methoxychlor	15.60f	14.75	289701	76692	21.211	14.812 #
25)		2,4'-DDE	12.96f	11.87	210634	329551	8.949	37.052 #
26)		2,4'-DDD	13.66	12.66f	1546397	688968	72.169	85.027
27)		2,4'-DDT	14.16f	13.06	803920	513333	36.016	59.636 #

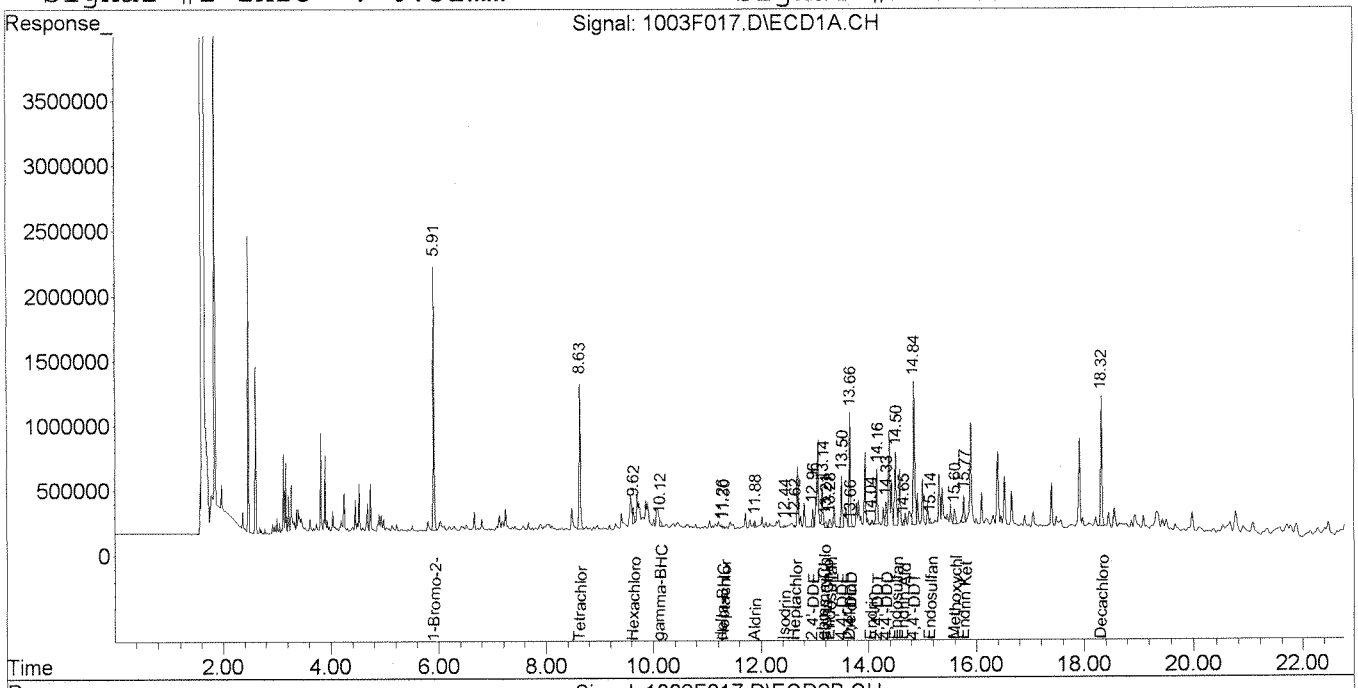
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

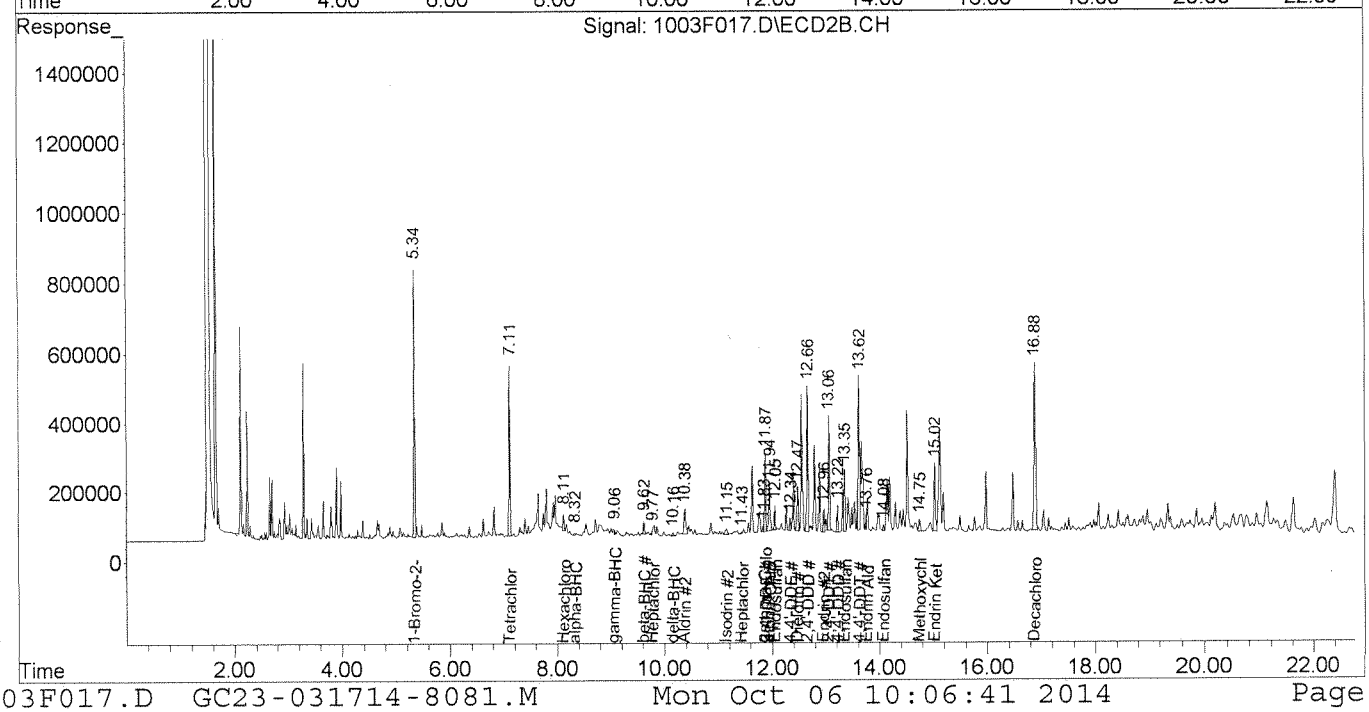
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 6 10:05 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

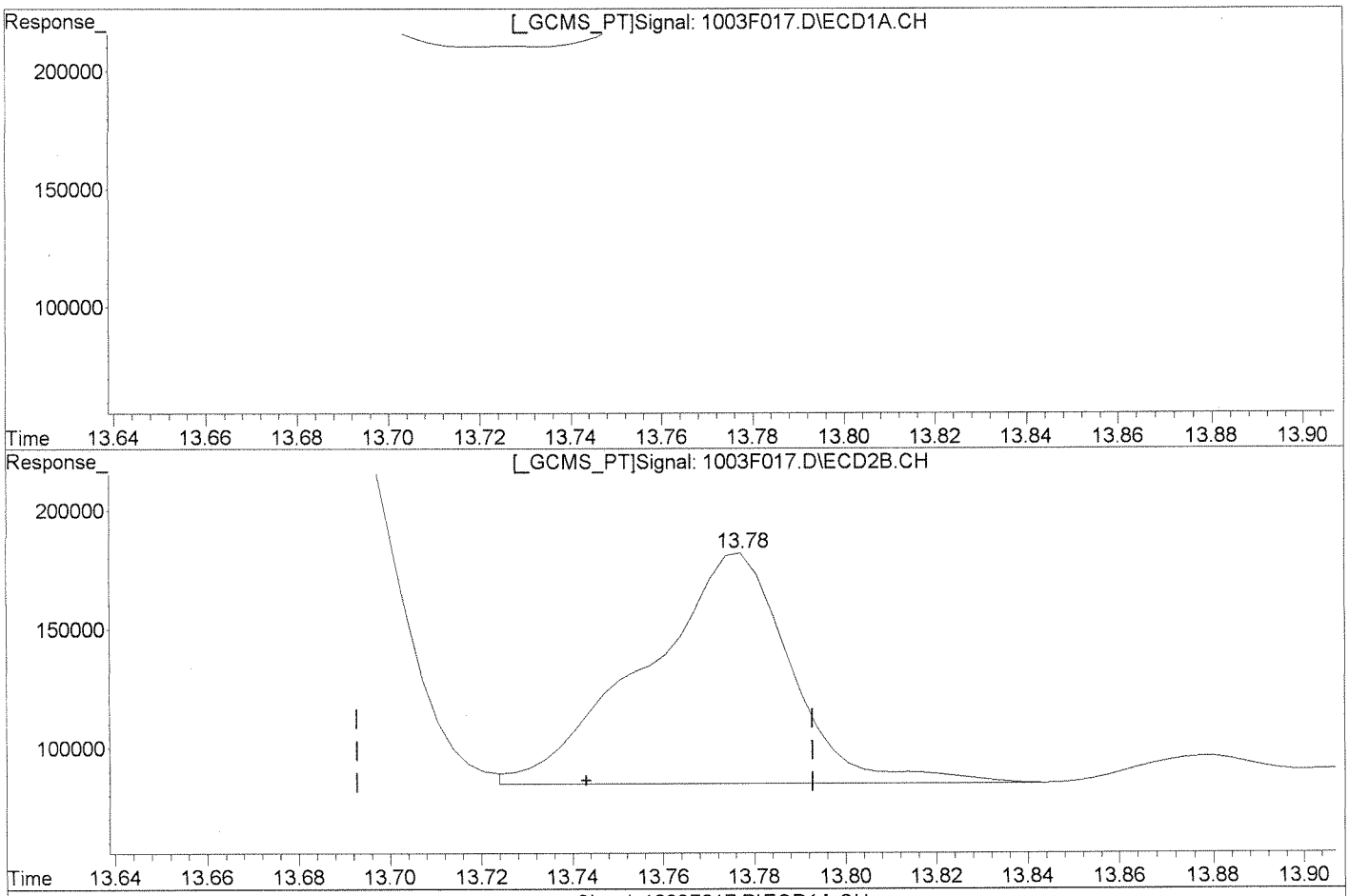




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:39 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(20) Endrin Aldehyde
14.65min 3.216ug/L
response 64224

(20) Endrin Aldehyde #2
13.78min 24.404ug/L
response 213944

Manual Integration:
Before

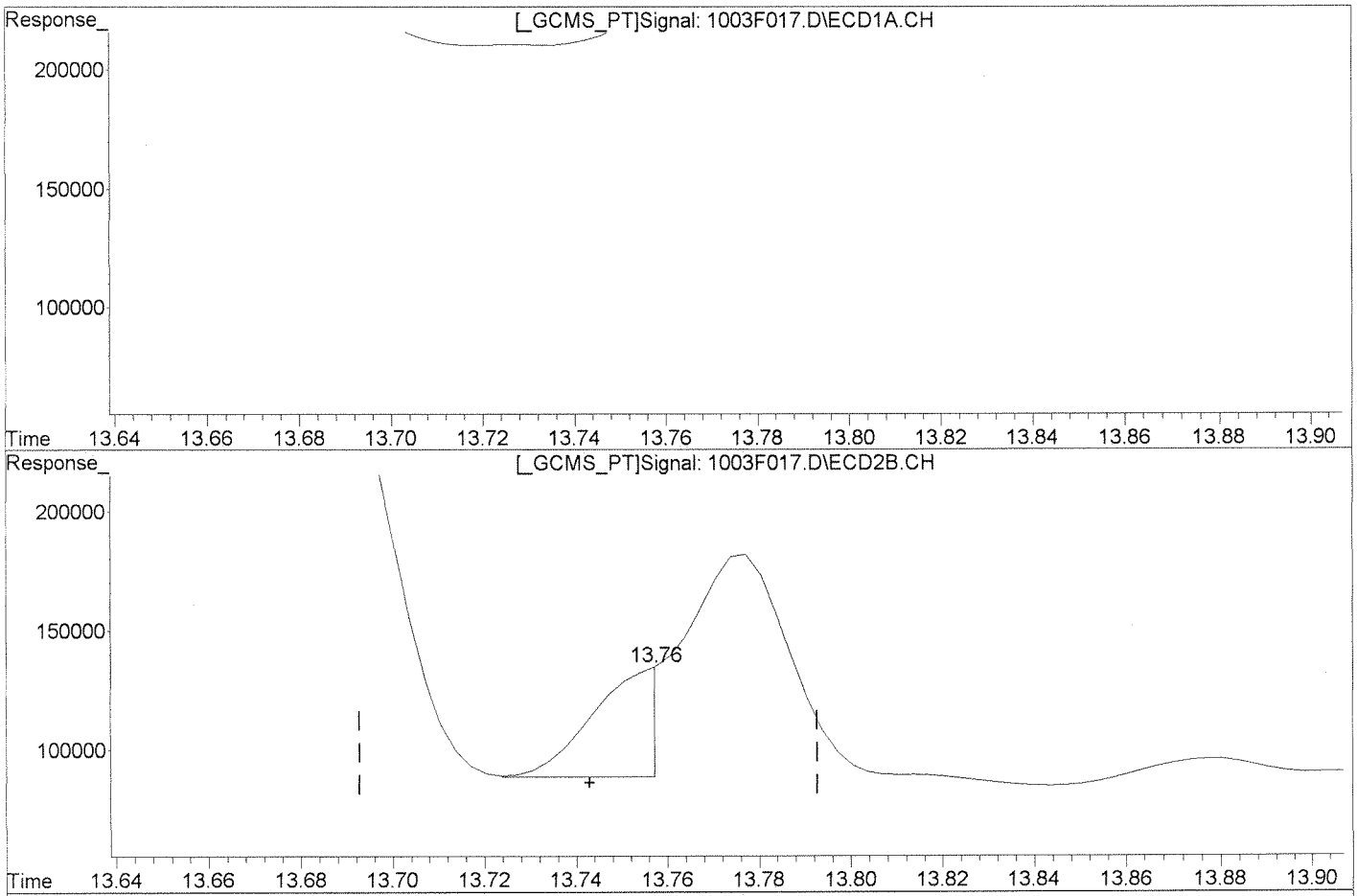
10/06/14

(+) = Expected Retention Time
1003F017.D GC23-031714-8081.M Mon Oct 06 10:05:51 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:39 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(20) Endrin Aldehyde
14.65min 3.216ug/L
response 64224

(20) Endrin Aldehyde #2
13.76min 5.246ug/L m
response 45991

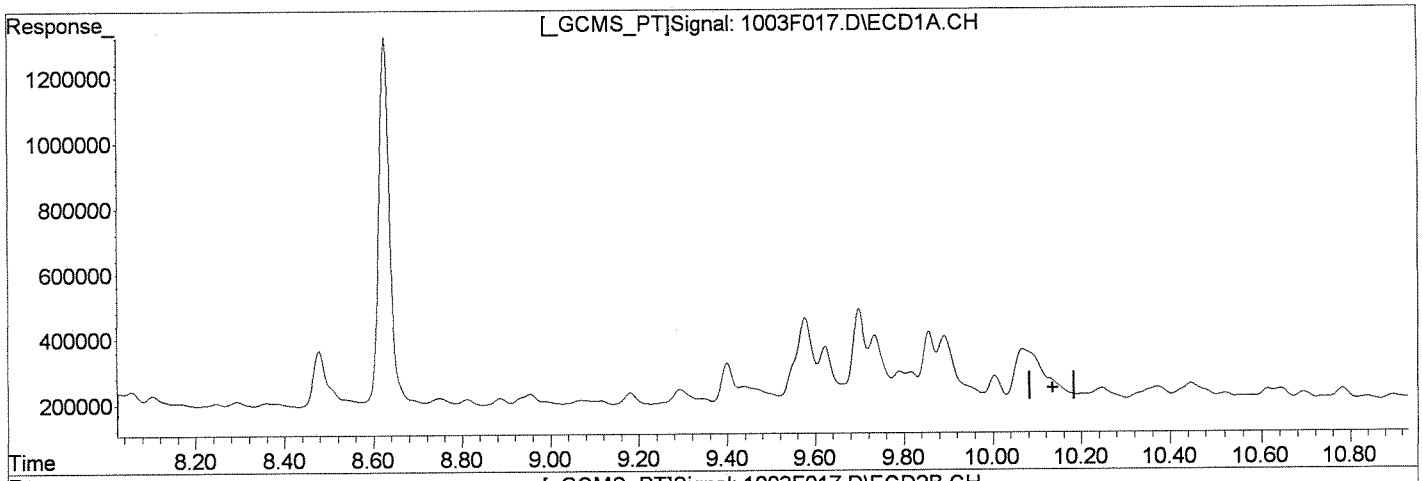
Manual Integration:
After
Wrong Peak
10/06/14

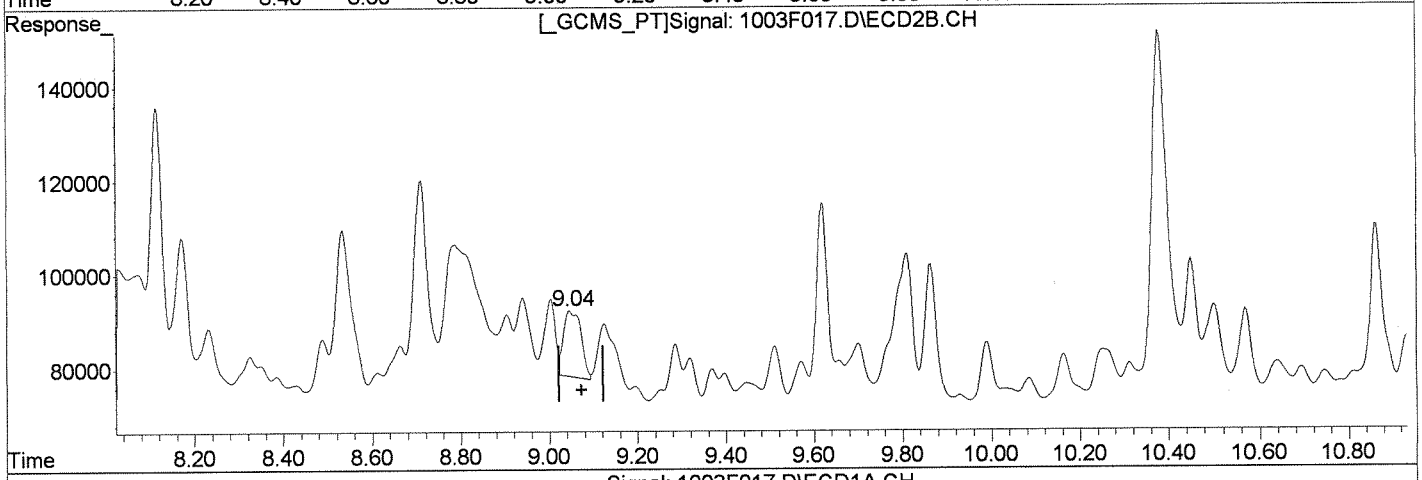
(+) = Expected Retention Time
1003F017.D GC23-031714-8081.M Mon Oct 06 10:06:17 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(6) gamma-BHC (Lindane)

0.00min 0.000ug/L

response 0

(6) gamma-BHC (Lindane) #2

9.04min 2.581ug/L

response 38104

Manual Integration:

Before

10/03/14

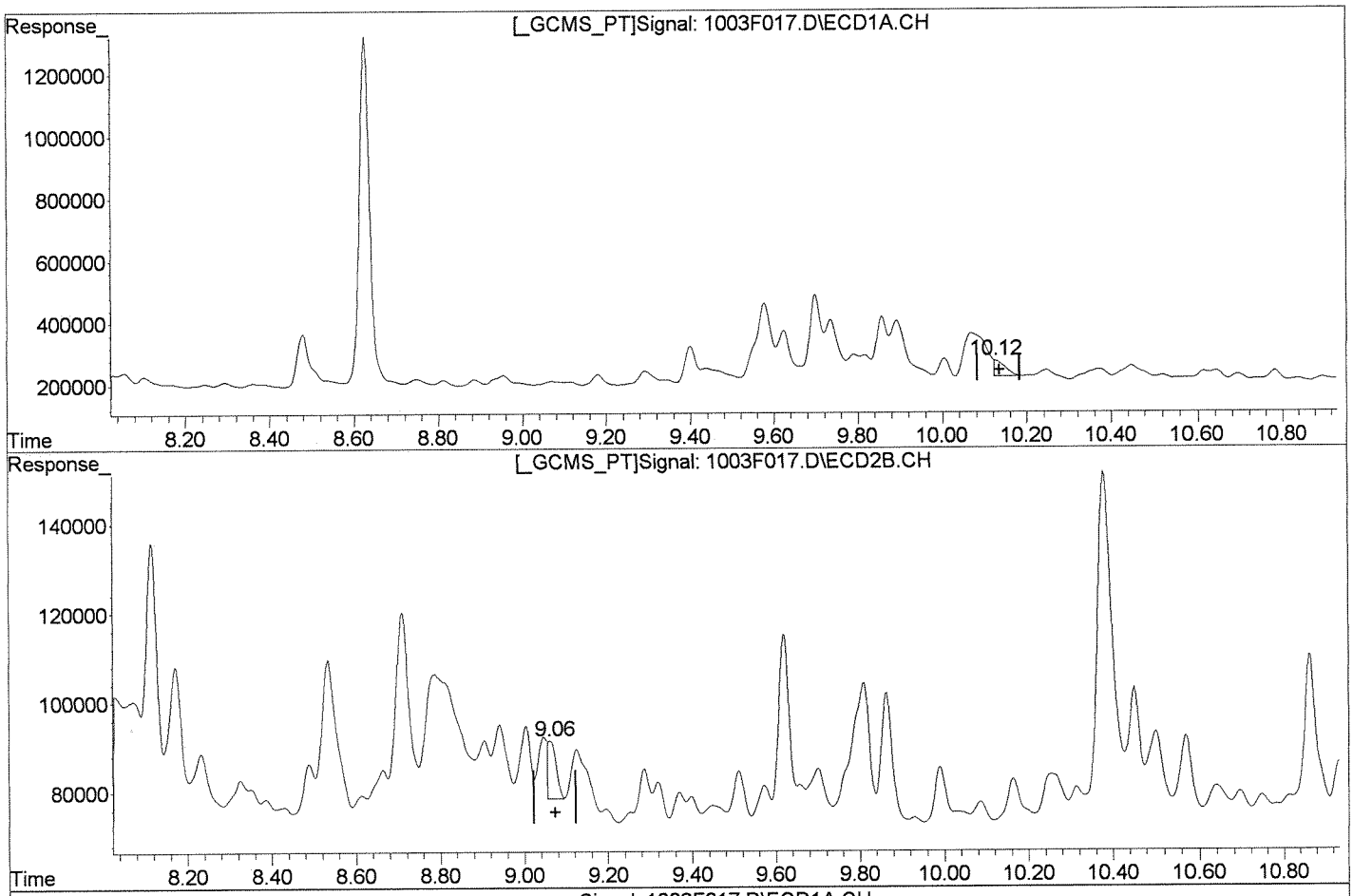
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:37:55 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.12min 2.146ug/L m

response 85850

(6) gamma-BHC (Lindane) #2

9.06min 1.134ug/L m

response 16745

Manual Integration:

After

Baseline/Shoulder

10/03/14

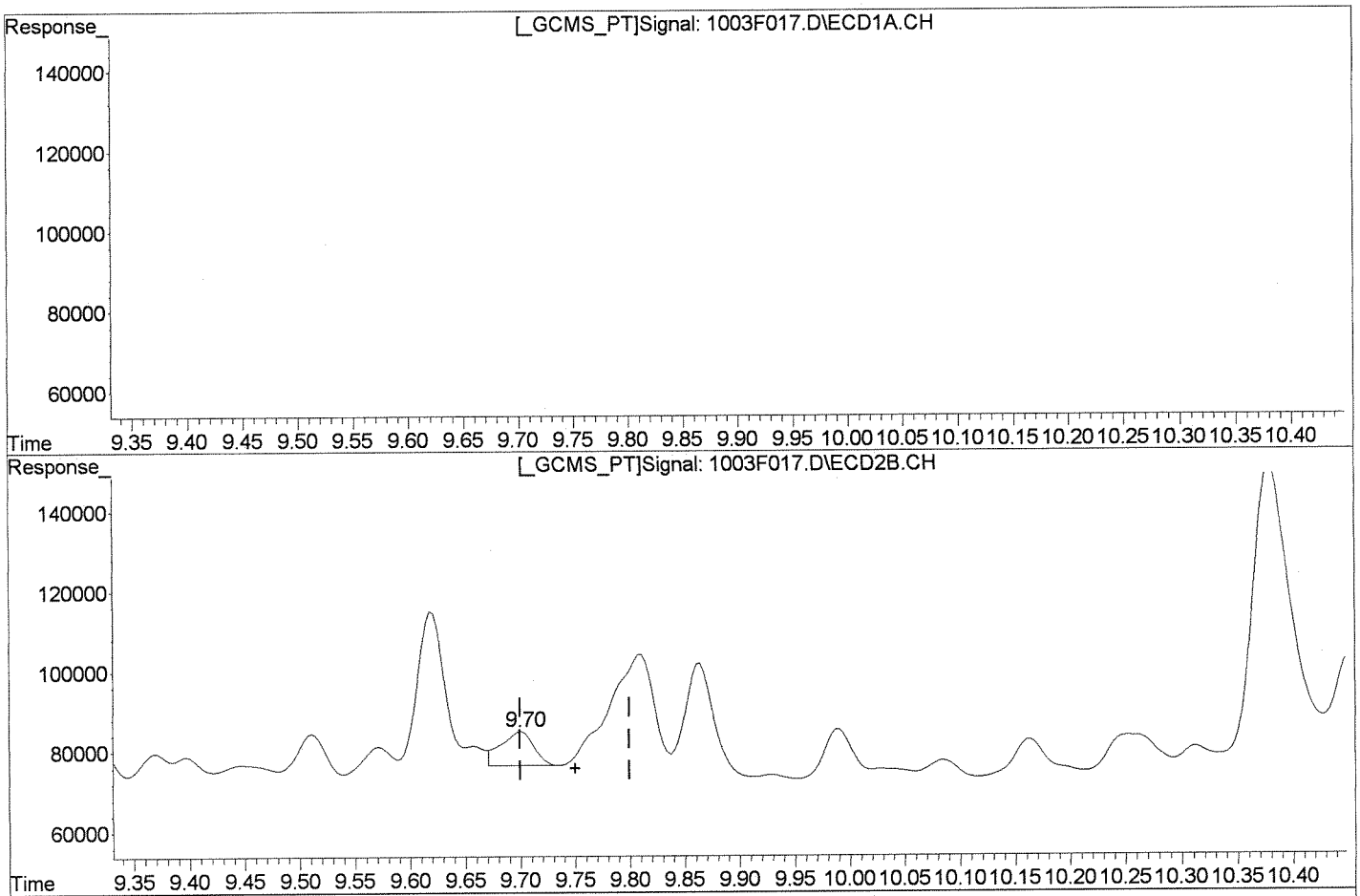
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:09 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(8) Heptachlor

11.30min 0.597ug/L

response 23187

(8) Heptachlor #2

9.70min 1.258ug/L

response 17343

Manual Integration:

Before

10/03/14

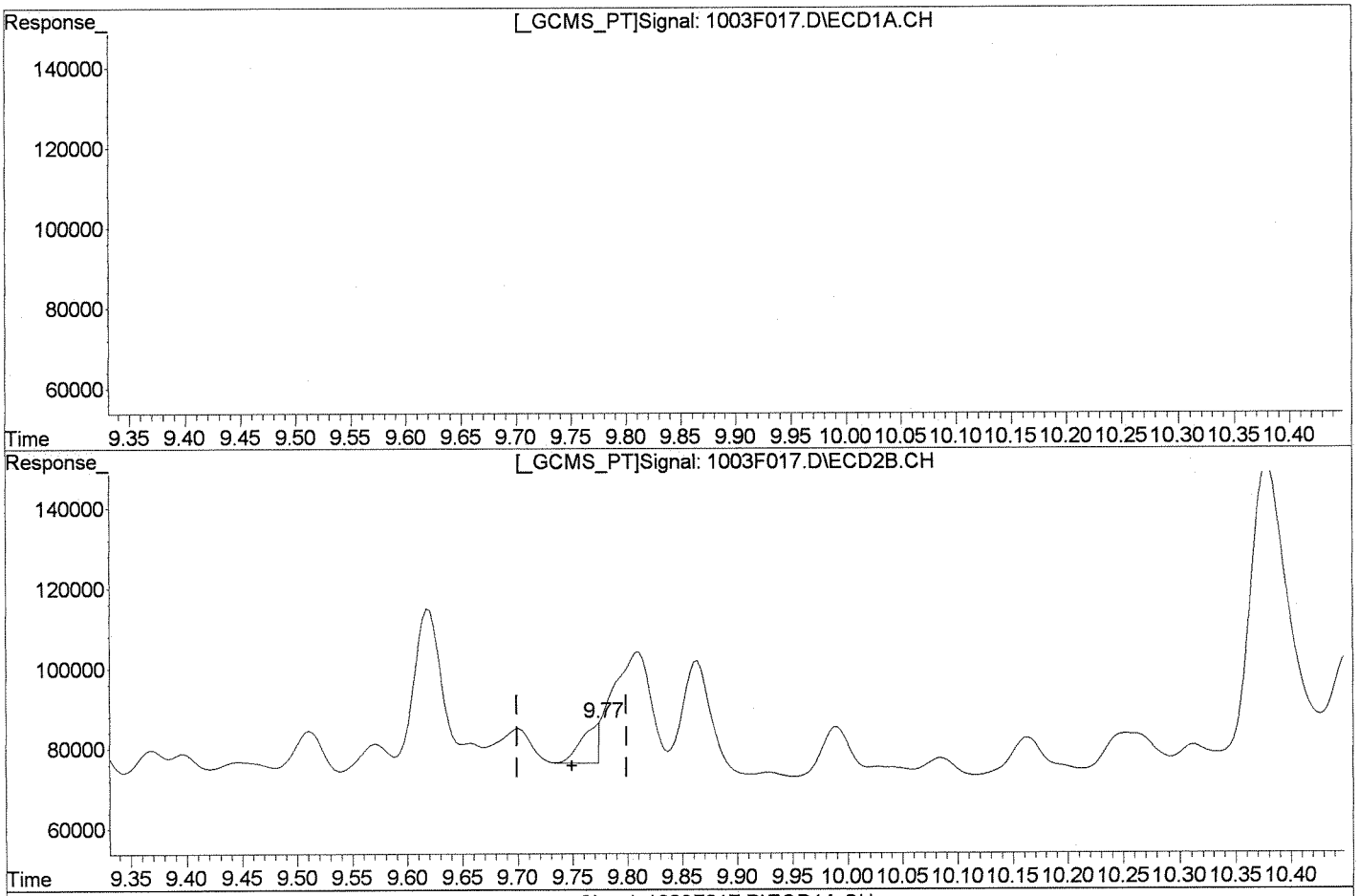
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:14 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(8) Heptachlor

11.30min 0.597ug/L

response 23187

(8) Heptachlor #2

9.77min 0.851ug/L m

response 11734

Manual Integration:

After

Wrong Peak

10/03/14

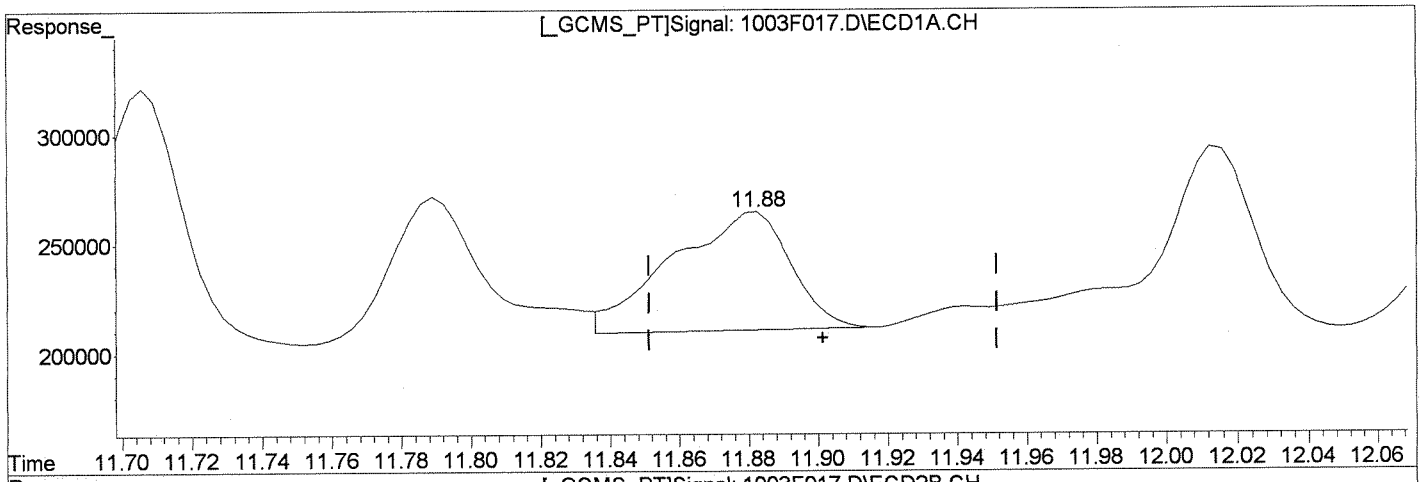
(+) = Expected Retention Time

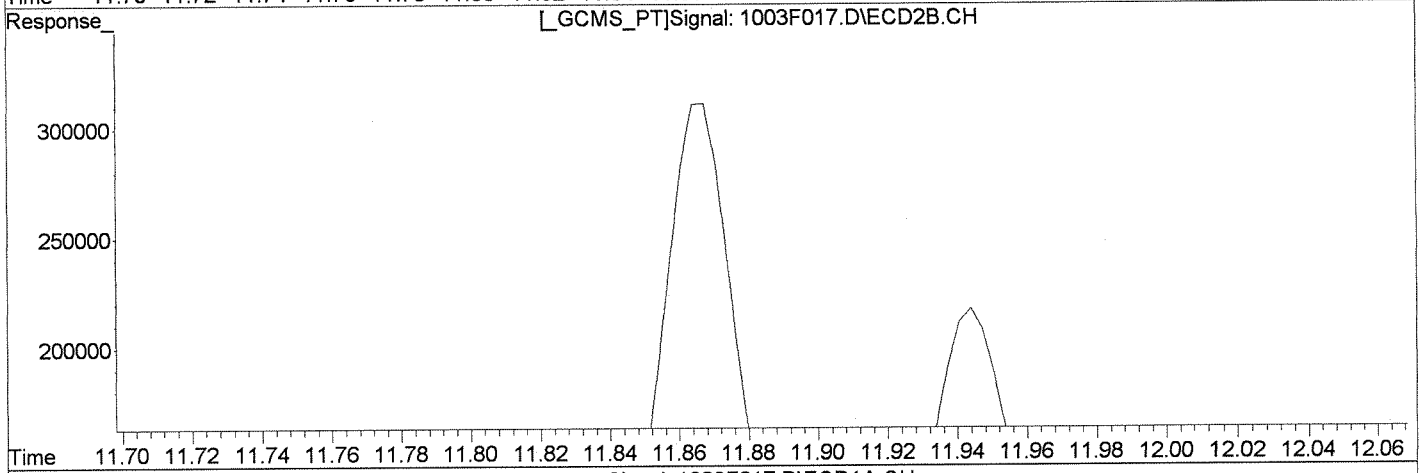
1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:20 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(9) Aldrin

11.88min 3.233ug/L

response 127932

(9) Aldrin #2

10.38min 11.251ug/L

response 171387

Manual Integration:

Before

10/03/14

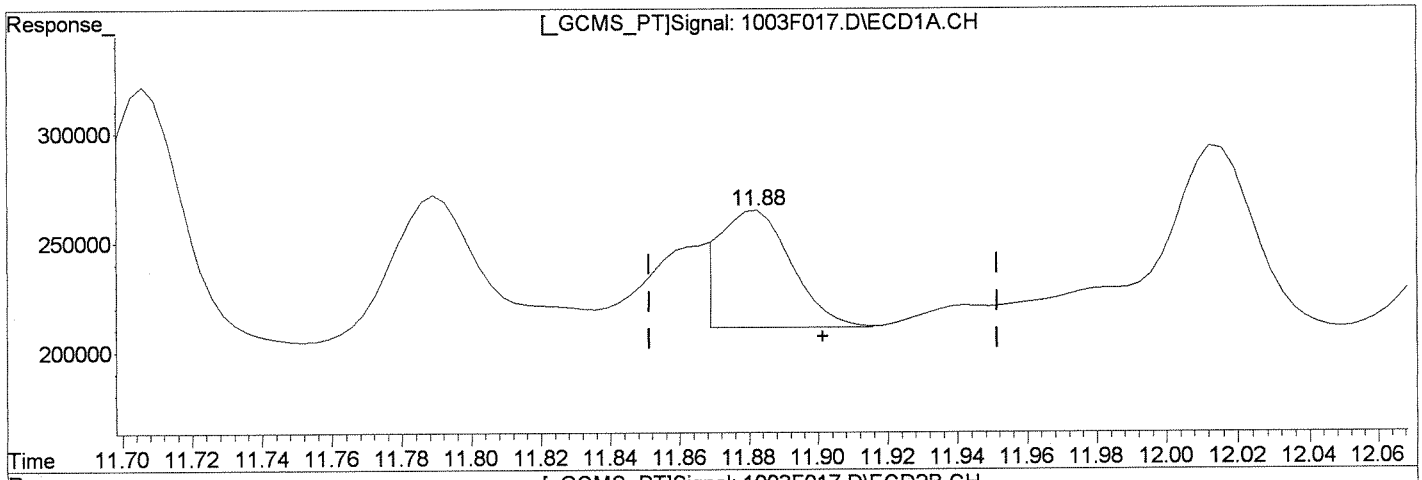
(+) = Expected Retention Time

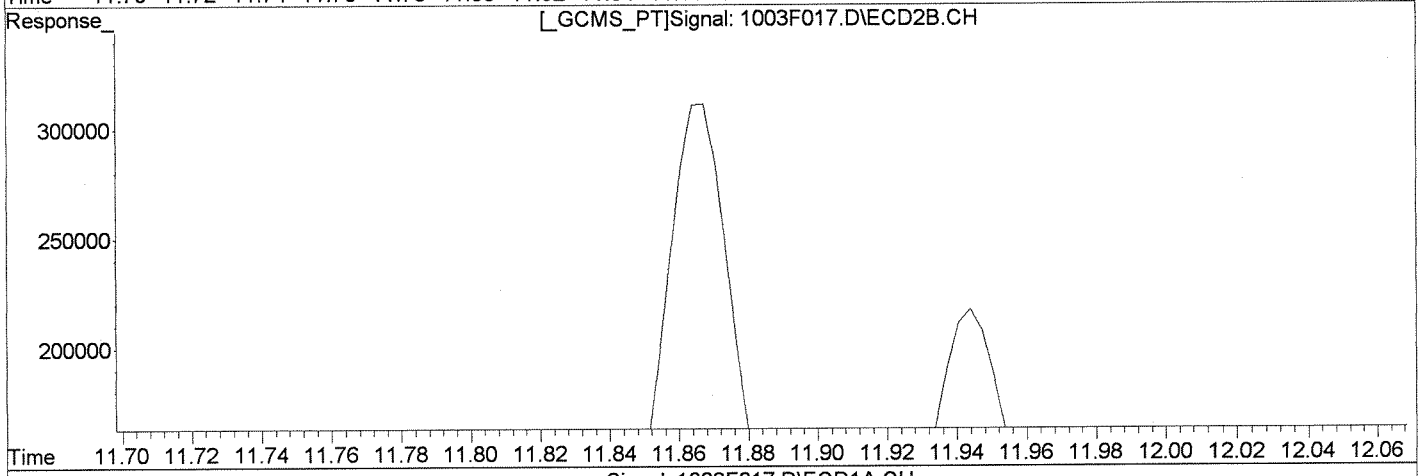
1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:25 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(9) Aldrin

11.88min 1.846ug/L m

response 73044

(9) Aldrin #2

10.38min 11.251ug/L

response 171387

Manual Integration:

After

Baseline/Shoulder

10/03/14

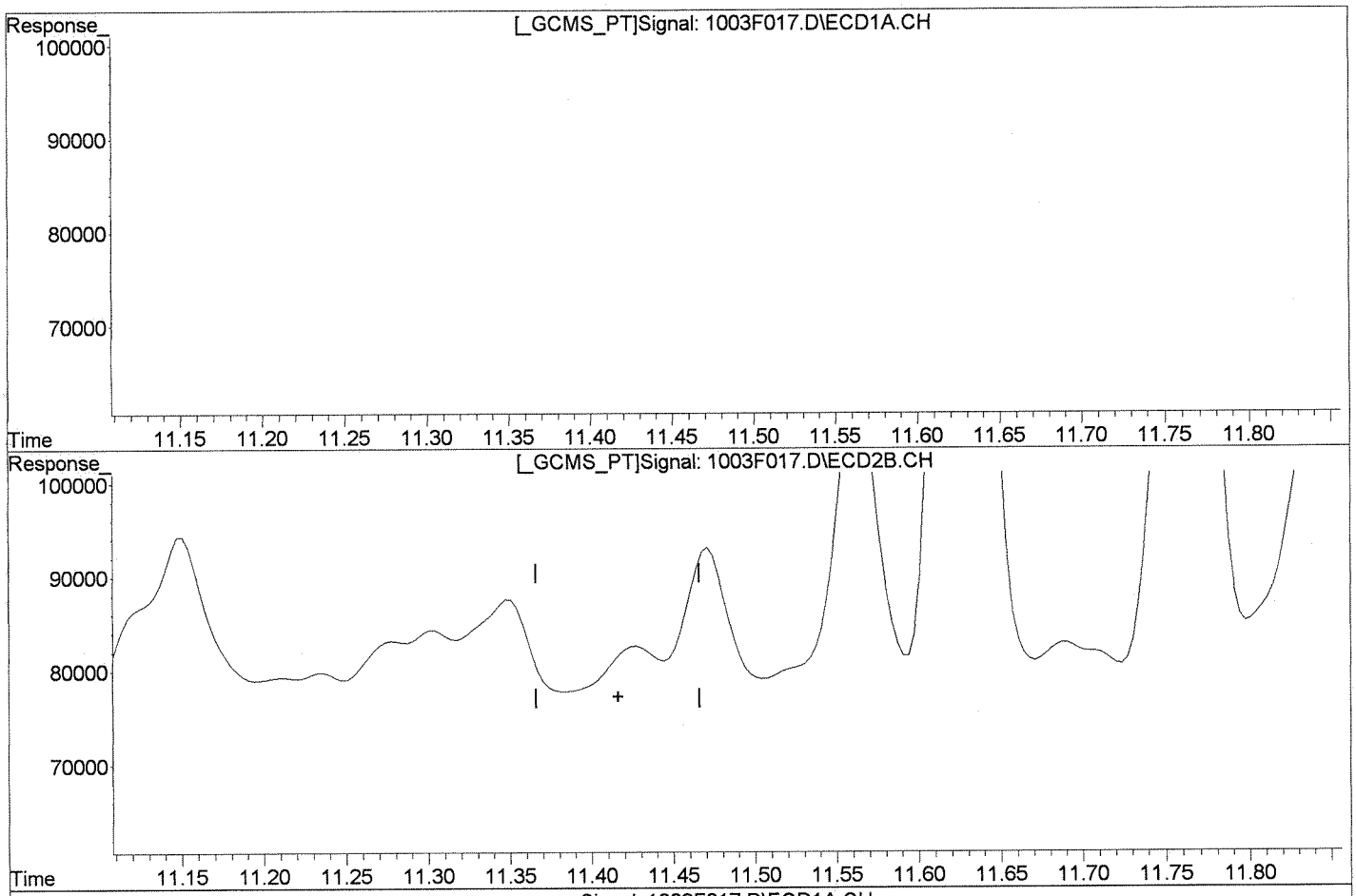
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:33 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(11) Heptachlor Epoxide

12.62min 0.510ug/L

response 18632

Manual Integration:

Before

10/03/14

(11) Heptachlor Epoxide #2

0.00min 0.000ug/L

response 0

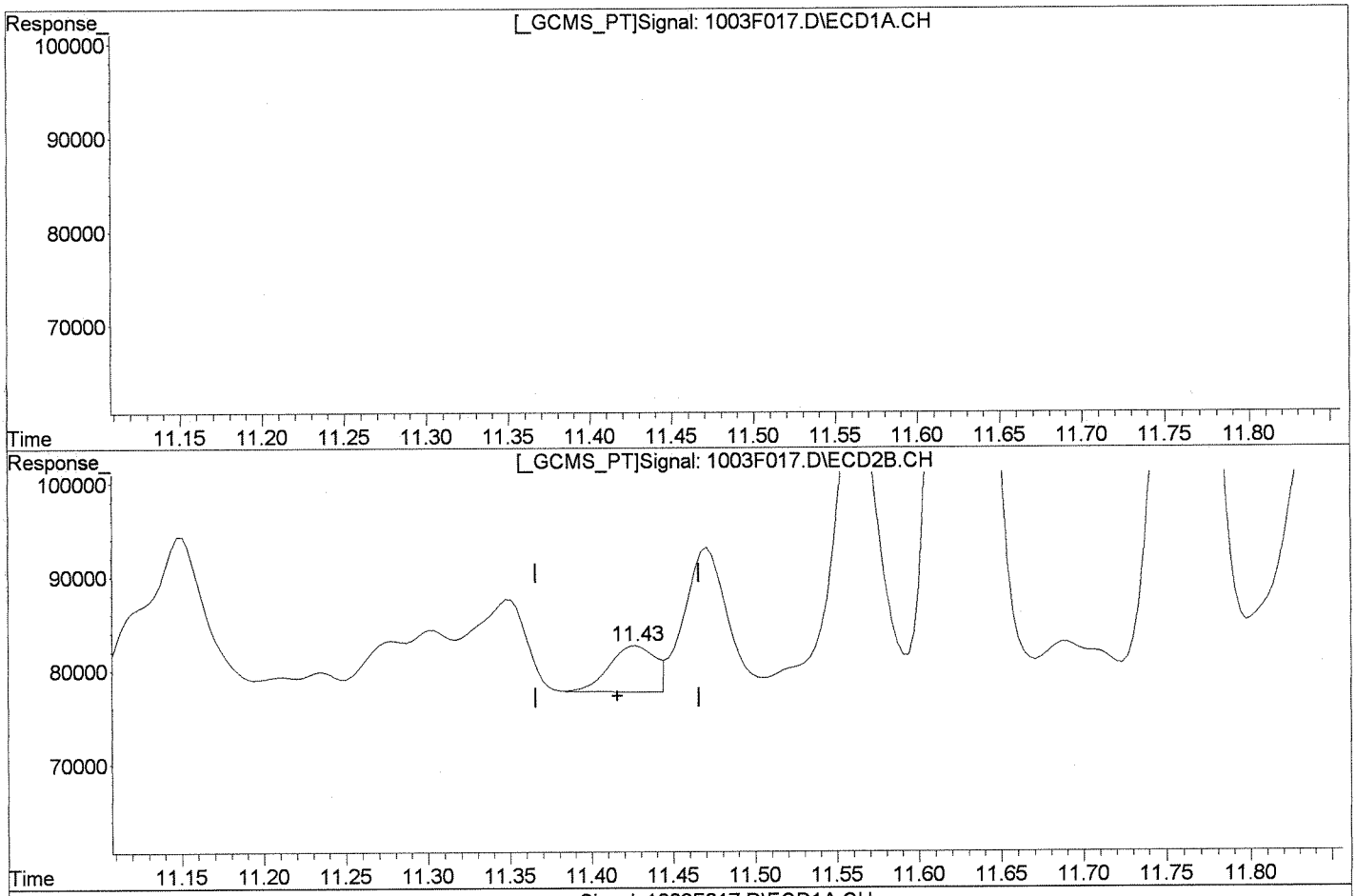
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:39 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(11) Heptachlor Epoxide

12.62min 0.510ug/L

response 18632

Manual Integration:

After

Missed Peak

10/03/14

(11) Heptachlor Epoxide #2

11.43min 0.736ug/L m

response 9969

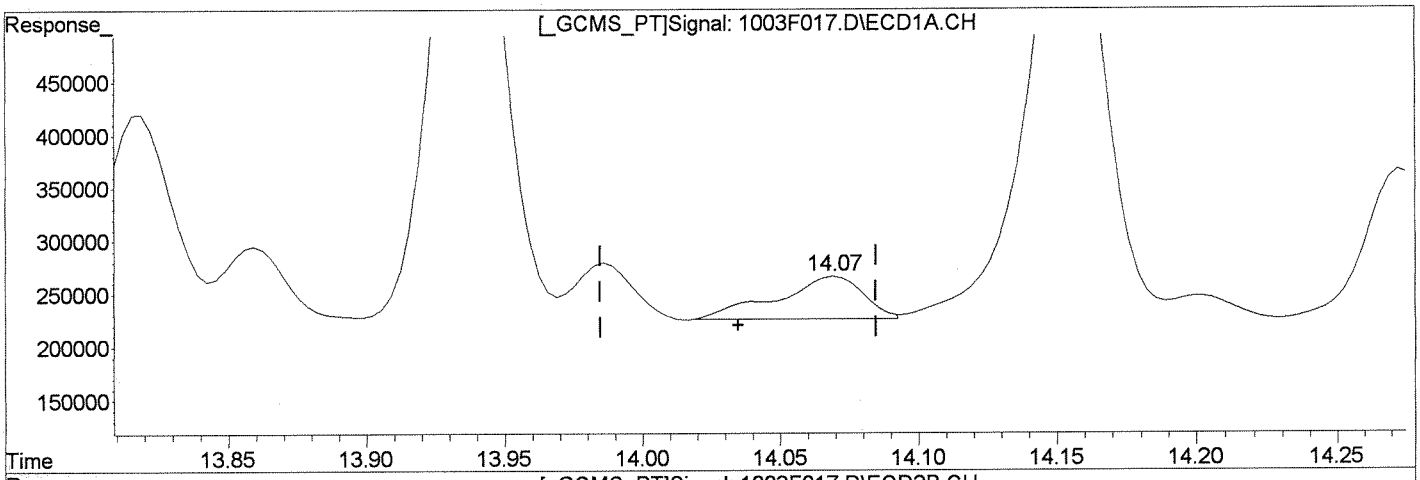
(+) = Expected Retention Time

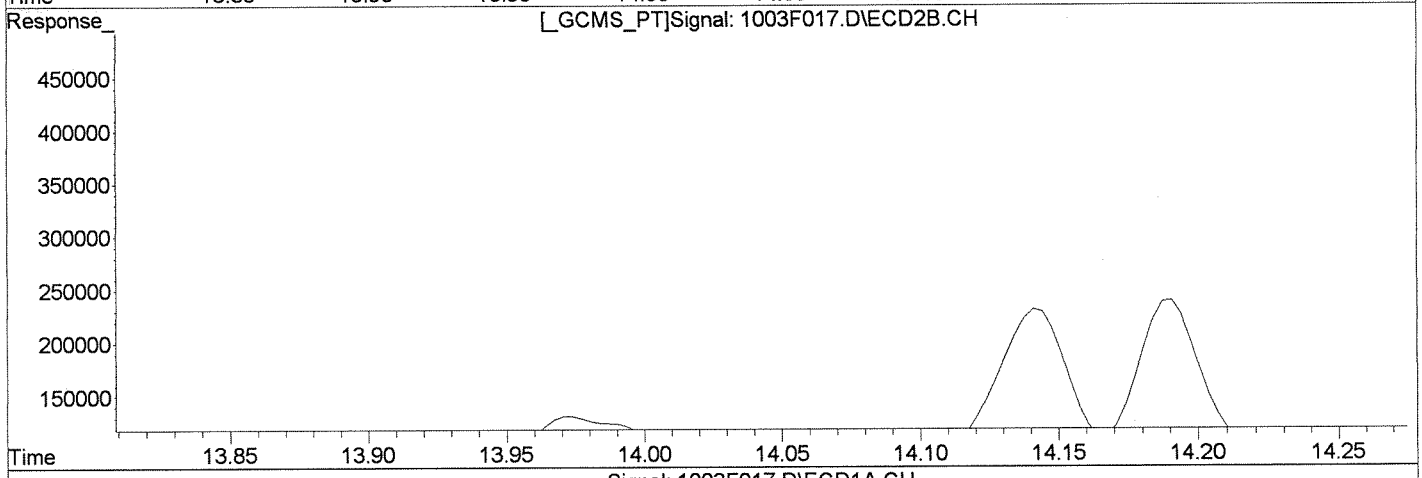
1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:42 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(17) Endrin

14.07min 2.839ug/L

response 86959

(17) Endrin #2

12.96min 9.595ug/L

response 114022

Manual Integration:

Before

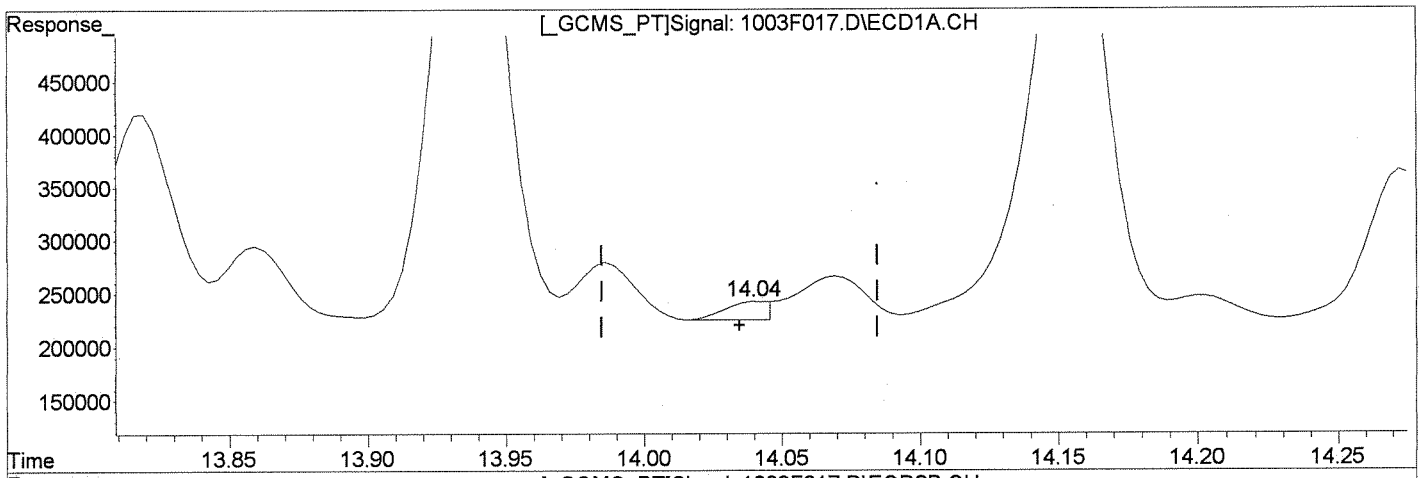
10/03/14

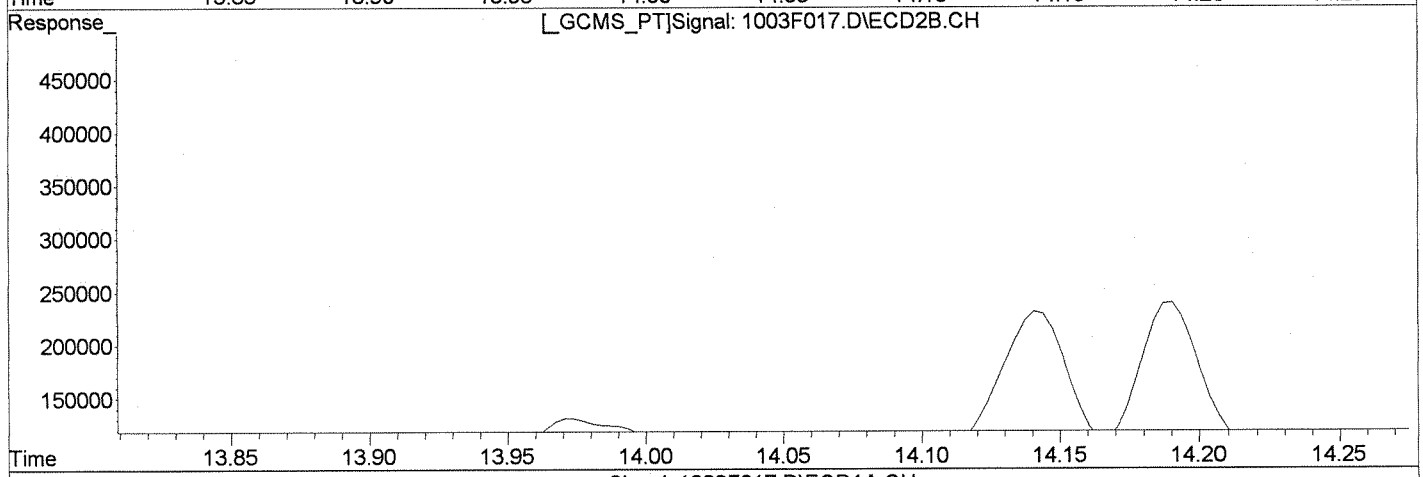
(+) = Expected Retention Time
1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:49 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(17) Endrin
14.04min 0.657ug/L m
response 20119

(17) Endrin #2
12.96min 9.595ug/L
response 114022

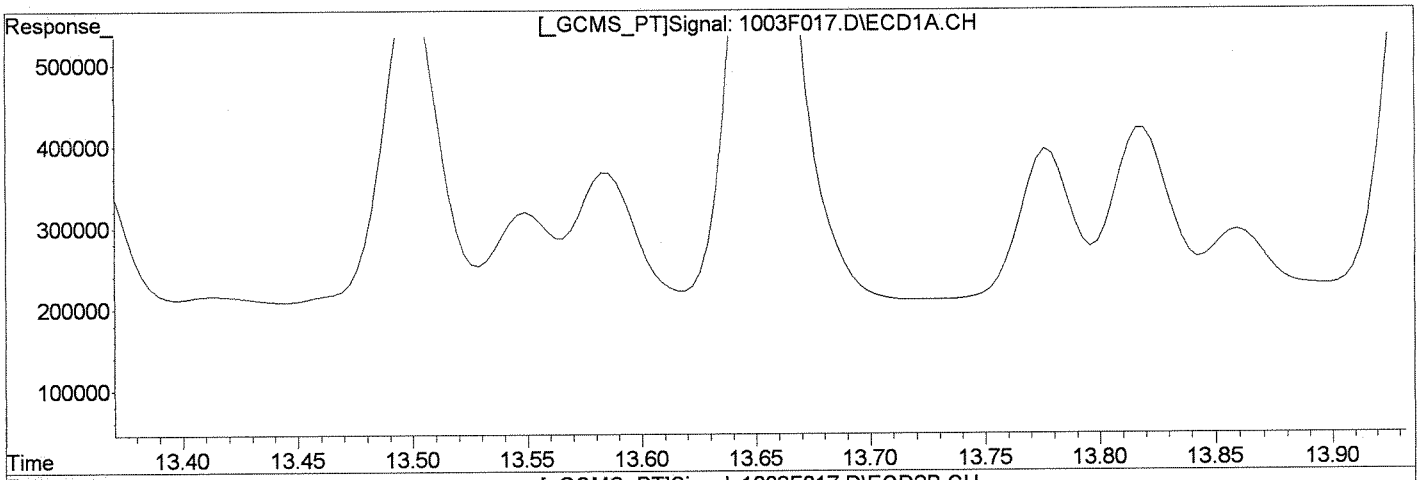
Manual Integration:
After
Wrong Peak
10/03/14

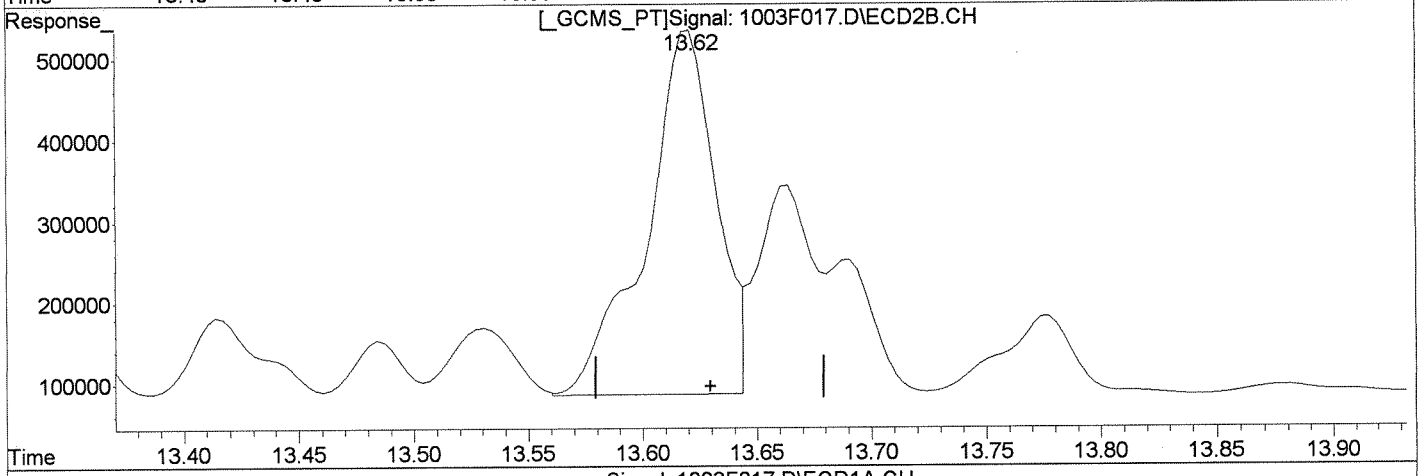
(+) = Expected Retention Time
1003F017.D GC23-031714-8081.M Fri Oct 03 17:38:53 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F017.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 87.279ug/L

response 2246728

(22) 4,4'-DDT #2

13.62min 94.573ug/L

response 959007

Manual Integration:

Before

10/03/14

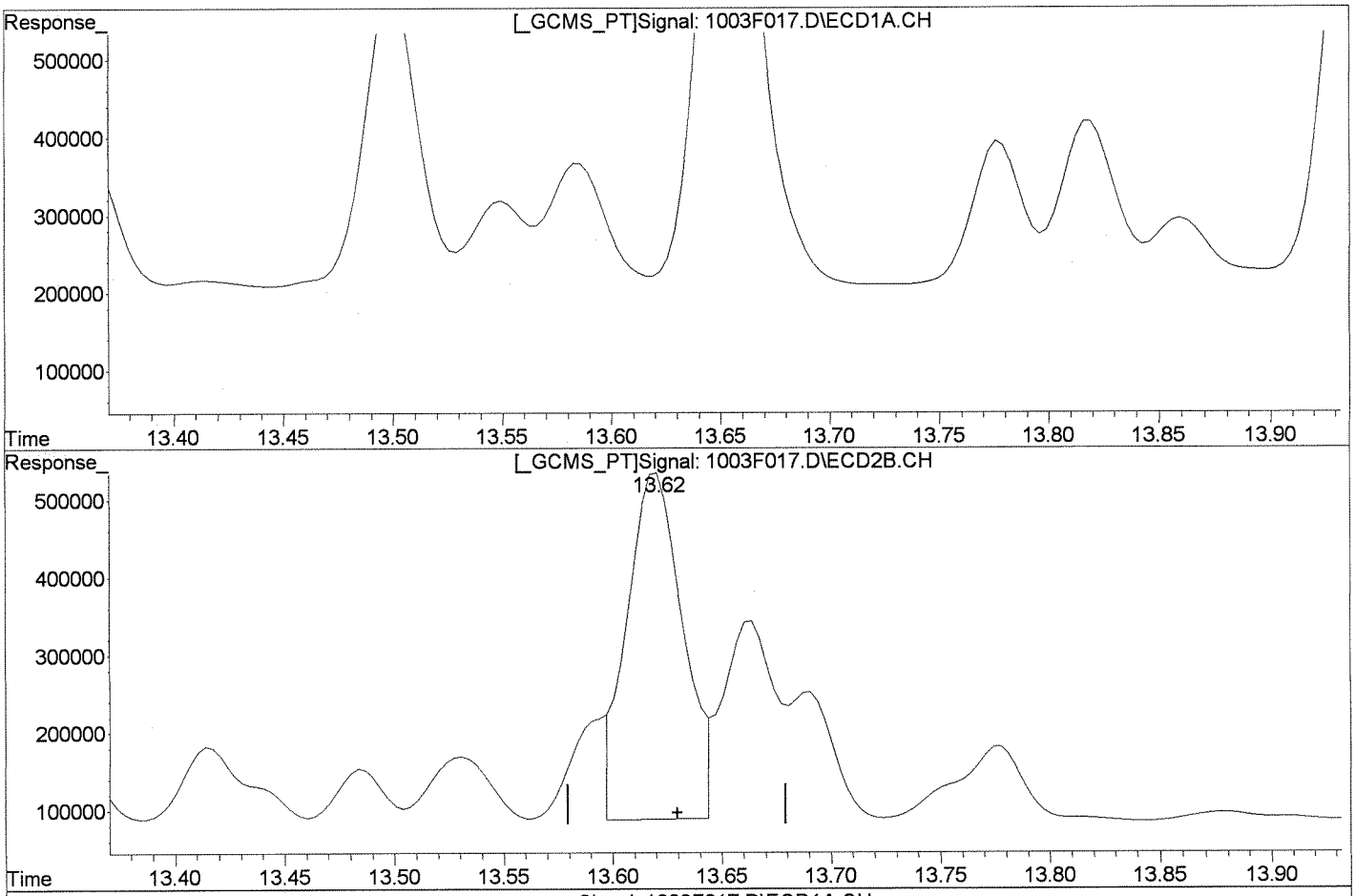
(+) = Expected Retention Time

1003F017.D GC23-031714-8081.M Fri Oct 03 17:39:01 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F017.D\ECD1A.CH Vial: 54
Signal #2 : J:\GC23\DATA\100314\1003F017.D\ECD2B.CH
Acq On : 03 Oct 2014 2:56 pm Operator: SMURRAY
Sample : K1409921-008 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F017.D\ECD1A.CH

(22) 4,4'-DDT
14.84min 87.279ug/L
response 2246728

Manual Integration:
After
Baseline/Shoulder
10/03/14

(22) 4,4'-DDT #2
13.62min 78.417ug/L m
response 795177

(+) = Expected Retention Time
1003F017.D GC23-031714-8081.M Fri Oct 03 17:39:06 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F018.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 15:26
Date Quantitated: 10/03/2014 17:41
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RO
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: am 10/6/14

Secondary Review:

Printed: 10/04/2014 10:07:25
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F018.D\1003F018C.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 15:26
Date Quantitated: 10/03/2014 17:41
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F018.D\1003F018c.d			**Vial:**	55
Acqu Date:	10/03/2014 15:26	**Quant Date:**	10/03/2014 17:41	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-009				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380551	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2757606	993018	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1476160	544854	44.57	41.58			45 OK
						%Recovery =		45 OK	42 OK	Limits =	21-112	
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1551999	588782	52.60	53.01			53 OK
						%Recovery =		53 OK	53 OK	Limits =	15-130	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.46	+0.01	8.32		52209	9907m	1.23	0.6280	0.88J	0.45J	**0.45**JP
1	beta-BHC			9.61	+0.01	0d	15238	0.0000	2.10	0.50U	1.5J	0.50U
1	gamma-BHC (Lindane)	10.15	+0.03	9.07	+0.01	7954m	180135	0.2030	12.36	0.45U	8.9	0.45U
1	delta-BHC	11.26	+0.04	10.13	+0.01	18627m	7093m	0.4890	0.4960	0.37U	0.37U	0.37U
1	Heptachlor	11.29	-0.02	9.76	+0.02	68480	5993m	1.80	0.4410	1.3J	0.83U	0.83U
1	4,4'-DDE	13.49	+0.01	12.33	+0.01	742936	22067	21.40	1.63	15	1.6U	1.6U
1	4,4'-DDD	14.32	+0.01	13.21	+0.01	83080	47130	2.93	4.46	2.1	3.2	2.1P
1	Endrin Aldehyde	14.68	+0.03	13.75	+0.02	195953	49309m	10.02	5.70	7.2Ui	4.1Ui	4.1Ui
1	4,4'-DDT	14.84	+0.04	13.61	-0.01	1971490	761635m	78.23	76.10	57Ui	55Ui	55Ui

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.109 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F018.D\1003F018c.d			**Vial:**	55
Acqu Date:	10/03/2014 15:26	**Quant Date:**	10/03/2014 17:41	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-009				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 69.4 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 16:58:55 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2757606	993018	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1476160	544854	44.572	41.579
28)	s	Decachlorobiphen	18.31	16.87	1551999	588782	52.602	53.007
		Target Compounds						
3)		alpha-BHC	9.46	8.32	52209	9907	1.227	0.628m#
4)		Hexachlorobenzen	9.62	8.11	99178	29812	1.367	1.967 #
5)		beta-BHC	0.00	9.61	0	15238	N.D. d	2.098
6)		gamma-BHC (Linda	10.15	9.07	7954	180135	0.203m	12.363 #
7)		delta-BHC	11.26	10.13	18627	7093	0.489m	0.496m
8)		Heptachlor	11.29f	9.76	68480	5993	1.801	0.441m#
9)		Aldrin	11.92	10.37f	5515	86771	0.142m	5.772 #
10)		Isodrin	12.40f	11.14	376593	43384	11.615	3.478 #
11)		Heptachlor Epoxi	12.59	11.40	87645	36282	2.451	2.714
12)		gamma-Chlordane	13.14	11.80f	917086	11710	25.362	0.838 #
13)		Endosulfan I	13.27	12.04	121963	149906	3.783	12.401 #
14)		alpha-Chlordane	0.00	11.94f	0	259826	N.D.	18.992 #
15)		Dieldrin	13.65	12.47	1781995	155481	51.602	11.403 #
16)		4,4'-DDE	13.49	12.33	742936	22067	21.398	1.631 #
17)		Endrin	14.04	12.96	150918	116696	5.033m	9.950 #
18)		Endosulfan II	14.50	13.41f	296083	126127	9.932m	11.241m
19)		4,4'-DDD	14.32	13.21	83080	47130	2.931	4.461 #
20)		Endrin Aldehyde	14.68	13.75	195953	49309	10.023	5.699m#
21)		Endosulfan Sulfa	15.14	14.08	10578	5334	0.401	0.510m#
22)		4,4'-DDT	14.84	13.61	1971490	761635	78.225	76.104m
23)		Endrin Ketone	15.85f	15.02	187750	53419	5.635	4.143 #
24)		Methoxychlor	15.60f	14.74	122121	44442	9.133	8.697
25)		2,4'-DDE	12.91	11.86	17649	484946	0.766	55.245 #
26)		2,4'-DDD	13.65	12.61	1781995	46305	84.943	5.790 #
27)		2,4'-DDT	14.15	13.06	804860	477258	36.830	56.180 #

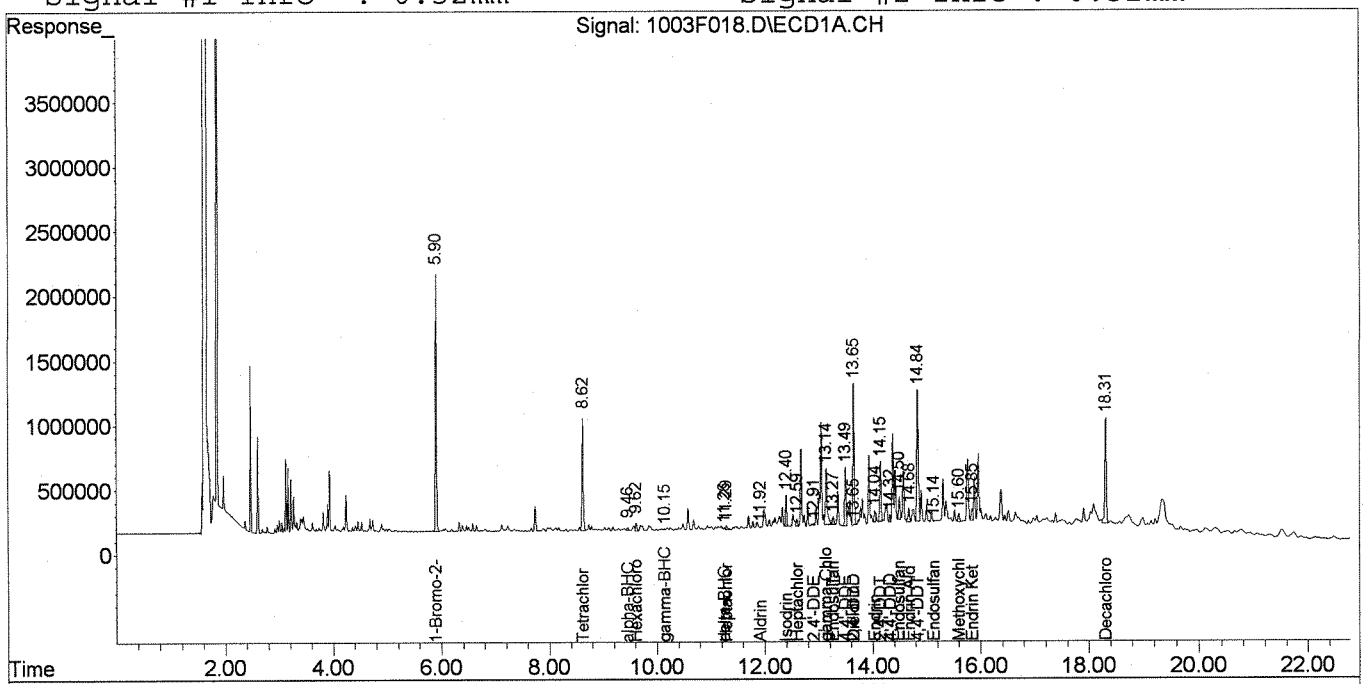
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

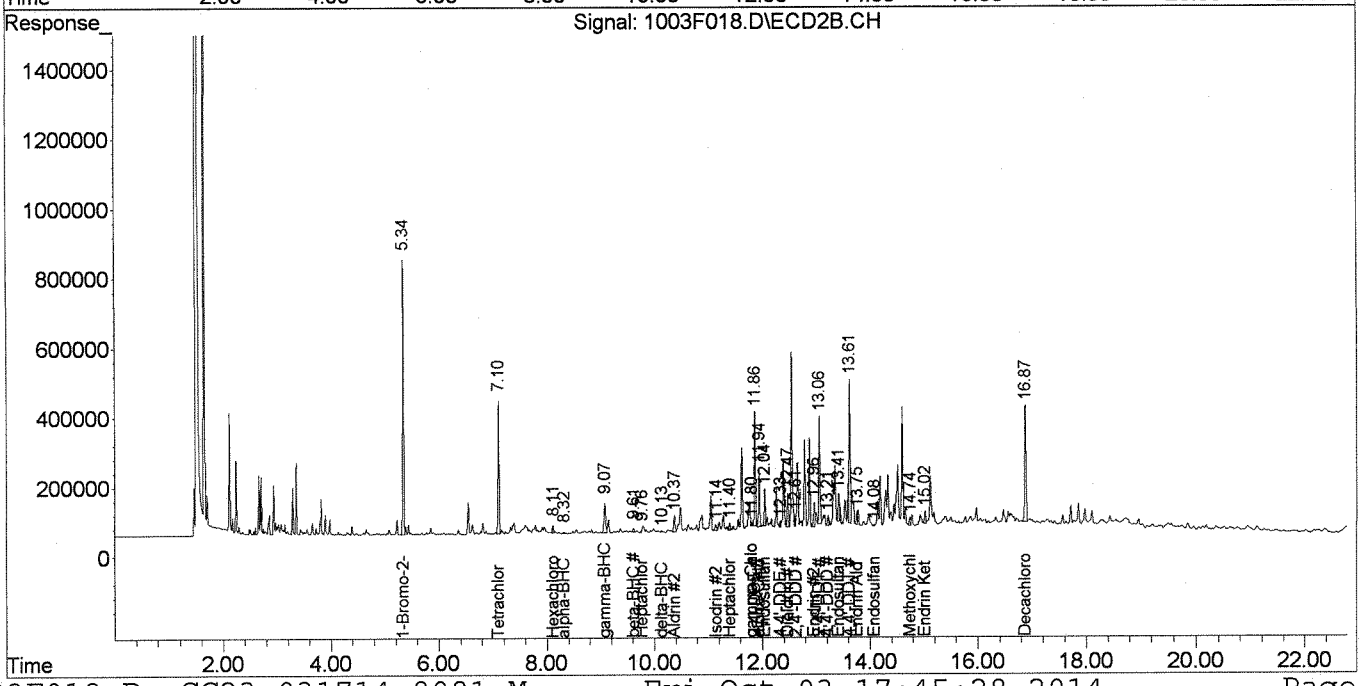
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:41 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

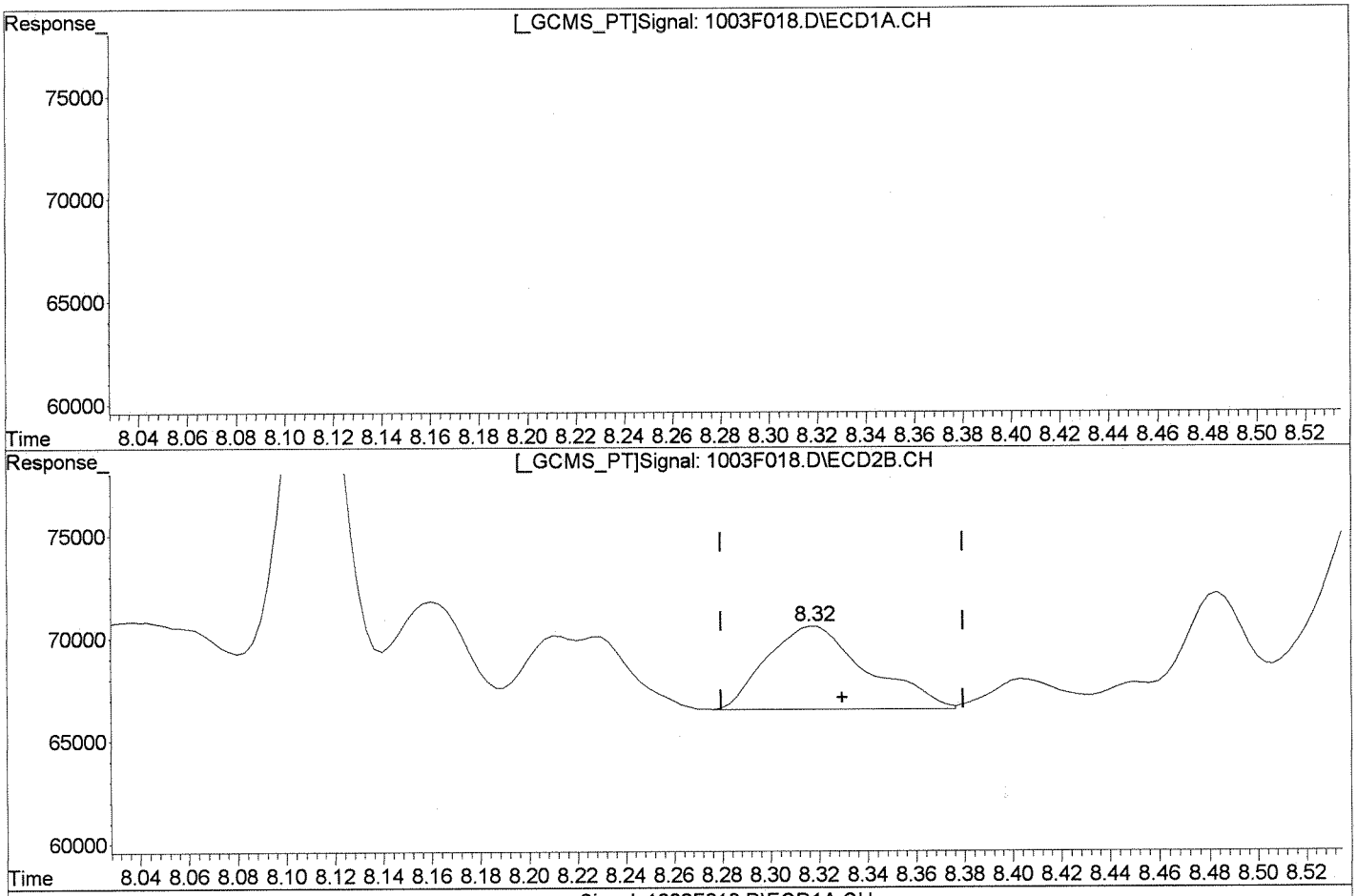




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(3) alpha-BHC

9.46min 1.227ug/L

response 52209

(3) alpha-BHC #2

8.32min 0.735ug/L

response 11601

Manual Integration:

Before

10/03/14

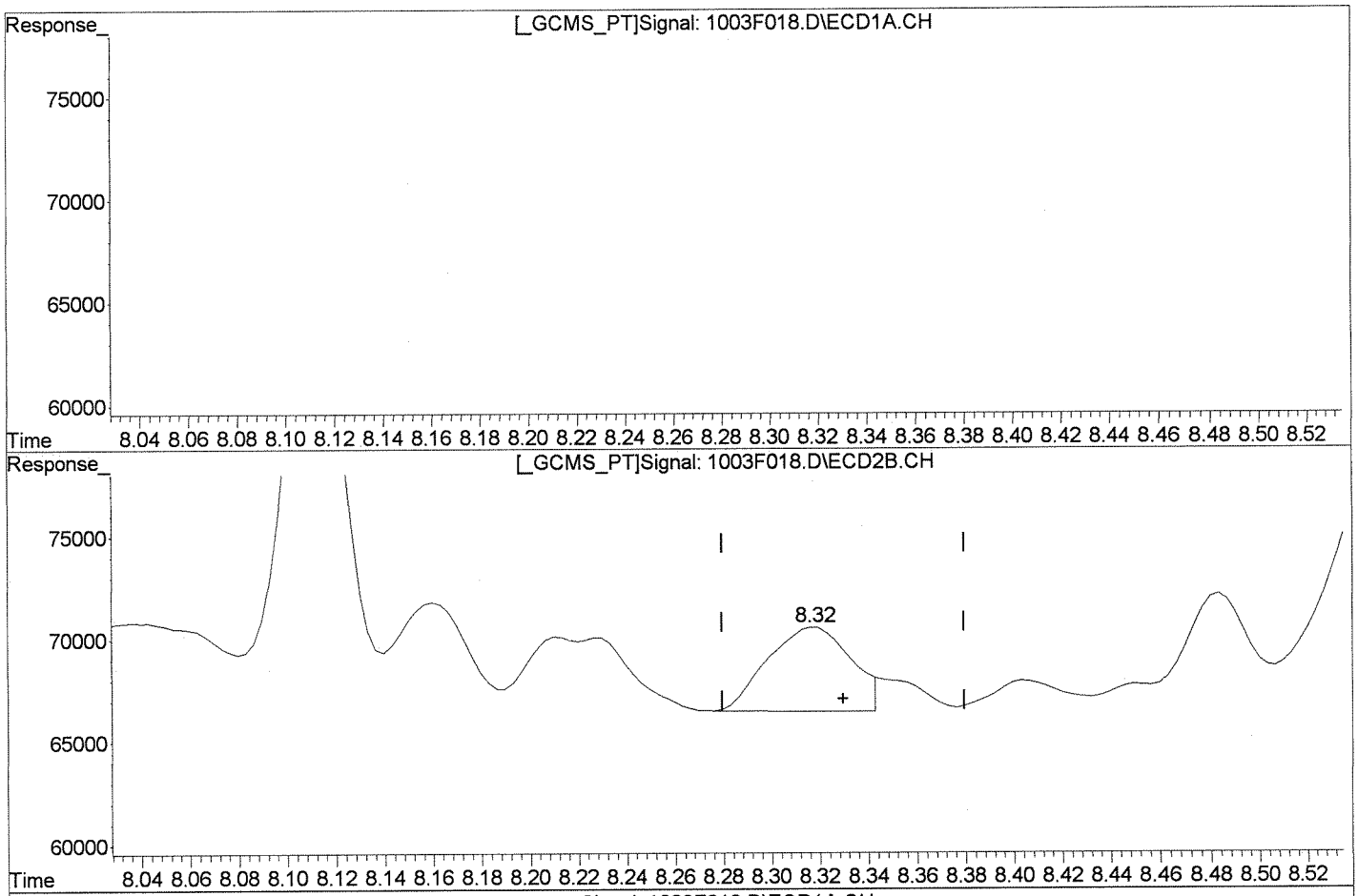
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:28 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(3) alpha-BHC

9.46min 1.227ug/L

response 52209

(3) alpha-BHC #2

8.32min 0.628ug/L m

response 9907

Manual Integration:

After

Baseline/Shoulder

10/03/14

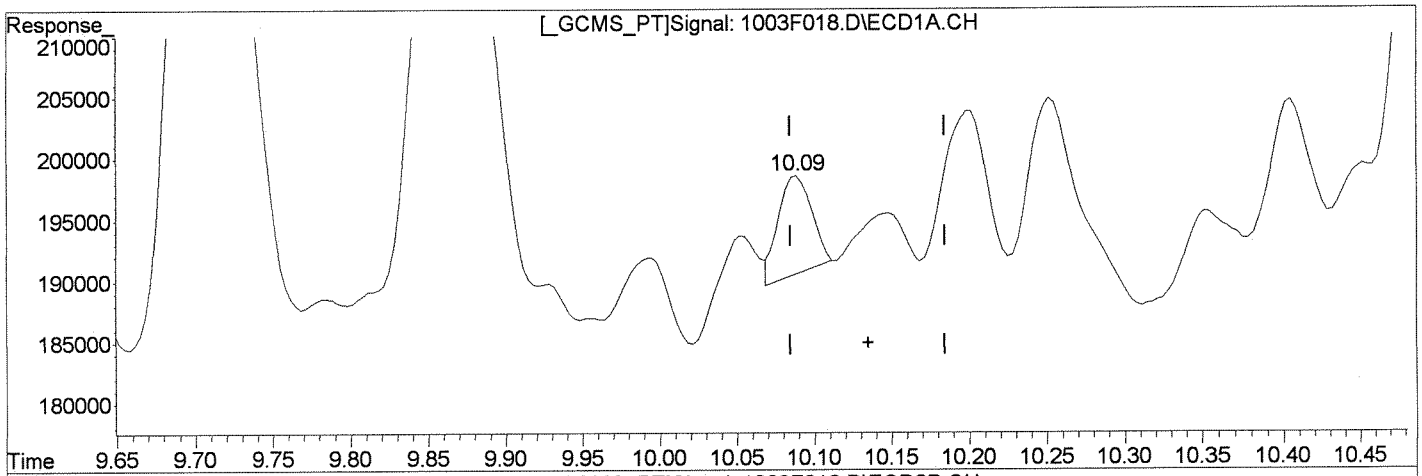
(+) = Expected Retention Time

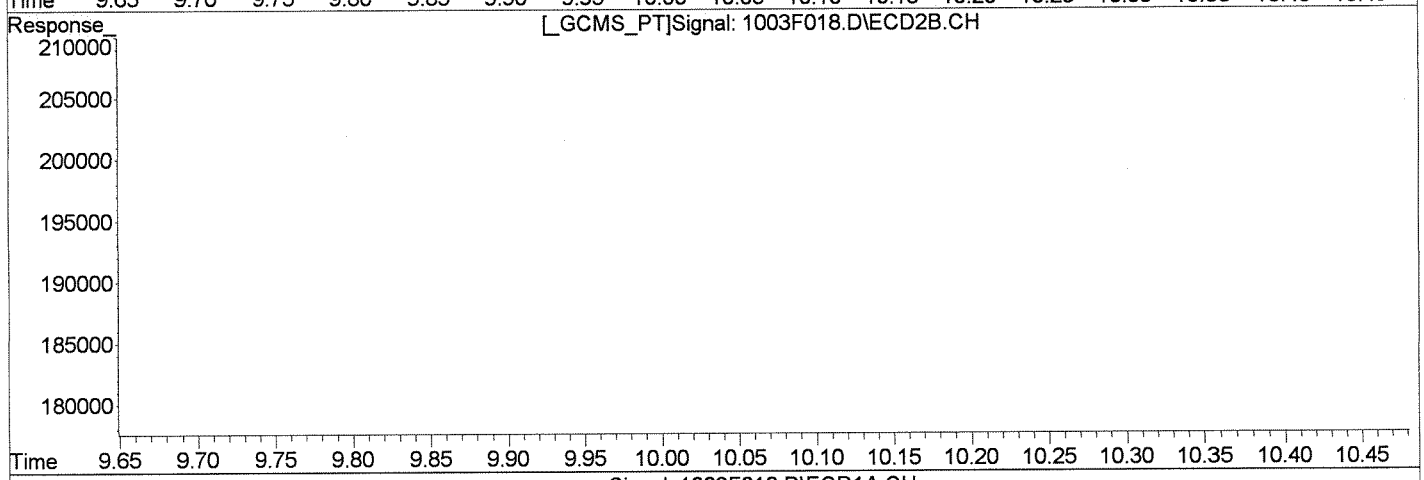
1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:32 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F018.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.09min 0.314ug/L

response 12278

Manual Integration:

Before

10/03/14

(6) gamma-BHC (Lindane) #2

9.07min 12.363ug/L

response 180135

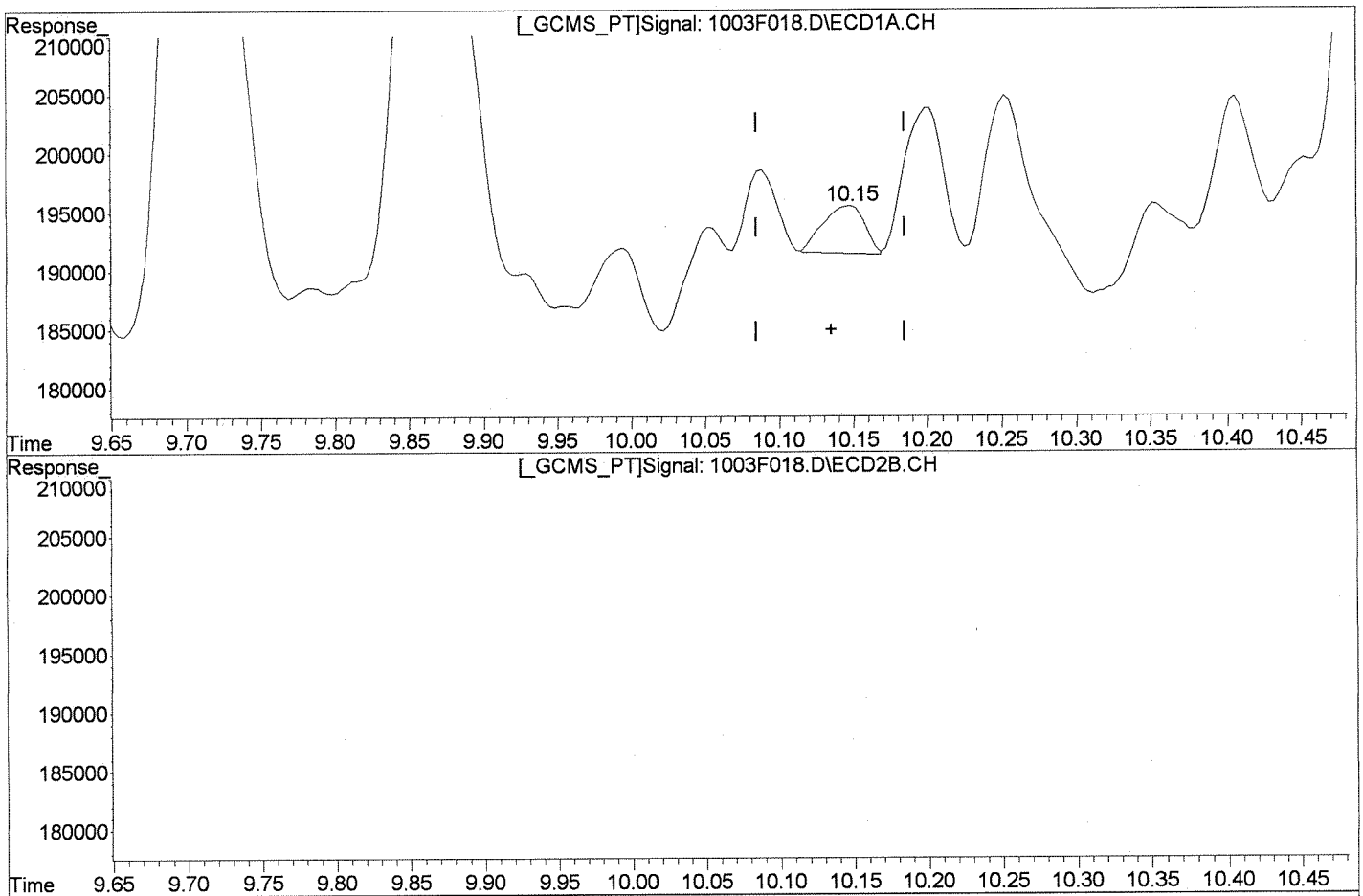
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:39 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.15min 0.203ug/L m

response 7954

Manual Integration:

After

Wrong Peak

10/03/14

(6) gamma-BHC (Lindane) #2

9.07min 12.363ug/L

response 180135

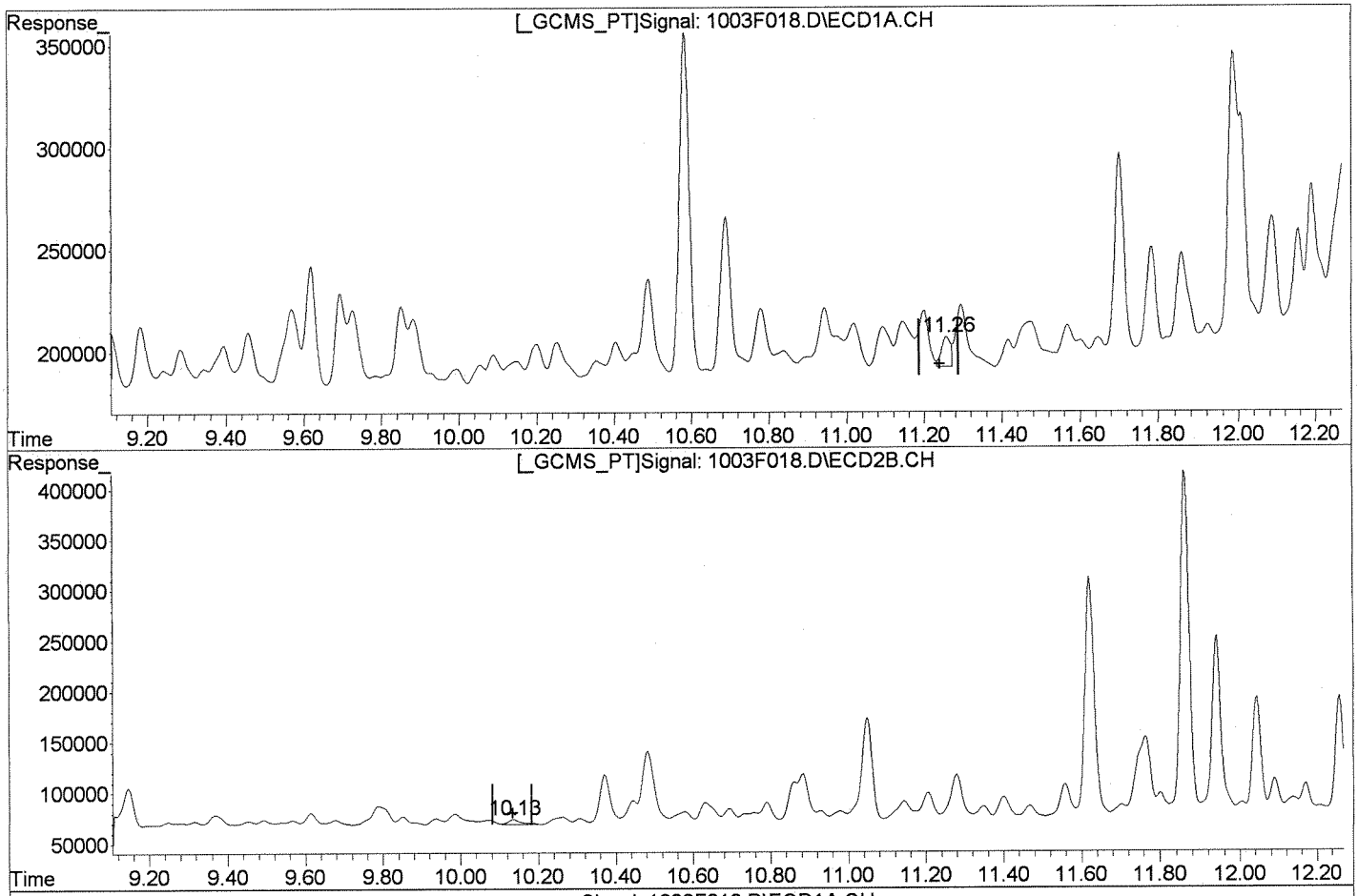
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:42 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(7) delta-BHC

11.26min 0.651ug/L

response 24764

(7) delta-BHC #2

10.13min 0.854ug/L

response 12221

Manual Integration:

Before

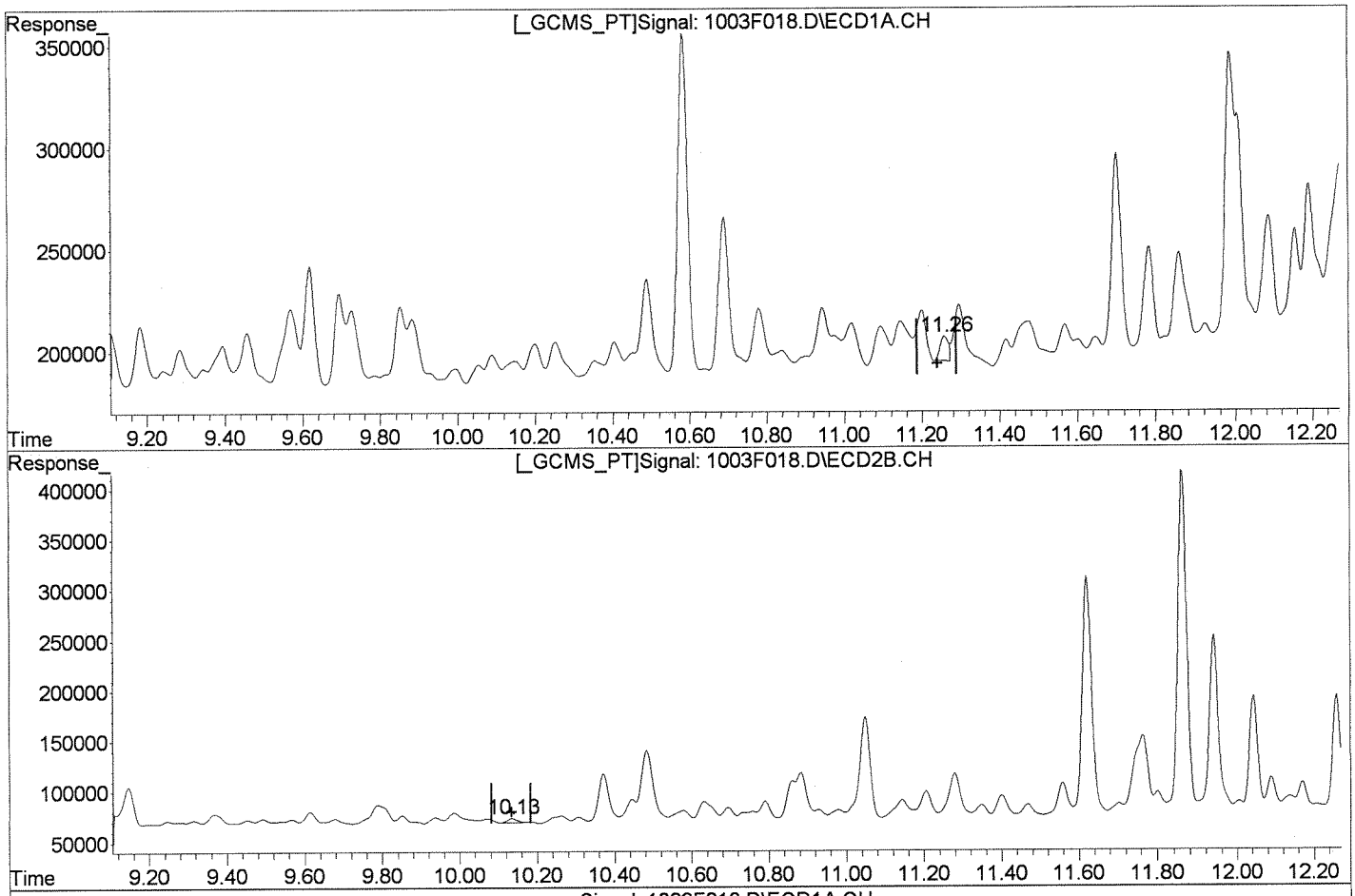
10/03/14

(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:45 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(7) delta-BHC

11.26min 0.489ug/L m

response 18627

(7) delta-BHC #2

10.13min 0.496ug/L m

response 7093

Manual Integration:

After

Baseline/Shoulder

10/03/14

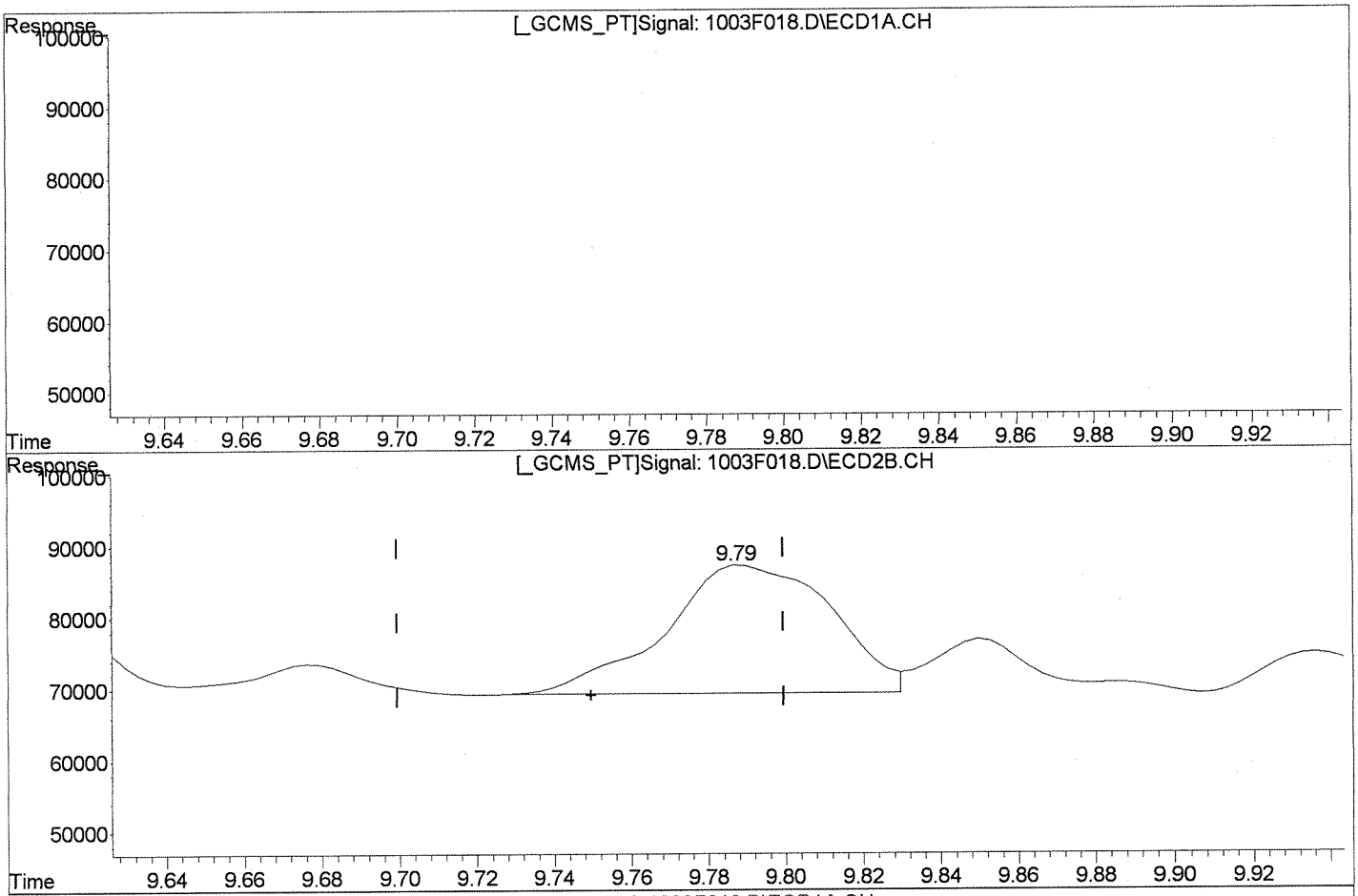
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:39:56 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

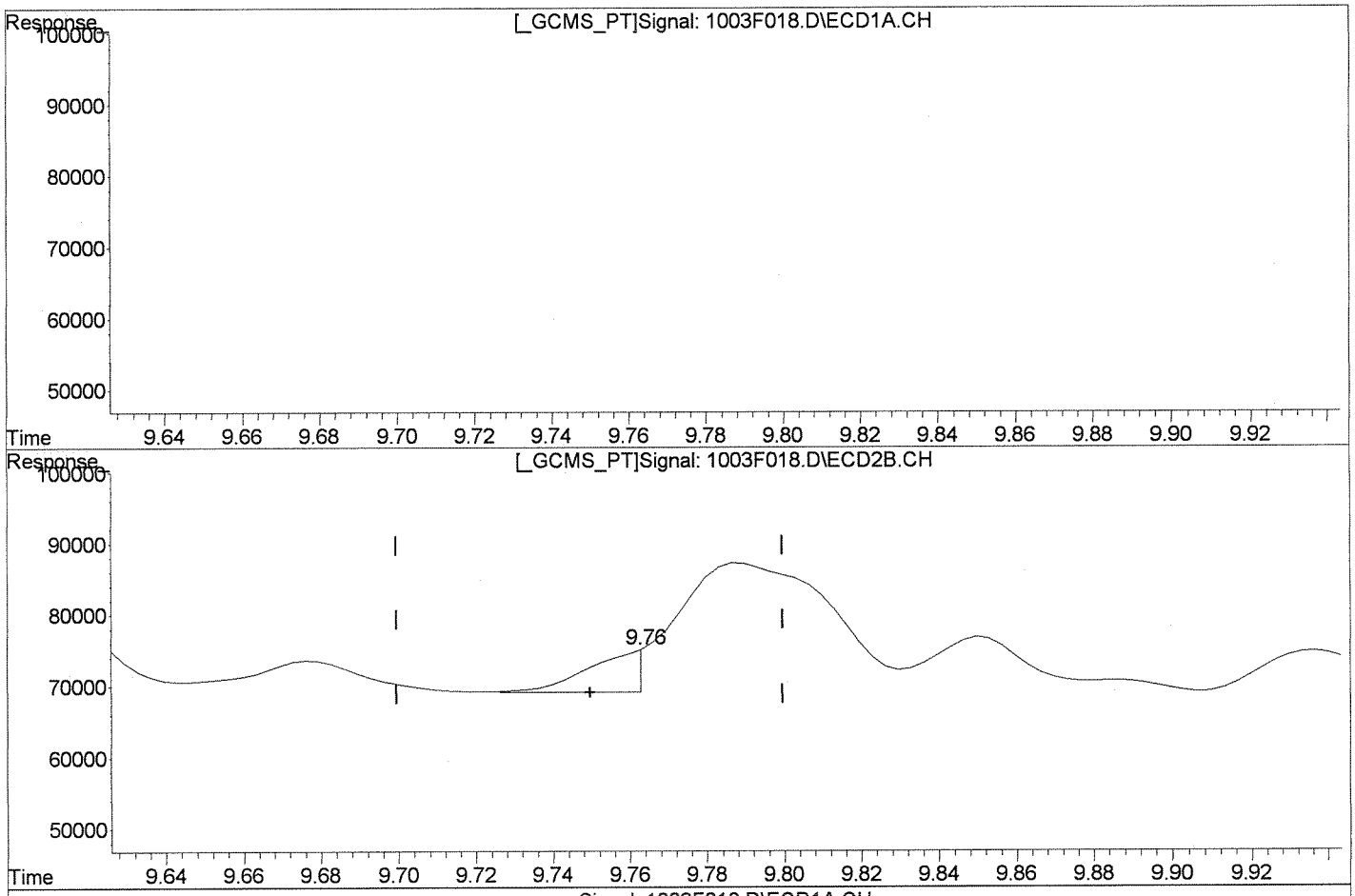


(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:04 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(8) Heptachlor

11.29min 1.801ug/L

response 68480

(8) Heptachlor #2

9.76min 0.441ug/L m

response 5993

Manual Integration:

After

Wrong Peak

10/03/14

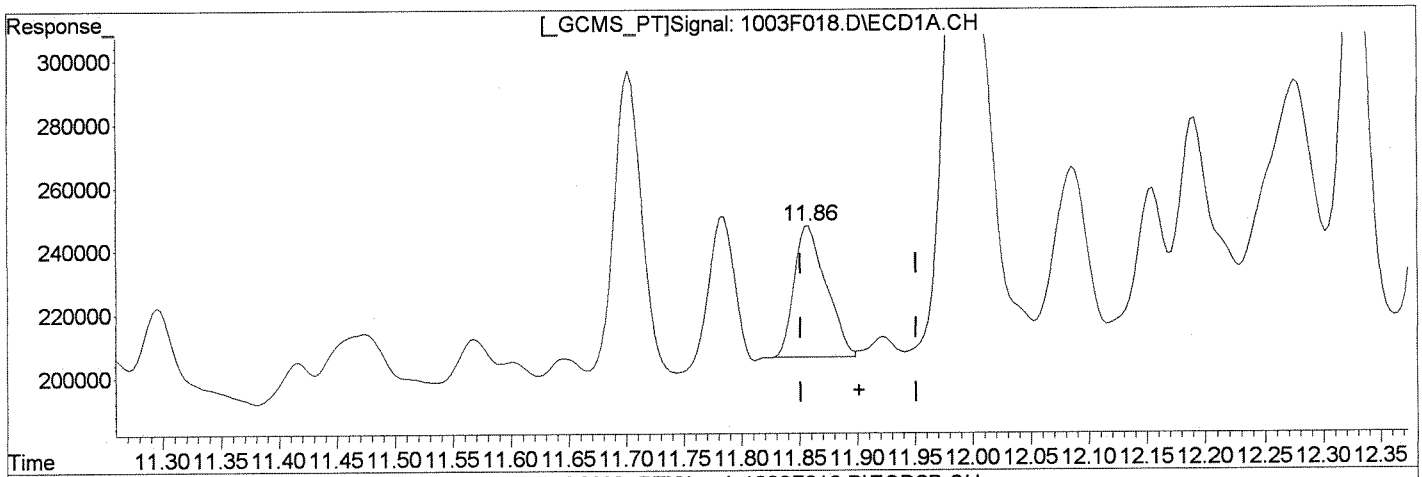
(+) = Expected Retention Time

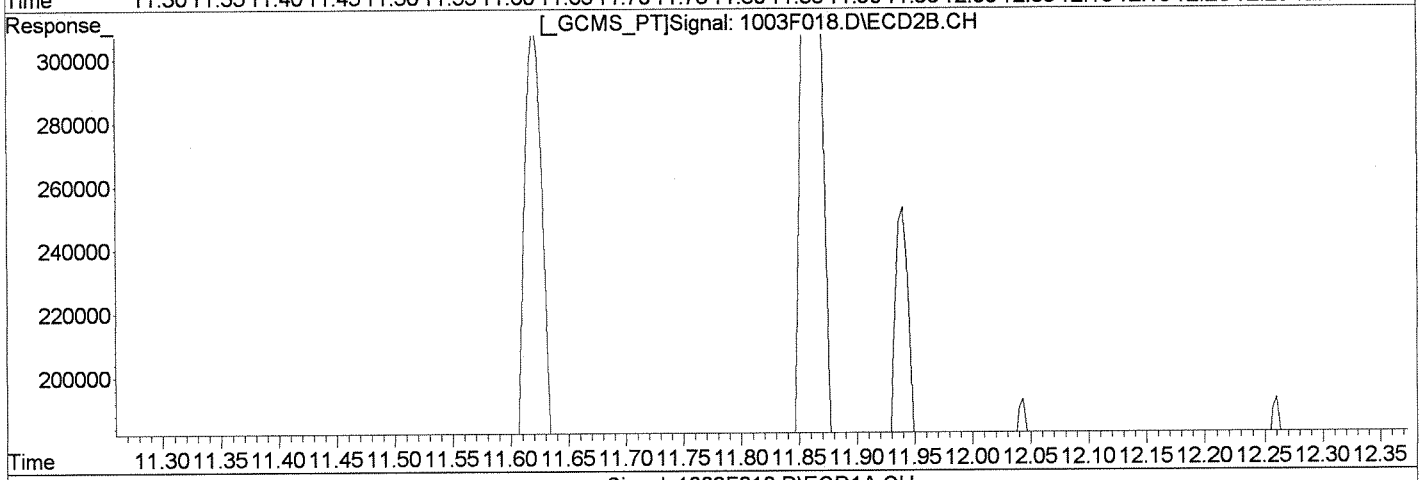
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:08 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F018.D\ECD1A.CH

(9) Aldrin

11.86min 2.063ug/L

response 79924

(9) Aldrin #2

10.37min 5.772ug/L

response 86771

Manual Integration:

Before

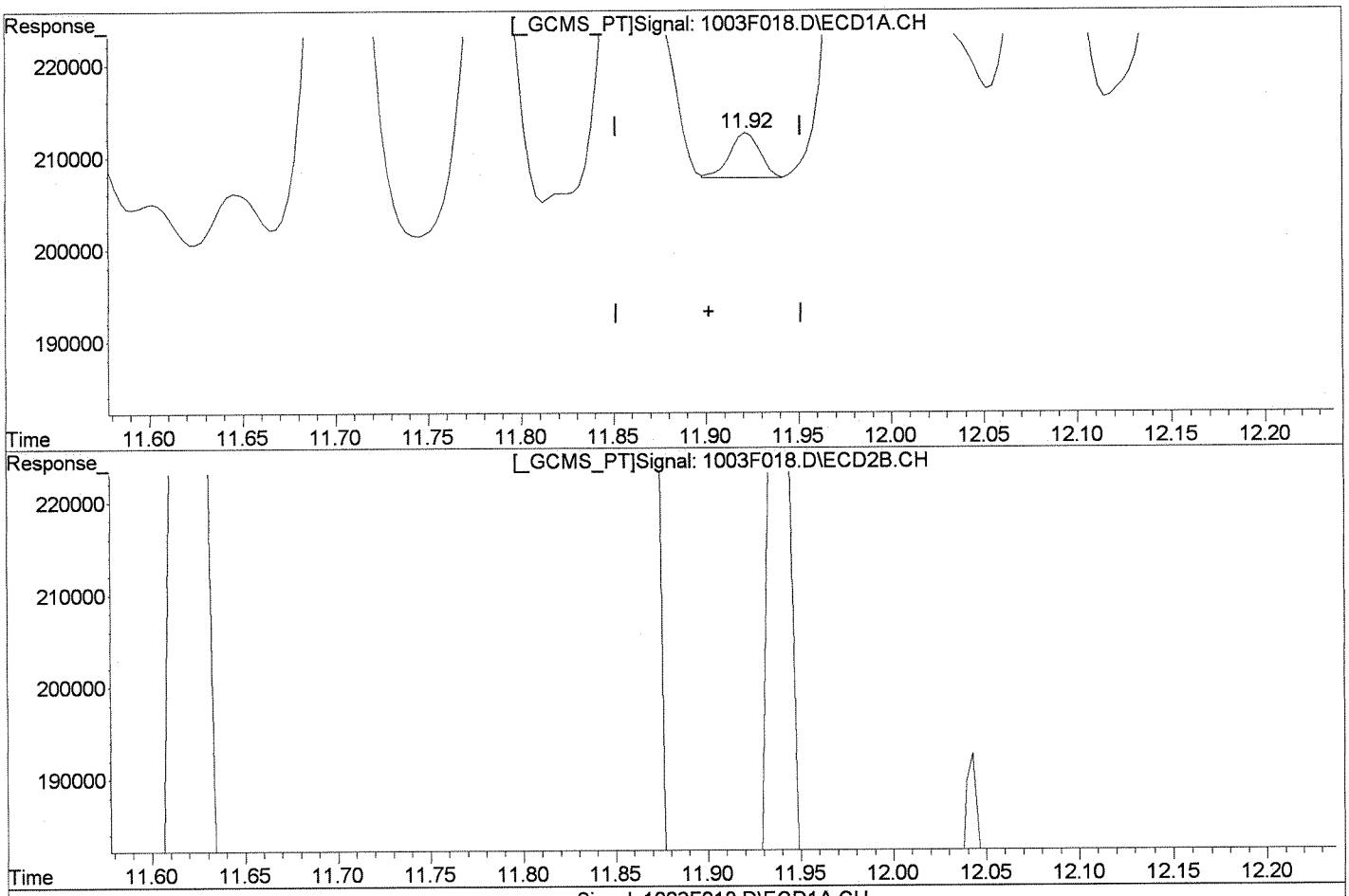
10/03/14

(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:13 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(9) Aldrin

11.92min 0.142ug/L m

response 5515

(9) Aldrin #2

10.37min 5.772ug/L

response 86771

Manual Integration:

After

Wrong Peak

10/03/14

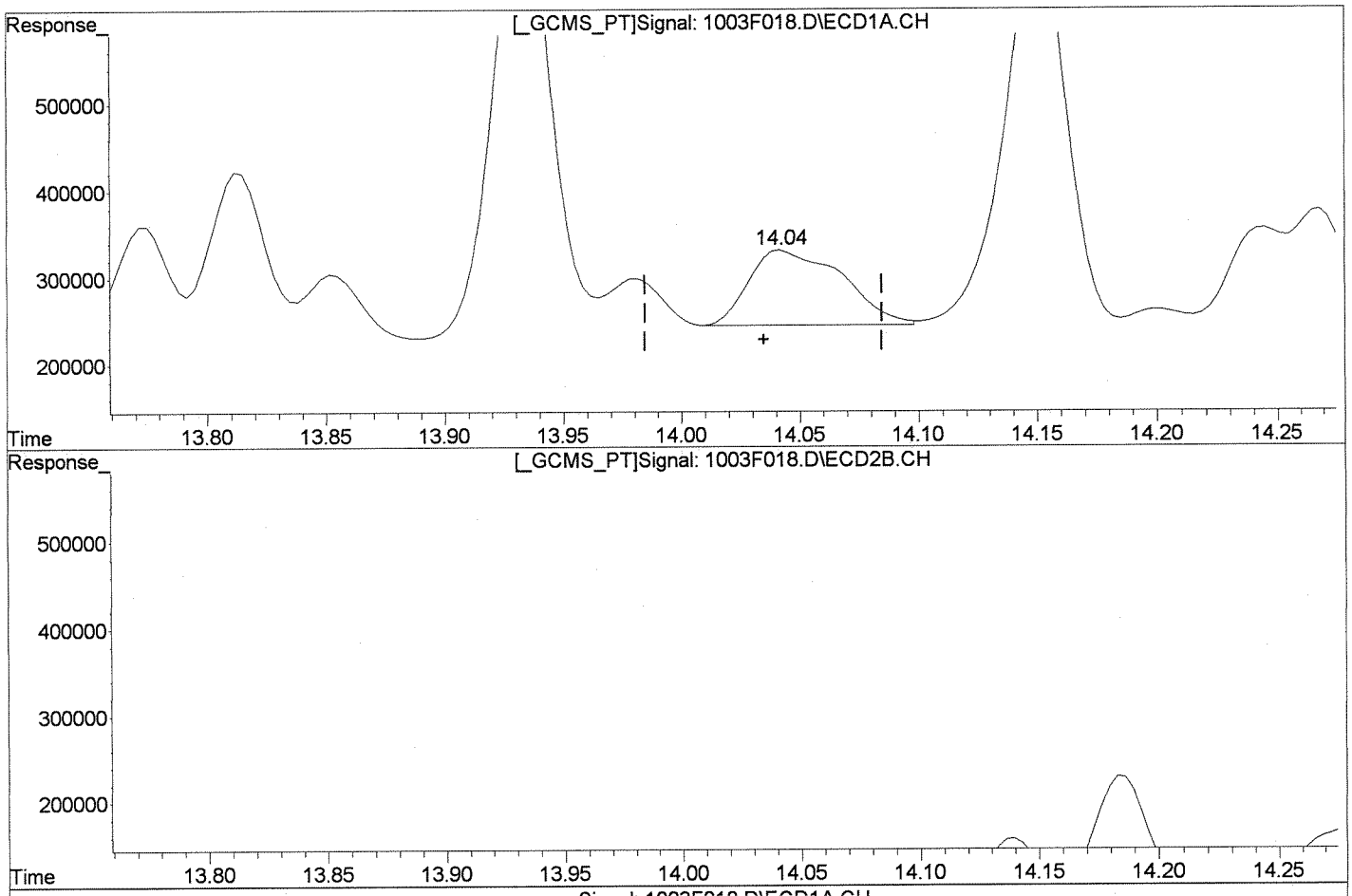
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:25 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(17) Endrin

14.04min 7.973ug/L

response 239066

(17) Endrin #2

12.96min 9.950ug/L

response 116696

Manual Integration:

Before

10/03/14

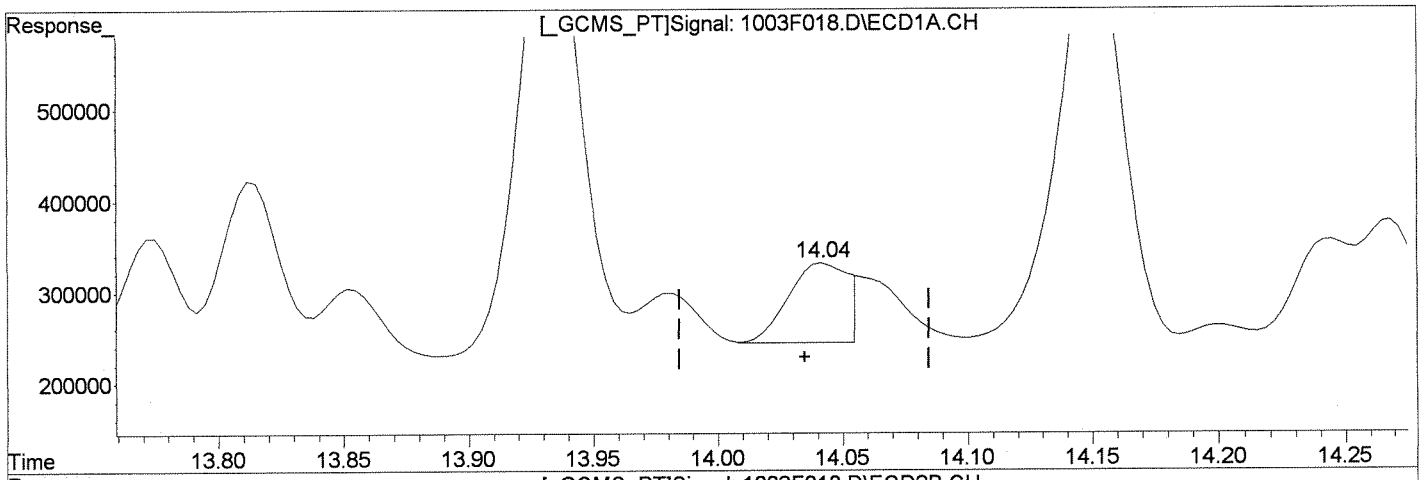
(+) = Expected Retention Time

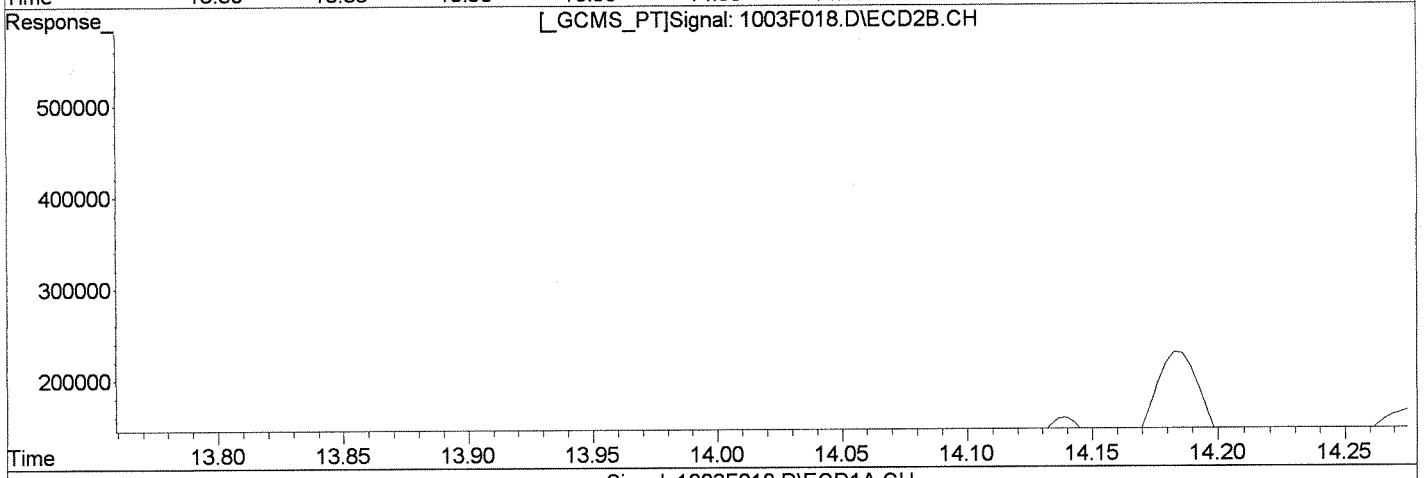
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:33 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F018.D\ECD1A.CH

(17) Endrin

14.04min 5.033ug/L m

response 150918

Manual Integration:

After

Baseline/Shoulder

10/03/14

(17) Endrin #2

12.96min 9.950ug/L

response 116696

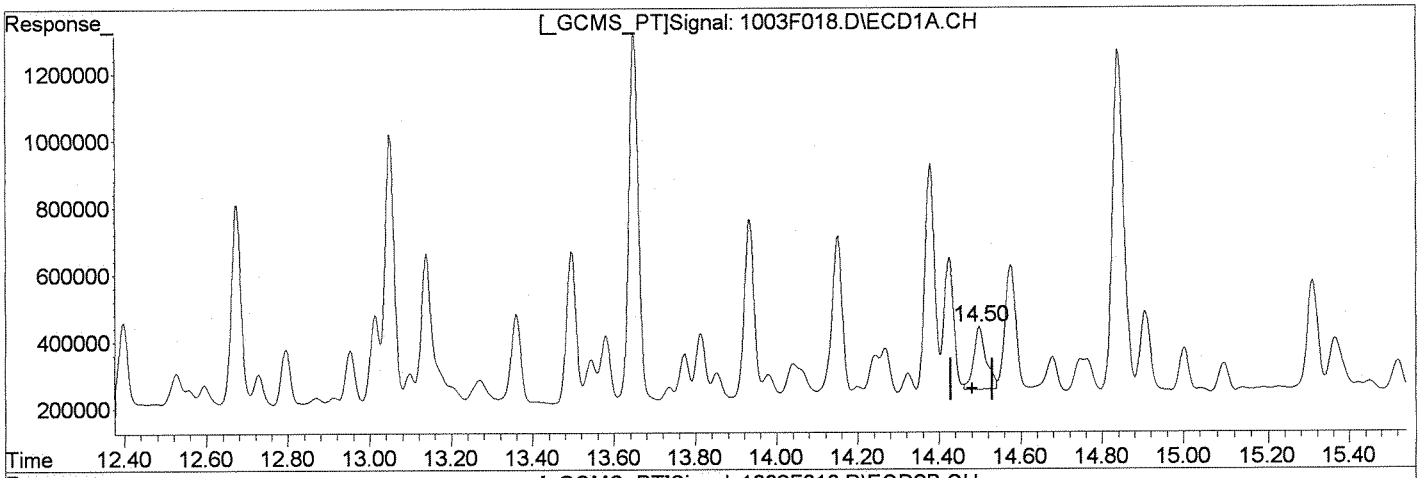
(+) = Expected Retention Time

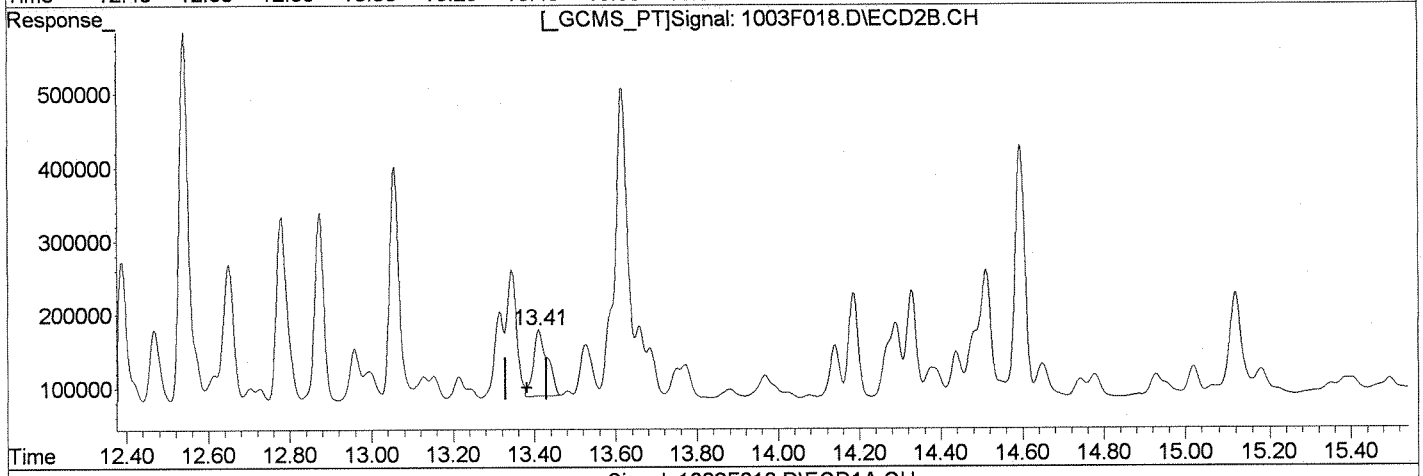
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:38 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F018.D\ECD1A.CH

(18) Endosulfan II

14.50min 13.314ug/L

response 396912

(18) Endosulfan II #2

13.41min 19.266ug/L

response 216167

Manual Integration:

Before

10/03/14

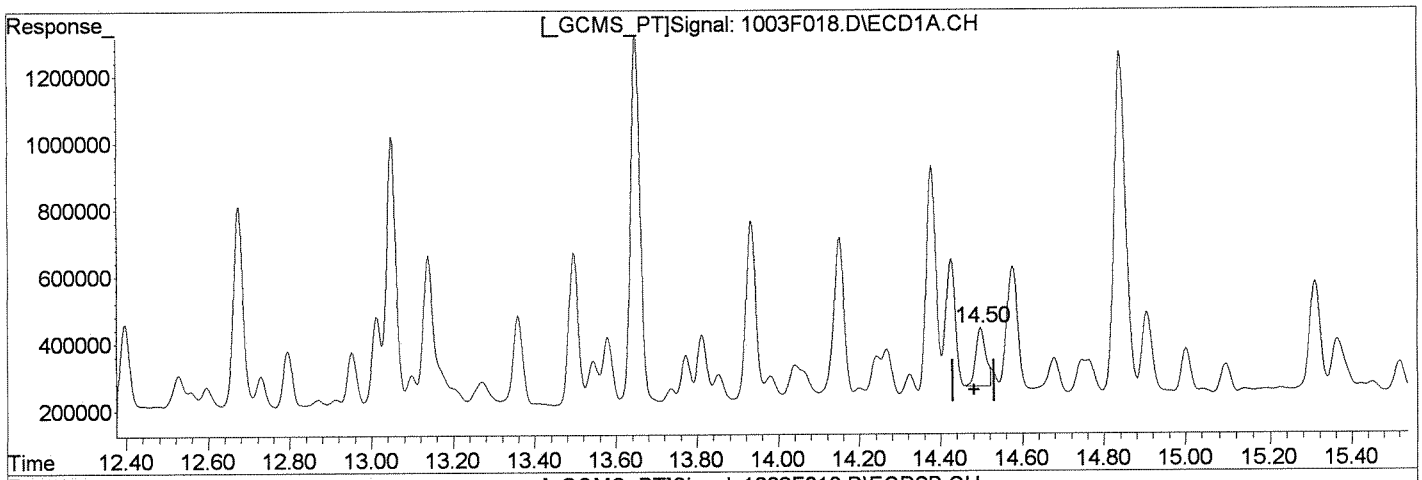
(+) = Expected Retention Time

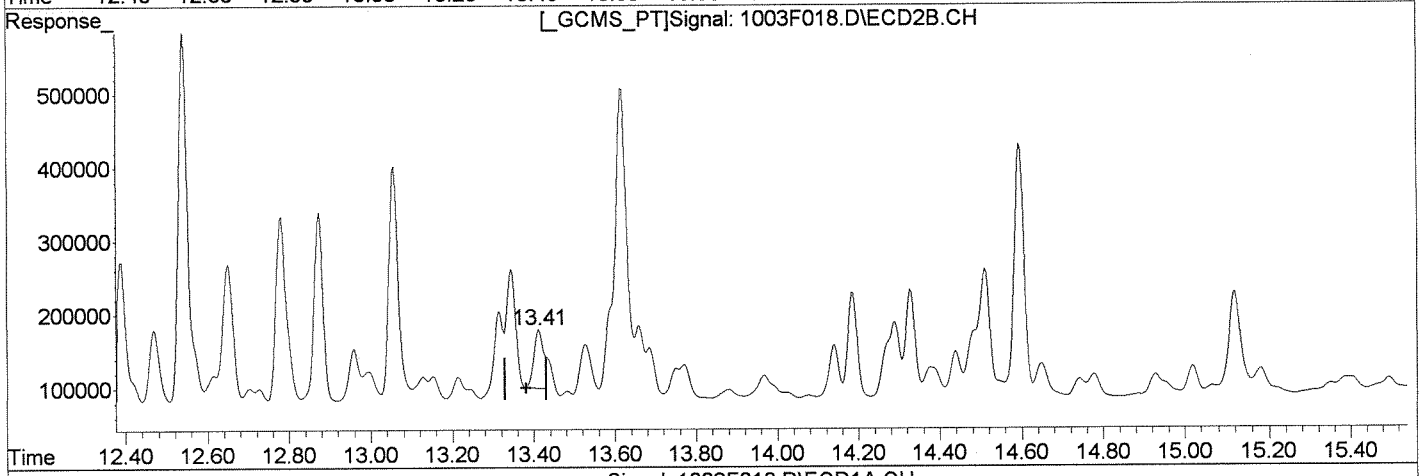
1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:40 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration





Signal: 1003F018.D\ECD1A.CH

(18) Endosulfan II

14.50min 9.932ug/L m

response 296083

Manual Integration:

After

Baseline/Shoulder

10/03/14

(18) Endosulfan II #2

13.41min 11.241ug/L m

response 126127

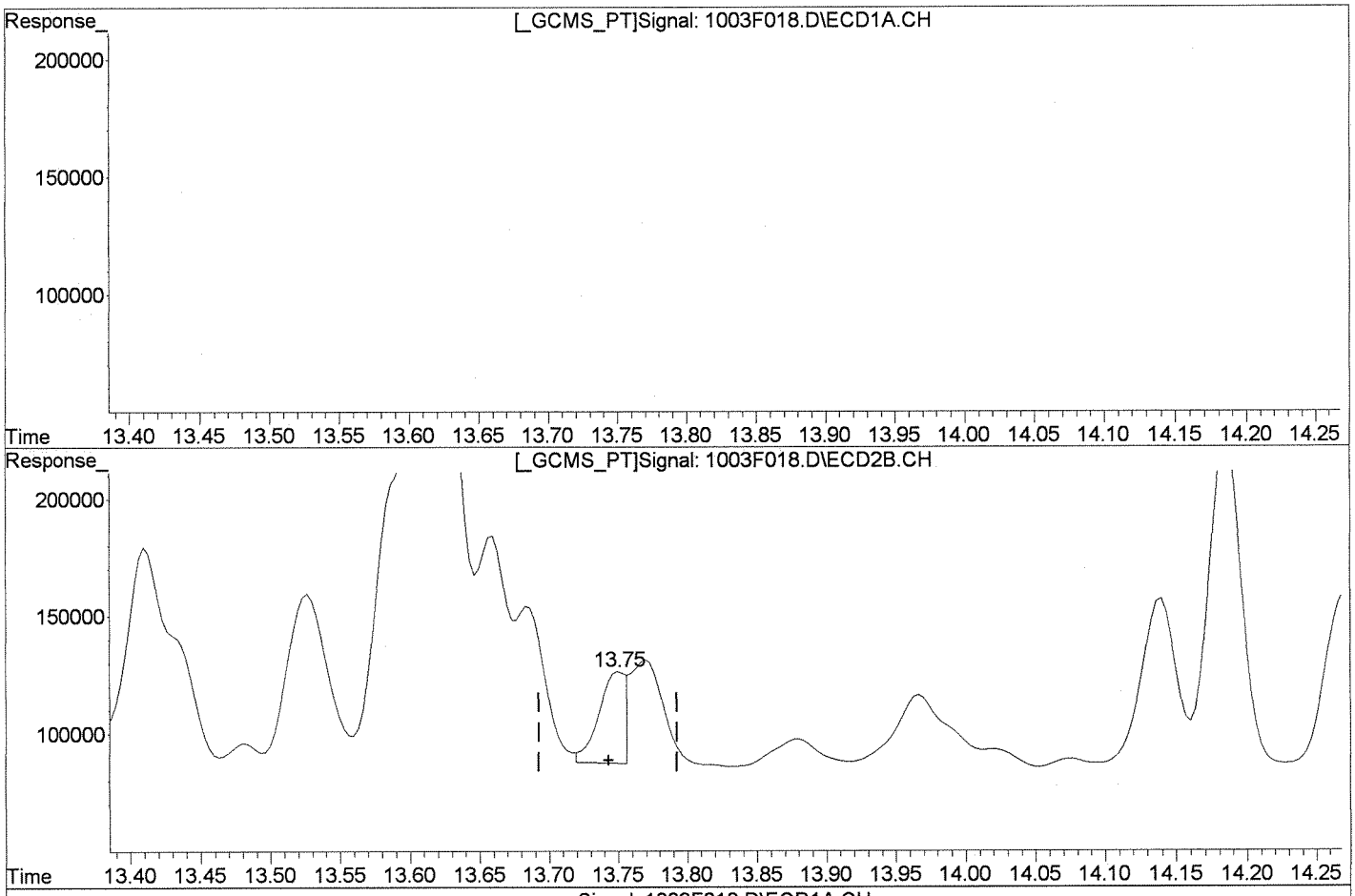
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:52 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(20) Endrin Aldehyde

14.68min 10.023ug/L

response 195953

(20) Endrin Aldehyde #2

13.75min 6.345ug/L

response 54897

Manual Integration:

Before

10/03/14

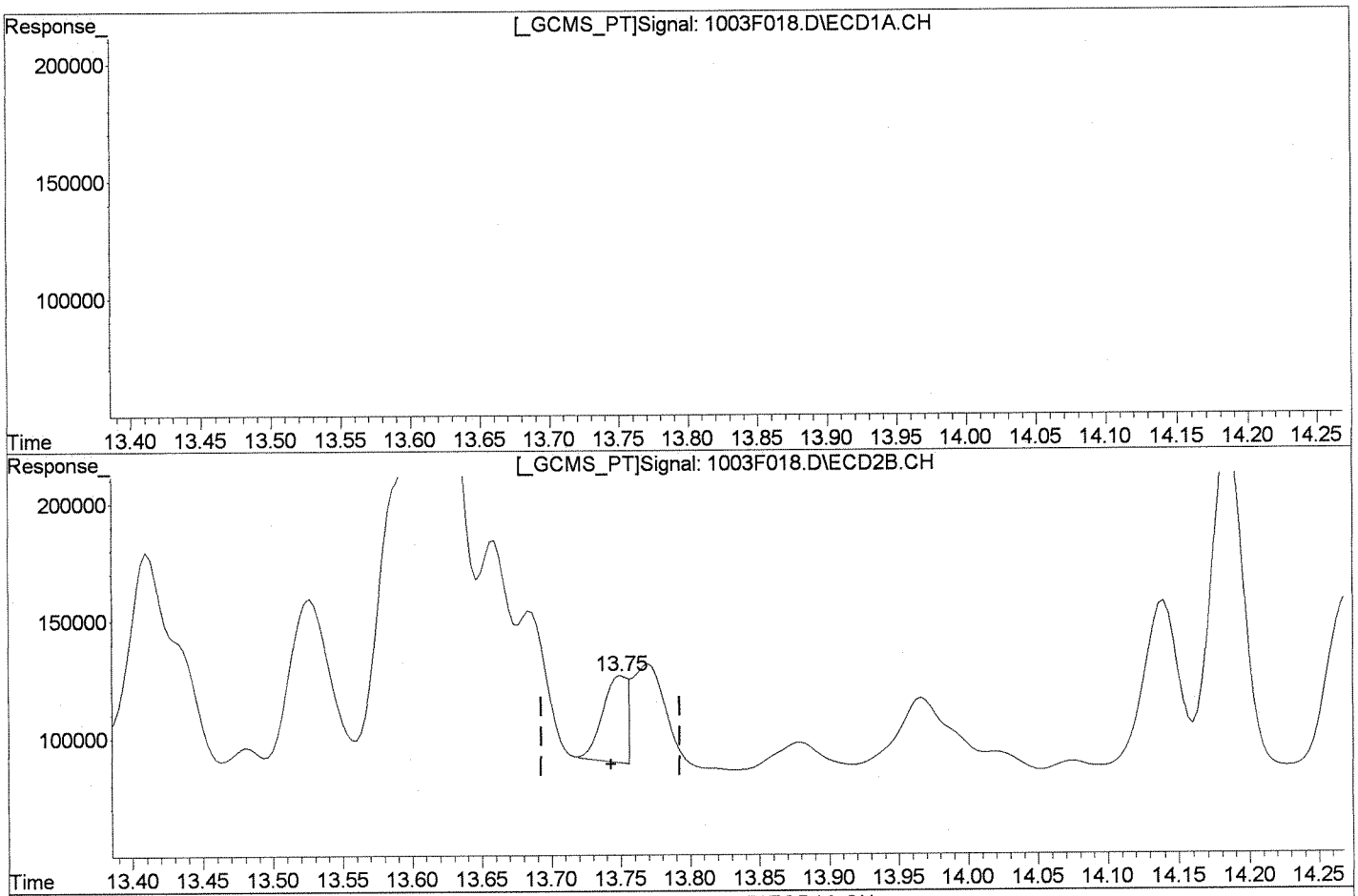
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:40:58 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(20) Endrin Aldehyde

14.68min 10.023ug/L

response 195953

(20) Endrin Aldehyde #2

13.75min 5.699ug/L m

response 49309

Manual Integration:

After

Baseline/Shoulder

10/03/14

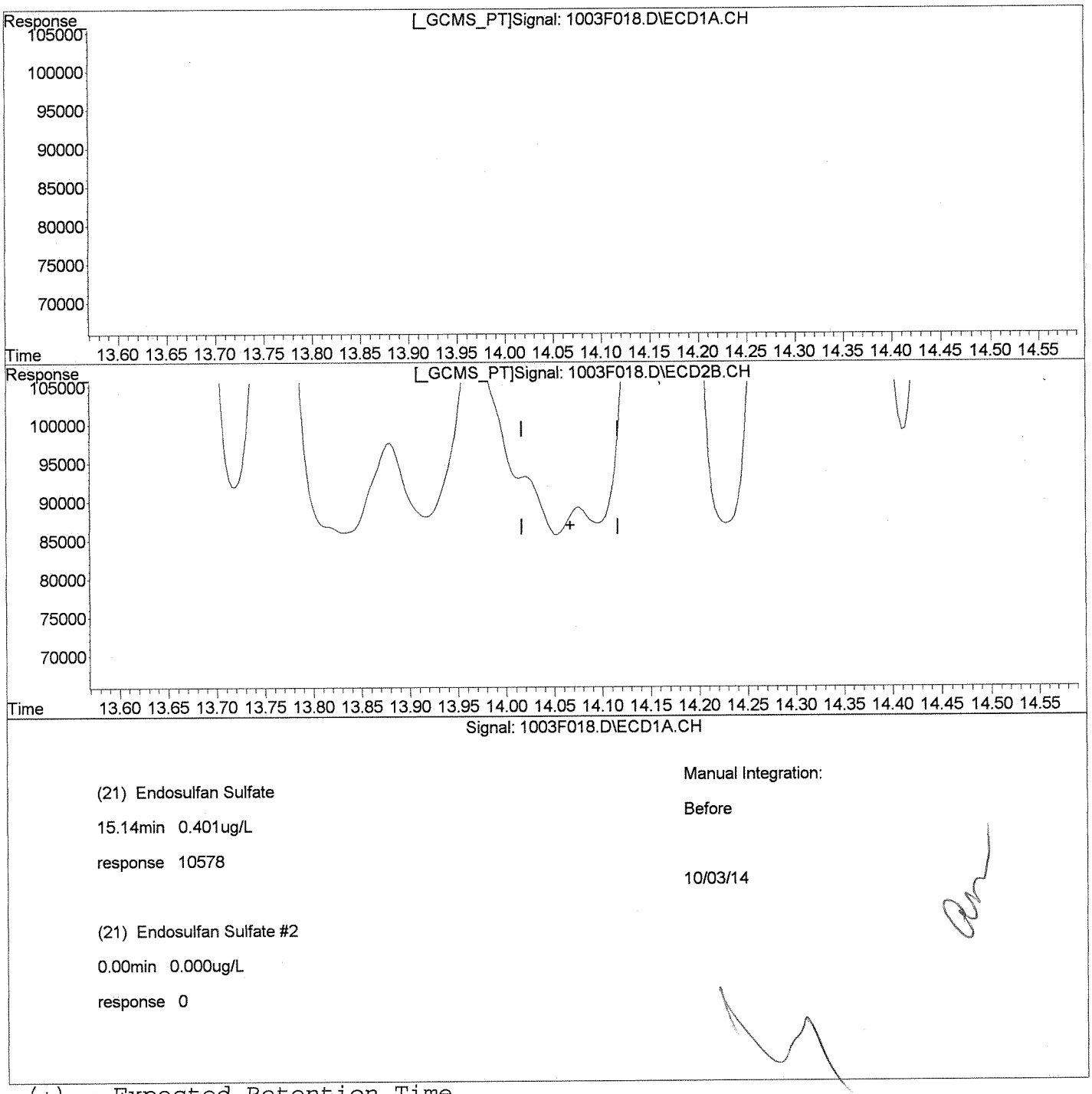
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:41:04 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

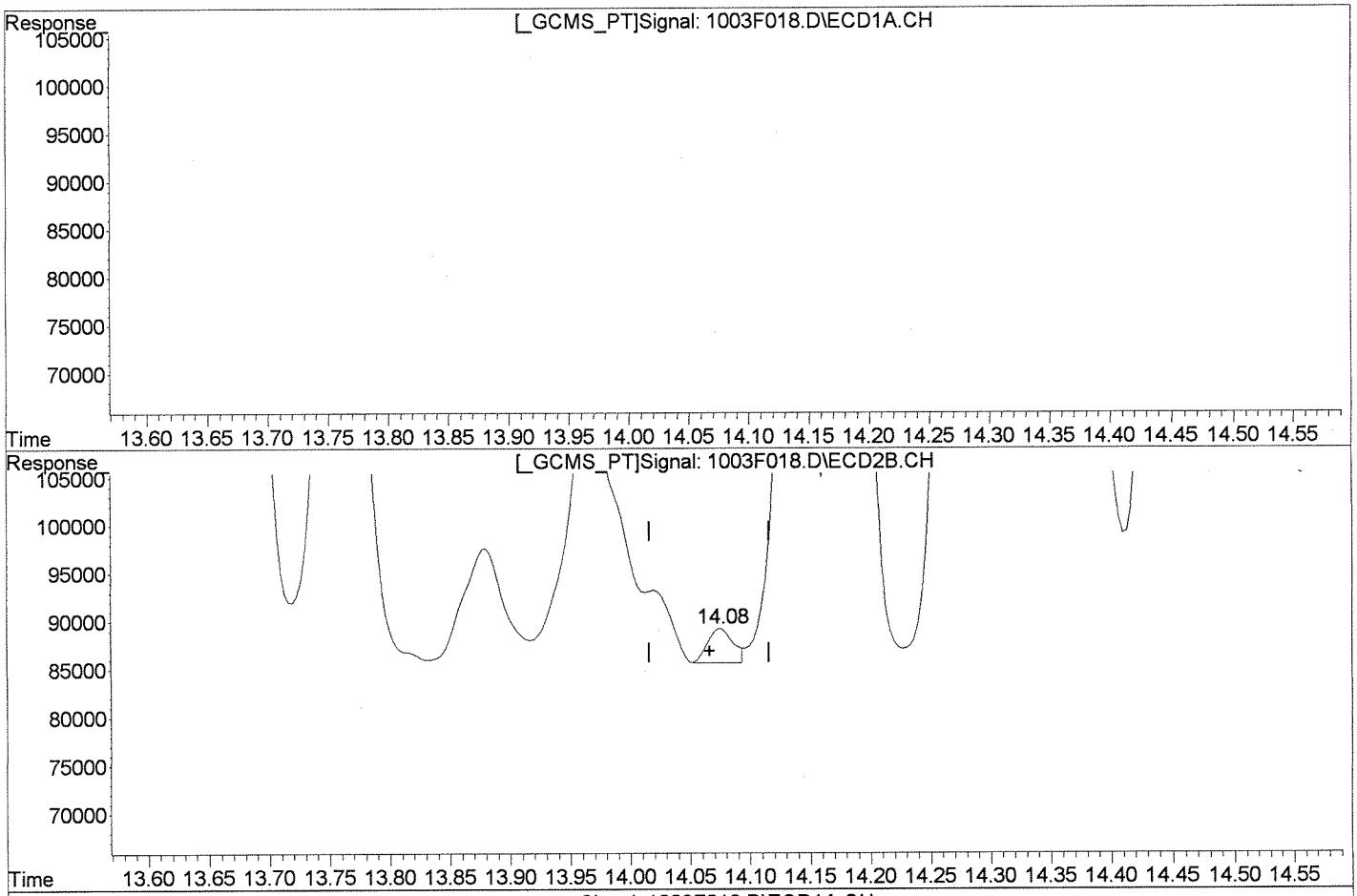


(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:41:08 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(21) Endosulfan Sulfate

15.14min 0.401ug/L

response 10578

Manual Integration:

After

Missed Peak

10/03/14

(21) Endosulfan Sulfate #2

14.08min 0.510ug/L m

response 5334

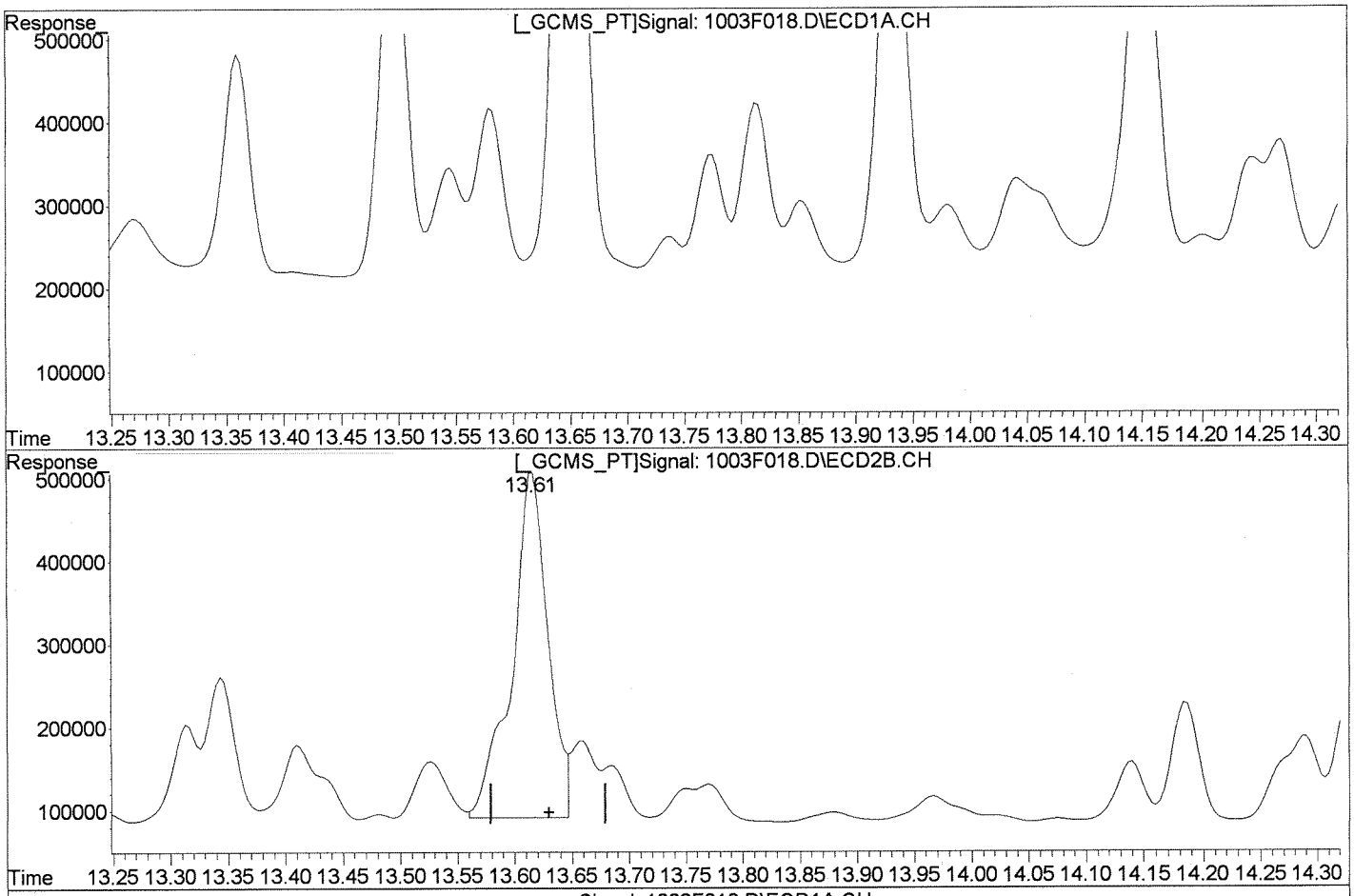
(+) = Expected Retention Time

1003F018.D GC23-031714-8081.M Fri Oct 03 17:41:13 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 78.225ug/L

response 1971490

(22) 4,4'-DDT #2

13.61min 91.074ug/L

response 911447

Manual Integration:

Before

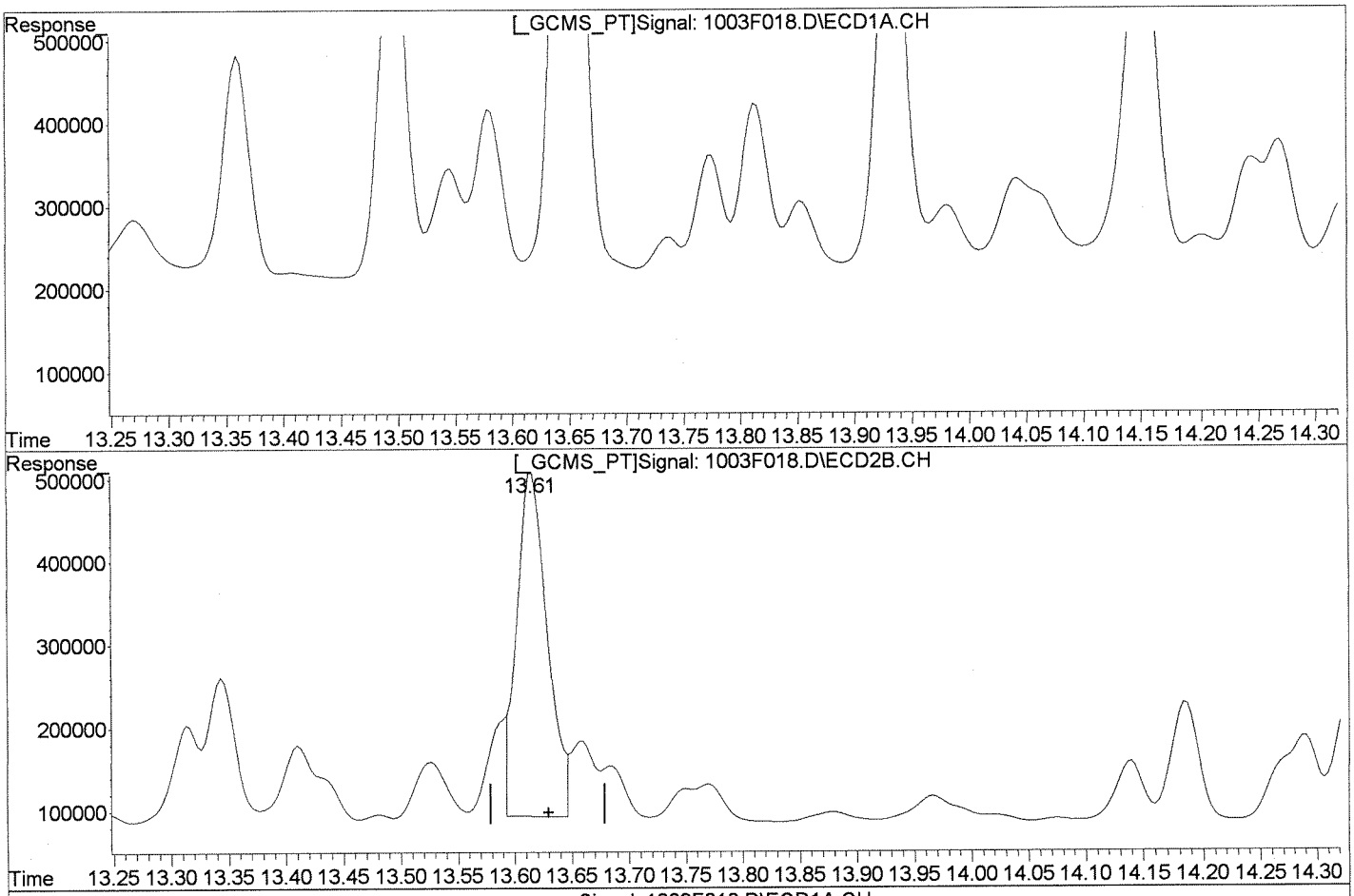
10/03/14

(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:41:17 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F018.D\ECD1A.CH Vial: 55
Signal #2 : J:\GC23\DATA\100314\1003F018.D\ECD2B.CH
Acq On : 03 Oct 2014 3:26 pm Operator: SMURRAY
Sample : K1409921-009 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F018.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 78.225ug/L

response 1971490

(22) 4,4'-DDT #2

13.61min 76.104ug/L m

response 761635

Manual Integration:

After

Baseline/Shoulder

10/03/14

(+) = Expected Retention Time
1003F018.D GC23-031714-8081.M Fri Oct 03 17:41:21 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F019.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 15:55
Date Quantitated: 10/03/2014 17:42
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: am 10/6/14

Secondary Review: [signature] 10/7/14

Printed: 10/04/2014 10:07:31
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F019.D\1003F019C.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 15:55
Date Quantitated: 10/03/2014 17:42
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: am 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F019.D\1003F019c.d			**Vial:**	56
Acqu Date:	10/03/2014 15:55	**Quant Date:**	10/03/2014 17:42	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-010				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380552	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2783386	983763	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1846291	711641	55.41		54.82				55	OK
							%Recovery =	55	OK	55	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1793926	696484	60.68		63.29				63	OK
							%Recovery =	61	OK	63	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.45		8.31	-0.01	6307	7919	0.1470	0.5060	0.74U	1.1J	0.74U
1	beta-BHC			9.61	+0.01	0	211016	0.0000	29.32	1.1U	61	1.1U
1	gamma-BHC (Lindane)	10.14	+0.02	9.07	+0.01	25119	17671m	0.6360	1.22	1.3J	2.6J	1.3JP
1	delta-BHC	11.25	+0.03			11724	0	0.3050	0.0000	0.78U	0.78U	0.78U
1	Heptachlor					0d	0	0.0000	0.0000	1.8U	1.8U	1.8U
1	4,4'-DDE	13.49	+0.01	12.33	+0.01	126027	11326m	3.60	0.8450	7.5	3.4U	3.4U
1	4,4'-DDD	14.32	+0.01	13.21	+0.01	33678	27112	1.18	2.59	2.5J	5.4	2.5JP
1	Endrin Aldehyde	14.68	+0.03	13.75	+0.02	22938	3937m	1.16	0.4590	3.0U	3.0U	3.0U
1	4,4'-DDT	14.84	+0.04	13.61	-0.01	301434	83259m	11.85	8.40	25Ui	18Ui	18Ui

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.298 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F019.D\1003F019c.d			**Vial:**	56
Acqu Date:	10/03/2014 15:55	**Quant Date:**	10/03/2014 17:42	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-010				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 23.6 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 16:58:57 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2783386	983763	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1846291	711641	55.410	54.818
28)	s	Decachlorobiphen	18.31	16.87	1793926	696484	60.675	63.293
		Target Compounds						
3)		alpha-BHC	9.45	8.31	6307	7919	0.147	0.506 #
5)		beta-BHC	0.00	9.61	0	211016	N.D.	29.321 #
6)		gamma-BHC (Linda	10.14	9.07	25119	17671	0.636	1.224m#
7)		delta-BHC	11.25	0.00	11724	0	0.305	N.D. #
9)		Aldrin	0.00	10.37f	0	860700	N.D. d	57.788
10)		Isodrin	12.39f	11.14	77004	18155	2.353	1.469 #
11)		Heptachlor Epoxi	0.00	11.40	0	3448	N.D.	0.260 #
12)		gamma-Chlordane	13.12	11.86f	1212212	67439	33.214	4.874 #
13)		Endosulfan I	13.27	12.04	38453	16483	1.182	1.376
14)		alpha-Chlordane	0.00	11.94f	0	59283	N.D.	4.374 #
15)		Dieldrin	13.64f	12.46	220687	39318	6.331	2.911 #
16)		4,4'-DDE	13.49	12.33	126027	11326	3.596	0.845m#
17)		Endrin	14.04	12.96	16183	17941	0.535	1.544 #
18)		Endosulfan II	14.49	13.41f	300911	26833	10.001	2.414m#
19)		4,4'-DDD	14.32	13.21	33678	27112	1.177	2.590 #
20)		Endrin Aldehyde	14.68	13.75	22938	3937	1.162	0.459m#
21)		Endosulfan Sulfa	15.09f	14.07	43377	2984	1.627	0.288 #
22)		4,4'-DDT	14.84	13.61	301434	83259	11.850	8.398m#
23)		Endrin Ketone	15.84f	15.02	8658	23896	0.257	1.871 #
24)		Methoxychlor	15.60f	14.74	44978	8093	3.332	1.599 #
25)		2,4'-DDE	12.95f	11.86	44623	67439	1.918	7.755 #
26)		2,4'-DDD	13.64	12.65	220687	3254628	10.422	410.811 #
27)		2,4'-DDT	14.15	13.05	146635	97239	6.648	11.554 #

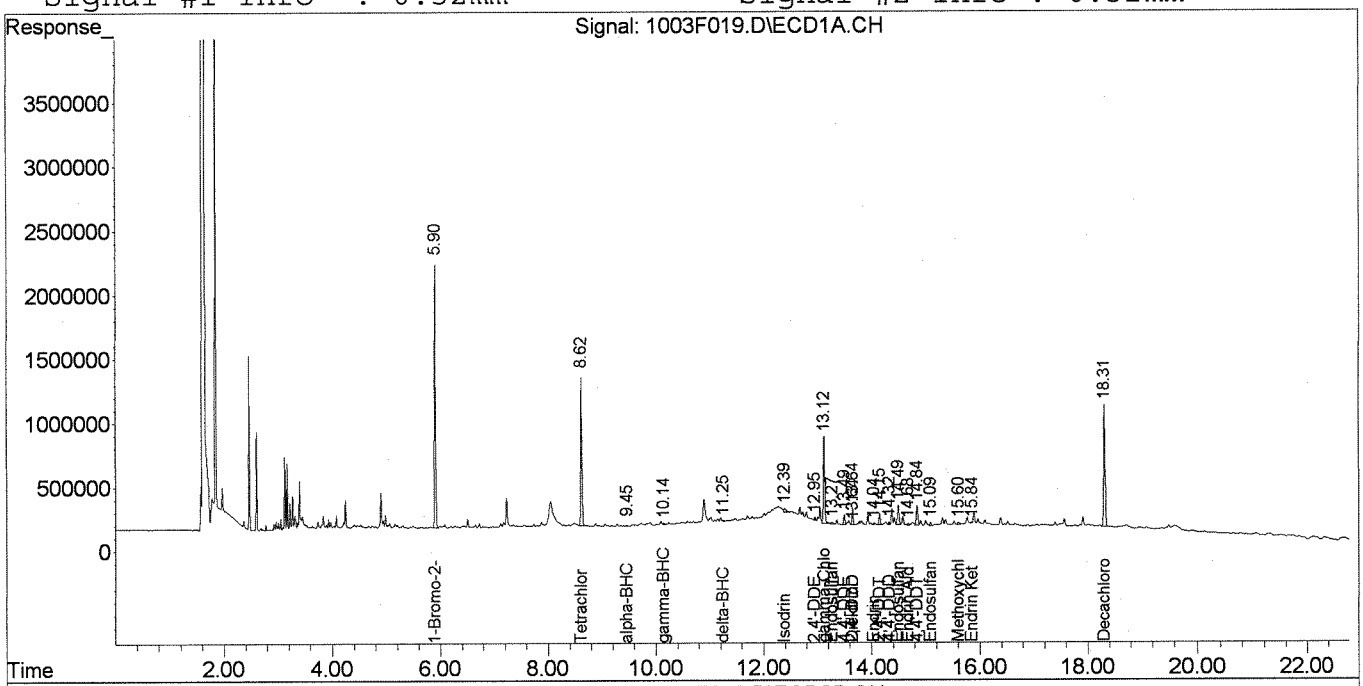
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

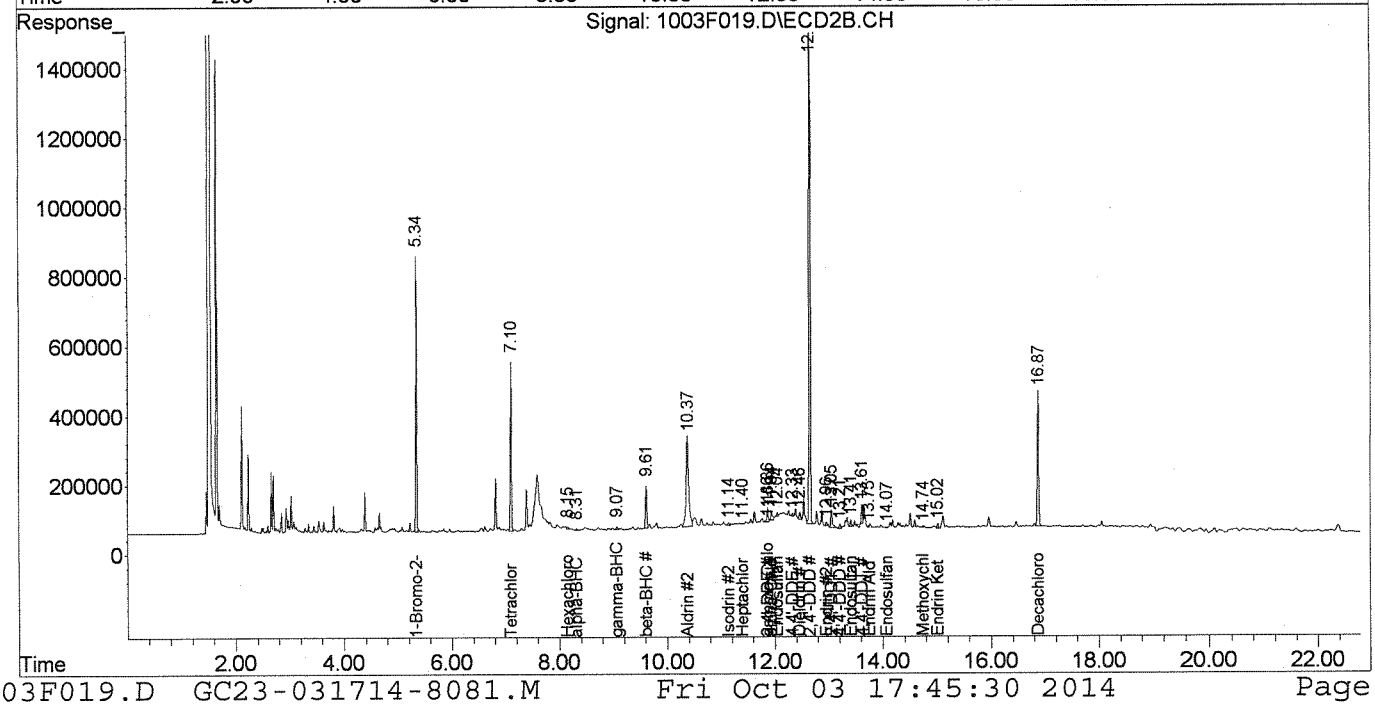
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:42 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

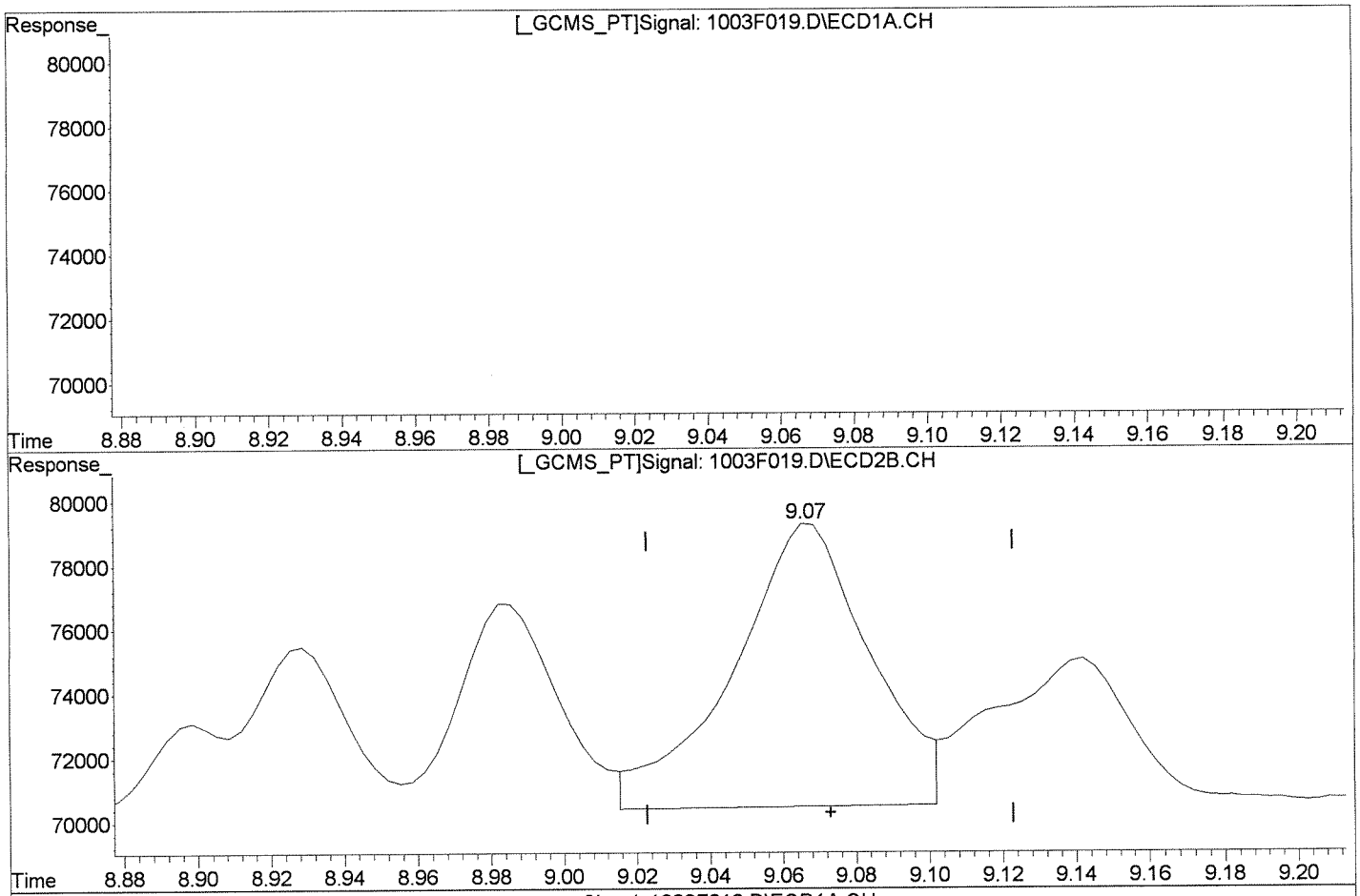




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.14min 0.636ug/L

response 25119

Manual Integration:

Before

10/03/14

(6) gamma-BHC (Lindane) #2

9.07min 1.589ug/L

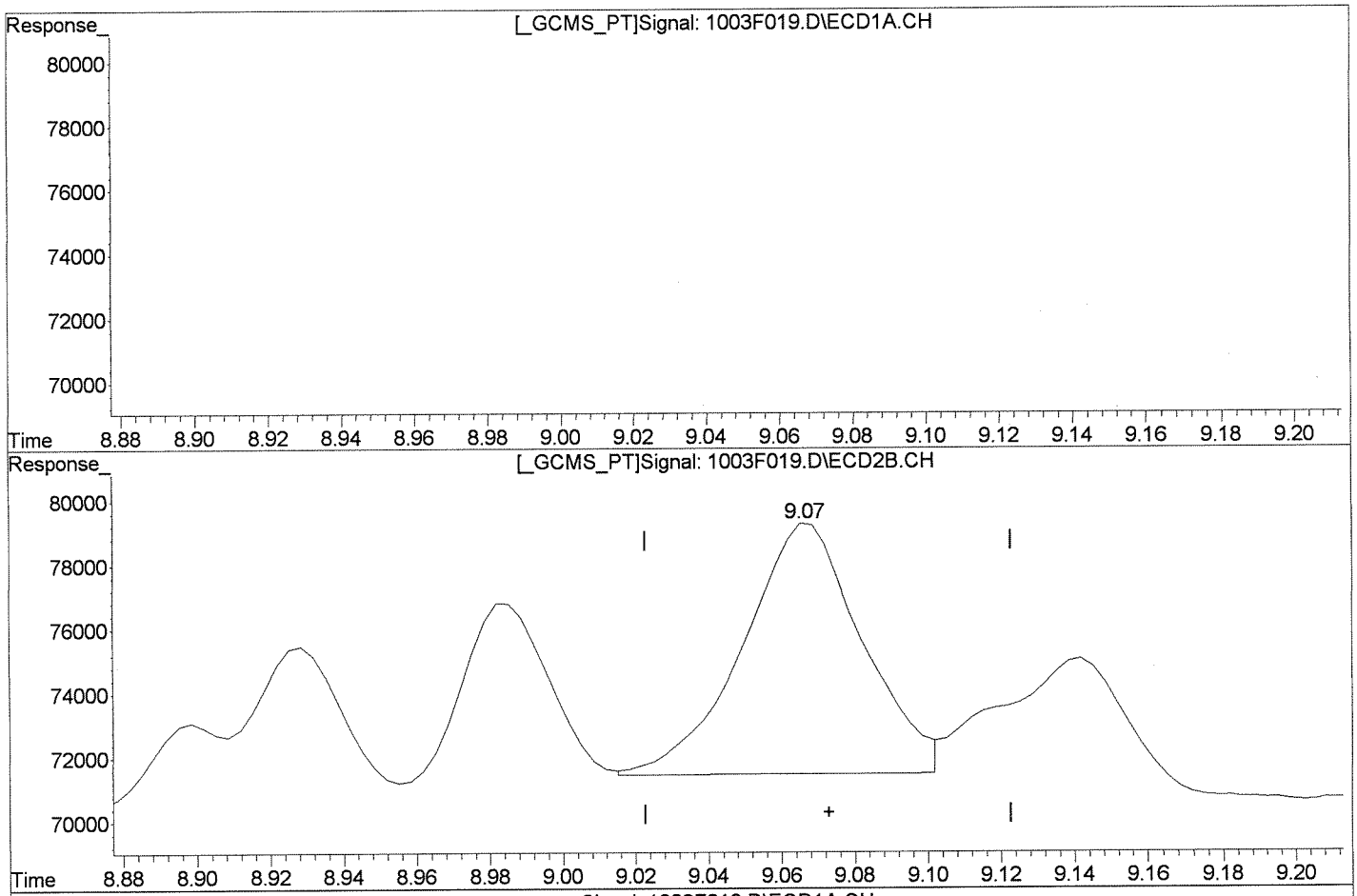
response 22936

(+) = Expected Retention Time
1003F019.D GC23-031714-8081.M Fri Oct 03 17:41:52 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(6) gamma-BHC (Lindane)

10.14min 0.636ug/L

response 25119

Manual Integration:

After

Baseline/Shoulder

10/03/14

(6) gamma-BHC (Lindane) #2

9.07min 1.224ug/L m

response 17671

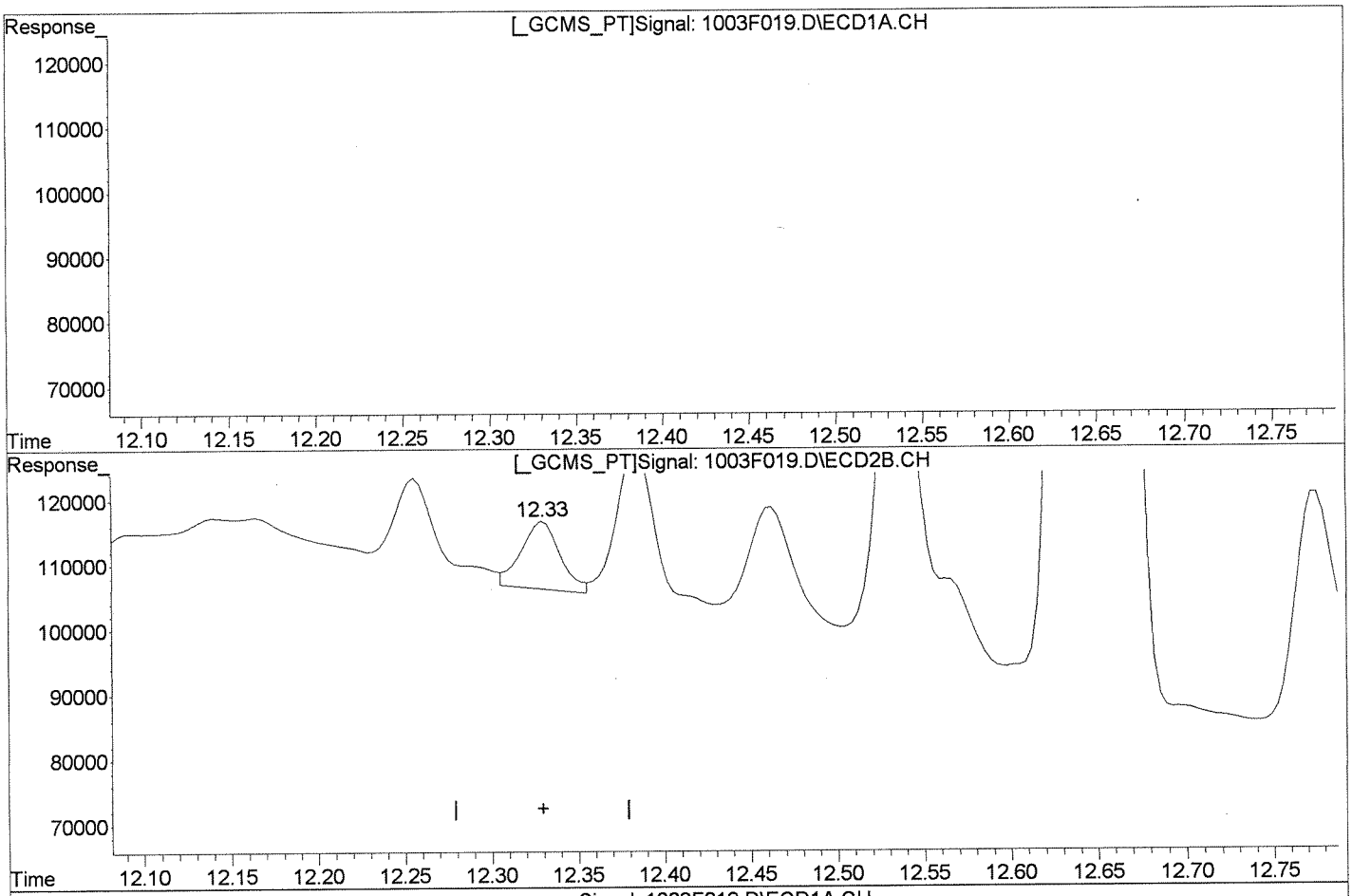
(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:41:56 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(16) 4,4'-DDE

13.49min 3.596ug/L

response 126027

Manual Integration:

Before

10/03/14

(16) 4,4'-DDE #2

12.33min 1.210ug/L

response 16221

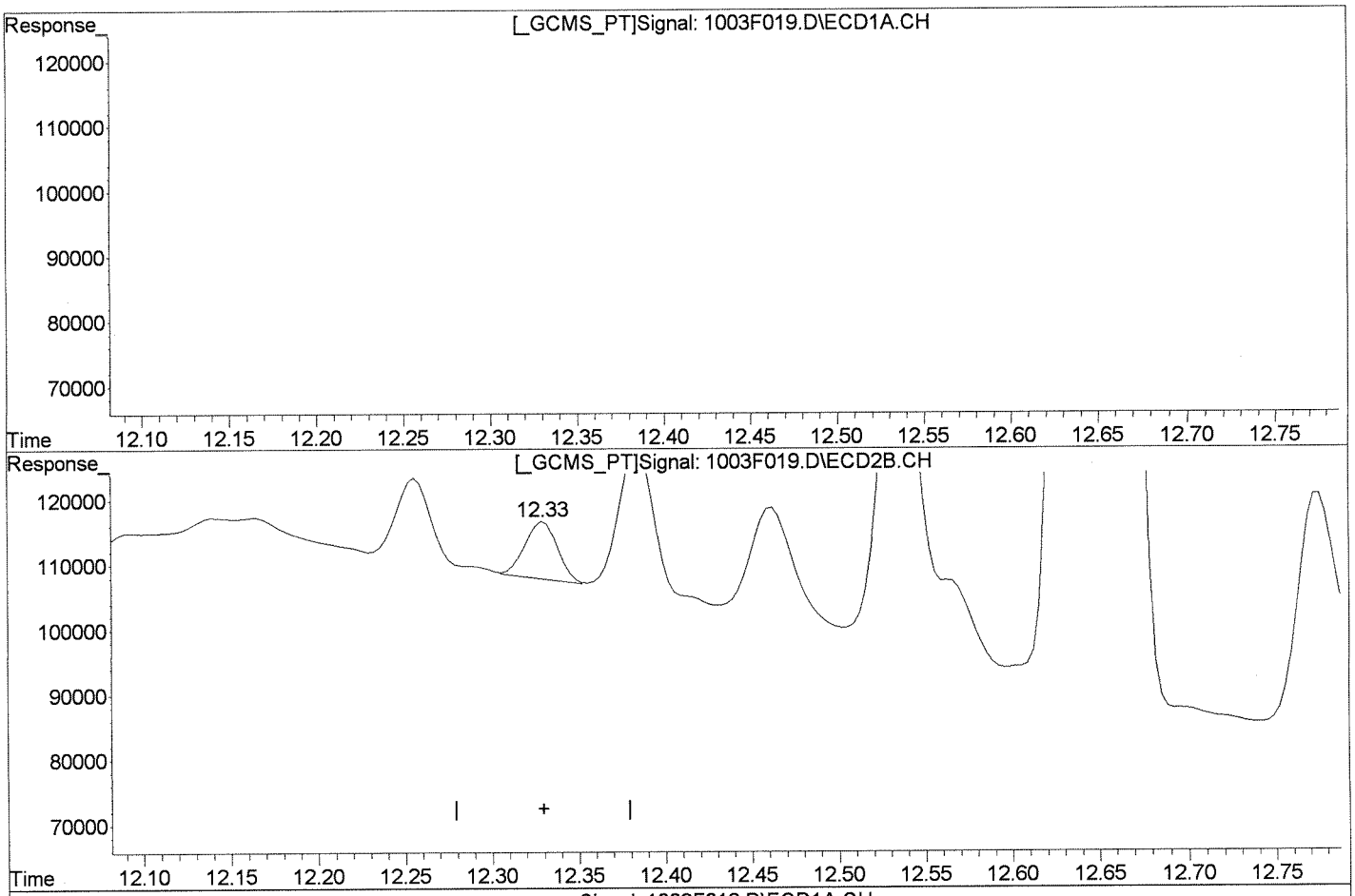
(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:17 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(16) 4,4'-DDE

13.49min 3.596ug/L

response 126027

(16) 4,4'-DDE #2

12.33min 0.845ug/L m

response 11326

Manual Integration:

After

Baseline/Shoulder

10/03/14

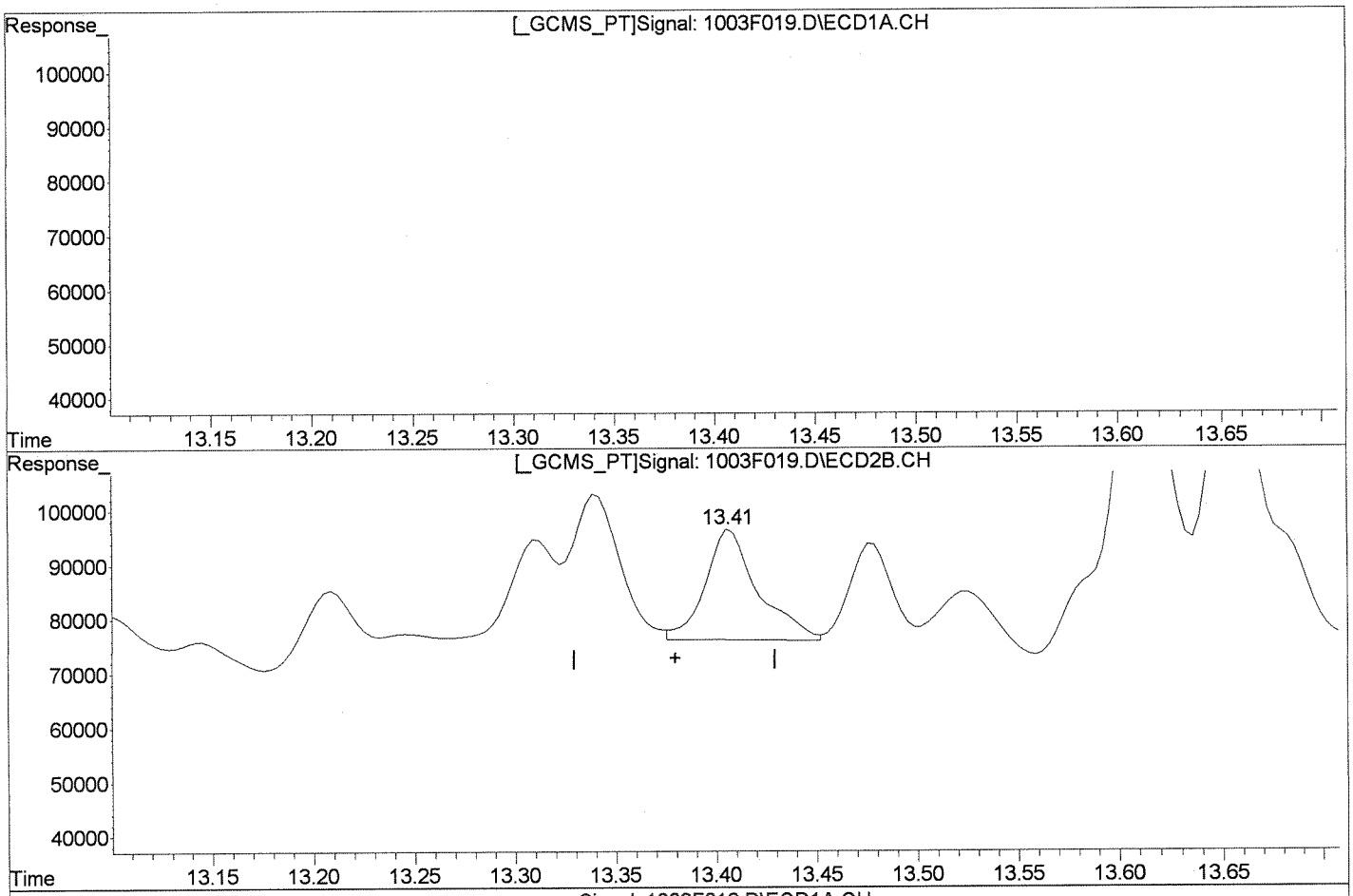
(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:20 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration

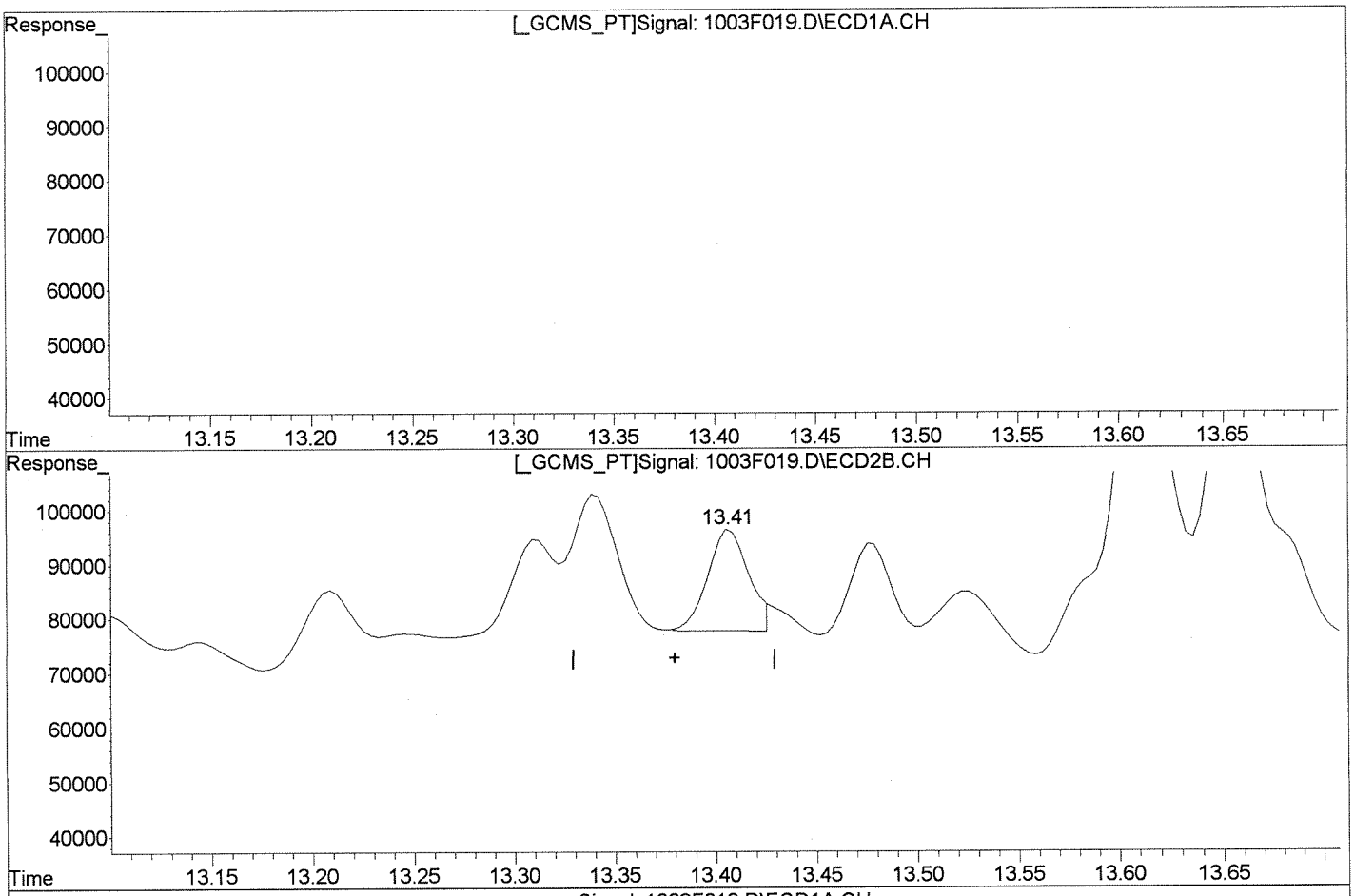


(+) = Expected Retention Time
1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:27 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(18) Endosulfan II

14.49min 10.001ug/L

response 300911

(18) Endosulfan II #2

13.41min 2.414ug/L m

response 26833

Manual Integration:

After

Baseline/Shoulder

10/03/14

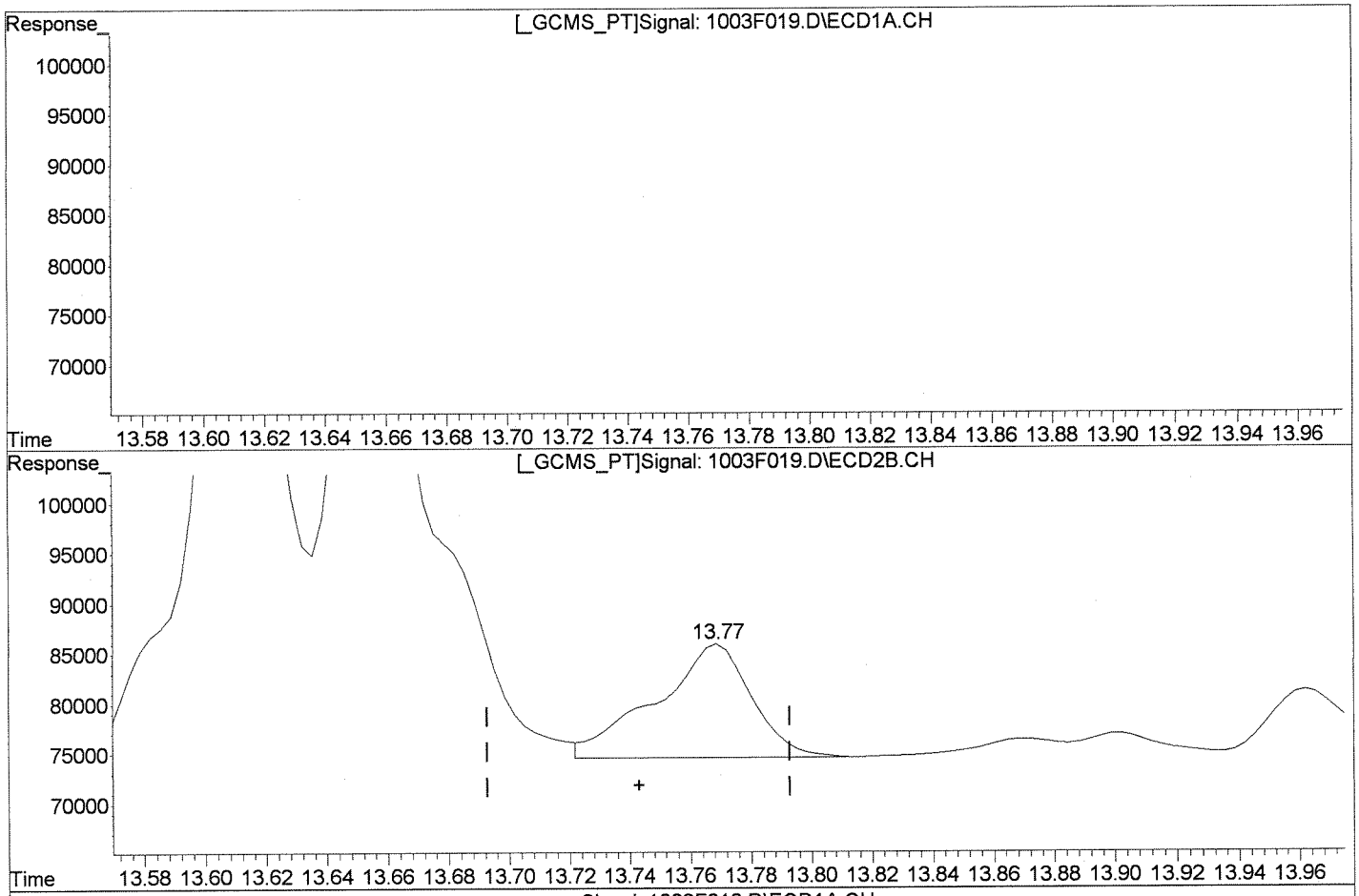
(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:30 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(20) Endrin Aldehyde

14.68min 1.162ug/L

response 22938

(20) Endrin Aldehyde #2

13.77min 2.898ug/L

response 24840

Manual Integration:

Before

10/03/14

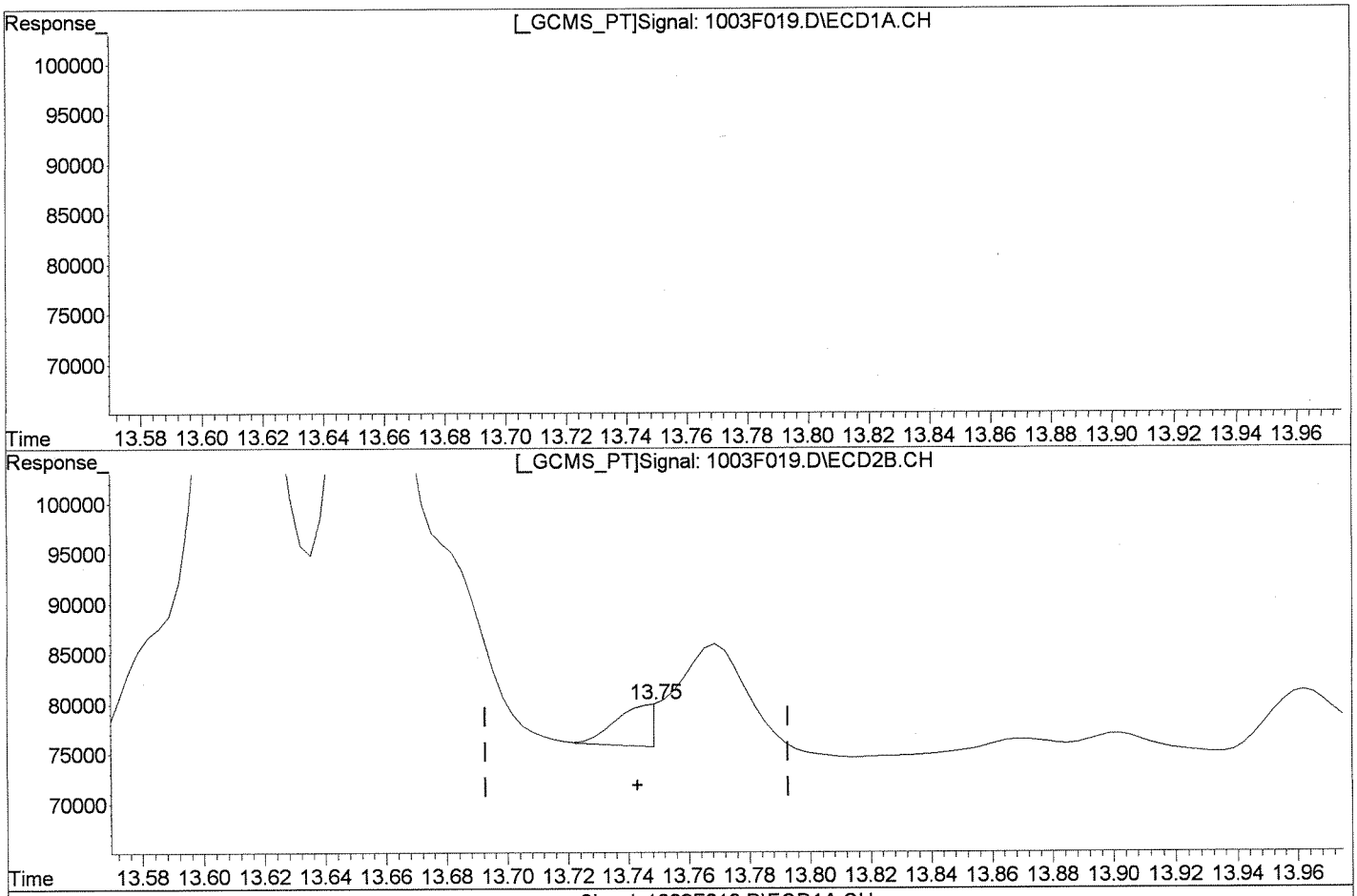
(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:35 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(20) Endrin Aldehyde
14.68min 1.162ug/L
response 22938

(20) Endrin Aldehyde #2
13.75min 0.459ug/L m
response 3937

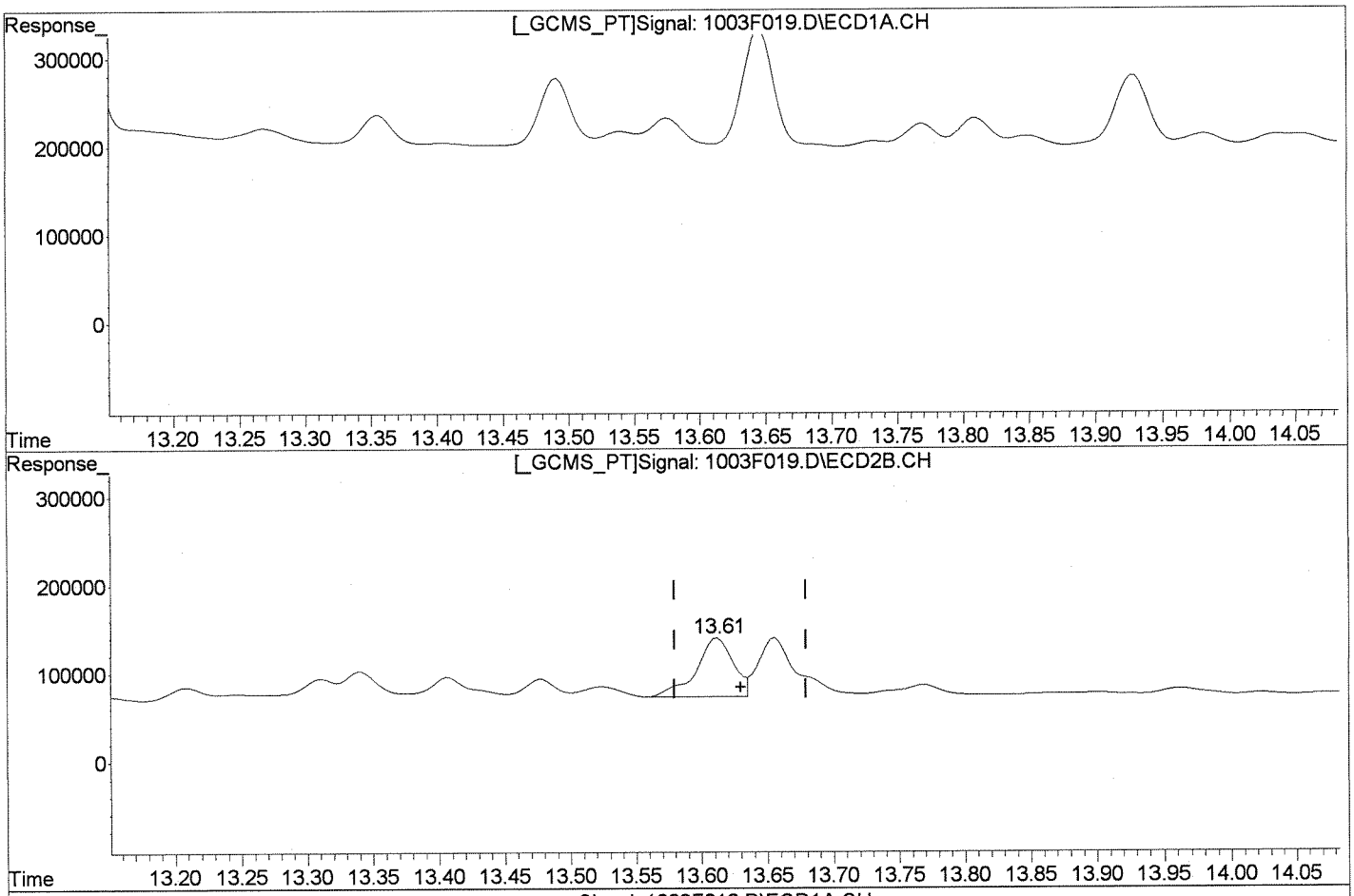
Manual Integration:
After
Wrong Peak
10/03/14

(+) = Expected Retention Time
1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:43 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 11.850ug/L

response 301434

(22) 4,4'-DDT #2

13.61min 13.513ug/L

response 133979

Manual Integration:

Before

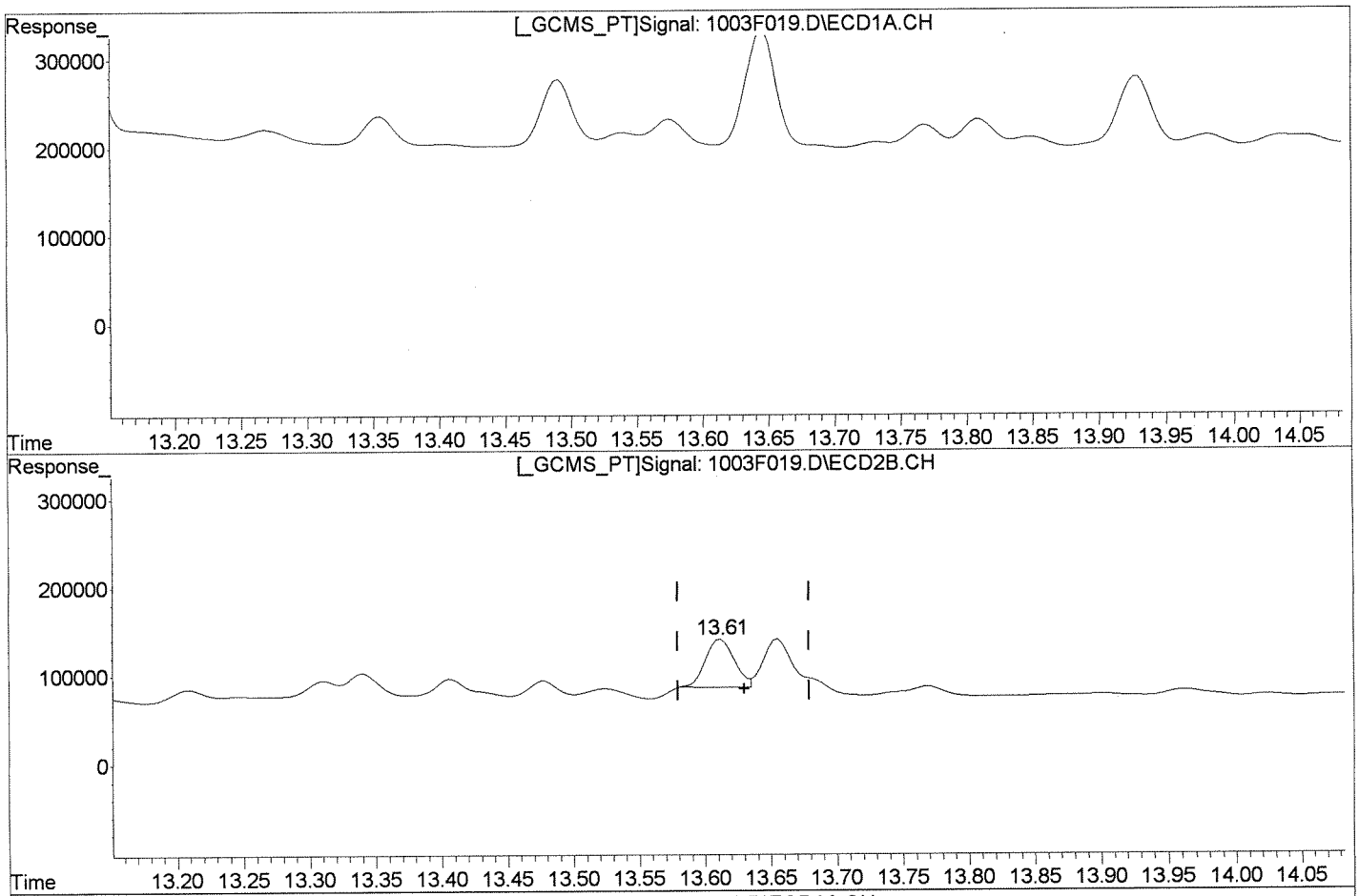
10/03/14

(+) = Expected Retention Time
1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:47 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F019.D\ECD1A.CH Vial: 56
Signal #2 : J:\GC23\DATA\100314\1003F019.D\ECD2B.CH
Acq On : 03 Oct 2014 3:55 pm Operator: SMURRAY
Sample : K1409921-010 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:58 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F019.D\ECD1A.CH

(22) 4,4'-DDT

14.84min 11.850ug/L

response 301434

Manual Integration:

After

Baseline/Shoulder

10/03/14

(22) 4,4'-DDT #2

13.61min 8.398ug/L m

response 83259

(+) = Expected Retention Time

1003F019.D GC23-031714-8081.M Fri Oct 03 17:42:51 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F020.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 16:25
Date Quantitated: 10/03/2014 17:44
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Std MRL Unsupported by ICAL	beta-BHC	2.5	1.3	NA	MRL OK
	Endrin Aldehyde	2.5	1.4	NA	↓

Primary Review: Am 10/6/14

Secondary Review: [signature]

Printed: 10/04/2014 10:07:37
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC23\DATA\100314\1003F020.D\1003F020C.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 16:25
Date Quantitated: 10/03/2014 17:44
Batch ID: KWG1413448
Analysis Method: 8081B
ListJoinID: LJ16551

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: am 10/6/14

Secondary Review: [signature]

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F020.D\1003F020c.d			**Vial:**	57
Acqu Date:	10/03/2014 16:25	**Quant Date:**	10/03/2014 17:44	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-011				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380545	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16551
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2785606	983762	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.61		7.10	+0.01	1618418	607524	48.44		46.80				48	OK
							%Recovery =	48	OK	47	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.30		16.86		1707982	686911	57.57		62.42				62	OK
							%Recovery =	58	OK	62	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.45		8.34	+0.02	3062	1394	0.0710	0.0890	0.35U	0.35U	0.35U
1	beta-BHC					0	0	0.0000	0.0000	0.50U	0.50U	0.50U
1	gamma-BHC (Lindane)	10.12		9.04	-0.02	3626	2612	0.0920	0.1810	0.45U	0.45U	0.45U
1	delta-BHC	11.24	+0.02			4694	0	0.1220	0.0000	0.37U	0.37U	0.37U
1	Heptachlor	11.30	-0.01	9.75	+0.01	17441	12382	0.4540	0.9190	0.83U	0.83U	0.83U
1	4,4'-DDE	13.48		12.32		12269	3211	0.3500	0.2390	1.6U	1.6U	1.6U
1	4,4'-DDD	14.31		13.21	+0.01	3147	4054	0.1100	0.3870	1.0U	1.0U	1.0U
1	Endrin Aldehyde	14.67	+0.02	13.76	+0.03	2462	3554	0.1250	0.4150	1.4U	1.4U	1.4U
1	4,4'-DDT	14.82	+0.02	13.65	+0.03	25071	33967	0.9850	3.43	0.85U	2.2	0.85U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.388 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	1

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F020.D\1003F020c.d			**Vial:**	57
Acqu Date:	10/03/2014 16:25	**Quant Date:**	10/03/2014 17:44	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-011				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Solids: 77.9 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F020.D\ECD1A.CH Vial: 57
Signal #2 : J:\GC23\DATA\100314\1003F020.D\ECD2B.CH
Acq On : 03 Oct 2014 4:25 pm Operator: SMURRAY
Sample : K1409921-011 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 16:58:58 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2-nitrob	5.90	5.34	2785606	983762	100.000	100.000	
		System Monitoring Compounds							
2)	s	Tetrachloro-m-xy	8.61	7.10	1618418	607524	48.440	46.798	
28)	s	Decachlorobiphen	18.30	16.86	1707982	686911	57.565	62.424	
		Target Compounds							
3)		alpha-BHC	9.45	8.34	3062	1394	0.071	0.089	#
4)		Hexachlorobenzen	9.61	8.11	65695	20659	0.443	1.376	#
6)		gamma-BHC (Linda	10.12	9.04f	3626	2612	0.092	0.181	#
7)		delta-BHC	11.24	0.00	4694	0	0.122	N.D.	#
8)		Heptachlor	11.30	9.75	17441	12382	0.454	0.919	#
9)		Aldrin	11.94f	10.36	7507	2493	0.192	0.167	
10)		Isodrin	0.00	11.15f	0	4063	N.D.	0.329	#
11)		Heptachlor Epoxi	0.00	11.45f	0	1444	N.D. d	0.109	
12)		gamma-Chlordane	13.12	11.85f	7939	3640	0.217	0.263	
13)		Endosulfan I	13.27	0.00	7443	0	0.229	N.D.	#
14)		alpha-Chlordane	13.18f	11.93f	5525	6340	0.153	0.468	#
15)		Dieldrin	13.64f	12.48	18085	1499	0.518	0.111m	#
16)		4,4'-DDE	13.48	12.32	12269	3211	0.350	0.239	#
17)		Endrin	0.00	12.94	0	1839	N.D.	0.158	#
18)		Endosulfan II	14.48	13.40	94089	3271	3.125	0.294	#
19)		4,4'-DDD	14.31	13.21	3147	4054	0.110	0.387	#
20)		Endrin Aldehyde	14.67	13.76	2462	3554	0.125	0.415	#
22)		4,4'-DDT	14.82	13.65	25071	33967	0.985	3.426	#
23)		Endrin Ketone	0.00	15.01	0	2748	N.D.	0.215	#
24)		Methoxychlor	15.60f	14.74	14715	3884	1.089	0.767	#
25)		2,4'-DDE	12.94f	11.85	2208	3640	0.095	0.419	#
26)		2,4'-DDD	13.64	12.64	18085	27819	0.853	3.511	#
27)		2,4'-DDT	14.14	13.05	16357	6835	0.741	0.812	

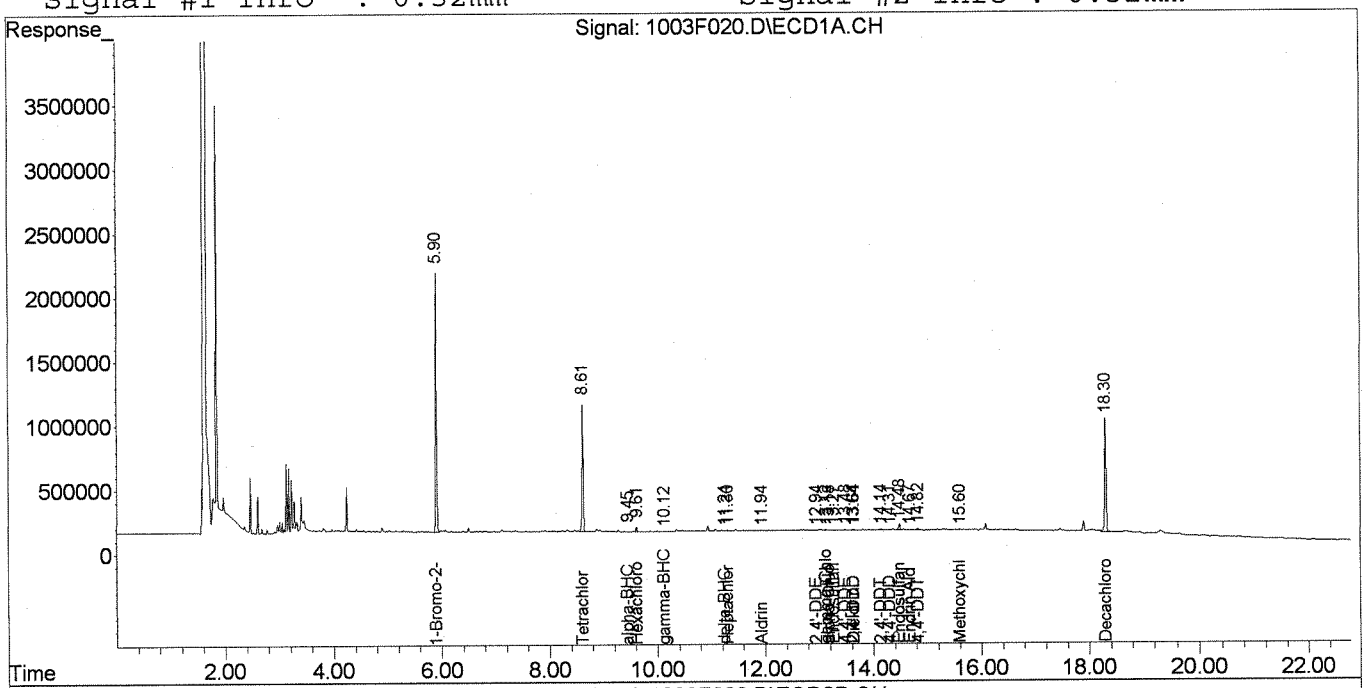
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

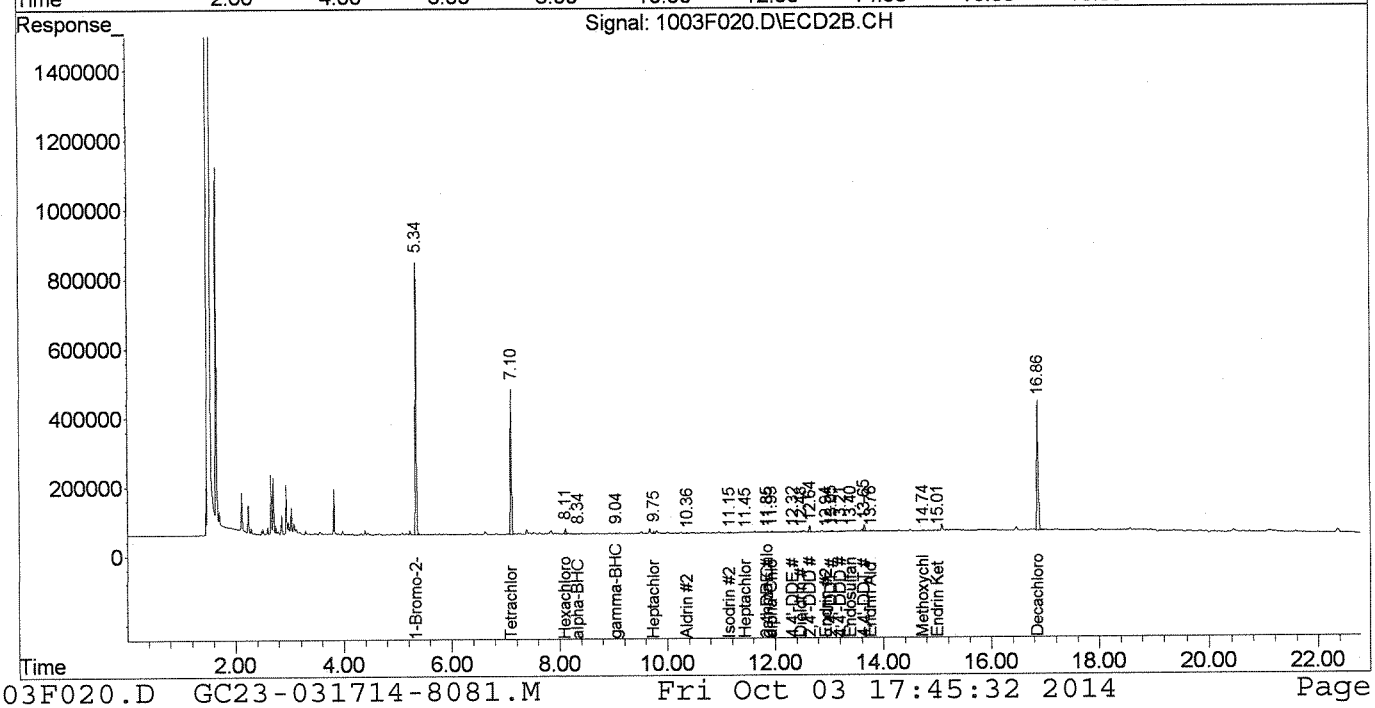
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F020.D\ECD1A.CH Vial: 57
Signal #2 : J:\GC23\DATA\100314\1003F020.D\ECD2B.CH
Acq On : 03 Oct 2014 4:25 pm Operator: SMURRAY
Sample : K1409921-011 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:44 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

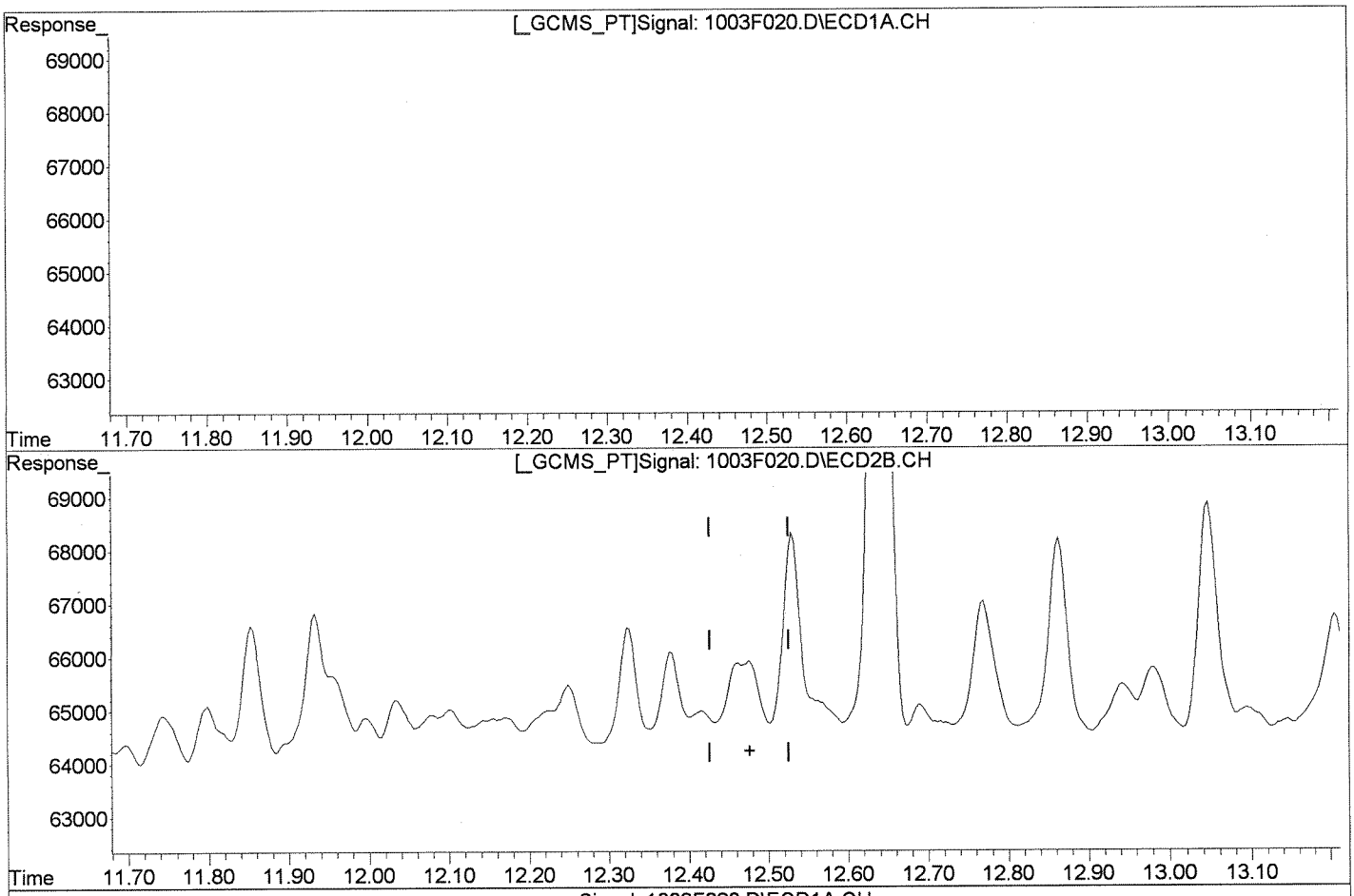




Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F020.D\ECD1A.CH Vial: 57
Signal #2 : J:\GC23\DATA\100314\1003F020.D\ECD2B.CH
Acq On : 03 Oct 2014 4:25 pm Operator: SMURRAY
Sample : K1409921-011 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:59 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F020.D\ECD1A.CH

(15) Dieldrin

13.64min 0.518ug/L

response 18085

(15) Dieldrin #2

0.00min 0.000ug/L

response 0

Manual Integration:

Before

10/03/14

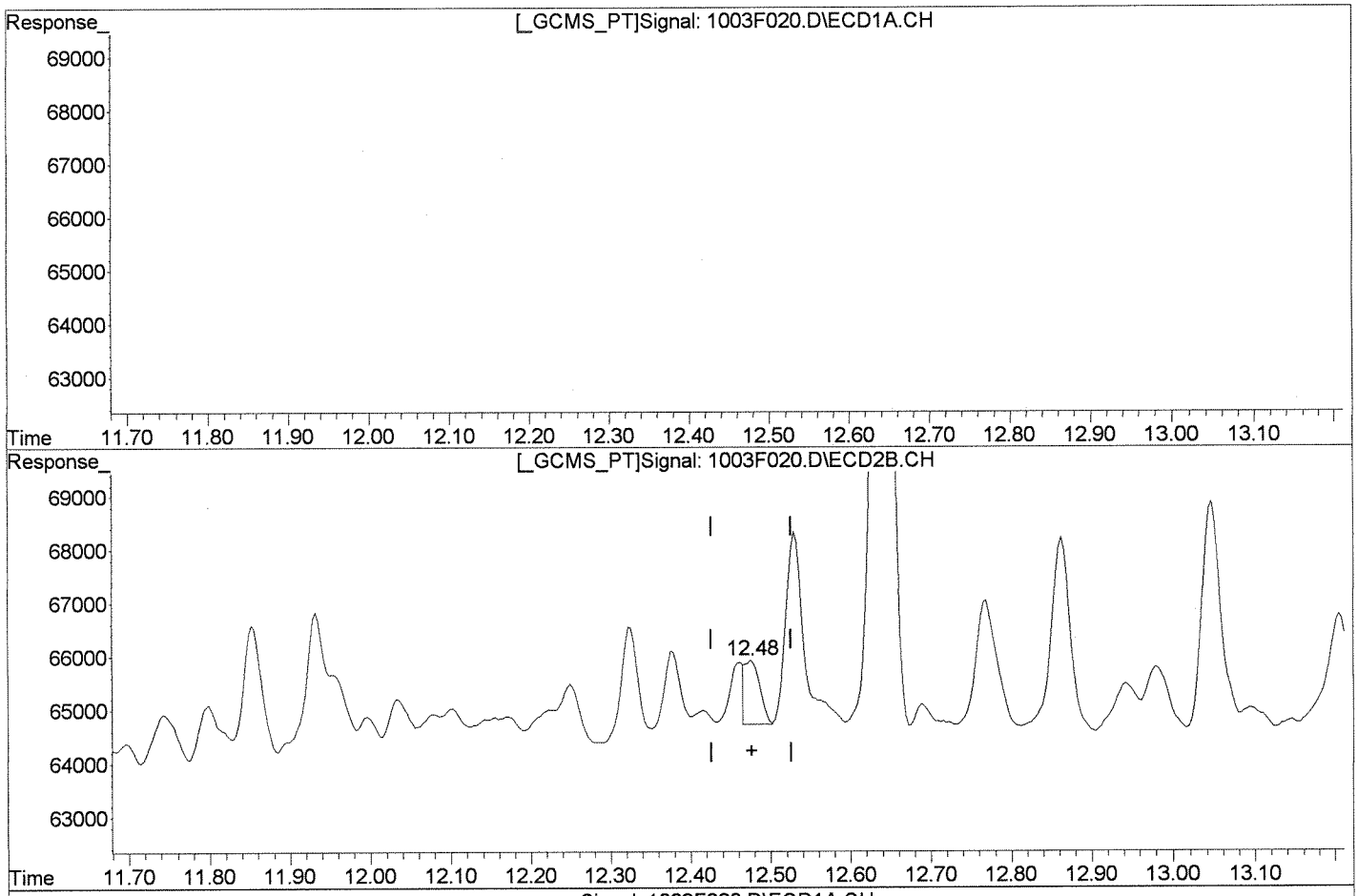
(+) = Expected Retention Time

1003F020.D GC23-031714-8081.M Fri Oct 03 17:44:07 2014

Quantitation Report (Qedit)

Signal #1 : J:\GC23\DATA\100314\1003F020.D\ECD1A.CH Vial: 57
Signal #2 : J:\GC23\DATA\100314\1003F020.D\ECD2B.CH
Acq On : 03 Oct 2014 4:25 pm Operator: SMURRAY
Sample : K1409921-011 Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 16:59 2014 Quant Results File: GC23-031714-8081.RES

Method : J:\GC23\METHODS\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration



Signal: 1003F020.D\ECD1A.CH

(15) Dieldrin

13.64min 0.518ug/L

response 18085

Manual Integration:

After

Missed Peak

10/03/14

(15) Dieldrin #2

12.48min 0.111ug/L m

response 1499

(+) = Expected Retention Time

1003F020.D GC23-031714-8081.M Fri Oct 03 17:44:10 2014

Exception Report

Data File: J:\GC23\DATA\100314\1003F022.D
Lab ID: KWG1413413-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/03/2014 17:23
Date Quantitated: 10/04/2014 08:04
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Analyte Co-elution	1-Bromo-2-nitrobenzene	5.9	NA	NA	SA
	Dieldrin	13.62	NA	NA	CE ND
	2,4'-DDD	13.62	NA	NA	↓
	1-Bromo-2-nitrobenzene {2}	5.9	NA	NA	SA
	1-Bromo-2-nitrobenzene {3}	5.9	NA	NA	↓
	1-Bromo-2-nitrobenzene {4}	5.9	NA	NA	↓
Enviroquant/Stealth Calibration Check	Hexachlorobenzene	Calc	S-7315.086	I-0	Quad ND

Primary Review: Am 10/6/14

Secondary Review: [signature]

Exception Report

Data File: J:\GC23\DATA\100314\1003F022.D\1003F022C.D
Lab ID: KWG1413413-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/03/2014 17:23
Date Quantitated: 10/04/2014 08:04
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	1-Bromo-2-nitrobenzene	5.34	NA	NA	SA
	Isodrin	11.16	NA	NA	CE ND
	2,4'-DDE	11.85	NA	NA	↓
	2,4'-DDT	13.06	NA	NA	↓
	1-Bromo-2-nitrobenzene {2}	5.34	NA	NA	SA
	1-Bromo-2-nitrobenzene {3}	5.34	NA	NA	↓
	1-Bromo-2-nitrobenzene {4}	5.34	NA	NA	↓
	Oxychlordane	11.16	NA	NA	CE ND
	cis-Nonachlor	13.06	NA	NA	↓
	trans-Nonachlor	11.85	NA	NA	↓
Enviroquant/Stealth Calibration Check	Chlorpyrifos	Calc	S-892.423	I-0	Quad ND

Primary Review: 10/6/14

Secondary Review:

Printed: 10/04/2014 10:07:52
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F022.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F022.D\1003F022c.d			**Vial:**	59
Acqu Date:	10/03/2014 17:23	**Quant Date:**	10/04/2014 08:04	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380544	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:			
MB Ref:		**Method ID:**	MJ1016
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26 c	5.34	-0.21 c	2697427	978433	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	5.90	c	5.34	c	2697427	978433	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	5.90	c	5.34	c	2697427	978433	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	5.90	c	5.34	c	2697427	978433	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1199834	459270	36.91	35.57			37 OK
						%Recovery =		37 OK	36 OK	Limits =	21-112	
1	Decachlorobiphenyl	18.30		16.87	+0.01	1255670	477526	43.10	43.63			44 OK
						%Recovery =		43 OK	44 OK	Limits =	15-130	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC			8.34	+0.02	0d	1115	0.0000	0.0720	0.35U	0.35U	0.35U
1	Hexachlorobenzene					1919	0	0.0000	0.0000	0.47U	0.47U	0.47U
1	beta-BHC					0	0	0.0000	0.0000	0.50U	0.50U	0.50U
1	gamma-BHC (Lindane)	10.12		9.06		1295	869	0.0340	0.0610	0.45U	0.45U	0.45U
1	delta-BHC	11.25	+0.03			1268	0	0.0340	0.0000	0.37U	0.37U	0.37U
1	Heptachlor	11.32	+0.01	9.75	+0.01	2871	2638	0.0770	0.1970	0.83U	0.83U	0.83U
1	Aldrin	11.89		10.36	+0.04	1083	1420	0.0290	0.0960	0.34U	0.34U	0.34U
1	Isodrin	12.44	+0.03	11.16	+0.04 c	1816	2346	0.0570	0.1910	0.30U	0.30U	0.30U
1	Heptachlor Epoxide	12.66	+0.06			1146	0	0.0330	0.0000	0.39U	0.39U	0.39U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F022.D	**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F022.D\1003F022c.d	**Vial:**	59
Acqu Date:	10/03/2014 17:23 **Quant Date:** 10/04/2014 08:04	**Dilution:**	1.0
Run Type:	MB	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-4		
Signal #1:	DB XLB **Signal #2:** DB-35MS		

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	13.12		11.82		1832	773	0.0520	0.0560	0.60U	0.60U	0.60U
1	Endosulfan I			12.06	+0.03	0	941	0.0000	0.0790	1.7U	1.7U	1.7U
1	alpha-Chlordane	13.19		11.97	+0.01	3163	1203	0.0910	0.0890	1.2U	1.2U	1.2U
1	Dieldrin	13.62	-0.04 c			1287	0	0.0380	0.0000	0.48U	0.48U	0.48U
1	4,4'-DDE	13.48				1319	0	0.0390	0.0000	1.6U	1.6U	1.6U
1	Endrin			12.94		0	1026	0.0000	0.0890	0.45U	0.45U	0.45U
1	Endosulfan II	14.49	+0.02			4525	0d	0.1550	0.0000	0.86U	0.86U	0.86U
1	4,4'-DDD			13.20		0	1938	0.0000	0.1860	1.0U	1.0U	1.0U
1	Endrin Aldehyde	14.69	+0.04	13.77	+0.04	4448	1490	0.2330	0.1750	1.4U	1.4U	1.4U
1	Endosulfan Sulfate					0d	0	0.0000	0.0000	0.57U	0.57U	0.57U
1	4,4'-DDT	14.81	+0.01	13.61	-0.01	2123	1585	0.0860	0.1610	0.85U	0.85U	0.85U
1	Endrin Ketone					0	0d	0.0000	0.0000	0.55U	0.55U	0.55U
1	Methoxychlor	15.61	+0.06			20621	0	1.58	0.0000	0.773J	0.61U	0.61U
1	2,4'-DDE			11.85	-0.01 c	0	926	0.0000	0.1070	0.94U	0.94U	0.94U
1	2,4'-DDD	13.62	-0.01 c	12.65	+0.03	1287	7855	0.0630	0.9970	1.4U	1.4U	1.4U
1	2,4'-DDT	14.10	-0.01	13.06	+0.02 c	2074	1165	0.0970	0.1390	0.50U	0.50U	0.50U
	Toxaphene					0	0	11.09	14.72	37.0U	37.0U	37.0U
2	Toxaphene {1}					0	0	0.0000	0.0000	37U	37U	
2	Toxaphene {2}	14.49				4525	0	17.22	0.0000	37U	37U	
2	Toxaphene {3}			13.77		0	1490	0.0000	14.72	37U	37U	
2	Toxaphene {4}	14.69				4448	0	11.35	0.0000	37U	37U	
2	Toxaphene {5}					0	0	0.0000	0.0000	37U	37U	
2	Toxaphene {6}	15.88				2487	0	4.70	0.0000	37U	37U	
	Chlordane					0	0	1.91	1.86	22.0U	22.0U	22.0U
3	Chlordane {1}	10.94				14811	0	4.62	0.0000	22U	22U	
3	Chlordane {2}	11.32		9.75		2871	2638	1.57	4.12	22U	22U	
3	Chlordane {3}			11.82		0	773	0.0000	0.5410	22U	22U	
3	Chlordane {4}	13.12		11.85		1832	926	0.4340	1.08	22U	22U	
3	Chlordane {5}	13.19		11.97		3163	1203	1.02	2.51	22U	22U	
3	Chlordane {6}			11.97		0	1203	0.0000	1.03	22U	22U	
4	Chlorpyrifos	11.81				3243	2371	0.2230	0.0000	0.66U	0.66U	0.66U
4	Oxychlordane	12.57		11.16	c	2766	2346	0.0960	0.2100	0.68U	0.68U	0.68U
4	cis-Nonachlor			13.06	c	0	1165	0.0000	0.0830	0.57U	0.57U	0.57U
4	trans-Nonachlor			11.85	c	0	926	0.0000	0.0680	0.53U	0.53U	0.53U
4	Mirex					0	0	0.0000	0.0000	0.68U	0.68U	0.68U
4	Hexachloroethane	3.93		3.33		1515	3532	0.0240	0.1560	0.47U	0.47U	0.47U
4	Hexachlorobutadiene	4.64		3.89		5450	6293	0.1120	0.3460	0.53U	0.53U	0.53U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 20.410 g **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F022.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F022.D\1003F022c.d			**Vial:**	59
Acqu Date:	10/03/2014 17:23	**Quant Date:**	10/04/2014 08:04	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 10 mL **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F022.D\ECD1A.CH Vial: 59
Signal #2 : J:\GC23\DATA\100314\1003F022.D\ECD2B.CH
Acq On : 03 Oct 2014 5:23 pm Operator: SMURRAY
Sample : KWG1413413-MB Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:47:33 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2-nitrob	5.90	5.34	2697427	978433	100.000	100.000	
29)		1-Bromo-2-nitrob	5.90	5.34	2697427	978433	100.000	100.000	
36)		1-Bromo-2-nitrob	5.90	5.34	2697427	978433	100.000	100.000	
43)		1-Bromo-2-nitrob	5.90	5.34	2697427	978433	100.000	100.000	
		System Monitoring Compounds							
2)	s	Tetrachloro-m-xy	8.62	7.10	1199834	459270	36.907	35.570	
28)	s	Decachlorobiphen	18.30	16.87	1255670	477526	43.103	43.632	
		Target Compounds							
3)		alpha-BHC	0.00	8.34	0	1115	N.D. d	0.072	
6)		gamma-BHC (Linda	10.12	9.06	1295	869	0.034	0.061	#
7)		delta-BHC	11.25	0.00	1268	0	0.034	N.D.	#
8)		Heptachlor	11.32	9.75	2871	2638	0.077	0.197	#
9)		Aldrin	11.89	10.36f	1083	1420	0.029	0.096	#
10)		Isodrin	12.44	11.16f	1816	2346	0.057	0.191	#
11)		Heptachlor Epoxi	12.66f	0.00	1146	0	0.033	N.D.	#
12)		gamma-Chlordane	13.12	11.82	1832	773	0.052	0.056	
13)		Endosulfan I	0.00	12.06	0	941	N.D.	0.079	#
14)		alpha-Chlordane	13.19	11.97	3163	1203	0.091	0.089	
15)		Dieldrin	13.62f	0.00	1287	0	0.038	N.D.	#
16)		4,4'-DDE	13.48	0.00	1319	0	0.039	N.D.	#
17)		Endrin	0.00	12.94	0	1026	N.D.	0.089	#
18)		Endosulfan II	14.49	0.00	4525	0	0.155	N.D. d	#
19)		4,4'-DDD	0.00	13.20	0	1938	N.D.	0.186	#
20)		Endrin Aldehyde	14.69f	13.77f	4448	1490	0.233	0.175	
22)		4,4'-DDT	14.81	13.61	2123	1585	0.086	0.161	#
24)		Methoxychlor	15.61f	0.00	20621	0	1.577	N.D.	#
25)		2,4'-DDE	0.00	11.85	0	926	N.D.	0.107	#
26)		2,4'-DDD	13.62	12.65	1287	7855	0.063	0.997	#
27)		2,4'-DDT	14.10f	13.06	2074	1165	0.097	0.139	#
31)		Toxaphene {2}	14.49	0.00	4525	0	17.216	N.D.	#
32)		Toxaphene {3}	0.00	13.77	0	1490	N.D.	14.721	#
33)		Toxaphene {4}	14.69f	0.00	4448	0	11.351	N.D.	#
35)		Toxaphene {6}	15.88	0.00	2487	0	4.703	N.D.	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F022.D\ECD1A.CH Vial: 59
Signal #2 : J:\GC23\DATA\100314\1003F022.D\ECD2B.CH
Acq On : 03 Oct 2014 5:23 pm Operator: SMURRAY
Sample : KWG1413413-MB Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:47:33 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
37)	Chlordane	10.94f	0.00	14811	0	4.624	N.D.	#
38)	Chlordane {2}	11.32	9.75	2871	2638	1.565	4.120	#
39)	Chlordane {3}	0.00	11.82	0	773	N.D.	0.541	#
40)	Chlordane {4}	13.12	11.85f	1832	926	0.434	1.080	#
41)	Chlordane {5}	13.19	11.97	3163	1203	1.015	2.507	#
42)	Chlordane {6}	0.00	11.97	0	1203	N.D.	1.032	#
45)	Oxychlordane	12.57	11.16f	2766	2346	0.096	0.210	#
46)	cis-Nonachlor	0.00	13.06	0	1165	N.D.	0.083	#
47)	trans-Nonachlor	0.00	11.85f	0	926	N.D.	0.068	#
49)	HCE	3.93	3.33	1515	3532	0.024	0.156	#
50)	HCBD	4.64f	3.89	5450	6293	0.112	0.346	#

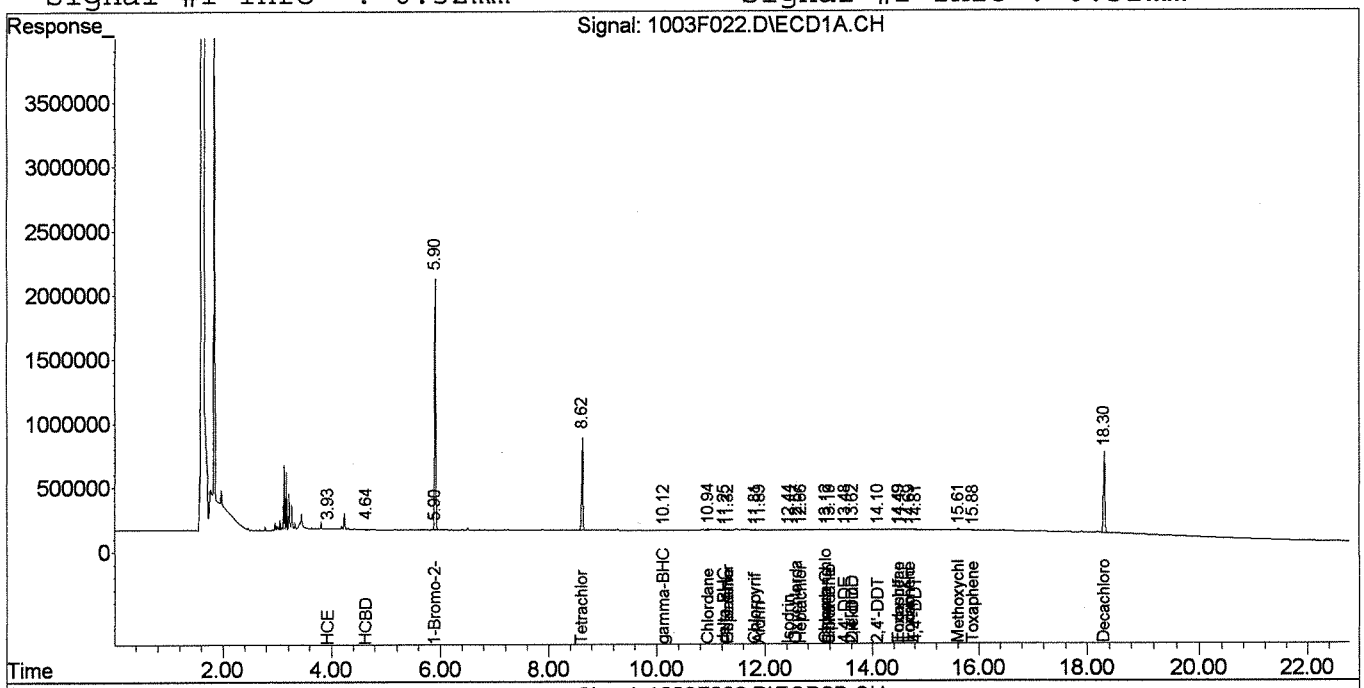
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

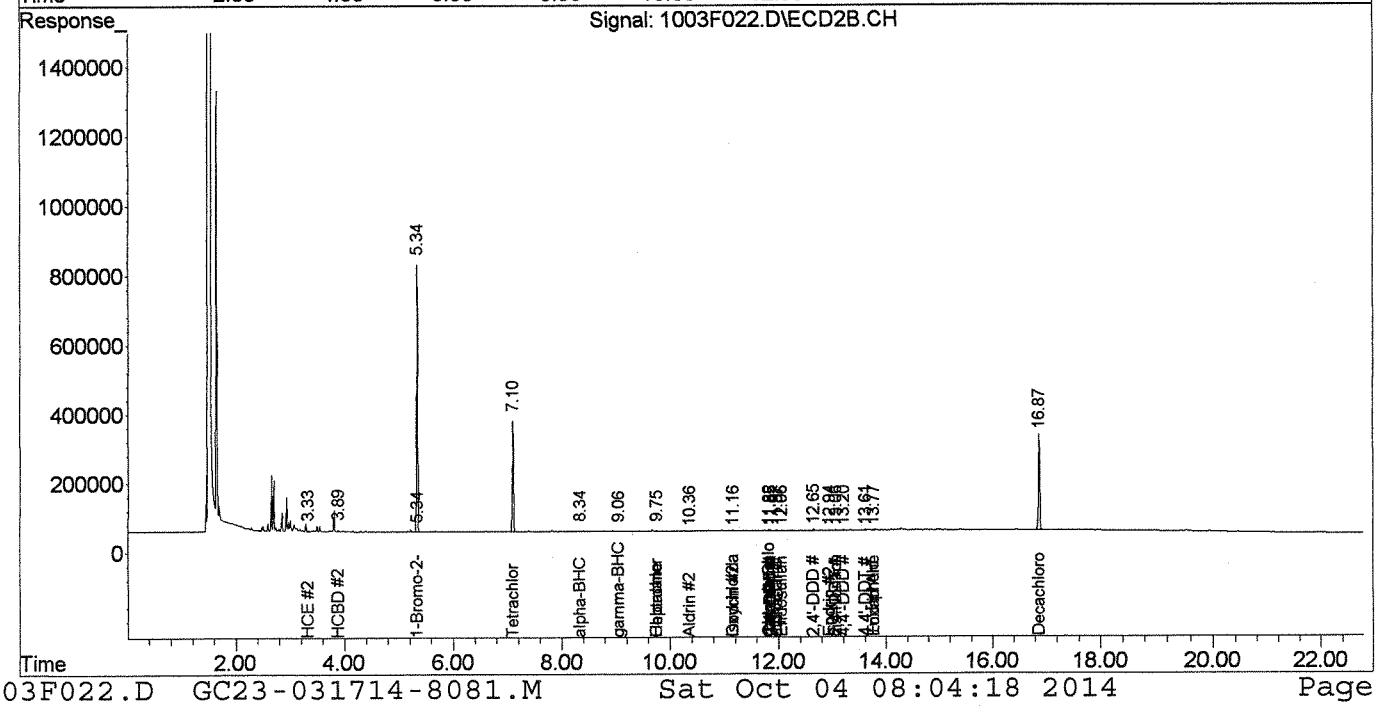
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F022.D\ECD1A.CH Vial: 59
Signal #2 : J:\GC23\DATA\100314\1003F022.D\ECD2B.CH
Acq On : 03 Oct 2014 5:23 pm Operator: SMURRAY
Sample : KWG1413413-MB Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 4 8:04 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Exception Report

Data File: J:\GC23\DATA\100314\1003F012.D
Lab ID: KWG1413413-1 -- K1409921-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 12:29
Date Quantitated: 10/03/2014 17:29
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RO

Primary Review: AM 10/6/14

Secondary Review: [signature] 10/7/14

Exception Report

Data File: J:\GC23\DATA\100314\1003F012.D\1003F012C.D
Lab ID: KWG1413413-1 -- K1409921-004MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 12:29
Date Quantitated: 10/03/2014 17:29
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Qm 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F012.D\1003F012c.d			**Vial:**	49
Acqu Date:	10/03/2014 12:29	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-1 -- K1409921-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380541	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:			
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.91	-0.25	5.34	-0.21	2562285	936274	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0d	0d	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1463138	572959	47.60	46.37			48	OK
						%Recovery =		48 OK	46 OK	Limits =	21-112		
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1519229	583854	55.57	55.75			56	OK
						%Recovery =		56 OK	56 OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.46	+0.01	8.33	+0.01	2327445	945551	58.88	63.52	37.0	39.9	**37.0**
1	Hexachlorobenzene	9.62	+0.01	8.11	+0.01	1666524	655149	47.52	45.84	29.8	28.8	**28.8**
1	beta-BHC	10.74	+0.01	9.61	+0.01	1039138	424478	63.52	61.97	39.9	38.9	**38.9**
1	gamma-BHC (Lindane)	10.13	+0.01	9.07	+0.01	2183565	899685	60.01	65.49	37.7	41.1	**37.7**
1	delta-BHC	11.23	+0.01	10.13	+0.01	2364960	963521	66.88	71.43	42.0	44.9	**42.0**
1	Heptachlor	11.32	+0.01	9.75	+0.01	1990180	855982	56.34	66.74	35.4	41.9	**35.4**
1	Aldrin	11.90	+0.01	10.33	+0.01	1949966	829766	54.16	58.54	34.0	36.8	**34.0**
1	Isodrin	12.42	+0.01	11.13	+0.01	1773006	749828	58.85	63.76	37.0	40.0	**37.0**
1	Heptachlor Epoxide	12.61	+0.01	11.41	+0.01	1972347	824146	59.37	65.38	37.3	41.1	**37.3**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F012.D\1003F012c.d			**Vial:**	49
Acqu Date:	10/03/2014 12:29	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-1 -- K1409921-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	13.13 +0.01	11.82	1985457	828898	59.09	62.95	37.1	39.5	**37.1**
1	Endosulfan I	13.25 +0.01	12.03	1138696	494489	38.01	43.39	23.9	27.2	**23.9**
1	alpha-Chlordane	13.20 +0.01	11.97 +0.01	1981079	820578	59.77	63.61	37.5	40.0	**37.5**
1	Dieldrin	13.67 +0.01	12.47	2029334	849779	63.24	66.10	39.7	41.5	**39.7**
1	4,4'-DDE	13.49 +0.01	12.33 +0.01	2037451	852643	63.16	66.82	39.7	42.0	**39.7**
1	Endrin	14.03 +0.01	12.95 +0.01	1810010	786947	64.96	71.16	40.8	44.7	**40.8**
1	Endosulfan II	14.48 +0.01	13.38 +0.01	1348430	549791	48.68	51.97	30.6	32.6	**30.6**
1	4,4'-DDD	14.32 +0.01	13.21 +0.01	1706272	719305	64.78	72.20	40.7	45.3	**40.7**
1	Endrin Aldehyde	14.66 +0.01	13.74 +0.01	1276682	554322	70.28^{CCV}	67.95	44.1	42.7	**42.7**
1	Endosulfan Sulfate	15.13 +0.01	14.06 +0.01	1732006	732118	70.59	74.22	44.3	46.6	**44.3**
1	4,4'-DDT	14.81 +0.01	13.63 +0.01	1579548	721154	67.45	76.43	42.4	48.0	**42.4**
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.55U	0.55U	0.55U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.61U	0.61U	0.61U
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.94U	0.94U	0.94U
1	2,4'-DDD			0d	0d	0.0000	0.0000	1.4U	1.4U	1.4U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.50U	0.50U	0.50U
	Toxaphene			0	0	0.0000	0.0000	37.0U	37.0U	37.0U
2	Toxaphene {1}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	37U	37U	
	Chlordane			0	0	0.0000	0.0000	22.0U	22.0U	22.0U
3	Chlordane {1}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	22U	22U	
4	Chlorpyrifos			0d	0d	0.0000	0.0000	0.66U	0.66U	0.66U
4	Oxychlordane			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	cis-Nonachlor			0d	0d	0.0000	0.0000	0.57U	0.57U	0.57U
4	trans-Nonachlor			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U
4	Mirex			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	Hexachloroethane			0d	0d	0.0000	0.0000	0.47U	0.47U	0.47U
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 20.283 g **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F012.D\1003F012c.d			**Vial:**	49
Acqu Date:	10/03/2014 12:29	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-1 -- K1409921-004MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 10 mL **Unit Factor:** 1
Solids: 78.5 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F012.D\ECD1A.CH Vial: 49
Signal #2 : J:\GC23\DATA\100314\1003F012.D\ECD2B.CH
Acq On : 03 Oct 2014 12:29 pm Operator: SMURRAY
Sample : K1409921-004MS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:27:58 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

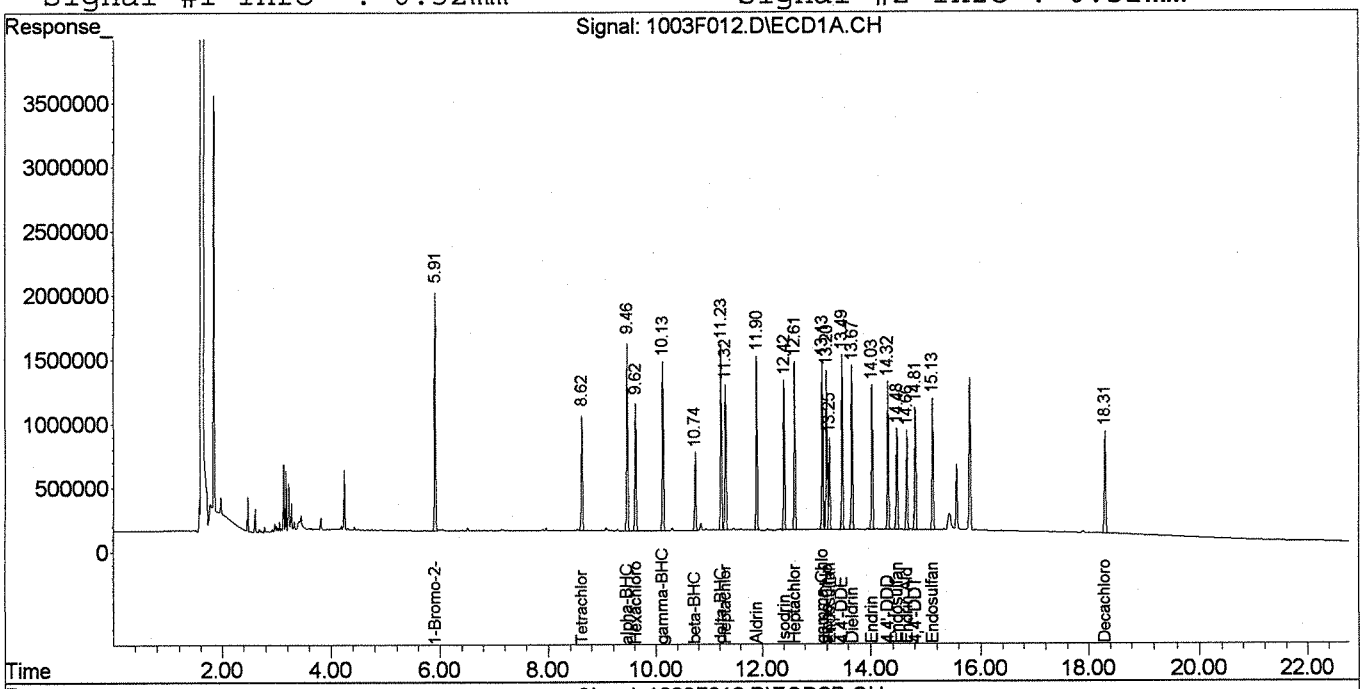
		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.91	5.34	2562285	936274	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1463138	572959	47.597	46.374
28)	s	Decachlorobiphen	18.31	16.87	1519229	583854	55.567	55.749
		Target Compounds						
3)		alpha-BHC	9.46	8.33	2327445	945551	58.884	63.523
4)		Hexachlorobenzen	9.62	8.11	1666524	655149	47.522	45.843
5)		beta-BHC	10.74	9.61	1039138	424478	63.521	61.973
6)		gamma-BHC (Linda	10.13	9.07	2183565	899685	60.011	65.487
7)		delta-BHC	11.23	10.13	2364960	963521	66.881	71.425
8)		Heptachlor	11.32	9.75	1990180	855982	56.343	66.740
9)		Aldrin	11.90	10.33	1949966	829766	54.164	58.536
10)		Isodrin	12.42	11.13	1773006	749828	58.853	63.763
11)		Heptachlor Epoxi	12.61	11.41	1972347	824146	59.370	65.379
12)		gamma-Chlordane	13.13	11.82	1985457	828898	59.094	62.945
13)		Endosulfan I	13.25	12.03	1138696	494489	38.012	43.387
14)		alpha-Chlordane	13.20	11.97	1981079	820578	59.769	63.614
15)		Dieldrin	13.67	12.47	2029334	849779	63.244	66.100
16)		4,4'-DDE	13.49	12.33	2037451	852643	63.155	66.820
17)		Endrin	14.03	12.95	1810010	786947	64.964	71.163
18)		Endosulfan II	14.48	13.38	1348430	549791	48.681	51.971
19)		4,4'-DDD	14.32	13.21	1706272	719305	64.780	72.203
20)		Endrin Aldehyde	14.66	13.74	1276682	554322	70.278	67.950
21)		Endosulfan Sulfa	15.13	14.06	1732006	732118	70.592	74.224
22)		4,4'-DDT	14.81	13.63	1579548	721154	67.451	76.427

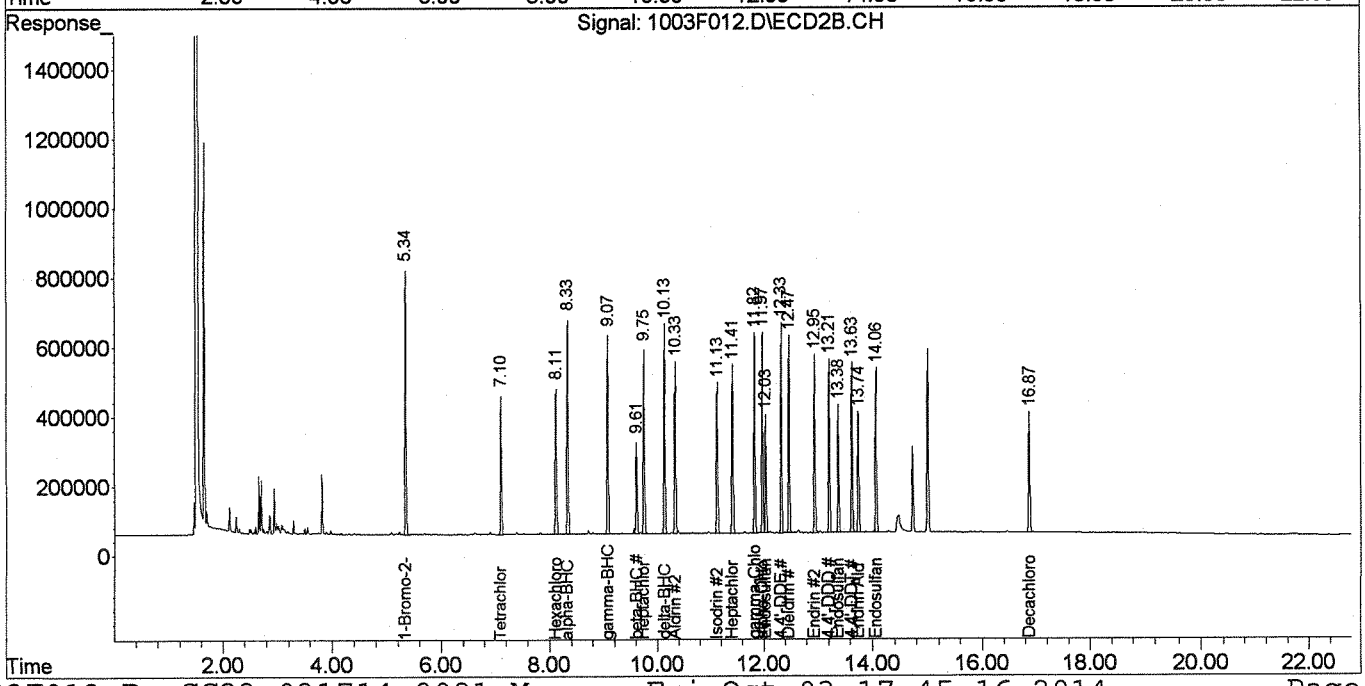
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC23\DATA\100314\1003F012.D\ECD1A.CH Vial: 49
Signal #2 : J:\GC23\DATA\100314\1003F012.D\ECD2B.CH
Acq On : 03 Oct 2014 12:29 pm Operator: SMURRAY
Sample : K1409921-004MS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:29 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Exception Report

Data File: J:\GC23\DATA\100314\1003F013.D
Lab ID: KWG1413413-2 -- K1409921-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 12:59
Date Quantitated: 10/03/2014 17:29
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RO

Primary Review: Am 10/6/14

Secondary Review: MM 10/7/14

Exception Report

Data File: J:\GC23\DATA\100314\1003F013.D\1003F013C.D
Lab ID: KWG1413413-2 -- K1409921-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 12:59
Date Quantitated: 10/03/2014 17:29
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F013.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F013.D\1003F013c.d			**Vial:**	50
Acqu Date:	10/03/2014 12:59	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-2 -- K1409921-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380542	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:			
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2589908	938260	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0d	0d	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.62	+0.01	7.10	+0.01	1708892	652325	55.11	52.69			55 OK
						%Recovery =		55 OK	53 OK	Limits =	21-112	
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1749861	670700	63.77	63.91			64 OK
						%Recovery =		64 OK	64 OK	Limits =	15-130	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.46	+0.01	8.33	+0.01	2611275	1043284	65.36	69.94	40.8	43.7	**40.8**
1	Hexachlorobenzene	9.62	+0.01	8.11	+0.01	1838197	711986	52.01	49.71	32.5	31.0	**31.0**
1	beta-BHC	10.74	+0.01	9.61	+0.01	1153341	463122	69.75	67.47	43.5	42.1	**42.1**
1	gamma-BHC (Lindane)	10.13	+0.01	9.07	+0.01	2414220	983789	65.64	71.46	41.0	44.6	**41.0**
1	delta-BHC	11.23	+0.01	10.13	+0.01	2621029	1051600	73.33	77.79	45.8	48.6	**45.8**
1	Heptachlor	11.32	+0.01	9.75	+0.01	2219838	938387	62.17	73.01	38.8	45.6	**38.8**
1	Aldrin	11.90	+0.01	10.33	+0.01	2185121	912246	60.05	64.22	37.5	40.1	**37.5**
1	Isodrin	12.42	+0.01	11.13	+0.01	1978804	822499	64.98	69.80	40.6	43.6	**40.6**
1	Heptachlor Epoxide	12.61	+0.01	11.42	+0.02	2181287	898201	64.96	71.10	40.5	44.4	**40.5**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F013.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F013.D\1003F013c.d			**Vial:**	50
Acqu Date:	10/03/2014 12:59	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-2 -- K1409921-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	13.13 +0.01	11.83 +0.01	2212496	916669	65.15	69.46	40.7	43.4	**40.7**
1	Endosulfan I	13.25 +0.01	12.04 +0.01	1278546	537094	42.23	47.03	26.4	29.4	**26.4**
1	alpha-Chlordane	13.20 +0.01	11.97 +0.01	2167895	895548	64.71	69.28	40.4	43.2	**40.4**
1	Dieldrin	13.67 +0.01	12.48 +0.01	2246398	922988	69.26	71.64	43.2	44.7	**43.2**
1	4,4'-DDE	13.49 +0.01	12.33 +0.01	2264452	928253	69.44	72.59	43.3	45.3	**43.3**
1	Endrin	14.03 +0.01	12.95 +0.01	2023528	860505	71.85	77.65	44.8	48.5	**44.8**
1	Endosulfan II	14.48 +0.01	13.38 +0.01	1481332	590576	52.91	55.71	33.0	34.8	**33.0**
1	4,4'-DDD	14.32 +0.01	13.21 +0.01	1859497	775759	69.85	77.71	43.6	48.5	**43.6**
1	Endrin Aldehyde	14.66 +0.01	13.74 +0.01	1354653	582116	73.78[CCV]	71.21	46.0	44.4	**44.4**
1	Endosulfan Sulfate	15.13 +0.01	14.07 +0.02	1882397	785147	75.90	79.43	47.4	49.6	**47.4**
1	4,4'-DDT	14.81 +0.01	13.63 +0.01	1711016	776295	72.29	82.10	45.1	51.2	**45.1**
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.55U	0.55U	0.55U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.61U	0.61U	0.61U
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.94U	0.94U	0.94U
1	2,4'-DDD			0d	0d	0.0000	0.0000	1.4U	1.4U	1.4U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.50U	0.50U	0.50U
	Toxaphene			0	0	0.0000	0.0000	37.0U	37.0U	37.0U
2	Toxaphene {1}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	37U	37U	
	Chlordane			0	0	0.0000	0.0000	22.0U	22.0U	22.0U
3	Chlordane {1}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	22U	22U	
4	Chlorpyrifos			0d	0d	0.0000	0.0000	0.66U	0.66U	0.66U
4	Oxychlordane			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	cis-Nonachlor			0d	0d	0.0000	0.0000	0.57U	0.57U	0.57U
4	trans-Nonachlor			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U
4	Mirex			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	Hexachloroethane			0d	0d	0.0000	0.0000	0.47U	0.47U	0.47U
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 20.410 g **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F013.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F013.D\1003F013c.d			**Vial:**	50
Acqu Date:	10/03/2014 12:59	**Quant Date:**	10/03/2014 17:29	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-2 -- K1409921-004DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 10 mL **Unit Factor:** 1
Solids: 78.5 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F013.D\ECD1A.CH Vial: 50
Signal #2 : J:\GC23\DATA\100314\1003F013.D\ECD2B.CH
Acq On : 03 Oct 2014 12:59 pm Operator: SMURRAY
Sample : K1409921-004DMS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:28:00 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2589908	938260	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.62	7.10	1708892	652325	55.114	52.685
28)	s	Decachlorobiphen	18.31	16.87	1749861	670700	63.774	63.906
		Target Compounds						
3)		alpha-BHC	9.46	8.33	2611275	1043284	65.360	69.940
4)		Hexachlorobenzen	9.62	8.11	1838197	711986	52.012	49.714
5)		beta-BHC	10.74	9.61	1153341	463122	69.750	67.471
6)		gamma-BHC (Linda	10.13	9.07	2414220	983789	65.642	71.458
7)		delta-BHC	11.23	10.13	2621029	1051600	73.332	77.789
8)		Heptachlor	11.32	9.75	2219838	938387	62.174	73.010
9)		Aldrin	11.90	10.33	2185121	912246	60.048	64.219
10)		Isodrin	12.42	11.13	1978804	822499	64.984	69.795
11)		Heptachlor Epoxi	12.61	11.42	2181287	898201	64.959	71.103
12)		gamma-Chlordane	13.13	11.83	2212496	916669	65.149	69.463
13)		Endosulfan I	13.25	12.04	1278546	537094	42.225	47.026
14)		alpha-Chlordane	13.20	11.97	2167895	895548	64.707	69.279
15)		Dieldrin	13.67	12.48	2246398	922988	69.262	71.643
16)		4,4'-DDE	13.49	12.33	2264452	928253	69.443	72.592
17)		Endrin	14.03	12.95	2023528	860505	71.853	77.650
18)		Endosulfan II	14.48	13.38	1481332	590576	52.909	55.709
19)		4,4'-DDD	14.32	13.21	1859497	775759	69.845	77.705
20)		Endrin Aldehyde	14.66	13.74	1354653	582116	73.775	71.206
21)		Endosulfan Sulfa	15.13	14.07	1882397	785147	75.903	79.431
22)		4,4'-DDT	14.81	13.63	1711016	776295	72.286	82.096

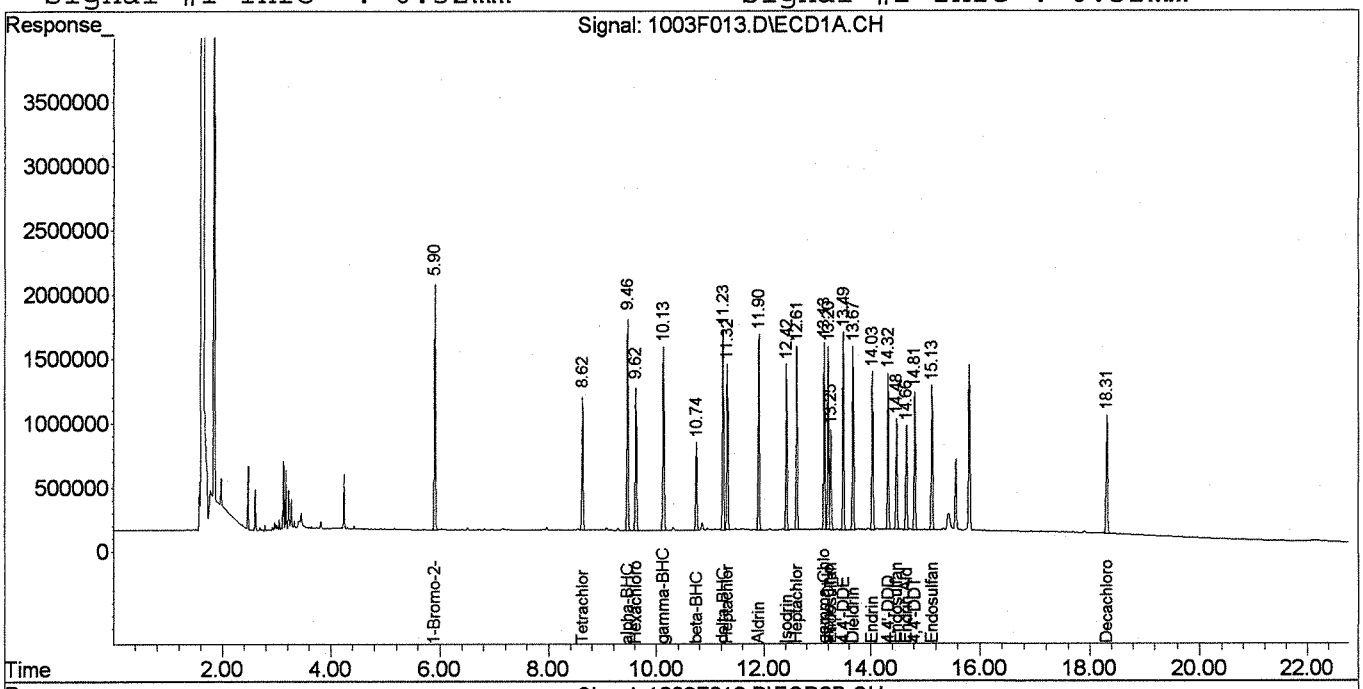
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

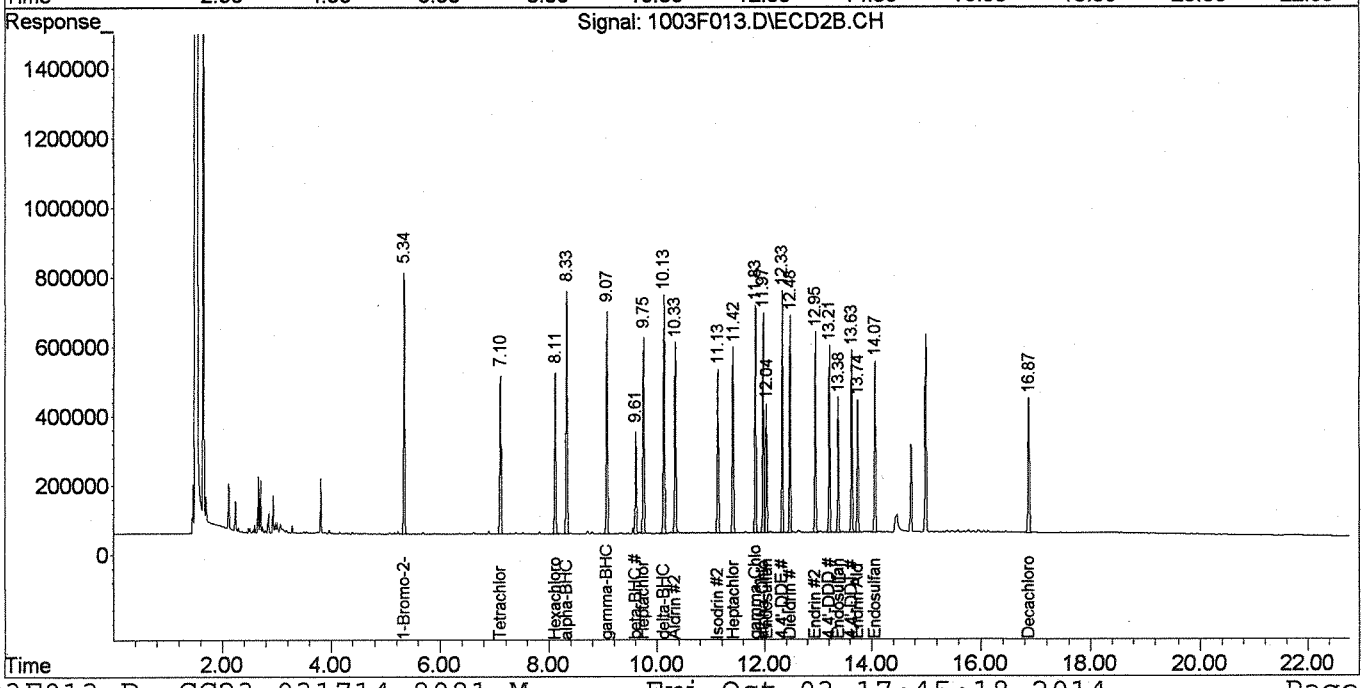
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F013.D\ECD1A.CH Vial: 50
Signal #2 : J:\GC23\DATA\100314\1003F013.D\ECD2B.CH
Acq On : 03 Oct 2014 12:59 pm Operator: SMURRAY
Sample : K1409921-004DMS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:29 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Exception Report

Data File: J:\GC23\DATA\100314\1003F021.D
Lab ID: KWG1413413-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 16:54
Date Quantitated: 10/03/2014 17:44
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Endrin Aldehyde	21.1	NA	20	ICV
Continuing Calibration Recovery	Endrin Aldehyde	23.6	NA	20	RO

Primary Review: Am 10/6/14

Secondary Review: [signature]

Exception Report

Data File: J:\GC23\DATA\100314\1003F021.D\1003F021C.D
Lab ID: KWG1413413-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/03/2014 16:54
Date Quantitated: 10/03/2014 17:44
Batch ID: KWG1413448
Analysis Method: 8081B
MethodJoinID: MJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/6/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC23\DATA\100314\1003F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F021.D\1003F021c.d			**Vial:**	58
Acqu Date:	10/03/2014 16:54	**Quant Date:**	10/03/2014 17:44	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8081B Pest OC	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413448	**Prep Lot:**	KWG1413413	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3541		
Prep Ref:	1380543	**Prep Date:**	09/25/2014		

Quant Method:	J:\GC23\METHODS\GC23-031714-	**Calibration ID:**	CAL13214
Title:			
MB Ref:	J:\GC23\DATA\100314\1003F022.D	**Method ID:**	MJ1016
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	5.90	-0.26	5.34	-0.21	2708881	952191	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0d	0d	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.61		7.10	+0.01	1557152	592329	47.92	/	47.14				48	OK
						%Recovery =		48	OK	47	OK	Limits =	21-112		
1	Decachlorobiphenyl	18.31	+0.01	16.87	+0.01	1660828	634805	57.56	/	59.60				60	OK
						%Recovery =		58	OK	60	OK	Limits =	15-130		

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	alpha-BHC	9.45		8.32		2613968	1033848	62.55	68.29	62.6	68.3	**62.6**
1	Hexachlorobenzene	9.61		8.11	+0.01	1797147	690368	48.51	47.50	48.5	47.5	**47.5**
1	beta-BHC	10.73		9.60		1139363	455548	65.88	65.40	65.9	65.4	**65.4**
1	gamma-BHC (Lindane)	10.12		9.06		2423395	981698	63.00	70.26	63.0	70.3	**63.0**
1	delta-BHC	11.23	+0.01	10.13	+0.01	2637457	1053713	70.55	76.81	70.6	76.8	**70.6**
1	Heptachlor	11.31		9.74		2201047	928473	58.94	71.18	58.9	71.2	**58.9**
1	Aldrin	11.89		10.33	+0.01	2176516	900214	57.19	62.45	57.2	62.4	**57.2**
1	Isodrin	12.41		11.12		1963209	809301	61.64	67.67	61.6	67.7	**61.6**
1	Heptachlor Epoxide	12.61	+0.01	11.41	+0.01	2208207	900972	62.87	70.28	62.9	70.3	**62.9**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F021.D	**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F021.D\1003F021c.d	**Vial:**	58
Acqu Date:	10/03/2014 16:54 **Quant Date:** 10/03/2014 17:44	**Dilution:**	1.0
Run Type:	LCS	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-3		
Signal #1:	DB XLB **Signal #2:** DB-35MS		

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/Kg #1	ug/Kg #2	Rpt
1	gamma-Chlordane	13.12	11.82	2202960	909578	62.02	67.92	62.0	67.9	**62.0**
1	Endosulfan I	13.25 +0.01	12.03	1294563	542337	40.88	46.79	40.9	46.8	**40.9**
1	alpha-Chlordane	13.20 +0.01	11.97 +0.01	2169786	890052	61.92	67.85	61.9	67.8	**61.9**
1	Dieldrin	13.66	12.47	2272070	934739	66.98	71.49	67.0	71.5	**67.0**
1	4,4'-DDE	13.48	12.33 +0.01	2241368	916283	65.72	70.61	65.7	70.6	**65.7**
1	Endrin	14.03 +0.01	12.95 +0.01	1981997	841294	67.29	74.81	67.3	74.8	**67.3**
1	Endosulfan II	14.47	13.38 +0.01	1526124	599840	52.12	55.76	52.1	55.8	**52.1**
1	4,4'-DDD	14.32 +0.01	13.21 +0.01	1873420	783396	67.28	77.32	67.3	77.3	**67.3**
1	Endrin Aldehyde	14.65	13.74 +0.01	1493799	635978	77.7 CCV	76.66	77.8	76.7	**76.7**
1	Endosulfan Sulfate	15.12	14.06 +0.01	1904924	801173	73.44	79.87	73.4	79.9	**73.4**
1	4,4'-DDT	14.81 +0.01	13.63 +0.01	1716939	772950	69.35	80.55	69.4	80.5	**69.4**
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.55U	0.55U	0.55U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.61U	0.61U	0.61U
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.94U	0.94U	0.94U
1	2,4'-DDD			0d	0d	0.0000	0.0000	1.4U	1.4U	1.4U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.50U	0.50U	0.50U
	Toxaphene			0	0	0.0000	0.0000	37.0U	37.0U	37.0U
2	Toxaphene {1}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	37U	37U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	37U	37U	
	Chlordane			0	0	0.0000	0.0000	22.0U	22.0U	22.0U
3	Chlordane {1}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	22U	22U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	22U	22U	
4	Chlorpyrifos			0d	0d	0.0000	0.0000	0.66U	0.66U	0.66U
4	Oxychlordane			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	cis-Nonachlor			0d	0d	0.0000	0.0000	0.57U	0.57U	0.57U
4	trans-Nonachlor			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U
4	Mirex			0d	0d	0.0000	0.0000	0.68U	0.68U	0.68U
4	Hexachloroethane			0d	0d	0.0000	0.0000	0.47U	0.47U	0.47U
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000	0.53U	0.53U	0.53U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 10.000 g **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC23\DATA\100314\1003F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\DATA\100314\1003F021.D\1003F021c.d			**Vial:**	58
Acqu Date:	10/03/2014 16:54	**Quant Date:**	10/03/2014 17:44	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413413-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 10 mL **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F021.D\ECD1A.CH Vial: 58
Signal #2 : J:\GC23\DATA\100314\1003F021.D\ECD2B.CH
Acq On : 03 Oct 2014 4:54 pm Operator: SMURRAY
Sample : KWG1413413-LCS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 03 17:44:28 2014 Quant Results File: GC23-031714-8081.RE

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Initial Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2-nitrob	5.90	5.34	2708881	952191	100.000	100.000
		System Monitoring Compounds						
2)	s	Tetrachloro-m-xy	8.61	7.10	1557152	592329	47.919	47.140
28)	s	Decachlorobiphen	18.31	16.87	1660828	634805	57.561	59.601
		Target Compounds						
3)		alpha-BHC	9.45	8.32	2613968	1033848	62.554	68.293
4)		Hexachlorobenzen	9.61	8.11	1797147	690368	48.507	47.500
5)		beta-BHC	10.73	9.60	1139363	455548	65.878	65.397
6)		gamma-BHC (Linda	10.12	9.06	2423395	981698	62.998	70.262
7)		delta-BHC	11.23	10.13	2637457	1053713	70.551	76.805
8)		Heptachlor	11.31	9.74	2201047	928473	58.940	71.181
9)		Aldrin	11.89	10.33	2176516	900214	57.185	62.445
10)		Isodrin	12.41	11.12	1963209	809301	61.640	67.670
11)		Heptachlor Epoxi	12.61	11.41	2208207	900972	62.873	70.279
12)		gamma-Chlordane	13.12	11.82	2202960	909578	62.019	67.917
13)		Endosulfan I	13.25	12.03	1294563	542337	40.876	46.790
14)		alpha-Chlordane	13.20	11.97	2169786	890052	61.919	67.846
15)		Dieldrin	13.66	12.47	2272070	934739	66.977	71.493
16)		4,4'-DDE	13.48	12.33	2241368	916283	65.717	70.607
17)		Endrin	14.03	12.95	1981997	841294	67.287	74.805
18)		Endosulfan II	14.47	13.38	1526124	599840	52.115	55.755
19)		4,4'-DDD	14.32	13.21	1873420	783396	67.277	77.322
20)		Endrin Aldehyde	14.65	13.74	1493799	635978	77.780	76.657
21)		Endosulfan Sulfa	15.12	14.06	1904924	801173	73.438	79.867
22)		4,4'-DDT	14.81	13.63	1716939	772950	69.350	80.547

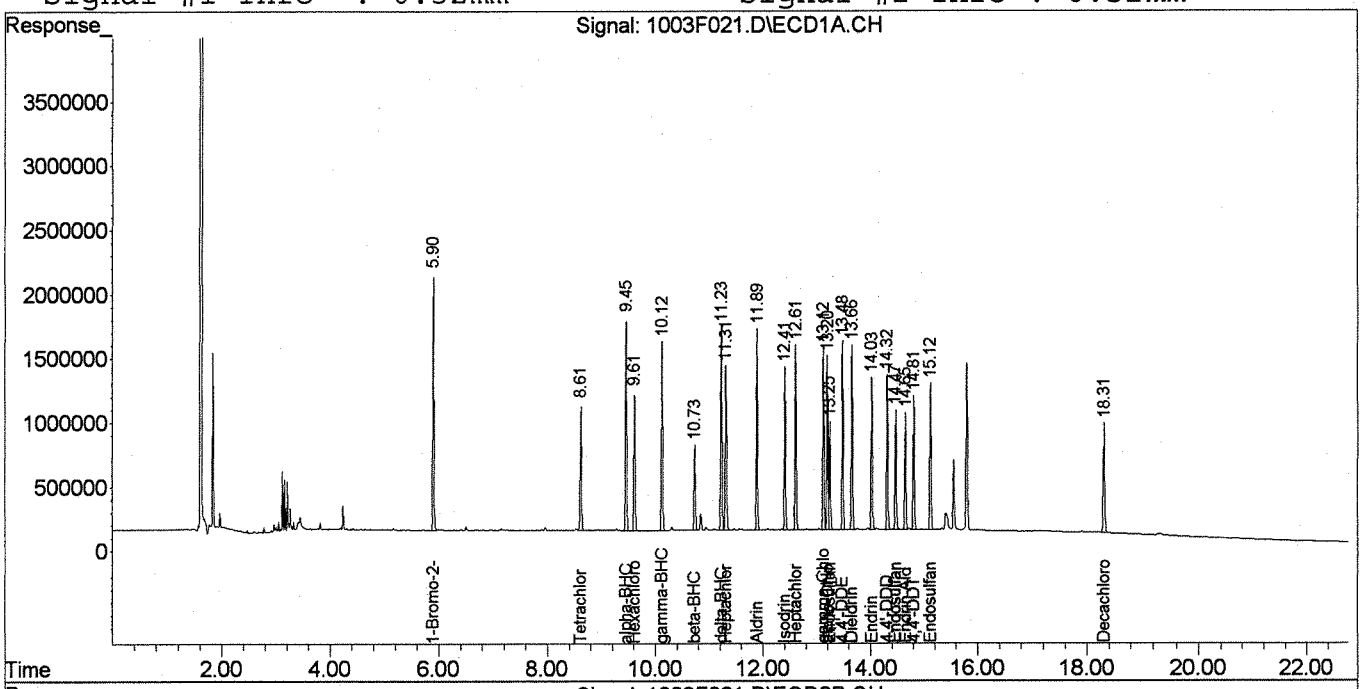
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

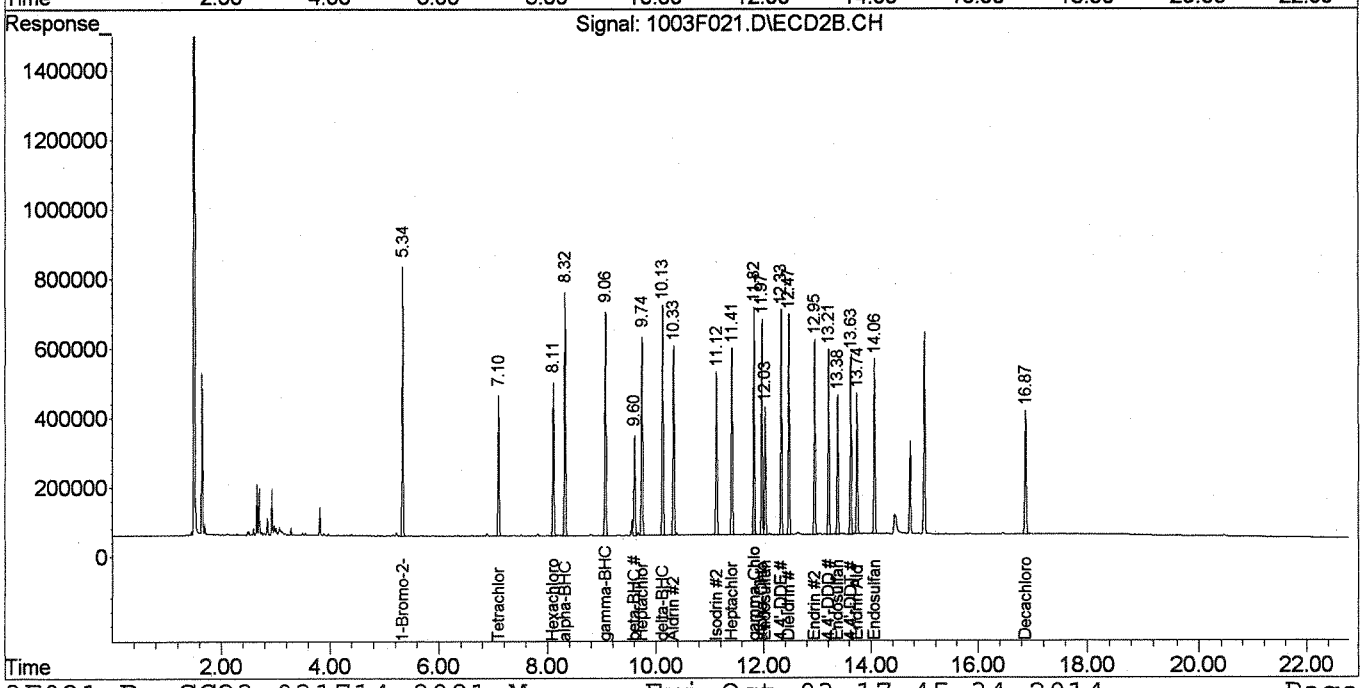
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC23\DATA\100314\1003F021.D\ECD1A.CH Vial: 58
Signal #2 : J:\GC23\DATA\100314\1003F021.D\ECD2B.CH
Acq On : 03 Oct 2014 4:54 pm Operator: SMURRAY
Sample : KWG1413413-LCS Inst : GC23
Misc : SEMIVOA GC\W0617642\3-CCV.H Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 3 17:44 2014 Quant Results File: GC23-031714-8081.RES

Quant Method : J:\GC23\M...\GC23-031714-8081.M (RTE Integrator)
Title : CAL 13214
Last Update : Tue Sep 30 06:00:20 2014
Response via : Multiple Level Calibration
DataAcq Meth : PEST1UL.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 218454 **Prep Workflow:** OrgExtSPEaq (7) **Status:** Draft **Prep Date:** 09/19/2014 00:00
Team: Semivoa GC **Prep Method:** EPA 3535A **Current Step:** Extraction **Due Date:** 09/23/2014
Analyst: CWilliams **Rush/NPDES:** N/A **Hold Date:** 09/22/2014

Lab Code	Client ID	Bottle #	✓	Initial Amount mL	pH Initial	pH Adj 1	Inter. Volume	Final Volume mL	Surr Amt µL	Spike Amt µL	TestNo List
K1409921-012	WS-091514-RB-SW03	.02	✓	1000	NA	2.5	NA	2	50	—	PCB ULL, Pest OC ULL
K1409921-013	WS-091514-RB-SW04	.02	✓	1000		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-014	WS-091514-RB-SW05 (1)	~~.02~~ .03	✓	1010		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-015	WS-091514-RB-SW02	.02	✓	990		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-016	WS-091514-RB-SW01 (1)	~~.02~~ .03	✓	1020		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-017	WS-091514-RB-FD10	.02	✓	1010		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-018	RINSE BLANK 9-15	.02	✓	1000		2.5		2		—	PCB ULL, Pest OC ULL
K1409958-001	W14I114-01 (2)	~~.02~~ .01	✓	960		2.5		2		—	Pest OC ULL
K1409958-002	W14I114-02 (1)	~~.02~~ 0.1	✓	960		2.5		2		—	Pest OC ULL
K1409986-001	C0914-NC245SW-A (1)	~~.02~~ .06	✓	1000		2.5		2		—	Pest OC ULL
K1409986-004	C0914-NC267-GW (1)	~~.02~~ .03	✓	890		2.5		2		—	Pest OC ULL
K1410023-001	MW-5 (1)	~~.02~~ .01	✓	1010		2.5		2		—	PEST_OC_ULL
(2) ~~K1410023-002~~	~~MW-6~~ (1)	~~.02~~ .01	✓							—	PEST_OC_ULL
K1410023-003	MW-7 (1)	~~.02~~ .01	✓	990		2.5		2		—	PEST_OC_ULL
KQ1411532-01	Lab Control Sample 8081/MISC 2,4 DD			1000		2.5		2		100/100/100	Pest OC ULL, PEST_OC_ULL
KQ1411532-02	Duplicate Lab Control Sample			1000		2.5		2			Pest OC ULL, PEST_OC_ULL
KQ1411532-03	Lab Control Sample TOX			1000		2.5		2		200	Pest OC ULL, PEST_OC_ULL
KQ1411532-04	Duplicate Lab Control Sample			1000		2.5		2			Pest OC ULL, PEST_OC_ULL
KQ1411532-05	Lab Control Sample 1660			1000		2.5		2		200	PCB ULL
KQ1411532-06	Duplicate Lab Control Sample			1000		2.5		2			PCB ULL
KQ1411532-07	Method Blank			1010		2.5		2		—	PCB ULL, Pest OC ULL, PEST_OC_ULL

21 Total Samples consisting of 14 Client Samples, 0 Client QC Samples, 7 Batch QC Samples associated with the current Prep Run.

Spiking Solutions **Witness:** KClark 9/19/14

Surr PCB06-45J Exp. 12/27/14 0.2ppm 50µl(Epp) 8I GCPS7-84M Exp. 10/10/14 0.1 ppm 100µl (Ep
MISC GCPS7-84B Exp 1/22/15 0.1ppm 100µl(Epp) 2,4DD GCPS7-84-K Exp 3/6/15 0.1ppm 100µl (Ep
TOX GCPS7-83I Exp 11/9/14 1ppm 200µl (Epp) 6O PCB06-46A Exp. 1/9/15 1ppm 200µl (Epp

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	9/19/14	9/19/14	CW			
Final Volume		9-26-14	K			

Comments

Insufficient sample volume for MS IDMS

① EE 9/19/14 CW

~~② during extraction~~

② Expected that acetone was introduced to sample during the extraction process. Due to high levels of solids in the sample matrix it will be extracted by continuous. Original and new meniscus are marked.

Additional Prep Information For Pest/PCB-UL Water by 3535

Service Request # K1409921, 9958, 9986 **Work Group #** 218454

Solvents/Reagents used: K1410023

Methanol Lot#: 76720 **Sulfuric Acid Lot#:** 53232

Acetone Lot #: OK520 **Hexane Lot #:** 78258

Atlantic C18 Disk Lot #: 3180113

Extraction Program # 8100 Initial Purge Prog # 8081.4

Between Sample Purge Program# 8081.8

Start (Time/Date/Initial): 0945 9/19/14 CW

Stop (Time/Date/Initial): 1445 9/19/14 CW

Final Volume/Cleanups:

Dry Disk (Time/Date/Initial): 0725 9/24/14 CW **Lot #:** B024006028I6

TurboVap(Time/Date/Initials): 0745 9/24/14 CW **Therm ID:** K-Turbovap-04
Temp as measured: 28 °C **Correction factor:** -1 °C **Adjusted temp:** 27 °C

Florisil cleanup (Time/Date/Initials): 10:30 9-26-14 [illegible] **Florisil Lot #:** 31137

1:1 Hexane Acetone: EXT002-4R **9:1 Hexane:Acetone:** EXT002-4Q

N-Evap (Time/Date/Initial): 11:00 9-26-14 [illegible] **N-Evap Therm ID:** XSVM001

Temp as measured: 35 °C **Correction factor:** 0 °C **Adjusted temp:** 35 °C

Sulfuric Acid Clean-up (Time/Date/Initials): 1020 9/24/14 CW **Acid Lot #:** 53232

Pest Vial: Yellow **Vial Storage:** Happy H1-I8
PCB Vial: Green **Vial Storage:** Ludwig F1-10

Comments/Observations: Pest only - Archived - Mason Jar

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason:)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

Exception Report

Data File: J:\GC34\DATA\092914\0929000008.D
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 12:37
Date Quantitated: 10/01/2014 11:05
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RO
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	↓
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:10
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000008.D\0929000008C.
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 12:37
Date Quantitated: 10/01/2014 11:05
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:13
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000008.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000008.D\0929000008c.d			**Vial:**	7
Acqu Date:	09/29/2014 12:37	**Quant Date:**	10/01/2014 11:05	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-012				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378549	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	7785871	2623938	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt
1	Tetrachloro-m-xylene	6.68		5.41		4086871m	1471317	4.84	/	4.47				97 OK
							%Recovery =	97 OK		89 OK		Limits =	20-106	
1	Decachlorobiphenyl	29.40		27.22	-0.01	5215336	1447707	4.41 CCV	/	4.55				91 OK
							%Recovery =	88 OK		91 OK		Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.66	+0.05 RT	6.52	+0.03	242424	392940	0.3700	1.11	0.74J	2.2	**0.74**JP
1	Hexachlorobenzene	7.82		6.33	+0.03	86513m	267047	0.0680	0.6360	0.20U	1.3	0.20U
1	beta-BHC	9.42		7.97	+0.03	46407	50753	0.0990	0.1400	0.47U	0.47U	0.47U
1	gamma-BHC (Lindane)	8.49	-0.02	7.31	+0.01	49427m	45803	0.0580	0.1340	0.22U	0.27J	0.22U
1	delta-BHC	10.35	+0.05 RT	8.75	+0.02	236328	14173	0.3760 CCV	0.0430	0.75J	0.20U	0.20U
1	Heptachlor	10.48		8.26	+0.06	1089179	36832	1.18	0.0990	2.4	0.20J	1.0Ui
1	4,4'-DDE	16.95	-0.03			488233	0d	0.6050	0.0000	1.2	0.11U	0.11U
1	4,4'-DDD					0	0d	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.69	+0.08			781892	0	1.15 CCV	0.0000	2.3B	0.22U	0.22U
1	4,4'-DDT	22.43	+0.02 RT	18.58	-0.06 RT	160397m	44181m	0.2320	0.1520	0.46J	0.30J	**0.30**JP

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1000 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000008.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000008.D\0929000008c.d			**Vial:**	7
Acqu Date:	09/29/2014 12:37	**Quant Date:**	10/01/2014 11:05	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-012				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:05:52 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.303	3.913	7785871	2623938	10.000	10.000	
29)		1-Bromo-2...	4.303	3.913	7785871	2623938	10.000	10.000	
36)		1-Bromo-2...	4.303	3.913	7785871	2623938	10.000	10.000	
43)		1-Bromo-2...	4.303	3.913	7785871	2623938	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.677	5.407	4086871	1471317	4.835m	4.468	
28)	s	Decachlor...	29.403	27.223	5215336	1447707	4.409	4.547	
		Target Compounds							
3)		alpha-BHC	7.660	6.517	242424	392940	0.370	1.114	#
4)		Hexachlor...	7.817	6.327	86513	267047	0.068m	0.636	#
5)		beta-BHC	9.420	7.967	46407	50753	0.099	0.140	#
6)		gamma-BHC...	8.490	7.310	49427	45803	0.058m	0.134	#
7)		delta-BHC	10.347	8.753	236328	14173	0.376	0.043	#
8)		Heptachlor	10.477	8.260f	1089179	36832	1.181	0.099	#
9)		Aldrin	0.000	9.117	0	713265	N.D.	2.241	#
11)		Heptachlo...	13.783	11.080	62971	14921	0.068	0.041	#
15)		Dieldrin	17.330	13.990f	70712	29446	0.086	0.085m	
16)		4,4'-DDE	16.953	0.000	488233	0	0.605	N.D.	d#
17)		Endrin	18.617	0.000	145604	0	0.159	N.D.	#
18)		Endosulfa...	20.727	17.230f	135846	62752	0.162m	0.194m	
20)		Endrin Al...	21.690f	0.000	781892	0	1.152	N.D.	#
21)		Endosulfa...	23.017	0.000	824930	0	0.823	N.D.	#
22)		4,4'-DDT	22.427	18.580f	160397	44181	0.232m	0.152m	#
23)		Endrin Ke...	24.770	0.000	297852	0	0.292	N.D.	d#
24)		Methoxychlor	0.000	23.273	0	64843	N.D. d	0.247	
25)		2,4'-DDE	14.897	0.000	50872	0	0.091	N.D.	#
26)		2,4'-DDD	17.477	14.697f	145626	56575	0.280	0.234	
27)		2,4'-DDT	19.427	16.237	66902	24426	0.118	0.100	
30)		Toxaphene	17.877	0.000	129875	0	41.311	N.D.	#
32)		Toxaphene...	22.100	17.743f	609486	19158	116.831	8.202	#
33)		Toxaphene...	22.667f	17.543	373364	313042	51.631	49.537	

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:05:52 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
34)	Toxaphene...	23.110	19.140f	73366	298394	11.573	65.877 #
37)	Chlordane	0.000	7.730	0	107394	N.D. d	10.295
38)	Chlordane...	10.477	8.260f	1089179	36832	22.070	1.988 #
39)	Chlordane...	11.843f	0.000	336028	0	8.993	N.D. d#
42)	Chlordane...	16.030	0.000	196744	0	2.818	N.D. d#
44)	Chlorpyrifos	0.000	9.757	0	28420	N.D. d	0.129
45)	Oxychlordane	0.000	10.707f	0	183461	N.D. d	0.602
46)	cis-Nonac...	19.960f	16.237	60786	24426	0.057	0.061
47)	trans-Non...	16.030	0.000	196744	0	0.194	N.D. #
48)	Mirex	26.100	0.000	250804	0	0.273	N.D. #
49)	HCE	2.777	2.373	511993	42445	0.466	0.086m#
50)	HCBD	3.303	2.790	63281	596850	0.054	1.465 #

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

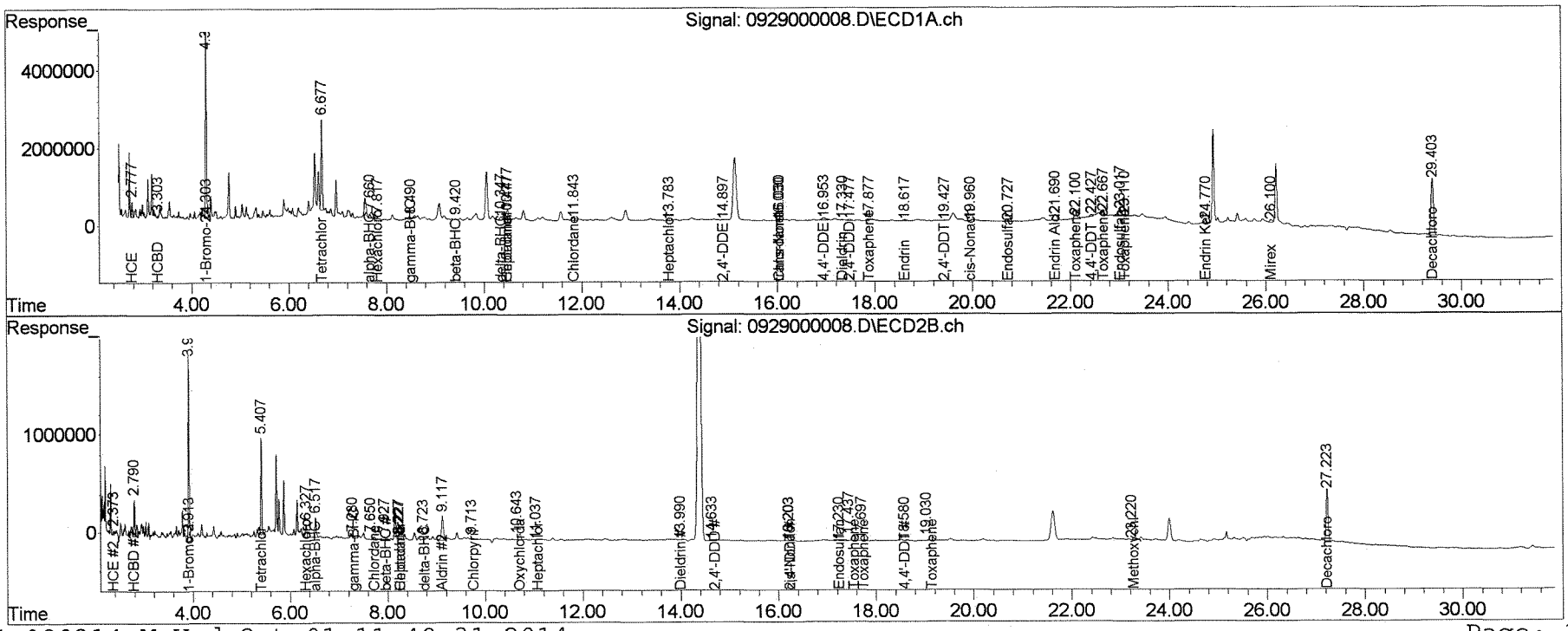
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:05:52 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1310

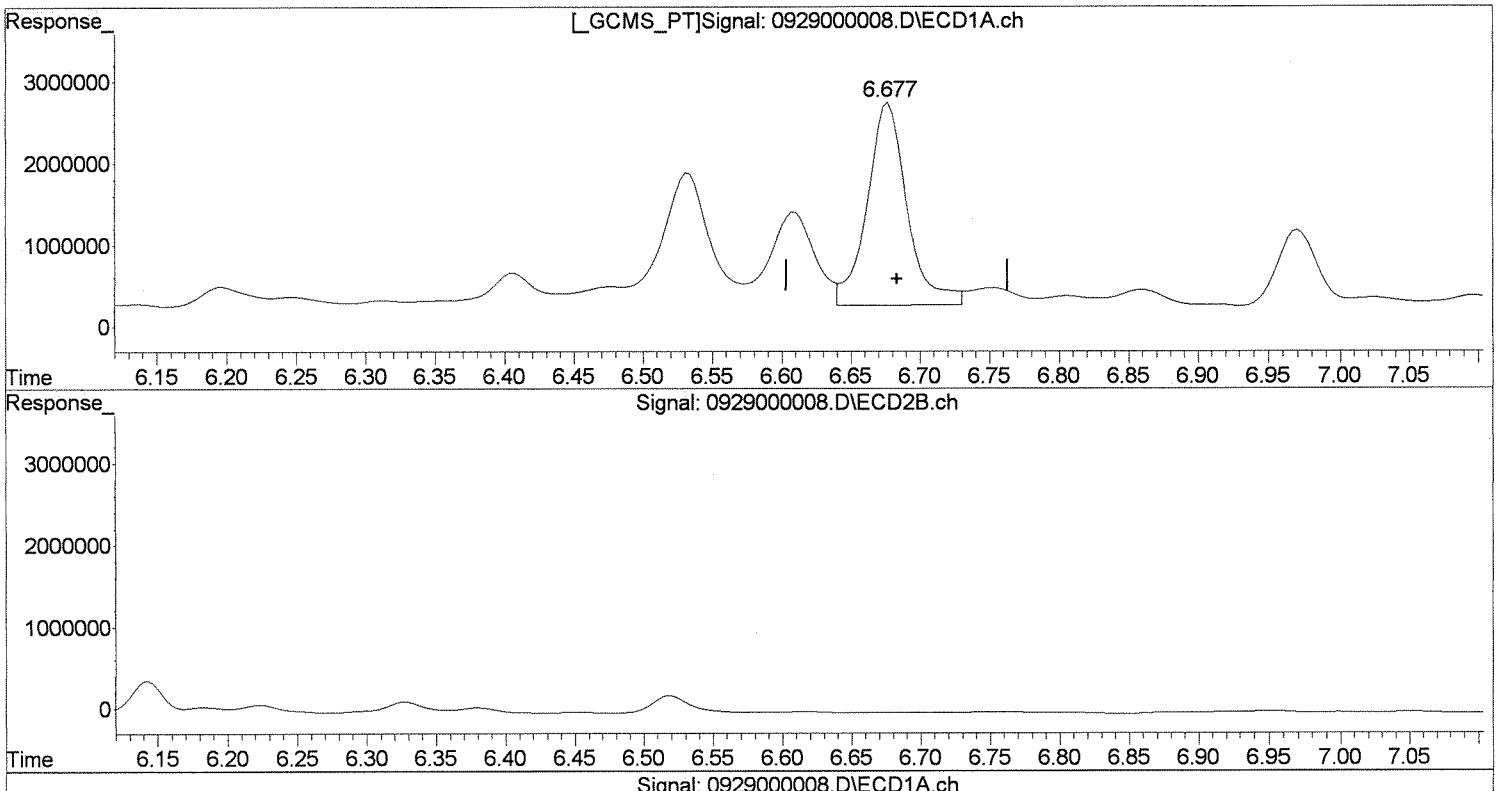


Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000008.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.677min 5.884 ug/L
response 4973165

(2) Tetrachloro-m-xylene #2 (s)
5.407min 4.468 ug/L
response 1471317

Manual Integration:
Before

10/01/14

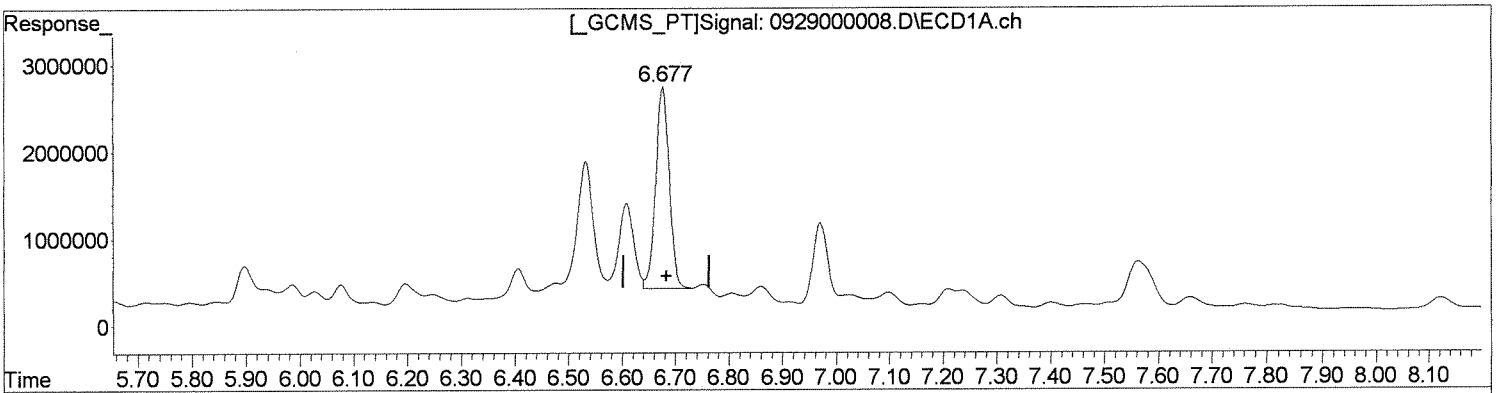
(+) = Expected Retention Time

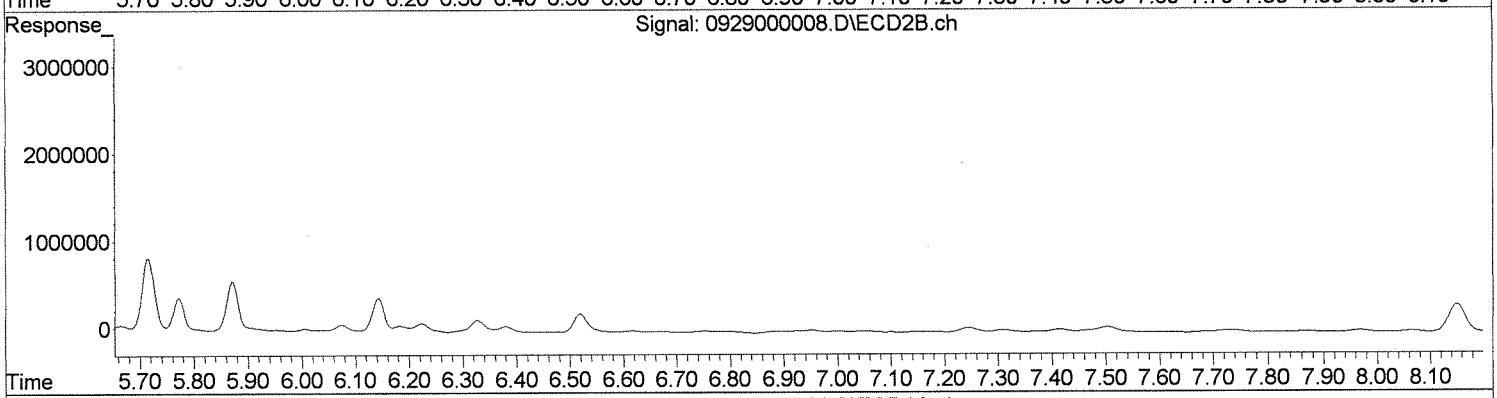
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.677min 4.835 ug/L m
response 4086871

(2) Tetrachloro-m-xylene #2 (s)
5.407min 4.468 ug/L
response 1471317

Manual Integration:
After
Baseline/Shoulder
10/01/14

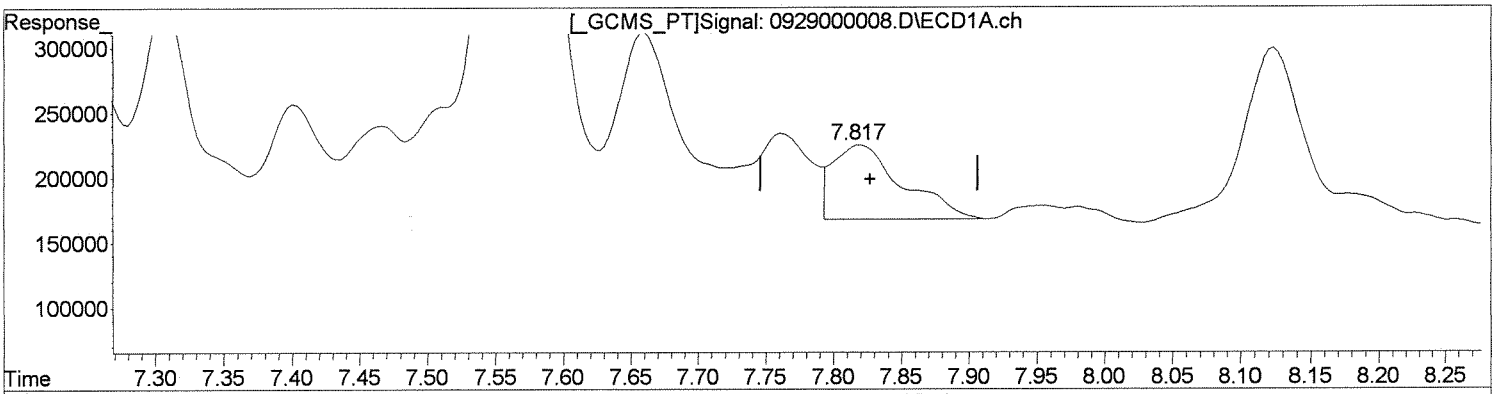
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:02:31 2014

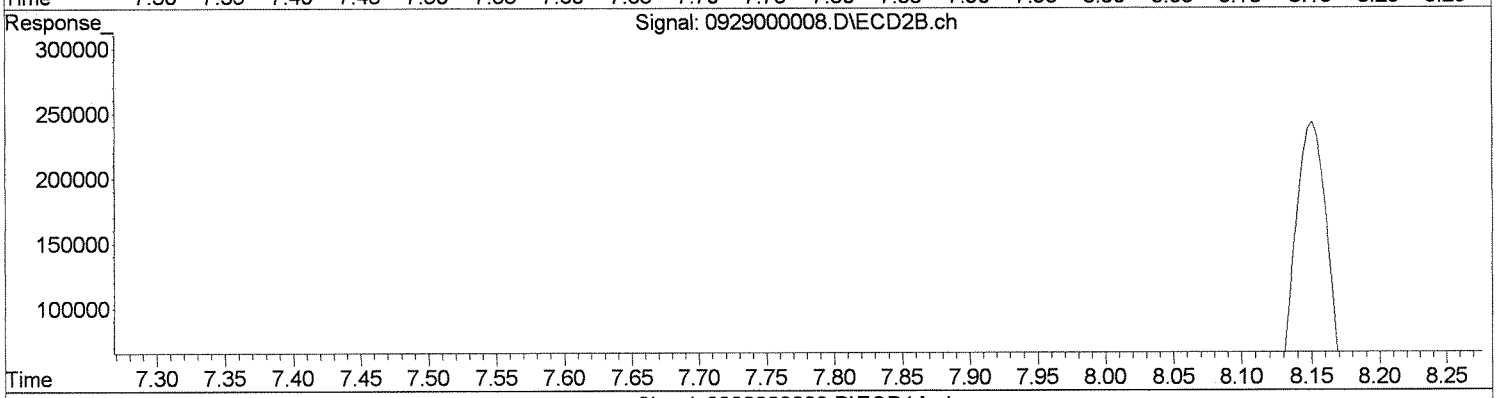
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(4) Hexachlorobenzene
7.817min 0.155 ug/L
response 198564

(4) Hexachlorobenzene #2
6.327min 0.636 ug/L
response 267047

Manual Integration:
Before

10/01/14

(+) = Expected Retention Time

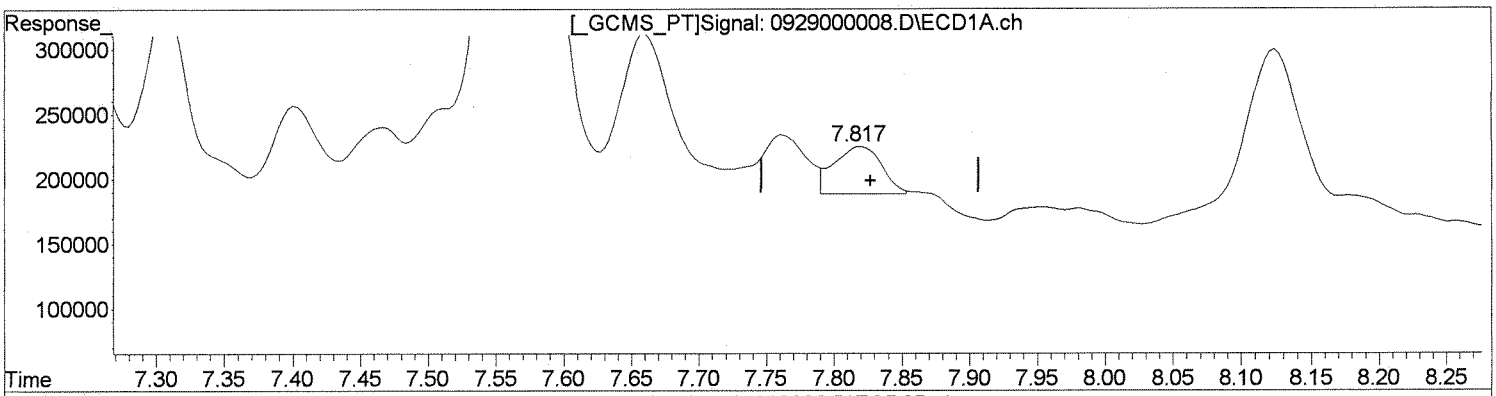
GC34-090314.M Wed Oct 01 11:02:40 2014 Page: 1

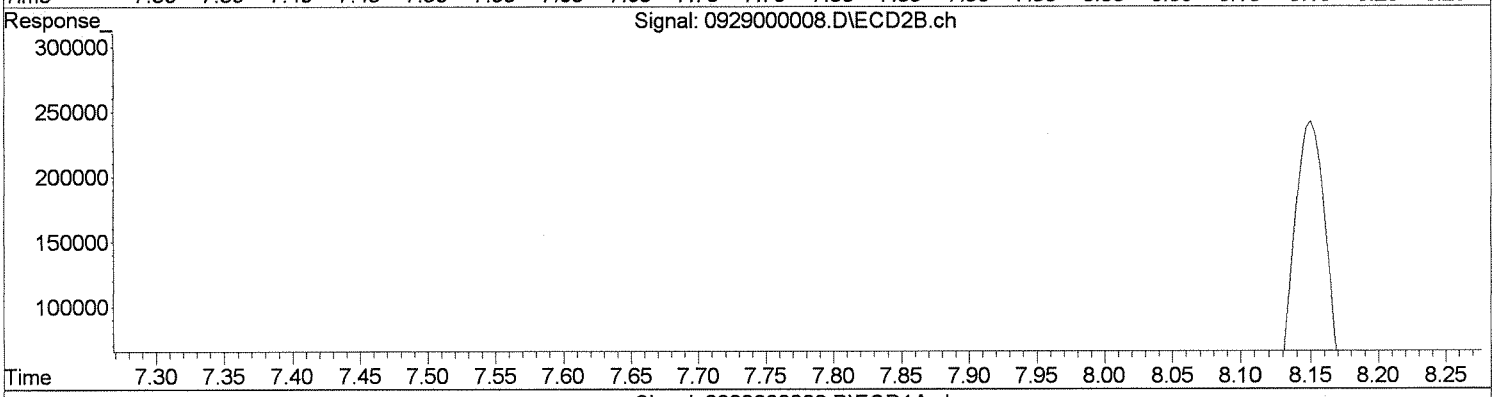
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(4) Hexachlorobenzene
7.817min 0.068 ug/L m
response 86513

(4) Hexachlorobenzene #2
6.327min 0.636 ug/L
response 267047

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

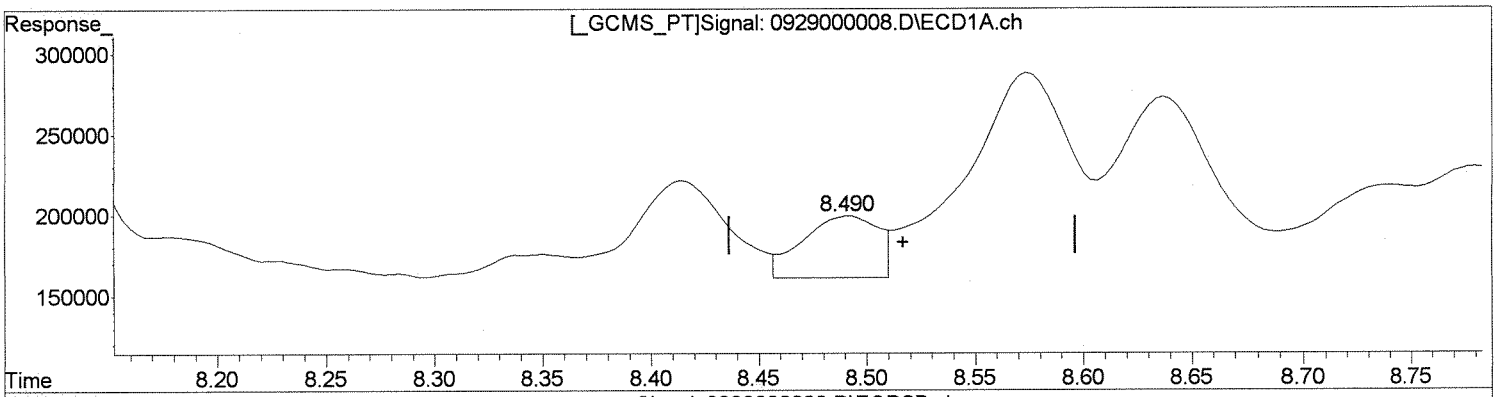
GC34-090314.M Wed Oct 01 11:02:43 2014 Page: 1

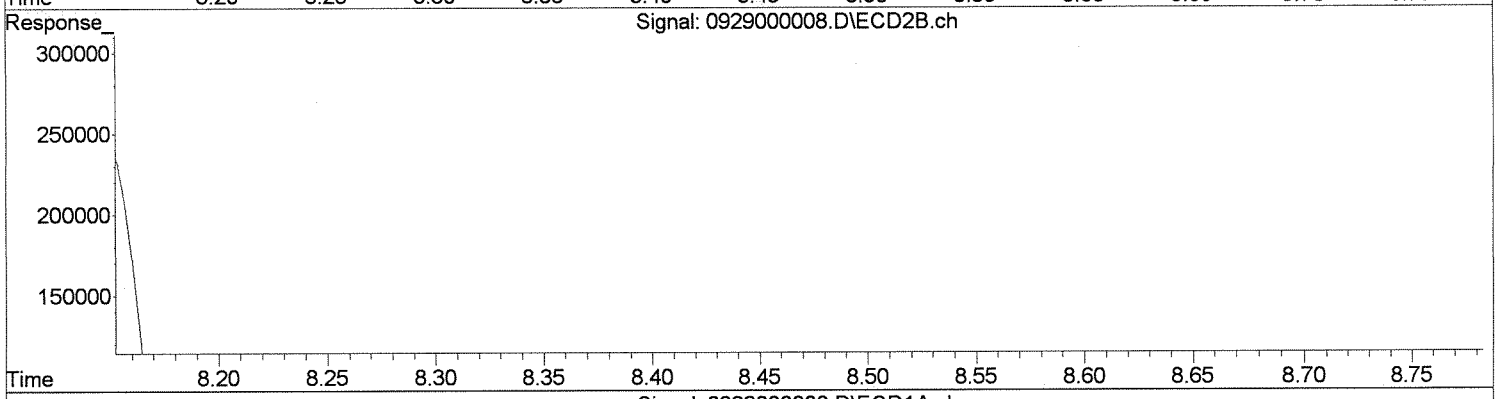
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.490min 0.125 ug/L
response 94955

(6) gamma-BHC (Lindane) #2
7.310min 0.134 ug/L
response 45803

Manual Integration:
Before

10/01/14

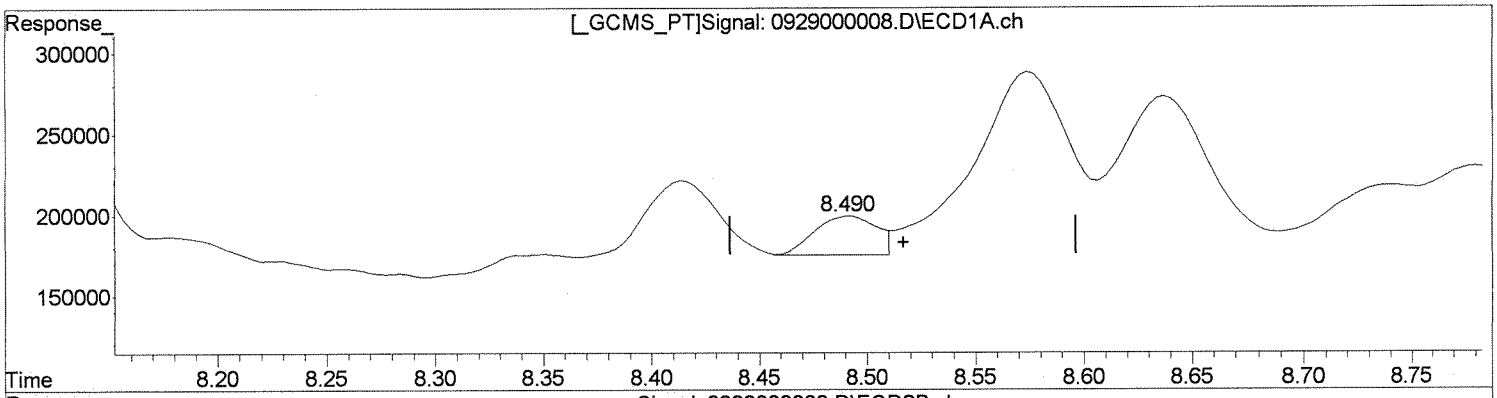
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:02:50 2014 Page: 1

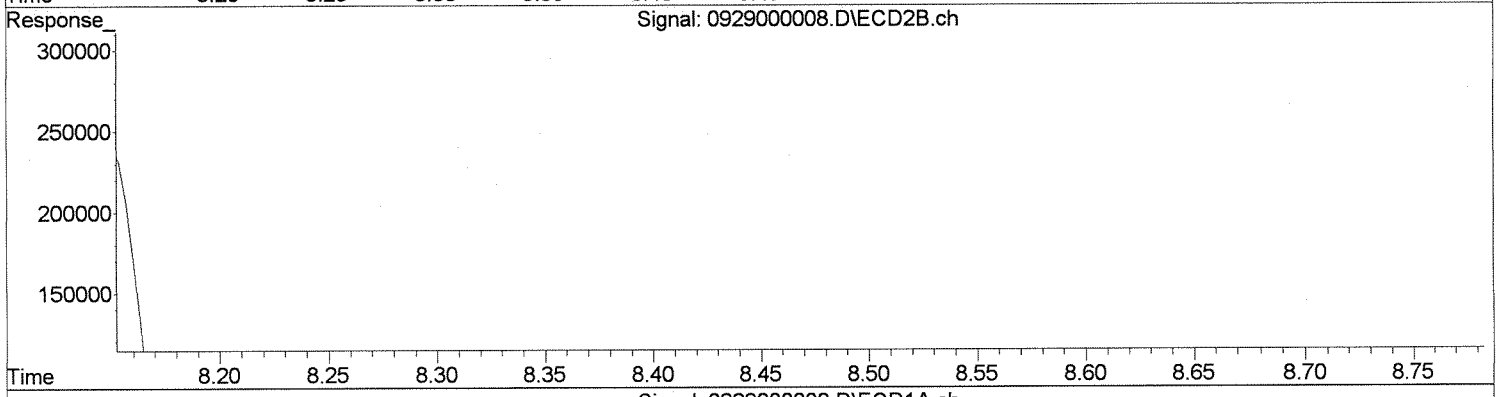
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.490min 0.058 ug/L m
response 49427

(6) gamma-BHC (Lindane) #2
7.310min 0.134 ug/L
response 45803

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

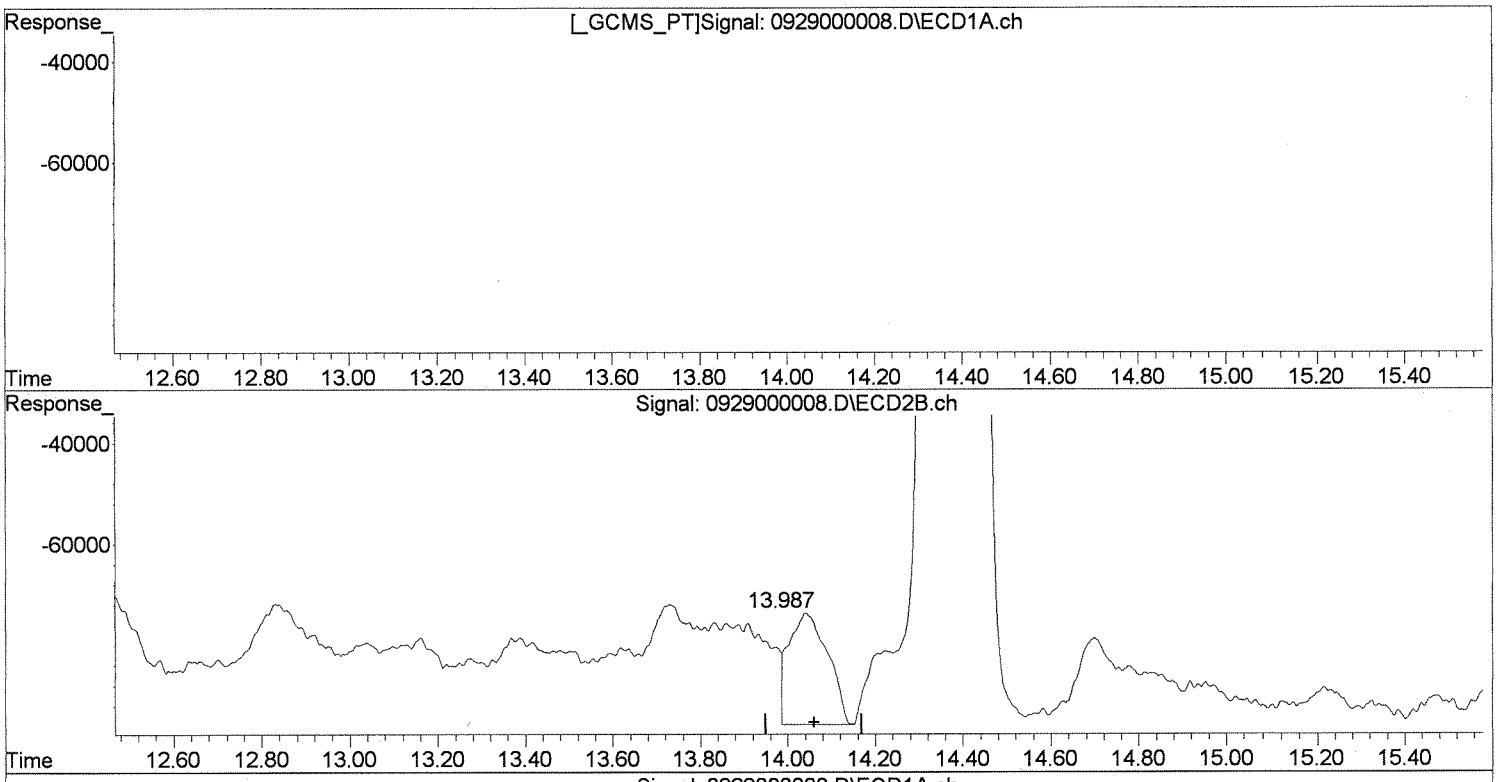
GC34-090314.M Wed Oct 01 11:02:53 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000008.D\ECD1A.ch

(15) Dieldrin
17.330min 0.086 ug/L
response 70712

(15) Dieldrin #2
14.040min 0.390 ug/L
response 135055

Manual Integration:
Before

10/01/14

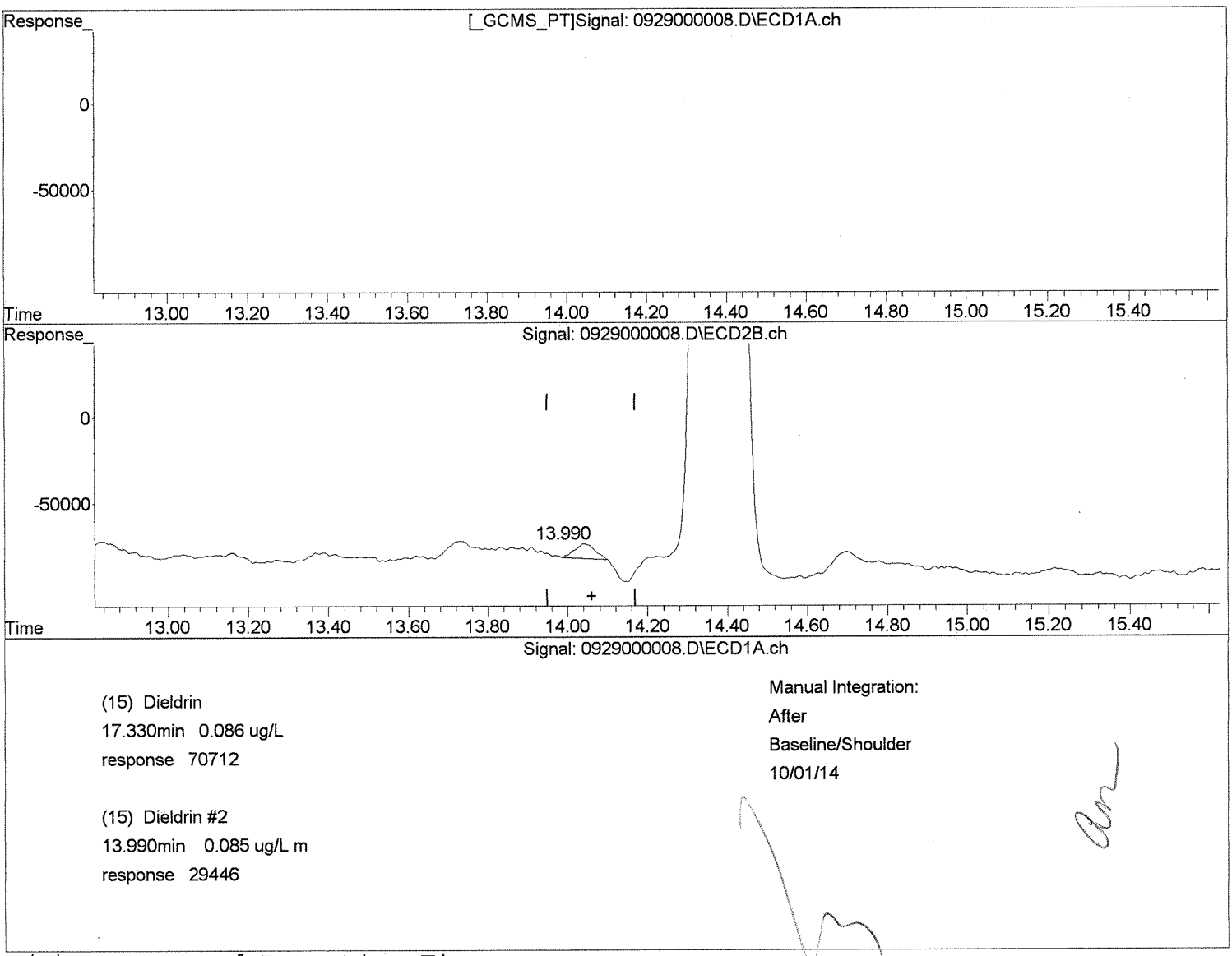
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



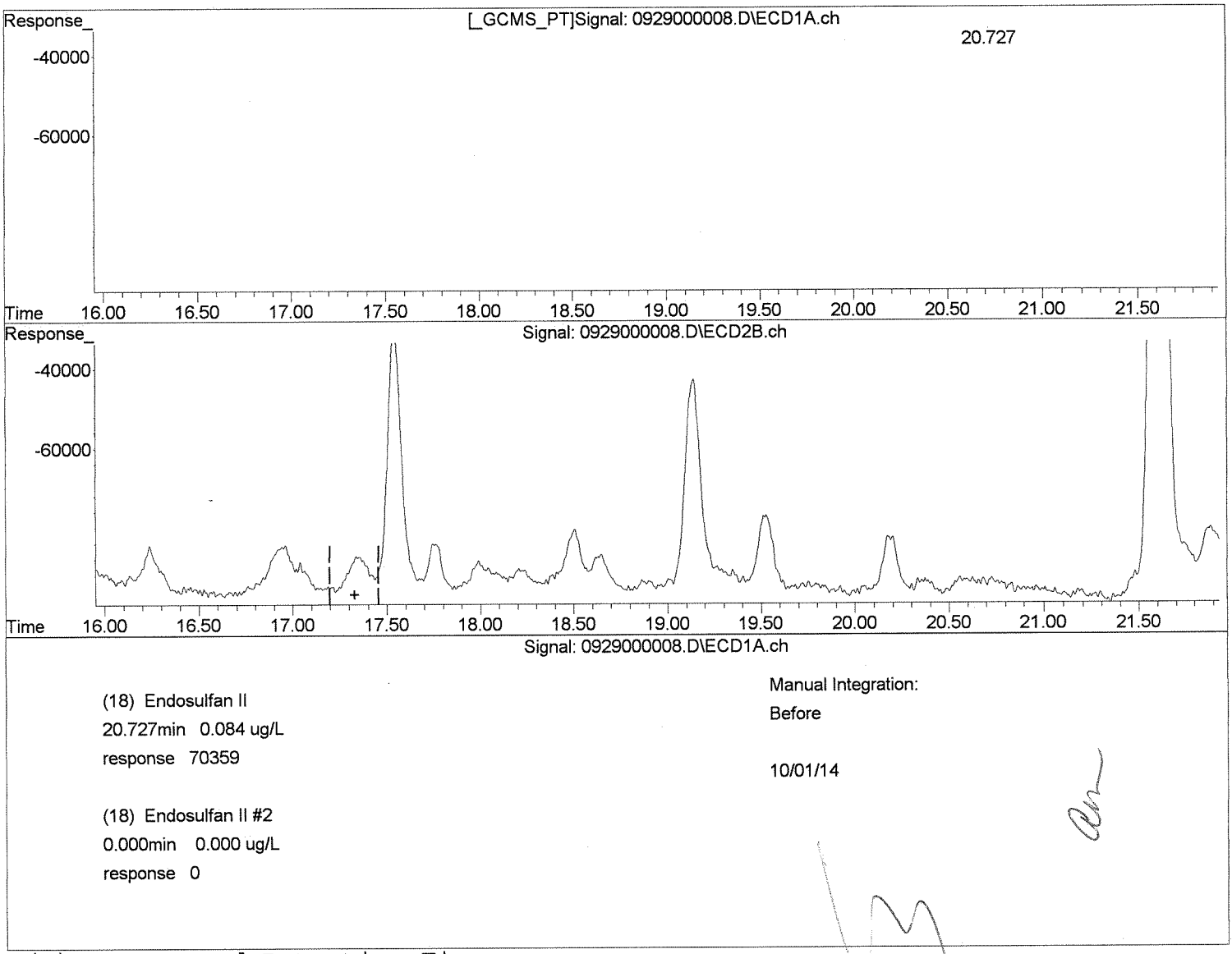
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



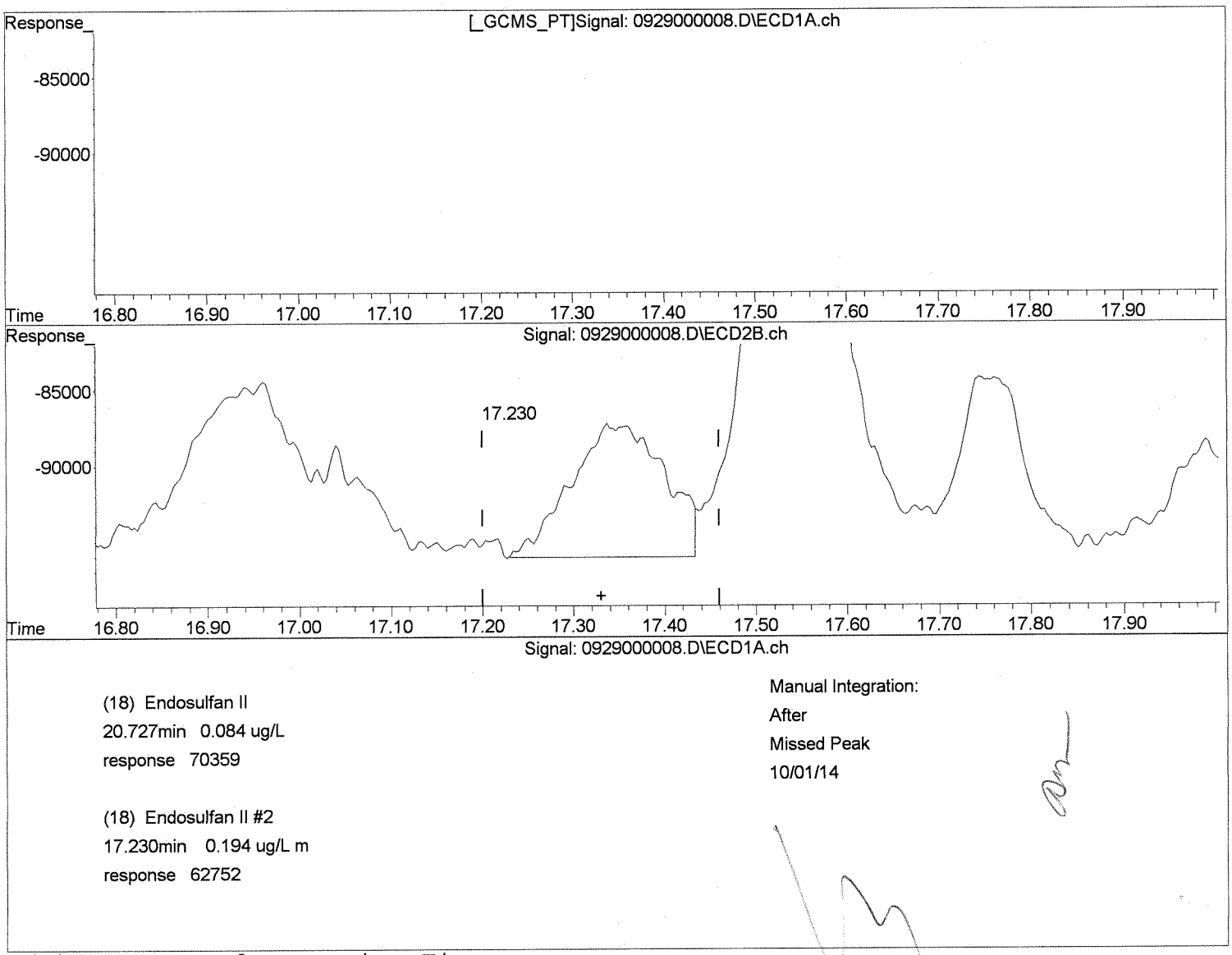
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:03:46 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(+) = Expected Retention Time

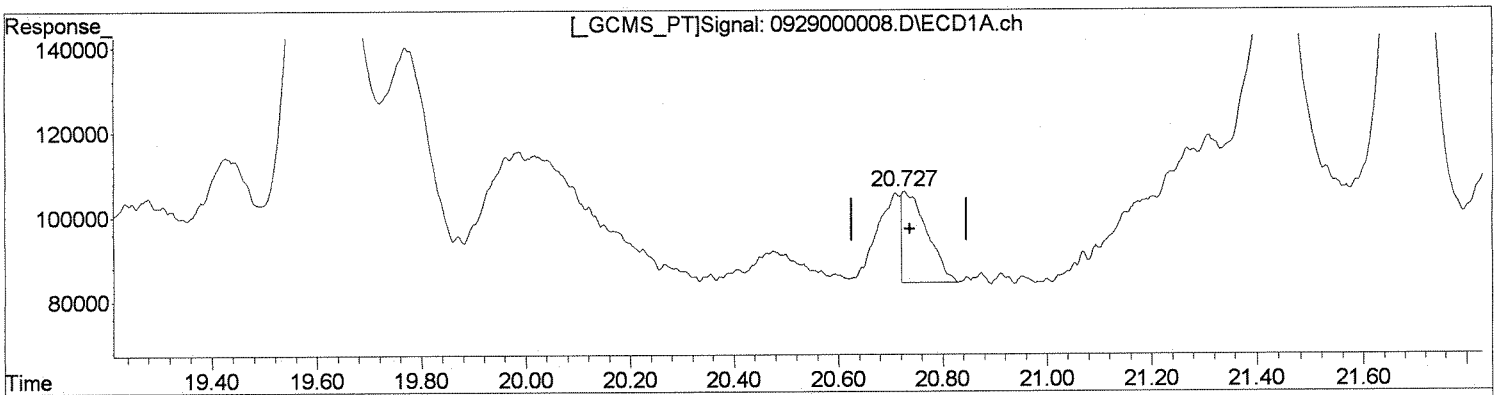
GC34-090314.M Wed Oct 01 11:03:51 2014 Page: 1

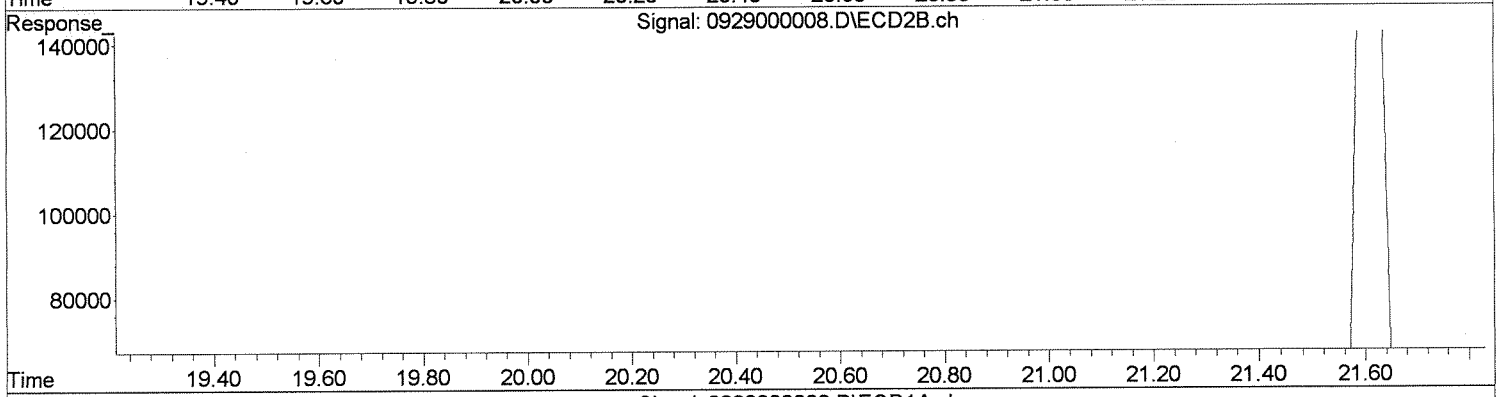
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(18) Endosulfan II
20.727min 0.084 ug/L
response 70359

(18) Endosulfan II #2
17.230min 0.194 ug/L m
response 62752

Manual Integration:
Before

10/01/14

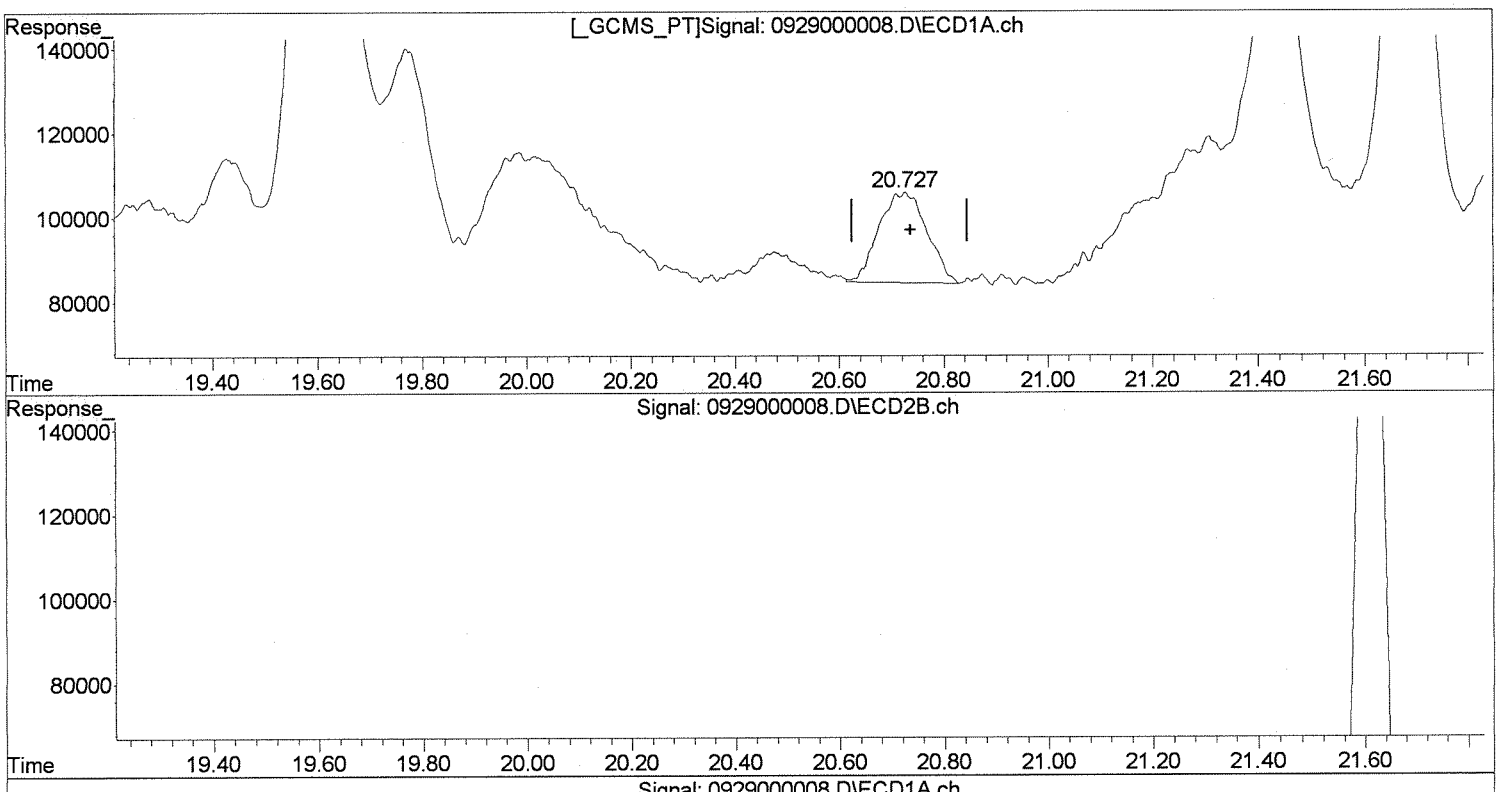
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:03:55 2014

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm



Signal: 0929000008.D\ECD1A.ch

(18) Endosulfan II
20.727min 0.162 ug/L m
response 135846

(18) Endosulfan II #2
17.230min 0.194 ug/L m
response 62752

Manual Integration:
After
Baseline/Shoulder
10/01/14

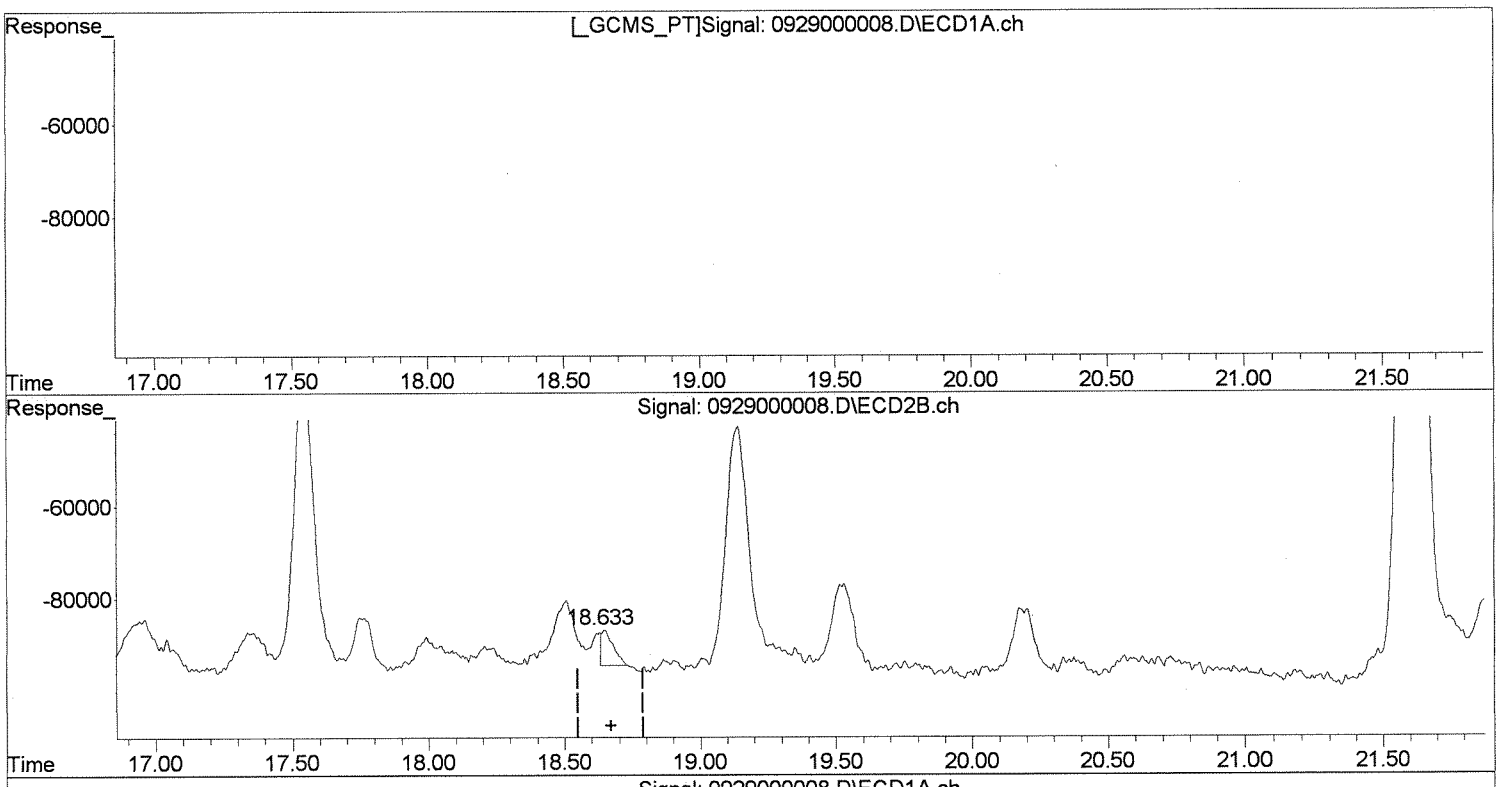
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:03:57 2014

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000008.D\ECD1A.ch

(22) 4,4'-DDT
22.427min 0.379 ug/L
response 261519

(22) 4,4'-DDT #2
18.643min 0.076 ug/L
response 22122

Manual Integration:
Before

10/01/14

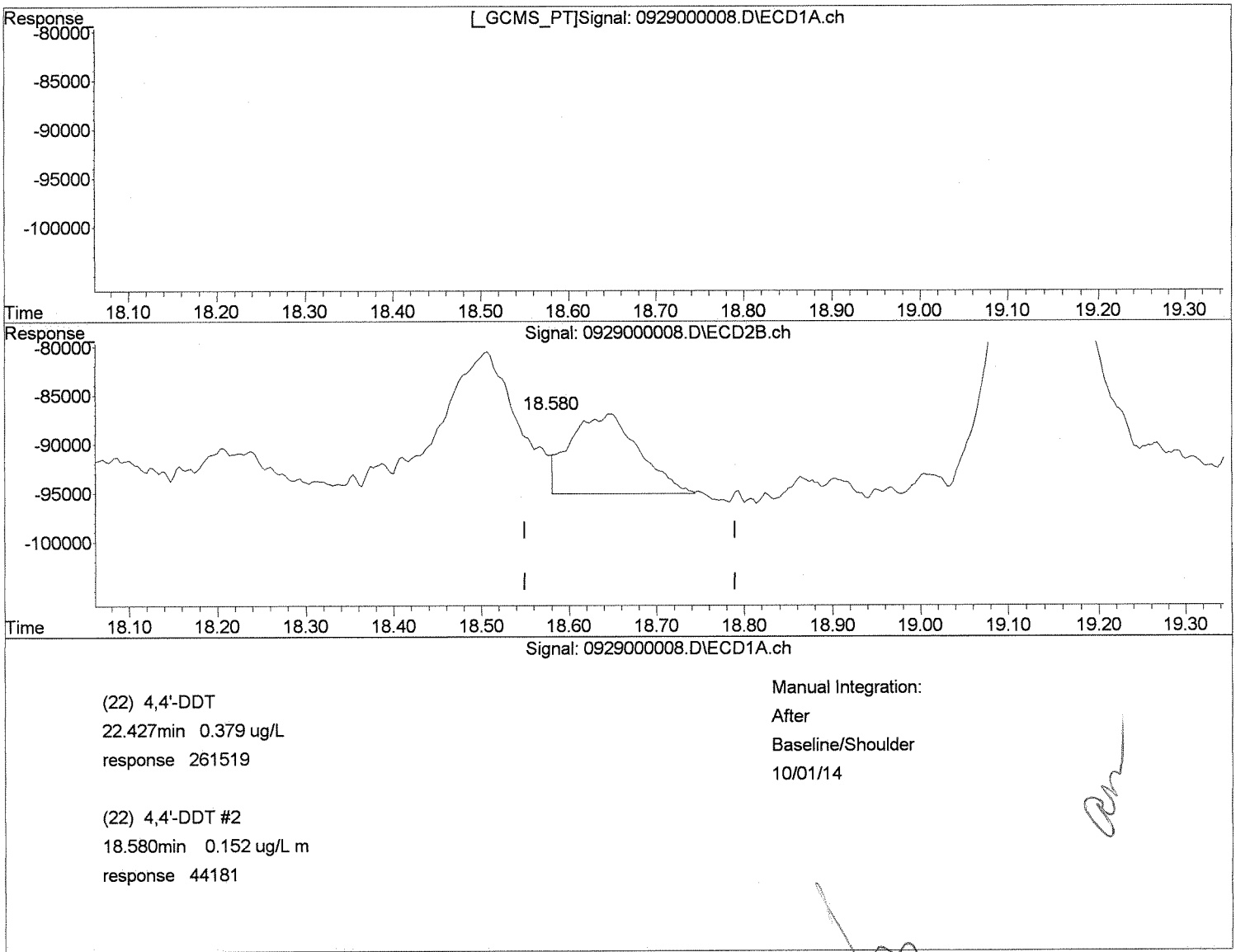
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



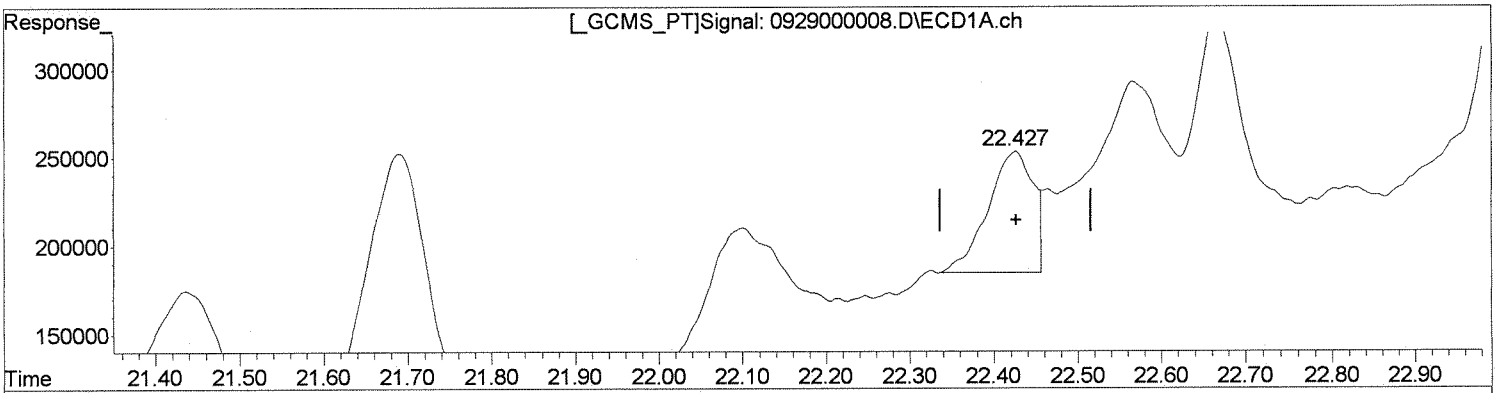
(+) = Expected Retention Time

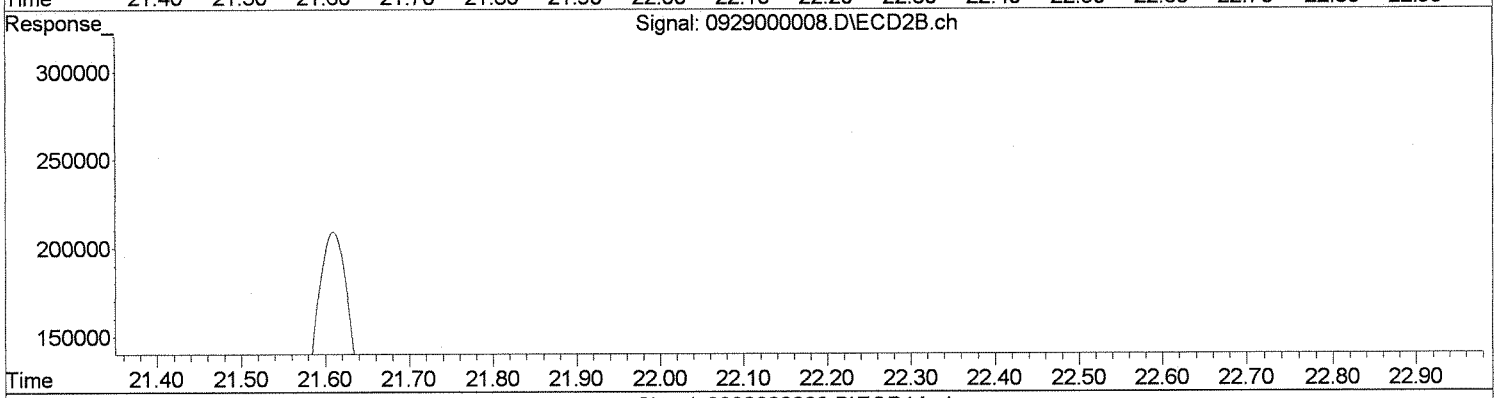
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(22) 4,4'-DDT
22.427min 0.379 ug/L
response 261519

(22) 4,4'-DDT #2
18.580min 0.152 ug/L m
response 44181

Manual Integration:
Before

10/01/14

(+) = Expected Retention Time

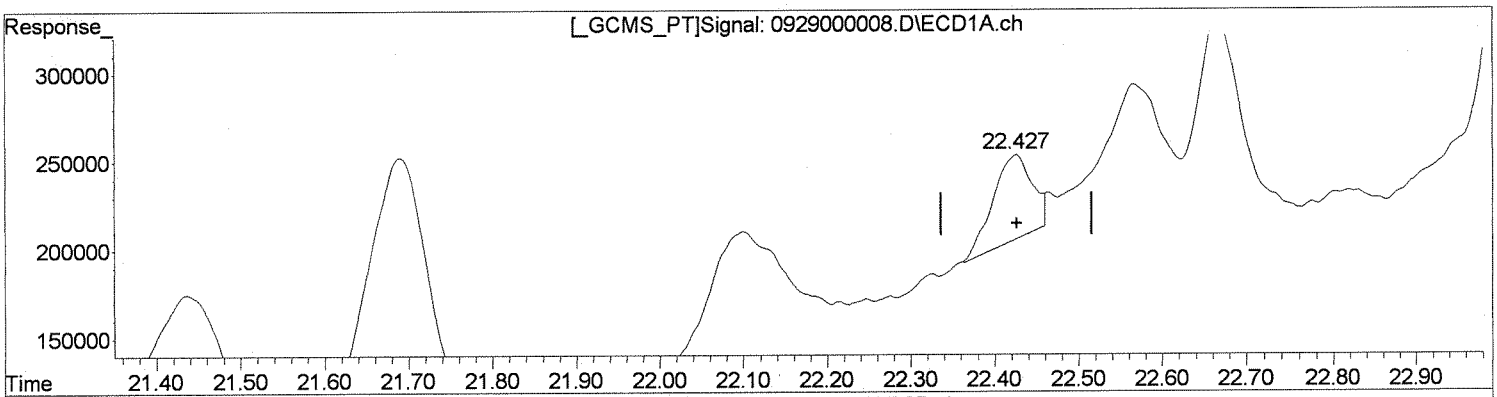
GC34-090314.M Wed Oct 01 11:04:22 2014 Page: 1

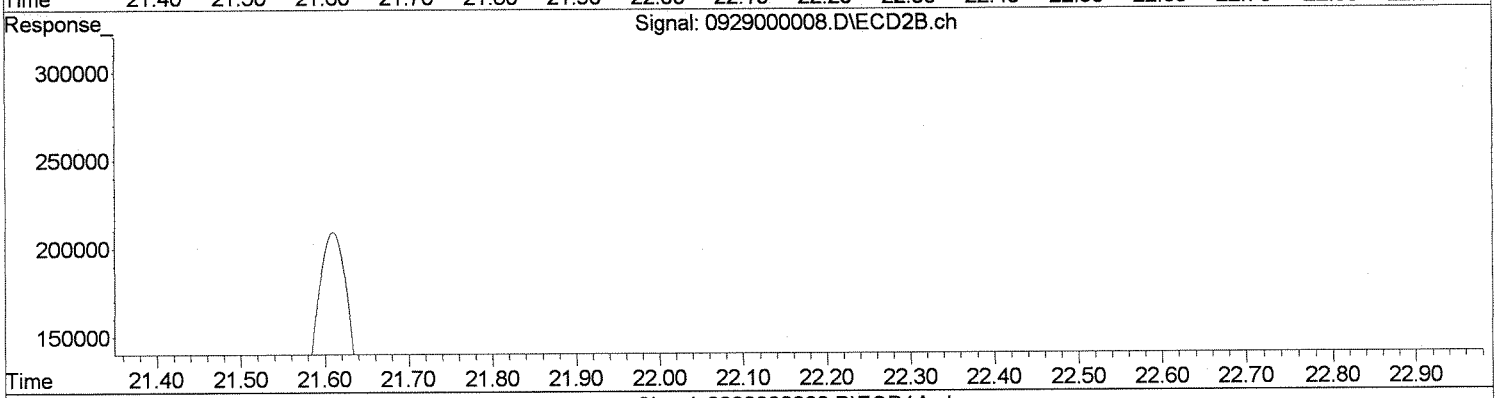
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000008.D\ECD1A.ch

(22) 4,4'-DDT
22.427min 0.232 ug/L m
response 160397

(22) 4,4'-DDT #2
18.580min 0.152 ug/L m
response 44181

Manual Integration:
After
Baseline/Shoulder
10/01/14

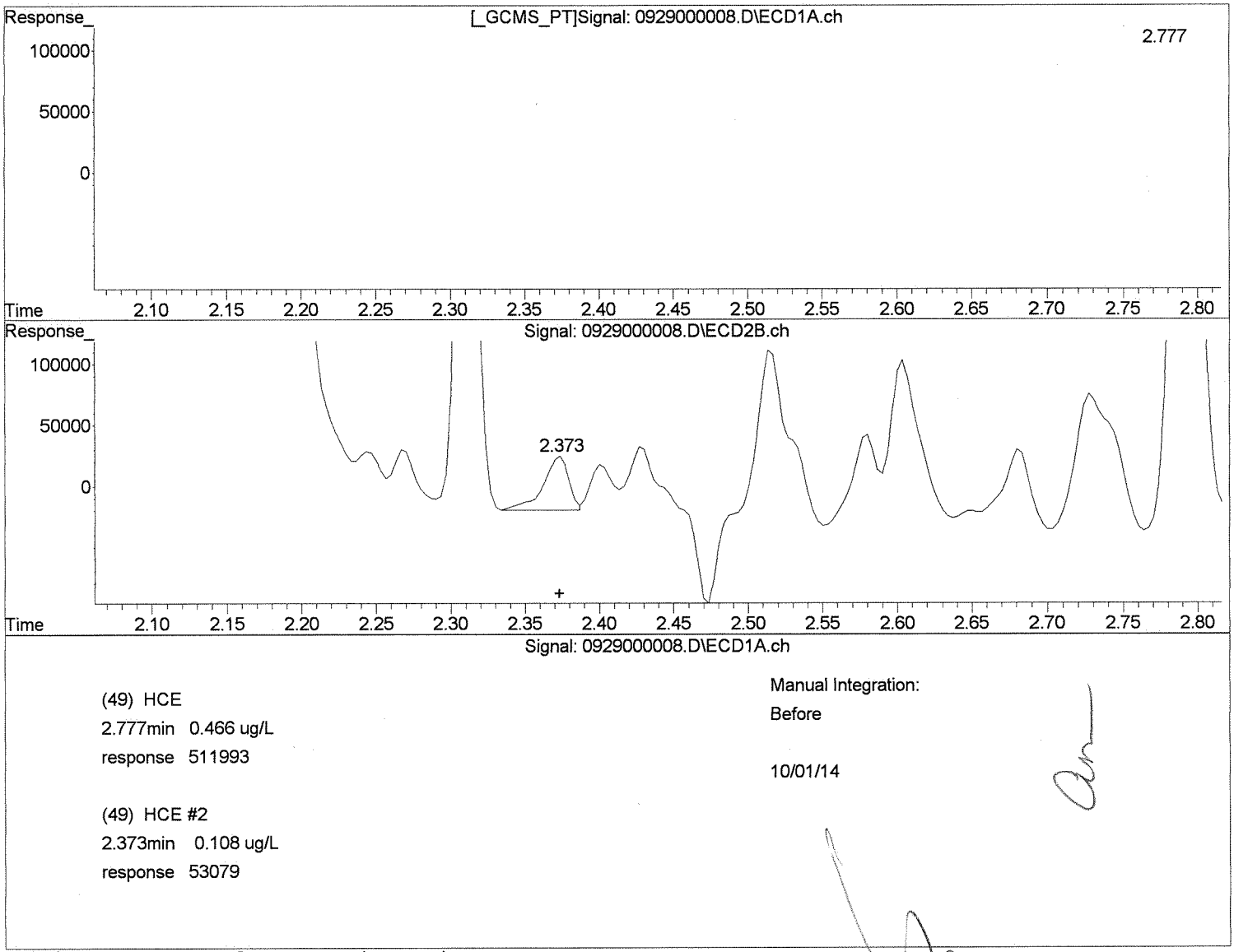
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(49) HCE
2.777min 0.466 ug/L
response 511993

(49) HCE #2
2.373min 0.108 ug/L
response 53079

Manual Integration:
Before

10/01/14

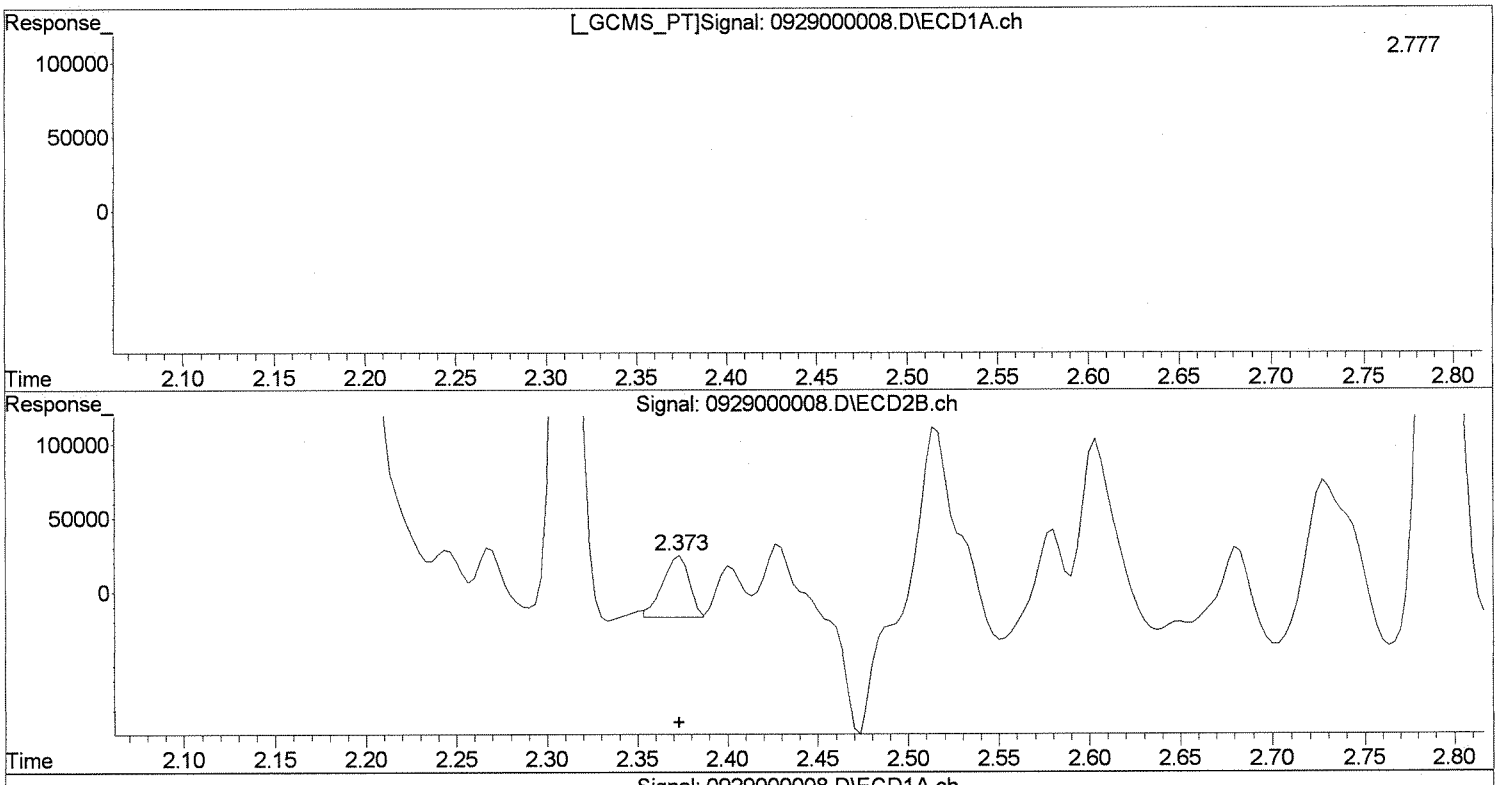
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 12:37:02
Operator :
Sample : K1409921-012
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 29 14:47:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000008.D\ECD1A.ch

(49) HCE
2.777min 0.466 ug/L
response 511993

(49) HCE #2
2.373min 0.086 ug/L m
response 42445

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000009.D
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 13:13
Date Quantitated: 10/01/2014 11:10
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RD
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:16
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000009.D\0929000009C.
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 13:13
Date Quantitated: 10/01/2014 11:10
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:19
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000009.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000009.D\0929000009c.d			**Vial:**	8
Acqu Date:	09/29/2014 13:13	**Quant Date:**	10/01/2014 11:10	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-013				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378550	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	8198068	2632437	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	-0.01	5.41		3961276m	1442830	4.45	4.37			89 OK
							%Recovery =	89 OK	87 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40		27.22	-0.01	5159191	1452415	4.18 CCV	4.55			91 OK
							%Recovery =	83 OK	91 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.58	-0.03	6.53	+0.04	786394	108241	1.08	0.3060	2.2	0.61J	1.0Ui
1	Hexachlorobenzene	7.82		6.32	+0.02	53399	332689	0.0400	0.7900	0.20U	1.6	0.20U
1	beta-BHC	9.42		7.97	+0.03	44400	42198	0.0900	0.0900	0.47U	0.47U	0.47U
1	gamma-BHC (Lindane)	8.51		7.31	+0.01	143206	65616	0.1860	0.1910	0.37J	0.38J	**0.37J**
1	delta-BHC	10.34	+0.04	8.75	+0.02	317489	25674	0.4820 CCV	0.0780	0.96J	0.20U	0.20U
1	Heptachlor	10.48		8.23	+0.03	1062462	38653m	1.09	0.1030	2.2	0.21J	1.0Ui
1	4,4'-DDE	16.96	-0.02	13.72		302836m	77544	0.3570	0.2310	0.71J	0.46J	**0.46**JP
1	4,4'-DDD					0	0	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.69	+0.08			656969	0	0.9190 CCV	0.0000	1.8B	0.22U	0.22U
1	4,4'-DDT					0d	0	0.0000	0.0000	0.30U	0.30U	0.30U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1000 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000009.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000009.D\0929000009c.d			**Vial:**	8
Acqu Date:	09/29/2014 13:13	**Quant Date:**	10/01/2014 11:10	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-013				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:10:19 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.300	3.910	8198068	2632437	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.407	3961276	1442830	4.451m	4.368	
28)	s	Decachlor...	29.400	27.223	5159191	1452415	4.133	4.547	
		Target Compounds							
3)		alpha-BHC	7.580	6.527	786394	108241	1.075	0.306	#
4)		Hexachlor...	7.820	6.323	53399	332689	0.040	0.790	#
5)		beta-BHC	9.417	7.967	44400	42198	0.090	0.090	
6)		gamma-BHC...	8.510	7.310	143206	65616	0.186	0.191	
7)		delta-BHC	10.340	8.750	317489	25674	0.482	0.078	#
8)		Heptachlor	10.480	8.233	1062462	38653	1.094	0.103m	#
9)		Aldrin	11.827f	9.117	172559	1483693	0.264	4.646	#
11)		Heptachlo...	13.767	11.177f	44725	70459	0.046	0.194	#
14)		alpha-Chl...	15.697	12.453f	86050	23009	0.084	0.063	
15)		Dieldrin	17.323	14.040	91443	26736	0.106	0.077	#
16)		4,4'-DDE	16.957	13.717	302836	77544	0.357m	0.231	#
17)		Endrin	18.633	0.000	94426	0	0.098	N.D.	#
18)		Endosulfa...	20.713	17.333	192456	10536	0.219	0.032	#
20)		Endrin Al...	21.687	0.000	656969	0	0.919	N.D.	#
21)		Endosulfa...	23.010	0.000	670474	0	0.607	N.D.	#
23)		Endrin Ke...	24.760	0.000	107639	0	0.086	N.D.	#
24)		Methoxychlor	24.720	23.263	99987	20490	0.227	N.D.	#
25)		2,4'-DDE	14.883	0.000	143395	0	0.244	N.D.	#
26)		2,4'-DDD	17.463	14.687f	407969	70254	0.745	0.302	#
27)		2,4'-DDT	0.000	16.290	0	11907	N.D.	0.048	#
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

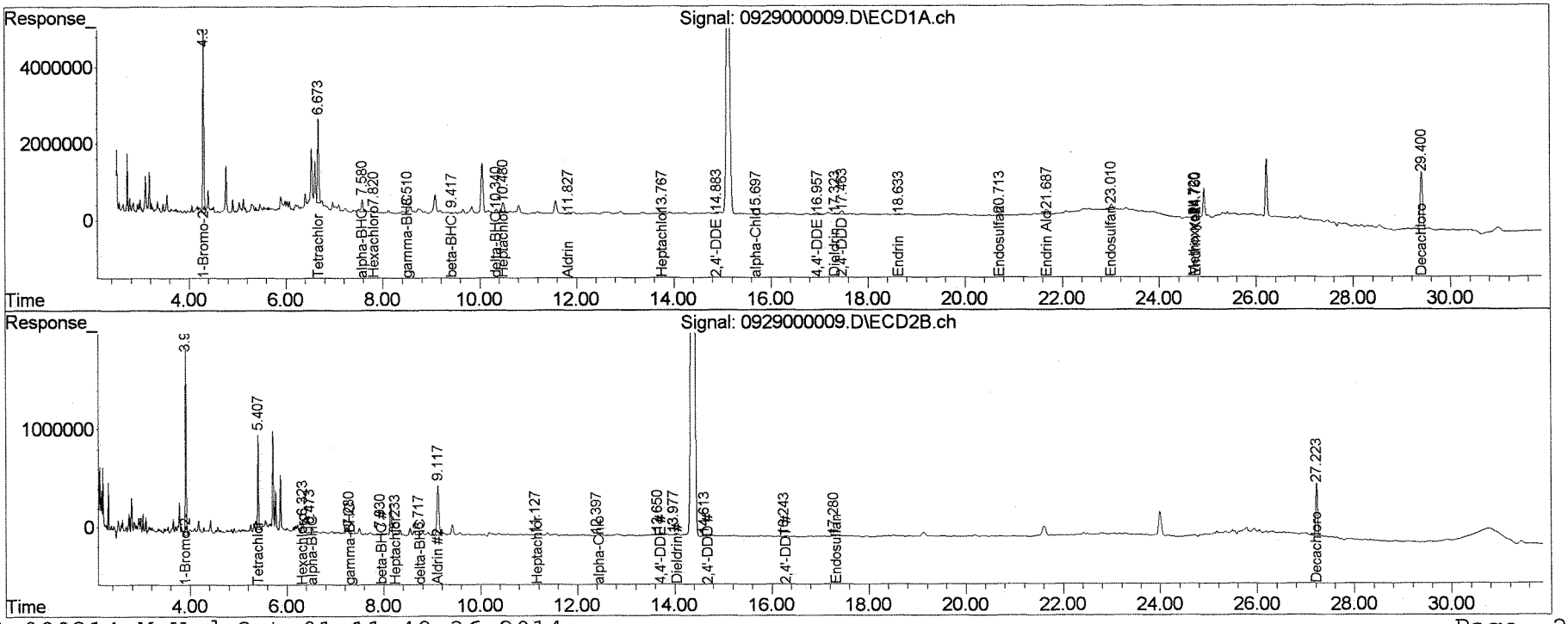
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:10:19 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1334

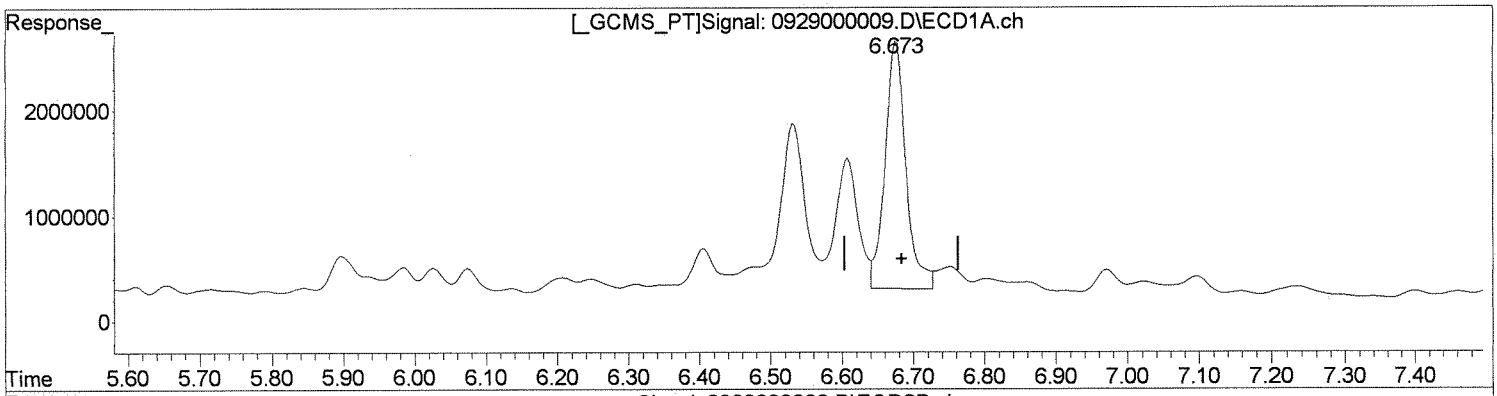


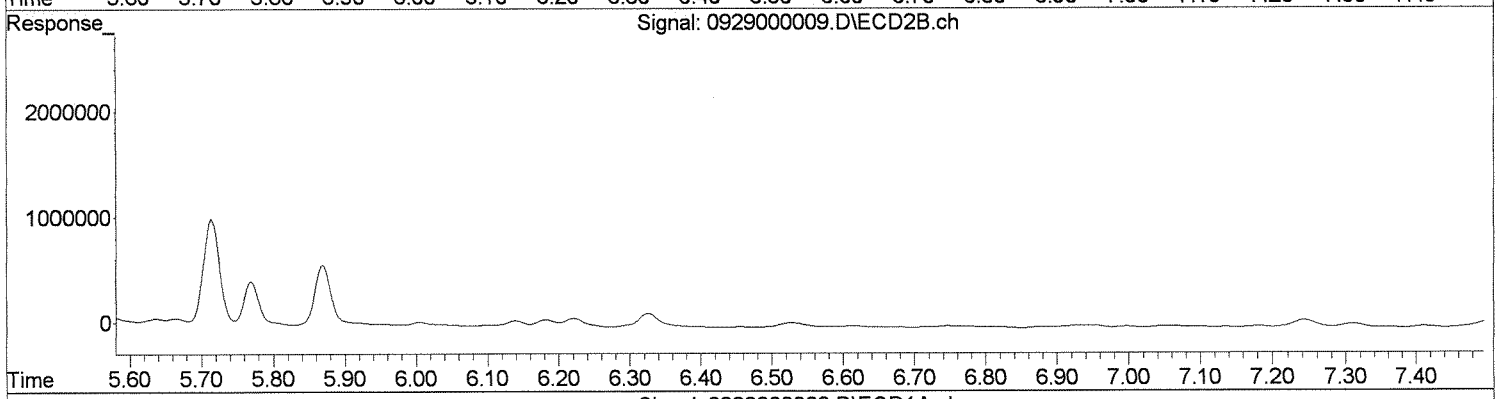
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000009.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 5.361 ug/L
response 4771574

(2) Tetrachloro-m-xylene #2 (s)
5.407min 4.368 ug/L
response 1442830

Manual Integration:
Before

10/01/14

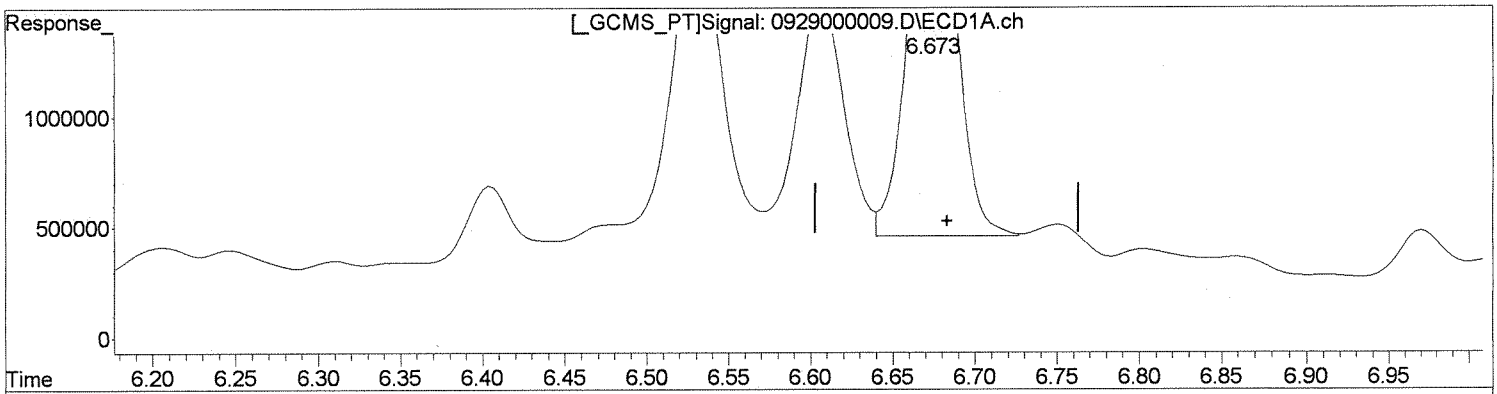
(+) = Expected Retention Time

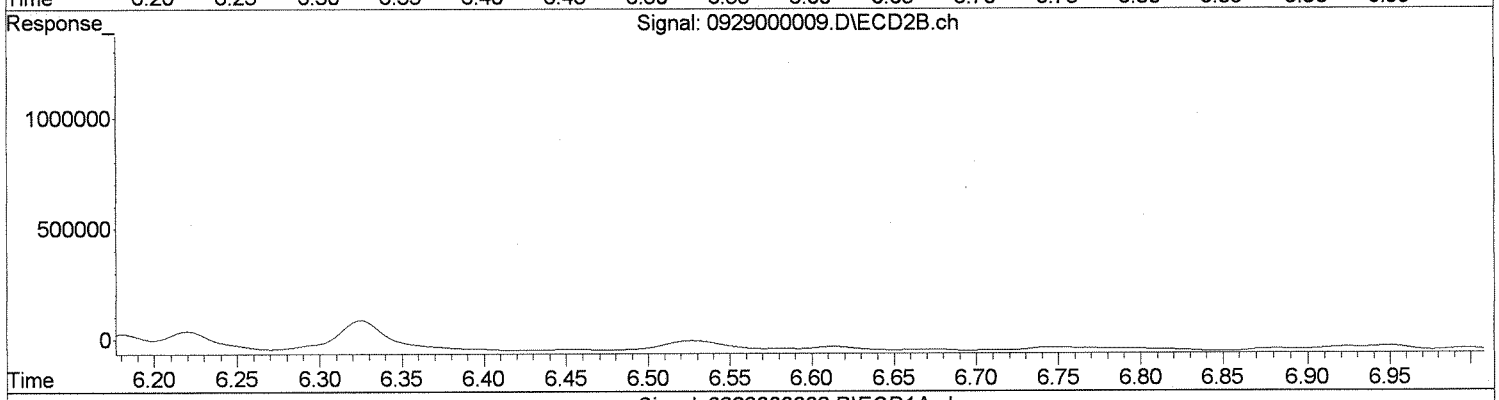
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm





Signal: 0929000009.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 4.451 ug/L m
response 3961276

(2) Tetrachloro-m-xylene #2 (s)
5.407min 4.368 ug/L
response 1442830

Manual Integration:
After
Baseline/Shoulder
10/01/14

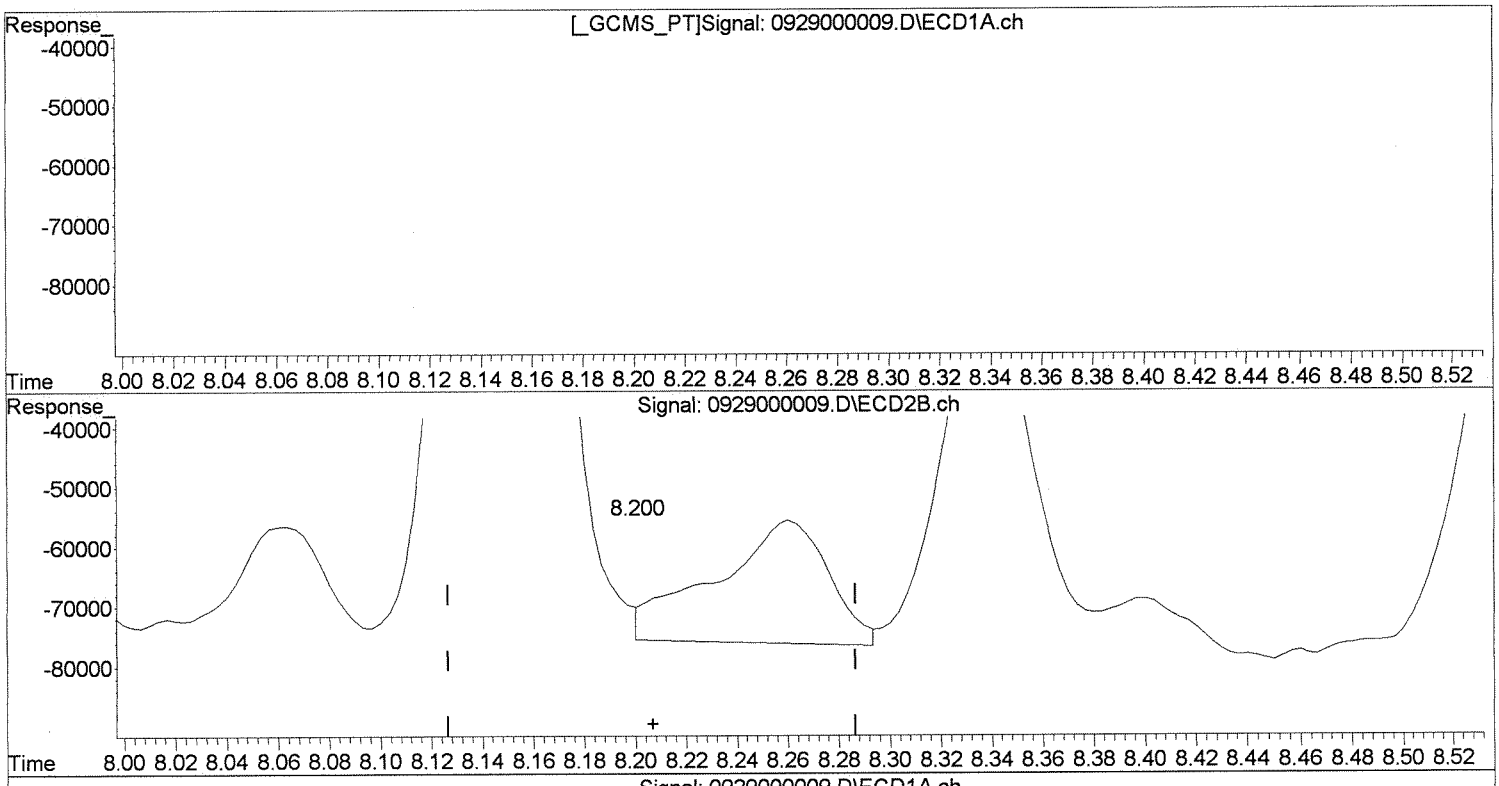
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:07:27 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor
10.480min 1.094 ug/L
response 1062462

(8) Heptachlor #2
8.260min 0.168 ug/L
response 63163

Manual Integration:
Before

10/01/14

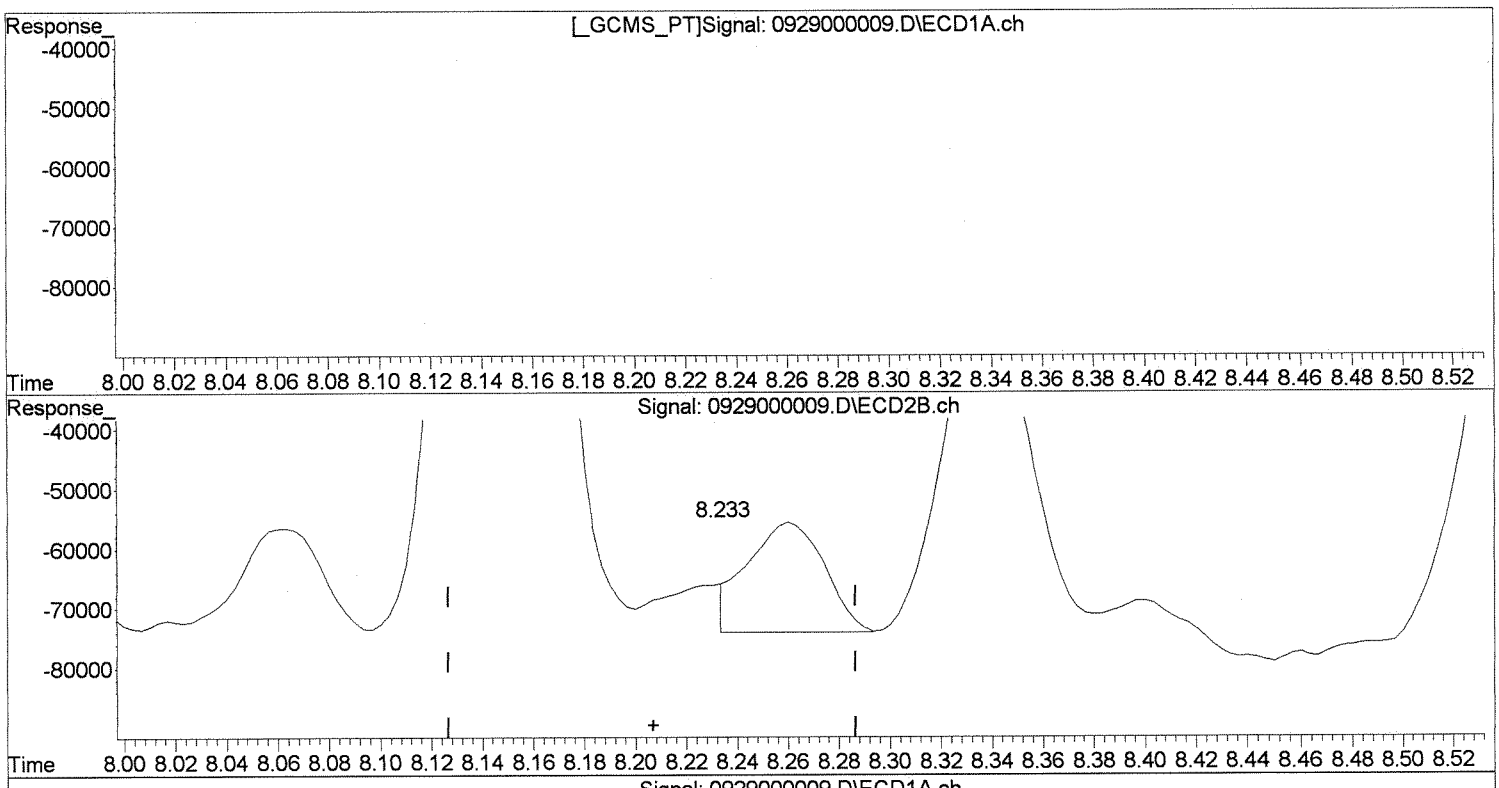
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000009.D\ECD1A.ch

(8) Heptachlor
10.480min 1.094 ug/L
response 1062462

(8) Heptachlor #2
8.233min 0.103 ug/L m
response 38653

Manual Integration:
After
Baseline/Shoulder
10/01/14

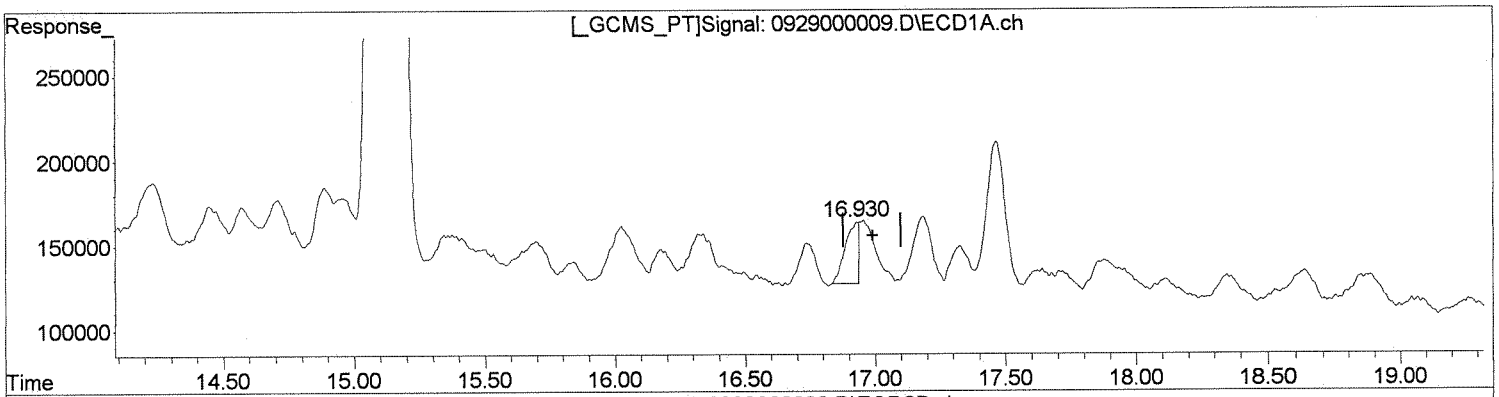
(+) = Expected Retention Time

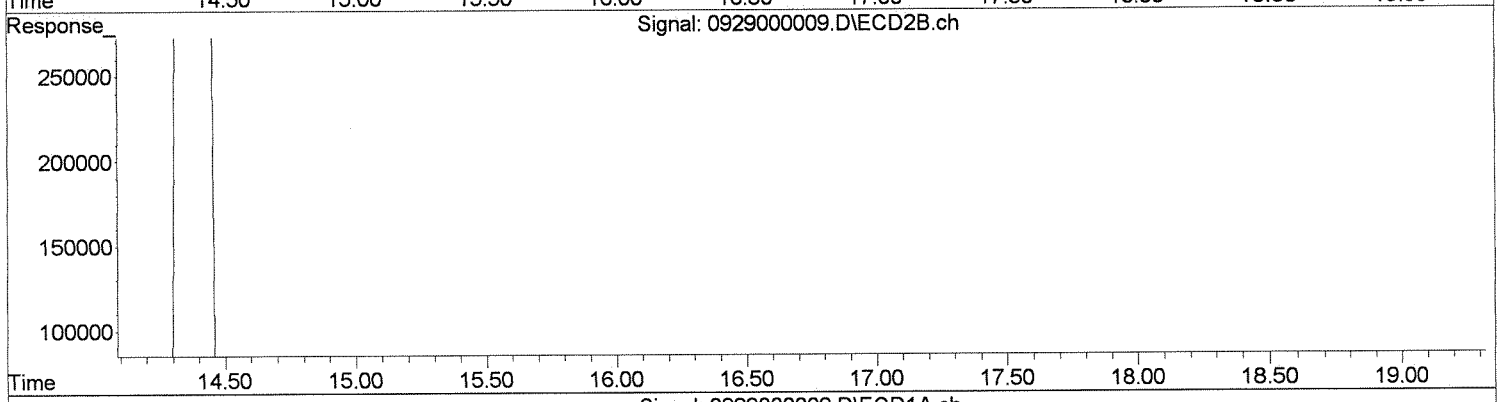
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000009.D\ECD1A.ch

(16) 4,4'-DDE
16.930min 0.154 ug/L
response 130984

(16) 4,4'-DDE #2
13.717min 0.231 ug/L
response 77544

Manual Integration:
Before

10/01/14

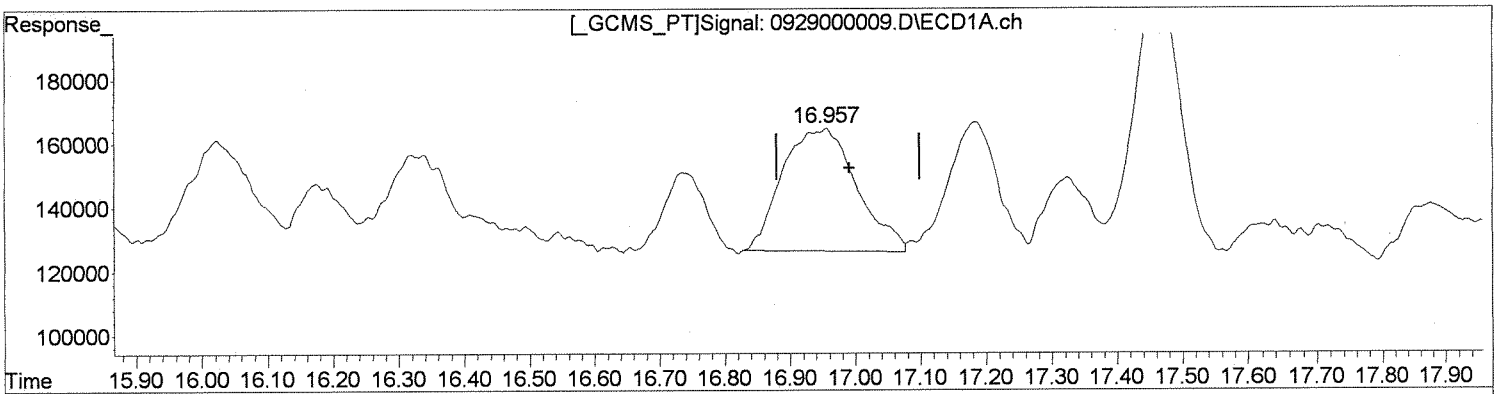
(+) = Expected Retention Time

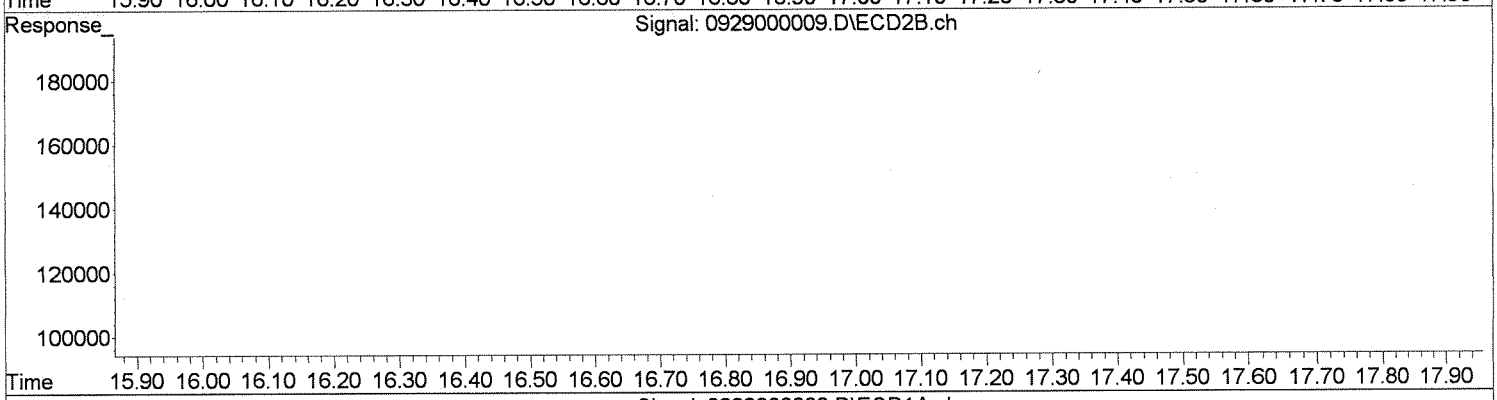
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:13:24
Operator :
Sample : K1409921-013
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:35:58 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000009.D\ECD1A.ch

(16) 4,4'-DDE
16.957min 0.357 ug/L m
response 302836

(16) 4,4'-DDE #2
13.717min 0.231 ug/L
response 77544

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000010.D
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 13:49
Date Quantitated: 10/07/2014 15:41
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RO
	Decachlorobiphenyl	-27.4	NA	20	↓

Primary Review: am 10/7/14

Secondary Review:

Printed: 10/07/2014 15:42:39
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000010.D\0929000010C.
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 13:49
Date Quantitated: 10/07/2014 15:41
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	26.5	NA	20	RO

Primary Review: 10/7/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000010.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000010.D\0929000010c.d			**Vial:**	9
Acqu Date:	09/29/2014 13:49	**Quant Date:**	10/07/2014 15:41	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-014				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378551	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.92	+0.00	8531938	2743635	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.68	5.41	4548523	1457461	4.91	4.23			98 OK
				%Recovery =		98 OK	85 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40	27.23	5124320	1586763	3.94 CCV	4.79			96 OK
				%Recovery =		79 OK	96 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.66	+0.05	6.52	+0.03	33862m	102623	0.0590	0.2780	0.19U	0.55J	0.19U
1	Hexachlorobenzene	7.82		6.30		209824m	89036	0.1500	0.2030	0.30J	0.40J	0.30J
1	beta-BHC			7.97	+0.03	0d	90961	0.0000	0.3500 CCV	0.47U	0.69J	0.47U
1	gamma-BHC (Lindane)	8.49	-0.02	7.31	+0.01	106121m	29199	0.1280	0.0810	0.25J	0.22U	0.22U
1	delta-BHC	10.35	+0.05	8.71	-0.02	169999	20452	0.2430 CCV	0.0600	0.48J	0.20U	0.20U
1	Heptachlor	10.49	+0.01	8.19	-0.01	542688	25491m	0.5370	0.0650	1.1	0.13U	0.13U
1	4,4'-DDE			13.72		0d	30883	0.0000	0.0880	0.11U	0.17J	0.11U
1	4,4'-DDD					0	0d	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde					0d	0d	0.0000	0.0000	0.22U	0.22U	0.22U
1	4,4'-DDT	22.43	+0.02			948509	0	1.25	0.0000	2.5	0.30U	0.30U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1010 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000010.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000010.D\0929000010c.d			**Vial:**	9
Acqu Date:	09/29/2014 13:49	**Quant Date:**	10/07/2014 15:41	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-014				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:41:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1)	i 1-Bromo-2...	4.303	3.917	8531938	2743635	10.000	10.000	
	System Monitoring Compounds							
2)	s Tetrachlo...	6.677	5.407	4548523	1457461	4.911	4.233	
28)	s Decachlor...	29.400	27.227	5124320	1586763	3.938	4.785	
	Target Compounds							
3)	alpha-BHC	7.663f	6.520	33862	102623	0.059m	0.278	#
4)	Hexachlor...	7.823	6.300	209824	89036	0.150m	0.203	#
5)	beta-BHC	0.000	7.970	0	90961	N.D. d	0.350	
6)	gamma-BHC...	8.493	7.313	106121	29199	0.128m	0.081	#
7)	delta-BHC	10.347	8.713	169999	20452	0.243	0.060	#
8)	Heptachlor	10.493	8.190	542688	25491	0.537	0.065m	#
9)	Aldrin	11.687f	9.117	75366	5878785	0.123	17.662	#
10)	Isodrin	13.107f	10.570f	111909	20133	0.221	0.074	#
11)	Heptachlo...	13.770	11.033f	53969	33138	0.053	0.088	#
12)	gamma-Chl...	0.000	12.037	0	13255	N.D.	0.035	#
13)	Endosulfan I	0.000	12.607f	0	9152	N.D.	0.028	#
14)	alpha-Chl...	0.000	12.487	0	22528	N.D.	0.059	#
15)	Dieldrin	17.327	14.063	47806	18607	0.053	0.051	
16)	4,4'-DDE	0.000	13.723	0	30883	N.D. d	0.088	
17)	Endrin	18.613	15.573f	263638	26239	0.263	0.073	#
18)	Endosulfa...	20.723	17.330	481811	61136	0.526	0.181	#
21)	Endosulfa...	23.010	0.000	229399	0	0.116	N.D.	#
22)	4,4'-DDT	22.433	0.000	948509	0	1.254	N.D.	#
23)	Endrin Ke...	24.757	0.000	25812	0	0.003	N.D.	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

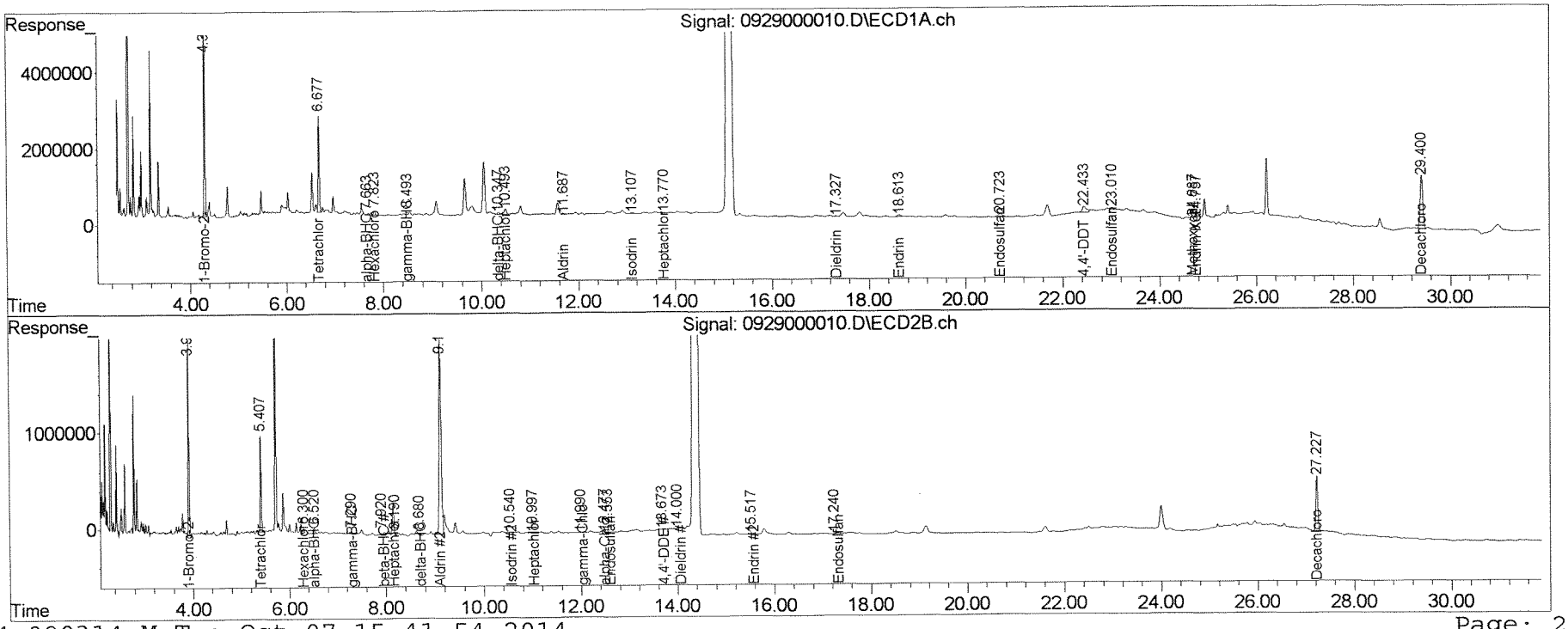
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:41:26 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1346

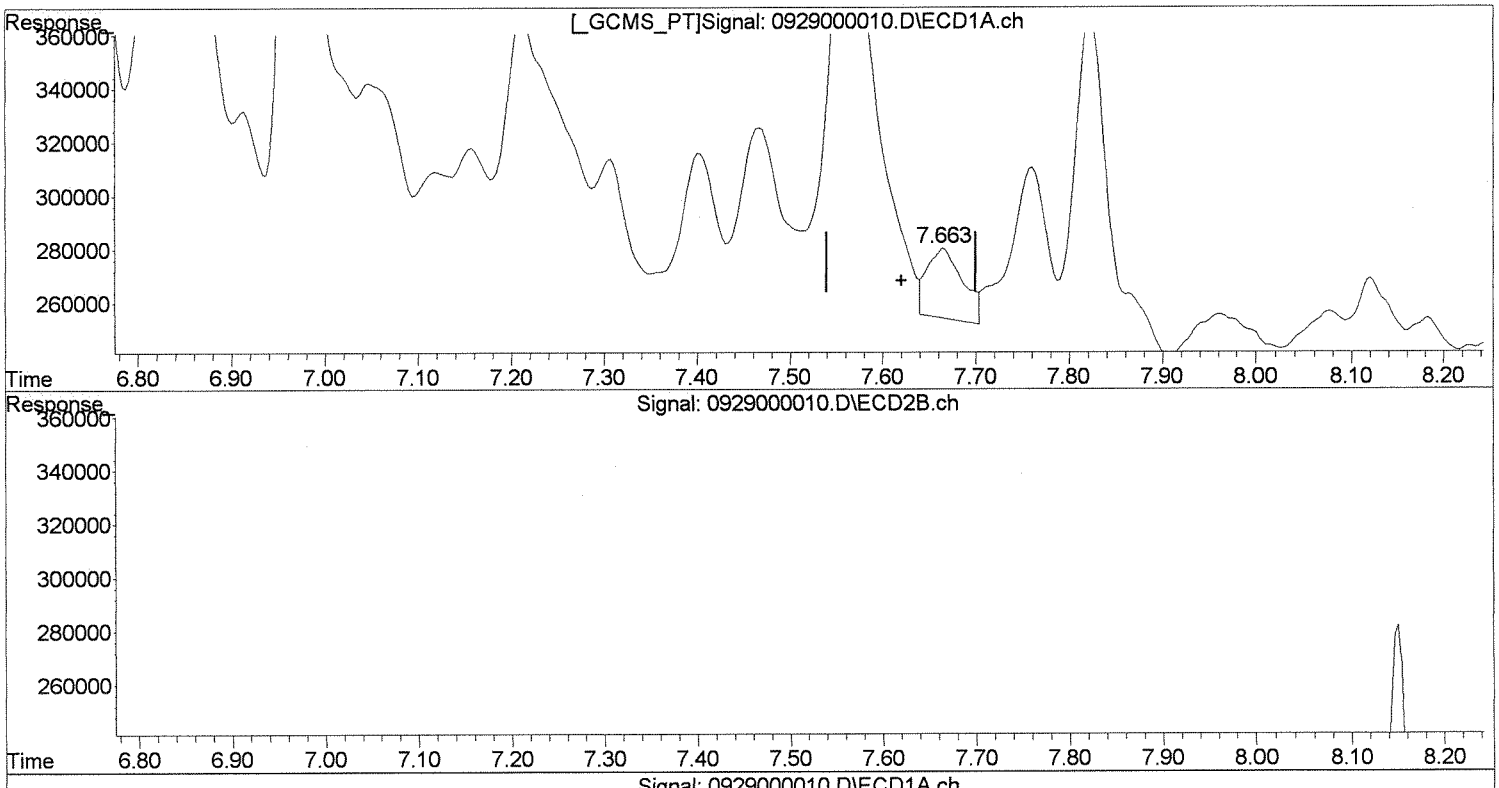


Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000010.D\ECD1A.ch

(3) alpha-BHC
7.663min 0.107 ug/L
response 68991

(3) alpha-BHC #2
6.520min 0.278 ug/L
response 102623

Manual Integration:
Before

10/01/14

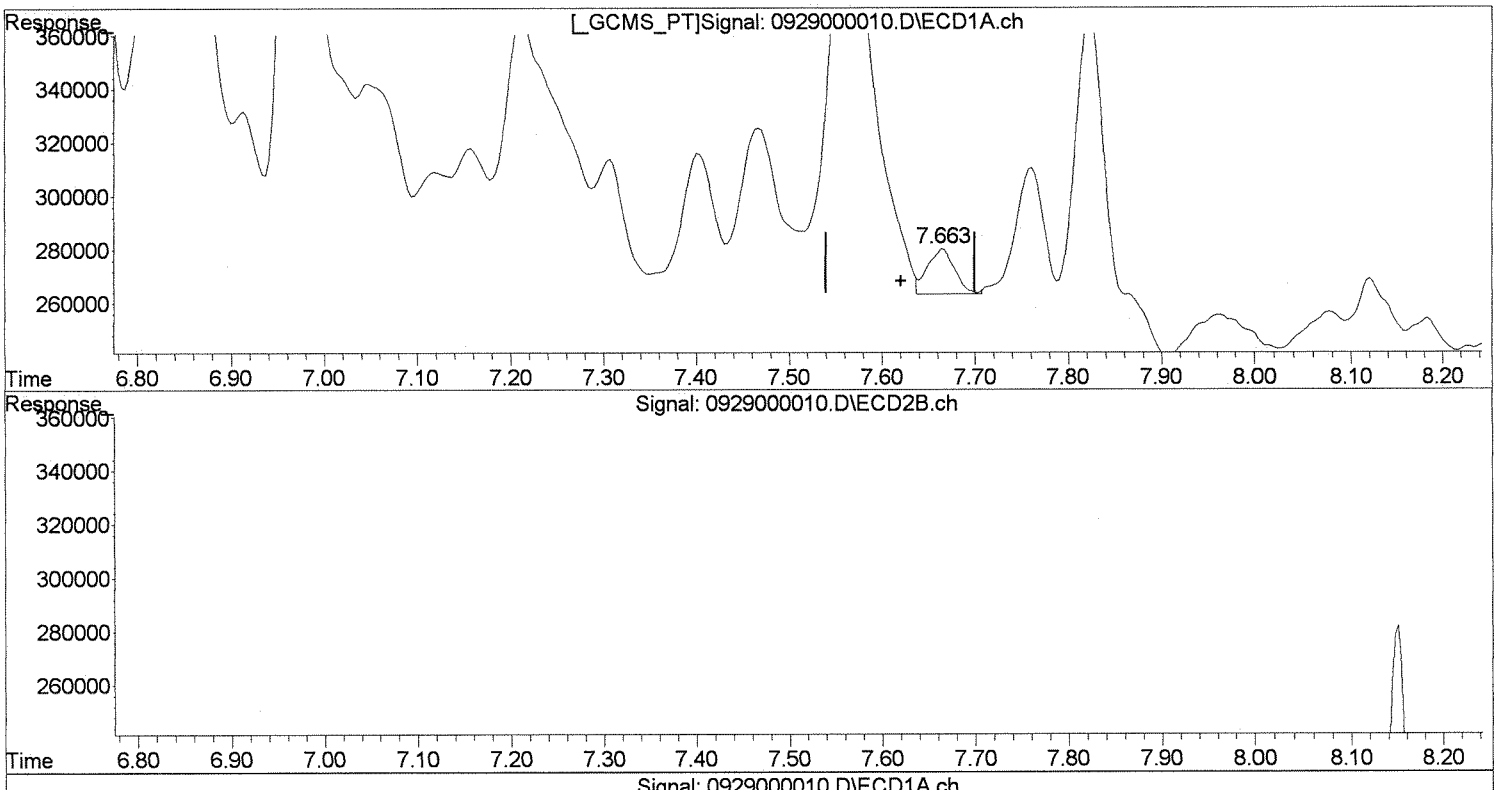
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000010.D\ECD1A.ch

(3) alpha-BHC
7.663min 0.059 ug/L m
response 33862

(3) alpha-BHC #2
6.520min 0.278 ug/L
response 102623

Manual Integration:
After
Baseline/Shoulder
10/01/14

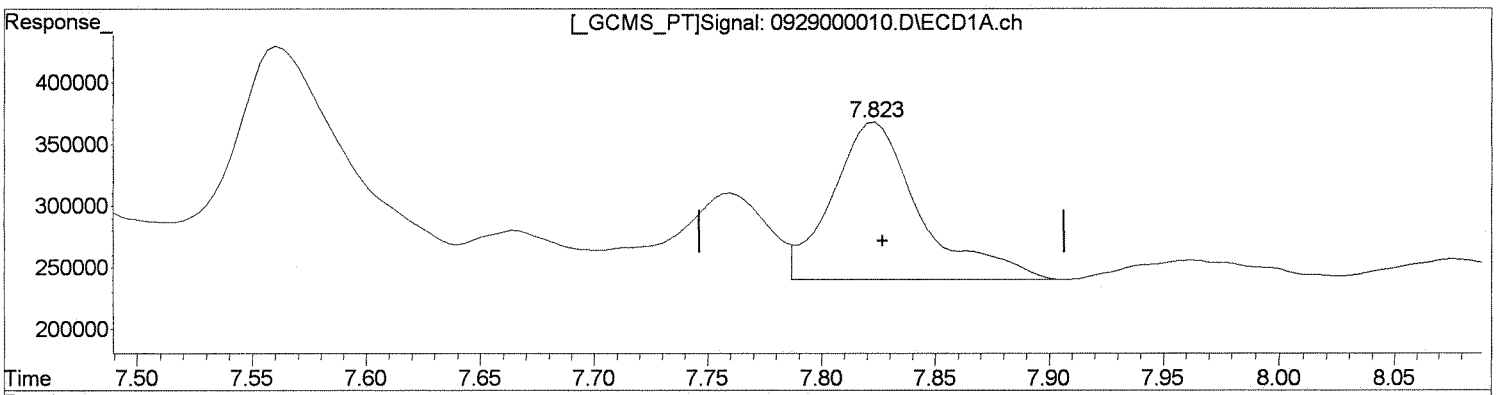
(+) = Expected Retention Time

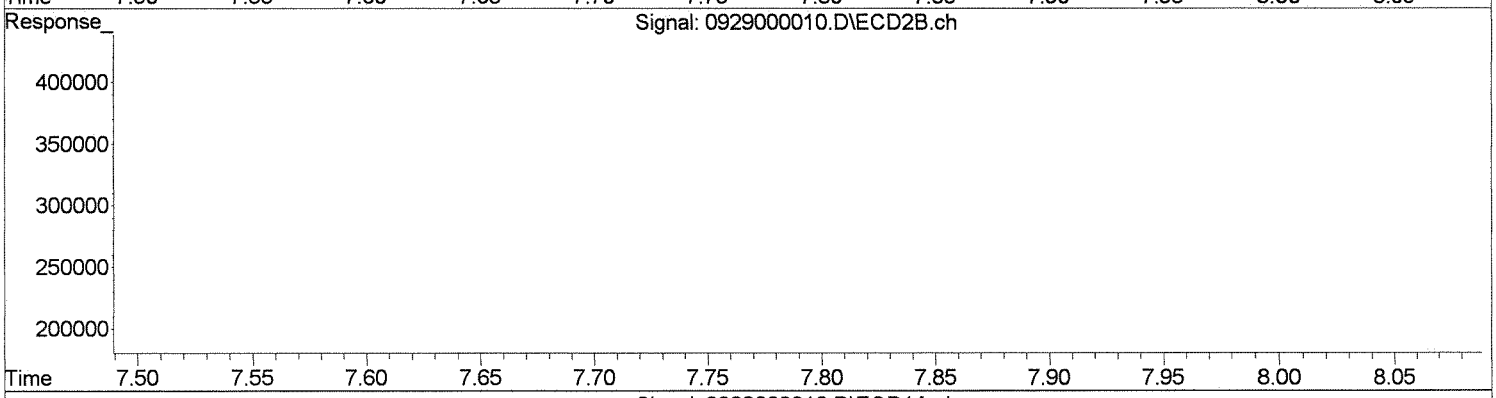
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000010.D\ECD1A.ch

(4) Hexachlorobenzene
7.823min 0.243 ug/L
response 340087

(4) Hexachlorobenzene #2
6.300min 0.203 ug/L
response 89036

Manual Integration:
Before

10/01/14

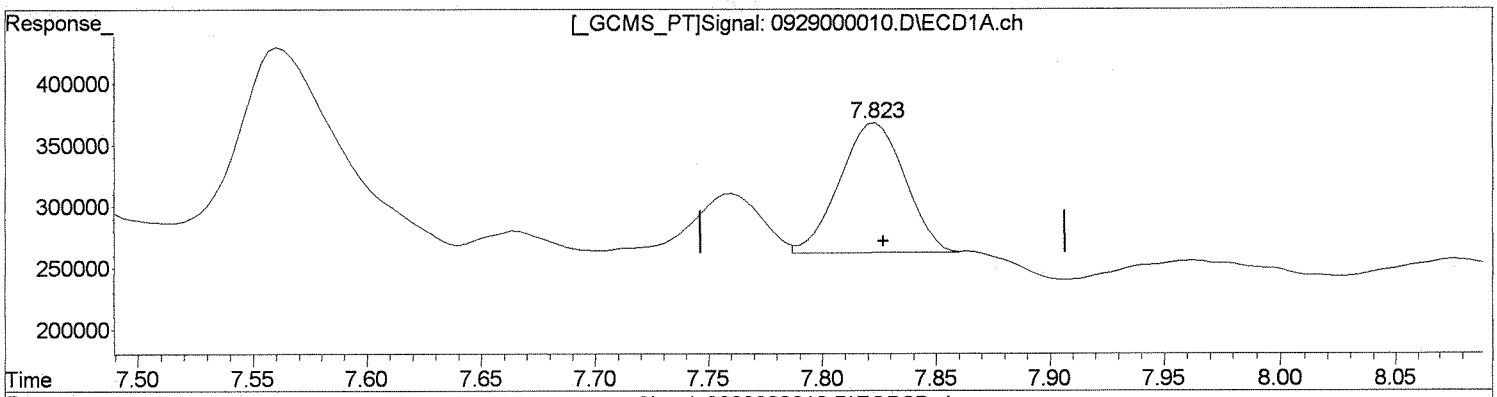
(+) = Expected Retention Time

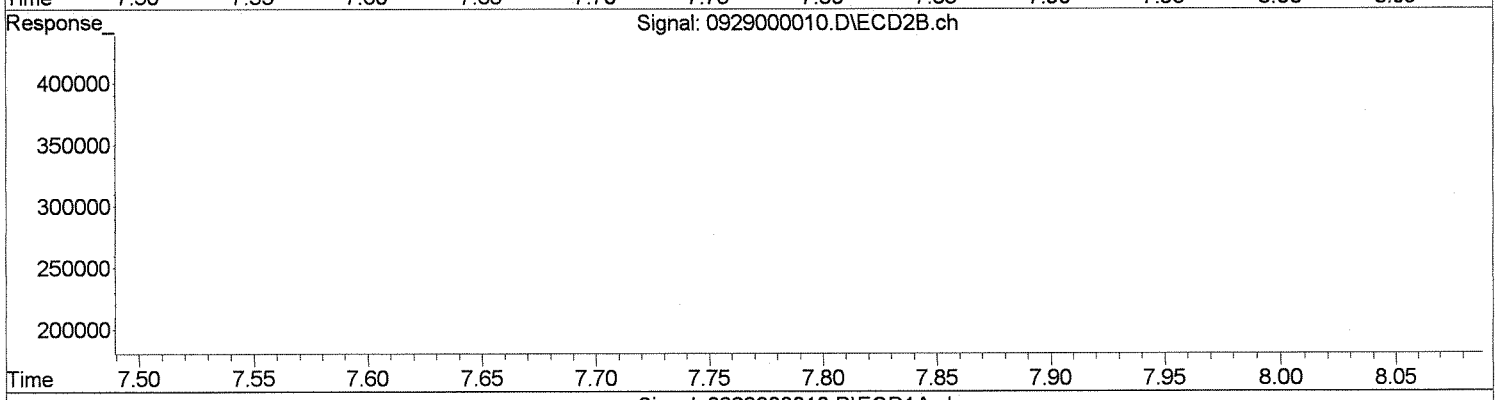
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000010.D\ECD1A.ch

(4) Hexachlorobenzene
7.823min 0.150 ug/L m
response 209824

(4) Hexachlorobenzene #2
6.300min 0.203 ug/L
response 89036

Manual Integration:
After
Baseline/Shoulder
10/01/14

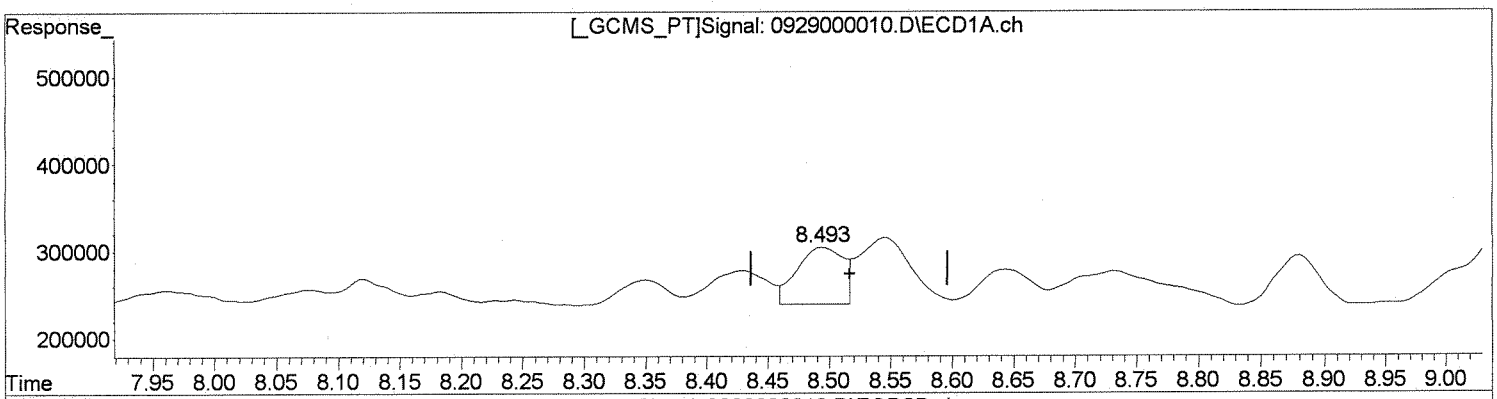
(+) = Expected Retention Time

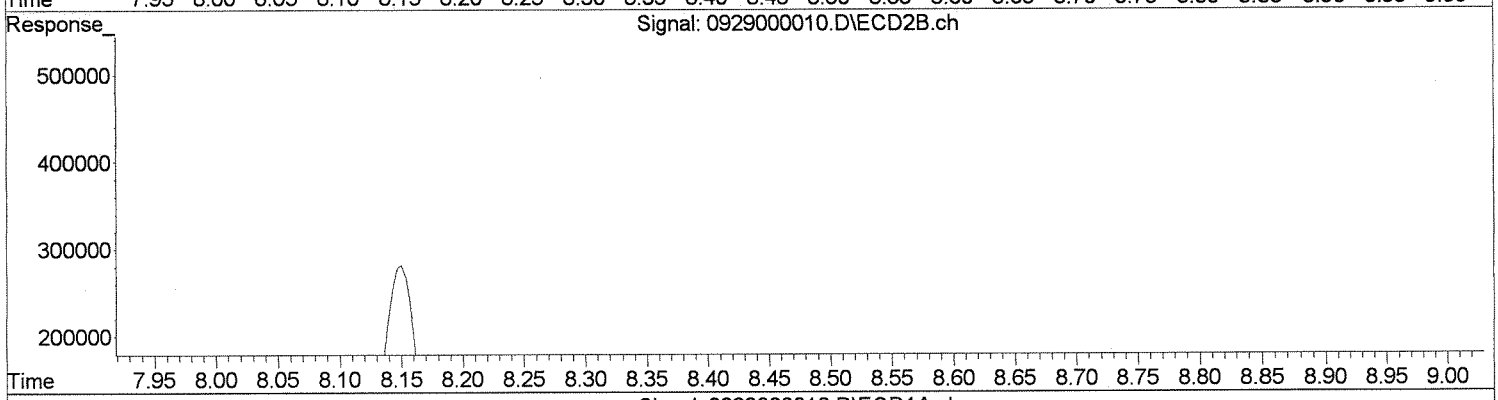
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000010.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.493min 0.220 ug/L
response 175087

(6) gamma-BHC (Lindane) #2
7.313min 0.081 ug/L
response 29199

Manual Integration:
Before

10/01/14

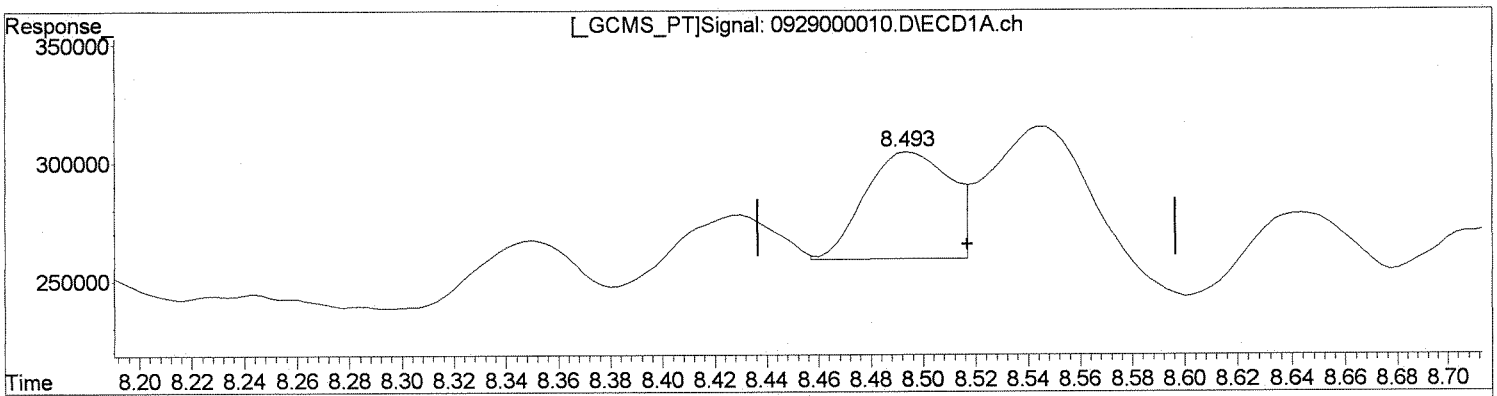
(+) = Expected Retention Time

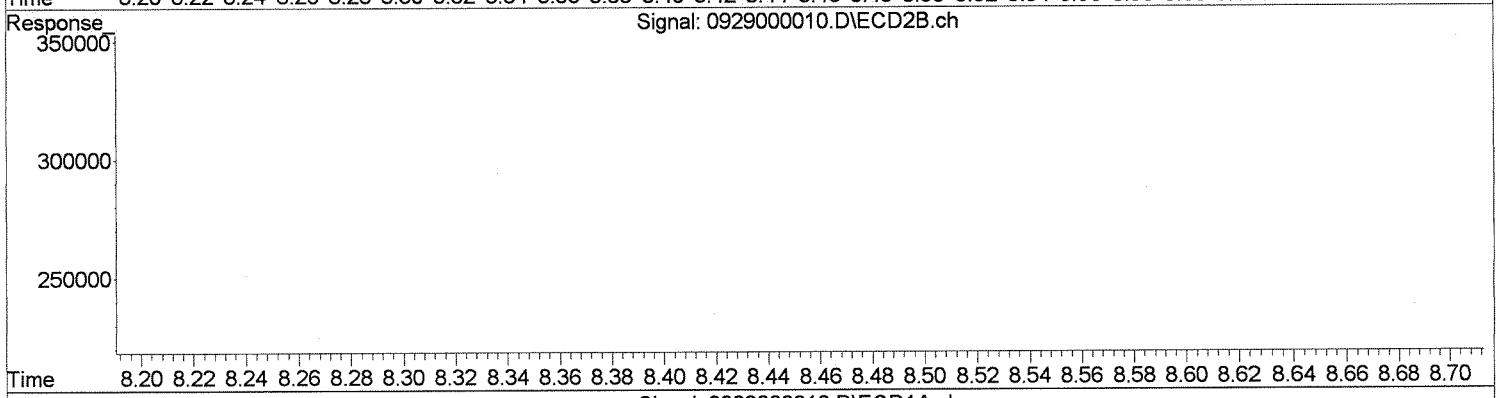
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000010.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.493min 0.128 ug/L m
response 106121

(6) gamma-BHC (Lindane) #2
7.313min 0.081 ug/L
response 29199

Manual Integration:
After
Baseline/Shoulder
10/01/14

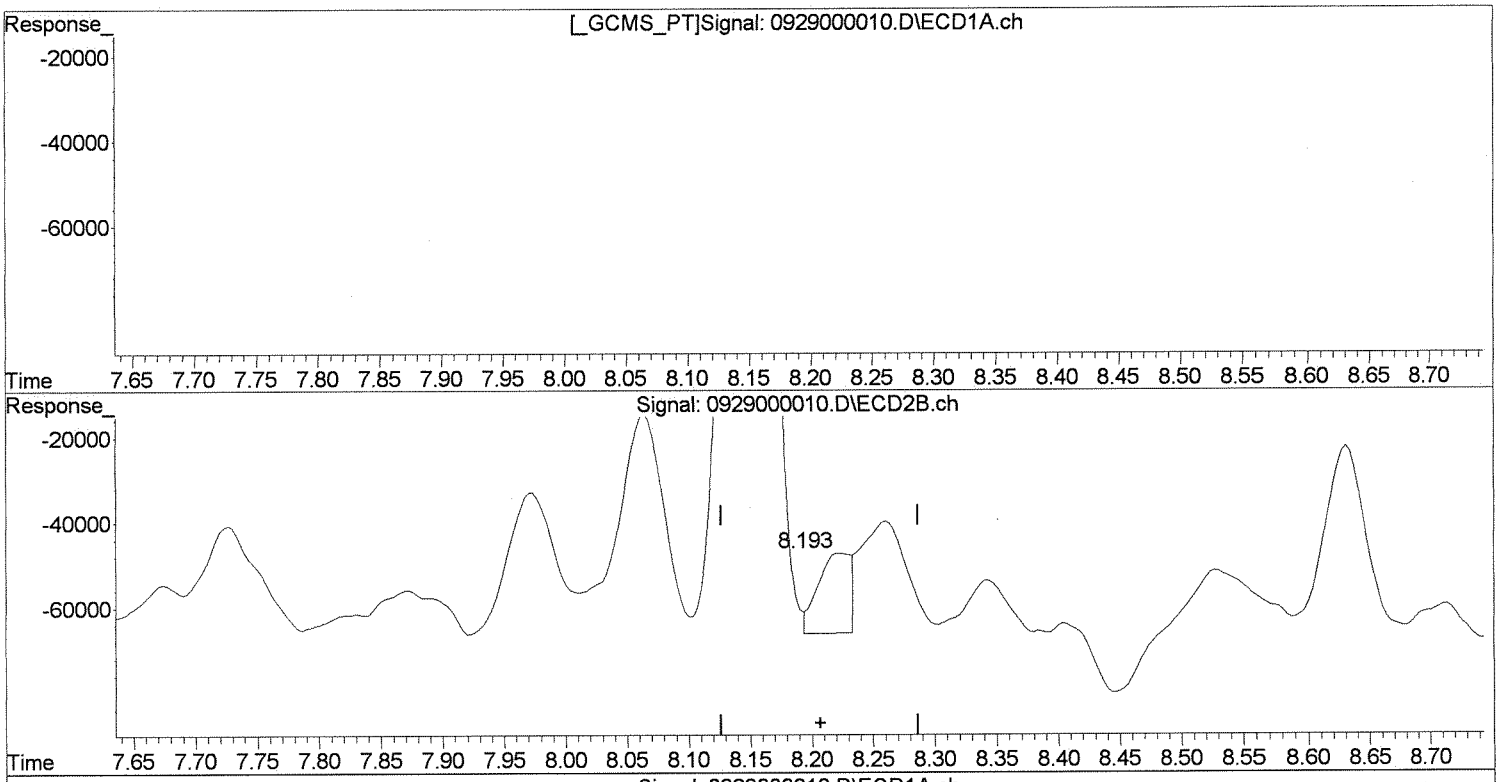
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



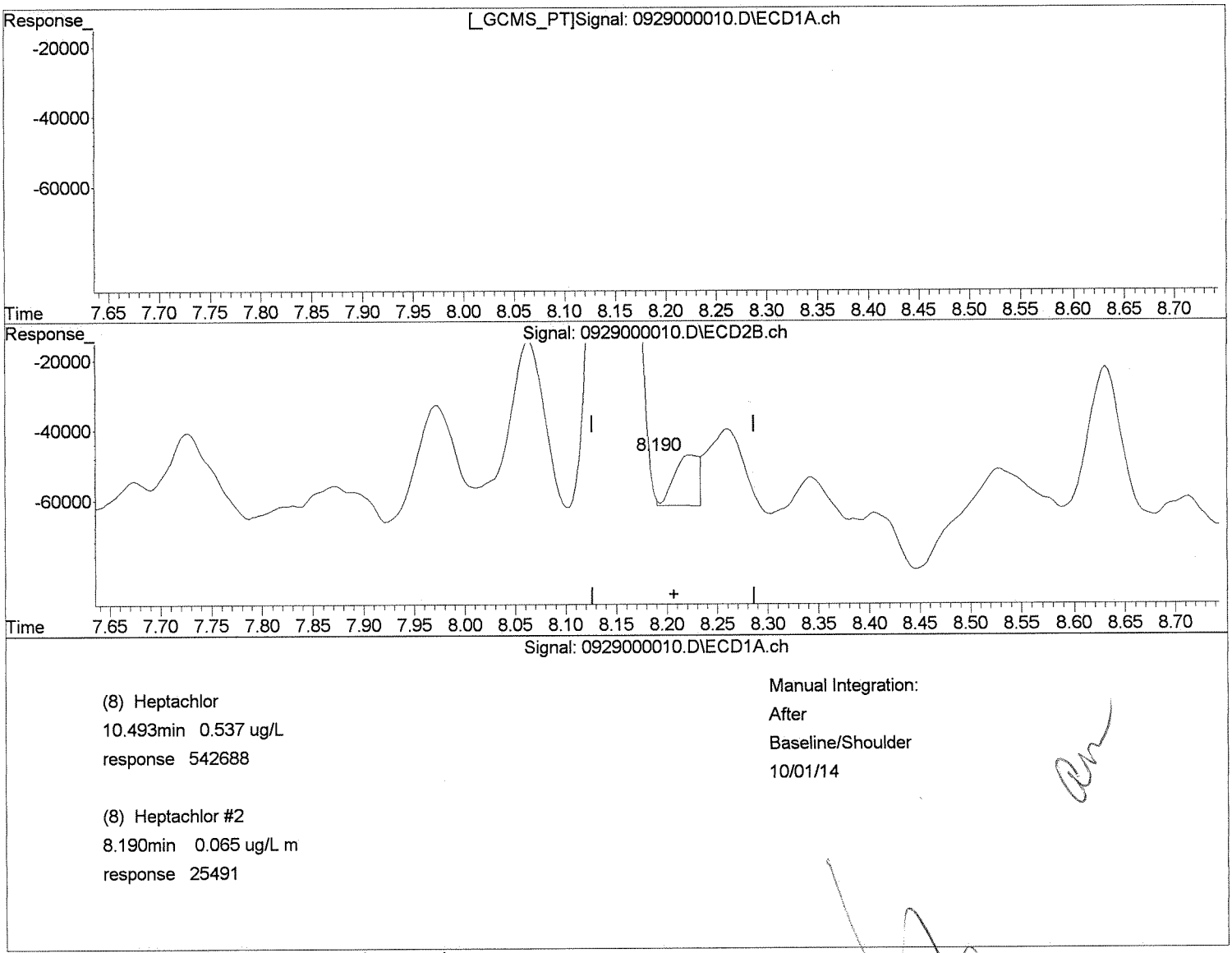
(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:11:59 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 13:49:53
Operator :
Sample : K1409921-014
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:02 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm



(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:12:03 2014 Page: 1

Exception Report

Data File: J:\GC34\DATA\092914\0929000011.D
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 14:26
Date Quantitated: 10/01/2014 11:13
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RO
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	↓
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: Am 10/7/14

Secondary Review: [signature]

Printed: 10/03/2014 11:51:28
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000011.D\0929000011C.
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 14:26
Date Quantitated: 10/01/2014 11:13
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Endrin Aldehyde	54.5	NA	20	RO
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:31
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000011.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000011.D\0929000011c.d			**Vial:**	10
Acqu Date:	09/29/2014 14:26	**Quant Date:**	10/08/2014 10:17	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-015				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378552	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	8382931	2733754	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.68	5.41	4297167	1390891	4.72	4.05			94 OK
				%Recovery =		94 OK	81 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40	27.23	4610359	1424688	3.59 CCV	4.28			86 OK
				%Recovery =		72 OK	86 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.66	+0.05	6.52	+0.03	195945	21359	0.2820	0.0580	0.57J	0.20U	0.20U
1	Hexachlorobenzene	7.82		6.30		95165	43543	0.0690	0.1000	0.21U	0.21U	0.21U
1	beta-BHC			7.97	+0.03	0d	51654	0.0000	0.1330	0.48U	0.48U	0.48U
1	gamma-BHC (Lindane)	8.51		7.29	-0.01	183425	17488m	0.2360	0.0490	0.48J	0.23U	0.23U
1	delta-BHC	10.35	+0.05			125522	0d	0.1790 CCV	0.0000	0.36J	0.21U	0.21U
1	Heptachlor	10.49	+0.01	8.22	+0.02	456698	32591	0.4600	0.0840	0.93Ui	0.17Ui	0.17Ui
1	4,4'-DDE			13.73	+0.01	0d	56312	0.0000	0.1610	0.12U	0.33J	0.12U
1	4,4'-DDD					0	0	0.0000	0.0000	0.29U	0.29U	0.29U
1	Endrin Aldehyde	21.68	+0.07	18.77	-0.08	1497327m	70899m	2.05 CCV	0.3640 CCV	4.1	0.74J	**0.74**JP
1	4,4'-DDT	22.44	+0.03			1226630	0	1.65	0.0000	3.3	0.31U	0.31U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 990 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000011.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000011.D\0929000011c.d			**Vial:**	10
Acqu Date:	09/29/2014 14:26	**Quant Date:**	10/08/2014 10:17	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-015				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:17:40 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	i	1-Bromo-2...	4.300	3.910	8382931	2733754	10.000	10.000
		System Monitoring Compounds						
2)	s	Tetrachlo...	6.677	5.407	4297167	1390891	4.722	4.054
28)	s	Decachlor...	29.403	27.227	4610359	1424688	3.593	4.275
		Target Compounds						
3)		alpha-BHC	7.657	6.520	195945	21359	0.282	0.058 #
4)		Hexachlor...	7.820	6.297	95165	43543	0.069	0.100 #
5)		beta-BHC	0.000	7.967	0	51654	N.D. d	0.133
6)		gamma-BHC...	8.510	7.290	183425	17488	0.236	0.049m#
7)		delta-BHC	10.347	0.000	125522	0	0.179	N.D. d#
8)		Heptachlor	10.493	8.220	456698	32591	0.460	0.084 #
9)		Aldrin	11.837f	9.117	173126	1694918	0.259	5.111 #
10)		Isodrin	13.180	10.560f	47895	10882	0.126	0.040 #
11)		Heptachlo...	0.000	11.030f	0	76297	N.D.	0.203 #
12)		gamma-Chl...	0.000	12.083	0	11269	N.D.	0.030 #
13)		Endosulfan I	0.000	12.730f	0	19296	N.D.	0.059 #
14)		alpha-Chl...	0.000	12.423f	0	70279	N.D.	0.186 #
15)		Dieldrin	17.357	14.100	81119	23139	0.092	0.064 #
16)		4,4'-DDE	0.000	13.727	0	56312	N.D. d	0.161
17)		Endrin	18.617	15.577f	461518	101198	0.468	0.284 #
18)		Endosulfa...	20.720	17.340	850820	28139	0.945	0.084 #
20)		Endrin Al...	21.680	18.773f	1497327	70899	2.049m	0.364m#
21)		Endosulfa...	23.007	0.000	336169	0	0.234	N.D. #
22)		4,4'-DDT	22.437	0.000	1226630	0	1.651	N.D. #
23)		Endrin Ke...	24.763	0.000	275040	0	0.247	N.D. #
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

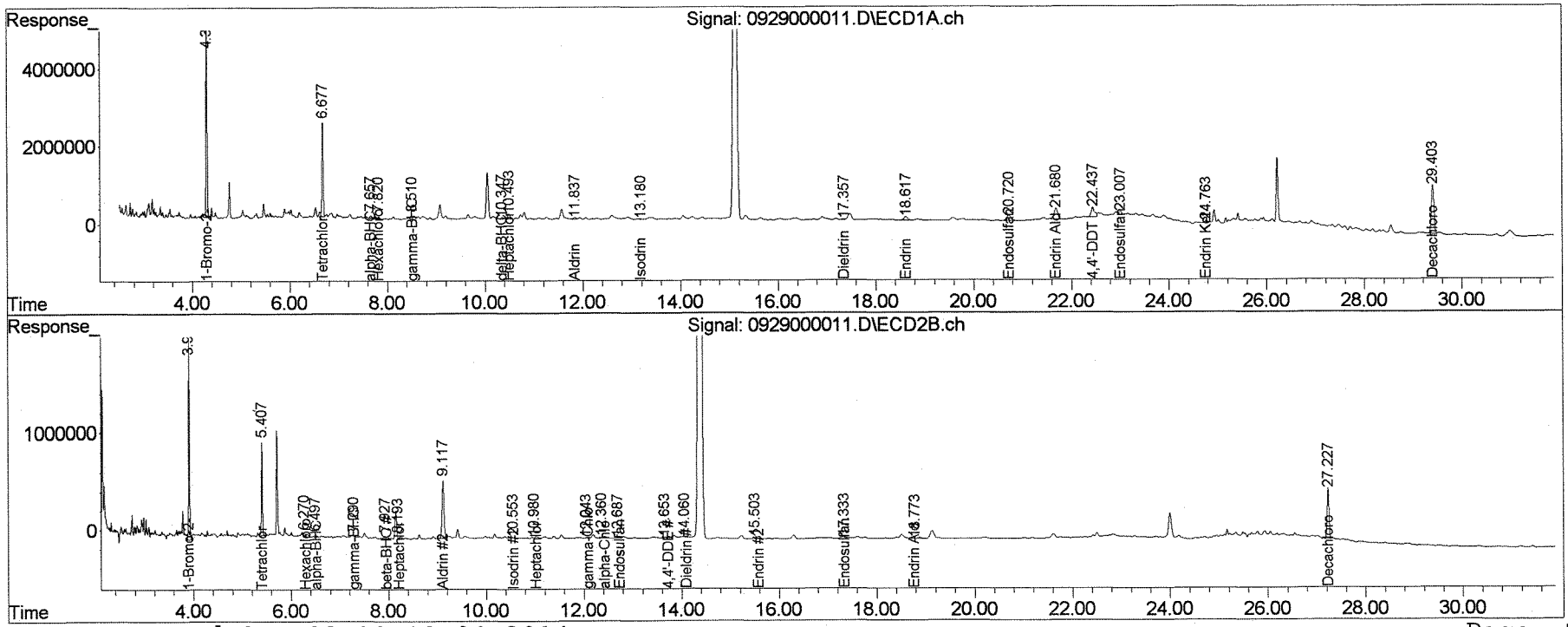
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:17:40 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1360

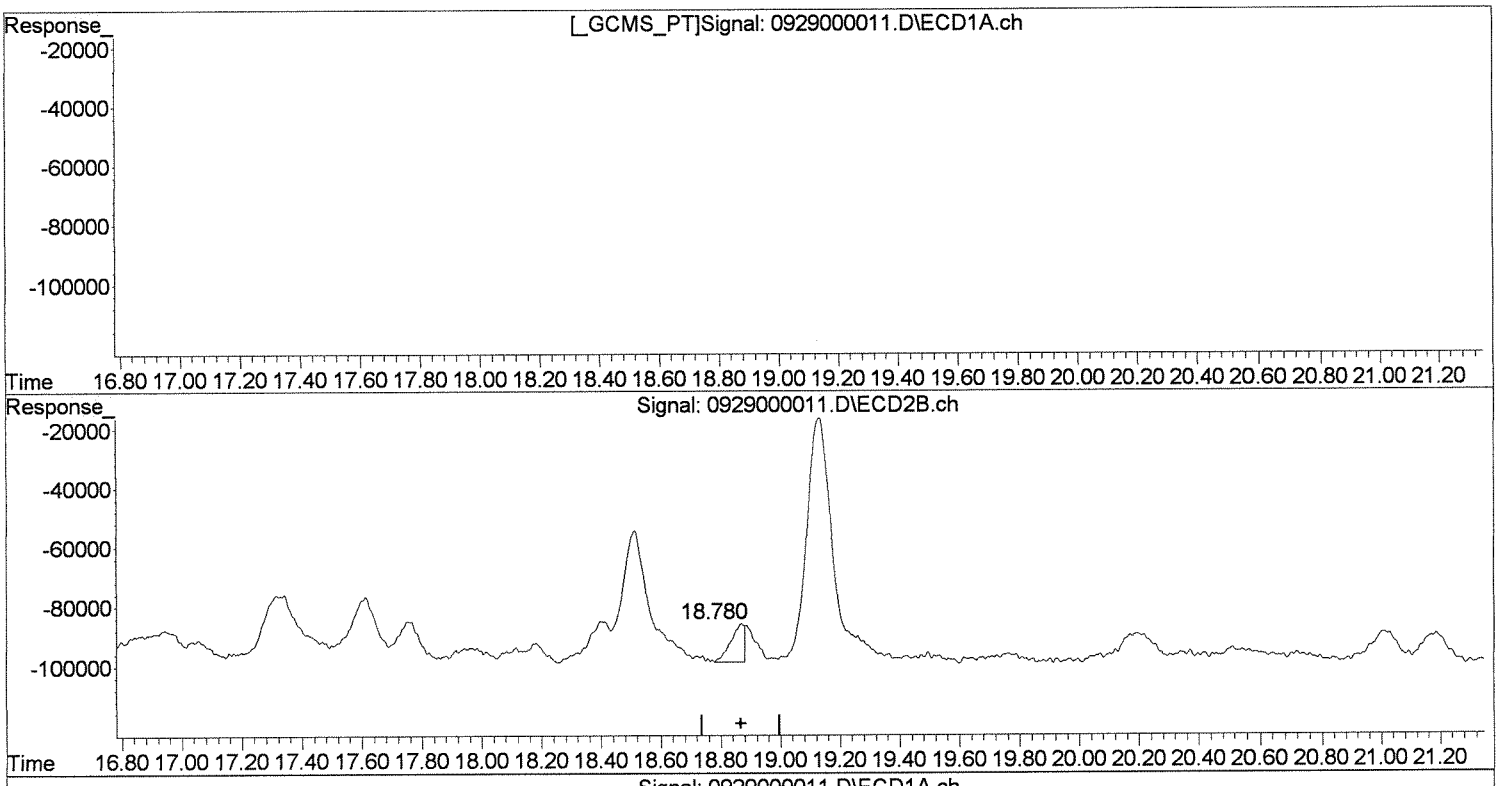


Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:54:47 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



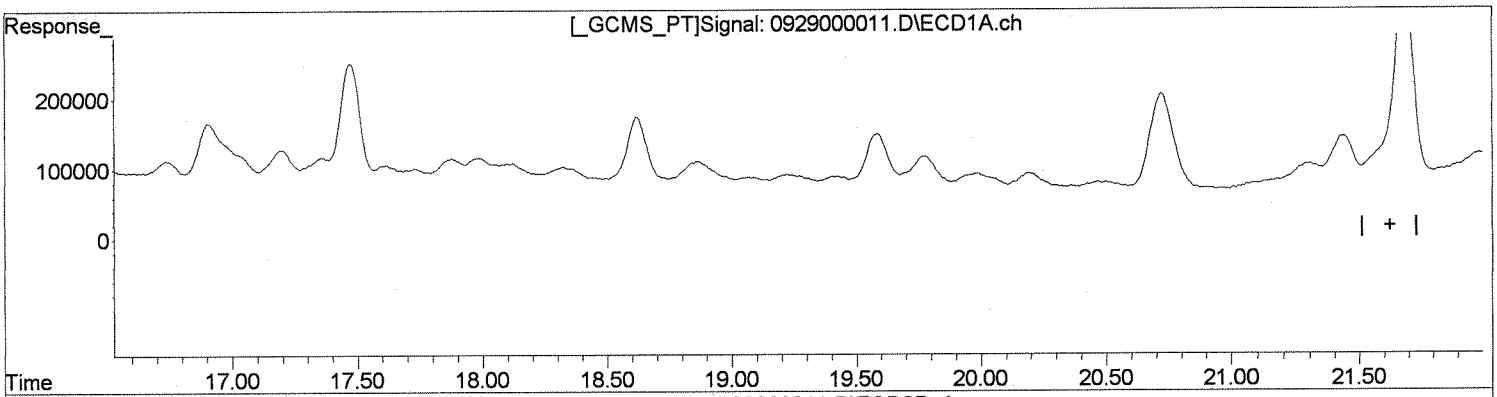
(+) = Expected Retention Time
GC34-090314.M Wed Oct 08 10:17:24 2014 Page: 1

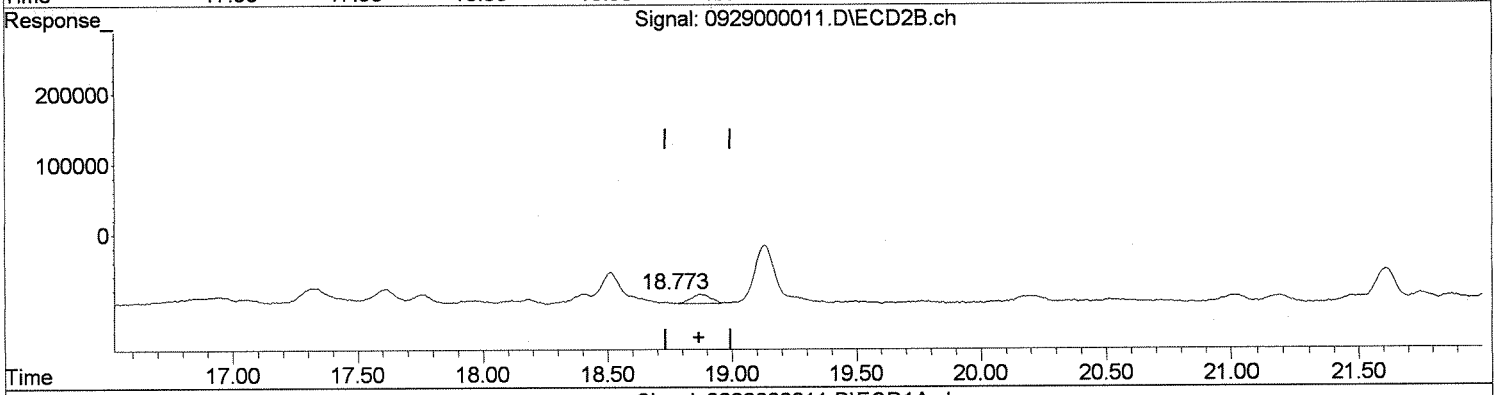
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:54:47 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000011.D\ECD1A.ch

(20) Endrin Aldehyde
0.000min 0.000 ug/L d
response 0

(20) Endrin Aldehyde #2
18.773min 0.364 ug/L m
response 70899

Manual Integration:
After
Baseline/Shoulder
10/08/14

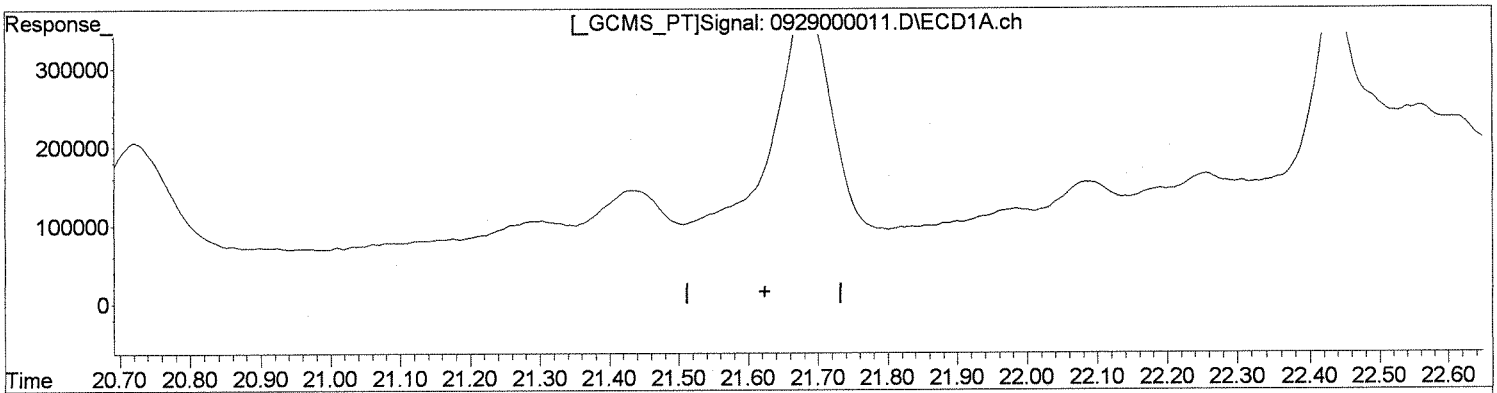
(+) = Expected Retention Time
GC34-090314.M Wed Oct 08 10:17:30 2014

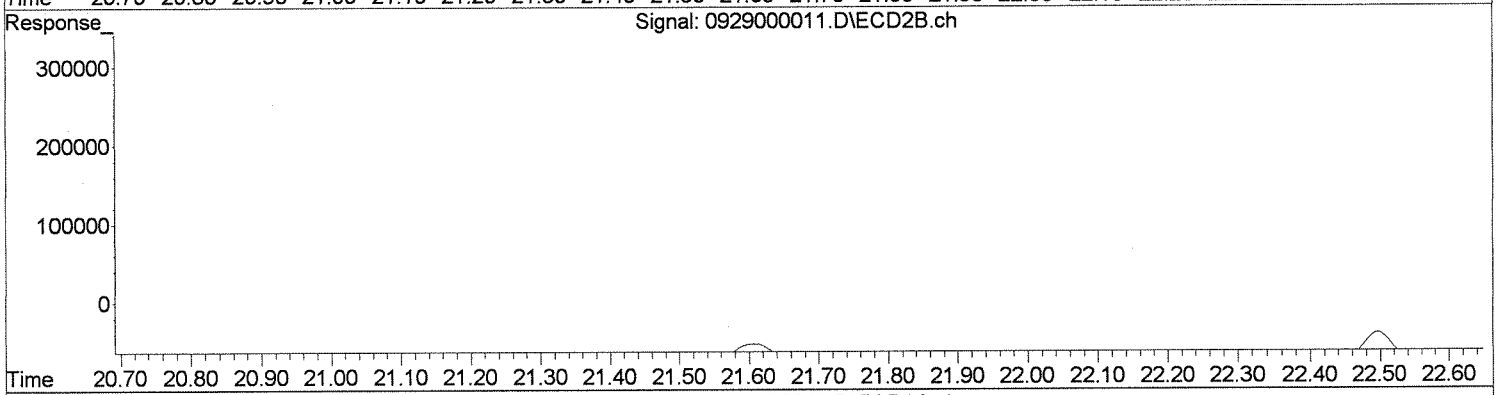
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:54:47 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000011.D\ECD1A.ch

(20) Endrin Aldehyde
0.000min 0.000 ug/L d
response 0

(20) Endrin Aldehyde #2
18.773min 0.364 ug/L m
response 70899

Manual Integration:
Before

10/08/14

(+) = Expected Retention Time

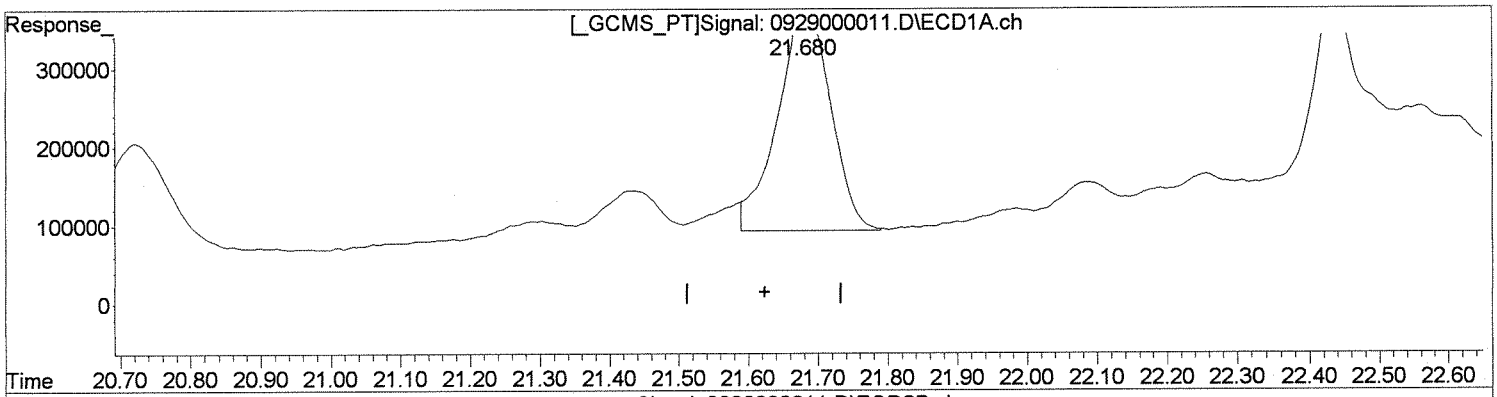
GC34-090314.M Wed Oct 08 10:17:35 2014 Page: 1

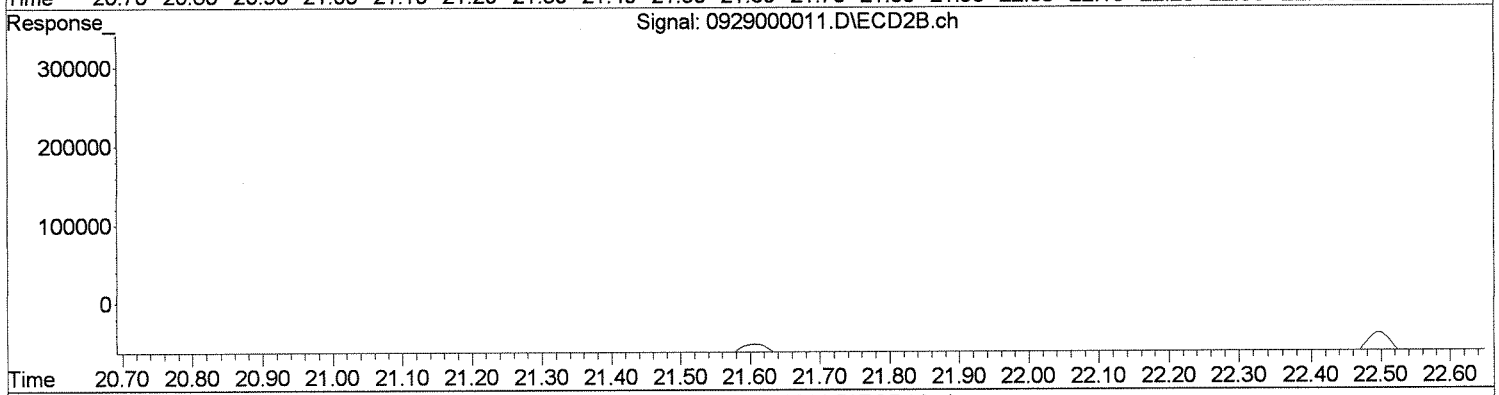
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 07 15:54:47 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000011.D\ECD1A.ch

(20) Endrin Aldehyde
21.680min 2.049 ug/L m
response 1497327

(20) Endrin Aldehyde #2
18.773min 0.364 ug/L m
response 70899

Manual Integration:
After
Baseline/Shoulder
10/08/14

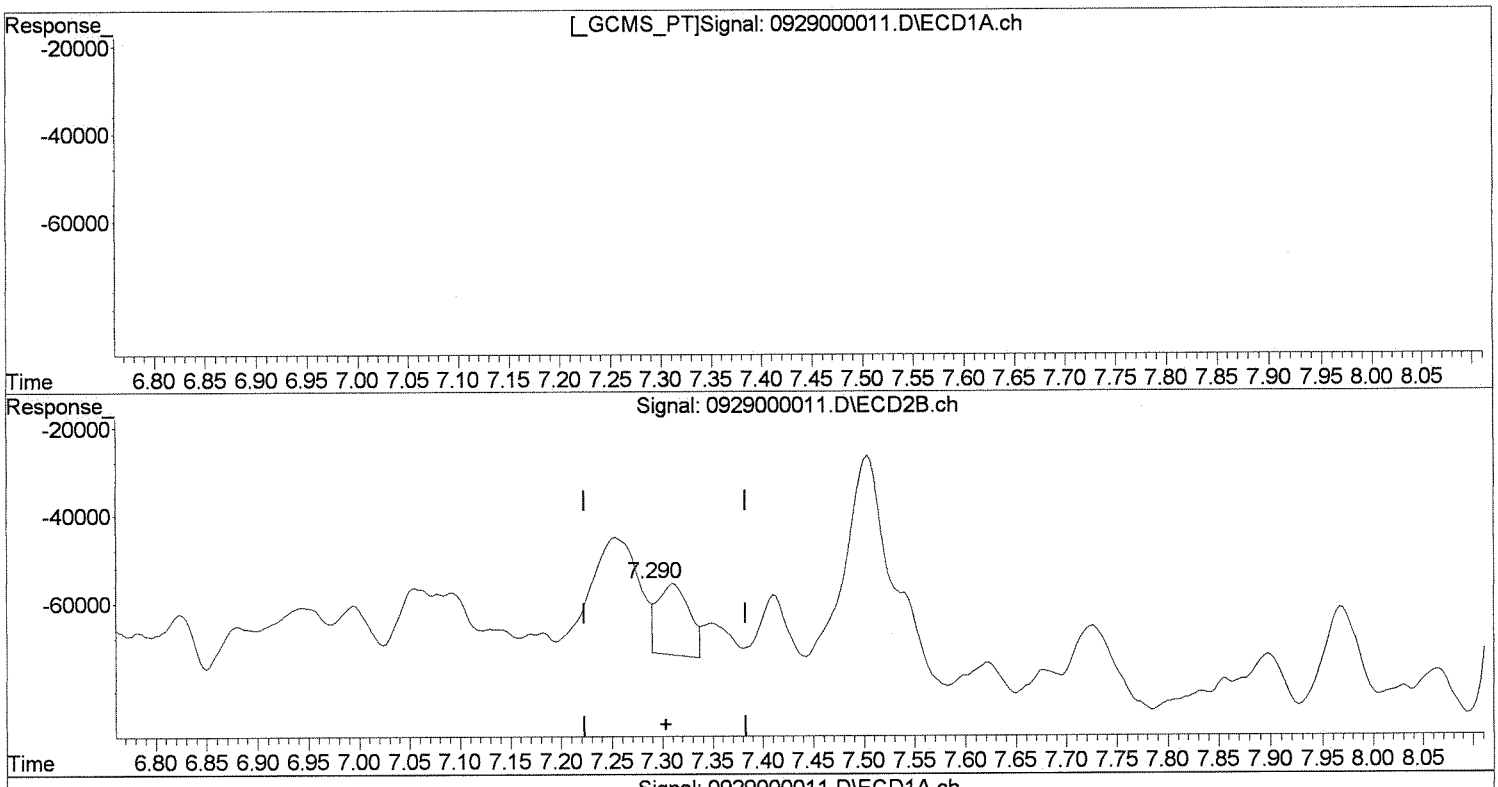
(+) = Expected Retention Time
GC34-090314.M Wed Oct 08 10:17:41 2014

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:06 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000011.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.510min 0.236 ug/L
response 183425

(6) gamma-BHC (Lindane) #2
7.310min 0.098 ug/L
response 35084

Manual Integration:
Before

10/01/14

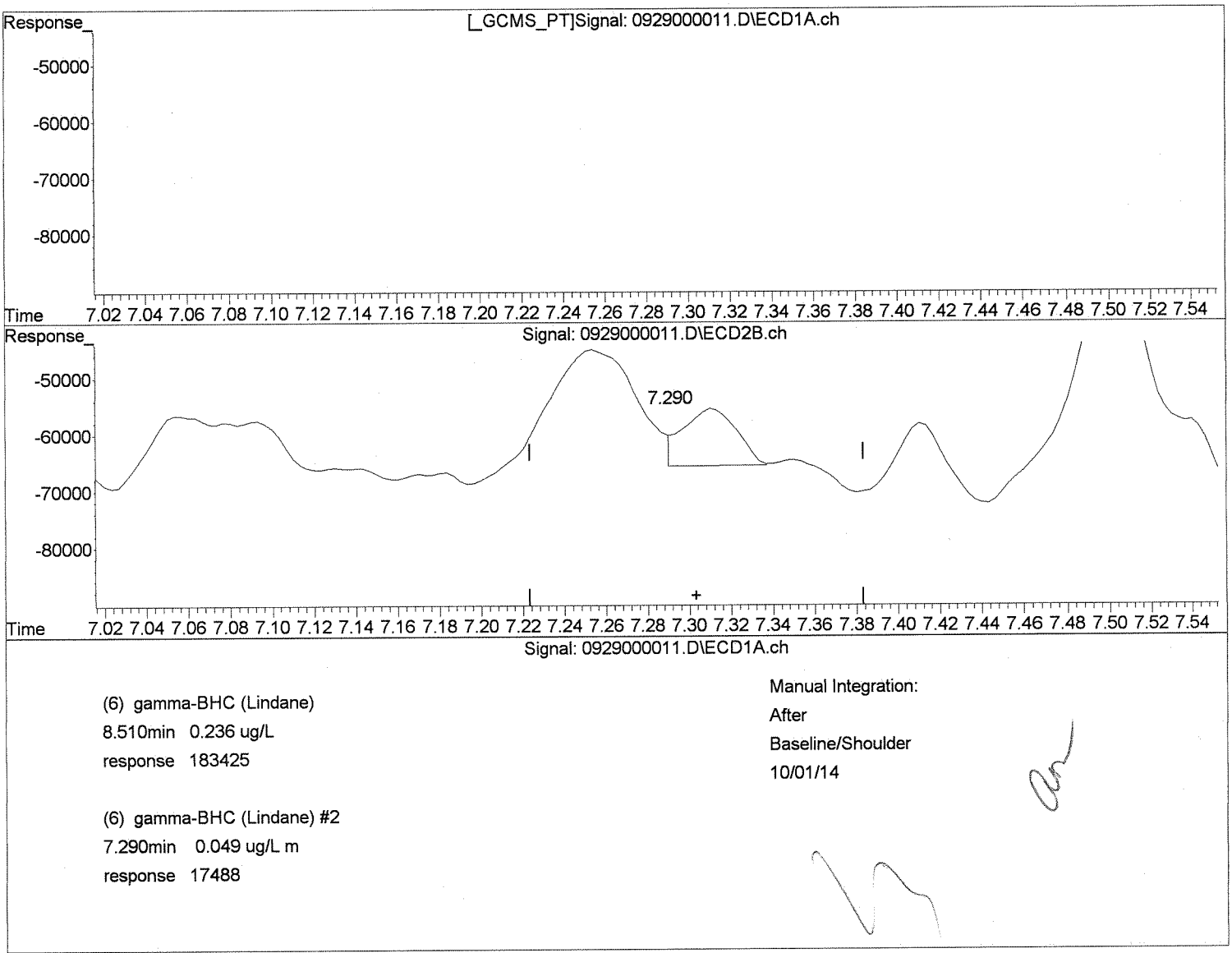
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 14:26:13
Operator :
Sample : K1409921-015
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:06 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:13:51 2014 Page: 1

Exception Report

Data File: J:\GC34\DATA\092914\0929000012.D
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 15:02
Date Quantitated: 10/01/2014 11:16
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RO
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: Am 10/7/14

Secondary Review: [signature] 10/8/14

Exception Report

Data File: J:\GC34\DATA\092914\0929000012.D\0929000012C.
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 15:02
Date Quantitated: 10/01/2014 11:16
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:37
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000012.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000012.D\0929000012c.d			**Vial:**	11
Acqu Date:	09/29/2014 15:02	**Quant Date:**	10/01/2014 11:16	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-016				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378553	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	9010945	2759726	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	-0.01	5.40	-0.01	4425808	1376735	4.52	3.98			90 OK
							%Recovery =	90 OK	80 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40		27.22	-0.01	5065236	1485599	3.68 CCV	4.43			89 OK
							%Recovery =	74 OK	89 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.65	+0.04	6.52	+0.03	28959	15692	0.0510	0.0420	0.19U	0.19U	0.19U
1	Hexachlorobenzene	7.82		6.29	-0.01	209355m	69482	0.1410	0.1570	0.28J	0.31J ppp	**0.28J**
1	beta-BHC			7.96	+0.02	0	39734	0.0000	0.0650	0.47U	0.47U	0.47U
1	gamma-BHC (Lindane)	8.55	+0.04	7.29	-0.01	453021	15688m	0.5560	0.0440	1.1	0.22U	0.22U
1	delta-BHC	10.34	+0.04	8.71	-0.02	122253	12198	0.1610 CCV	0.0350	0.32J	0.20U	0.20U
1	Heptachlor	10.49	+0.01			400670	0d	0.3750	0.0000	0.74J	0.13U	0.13U
1	4,4'-DDE					0	0	0.0000	0.0000	0.11U	0.11U	0.11U
1	4,4'-DDD					0	0d	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.69	+0.08			746194	0	0.9500 CCV	0.0000	1.9B	0.22U	0.22U
1	4,4'-DDT					0d	0	0.0000	0.0000	0.30U	0.30U	0.30U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1020 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000012.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000012.D\0929000012c.d			**Vial:**	11
Acqu Date:	09/29/2014 15:02	**Quant Date:**	10/01/2014 11:16	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-016				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:16:00 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.297	3.910	9010945	2759726	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.403	4425808	1376735	4.524	3.975	
28)	s	Decachlor...	29.403	27.223	5065236	1485599	3.676	4.427	
		Target Compounds							
3)		alpha-BHC	7.653	6.520	28959	15692	0.051	0.042	
4)		Hexachlor...	7.820	6.293	209355	69482	0.141m	0.157	
5)		beta-BHC	0.000	7.963	0	39734	N.D.	0.065	#
6)		gamma-BHC...	8.547	7.287	453021	15688	0.556	0.044m	#
7)		delta-BHC	10.343	8.707	122253	12198	0.161	0.035	#
8)		Heptachlor	10.493	0.000	400670	0	0.375	N.D. d	#
9)		Aldrin	0.000	9.113	0	230483	N.D. d	0.688	
11)		Heptachlo...	13.763	0.000	123306	0	0.114	N.D. d	#
14)		alpha-Chl...	15.700	0.000	50157	0	0.044	N.D. d	#
17)		Endrin	18.617	0.000	53165	0	0.050	N.D.	#
18)		Endosulfa...	20.717	0.000	47734	0	0.049	N.D.	#
20)		Endrin Al...	21.687	0.000	746194	0	0.950	N.D.	#
25)		2,4'-DDE	14.873	0.000	108698	0	0.169	N.D.	#
26)		2,4'-DDD	17.467	0.000	125825	0	0.209	N.D.	#
27)		2,4'-DDT	0.000	16.293	0	8395	N.D.	0.033	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

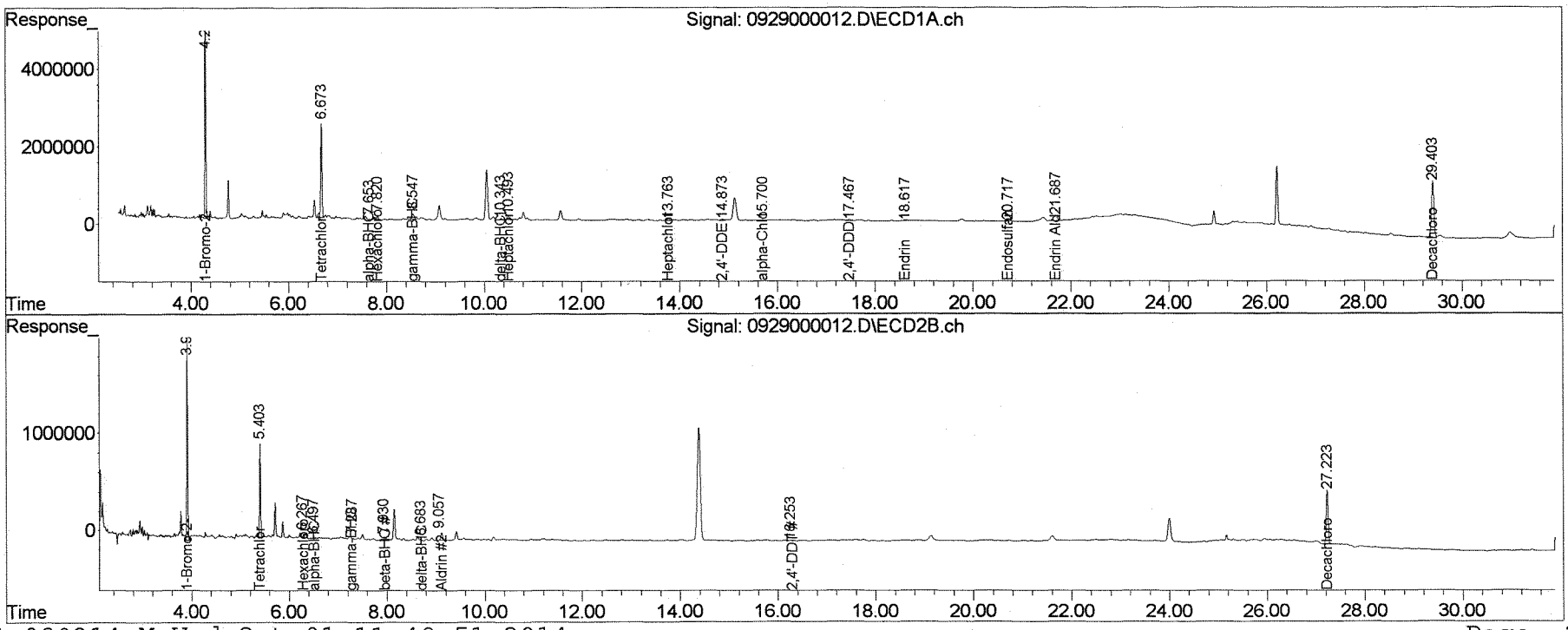
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:16:00 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

1372

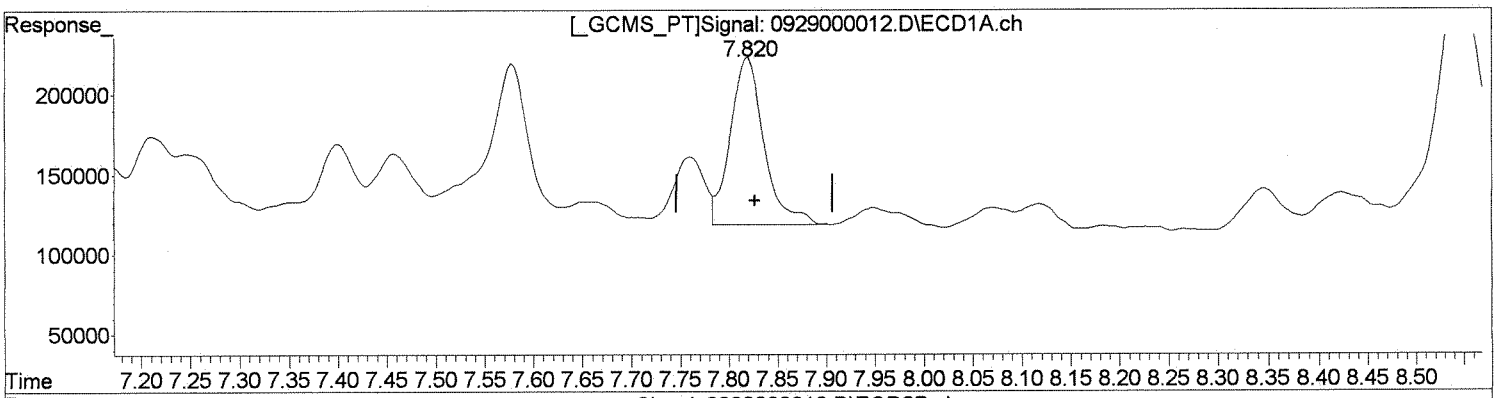


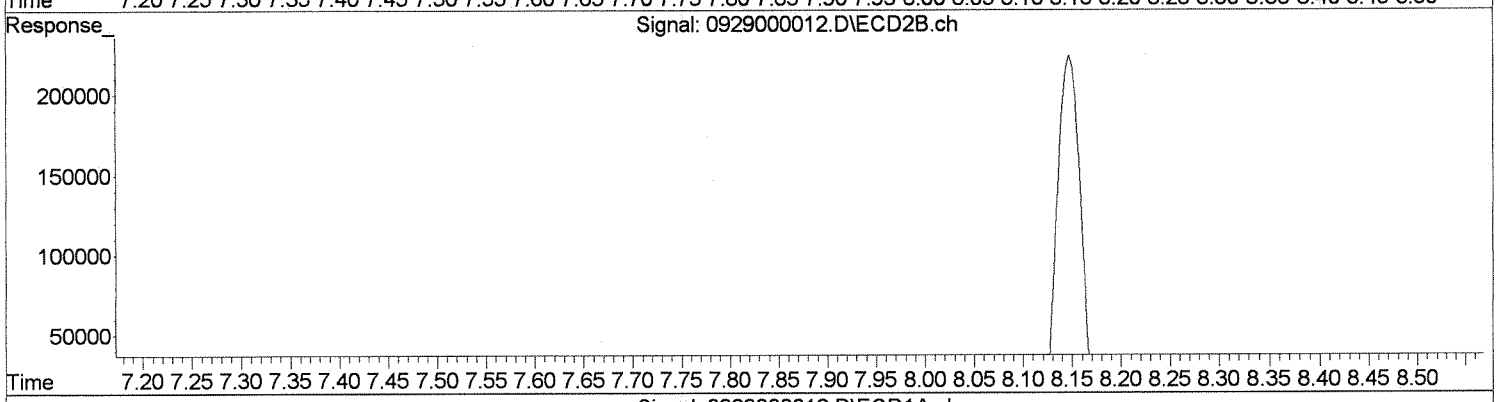
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:09 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000012.D\ECD1A.ch

(4) Hexachlorobenzene
7.820min 0.169 ug/L
response 250108

(4) Hexachlorobenzene #2
6.293min 0.157 ug/L
response 69482

Manual Integration:
Before

10/01/14

(+) = Expected Retention Time

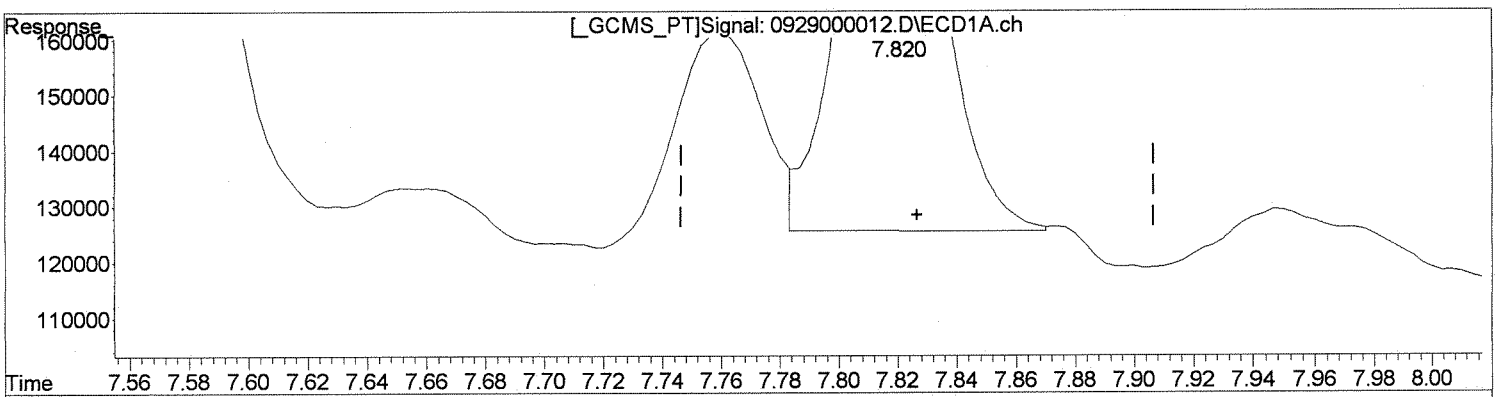
GC34-090314.M Wed Oct 01 11:15:15 2014 Page: 1

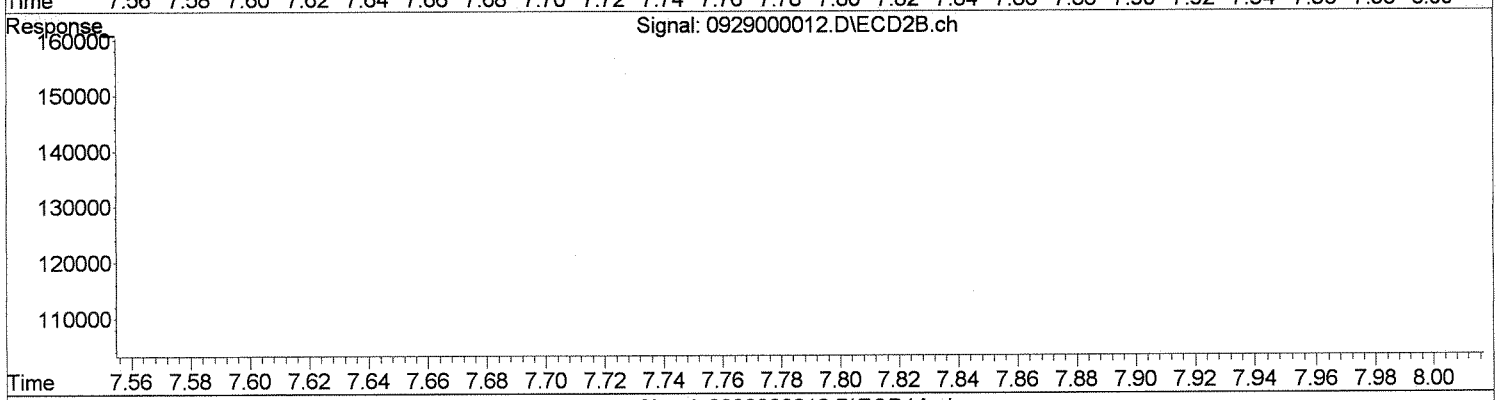
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:09 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000012.D\ECD1A.ch

(4) Hexachlorobenzene
7.820min 0.141 ug/L m
response 209355

(4) Hexachlorobenzene #2
6.293min 0.157 ug/L
response 69482

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

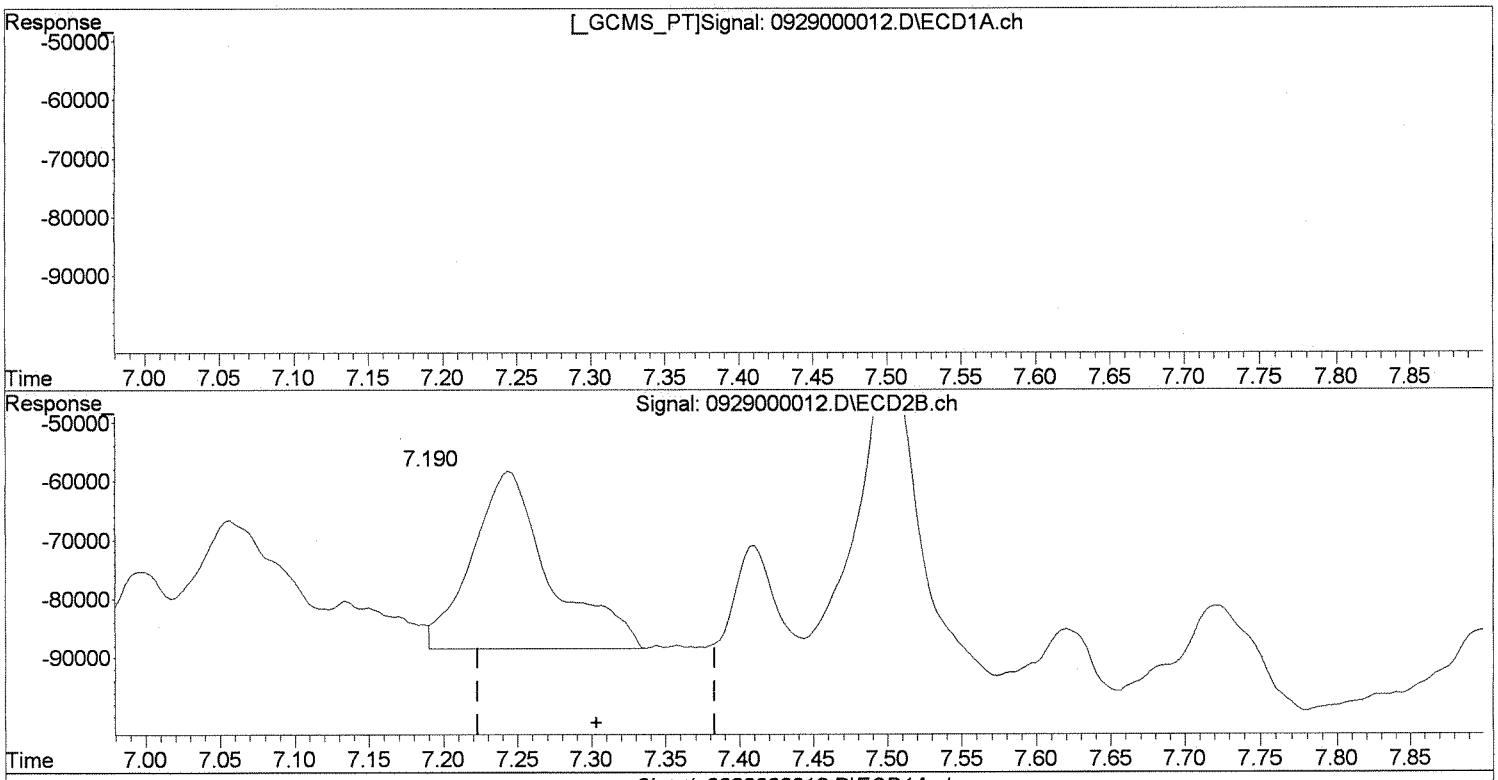
GC34-090314.M Wed Oct 01 11:15:19 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:09 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000012.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.547min 0.556 ug/L
response 453021

(6) gamma-BHC (Lindane) #2
7.243min 0.306 ug/L
response 110138

Manual Integration:
Before

10/01/14

(+) = Expected Retention Time

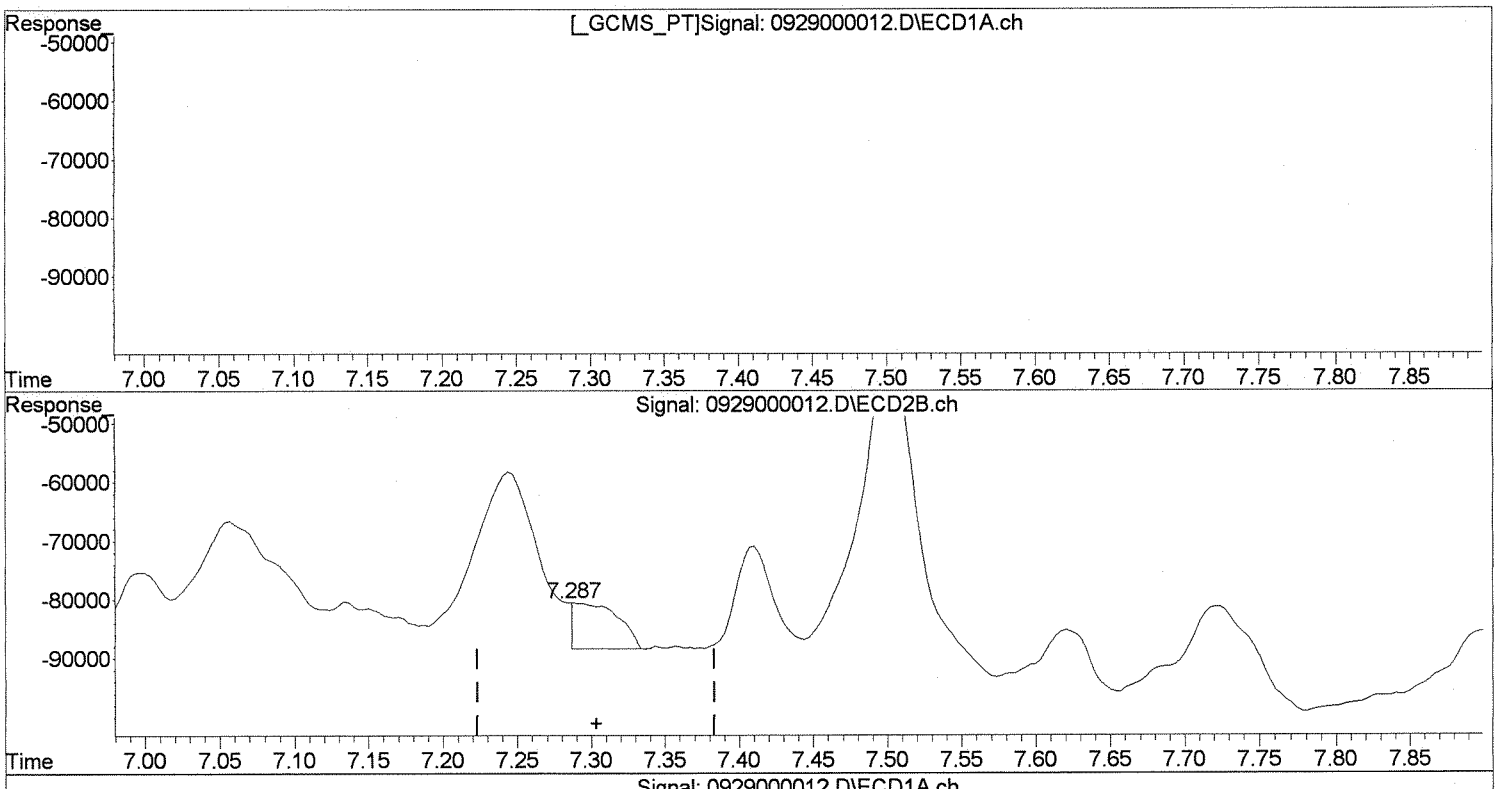
GC34-090314.M Wed Oct 01 11:15:25 2014 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:02:30
Operator :
Sample : K1409921-016
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:09 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Signal: 0929000012.D\ECD1A.ch

(6) gamma-BHC (Lindane)
8.547min 0.556 ug/L
response 453021

(6) gamma-BHC (Lindane) #2
7.287min 0.044 ug/L m
response 15688

Manual Integration:
After
Wrong Peak
10/01/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000013.D
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 15:38
Date Quantitated: 10/01/2014 11:17
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	delta-BHC	21.3	NA	20	RO
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	↓
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:40
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000013.D\0929000013C.
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 15:38
Date Quantitated: 10/01/2014 11:17
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:43
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000013.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000013.D\0929000013c.d			**Vial:**	12
Acqu Date:	09/29/2014 15:38	**Quant Date:**	10/01/2014 11:17	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-017				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378554	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	9279366	2987748	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	-0.01	5.40	-0.01	3829947	1233503	3.80	3.29			76 OK
							%Recovery =	76 OK	66 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40		27.22	-0.01	4201812	1300432	2.93 CCV	3.52			70 OK
							%Recovery =	59 OK	70 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.58	-0.03	6.53	+0.04	244756	20466	0.3160	0.0510	0.63J	0.19U	0.19U
1	Hexachlorobenzene	7.82		6.30		179156m	69968	0.1180	0.1460	0.23J	0.29J	**0.23**J
1	beta-BHC			7.96	+0.02	0	51245	0.0000	0.1070	0.47U	0.47U	0.47U
1	gamma-BHC (Lindane)	8.54	+0.03	7.31	+0.01	237657	23390	0.2780	0.0600	0.55J	0.22U	0.22U
1	delta-BHC	10.34	+0.04	8.71	-0.02	208244	34287	0.2750 CCV	0.0920	0.54J	0.20U	0.20U
1	Heptachlor	10.49	+0.01	8.21	+0.01	593840	14064	0.5400	0.0330	1.1	0.13U	0.13U
1	4,4'-DDE					0d	0	0.0000	0.0000	0.11U	0.11U	0.11U
1	4,4'-DDD					0	0	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.68	+0.07			823664	0	1.02 CCV	0.0000	2.0B	0.22U	0.22U
1	4,4'-DDT					0d	0	0.0000	0.0000	0.30U	0.30U	0.30U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1010 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000013.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000013.D\0929000013c.d			**Vial:**	12
Acqu Date:	09/29/2014 15:38	**Quant Date:**	10/01/2014 11:17	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-017				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:38:47
Operator :
Sample : K1409921-017
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:17:10 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.297	3.910	9279366	2987748	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.403	3829947	1233503	3.802	3.290	
28)	s	Decachlor...	29.400	27.223	4201812	1300432	2.931	3.519	
		Target Compounds							
3)		alpha-BHC	7.580	6.533	244756	20466	0.316	0.051	#
4)		Hexachlor...	7.817	6.297	179156	69968	0.118m	0.146	
5)		beta-BHC	0.000	7.963	0	51245	N.D.	0.107	#
6)		gamma-BHC...	8.543	7.307	237657	23390	0.278	0.060	#
7)		delta-BHC	10.343	8.707	208244	34287	0.275	0.092	#
8)		Heptachlor	10.490	8.213	593840	14064	0.540	0.033	#
9)		Aldrin	11.677f	9.113	46340	1138108	0.078	3.140	#
10)		Isodrin	13.103f	10.563f	41806	17757	0.110	0.060	#
11)		Heptachlo...	13.763	11.023f	31328	44810	0.028	0.109	#
12)		gamma-Chl...	15.473	0.000	35851	0	0.032	N.D.	#
14)		alpha-Chl...	15.677f	12.413f	56840	14806	0.049	0.036	#
17)		Endrin	18.610	15.580f	47259	17173	0.043	0.044	
18)		Endosulfa...	20.733	0.000	209393	0	0.210	N.D.	#
20)		Endrin Al...	21.683	0.000	823664	0	1.018	N.D.	#
21)		Endosulfa...	23.013	0.000	200242	0	0.069	N.D.	#
24)		Methoxychlor	24.677	0.000	65530	0	0.131	N.D.	#
25)		2,4'-DDE	14.873	12.187f	50685	15049	0.076	0.056	#
26)		2,4'-DDD	17.467	0.000	207349	0	0.335	N.D.	#
27)		2,4'-DDT	0.000	16.297f	0	43156	N.D.	0.155	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

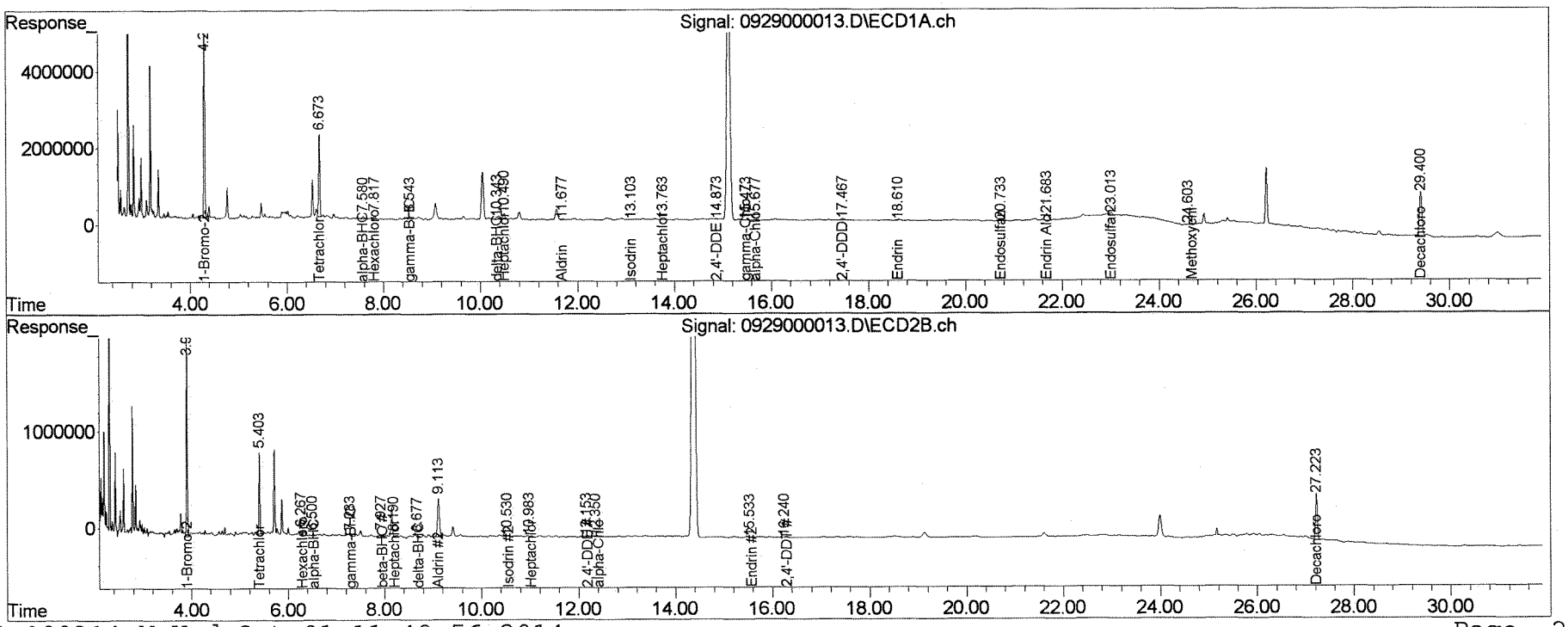
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:38:47
Operator :
Sample : K1409921-017
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:17:10 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1382

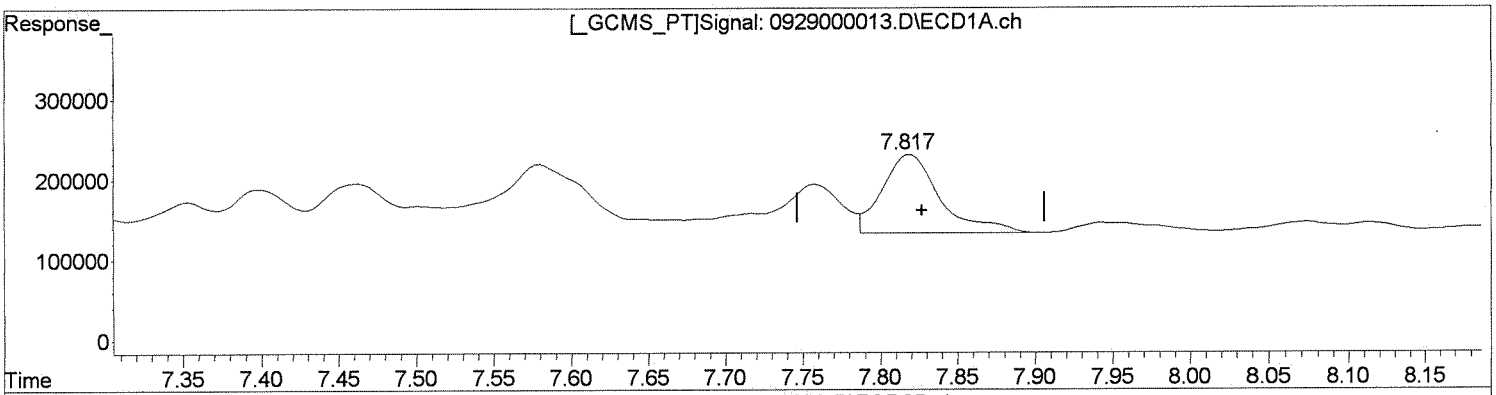


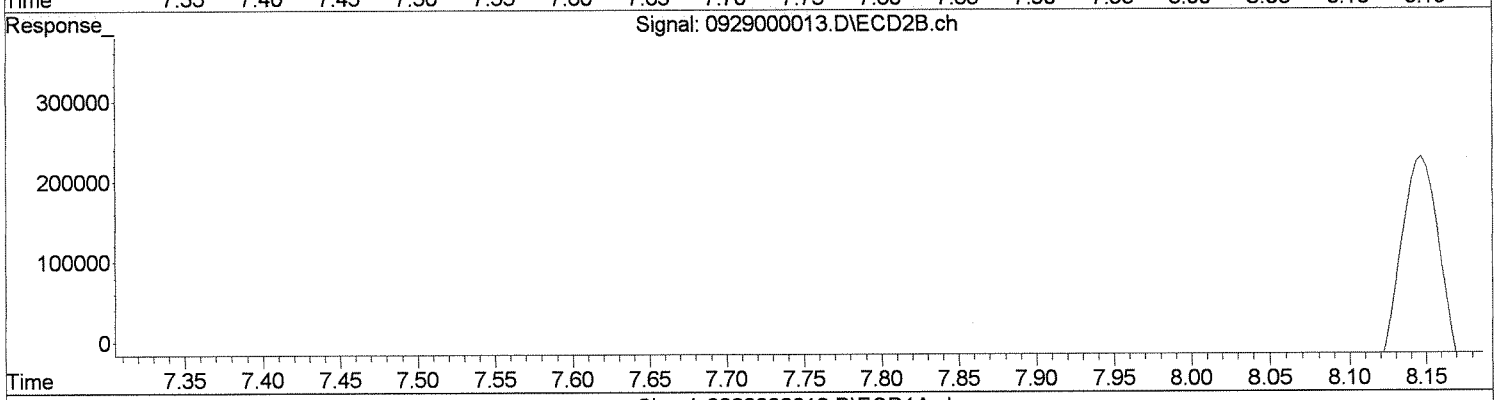
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:38:47
Operator :
Sample : K1409921-017
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:14 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000013.D\ECD1A.ch

(4) Hexachlorobenzene
7.817min 0.167 ug/L
response 254882

(4) Hexachlorobenzene #2
6.297min 0.146 ug/L
response 69968

Manual Integration:
Before

10/01/14

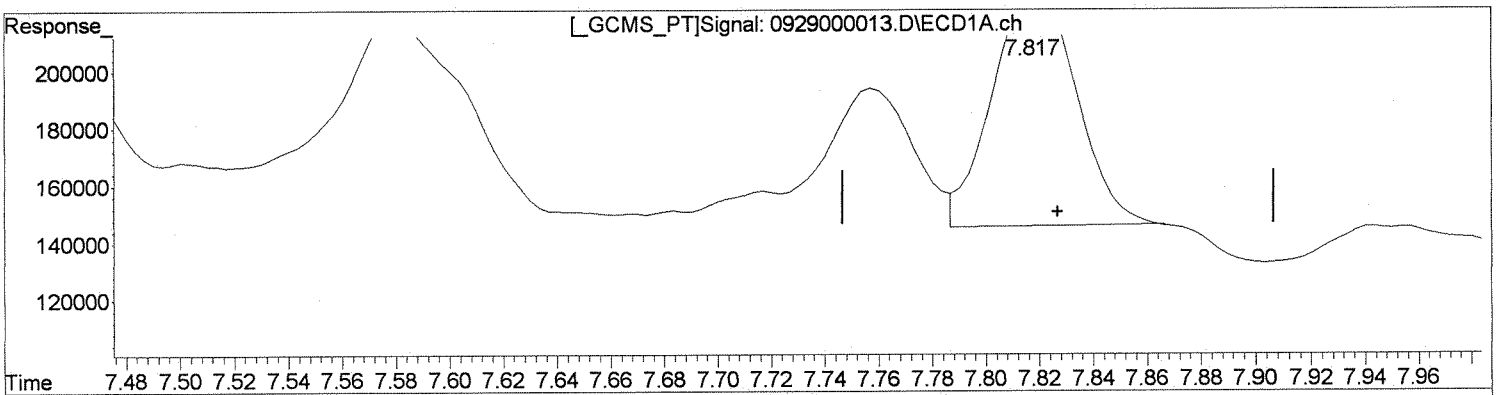
(+) = Expected Retention Time

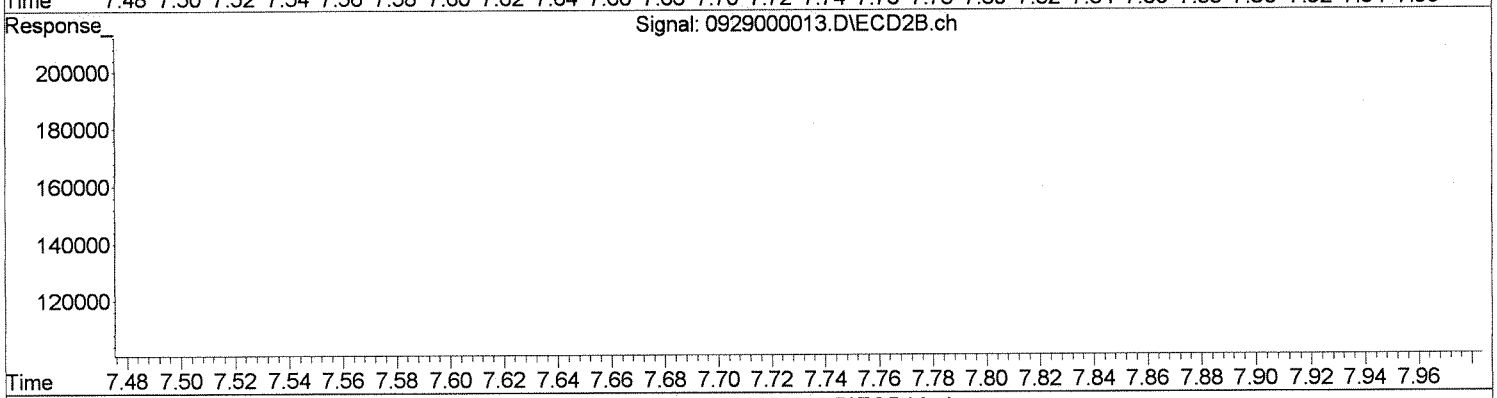
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 15:38:47
Operator :
Sample : K1409921-017
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:14 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000013.D\ECD1A.ch

(4) Hexachlorobenzene
7.817min 0.118 ug/L m
response 179156

(4) Hexachlorobenzene #2
6.297min 0.146 ug/L
response 69968

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000014.D
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 16:15
Date Quantitated: 10/01/2014 11:18
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	26.5	NA	20	MRL ↑
	delta-BHC	21.3	NA	20	RO
	Endrin Aldehyde	21.1	NA	20	↓
	Decachlorobiphenyl	-27.4	NA	20	
Method Blank	Endrin Aldehyde	1.7	NA	1.0	↓

Primary Review: AM 10/7/14

Secondary Review: [signature]

Printed: 10/03/2014 11:51:46
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000014.D\0929000014C.
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 09/29/2014 16:15
Date Quantitated: 10/01/2014 11:18
Batch ID: KWG1413270
Analysis Method: 8081B
ListJoinID: LJ16513

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	26.5	NA	20	MRL↑
Above Highest ICAL Level	Heptachlor	22.78	NA	10	INT E

Primary Review: 10/7/14

Secondary Review:

Printed: 10/03/2014 11:51:49
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000014.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000014.D\0929000014c.d			**Vial:**	13
Acqu Date:	09/29/2014 16:15	**Quant Date:**	10/01/2014 11:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-018				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	K1409921
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378555	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:	Organochlorine Pesticides	**Report List ID:**	LJ16513
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01	3.91	-0.01	8964090	2925962	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	-0.01	5.40	-0.01	3347416m	1169801	3.44	3.19			69 OK
						%Recovery =		69 OK	64 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40		27.22	-0.01	4662766	1306383	3.39 CCV	3.62			72 OK
						%Recovery =		68 OK	72 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC					0d	0d	0.0000	0.0000	0.19U	0.19U	0.19U
1	Hexachlorobenzene			6.35	+0.05	0d	69530	0.0000	0.1490	0.20U	0.30J	0.20U
1	beta-BHC	9.45	+0.03	7.97	+0.03	138251	341424	0.2570 CCV	1.62 CCV	0.51J	3.2	1.0Ui
1	gamma-BHC (Lindane)	8.52	+0.01	7.31	+0.01	545757	185476	0.6740	0.4850	1.3	0.97J	0.97J
1	delta-BHC	10.34	+0.04	8.70	-0.03	102263	20552	0.1330 CCV	0.0560	0.27J	0.20U	0.20U
1	Heptachlor	10.49	+0.01	8.15	-0.05	7826915	9497599	7.37	22.78	15	46E	15Ui
1	4,4'-DDE					0	0	0.0000	0.0000	0.11U	0.11U	0.11U
1	4,4'-DDD					0	0d	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.69	+0.08			1140812	0	1.46 CCV	0.0000	2.9B	0.22U	0.22U
1	4,4'-DDT					0d	0	0.0000	0.0000	0.30U	0.30U	0.30U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount: 1000 mL **Dilution:** 1.0

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000014.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000014.D\0929000014c.d			**Vial:**	13
Acqu Date:	09/29/2014 16:15	**Quant Date:**	10/01/2014 11:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1409921-018				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Final Vol: 2 mL **Unit Factor:** 1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 16:15:11
Operator :
Sample : K1409921-018
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:18:24 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.297	3.910	8964090	2925962	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.403	3347416	1169801	3.440m	3.186	
28)	s	Decachlor...	29.400	27.220	4662766	1306383	3.390	3.617	
		Target Compounds							
4)		Hexachlor...	0.000	6.350f	0	69530	N.D. d	0.149	
5)		beta-BHC	9.450	7.970	138251	341424	0.257	1.616	#
6)		gamma-BHC...	8.517	7.313	545757	185476	0.674	0.485	#
7)		delta-BHC	10.343	8.697f	102263	20552	0.133	0.056	#
8)		Heptachlor	10.493	8.147f	7826915	9497599	7.369	22.780	#
9)		Aldrin	0.000	9.143	0	65598	N.D.	0.185	#
10)		Isodrin	13.207	10.503	47952	160851	0.121	0.553	#
11)		Heptachlo...	13.767	11.167f	52293	28125	0.049	0.070	#
12)		gamma-Chl...	15.480	0.000	48259	0	0.045	N.D.	#
14)		alpha-Chl...	0.000	12.477	0	13512	N.D.	0.033	#
20)		Endrin Al...	21.690f	0.000	1140812	0	1.460	N.D.	#
24)		Methoxychlor	24.670	0.000	59260	0	0.123	N.D.	#
26)		2,4'-DDD	17.463	0.000	41883	0	0.070	N.D.	#
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

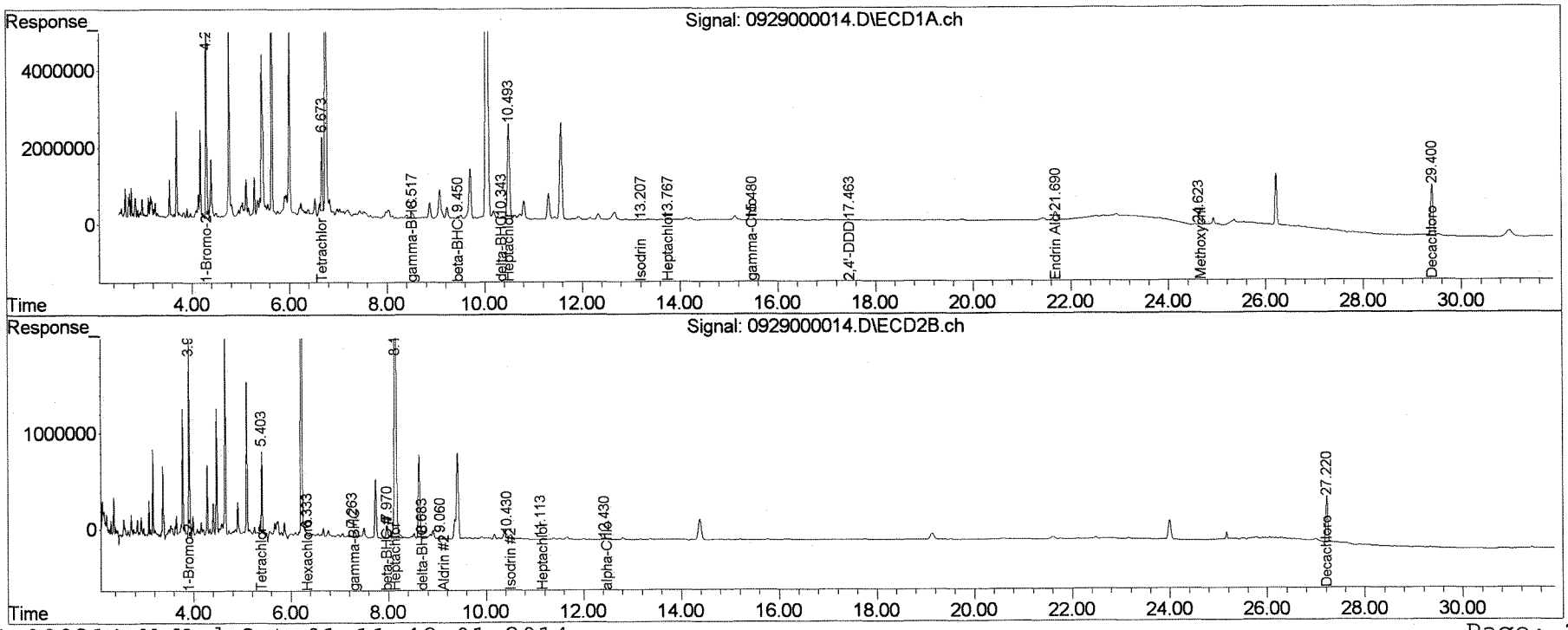
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 16:15:11
Operator :
Sample : K1409921-018
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 01 11:18:24 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1390

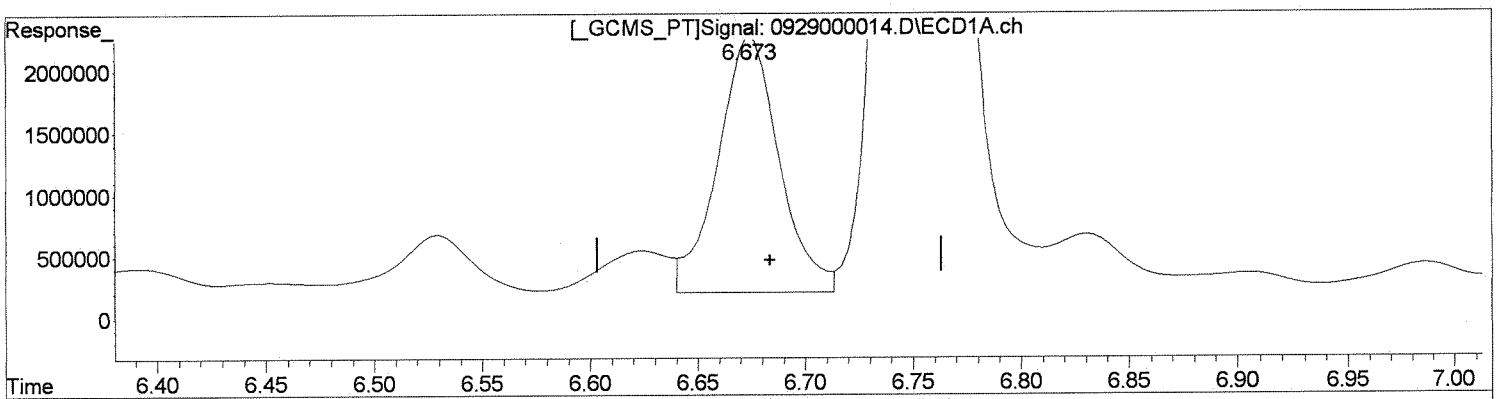


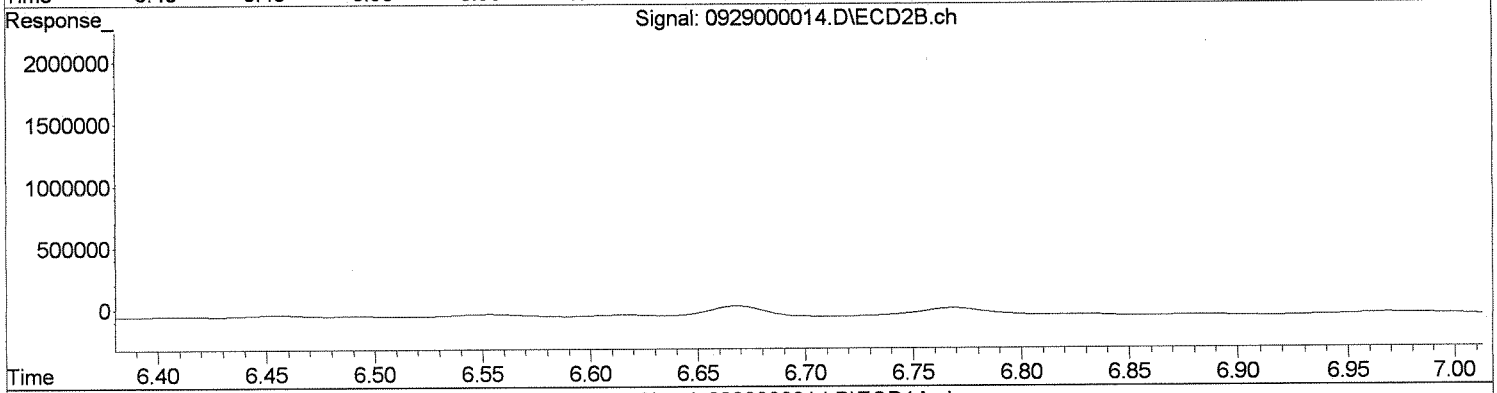
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 16:15:11
Operator :
Sample : K1409921-018
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:18 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm





Signal: 0929000014.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 4.213 ug/L
response 4099703

(2) Tetrachloro-m-xylene #2 (s)
5.403min 3.186 ug/L
response 1169801

Manual Integration:
Before

10/01/14

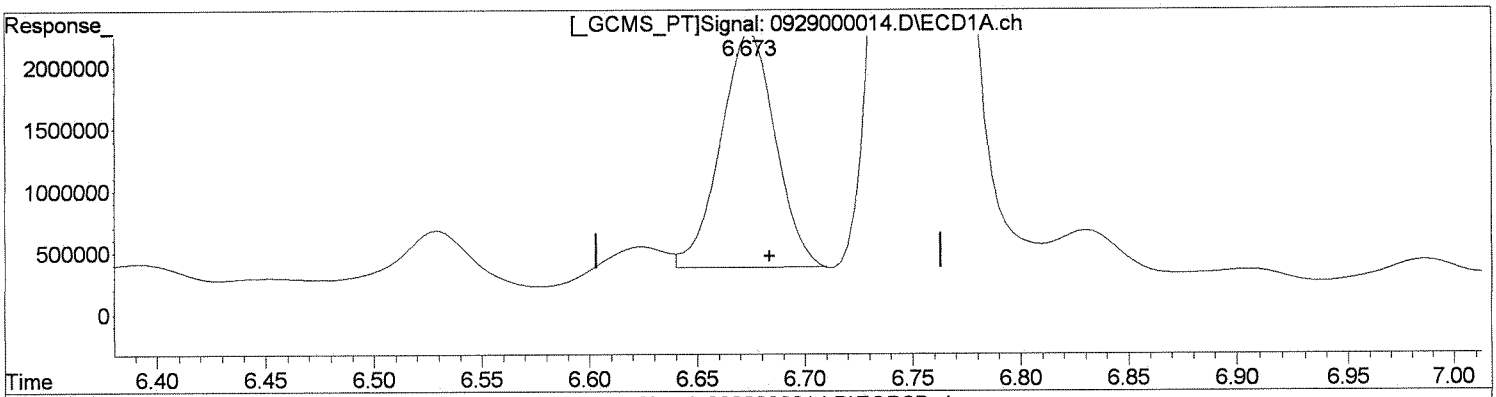
(+) = Expected Retention Time

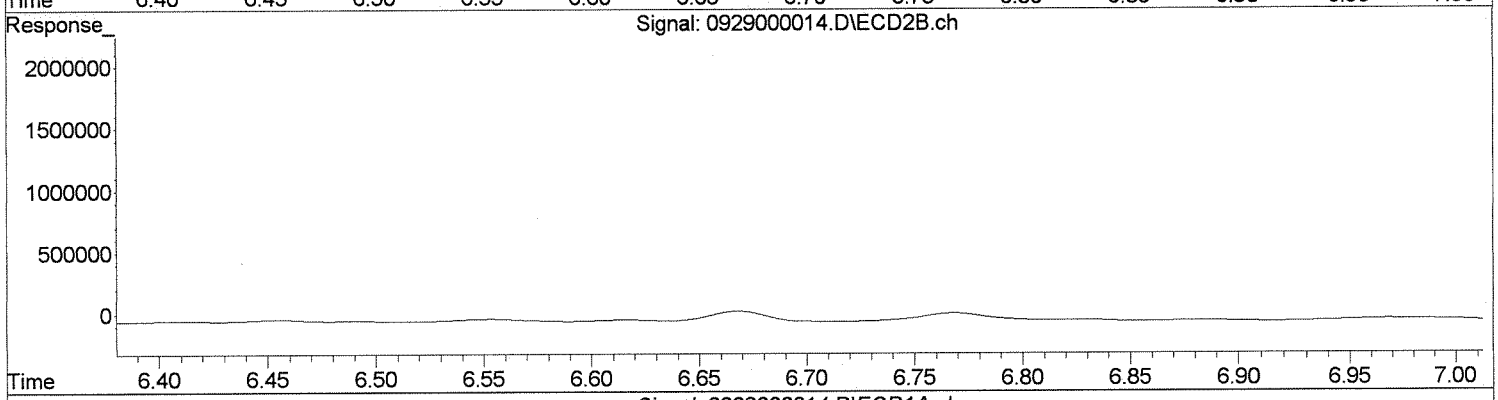
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 29-Sep-2014, 16:15:11
Operator :
Sample : K1409921-018
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Sep 30 06:36:18 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Tue Sep 23 16:03:00 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm





Signal: 0929000014.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 3.440 ug/L m
response 3347416

(2) Tetrachloro-m-xylene #2 (s)
5.403min 3.186 ug/L
response 1169801

Manual Integration:
After
Baseline/Shoulder
10/01/14

(+) = Expected Retention Time
GC34-090314.M Wed Oct 01 11:17:46 2014

Exception Report

Data File: J:\GC34\DATA\092914\0929000031.D
Lab ID: KWG1413165-5
RunType: MB
Matrix: WATER

Date Acquired: 09/30/2014 02:33
Date Quantitated: 10/08/2014 10:07
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Perthane	26.3	NA	20	
Continuing Calibration Recovery	Endrin Aldehyde	24.5	NA	20	
	Decachlorobiphenyl	-29.0	NA	20	
	Perthane	-100.0	NA	20	
Analyte Co-elution	1-Bromo-2-nitrobenzene	4.3	NA	NA	
	1-Bromo-2-nitrobenzene {2}	4.3	NA	NA	
	1-Bromo-2-nitrobenzene {3}	4.3	NA	NA	
	1-Bromo-2-nitrobenzene {4}	4.3	NA	NA	

Primary Review: Am 10/8/14

Secondary Review:

Printed: 10/08/2014 10:08:55
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\GC34\DATA\092914\0929000031.D\0929000031C.
Lab ID: KWG1413165-5
RunType: MB
Matrix: WATER

Date Acquired: 09/30/2014 02:33
Date Quantitated: 10/08/2014 10:07
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Perthane	-100.0	NA	20	
Analyte Co-elution	1-Bromo-2-nitrobenzene	3.91	NA	NA	
	1-Bromo-2-nitrobenzene {2}	3.91	NA	NA	
	1-Bromo-2-nitrobenzene {3}	3.91	NA	NA	
	1-Bromo-2-nitrobenzene {4}	3.91	NA	NA	

Primary Review: AM 10/8/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000031.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000031.D\0929000031c.d			**Vial:**	24
Acqu Date:	09/30/2014 02:33	**Quant Date:**	10/08/2014 10:07	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	
Analysis Method:	8081A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378566	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:			
MB Ref:		**Method ID:**	MJ1459
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30 -0.01 c	3.91 -0.01 c	8548066	2568920	10.00	10.00
2	1-Bromo-2-nitrobenzene {2}	4.30 +0.00 c	3.91 0.00 c	8548066	2568920	10.00	10.00
3	1-Bromo-2-nitrobenzene {3}	4.30 +0.00 c	3.91 -0.01 c	8548066	2568920	10.00	10.00
4	1-Bromo-2-nitrobenzene {4}	4.30 -0.01 c	3.91 -0.01 c	8548066	2568920	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	5.40	4483438m	1392148	4.83	4.32			97 OK
				%Recovery =		97 OK	86 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40	27.22	5125667	1401590	3.93 CCV	4.49			90 OK
				%Recovery =		79 OK	90 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.66 +0.05	6.51 +0.02	87660	55121	0.1320	0.1600	0.27Ui	0.32Ui	0.27Ui
1	Hexachlorobenzene	7.82	6.29	40821	20635	0.0290	0.0500	0.20U	0.20U	0.20U
1	beta-BHC	9.44 +0.03	7.96 +0.02	76981	49833	0.1500	0.1410	0.47U	0.47U	0.47U
1	gamma-BHC (Lindane)	8.54 +0.04		233779	0d	0.2980 CCV	0.0000	0.590J	0.22U	0.22U
1	delta-BHC		8.71 -0.02	0	43895	0.0000	0.1370	0.20U	0.271J	0.20U
1	Heptachlor	10.49 +0.01		430593	0d	0.4250	0.0000	0.842J	0.13U	0.13U
1	Aldrin		9.12 +0.03	0	46355	0.0000	0.1490	0.20U	0.295J	0.20U
1	Isodrin			0	0	0.0000	0.0000	0.18U	0.18U	0.18U
1	Heptachlor Epoxide	13.77 -0.01		90256	0d	0.0880	0.0000	0.69U	0.69U	0.69U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000031.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000031.D\0929000031c.d			**Vial:**	24
Acqu Date:	09/30/2014 02:33	**Quant Date:**	10/08/2014 10:07	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.21U	0.21U	0.21U
1	Endosulfan I			0d	0	0.0000	0.0000	0.15U	0.15U	0.15U
1	alpha-Chlordane	15.71 -0.02	12.47 -0.01	53680	33334	0.0500	0.0940	0.17U	0.186J	0.17U
1	Dieldrin			0	0	0.0000	0.0000	0.23U	0.23U	0.23U
1	4,4'-DDE	16.96 -0.01		64762	0d	0.0730	0.0000	0.145J	0.11U	0.11U
1	Endrin			0	0	0.0000	0.0000	0.18U	0.18U	0.18U
1	Endosulfan II			0	0	0.0000	0.0000	0.20U	0.20U	0.20U
1	4,4'-DDD			0	0d	0.0000	0.0000	0.28U	0.28U	0.28U
1	Endrin Aldehyde	21.68 +0.08		638238	0	0.8570CCV	0.0000	1.70	0.22U	0.22U
1	Endosulfan Sulfate			32678	0	0.0000	0.0000	0.84U	0.84U	0.84U
1	4,4'-DDT	22.42 +0.01		336073	0	0.4430	0.0000	0.877J	0.30U	**0.877**JN
1	Endrin Ketone	24.76 +0.01		32465	0	0.0100	0.0000	0.28U	0.28U	0.28U
1	Methoxychlor	24.67 -0.01		42949	0d	0.0930	0.0000	0.22U	0.22U	0.22U
1	2,4'-DDE	14.88 +0.03		60984	0	0.1000	0.0000	0.26U	0.26U	0.26U
1	2,4'-DDD	17.47 -0.02		68924	0	0.1210	0.0000	0.30U	0.30U	0.30U
1	2,4'-DDT			0	0	0.0000	0.0000	0.086U	0.086U	0.086U
	Toxaphene			0	0	14.42	5.09	28.6J	19.0U	**28.6**J
2	Toxaphene {1}			0	0	0.0000	0.0000	19U	19U	
2	Toxaphene {2}			0	0	0.0000	0.0000	19U	19U	
2	Toxaphene {3}	22.08 +0.04	17.74 -0.02	83934	9525	14.65	4.17	29.0J	19U	
2	Toxaphene {4}		17.54 +0.01	0	37183	0.0000	6.01	19U	19U	
2	Toxaphene {5}	23.11 +0.04		32678	0d	4.70	0.0000	19U	19U	
2	Toxaphene {6}	24.92 +0.01		458962	0	23.91	0.0000	47.3J	19U	
	Chlordane			0	0	2.83CCV	3.33	5.61J	6.59J	**5.61**J
3	Chlordane {1}	9.79 +0.07	7.72	71607	77543	2.22	7.59	4.39J	15.0J	RPI
3	Chlordane {2}	10.49	8.25 +0.05	430593	24070	7.95	1.33	15.7J	4.0U	
3	Chlordane {3}	11.94 +0.05		107803	0	2.63	0.0000	5.20J	4.0U	
3	Chlordane {4}			0	0	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {5}	15.71 -0.02		53680	0	0.5530	0.0000	4.0U	4.0U	
3	Chlordane {6}	16.03 -0.03	12.47 -0.02	63328	33334	0.8260	1.06	4.0U	4.0U	
4	Chlorpyrifos		9.67 -0.04	0d	15638	0.0000	0.0740	0.25U	0.25U	0.25U
4	Oxychlordane		10.70 +0.07	0d	29088	0.0000	0.1000	0.25U	0.25U	0.25U
4	cis-Nonachlor			0	0	0.0000	0.0000	0.33U	0.33U	0.33U
4	trans-Nonachlor			0d	0	0.0000	0.0000	0.20U	0.20U	0.20U
4	Mirex	26.09 +0.03		69351	0	0.0680	0.0000	0.31U	0.31U	0.31U
4	Hexachloroethane	2.76 -0.01	2.36 -0.01	36048	22202	0.2020	0.0470	0.400J	0.33U	0.33U
4	Hexachlorobutadiene	3.33 +0.01	2.80 +0.01	199227	43395	0.1540	0.1110	0.305J	0.220J	**0.220**J
4	Perthane			0	0	0.0000CCV	0.0000CCV	20U	20U	20U

The -/+ after Retention Time symbolize the direction of the RT shift

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000031.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000031.D\0929000031c.d			**Vial:**	24
Acqu Date:	09/30/2014 02:33	**Quant Date:**	10/08/2014 10:07	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Amount:	1010 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000031.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 02:33:37
Operator :
Sample : KWG1413165-MB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:07:48 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.297	3.907	8548066	2568920	10.000	10.000	
29)		1-Bromo-2...	4.297	3.907	8548066	2568920	10.000	10.000	
36)		1-Bromo-2...	4.297	3.907	8548066	2568920	10.000	10.000	
43)		1-Bromo-2...	4.297	3.907	8548066	2568920	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.400	4483438	1392148	4.831m	4.318	
28)	s	Decachlor...	29.400	27.220	5125667	1401590	3.931	4.492	
		Target Compounds							
3)		alpha-BHC	7.660	6.513	87660	55121	0.132	0.160	
4)		Hexachlor...	7.820	6.293	40821	20635	0.029	0.050	#
5)		beta-BHC	9.440	7.963	76981	49833	0.150	0.141	
6)		gamma-BHC...	8.543	0.000	233779	0	0.298	N.D.	d#
7)		delta-BHC	0.000	8.707	0	43895	N.D.	0.137	#
8)		Heptachlor	10.490	0.000	430593	0	0.425	N.D.	d#
9)		Aldrin	0.000	9.120	0	46355	N.D.	0.149	#
11)		Heptachlo...	13.767	0.000	90256	0	0.088	N.D.	d#
14)		alpha-Chl...	15.710	12.467	53680	33334	0.050	0.094	#
16)		4,4'-DDE	16.963	0.000	64762	0	0.073	N.D.	d#
20)		Endrin Al...	21.677	0.000	638238	0	0.857	N.D.	#
22)		4,4'-DDT	22.417	0.000	336073	0	0.443	N.D.	#
23)		Endrin Ke...	24.757	0.000	32465	0	0.010	N.D.	#
24)		Methoxychlor	24.673	0.000	42949	0	0.093	N.D.	d#
25)		2,4'-DDE	14.877	0.000	60984	0	0.100	N.D.	#
26)		2,4'-DDD	17.467	0.000	68924	0	0.121	N.D.	#
32)		Toxaphene...	22.077	17.740f	83934	9525	14.654	4.165	#
33)		Toxaphene...	0.000	17.543	0	37183	N.D.	6.010	#
34)		Toxaphene...	23.110	0.000	32678	0	4.695	N.D.	d#
35)		Toxaphene...	24.920	0.000	458962	0	23.911	N.D.	#
37)		Chlordane	9.793f	7.717	71607	77543	2.218	7.592	#
38)		Chlordane...	10.490	8.250	430593	24070	7.947	1.327	#
39)		Chlordane...	11.943f	0.000	107803	0	2.628	N.D.	#

Data Path : J:\GC34\DATA\092914\
Data File : 0929000031.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 02:33:37
Operator :
Sample : KWG1413165-MB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:07:48 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
41)	Chlordane...	15.710	0.000	53680	0	0.553	N.D.	#
42)	Chlordane...	16.030	12.467f	63328	33334	0.826	1.063	#
44)	Chlorpyrifos	0.000	9.667f	0	15638	N.D. d	0.074	
45)	Oxychlordane	0.000	10.703f	0	29088	N.D. d	0.100	
48)	Mirex	26.090	0.000	69351	0	0.068	N.D.	#
49)	HCE	2.760	2.363	36048	22202	0.202	0.047	#
50)	HCBD	3.330	2.797	199227	43395	0.154	0.111	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

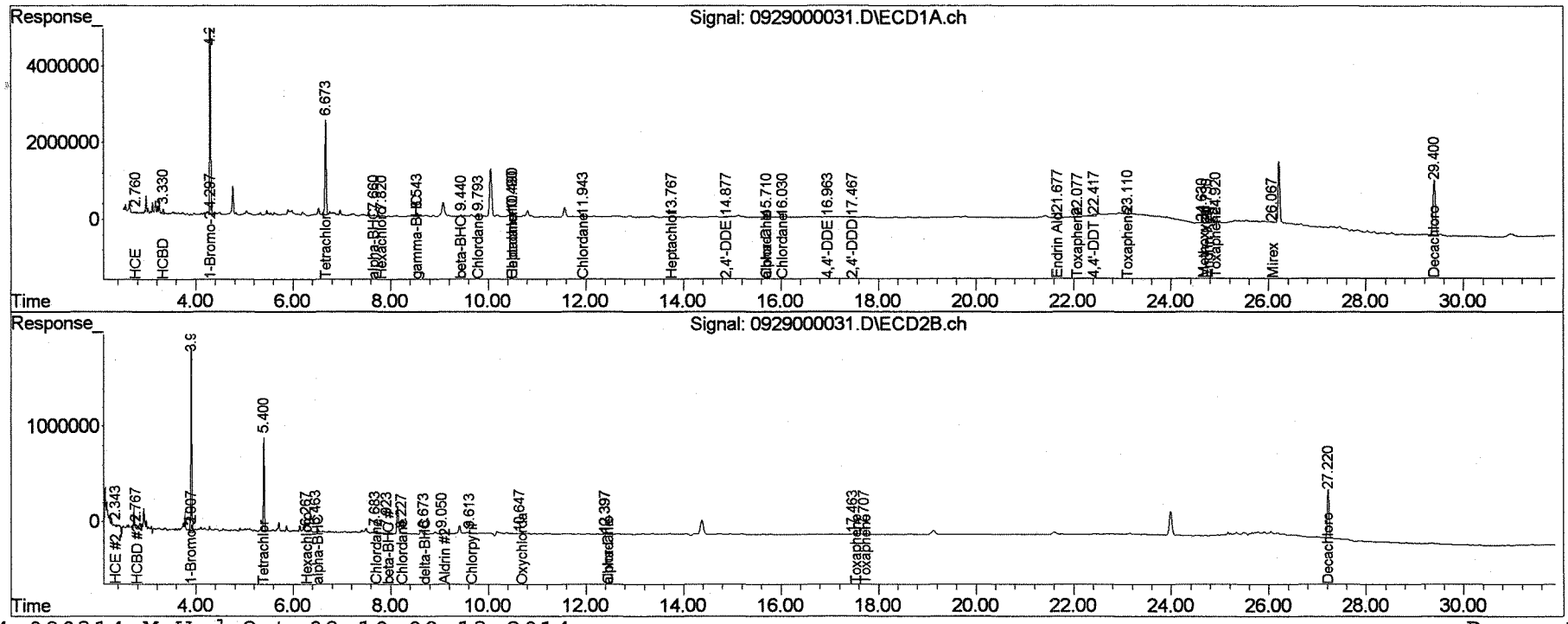
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000031.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 02:33:37
Operator :
Sample : KWG1413165-MB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:07:48 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1400

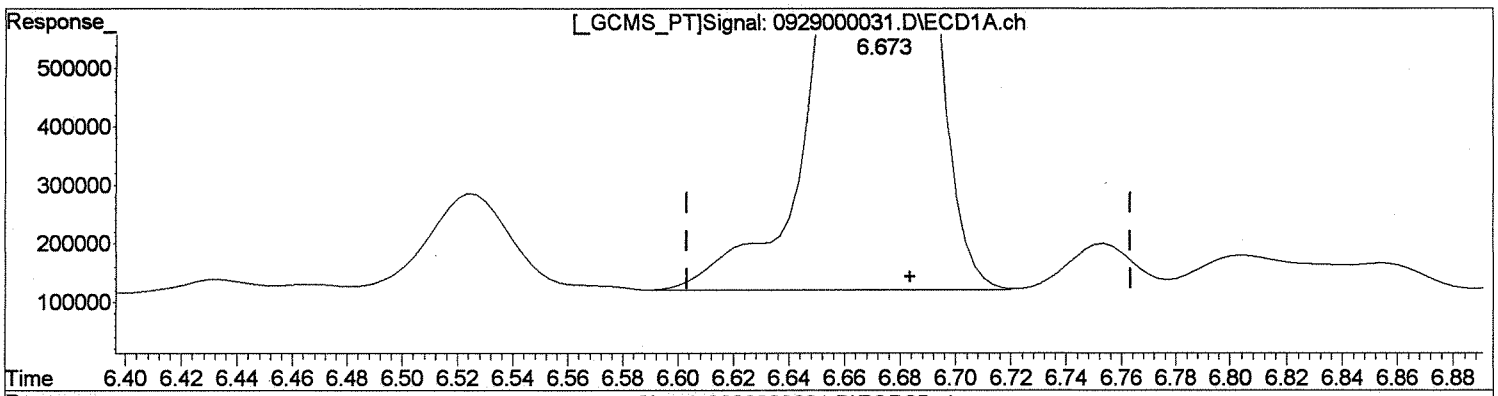


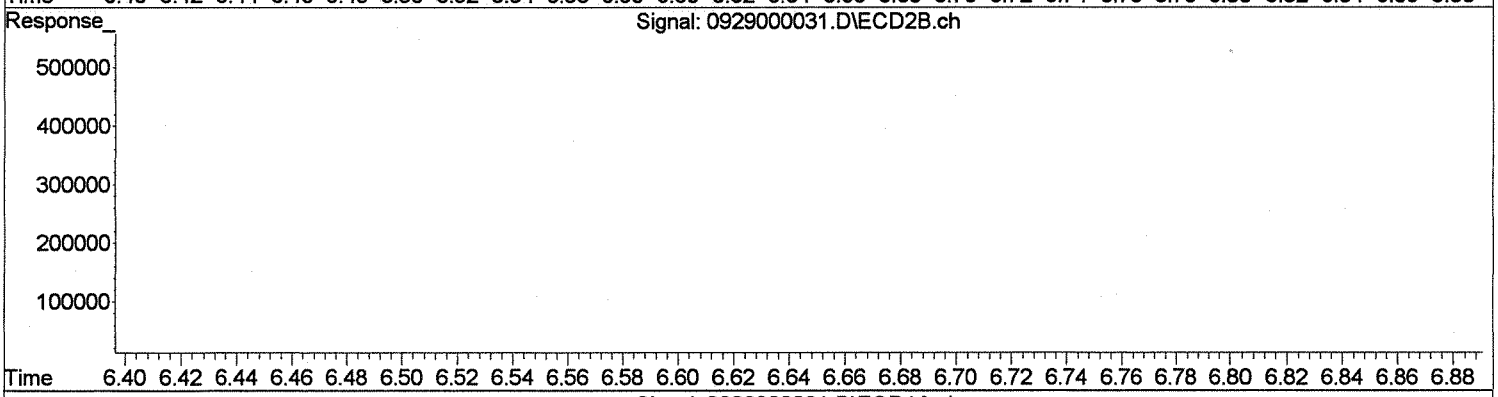
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000031.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 02:33:37
Operator :
Sample : KWG1413165-MB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:05:49 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000031.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 4.937 ug/L
response 4581680

(2) Tetrachloro-m-xylene #2 (s)
5.400min 4.318 ug/L
response 1392148

Manual Integration:
Before

10/08/14

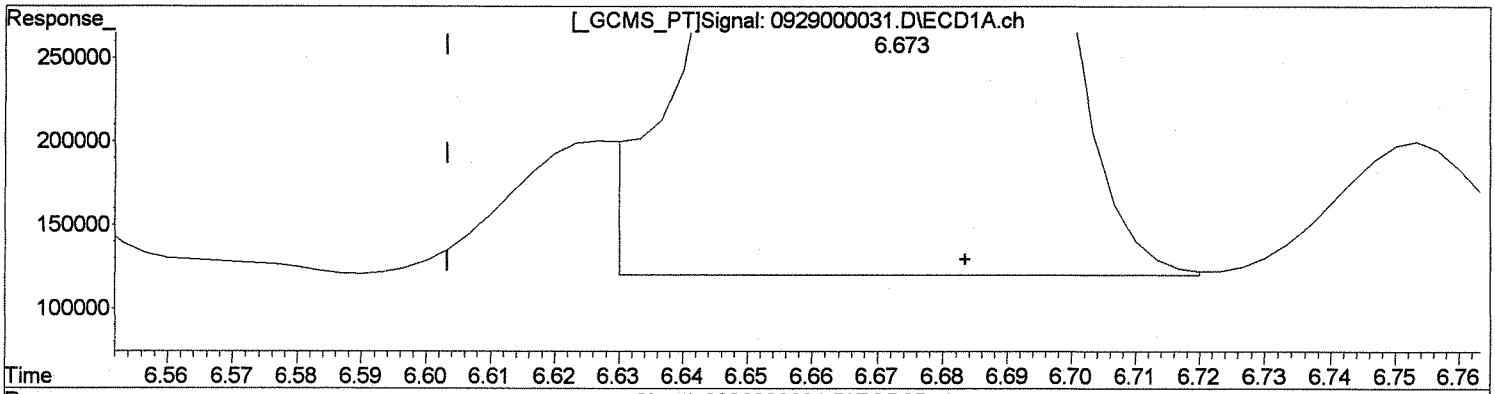
(+) = Expected Retention Time

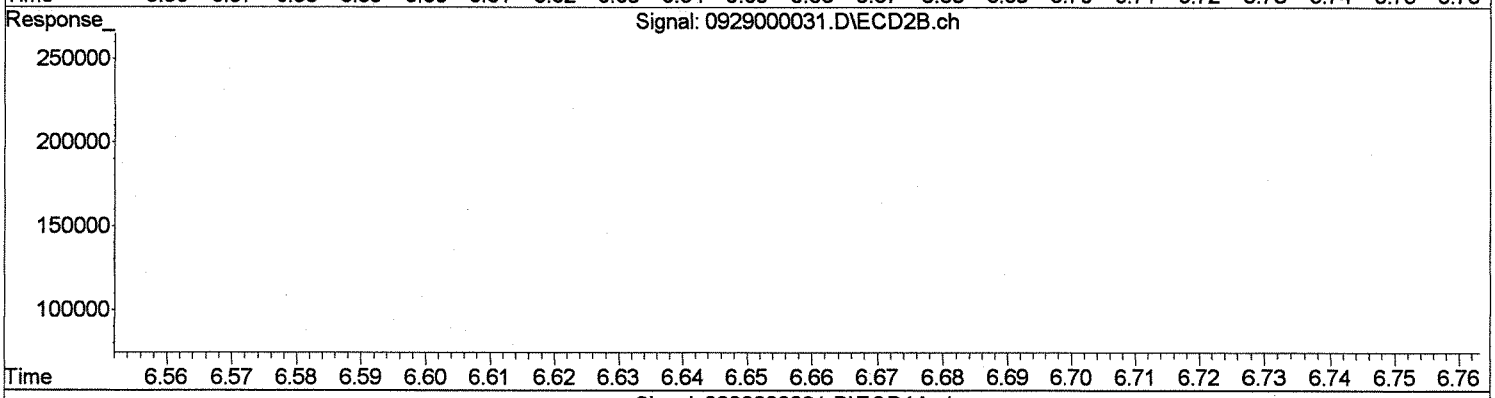
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000031.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 02:33:37
Operator :
Sample : KWG1413165-MB
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:05:49 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000031.D\ECD1A.ch

(2) Tetrachloro-m-xylene (s)
6.673min 4.831 ug/L m
response 4483438

(2) Tetrachloro-m-xylene #2 (s)
5.400min 4.318 ug/L
response 1392148

Manual Integration:
After
Baseline/Shoulder
10/08/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000027.D
Lab ID: KWG1413165-1
RunType: LCS
Matrix: WATER

Date Acquired: 09/30/2014 00:08
Date Quantitated: 10/08/2014 09:59
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Perthane	26.3	NA	20	
Continuing Calibration Recovery	beta-BHC	24.9	NA	20	
	Isodrin	25.4	NA	20	
	Endrin Aldehyde	24.5	NA	20	
	Decachlorobiphenyl	-29.0	NA	20	
	Perthane	-100.0	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	42855.41666	771421.6666	
	1-Bromo-2-nitrobenzene {3}	0	91215.08333	364860.3333	
Analyte Co-elution	1-Bromo-2-nitrobenzene	4.3	NA	NA	
	1-Bromo-2-nitrobenzene {4}	4.3	NA	NA	

Primary Review: AM 10/8/14

Secondary Review:

Exception Report

Data File: J:\GC34\DATA\092914\0929000027.D\0929000027C.
Lab ID: KWG1413165-1
RunType: LCS
Matrix: WATER

Date Acquired: 09/30/2014 00:08
Date Quantitated: 10/08/2014 09:59
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	25.9	NA	20	
	Isodrin	20.6	NA	20	
	Endrin Aldehyde	49.2	NA	20	
	Perthane	-100.0	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	31027.33333	24109.33333	
	1-Bromo-2-nitrobenzene {3}	0	1645398.75	6581595	
Analyte Co-elution	1-Bromo-2-nitrobenzene	3.91	NA	NA	
	2,4'-DDE	12.2	NA	NA	
	2,4'-DDT	16.22	NA	NA	
	1-Bromo-2-nitrobenzene {4}	3.91	NA	NA	
	cis-Nonachlor	16.22	NA	NA	
	trans-Nonachlor	12.2	NA	NA	
Above Highest ICAL Level	2,4'-DDE	10.34	NA	10	

Primary Review: _____ 10/8/14

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000027.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000027.D\0929000027c.d			**Vial:**	20
Acqu Date:	09/30/2014 00:08	**Quant Date:**	10/08/2014 09:59	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378562	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:			
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30	-0.01 c	3.91	-0.01 c	10584273	3098423	10.00	10.00
2	1-Bromo-2-nitrobenzene {2}					0d	0d	10.00	10.00
3	1-Bromo-2-nitrobenzene {3}					0d	0d	10.00	10.00
4	1-Bromo-2-nitrobenzene {4}	4.30	-0.01 c	3.91	-0.01 c	10584273	3098423	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	6.67	5.40	3497240	1098822	3.04	2.83			61	OK
					%Recovery =	61 OK	57 OK	Limits =	20-106		
1	Decachlorobiphenyl	29.40	27.22	4150865	1085026	2.52 CCV	2.78			56	OK
					%Recovery =	50 OK	56 OK	Limits =	19-127		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.61		6.49		4260657	1469610	3.95	3.53	7.90	7.05	**7.05**
1	Hexachlorobenzene	7.82		6.29		5760294	1546824	3.31	3.12	6.62	6.24	**6.24**
1	beta-BHC	9.42	+0.01	7.94		2677992	871319	4.22 CCV	4.11 CCV	8.45	8.22	**8.22**
1	gamma-BHC (Lindane)	8.50		7.29		4348042	1474342	4.12	3.64	8.24	7.29	**7.29**
1	delta-BHC	10.30		8.72	-0.01	4038590	1498652	4.22	3.87	8.44	7.73	**7.73**
1	Heptachlor	10.48		8.20	+0.01	5243268	1646179	4.18	3.73	8.36	7.46	**7.46**
1	Aldrin	11.73		9.09		3863358	1368703	3.78	3.64	7.56	7.28	**7.28**
1	Isodrin	13.17	+0.01	10.49		3899655	1271611	4.24 CCV	4.13 CCV	8.48	8.26	**8.26**
1	Heptachlor Epoxide	13.78		11.07		4888338	1506861	3.86	3.53	7.73	7.06	**7.06**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000027.D	**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000027.D\0929000027c.d	**Vial:**	20
Acqu Date:	09/30/2014 00:08 **Quant Date:** 10/08/2014 09:59	**Dilution:**	1.0
Run Type:	LCS	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-1		
Signal #1:	DB XLB **Signal #2:** DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	15.48	12.05	4796917	1530705	3.79	3.54	7.59	7.08	**7.08**
1	Endosulfan I	15.83	12.65	3764528	1214658	3.38	3.25	6.75	6.50	**6.50**
1	alpha-Chlordane	15.73	12.48	5093055	1524258	3.84	3.56	7.68	7.13	**7.13**
1	Dieldrin	17.32	14.04	4244751	1507458	3.82	3.69	7.64	7.37	**7.37**
1	4,4'-DDE	16.97	13.71	4050516	1349771	3.70	3.41	7.39	6.82	**6.82**
1	Endrin	18.65 +0.01	15.64	4181357	1368177	3.36	3.38	6.72	6.76	**6.72**
1	Endosulfan II	20.72 +0.01	17.31 +0.01	4122511	1262418	3.63	3.31	7.25	6.62	**6.62**
1	4,4'-DDD	20.46	16.95	3113146	1112667	4.02	3.58	8.04	7.16	**7.16**
1	Endrin Aldehyde	21.60	18.84 +0.01	3192775	808447	3.46ccv	3.67ccv	6.92	7.33	**6.92**
1	Endosulfan Sulfate	23.02	20.36 +0.01	3491392	1015223	2.83	2.83	5.65	5.66	**5.65**
1	4,4'-DDT	22.41	18.64	3308228m	1086113	3.53	3.17	7.05	6.33	**6.33**
1	Endrin Ketone	24.75	23.48	4302611	1457426	3.31	3.56	6.62	7.12	**6.62**
1	Methoxychlor	24.68	23.28	2357435	689173	4.14	3.55	8.28	7.10	**7.10**
1	2,4'-DDE	14.85	12.20 -0.01 c	4511230	2877000	5.96	10.34	11.9	20.7E	**11.9**P
1	2,4'-DDD	17.49	14.73 +0.01	4200221	1328178	5.94	5.62	11.9	11.2	**11.2**
1	2,4'-DDT	19.43	16.22 -0.01 c	4618165	1422406	5.98	4.92	12.0	9.84	**12.0**
	Toxaphene			0	0	0.0000	0.0000	19.0U	19.0U	NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	19U	19U	
	Chlordane			0	0	0.0000	0.0000	4.00U	4.00U	NR
3	Chlordane {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	4.0U	4.0U	
4	Chlorpyrifos	11.65 -0.01	9.71	3409481	958678	3.93	3.76	7.86	7.52	**7.52**
4	Oxychlordane	13.68	10.63	4378503	1273473	3.75	3.62	7.51	7.23	**7.23**
4	cis-Nonachlor	20.04 -0.01	16.22 +0.07c	5236482	1422406	3.56	3.08	7.12	6.17	**7.12**
4	trans-Nonachlor	16.06	12.20 +0.01c	5201066	2877000	3.75	7.18	7.50	14.4	**7.50**P
4	Mirex	26.06	23.81	3674886	1280127	2.92	3.02	5.84	6.03	**5.84**
4	Hexachloroethane	2.76 -0.01	2.37	5232954	1497163	2.58	2.64	5.16	5.28	**5.16**
4	Hexachlorobutadiene	3.32	2.79	4773190	1296690	2.97	2.75	5.94	5.51	**5.51**
4	Perthane			0	0	0.0000ccv	0.0000ccv	20U	20U	20U

The -/+ after Retention Time symbolize the direction of the RT shift

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000027.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000027.D\0929000027c.d			**Vial:**	20
Acqu Date:	09/30/2014 00:08	**Quant Date:**	10/08/2014 09:59	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000027.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:08:08
Operator :
Sample : KWG1413165-LCS1
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 09:59:39 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.297	3.907	10584273	3098423	10.000	10.000	
43)		1-Bromo-2...	4.297	3.907	10584273	3098423	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.403	3497240	1098822	3.044	2.826	
28)	s	Decachlor...	29.400	27.223	4150865	1085026	2.519	2.783	
		Target Compounds							
3)		alpha-BHC	7.610	6.490	4260657	1469610	3.949	3.527	
4)		Hexachlor...	7.820	6.293	5760294	1546824	3.312	3.122	
5)		beta-BHC	9.417	7.940	2677992	871319	4.223	4.110	
6)		gamma-BHC...	8.503	7.293	4348042	1474342	4.122	3.643	
7)		delta-BHC	10.297	8.723	4038590	1498652	4.218	3.867	
8)		Heptachlor	10.480	8.197	5243268	1646179	4.181	3.729	
9)		Aldrin	11.733	9.090	3863358	1368703	3.780	3.641	
10)		Isodrin	13.167	10.490	3899655	1271611	4.242	4.130	
11)		Heptachlo...	13.783	11.070	4888338	1506861	3.863	3.530	
12)		gamma-Chl...	15.480	12.050	4796917	1530705	3.794	3.541	
13)		Endosulfan I	15.833	12.647	3764528	1214658	3.375	3.251	
14)		alpha-Chl...	15.727	12.483	5093055	1524258	3.838	3.563	
15)		Dieldrin	17.320	14.037	4244751	1507458	3.820	3.685	
16)		4,4'-DDE	16.970	13.713	4050516	1349771	3.695	3.411	
17)		Endrin	18.647	15.640	4181357	1368177	3.361	3.382	
18)		Endosulfa...	20.717	17.307	4122511	1262418	3.626	3.308	
19)		4,4'-DDD	20.457	16.953	3113146	1112667	4.020	3.578	
20)		Endrin Al...	21.597	18.837	3192775	808447	3.461	3.666	
21)		Endosulfa...	23.017	20.357	3491392	1015223	2.826	2.828	
22)		4,4'-DDT	22.410	18.640	3308228	1086113	3.526m	3.167	
23)		Endrin Ke...	24.747	23.477	4302611	1457426	3.310	3.560	
24)		Methoxychlor	24.680	23.277	2357435	689173	4.140	3.551	
25)		2,4'-DDE	14.850	12.200	4511230	2877000	5.958	10.344	#
26)		2,4'-DDD	17.487	14.727	4200221	1328178	5.941	5.624	
27)		2,4'-DDT	19.430	16.223	4618165	1422406	5.976	4.920	

Data Path : J:\GC34\DATA\092914\
Data File : 0929000027.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:08:08
Operator :
Sample : KWG1413165-LCS1
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 09:59:39 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
44)	Chlorpyrifos	11.650	9.707	3409481	958678	3.932	3.759	
45)	Oxychlordane	13.677	10.627	4378503	1273473	3.753	3.616	
46)	cis-Nonac...	20.040	16.223	5236482	1422406	3.561	3.084	
47)	trans-Non...	16.057	12.200	5201066	2877000	3.752	7.181	#
48)	Mirex	26.063	23.807	3674886	1280127	2.922	3.016	
49)	HCE	2.760	2.370	5232954	1497163	2.582	2.638	
50)	HCBD	3.317	2.787	4773190	1296690	2.971	2.753	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

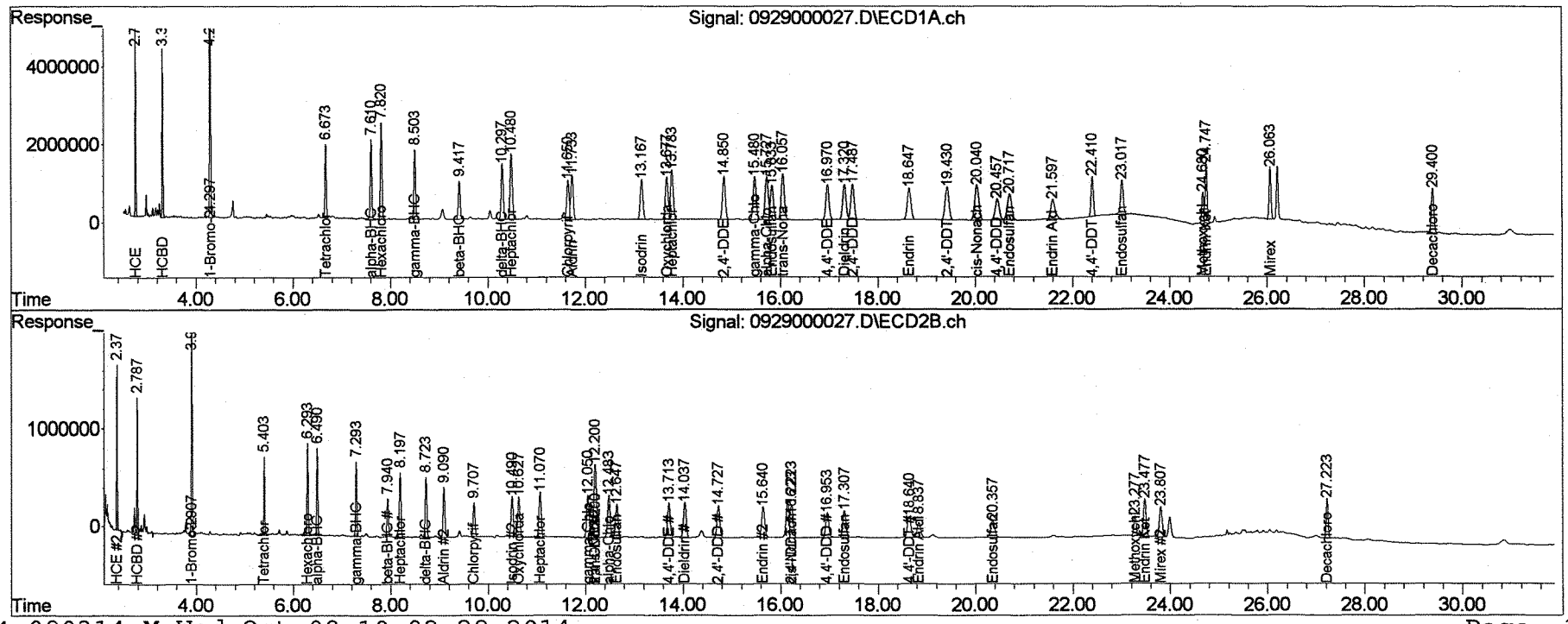
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000027.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:08:08
Operator :
Sample : KWG1413165-LCS1
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 09:59:39 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1410

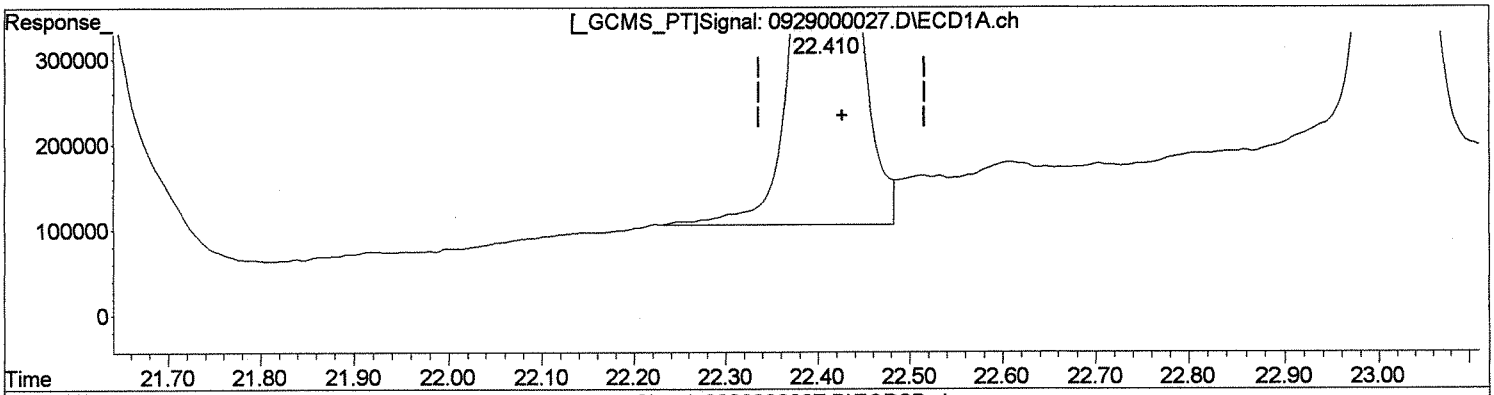


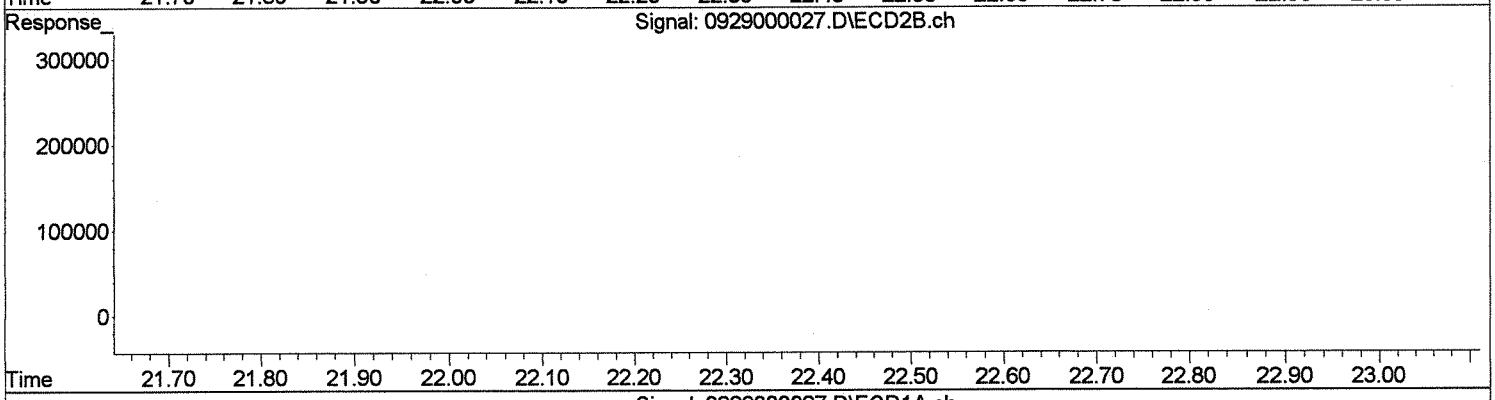
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000027.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:08:08
Operator :
Sample : KWG1413165-LCS1
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 09:54:51 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000027.D\ECD1A.ch

(22) 4,4'-DDT
22.410min 3.898 ug/L
response 3657586

(22) 4,4'-DDT #2
18.640min 3.167 ug/L
response 1086113

Manual Integration:
Before

10/08/14

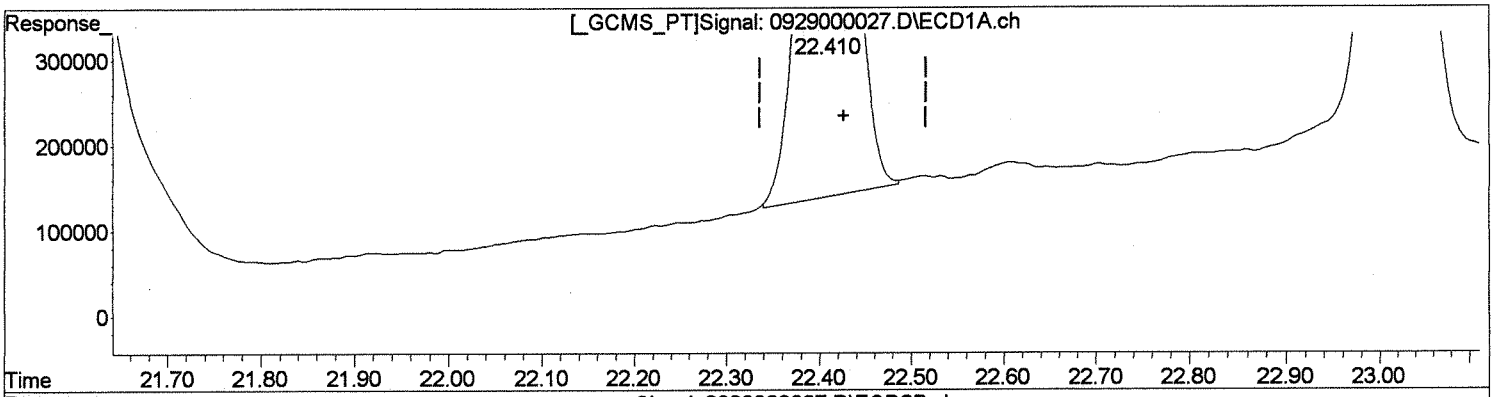
(+) = Expected Retention Time

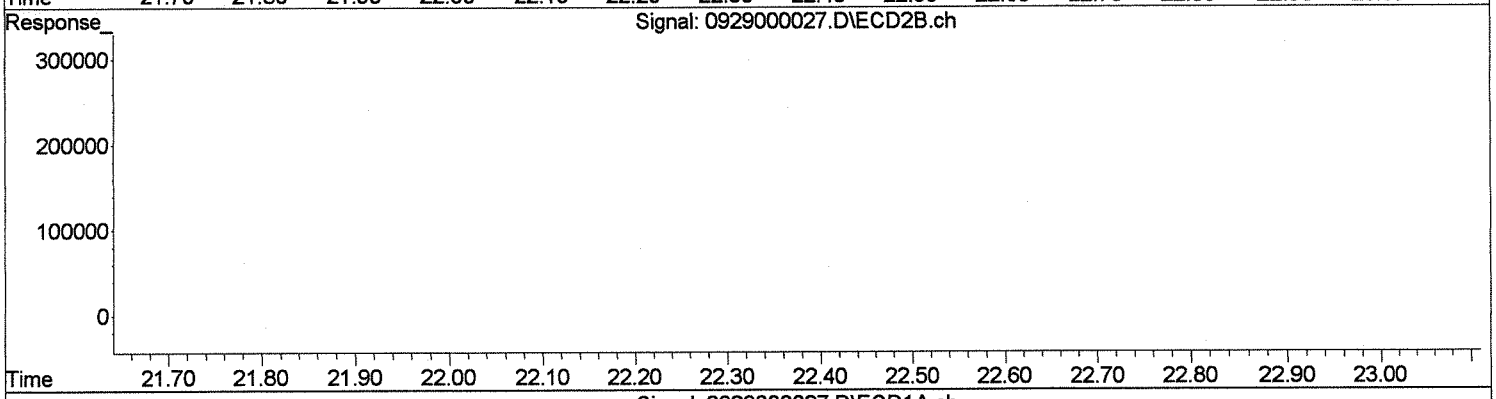
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000027.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:08:08
Operator :
Sample : KWG1413165-LCS1
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 09:54:51 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000027.D\ECD1A.ch

(22) 4,4'-DDT
22.410min 3.526 ug/L m
response 3308228

(22) 4,4'-DDT #2
18.640min 3.167 ug/L
response 1086113

Manual Integration:
After
Baseline/Shoulder
10/08/14

(+) = Expected Retention Time

Exception Report

Data File: J:\GC34\DATA\092914\0929000028.D
Lab ID: KWG1413165-2
RunType: DLCS
Matrix: WATER

Date Acquired: 09/30/2014 00:44
Date Quantitated: 10/08/2014 10:02
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Perthane	26.3	NA	20	NR
Continuing Calibration Recovery	beta-BHC	24.9	NA	20	
	Isodrin	25.4	NA	20	
	Endrin Aldehyde	24.5	NA	20	
	Decachlorobiphenyl	-29.0	NA	20	
	Perthane	-100.0	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	42855.41666	771421.6666	
	1-Bromo-2-nitrobenzene {3}	0	01215.08333	364860.3333	
Analyte Co-elution	1-Bromo-2-nitrobenzene	4.3	NA	NA	
	1-Bromo-2-nitrobenzene {4}	4.3	NA	NA	

Primary Review: AM 10/8/14

Secondary Review: [signature]

Exception Report

Data File: J:\GC34\DATA\092914\0929000028.D\0929000028C.
Lab ID: KWG1413165-2
RunType: DLCS
Matrix: WATER

Date Acquired: 09/30/2014 00:44
Date Quantitated: 10/08/2014 10:02
Batch ID: KWG1413270
Analysis Method: 8081B
MethodJoinID: MJ1232

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	beta-BHC	25.9	NA	20	
	Isodrin	20.6	NA	20	
	Endrin Aldehyde	49.2	NA	20	
	Perthane	-100.0	NA	20	
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	31027.33333	24109.33333	
	1-Bromo-2-nitrobenzene {3}	0	1645398.75	6581595	
Analyte Co-elution	1-Bromo-2-nitrobenzene	3.91	NA	NA	
	2,4'-DDE	12.2	NA	NA	
	2,4'-DDT	16.22	NA	NA	
	1-Bromo-2-nitrobenzene {4}	3.91	NA	NA	
	cis-Nonachlor	16.22	NA	NA	
	trans-Nonachlor	12.2	NA	NA	

Primary Review: am 10/8/14

Secondary Review:

Quantitation Report

Data File #1:	J:\GC34\DATA\092914\0929000028.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000028.D\0929000028c.d			**Vial:**	21
Acqu Date:	09/30/2014 00:44	**Quant Date:**	10/08/2014 10:02	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8081B Pest OC U	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413270	**Prep Lot:**	KWG1413165	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3535A		
Prep Ref:	1378563	**Prep Date:**	09/19/2014		

Quant Method:	J:\GC34\METHODS\GC34-090314.	**Calibration ID:**	CAL13530
Title:			
MB Ref:	J:\GC34\DATA\092914\0929000031.D	**Method ID:**	MJ1232
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	4.30 -0.01 c	3.91 -0.01 c	9970944	3088154	10.00	10.00
2	1-Bromo-2-nitrobenzene {2}			0d	0d	10.00	10.00
3	1-Bromo-2-nitrobenzene {3}			0d	0d	10.00	10.00
4	1-Bromo-2-nitrobenzene {4}	4.30 -0.01 c	3.91 -0.01 c	9970944	3088154	10.00	10.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	6.67	5.40	3391571	1078162	3.13	2.78			63 OK
					%Recovery =	63 OK	56 OK	Limits =	20-106	
1	Decachlorobiphenyl	29.40	27.22	4120905	1135615	2.66 CCV	2.93			59 OK
					%Recovery =	53 OK	59 OK	Limits =	19-127	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	7.61	6.49	3356377	1221648	3.38	2.94	6.76	5.88	**5.88**
1	Hexachlorobenzene	7.82	6.30 +0.01	4829201	1316052	2.95	2.67	5.90	5.33	**5.33**
1	beta-BHC	9.42 +0.01	7.94	2276147	742322	3.81 CCV	3.49 CCV	7.62	6.98	**6.98**
1	gamma-BHC (Lindane)	8.51 +0.01	7.29	3608813	1243389	3.68	3.08	7.36	6.17	**6.17**
1	delta-BHC	10.30	8.73	3377133	1275441	3.80	3.30	7.60	6.60	**6.60**
1	Heptachlor	10.48	8.20 +0.01	4380502	1316001	3.71	2.99	7.42	5.98	**5.98**
1	Aldrin	11.73	9.10 +0.01	3090066	1139836	3.27	3.04	6.53	6.08	**6.08**
1	Isodrin	13.17 +0.01	10.49	3070467	1000012	3.62 CCV	3.26 CCV	7.24	6.52	**6.52**
1	Heptachlor Epoxide	13.79 +0.01	11.07	4158022	1265863	3.49	2.98	6.98	5.95	**5.95**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000028.D	**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000028.D\0929000028c.d	**Vial:**	21
Acqu Date:	09/30/2014 00:44 **Quant Date:** 10/08/2014 10:02	**Dilution:**	1.0
Run Type:	DLCS	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-2		
Signal #1:	DB XLB **Signal #2:** DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	15.49 +0.01	12.05	4093474	1310160	3.44	3.04	6.87	6.08	**6.08**
1	Endosulfan I	15.83	12.65	3172379	1026672	3.02	2.76	6.04	5.51	**5.51**
1	alpha-Chlordane	15.72 -0.01	12.48	4259647	1297247	3.41	3.04	6.82	6.08	**6.08**
1	Dieldrin	17.32	14.04	3567530	1257290	3.41	3.08	6.82	6.17	**6.17**
1	4,4'-DDE	16.97	13.71	3350196	1141718	3.24	2.90	6.49	5.79	**5.79**
1	Endrin	18.65 +0.01	15.64	3517032	1171336	3.00	2.91	6.00	5.81	**5.81**
1	Endosulfan II	20.72 +0.01	17.31 +0.01	3478143	1075468	3.25	2.83	6.49	5.65	**5.65**
1	4,4'-DDD	20.46	16.95	2622527	974634	3.59	3.15	7.19	6.29	**6.29**
1	Endrin Aldehyde	21.60	18.84 +0.01	2762639	667515	3.18ccv	3.04ccv	6.36	6.07	**6.07**
1	Endosulfan Sulfate	23.02	20.35	2697061m	868156	2.30	2.43	4.59	4.85	**4.59**
1	4,4'-DDT	22.41	18.64	2808529m	943384	3.18	2.76	6.35	5.52	**5.52**
1	Endrin Ketone	24.75	23.48	3590926	1233873	2.93	3.02	5.86	6.05	**5.86**
1	Methoxychlor	24.68	23.28	2005782	583999	3.74	2.99	7.48	5.99	**5.99**
1	2,4'-DDE	14.85	12.20 -0.01 c	3933473	2533361	5.51	9.14	11.0	18.3	**11.0**P
1	2,4'-DDD	17.48 -0.01	14.73 +0.01	3884446	1174298	5.83	4.98	11.7	9.97	**9.97**
1	2,4'-DDT	19.43	16.22 -0.01 c	4043294	1253971	5.55	4.35	11.1	8.70	**11.1**
	Toxaphene			0	0	0.0000	0.0000	19.0U	19.0U	NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	19U	19U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	19U	19U	
	Chlordane			0	0	0.0000	0.0000	4.00U	4.00U	NR
3	Chlordane {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
3	Chlordane {6}			0d	0d	0.0000	0.0000	4.0U	4.0U	
4	Chlorpyrifos	11.65 -0.01	9.71	2996170	845261	3.67	3.33	7.34	6.65	**6.65**
4	Oxychlordane	13.68	10.63	3764113	1098614	3.42	3.13	6.85	6.26	**6.26**
4	cis-Nonachlor	20.04 -0.01	16.22 +0.07c	4593294	1253971	3.32	2.73	6.63	5.45	**6.63**
4	trans-Nonachlor	16.06	12.20 +0.01c	4509180	2533361	3.45	6.33	6.91	12.7	**6.91**P
4	Mirex	26.06	23.81	3342556	1152875	2.82	2.71	5.64	5.42	**5.42**
4	Hexachloroethane	2.76 -0.01	2.37	4485978	1324946	2.37	2.34	4.74	4.68	**4.68**
4	Hexachlorobutadiene	3.32	2.79	4186418	1170951	2.77	2.49	5.53	4.99	**4.99**
4	Perthane			0	0	0.0000ccv	0.0000ccv	20U	20U	20U

The -/+ after Retention Time symbolize the direction of the RT shift

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC34\DATA\092914\0929000028.D			**Instrument:**	GC34
Data File #2:	J:\GC34\DATA\092914\0929000028.D\0929000028c.d			**Vial:**	21
Acqu Date:	09/30/2014 00:44	**Quant Date:**	10/08/2014 10:02	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1413165-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:02:00 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	4.300	3.910	9970944	3088154	10.000	10.000	
43)		1-Bromo-2...	4.300	3.910	9970944	3088154	10.000	10.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	6.673	5.403	3391571	1078162	3.133	2.782	
28)	s	Decachlor...	29.400	27.223	4120905	1135615	2.662	2.933	
		Target Compounds							
3)		alpha-BHC	7.613	6.493	3356377	1221648	3.382	2.942	
4)		Hexachlor...	7.820	6.297	4829201	1316052	2.948	2.665	
5)		beta-BHC	9.417	7.940	2276147	742322	3.810	3.491	
6)		gamma-BHC...	8.507	7.293	3608813	1243389	3.682	3.083	
7)		delta-BHC	10.300	8.727	3377133	1275441	3.801	3.302	
8)		Heptachlor	10.483	8.197	4380502	1316001	3.708	2.991	
9)		Aldrin	11.733	9.097	3090066	1139836	3.265	3.042	
10)		Isodrin	13.167	10.493	3070467	1000012	3.621	3.259	
11)		Heptachlo...	13.787	11.070	4158022	1265863	3.488	2.976	
12)		gamma-Chl...	15.487	12.053	4093474	1310160	3.436	3.041	
13)		Endosulfan I	15.833	12.647	3172379	1026672	3.019	2.757	
14)		alpha-Chl...	15.723	12.483	4259647	1297247	3.408	3.042	
15)		Dieldrin	17.317	14.040	3567530	1257290	3.408	3.084	
16)		4,4'-DDE	16.973	13.713	3350196	1141718	3.244	2.895	
17)		Endrin	18.650	15.643	3517032	1171336	3.001	2.905	
18)		Endosulfa...	20.717	17.307	3478143	1075468	3.247	2.827	
19)		4,4'-DDD	20.460	16.953	2622527	974634	3.594	3.145	
20)		Endrin Al...	21.603	18.837	2762639	667515	3.179	3.037	
21)		Endosulfa...	23.020	20.353	2697061	868156	2.295m	2.427	
22)		4,4'-DDT	22.410	18.640	2808529	943384	3.177m	2.760	
23)		Endrin Ke...	24.750	23.477	3590926	1233873	2.930	3.024	
24)		Methoxychlor	24.680	23.277	2005782	583999	3.739	2.994	
25)		2,4'-DDE	14.850	12.203	3933473	2533361	5.514	9.139	#
26)		2,4'-DDD	17.483	14.727	3884446	1174298	5.833	4.984	
27)		2,4'-DDT	19.430	16.223	4043294	1253971	5.554	4.351	

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:02:00 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
44)	Chlorpyrifos	11.653	9.707	2996170	845261	3.668	3.325	
45)	Oxychlordane	13.680	10.630	3764113	1098614	3.424	3.130	
46)	cis-Nonac...	20.043	16.223	4593294	1253971	3.316	2.727	
47)	trans-Non...	16.057	12.203	4509180	2533361	3.453	6.326	#
48)	Mirex	26.060	23.807	3342556	1152875	2.821	2.708	
49)	HCE	2.763	2.370	4485978	1324946	2.370	2.342	
50)	HCBD	3.317	2.787	4186418	1170951	2.766	2.494	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

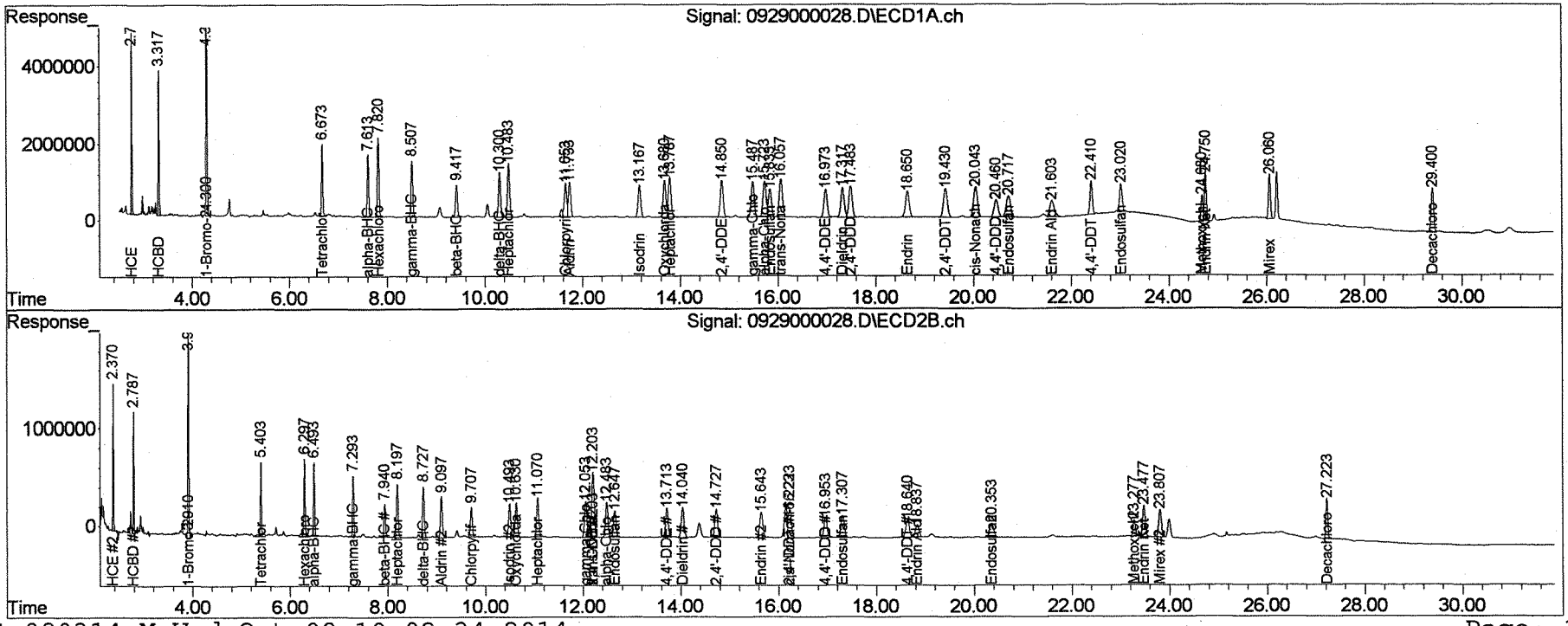
Quantitation Report (QT Reviewed)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:02:00 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB
Signal #1 Info : 0.32mm
Signal #2 Phase: DB-35MS
Signal #2 Info : 0.32mm

1420

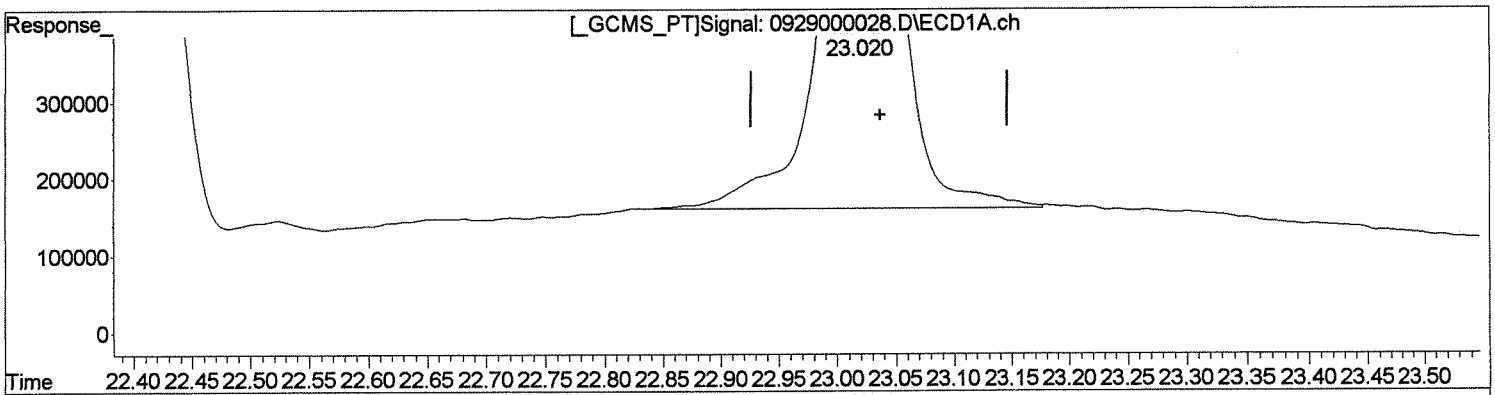


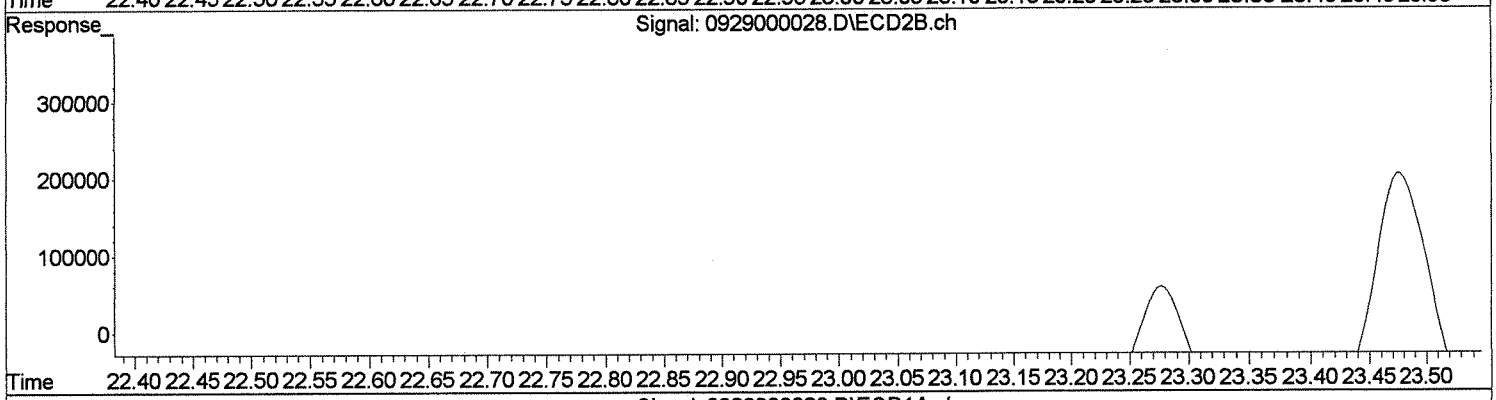
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:00:33 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000028.D\ECD1A.ch

(21) Endosulfan Sulfate
23.020min 2.615 ug/L
response 3053992

(21) Endosulfan Sulfate #2
20.353min 2.427 ug/L
response 868156

Manual Integration:
Before

10/08/14

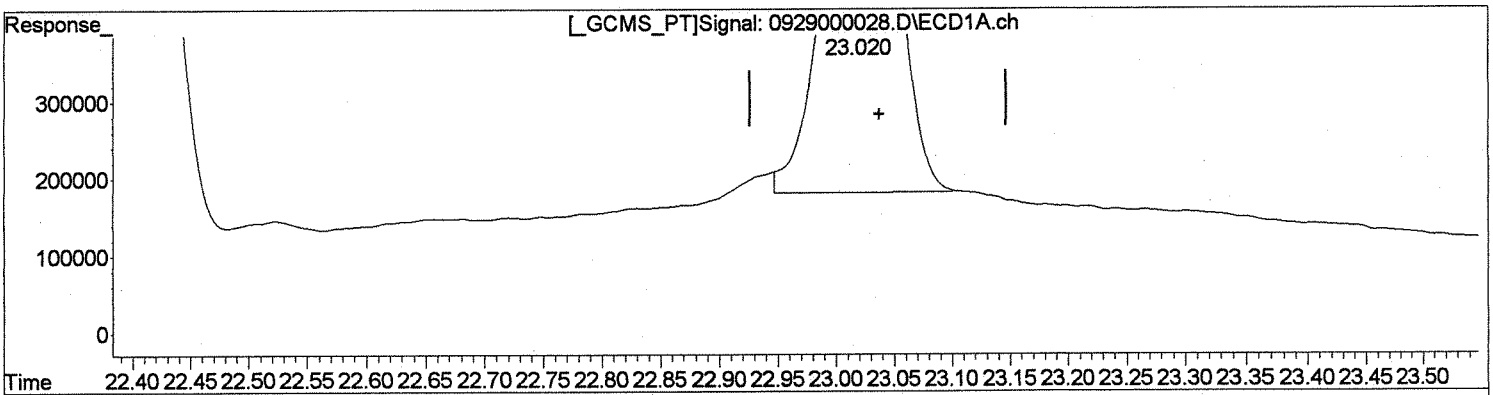
(+) = Expected Retention Time

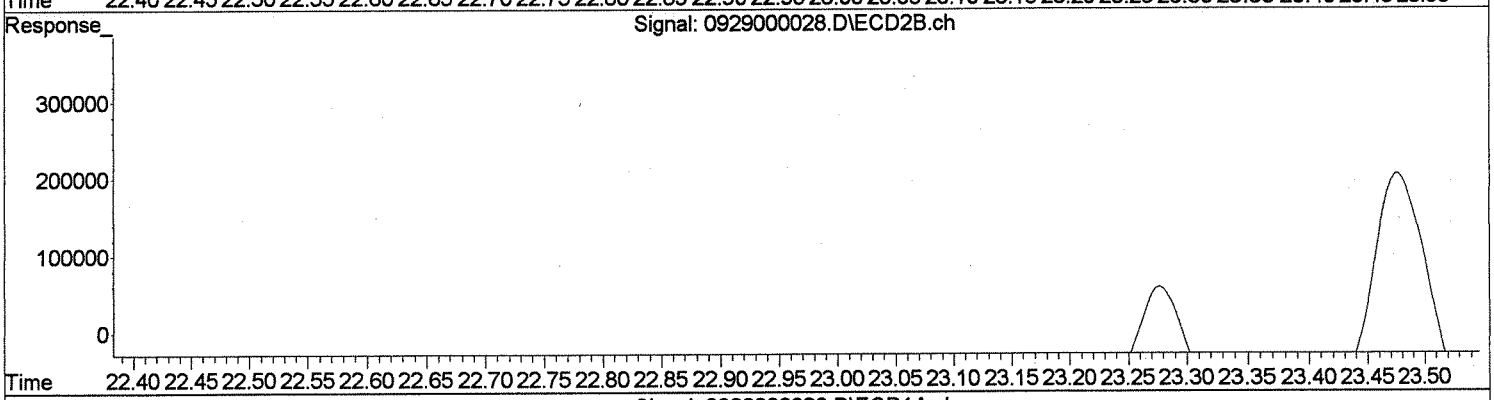
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:00:33 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000028.D\ECD1A.ch

(21) Endosulfan Sulfate
23.020min 2.295 ug/L m
response 2697061

(21) Endosulfan Sulfate #2
20.353min 2.427 ug/L
response 868156

Manual Integration:
After
Baseline/Shoulder
10/08/14

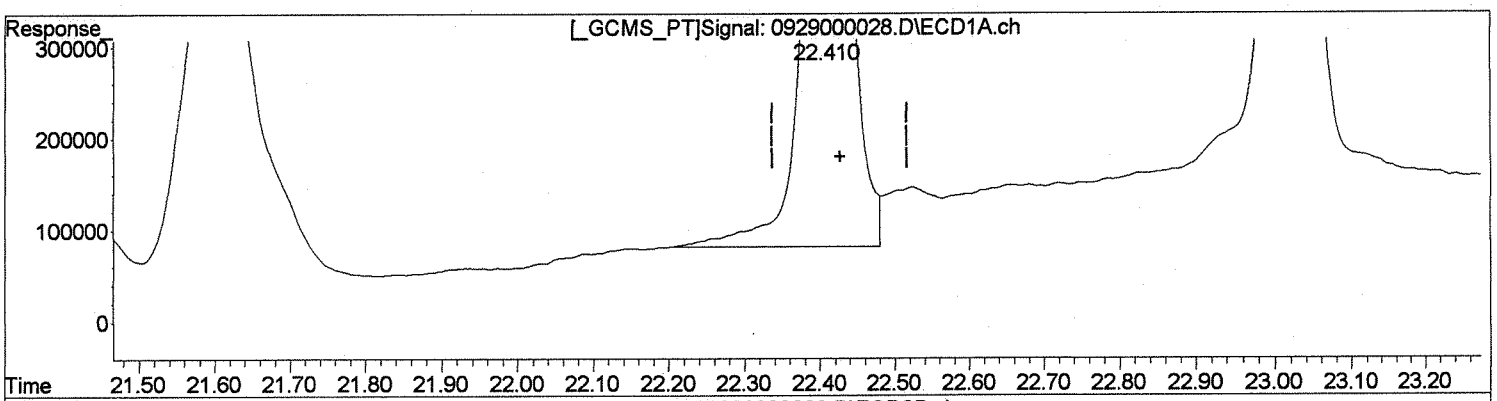
(+) = Expected Retention Time

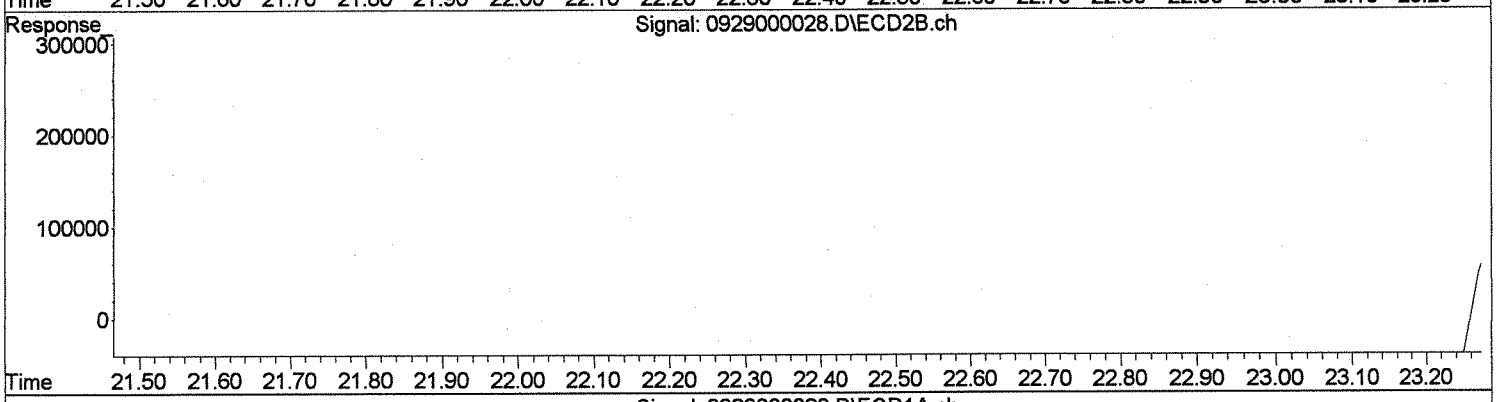
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:00:33 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000028.D\ECD1A.ch

(22) 4,4'-DDT
22.410min 3.625 ug/L
response 3204279

(22) 4,4'-DDT #2
18.640min 2.760 ug/L
response 943384

Manual Integration:
Before

10/08/14

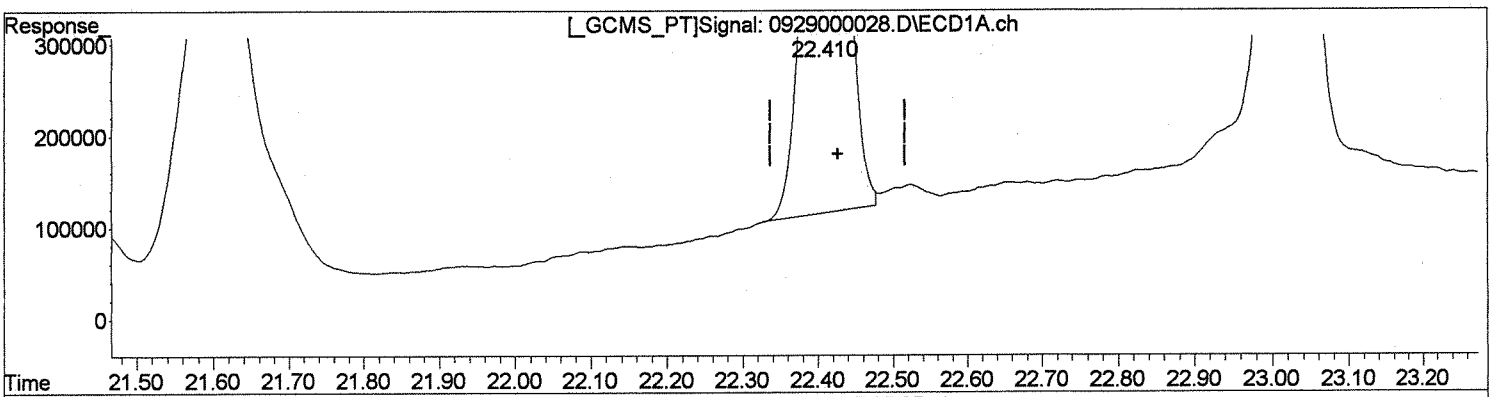
(+) = Expected Retention Time

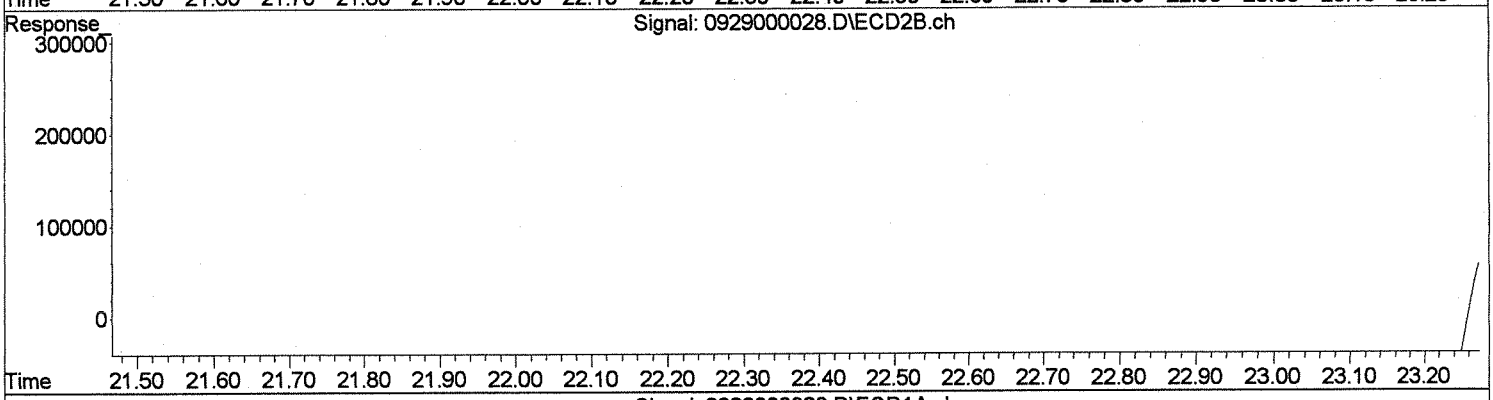
Quantitation Report (Qedit)

Data Path : J:\GC34\DATA\092914\
Data File : 0929000028.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 30-Sep-2014, 00:44:37
Operator :
Sample : KWG1413165-DLCS2
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Oct 08 10:00:33 2014
Quant Method : J:\GC34\METHODS\GC34-090314.M
Quant Title : Organochlorine Pesticides CAL13530
QLast Update : Wed Oct 08 09:35:57 2014
Response via : Initial Calibration
Integrator: RTE

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Signal: 0929000028.D\ECD1A.ch

(22) 4,4'-DDT
22.410min 3.177 ug/L m
response 2808529

(22) 4,4'-DDT #2
18.640min 2.760 ug/L
response 943384

Manual Integration:
After
Baseline/Shoulder
10/08/14

(+) = Expected Retention Time

Polychlorinated Biphenyls

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Preparation Information

Group ID:	KWG1413166	**Prep Method:**	EPA 3535A	**Prep Date:**	09/19/14 09:45
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1409921-012	WS-091514-RB-SW03	8082A PCB ULL	WATER	1000mL	2mL	
K1409921-013	WS-091514-RB-SW04	8082A PCB ULL	WATER	1000mL	2mL	
K1409921-014	WS-091514-RB-SW05	8082A PCB ULL	WATER	1010mL	2mL	
K1409921-015	WS-091514-RB-SW02	8082A PCB ULL	WATER	990mL	2mL	
K1409921-016	WS-091514-RB-SW01	8082A PCB ULL	WATER	1020mL	2mL	
K1409921-017	WS-091514-RB-FD10	8082A PCB ULL	WATER	1010mL (1)	2mL	
K1409921-018	RINSE BLANK 9-15	8082A PCB ULL	WATER	~~100mL~~ 1000 mL	2mL	
KWG1413166-1	Lab Control Sample	8082A PCB ULL	WATER	1000mL	2mL	
KWG1413166-2	Duplicate Lab Control Sampl	8082A PCB ULL	WATER	1000mL	2mL	
KWG1413166-3	Method Blank	8082A PCB ULL	WATER	1010mL	2mL	

Lab Code	Parent Lab Code	Comments
KWG1413166-1		KQ1411532-05
KWG1413166-2		KQ1411532-06
KWG1413166-3		KQ1411532-07

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1409921-012	1378571					KClark
K1409921-013	1378572					KClark
K1409921-014	1378573					KClark
K1409921-015	1378574					KClark
K1409921-016	1378575					KClark
K1409921-017	1378576					KClark
K1409921-018	1378570					KClark
KWG1413166-1	1378567					KClark
KWG1413166-2	1378568					KClark
KWG1413166-3	1378569					KClark

Comments: (1) EF KC 9/29/14

Started By: CWilliam Assisted By: _____ Training: Yes / No

Completed By: KMiller Assisted By: _____ Yes / No

Reviewed By: KC Date: 9/29/14 Storage: _____

Chain of Custody

Relinquished By: _____ Date: 9-26-14

Received By: _____ Date: 9/26/14

Extracts Examined: Yes / No

Preparation Information Benchsheet

Prep Run: 218454
Team: Semivoa GC
Analyst: CWilliams
Prep Workflow: OrgExtSPEaq (7)
Prep Method: EPA 3535A
Rush/NPDES: N/A
Status: Draft
Current Step: Extraction
Prep Date: 09/19/2014 00:00
Due Date: 09/23/2014
Hold Date: 09/22/2014

Lab Code	Client ID	Bottle #	✓	Initial Amount mL	pH Initial	pH Adj 1	Inter. Volume	Final Volume mL	Surr Amt µL	Spike Amt µL	TestNo List
K1409921-012	WS-091514-RB-SW03	.02	✓	1000	NA	2.5	NA	2	50	—	PCB ULL, Pest OC ULL
K1409921-013	WS-091514-RB-SW04	.02	✓	1000		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-014	WS-091514-RB-SW05	~~.02~~ .03	✓	1010		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-015	WS-091514-RB-SW02	.02	✓	990		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-016	WS-091514-RB-SW01	~~.02~~ .03	✓	1020		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-017	WS-091514-RB-FD10	.02	✓	1010		2.5		2		—	PCB ULL, Pest OC ULL
K1409921-018	RINSE BLANK 9-15	.02	✓	1000		2.5		2		—	PCB ULL, Pest OC ULL
K1409958-001	W14I114-01	~~.02~~ .01	✓	960		2.5		2		—	Pest OC ULL
K1409958-002	W14I114-02	~~.02~~ 0.1	✓	960		2.5		2		—	Pest OC ULL
K1409986-001	C0914-NC245SW-A	~~.02~~ .06	✓	1000		2.5		2		—	Pest OC ULL
K1409986-004	C0914-NC267-GW	~~.02~~ .03	✓	890		2.5		2		—	Pest OC ULL
K1410023-001	MW-5	~~.02~~ .01	✓	1010		2.5		2		—	PEST_OC_ULL
(2) ~~K1410023-002~~	~~MW-6~~	~~.02~~	✓							—	PEST_OC_ULL
K1410023-003	MW-7	~~.02~~ .01	✓	990		2.5		2		—	PEST_OC_ULL
KQ1411532-01	Lab Control Sample 8081/MISC 2,4 DD			1000		2.5		2		100/100/100	Pest OC ULL, PEST_OC_ULL
KQ1411532-02	Duplicate Lab Control Sample			1000		2.5		2			Pest OC ULL, PEST_OC_ULL
KQ1411532-03	Lab Control Sample TOX			1000		2.5		2		200	Pest OC ULL, PEST_OC_ULL
KQ1411532-04	Duplicate Lab Control Sample			1000		2.5		2			Pest OC ULL, PEST_OC_ULL
KQ1411532-05	Lab Control Sample 1660			1000		2.5		2		200	PCB ULL
KQ1411532-06	Duplicate Lab Control Sample			1000		2.5		2			PCB ULL
KQ1411532-07	Method Blank			1010		2.5		2		—	PCB ULL, Pest OC ULL, PEST_OC_ULL

21 Total Samples consisting of 14 Client Samples, 0 Client QC Samples, 7 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Witness: KClark 9/19/14

Surr PCB06-455 Exp. 12/27/14 0.2ppm 50µl(Epp) 81 GCPS7-84M Exp. 10/10/14 0.1 ppm 100µl (Epp
MISC GCPS7-84B Exp 1/22/15 0.1ppm 100µl (Epp) 2,4DD GCPS7-84-K Exp 3/6/15 0.1ppm 100µl (Epp
TOX GCPS7-83I Exp 11/9/14 1ppm 200µl (Epp) 60 PCB06-46A Exp. 1/9/15 1ppm 200µl (Epp.

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	9/19/14	9/19/14	CW			
Final Volume		9-26-14	K			

Comments

Insufficient sample volume for MS/DMS

① EE 9/19/14 CW

~~② during extraction~~

② Expected that acetone was introduced to sample during the extraction process. Due to high levels of solids in the sample matrix it will be extracted by continuous. Original and new meniscus are marked.

Additional Prep Information For Pest/PCB-UL Water by 3535

Service Request # K1409921, 9958, 9986 Work Group # 218454

Solvents/Reagents used: K1410023

Methanol Lot#: 76720 Sulfuric Acid Lot#: 53232

Acetone Lot #: OK520 Hexane Lot #: 78258

Atlantic C18 Disk Lot #: 3160113

Extraction Program # 8100 Initial Purge Prog # 8081.4

Between Sample Purge Program# 8081.8

Start (Time/Date/Initial): 0945 9/19/14 CW

Stop (Time/Date/Initial): 1445 9/19/14 CW

Final Volume/Cleanups:

Dry Disk (Time/Date/Initial): 0725 9/24/14 CW Lot #: B024006028I6

TurboVap(Time/Date/Initials): 0745 9/24/14 CW Therm ID: K-Turbovap-04

Temp as measured: 28 °C Correction factor: -1 °C Adjusted temp: 27 °C

Florisil cleanup (Time/Date/Initials): 10:30 9-26-14 K Florisil Lot #: 31137

1:1 Hexane Acetone: EXT002-4R 9:1 Hexane:Acetone: EXT002-4Q

N-Evap (Time/Date/Initial): 11:00 9-26-14 K N-Evap Therm ID: XSVM001

Temp as measured: 35 °C Correction factor: 0 °C Adjusted temp: 35 °C

Sulfuric Acid Clean-up (Time/Date/Initials): 1020 9/24/14 CW Acid Lot #: 53232

Pest Vial: Yellow Vial Storage: Happy H1-I8

PCB Vial: Green Vial Storage: Ludwig F1-10

Comments/Observations: Pest only - Archived - Mason Jar

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason:)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☐ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

Preparation Information

Group ID:	KWG1413412	**Prep Method:**	EPA 3541	**Prep Date:**	09/25/14 12:35
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1409921-004	SE-091514-RB-SD11	8082A PCB	SEDIMENT	20.051g	10mL	
K1409921-005	SE-091514-RB-SD10	8082A PCB	SEDIMENT	20.143g	10mL	
K1409921-006	SE-091514-RB-SD09	8082A PCB	SEDIMENT	20.026g	10mL	
K1409921-007	SE-091514-RB-SD08	8082A PCB	SEDIMENT	20.087g	10mL	
K1409921-008	SE-091514-RB-SD07	8082A PCB	SEDIMENT	20.104g	10mL	
K1409921-009	SE-091514-RB-SD06	8082A PCB	SEDIMENT	20.109g	10mL	
K1409921-010	SE-091514-RB-SD05	8082A PCB	SEDIMENT	20.298g	10mL	
K1409921-011	SE-091514-RB-SD12	8082A PCB	SEDIMENT	20.388g	10mL	
KWG1413412-1	Matrix Spike	8082A PCB	SEDIMENT	20.153g	10mL	
KWG1413412-2	Duplicate Matrix Spike	8082A PCB	SEDIMENT	20.116g	10mL	
KWG1413412-3	Lab Control Sample	8082A PCB	SEDIMENT	10.000g	10mL	
KWG1413412-4	Method Blank	8082A PCB	SEDIMENT	20.410g	10mL	

Lab Code	Parent Lab Code	Comments
KWG1413412-1	K1409921-004	KQ1411615-04
KWG1413412-2	K1409921-004	KQ1411615-05
KWG1413412-3		KQ1411615-06
KWG1413412-4		KQ1411615-07

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1409921-004	1380529					HSteele
K1409921-005	1380530					HSteele
K1409921-006	1380531					HSteele
K1409921-007	1380532					HSteele
K1409921-008	1380533					HSteele
K1409921-009	1380534					HSteele
K1409921-010	1380535					HSteele
K1409921-011	1380536					HSteele
KWG1413412-1	1380537					(X) ~~HSteele~~ T Jackson
KWG1413412-2	1380538					(X) ~~HSteele~~ T Jackson
KWG1413412-3	1380539					(X) ~~HSteele~~ T Jackson
KWG1413412-4	1380540					HSteele

Comments: (X) EE KC 10/3/14

Started By: CHarvey Assisted By: _____ Training: Yes / No

Completed By: KMiller Assisted By: _____ Yes / No

Reviewed By: KC Date: 10/3/14 Storage: _____

Chain of Custody

Relinquished By: _____ Date: 10-2-14

Received By: _____ Date: _____

Extracts Examined: Yes / No

Preparation Information Benchsheet

Prep Run: 218585
Team: Semivoa GC
Analyst: JJOHNSON
Prep Workflow: OrgExtS (14)
Prep Method: EPA 3541
Rush/NPDES: N/A
Status: Draft
Current Step: Extraction
Prep Date: ~~09/19/2014~~ 09/25/2014 EE K ~~11:58~~ ~~12:35~~ 10|3
Due Date: 09/22/2014
Hold Date: 09/29/2014

[redacted]

Lab Code	Client ID	Bottle #	✓	Target Amt	Initial Amount g	Inter. Volume mL	Final Volume mL	Surr Amt uL	Spike Amt uL	TestNo List
K1409921-004	SE-091514-RB-SD11 S,W	~~.02~~ .03	✓	10.00 g	20.051	10	10	500	—	PCB, Pest OC
K1409921-005	SE-091514-RB-SD10 W,R,S,O	.02	✓	10.00 g	20.143	10	10		—	PCB, Pest OC
K1409921-006	SE-091514-RB-SD09 S,O,R	.02	✓	10.00 g	20.026	10	10		—	PCB, Pest OC
K1409921-007	SE-091514-RB-SD08 O,R	~~.02~~ .03	✓	10.00 g	20.087	10	10		—	PCB, Pest OC
K1409921-008	SE-091514-RB-SD07 R,W	.02	✓	10.00 g	20.104	10	10		—	PCB, Pest OC
K1409921-009	SE-091514-RB-SD06 O,W	~~.02~~ .03	✓	10.00 g	20.109	10	10		—	PCB, Pest OC
K1409921-010	SE-091514-RB-SD05 W,O	.02	✓	10.00 g	20.298	10	10		—	PCB, Pest OC
K1409921-011	SE-091514-RB-SD12 S,W,O	.02	✓	10.00 g	20.388	10	10		—	PCB, Pest OC
K1409921-004: KQ1411615-01	Matrix Spike S,W	~~.02~~ .03	✓	10.00 g	20.283	10	10		250	Pest OC
K1409921-004: KQ1411615-02	Duplicate Matrix Spike S,W	~~.02~~ .03	✓	10.00 g	20.410	10	10			Pest OC
KQ1411615-03	Lab Control Sample			10.00 g	10.000	10	10			Pest OC
K1409921-004: KQ1411615-04	Matrix Spike S,W	~~.02~~ .03	✓	10 g	~~20.153~~ ~~20.104~~ EE 9/25/14 TS	10	10		250	PCB
K1409921-004: KQ1411615-05	Duplicate Matrix Spike S,W	~~.02~~ .03	✓	10 g	20.116	10	10			PCB
KQ1411615-06	Lab Control Sample			10 g	10.000	10	10			PCB
KQ1411615-07	Method Blank			10 g	20.410	10	10		—	PCB, Pest OC

15 Total Samples consisting of 8 Client Samples, 4 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Witness: H Stark 9-25-14
TS Jackson 9/25/14

Spiking Solutions

Surr: PCB 6-51D, 2ug/mL, exp 2/28/15, 500uL, 3Bepp
Spike: CRPST-84L, 4ppm, exp 10/10/14, 250uL, Zepp
PCB 6-47K, 40ug/mL, exp 2/5/15, 250uL, Zepp

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	9/25/14		C. Haney			
Final Volume		10-2-14	KM			

Comments

S=Sandy Sample matrix, W= Water visible in sample, R=Rocks, O=Organic matter in sample

GPC RUNLOG

Run Date: 9/29/2014 **Calibration Date:** 9/23/2014

GPC #: 7 **Program Number:** 2

Lab I.D.	Position	Test	Dilution	Comments
BLANK	1	P/P	4 ML TO 10 ML	NA
K11615 LCS 82	2	P/P	4 ML TO 10 ML	NA
K11615 LCS 81	3	P/P	4 ML TO 10 ML	NA
K11615 MB	4	P/P	4 ML TO 10 ML	NA
9921-4	5	P/P	4 ML TO 10 ML	NA
9921-5	6	P/P	4 ML TO 10 ML	NA
9921-6	7	P/P	4 ML TO 10 ML	NA
9921-7	8	P/P	4 ML TO 10 ML	NA
9921-8	9	P/P	4 ML TO 10 ML	NA
9921-9	10	P/P	4 ML TO 10 ML	NA
9921-10	11	P/P	4 ML TO 10 ML	NA
9921-11	12	P/P	4 ML TO 10 ML	NA
9921-4 MS 81	13	P/P	4 ML TO 10 ML	NA
9921-4 DMS 81	14	P/P	4 ML TO 10 ML	NA
9921-4 MS 82	15	P/P	4 ML TO 10 ML	NA
9921-4 DMS 82	16	P/P	4 ML TO 10 ML	NA
	17			
	18			
	19			
	20			
	21			
	22			
	23			

Final Volume Calculation

Intermediate Volume before GPC: 10 mL

Aliquot taken from intermediate volume: 4 mL

Aliquot diluted up to.... 10 mL

Volume Injected onto column: 5 mL

GPC'd Extract brought to the Final Volume of: 2 mL

Calculated True Final Volume: 10 mL

Operator Date and Initial: 09/29/2014 KM

Additional Prep Information For Pest/PCB Soils by EPA 3541

Service Request # K1409921 Work Group # Z18585

Solvents/Reagents used:

Date/Time/Initials Weighed: 9/19/14 1530 JJ Balance ID: K-Bal-3 Calibration Verified ☒

Storage Location (if not extracted same day): 309-R-06

DCM Lot # DL130 Sulfate Lot # K21000l Matrix Sand Lot # 061913

Soxtherm Start (Time/Date/Initial): 1235 | 9-25-14 | CH

Soxtherm Stop (Time/Date/Initial): 815 | 9/26/14 | LL

Cleanups:

N-Evap (Date/Time/Initial): 9-29-14 7:30 K N-Evap Thermometer ID: XSVM001

Temp as measured: 35 °C Correction factor: 0 °C Adjusted temp: 35 °C

GPC Clean-up (3640) (Time/Date/Initial): 10:00 9-29-14 K (all samples) Filter Lot #: 21829780

Solvent Exchanged To Hexane (Time/Date/Initial): 8:45 10-2-14 K Hexane lot#: 78258

S-Evap Thermometer ID: XSVM006 S-Evap (Date/Time/Initial): 10-2-14 8:45 K

Temp as measured: 75 °C Correction factor: 0 °C Adjusted temp: 75 °C

N-Evap (Date/Time/Initial): 11:00 10-2-14 K N-Evap Thermometer ID: XSVM001

Temp as measured: 35 °C Correction factor: 0 °C Adjusted temp: 35 °C

Sulfuric Acid Clean-up (3665) (Time/Date/Initial): 2:30 10-2-14 K Acid Lot #: 53232

Clean-up #3 Carbon 10-2-14 K ☒ all samples ☐ some samples: Lot 31154 EXT002-30F

Pest Vial: Yellow Vial Storage: Greeny A1-B2

PCB Vial: Green Vial Storage: Rudwig C1-D2

Archived Extract Storage: FYQYQR

Comments/Observations: _____

Bench Sheet Review Check List	
☑	Hold Times Met (if no, Reason:)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike Information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☐	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F008.I
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 05:56
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 05:56
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Printed: 10/06/2014 14:07:09
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F008.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D			**Vial:**	4
Acqu Date:	10/04/2014 05:56	**Quant Date:**	10/13/2014 04:23	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-012				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378571	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1		ng/mL #2				Rpt	
Decachlorobiphenyl	12.45	-0.01	14.43	0.00	3204265	4923115	6.00		6.22				124	OK
					%Recovery =		120	OK	124	OK	**Limits =**	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}	4.29	4.95	0m	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	1.08	1.90	0.0022J	0.0038J	**0.0022**JP
Aroclor 1242 {2}	4.81	5.33	6900m	59332m	0.7350	2.25	0.0015J	0.0045J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F008.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D			**Vial:**	4
Acqu Date:	10/04/2014 05:56	**Quant Date:**	10/13/2014 04:23	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-012				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.01	5.95	42397m	39515m	1.76	1.25	0.0035J	0.0025J	
Aroclor 1242 {4}	5.11	5.99	12257m	61148m	0.7460	1.58	0.0015J	0.0032J	
Aroclor 1242 {5}	5.24	6.18	0m	51858m	0.0000	2.53	0.00096U	0.0051	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}	6.36	7.24	20710m	92962m	1.70	2.12	0.0034J	0.0042J	
Aroclor 1254			0	0	1.21	2.04	0.0024J	0.0041J	**0.0024**JP
Aroclor 1254 {2}	6.79	7.29	17398m	45761m	0.8200	2.42	0.0016J	0.0048J	
Aroclor 1254 {3}	6.95	7.62	63215m	102358m	1.47	1.67	0.0029J	0.0033J	
Aroclor 1254 {4}	7.30	8.63	27652m	51090m	1.14	2.21	0.0023J	0.0044J	
Aroclor 1254 {5}	7.92	9.42	12989m	48149m	0.9260	1.79	0.0019J	0.0036J	
Aroclor 1260 {1}	7.79 0.00	8.45 0.00	0m	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.7588	0.8270	0.0015J	0.0017J	**0.0015**J
Aroclor 1260 {2}	8.23 -0.01	9.95 +0.00	15767m	37335m	0.7240	1.17	0.0014J	0.0023J	
Aroclor 1260 {3}	8.79 -0.01	10.42 0.00	19750m	26253m	0.8850	0.8090	0.0018J	0.0016J	
Aroclor 1260 {4}	9.25 -0.01	11.11 -0.01	32929m	51358m	0.6800	0.7240	0.0014J	0.0014J	
Aroclor 1260 {5}	10.04 -0.01	11.77 0.00	28502m	28085m	0.7460	0.6020	0.0015J	0.0012J	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Report Date: 13-Oct-2014 04:23

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D
Inj Date : 04-OCT-2014 05:56
Sample Info: K1409921-012
Misc Info :
Cal Date : 06-OCT-2014 13:58
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

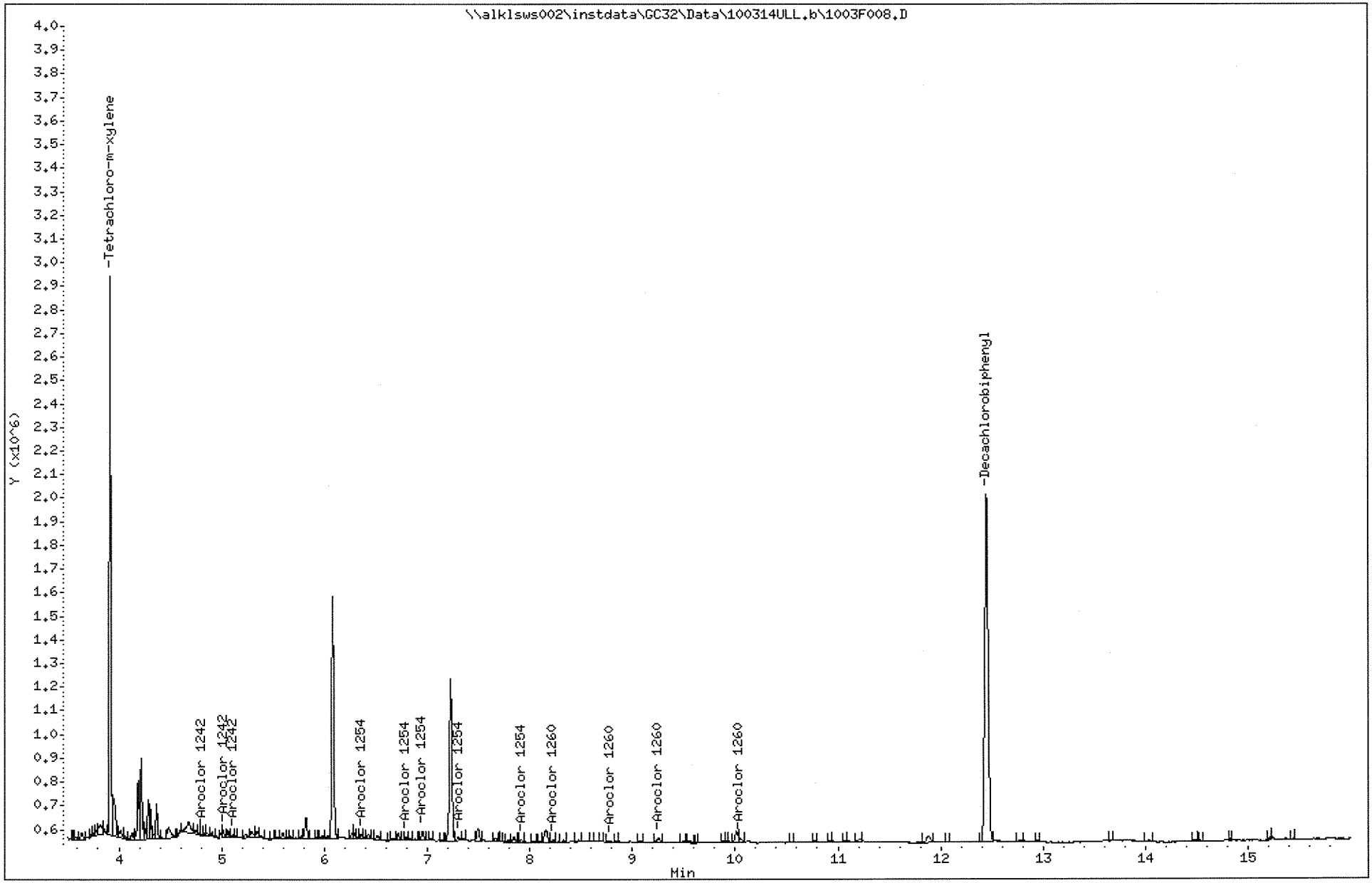
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.641	2323018	5119515	3.50	4.22		100.00(R)
Aroclor 1242	4.287	4.948					80.00- 120.00	0.00(M)
	4.811	5.325	6900	59332	0.735	2.25	67.74- 101.60	3.79(M)
	5.014	5.945	42397	39515	1.76	1.25	183.47- 275.21	33.99(M)
	5.107	5.985	12257	61148	0.746	1.58	127.13- 190.69	6.73(M)
	5.237	6.181		51858		2.53	97.67- 146.51	0.00(M)
			Average of Peak Amounts =		1.08	1.90		
Aroclor 1254	6.357	7.241	20710	92962	1.70	2.12	80.00- 120.00	100.00(M)
	6.794	7.291	17398	45761	0.820	2.42	144.59- 216.89	84.01(M)
	6.954	7.621	63215	102358	1.47	1.67	283.85- 425.77	305.24(M)
	7.301	8.631	27652	51090	1.14	2.21	154.54- 231.81	133.52(M)
	7.917	9.418	12989	48149	0.926	1.79	99.03- 148.55	62.72(M)
			Average of Peak Amounts =		1.21	2.04		
Aroclor 1260	7.787	8.445					80.00- 120.00	0.00(M)
	8.227	9.951	15767	37335	0.724	1.17	134.02- 201.03	120.88(M)
	8.787	10.418	19750	26253	0.885	0.809	140.40- 210.60	151.42(M)
	9.254	11.108	32929	51358	0.680	0.724	299.92- 449.88	252.45(M)
	10.041	11.768	28502	28085	0.746	0.602	236.01- 354.01	218.52(M)
			Average of Peak Amounts =		0.759	0.826		
Decachlorobiphenyl	12.447	14.431	3204265	4923115	6.00	6.22		100.00(R)
Aroclors, Total	1.000	1.000	73148	156785	3.05	4.77		0.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Date : 04-OCT-2014 05:56
Client ID:
Instrument: GC32.i
Sample Info: K1409921-012
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

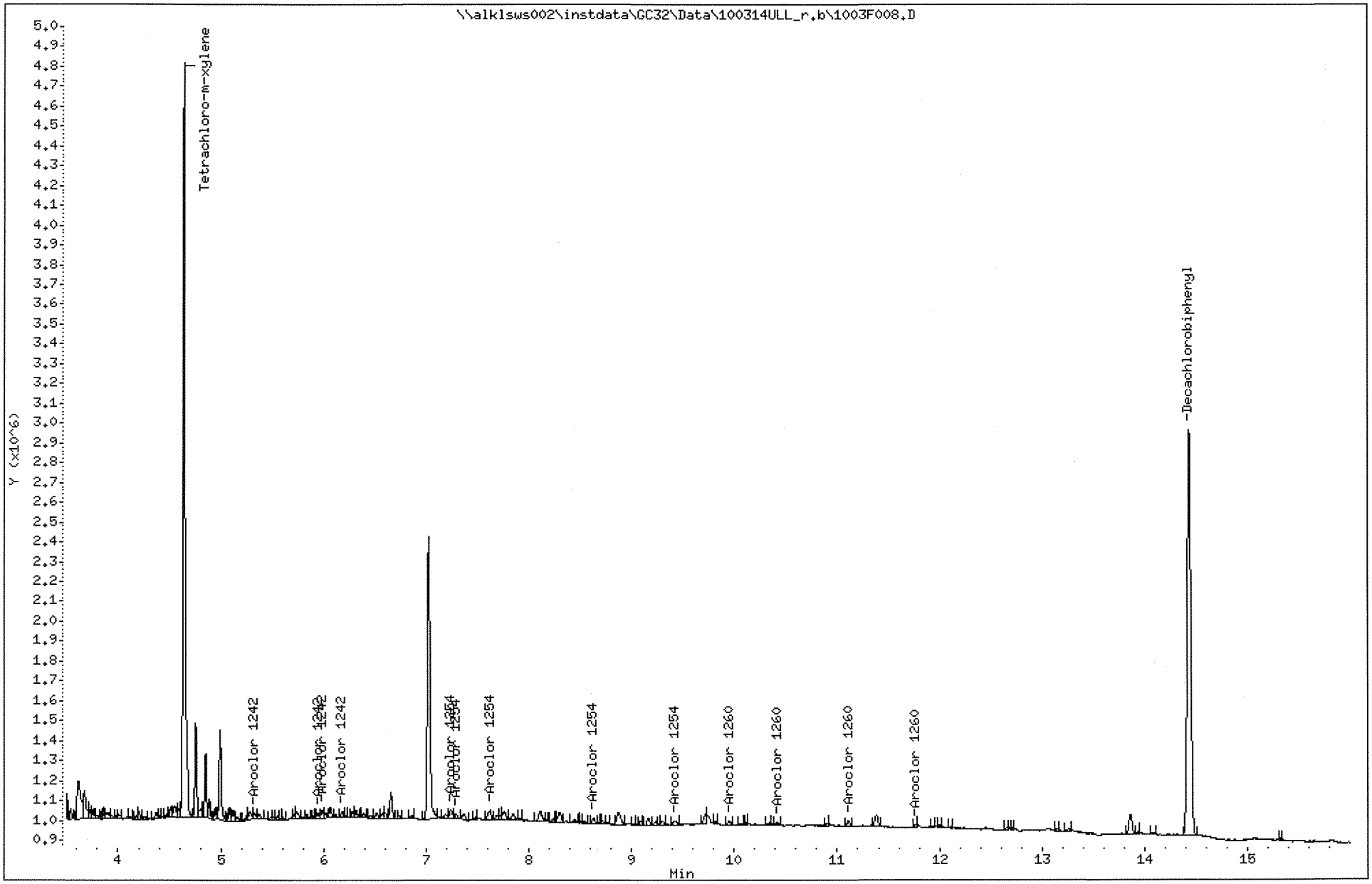


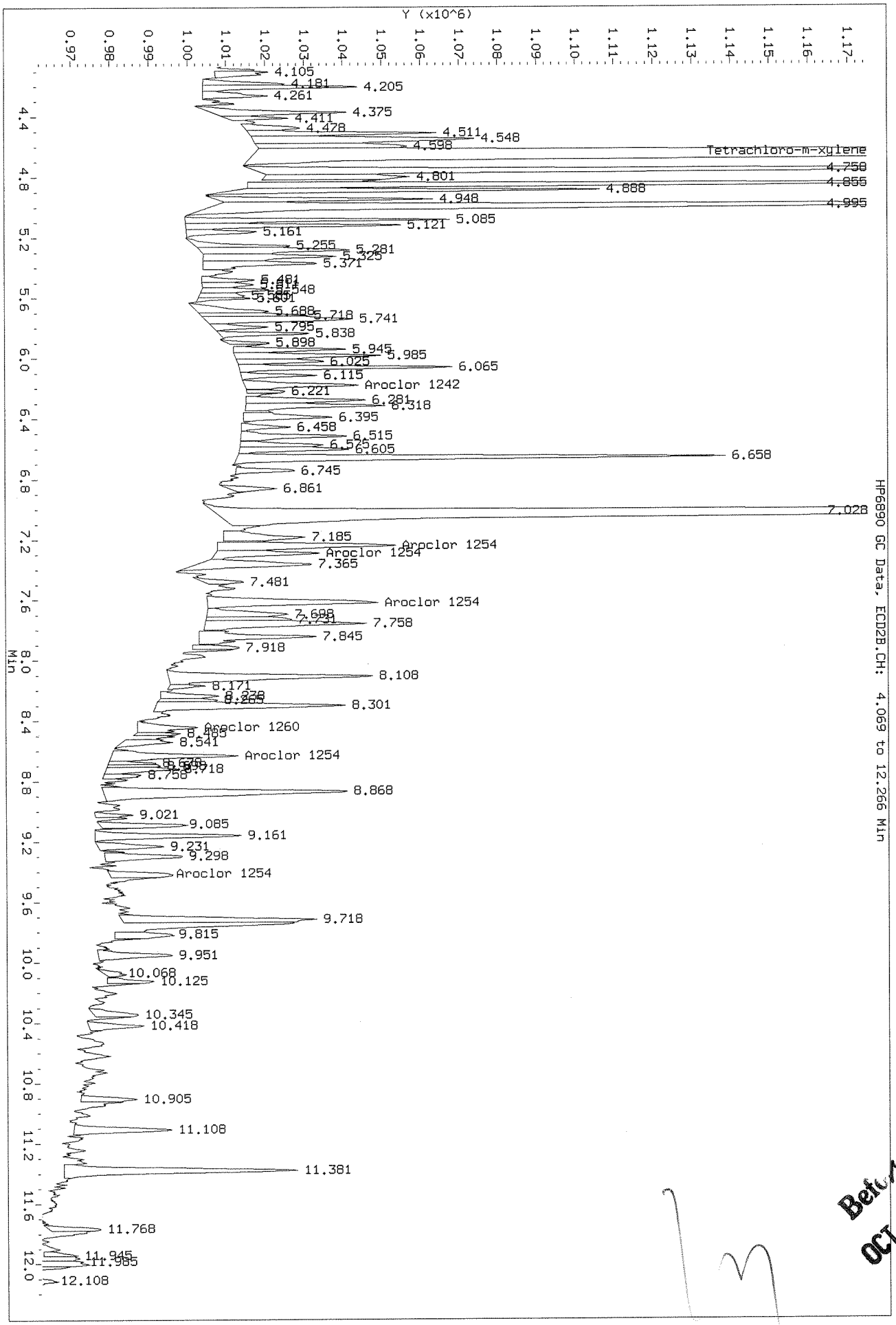
Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D
Date : 04-OCT-2014 05:56
Client ID:
Sample Info: K1409921-012

Instrument: GC32.i

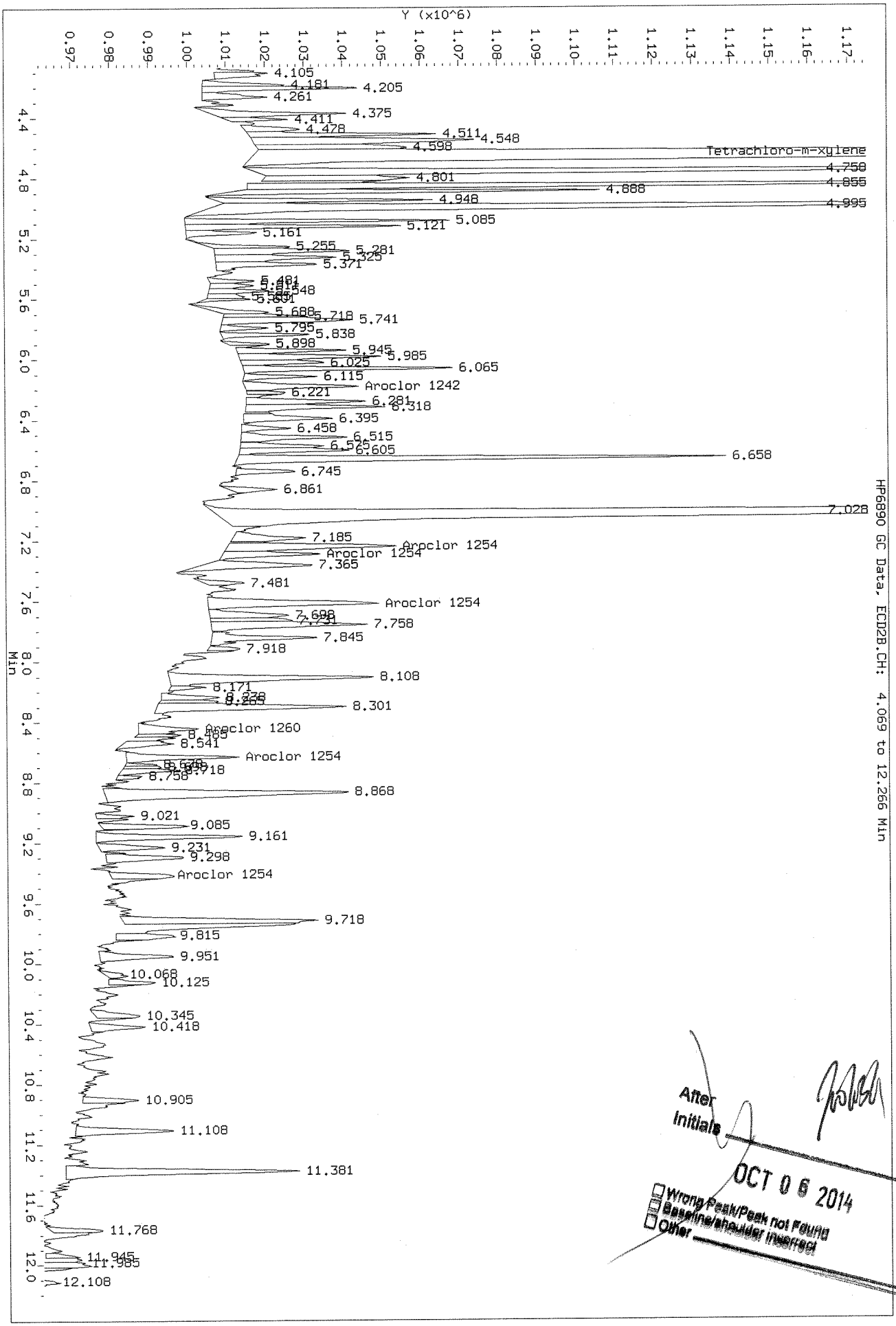
Operator: JMSmith

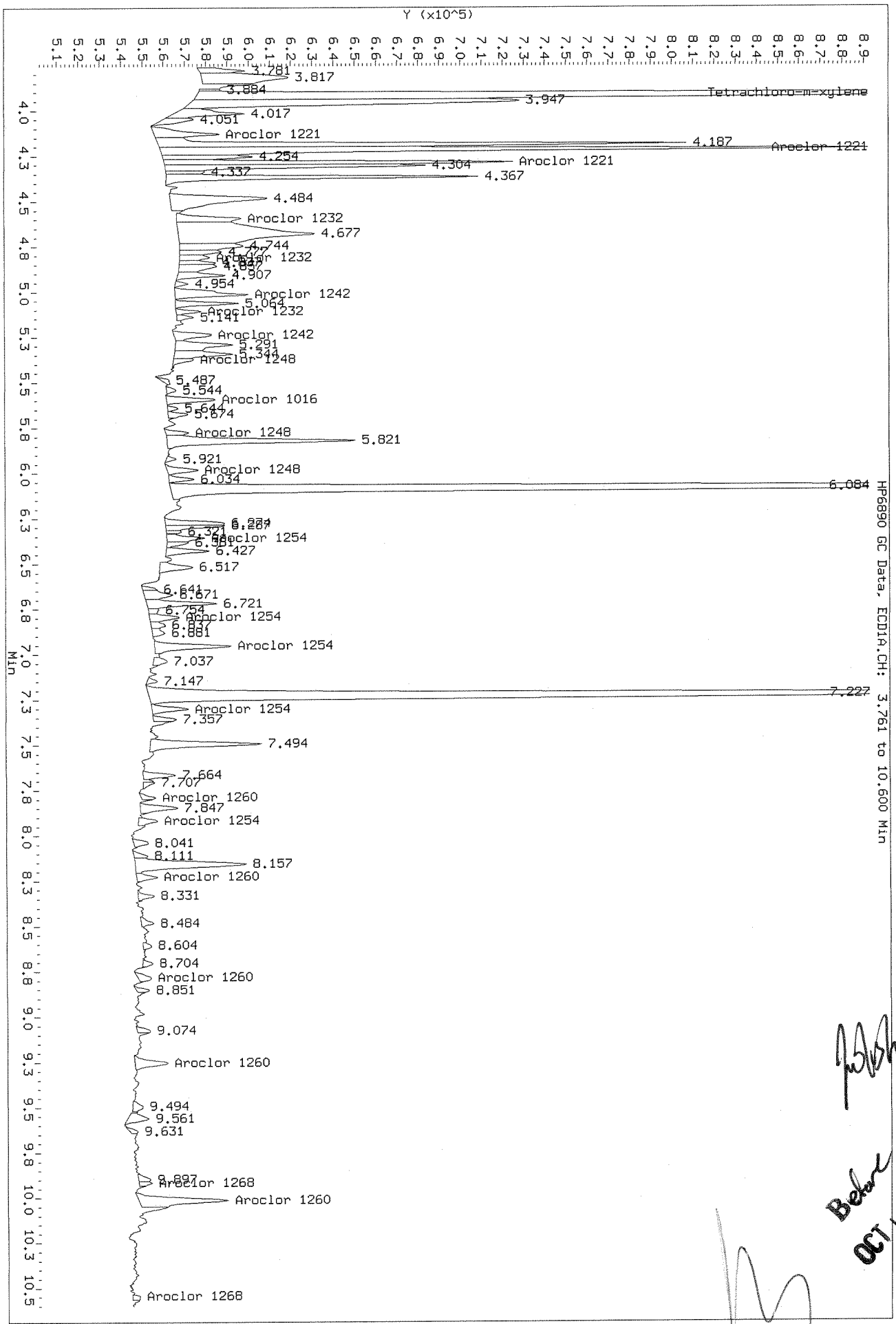
Column phase: DB-XLB
Column diameter: 0.32



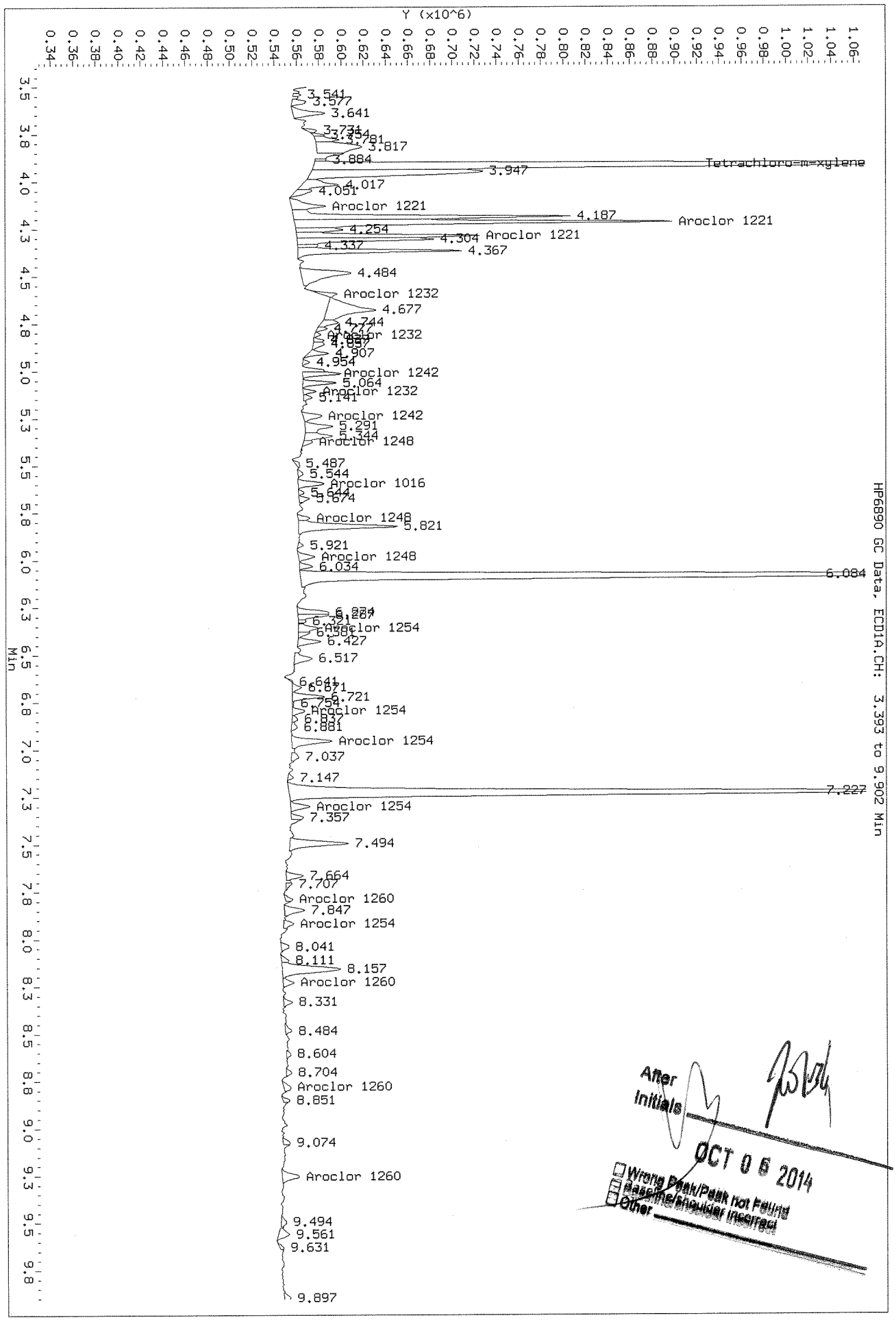


Before
OCT 06 2014


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.1
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 4.069 to 12.266 Min
Y (x10^6)
Min
Tetrachloro-m-xylene
Aroclor 1242
Aroclor 1254
Aroclor 1254
Aroclor 1254
Aroclor 1260
Aroclor 1254
Aroclor 1254
After
Initials
OCT 0 6 2014
Wrong Peak/Peak not Found
Baseline/shoulder inverted
Other

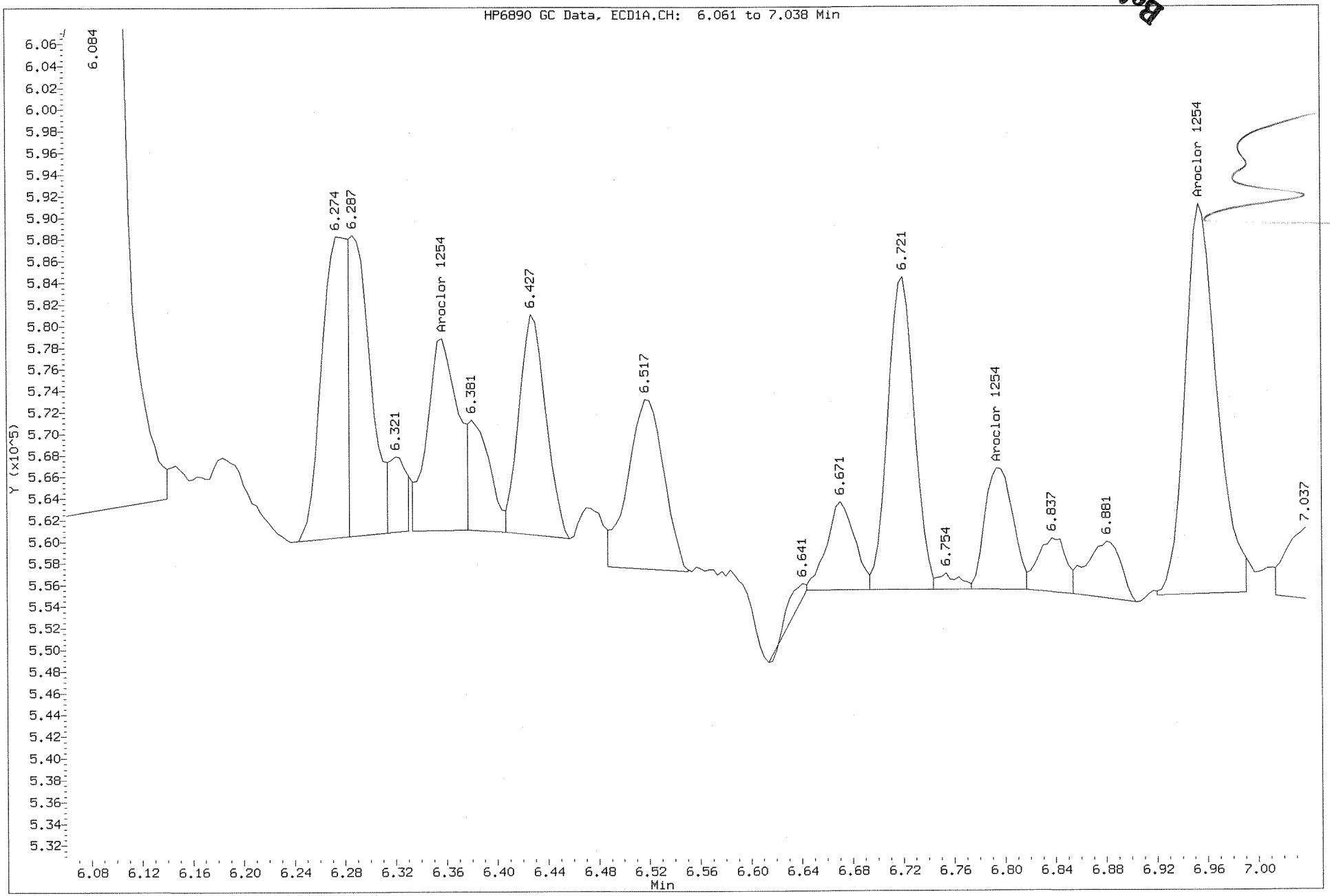


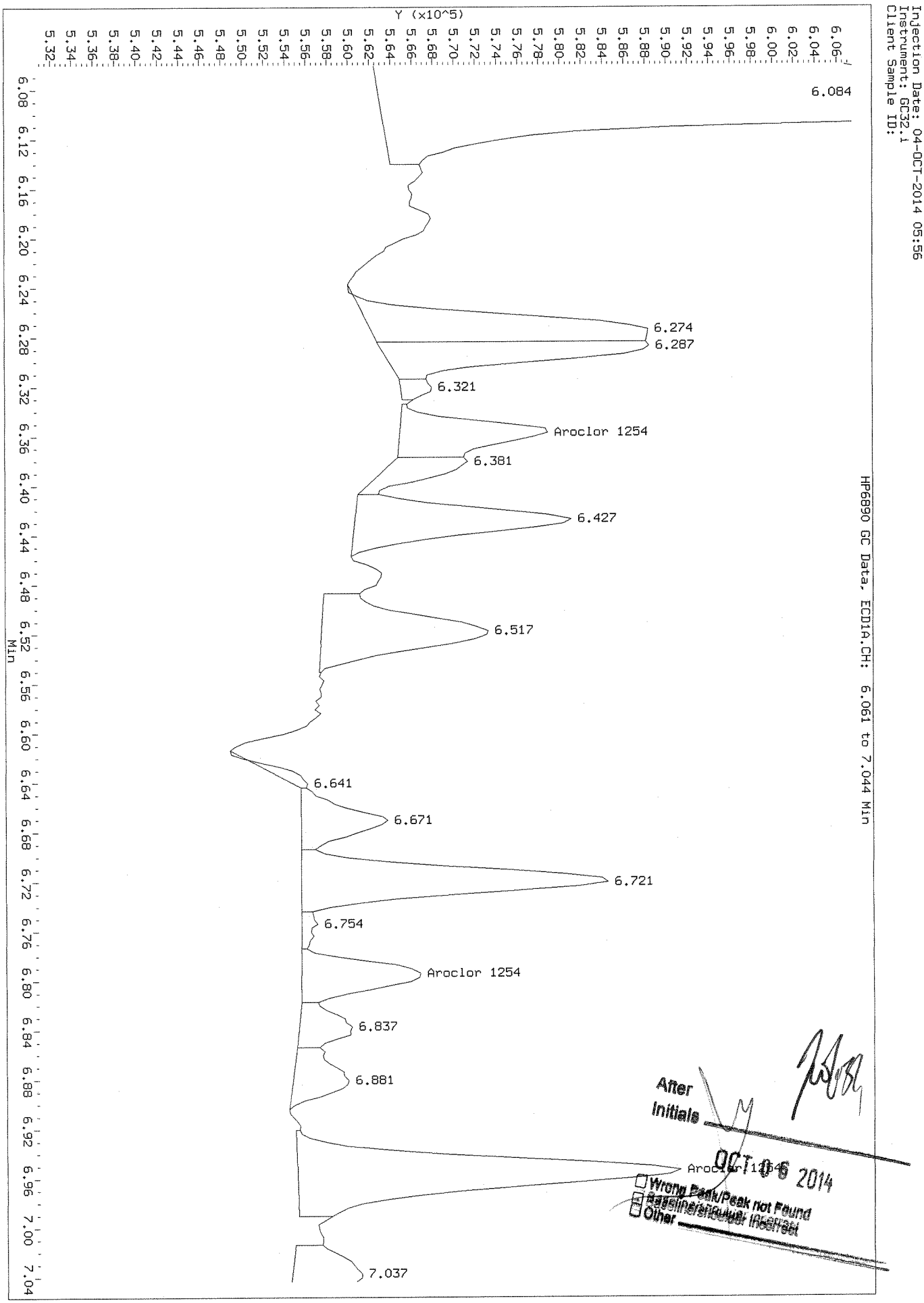
Before
OCT 16 2014


Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:
HP6890 GC Data, ECD1A.CH: 3.393 to 9.902 Min
Y (x10^6)
Min
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1016
Aroclor 1254
Aroclor 1260
Initials
OCT 0 6 2014
Wrong Peak/Peak not Found
Other

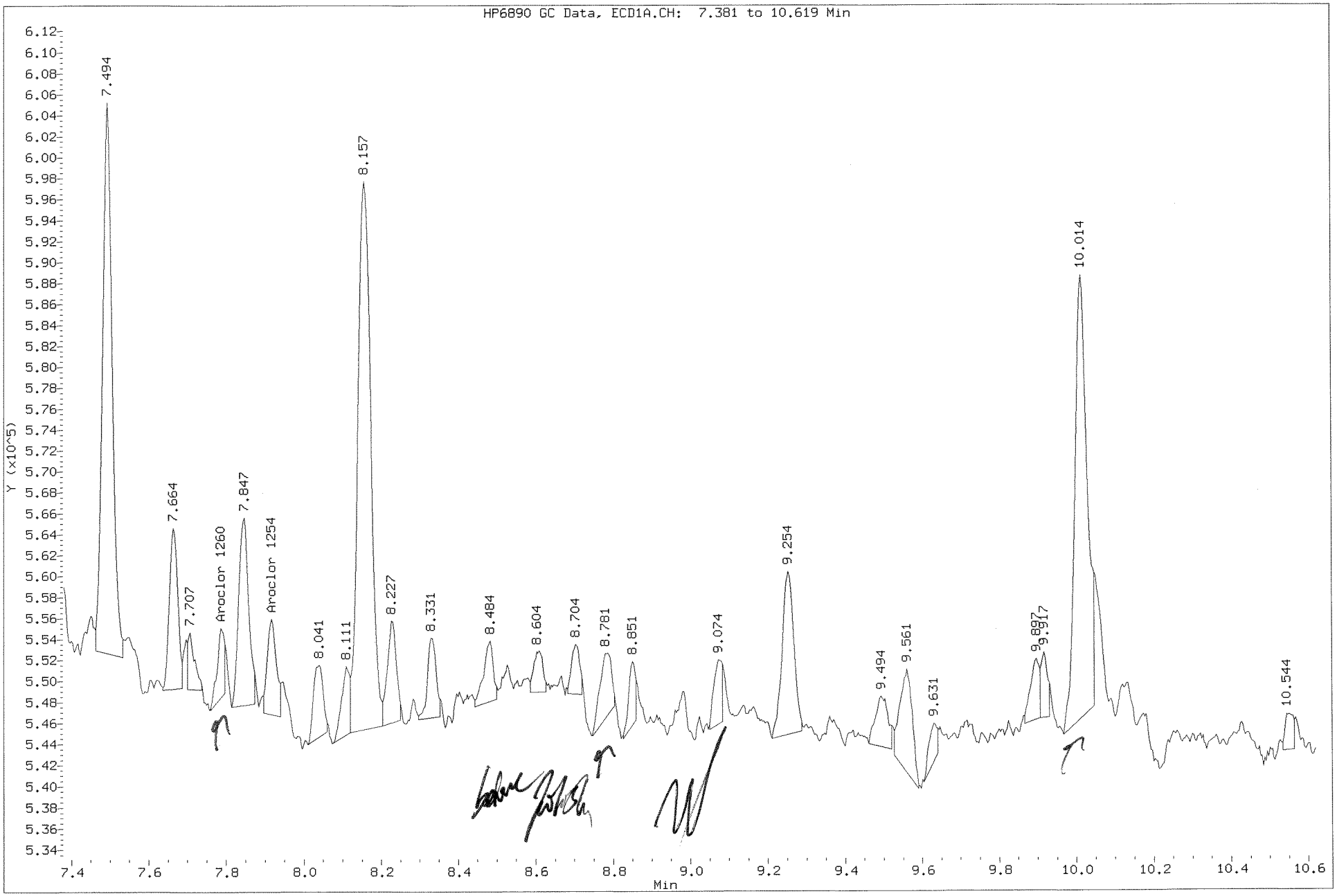
Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:

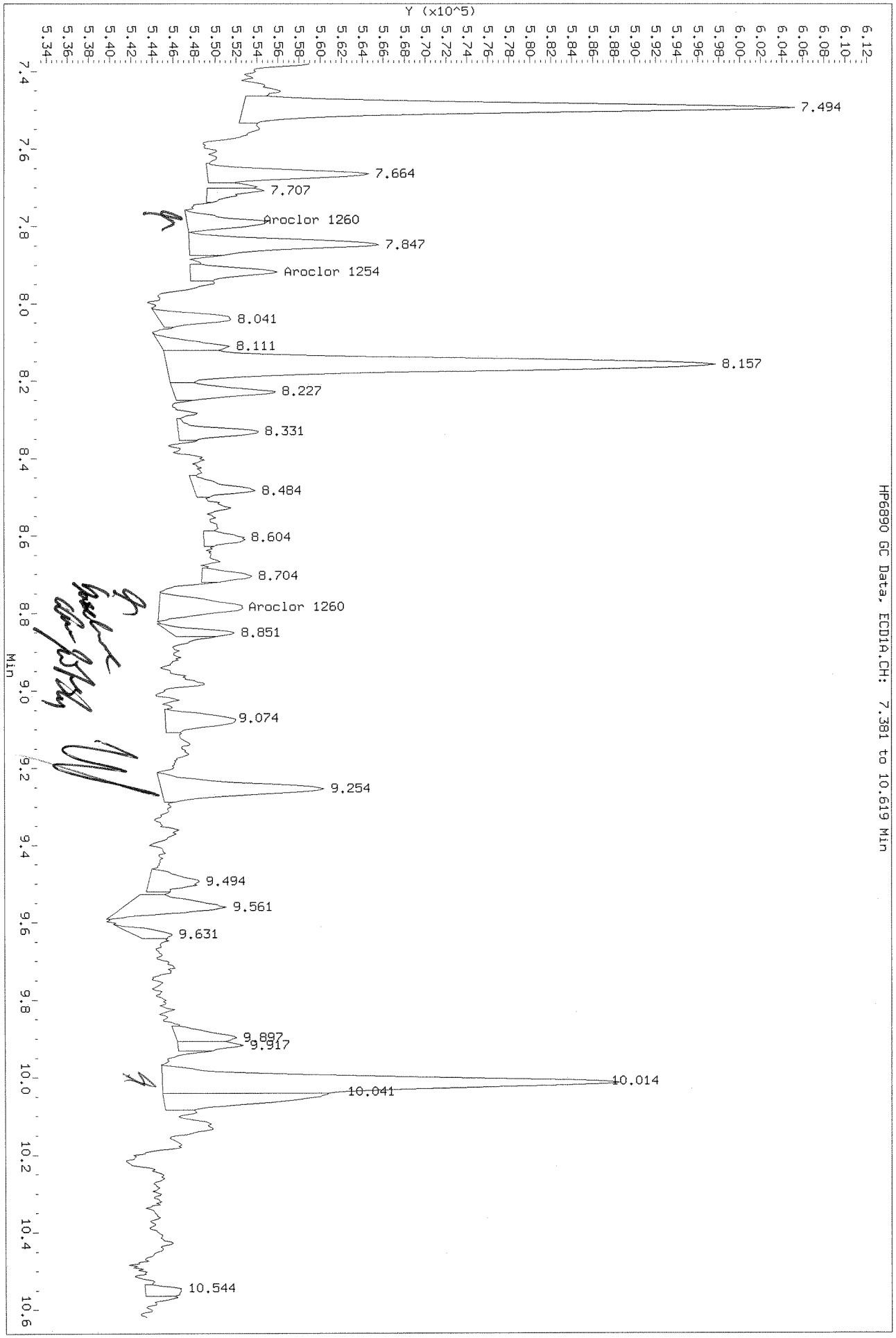
Before Rinse
OCT 06 2014



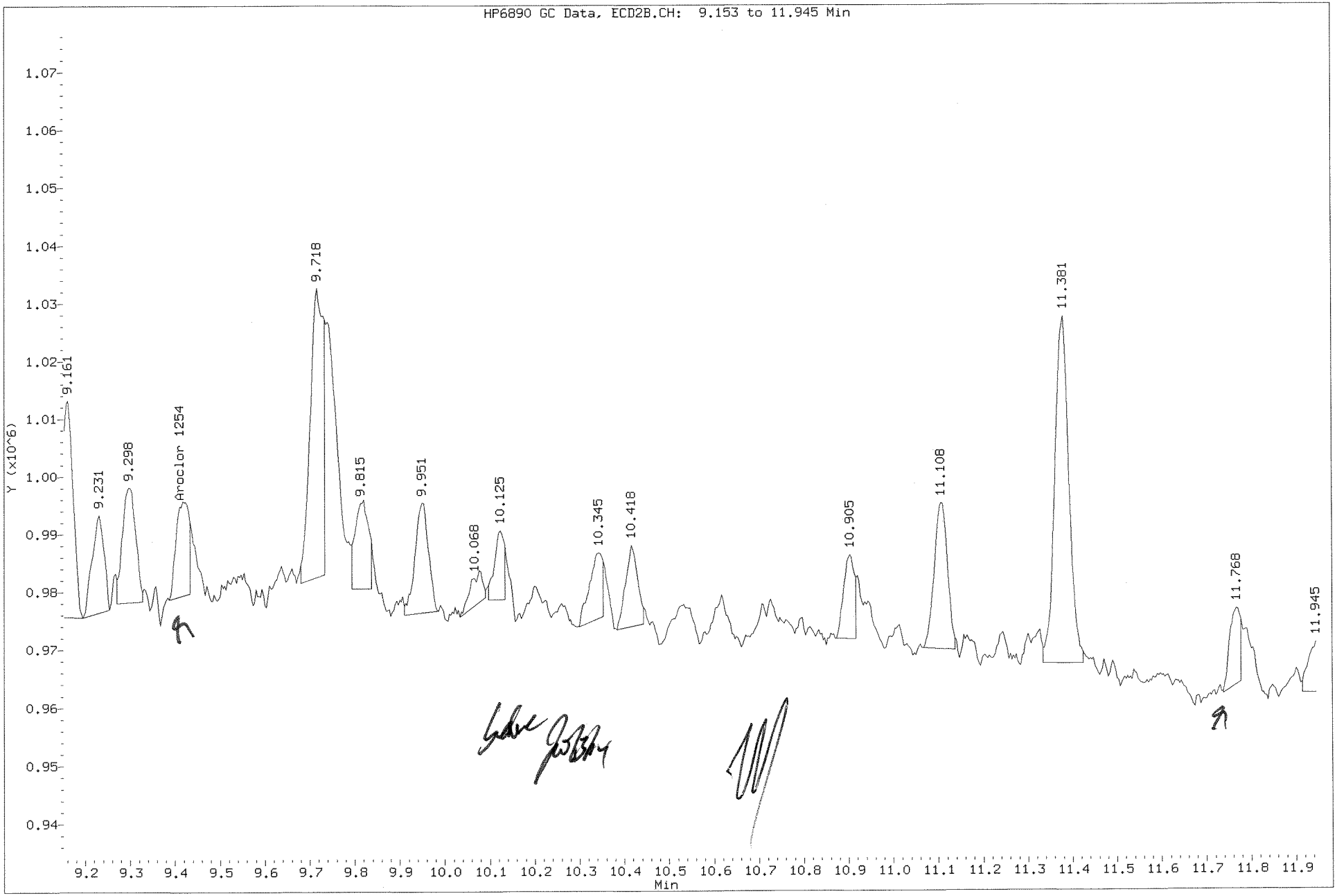

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.1
Client Sample ID:
HP6890 GC Data, ECD1A.CH: 6.061 to 7.044 Min
Y (x10^5)
Min
6.084
6.274
6.287
6.321
Aroclor 1254
6.381
6.427
6.517
6.641
6.671
6.721
6.754
Aroclor 1254
6.837
6.881
Aroclor 1254
7.037
After Initials
OCT 06 2014
Wrong Peak/Peak not Found
Baseline/Integration Incorrect
Other

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:



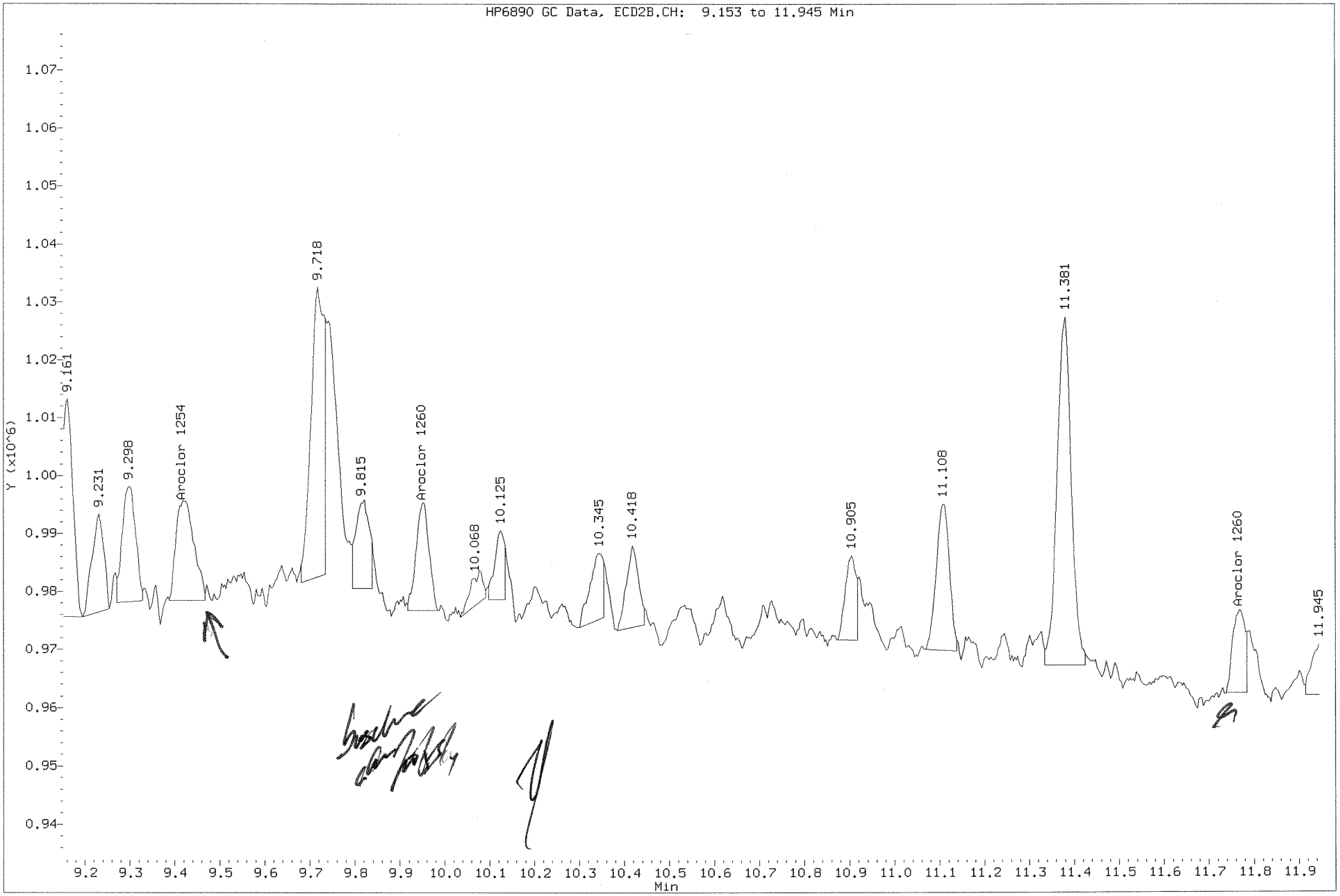

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:
HP6890 GC Data, ECD1A.CH: 7.381 to 10.619 Min
Y (x10^5)
Min
7.494
7.664
7.707
Aroclor 1260
7.847
Aroclor 1254
8.041
8.111
8.157
8.227
8.331
8.484
8.604
8.704
Aroclor 1260
8.851
9.074
9.254
9.494
9.561
9.631
9.897
9.917
10.014
10.041
10.544

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:



1450

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F008.D
Injection Date: 04-OCT-2014 05:56
Instrument: GC32.i
Client Sample ID:



1451

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F009.I
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:17
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:17
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Printed: 10/06/2014 14:07:15
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F009.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D			**Vial:**	5
Acqu Date:	10/04/2014 06:17	**Quant Date:**	10/13/2014 04:37	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-013				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378572	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt	
Decachlorobiphenyl	12.45	-0.01	14.43	0.00	2985485	4661248	5.59	5.89			118	OK
						%Recovery =	112 OK	118 OK	Limits =	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}	4.29	4.95	0m	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	1.28	2.50	0.0026J	0.0050J	**0.0026**JP
Aroclor 1242 {2}	4.81	5.33	8246m	74456	0.8790	2.83	0.0018J	0.0057	RPD

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F009.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D			**Vial:**	5
Acqu Date:	10/04/2014 06:17	**Quant Date:**	10/13/2014 04:37	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-013				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.02	5.95	46130m	53231	1.92	1.68	0.0038J	0.0034J	
Aroclor 1242 {4}	5.11	5.99	16957m	88927	1.03	2.30	0.0021J	0.0046J	
Aroclor 1242 {5}	5.25	6.18	0m	65388	0.0000	3.19	0.00096U	0.0064	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}	6.36	7.24	20416m	121040m	1.68	2.76	0.0034J	0.0055	
Aroclor 1254			0	0	1.24	2.30	0.0025J	0.0046J	**0.0025**JP RPD
Aroclor 1254 {2}	6.80	7.30	16726m	50574m	0.7890	2.68	0.0016J	0.0054	
Aroclor 1254 {3}	6.96	7.62	0m	118626m	0.0000	1.94	0.00096U	0.0039J	
Aroclor 1254 {4}	7.30	8.63	29273m	0m	1.21	0.0000	0.0024J	0.00096U	
Aroclor 1254 {5}	7.92	9.42	18079m	48985m	1.29	1.82	0.0026J	0.0036J	
Aroclor 1260 {1}	7.79 +0.00	8.44 -0.01	13918	29920m	1.06	1.26	0.0021J	0.0025J	
Aroclor 1260			0	0	1.10	1.29	0.0022J	0.0026J	**0.0022**J
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	25261	40677m	1.16	1.28	0.0023J	0.0026J	
Aroclor 1260 {3}	8.79 +0.00	10.42 0.00	25577	41859m	1.15	1.29	0.0023J	0.0026J	
Aroclor 1260 {4}	9.26 0.00	11.11 0.00	50307	77941m	1.04	1.10	0.0021J	0.0022J	
Aroclor 1260 {5}	10.01 -0.04	11.78 +0.00	0	69849m	0.0000	1.50	0.00096U	0.0030J	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F009.D
Report Date: 13-Oct-2014 04:37

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F009.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D
Inj Date : 04-OCT-2014 06:17
Sample Info: K1409921-013
Misc Info :
Cal Date : 06-OCT-2014 14:00
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

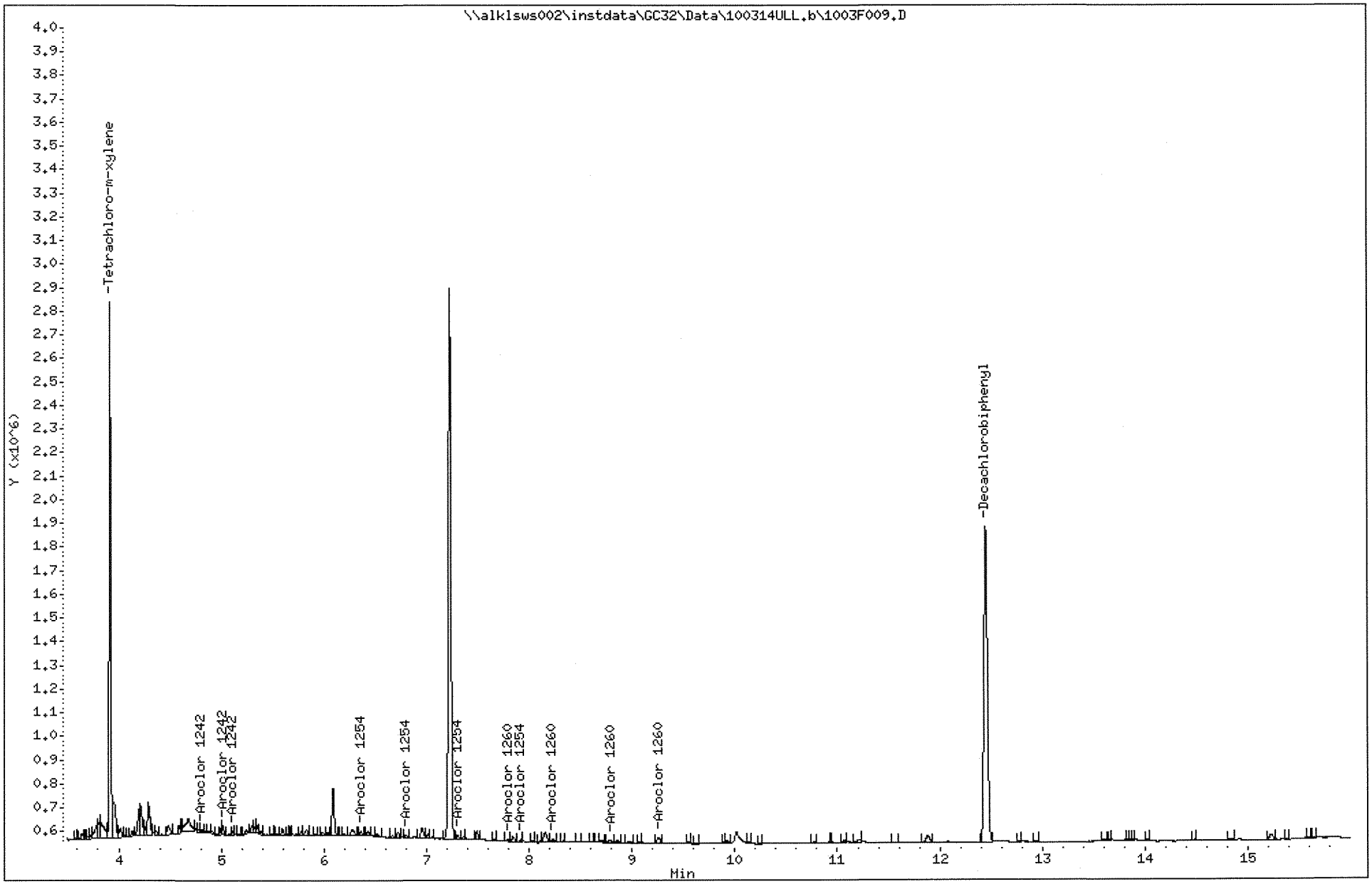
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.645	2190036	4791489	3.30	3.95		100.00(R)
Aroclor 1242	4.287	4.951					80.00- 120.00	0.00(M)
	4.811	5.328	8246	74456	0.879	2.82	67.74- 101.60	3.73(M)
	5.017	5.945	46130	53231	1.92	1.68	183.47- 275.21	20.89(M)
	5.111	5.985	16957	88927	1.03	2.30	127.13- 190.69	7.68(M)
	5.247	6.181		65388		3.19	97.67- 146.51	106.83(M)
			Average of Peak Amounts =		1.28	2.50		
Aroclor 1254	6.357	7.241	20416	121040	1.68	2.76	80.00- 120.00	100.00(M)
	6.801	7.295	16726	50574	0.789	2.68	144.59- 216.89	81.93(M)
	6.957	7.621		118626		1.93	115.49- 173.24	98.01(M)
	7.301	8.631	29273		1.21		154.54- 231.81	143.38(M)
	7.917	9.418	18079	48985	1.29	1.82	99.03- 148.55	88.55(M)
			Average of Peak Amounts =		1.24	2.30		
Aroclor 1260	7.794	8.438	13918	29920	1.06	1.26	80.00- 120.00	100.00
	8.231	9.948	25261	40677	1.16	1.28	134.02- 201.03	181.50
	8.794	10.418	25577	41859	1.15	1.29	140.40- 210.60	183.77
	9.257	11.111	50307	77941	1.04	1.10	299.92- 449.88	361.45
	10.014	11.775		69849		1.50	138.91- 208.36	233.45
			Average of Peak Amounts =		1.10	1.29		
Decachlorobiphenyl	12.447	14.431	2985485	4661248	5.59	5.89		100.00(R)
Aroclors, Total	1.000	1.000	73666	207355	3.62	6.08		0.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F009.D
Date : 04-OCT-2014 06:17
Client ID:
Instrument: GC32.i
Sample Info: K1409921-013
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

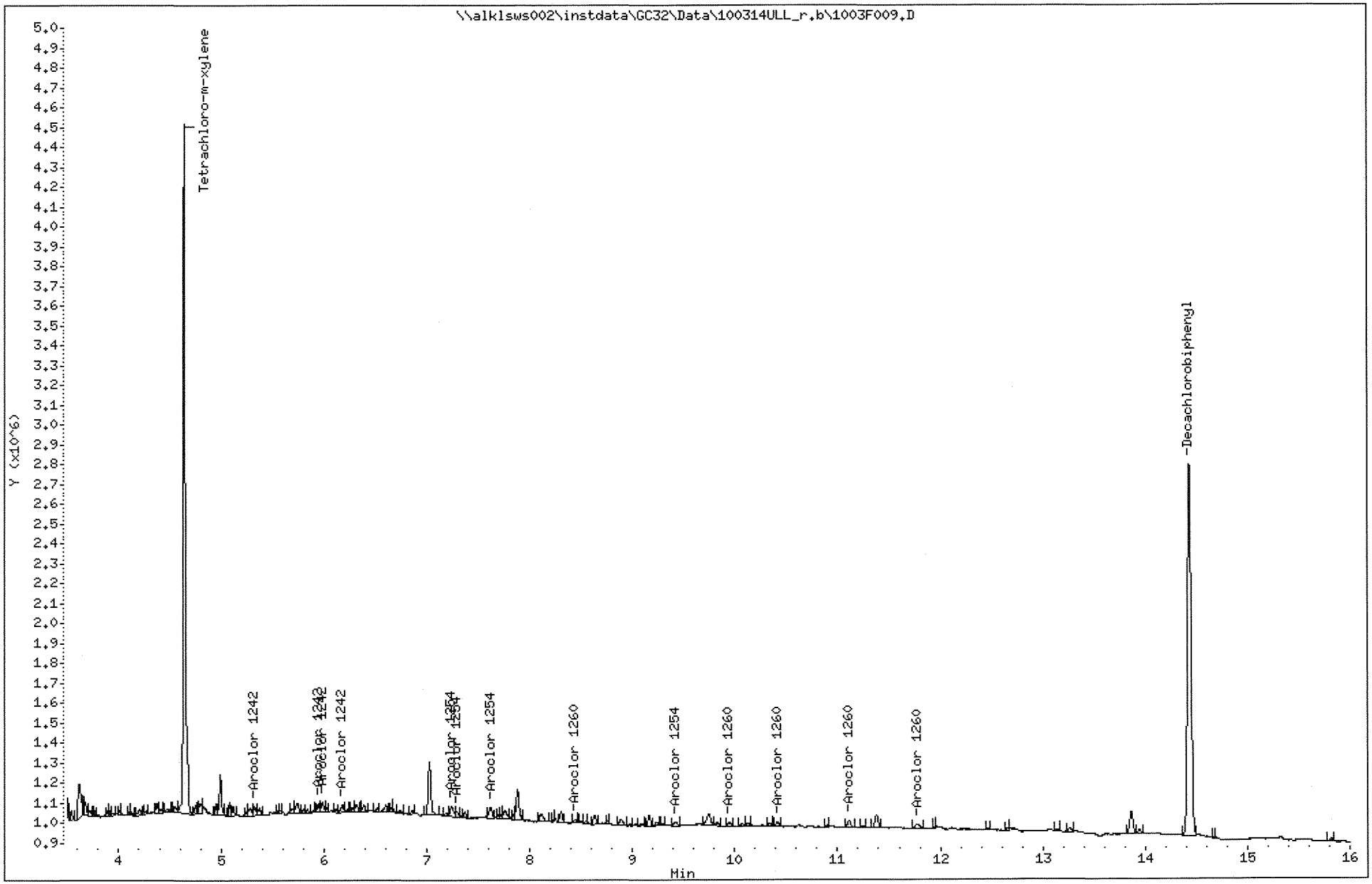


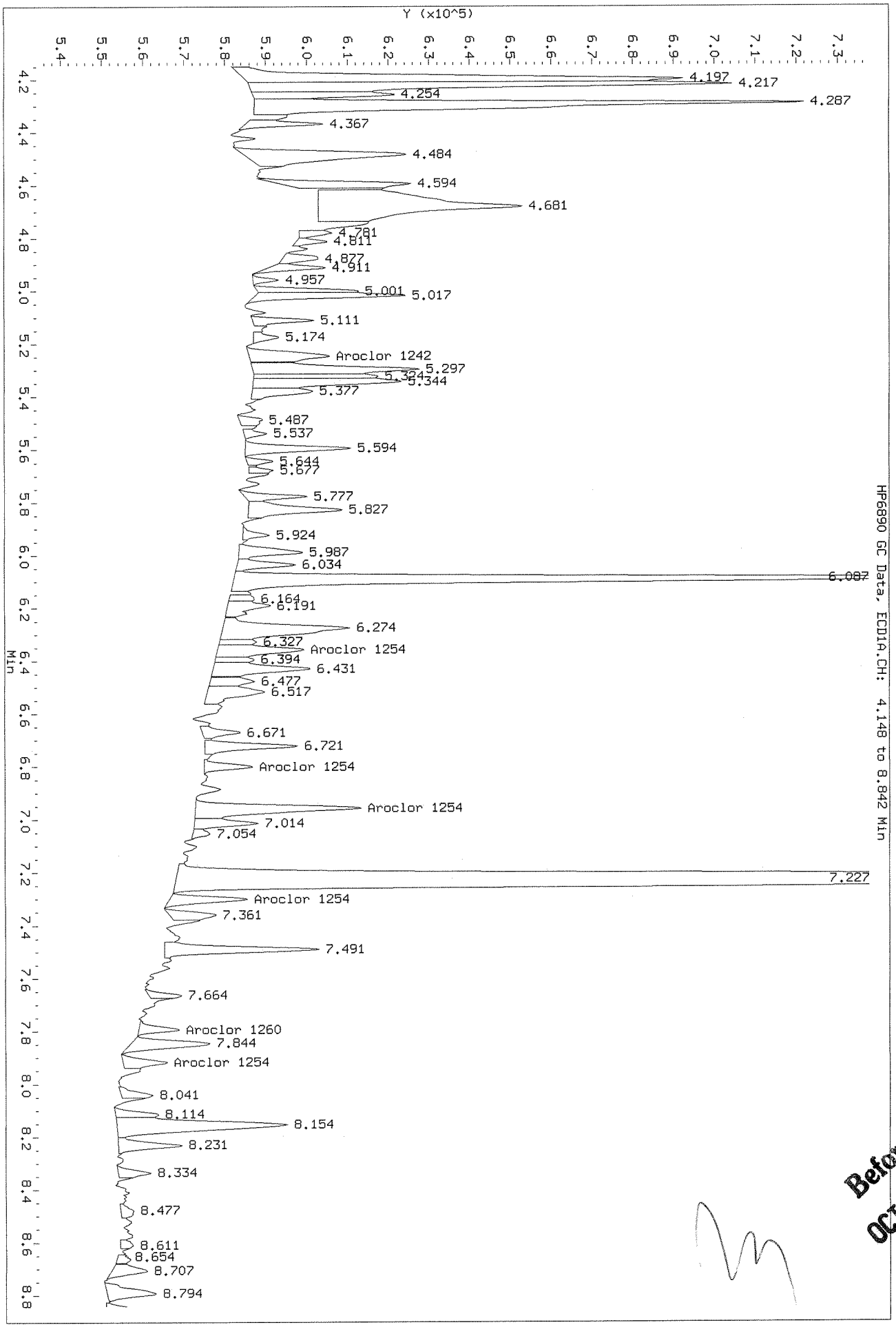
Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D
Date : 04-OCT-2014 06:17
Client ID:
Sample Info: K1409921-013

Instrument: GC32.i

Operator: JMSmith

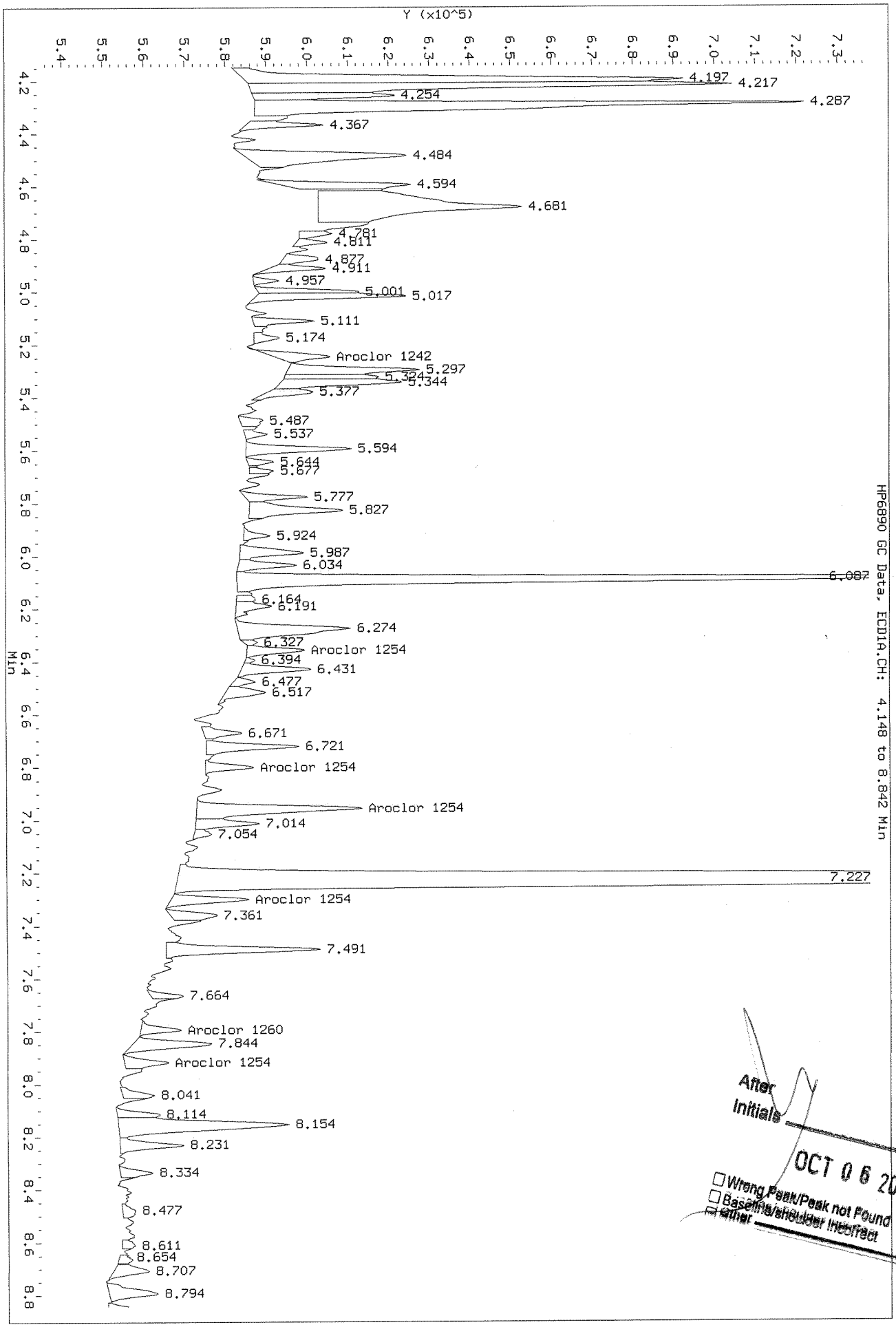
Column phase: DB-XLB
Column diameter: 0.32





Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F009.D
Injection Date: 04-OCT-2014 06:17
Instrument: GC32.1
Client Sample ID:

Before
OCT 06 2014

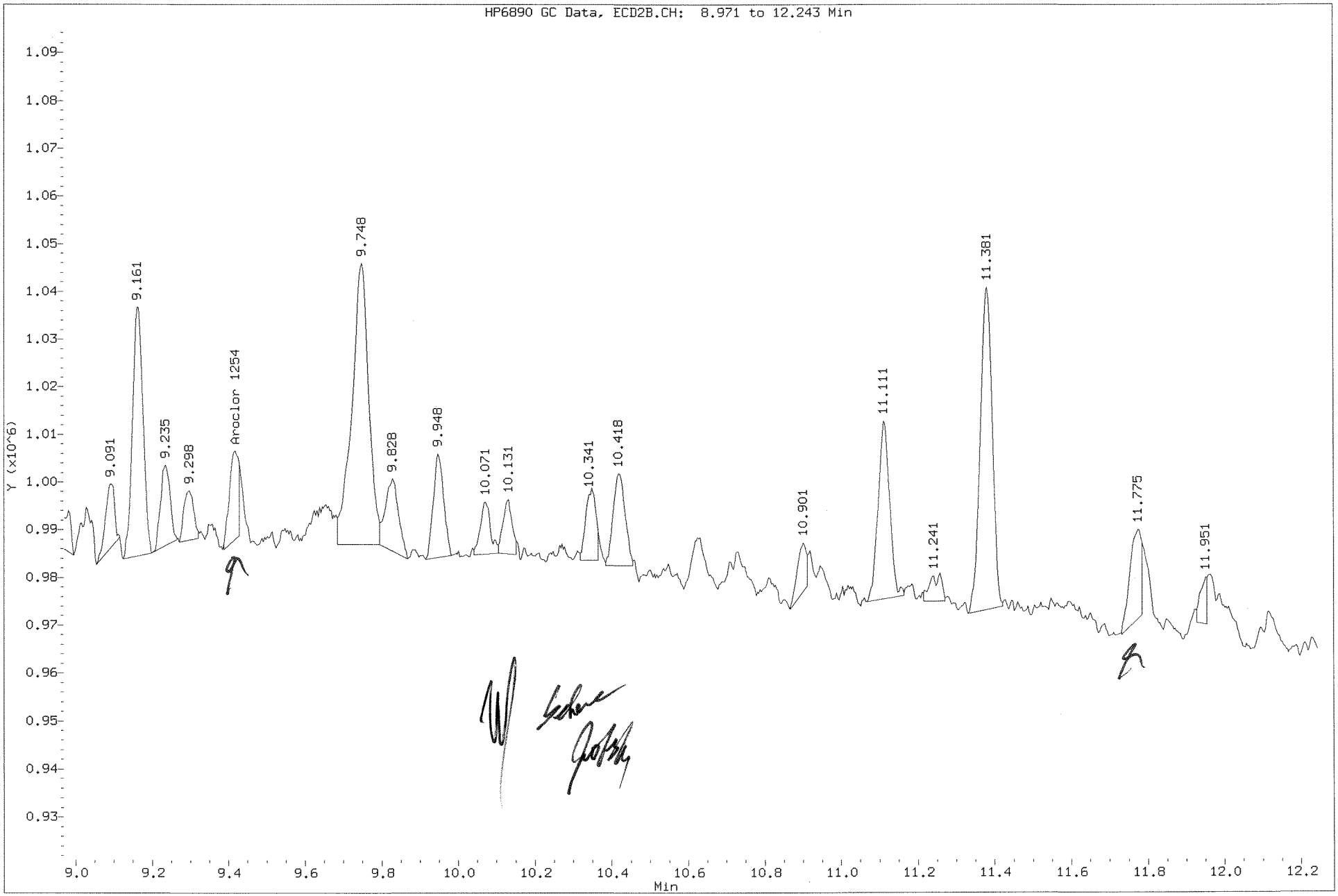


After Initials

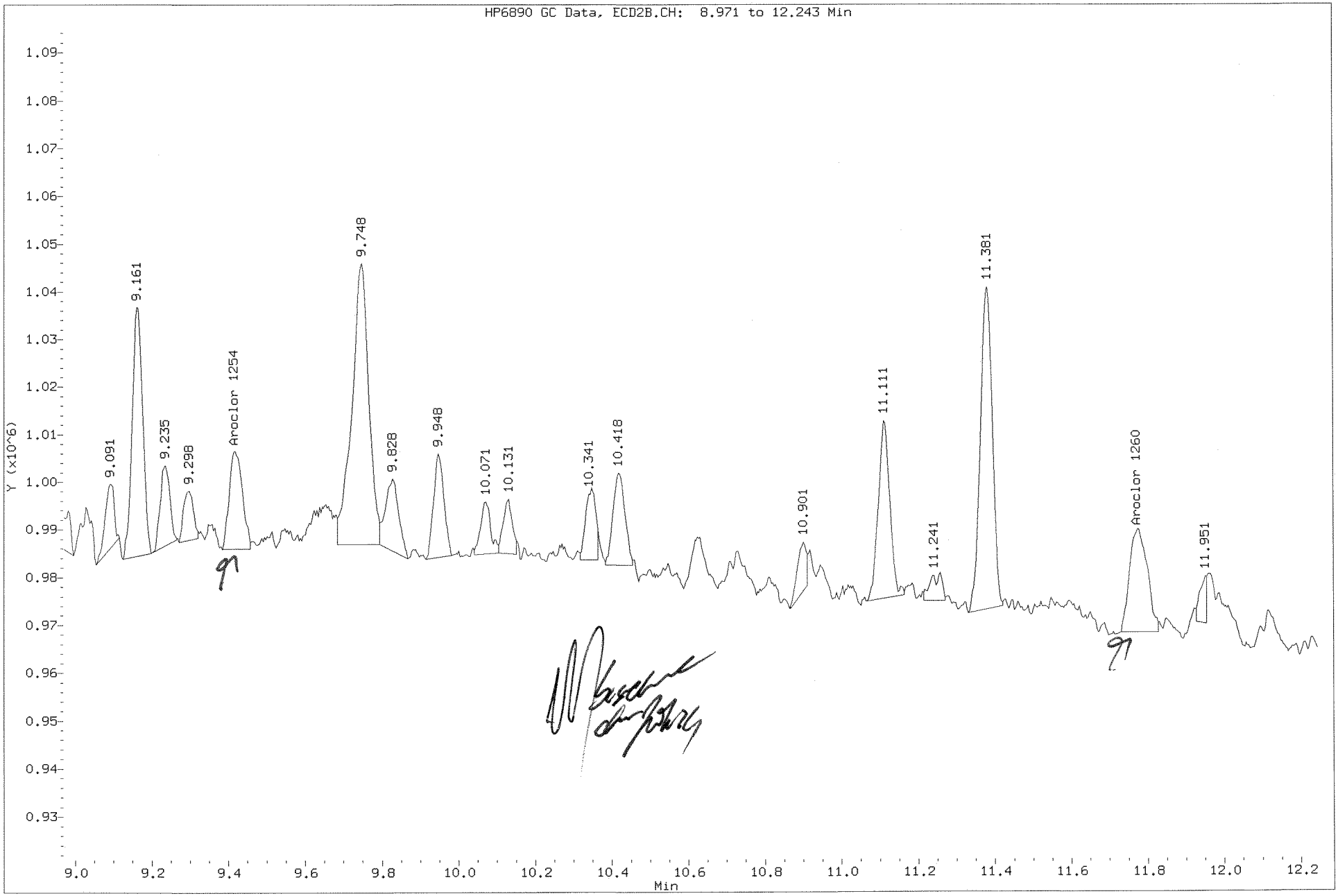
OCT 0 6 2014

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ other

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D
Injection Date: 04-OCT-2014 06:17
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F009.D
Injection Date: 04-OCT-2014 06:17
Instrument: GC32.i
Client Sample ID:



1462

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F010.I
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:38
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:38
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F010.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D			**Vial:**	6
Acqu Date:	10/04/2014 06:38	**Quant Date:**	10/13/2014 04:49	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-014				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378573	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2				Rpt	
Decachlorobiphenyl	12.45 0.00	14.43 0.00	3543268	4815578	6.63	6.08				133	OK
			%Recovery =		133	OK	122	OK	**Limits =** 39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}	4.30	4.95	0m	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	1.92	2.92	0.0038J	0.0058	**0.0038**JP
Aroclor 1242 {2}	4.82	5.33	15538m	50730m	1.66	1.92	0.0033J	0.0038J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F010.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D			**Vial:**	6
Acqu Date:	10/04/2014 06:38	**Quant Date:**	10/13/2014 04:49	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-014				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.01	5.94	57671m	82345m	2.40	2.60	0.0048J	0.0051	
Aroclor 1242 {4}	5.11	5.98	27989m	112691m	1.70	2.91	0.0034J	0.0058	
Aroclor 1242 {5}	5.25	6.18	0m	86915m	0.0000	4.25	0.00096U	0.0084	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}	6.36	7.24	78313m	205217m	6.44	4.67	0.013	0.0093	
Aroclor 1254			0	0	4.45	5.31	0.0088	0.011	**0.0088**
Aroclor 1254 {2}	6.80	7.29	73780m	92103m	3.48	4.88	0.0069	0.0097	
Aroclor 1254 {3}	6.95	7.62	0m	340437m	0.0000	5.55	0.00096U	0.011	
Aroclor 1254 {4}	7.30	8.63	90839m	0m	3.75	0.0000	0.0074	0.00096U	
Aroclor 1254 {5}	7.92	9.42	58099m	165346m	4.14	6.15	0.0082	0.012	
Aroclor 1260 {1}	7.79 0.00	8.44 -0.01	0	56132	0.0000	2.37	0.00096U	0.0047J	
Aroclor 1260			0	0	2.82	3.28	0.0056	0.0065	**0.0056**
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	60911	124023	2.80	3.90	0.0055	0.0077	
Aroclor 1260 {3}	8.79 0.00	10.42 0.00	68316	124487	3.06	3.84	0.0061	0.0076	
Aroclor 1260 {4}	9.25 -0.01	11.11 0.00	125438	214893	2.59	3.03	0.0051	0.0060	
Aroclor 1260 {5}	10.01 -0.04	11.78 +0.01	0	0	0.0000	0.0000	0.00096U	0.00096U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1010 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Report Date: 13-Oct-2014 04:49

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D
Inj Date : 04-OCT-2014 06:38
Sample Info: K1409921-014
Misc Info :
Cal Date : 06-OCT-2014 13:58
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.912	4.642	2515864	2436460	3.79	2.01		100.00(R)
Aroclor 1242	4.295	4.949					80.00- 120.00	0.00(M)
	4.815	5.326	15538	50730	1.66	1.92	67.74- 101.60	0.00(M)
	5.012	5.942	57671	82345	2.40	2.60	183.47- 275.21	0.00(M)
	5.108	5.982	27989	112691	1.70	2.91	127.13- 190.69	0.00(M)
	5.245	6.179		86915		4.25	97.67- 146.51	0.00(M)
			Average of Peak Amounts =		1.92	2.92		
Aroclor 1254	6.355	7.242	78313	205217	6.44	4.67	80.00- 120.00	100.00(M)
	6.795	7.292	73780	92103	3.48	4.88	144.59- 216.89	94.21(M)
	6.952	7.619		340437		5.55	115.49- 173.24	165.89(M)
	7.295	8.629	90839		3.75		154.54- 231.81	115.99(M)
	7.915	9.416	58099	165346	4.14	6.15	99.03- 148.55	93.38(M)
			Average of Peak Amounts =		4.45	5.31		
Aroclor 1260	7.788	8.439		56132		2.37	80.00- 120.00	100.00
	8.228	9.946	60911	124023	2.80	3.90	134.02- 201.03	134.38
	8.788	10.416	68316	124487	3.06	3.84	140.40- 210.60	150.71
	9.252	11.109	125438	214893	2.59	3.03	299.92- 449.88	276.73
	10.012	11.779					138.91- 208.36	0.00
			Average of Peak Amounts =		2.82	3.29		
Decachlorobiphenyl	12.448	14.429	3543268	4815578	6.63	6.08		100.00(R)
Aroclors, Total	1.000	1.000	193878	413829	9.19	11.5		0.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

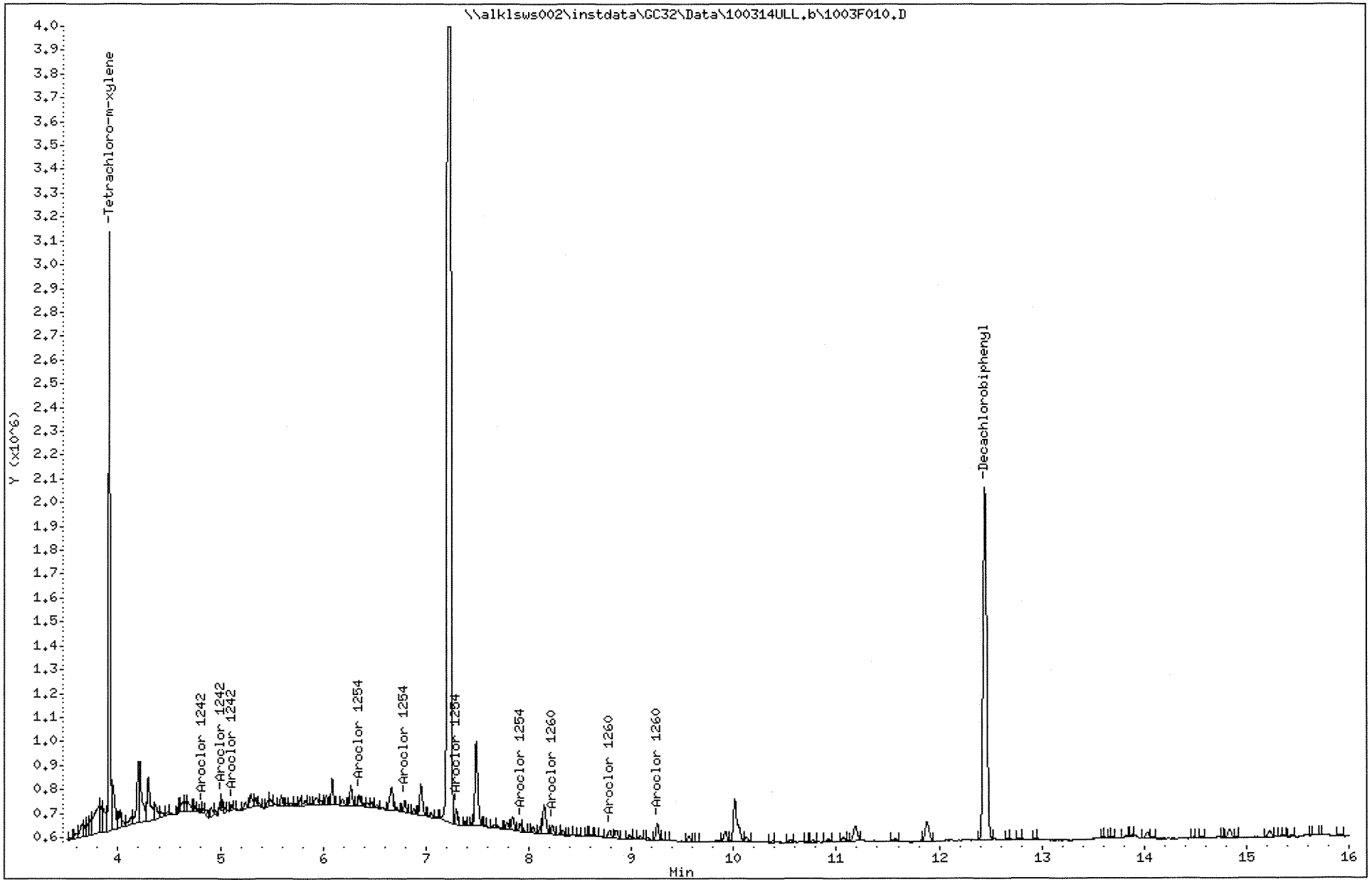
Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Date : 04-OCT-2014 06:38
Client ID:
Sample Info: K1409921-014

Instrument: GC32.i

Operator: JMSmith

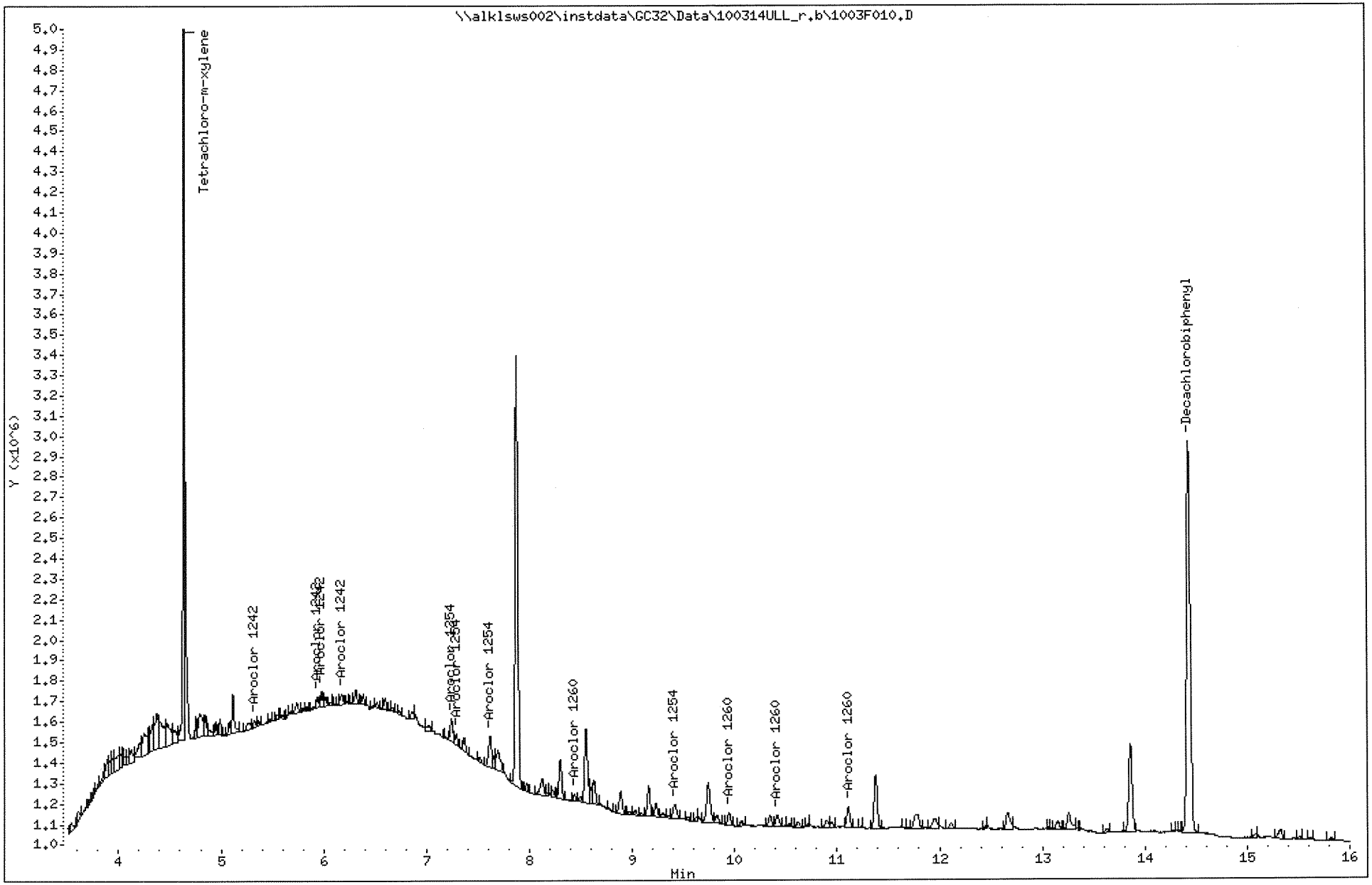
Column phase: DB-35MS

Column diameter: 0.32

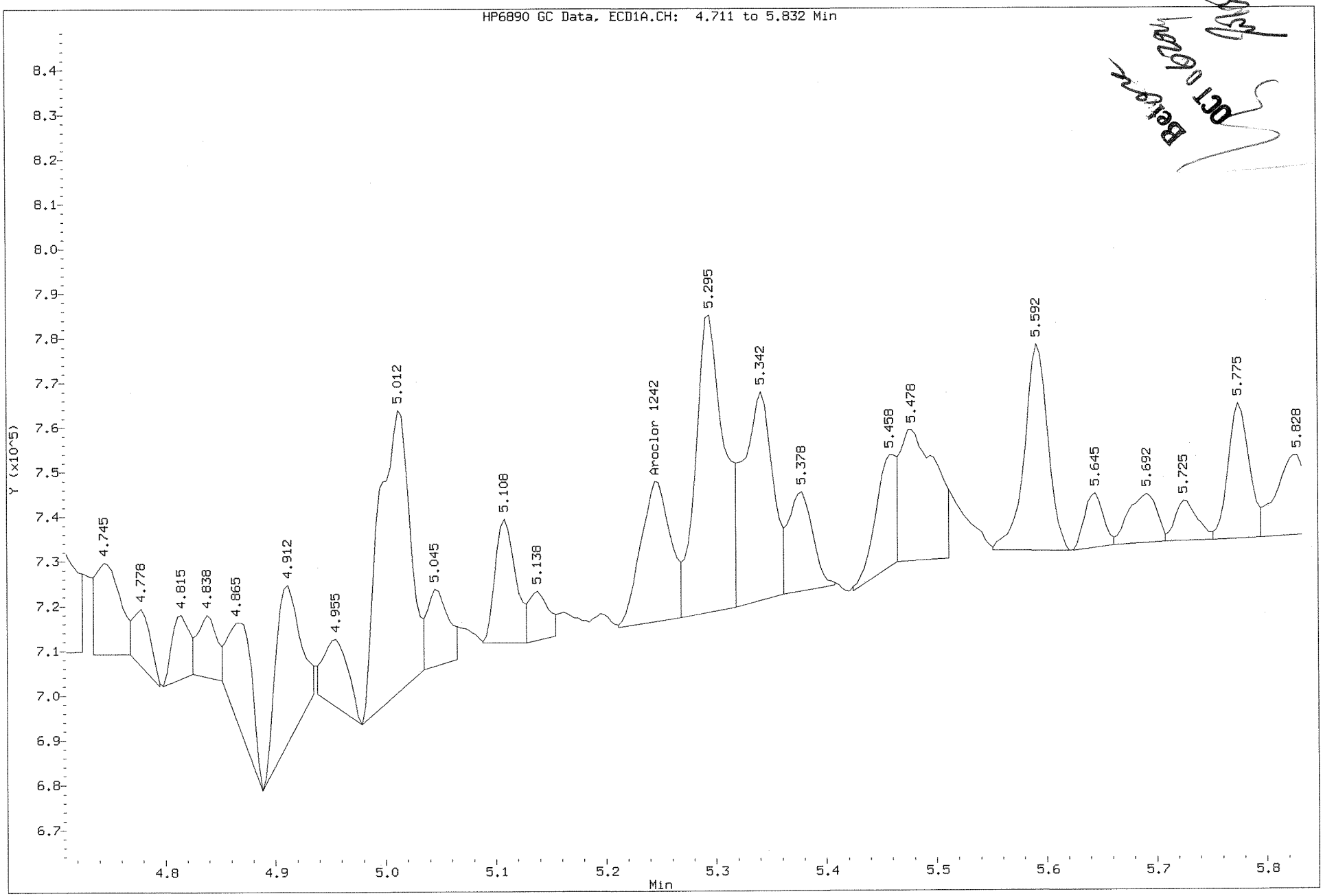


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D
Date : 04-OCT-2014 06:38
Client ID:
Sample Info: K1409921-014

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



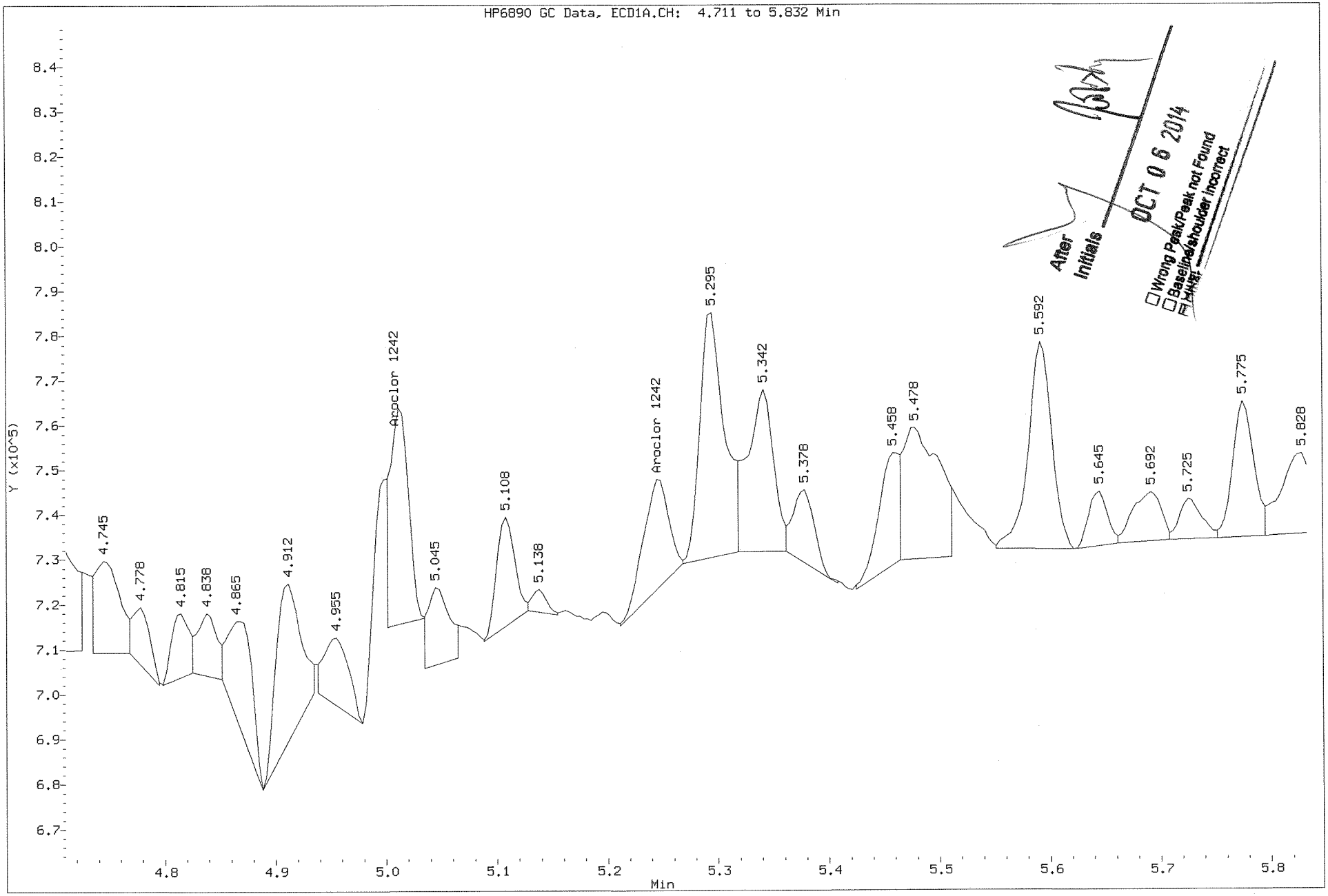
Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:



Belgrade OCT 06 2014

1470

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:



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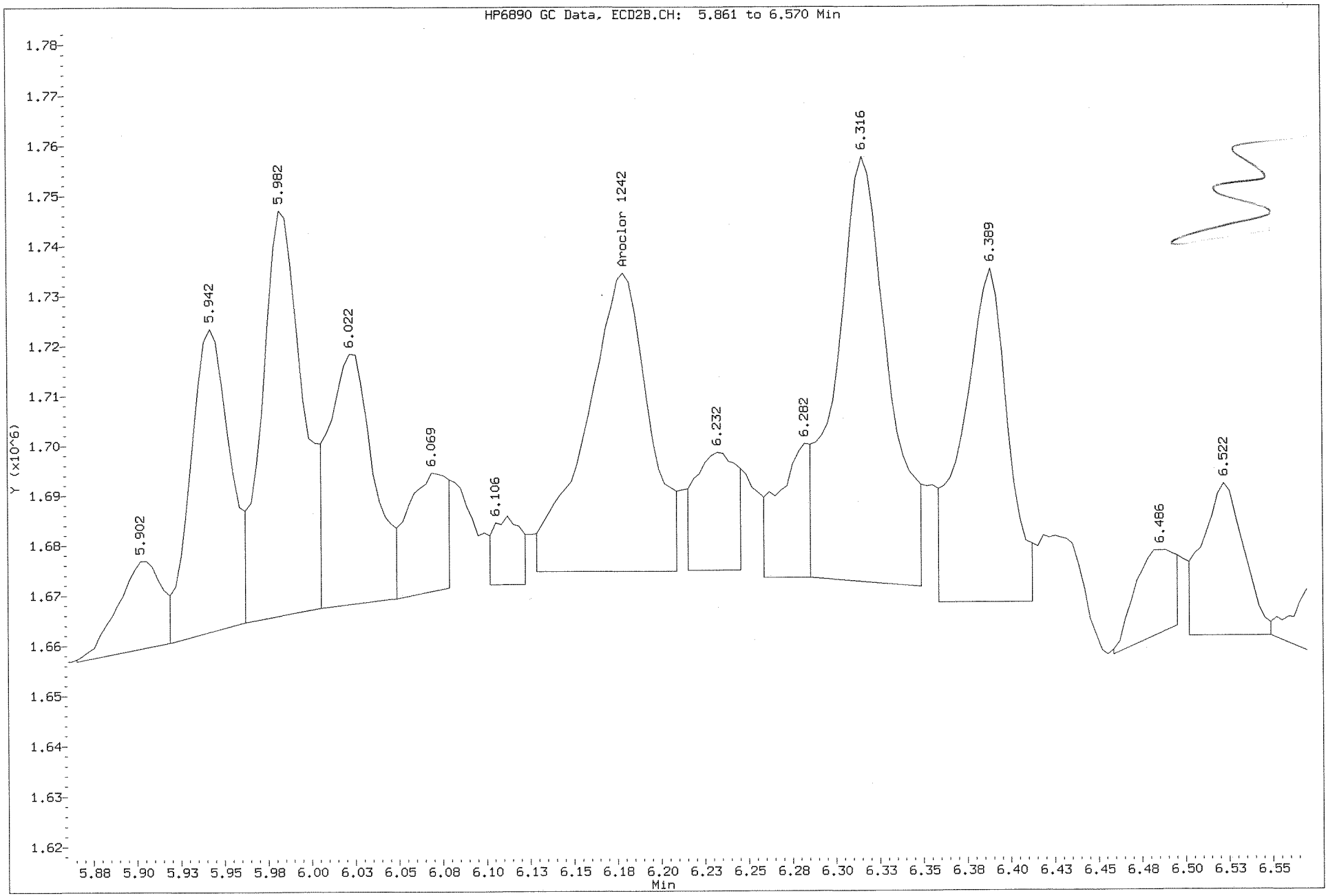
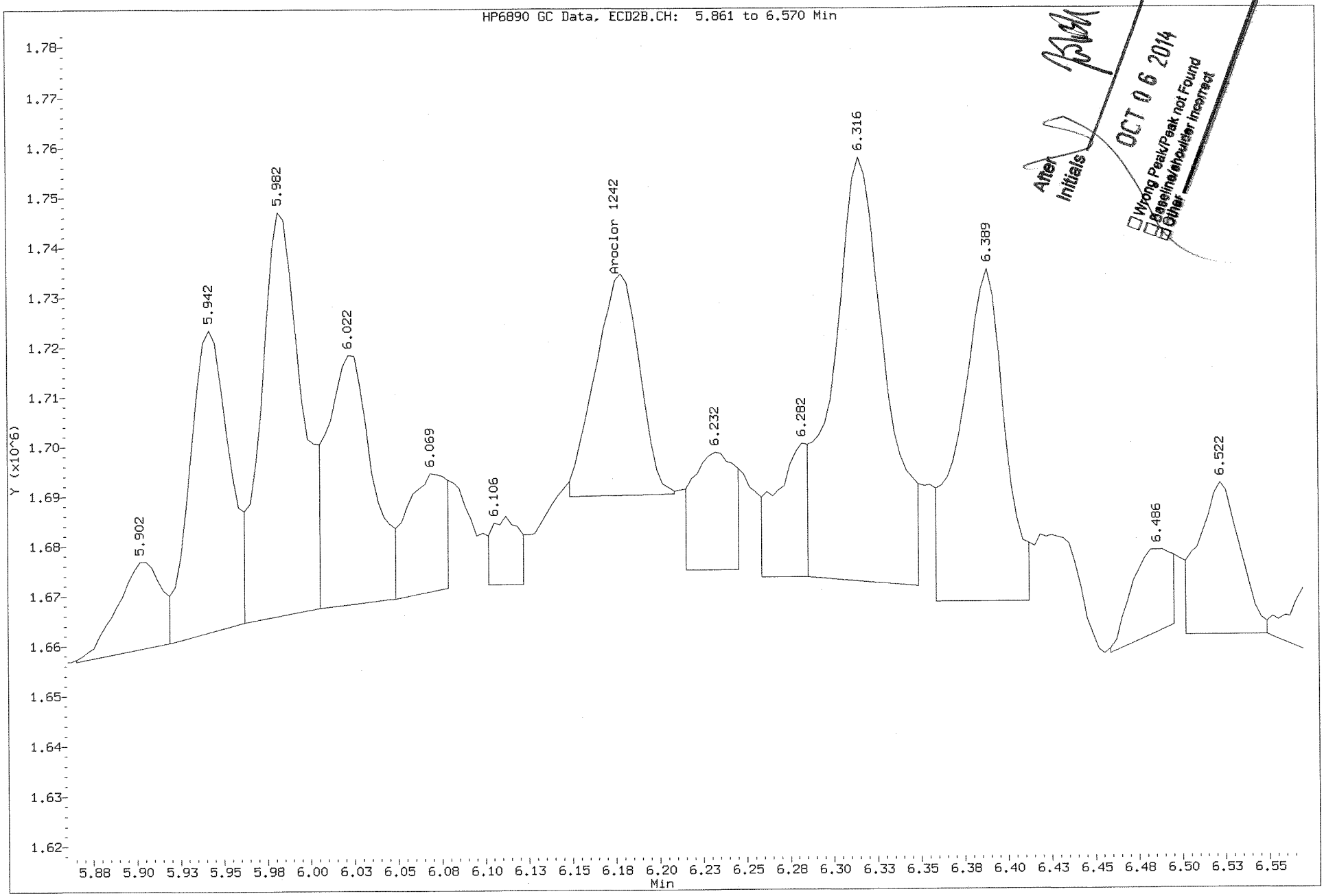
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:



1472

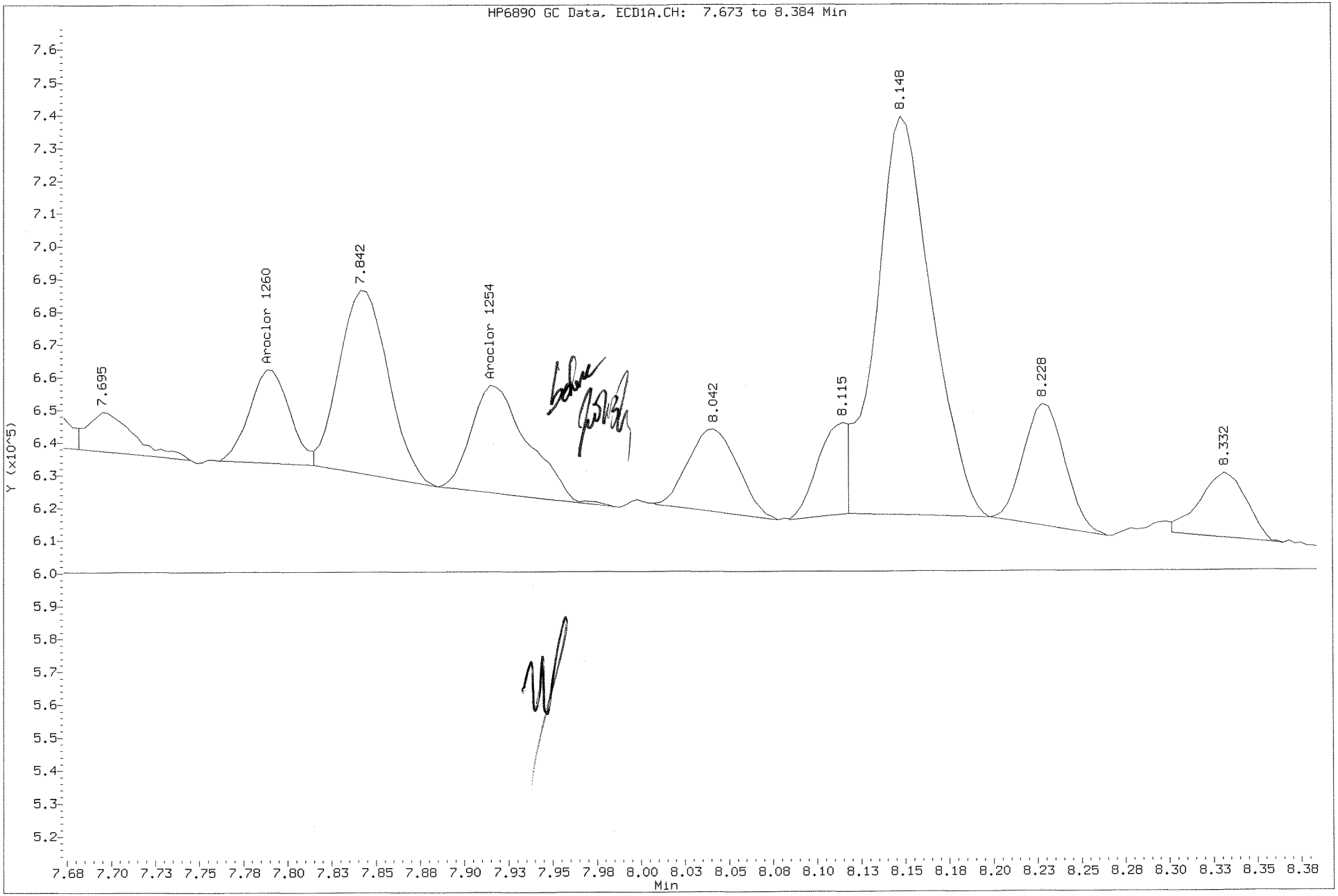
Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:



After Initials
OCT 0 6 2014
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☑ Other

1473

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:



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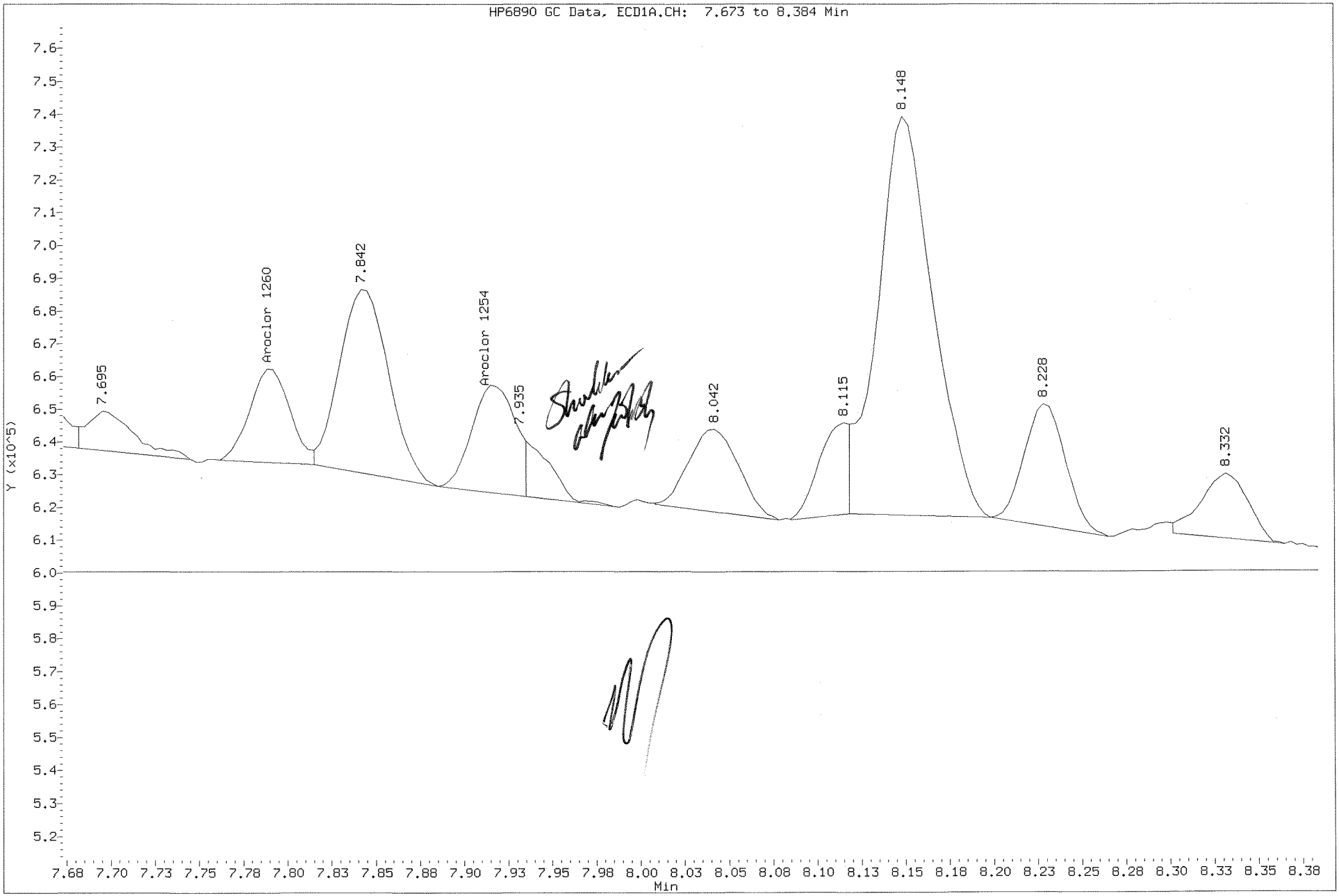
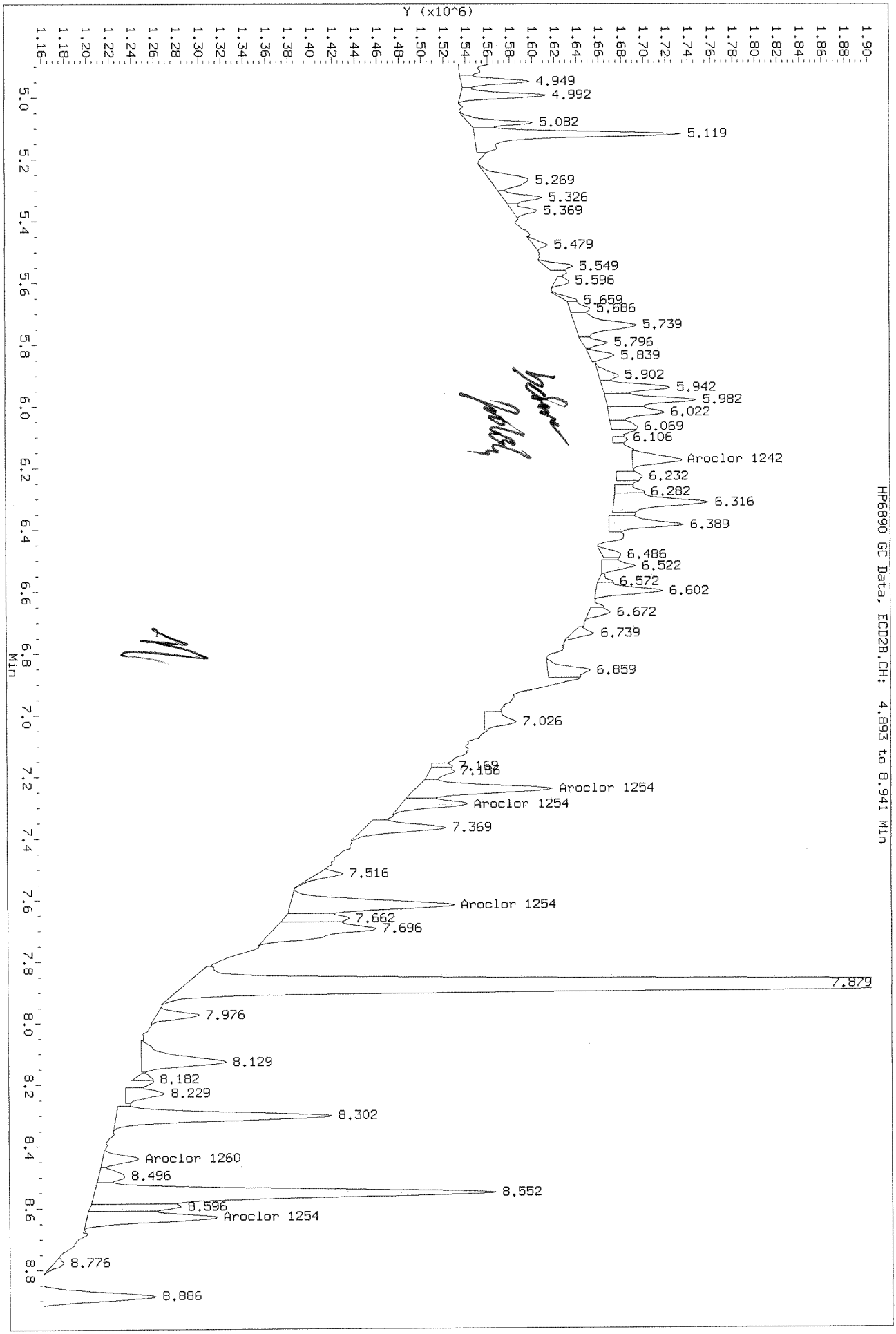
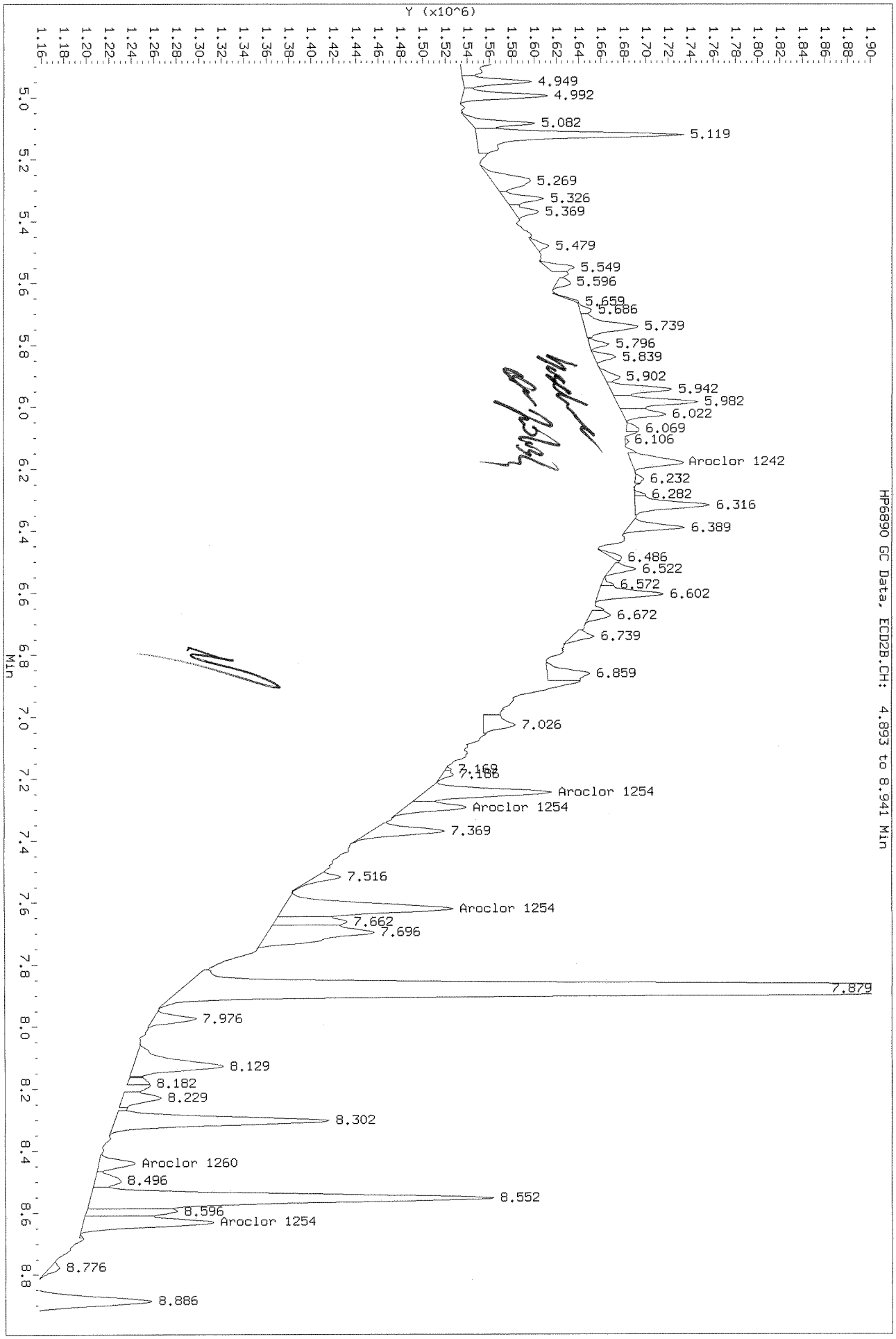
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:




Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 4.893 to 8.941 Min
Y (x10^6)
Min
4.949
4.992
5.082
5.119
5.269
5.326
5.369
5.479
5.549
5.596
5.659
5.686
5.739
5.796
5.839
5.902
5.942
5.982
6.022
6.069
6.106
Aroclor 1242
6.232
6.282
6.316
6.389
6.486
6.522
6.572
6.602
6.672
6.739
6.859
7.026
7.169
7.186
Aroclor 1254
Aroclor 1254
7.369
7.516
Aroclor 1254
7.662
7.696
7.879
7.976
8.129
8.182
8.229
8.302
Aroclor 1260
8.496
8.552
8.596
Aroclor 1254
8.776
8.886


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F010.D
Injection Date: 04-OCT-2014 06:38
Instrument: GC32.i
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 4.893 to 8.941 Min
Y (x10^6)
Min
4.949
4.992
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5.119
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Aroclor 1242
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6.672
6.739
6.859
7.026
7.169
7.186
Aroclor 1254
Aroclor 1254
7.369
7.516
Aroclor 1254
7.662
7.696
7.879
7.976
8.129
8.182
8.229
8.302
Aroclor 1260
8.496
8.552
8.596
Aroclor 1254
8.776
8.886

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F011.I
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:59
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 06:59
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F011.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F011.D			**Vial:**	7
Acqu Date:	10/04/2014 06:59	**Quant Date:**	10/13/2014 18:48	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-015				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378574	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2			Rpt	
Decachlorobiphenyl	12.45	0.00	14.43	2993479	4273223	5.60	5.40			112	OK
					%Recovery =	112 OK	108 OK	Limits =	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1016			0	0	0.0000	0.0000	0.00097U	0.00097U	0.00097U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0025U	0.0025U	
Aroclor 1221			0	0	0.0000	0.0000	0.0025U	0.0025U	0.0025U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0025U	0.0025U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0025U	0.0025U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1232			0	0	0.0000	0.0000	0.00097U	0.00097U	0.00097U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1242 {1}	4.30	4.95	0m	0	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1242			0	0	2.78	3.57	0.0056	0.0072	**0.0056**
Aroclor 1242 {2}	4.82	5.33	12873m	51109	1.37	1.94	0.0028J	0.0039J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F011.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F011.D			**Vial:**	7
Acqu Date:	10/04/2014 06:59	**Quant Date:**	10/13/2014 18:48	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-015				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.02	5.95	102117m	105189	4.25	3.32	0.0086	0.0067	
Aroclor 1242 {4}	5.11	5.99	32008m	173290	1.95	4.48	0.0039J	0.0091	
Aroclor 1242 {5}	5.25	6.18	37432m	92825	3.56	4.53	0.0072	0.0092	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1248			0	0	0.0000	0.0000	0.00097U	0.00097U	0.00097U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1254 {1}	6.36	7.25	148444	422975	12.20	9.63	0.025	0.019	
Aroclor 1254			0	0	8.47	9.64	0.017	0.019	**0.017**
Aroclor 1254 {2}	6.80	7.30	149305	170026	7.04	9.01	0.014	0.018	
Aroclor 1254 {3}	6.96	7.63	0	614980	0.0000	10.03	0.00097U	0.020	
Aroclor 1254 {4}	7.30	8.63	170953	0	7.05	0.0000	0.014	0.00097U	
Aroclor 1254 {5}	7.92	9.42	106193	266272	7.57	9.91	0.015	0.020	
Aroclor 1260 {1}	7.79	8.45	0	0	0.0000	0.0000	0.00097U	0.00097U	
Aroclor 1260			0	0	4.72	5.93	0.0095	0.012	**0.0095**
Aroclor 1260 {2}	8.23	9.95 0.00	116867	194667	5.37	6.12	0.011	0.012	
Aroclor 1260 {3}	8.79	10.42 0.00	100642	195141	4.51	6.02	0.0091	0.012	
Aroclor 1260 {4}	9.26	11.11	216279	366114	4.47	5.16	0.0090	0.010	
Aroclor 1260 {5}	10.05 0.00	11.77 0.00	174029	300805	4.56	6.44	0.0092	0.013	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	990 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F011.D
Report Date: 13-Oct-2014 18:48

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F011.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F011.D
Inj Date : 04-OCT-2014 06:59
Sample Info: K1409921-015
Misc Info :
Cal Date : 06-OCT-2014 14:00
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

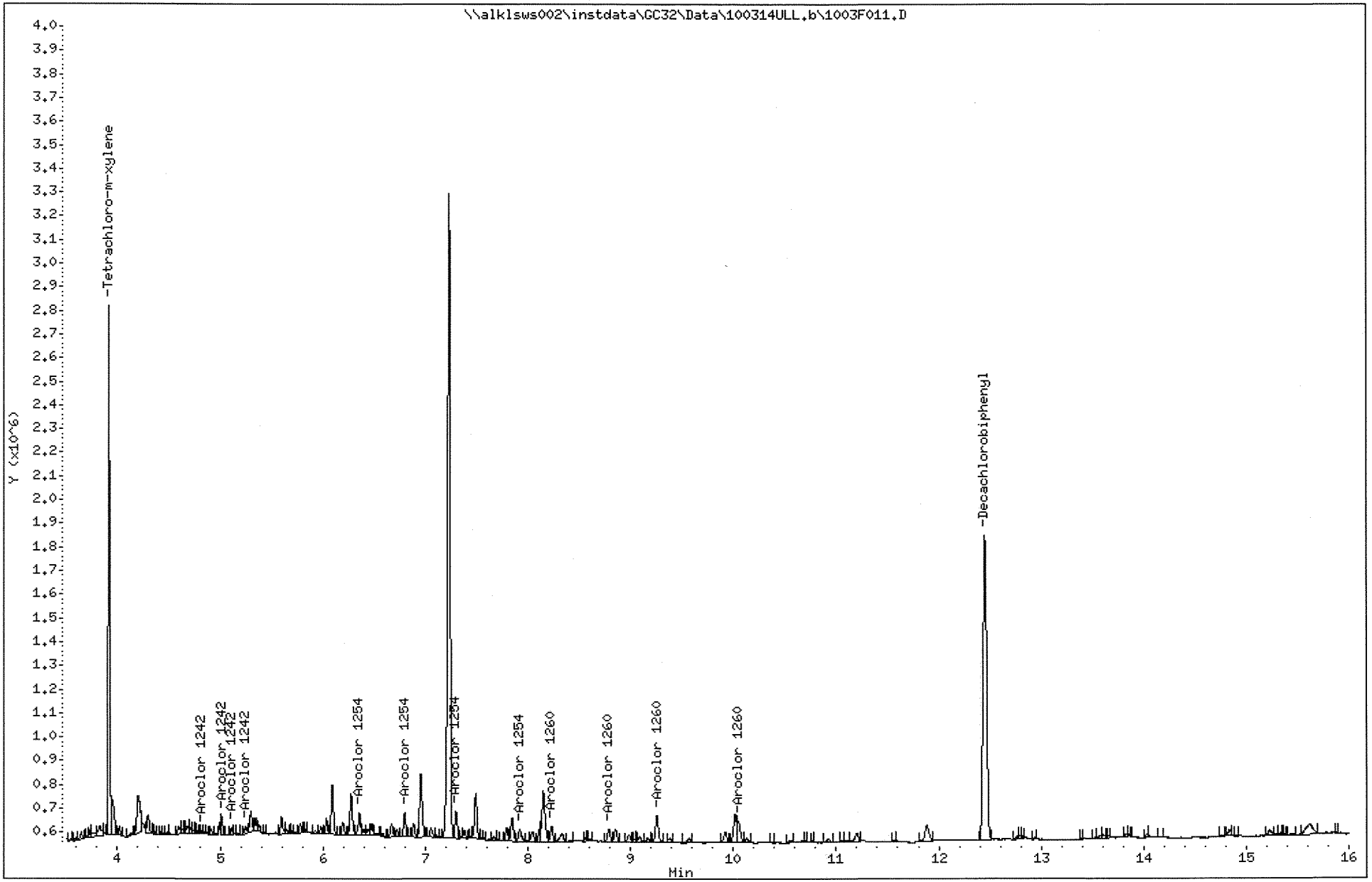
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.915	4.646	2132031	4775484	3.21	3.94		100.00(R)
Aroclor 1242	4.299	4.949					80.00- 120.00	0.00(M)
	4.815	5.329	12873	51109	1.37	1.94	67.74- 101.60	0.00(M)
	5.015	5.946	102117	105189	4.25	3.32	183.47- 275.21	0.00(M)
	5.109	5.986	32008	173290	1.95	4.48	127.13- 190.69	0.00(M)
	5.249	6.179	37432	92825	3.56	4.53	75.12- 112.68	0.00(M)
			Average of Peak Amounts =		2.78	3.57		
Aroclor 1254	6.355	7.246	148444	422975	12.2	9.63	80.00- 120.00	100.00
	6.799	7.296	149305	170026	7.04	9.01	144.59- 216.89	100.58
	6.955	7.626		614980		10.0	115.49- 173.24	145.39
	7.299	8.633	170953		7.05		154.54- 231.81	115.16
	7.919	9.419	106193	266272	7.57	9.91	99.03- 148.55	71.54
			Average of Peak Amounts =		8.47	9.64		
Aroclor 1260	7.792	8.446					80.00- 120.00	0.00
	8.232	9.949	116867	194667	5.37	6.12	134.02- 201.03	134.72
	8.792	10.419	100642	195141	4.51	6.02	140.40- 210.60	116.02
	9.259	11.113	216279	366114	4.47	5.16	299.92- 449.88	249.32
	10.052	11.769	174029	300805	4.56	6.44	236.01- 354.01	200.61
			Average of Peak Amounts =		4.73	5.94		
Decachlorobiphenyl	12.449	14.433	2993479	4273223	5.60	5.40		100.00(R)
Aroclors, Total	1.000	1.000	341785	738348	16.0	19.1		0.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F011.D
Date : 04-OCT-2014 06:59
Client ID:
Instrument: GC32.i
Sample Info: K1409921-015
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

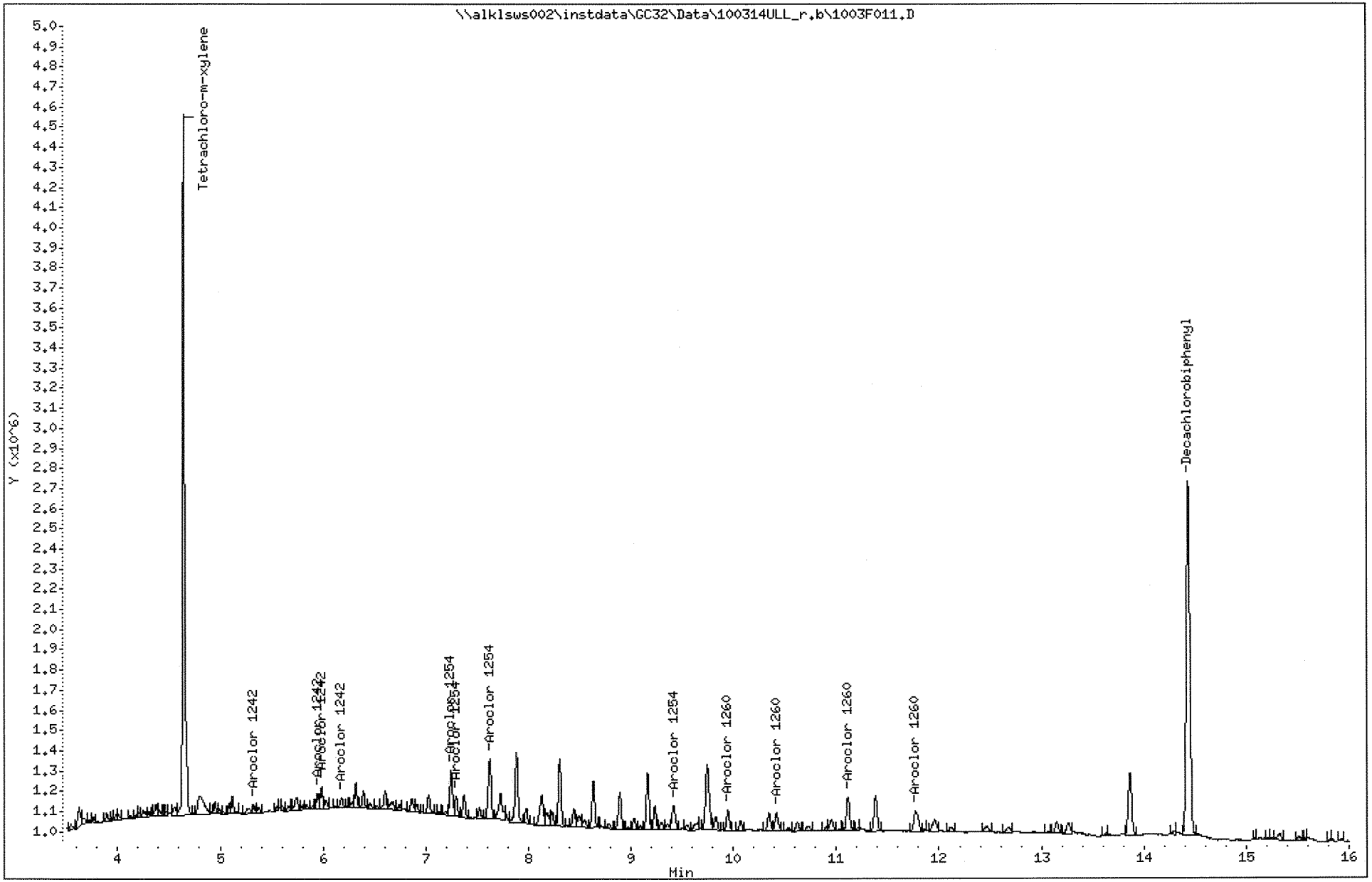


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F011.D
Date : 04-OCT-2014 06:59
Client ID:
Sample Info: K1409921-015

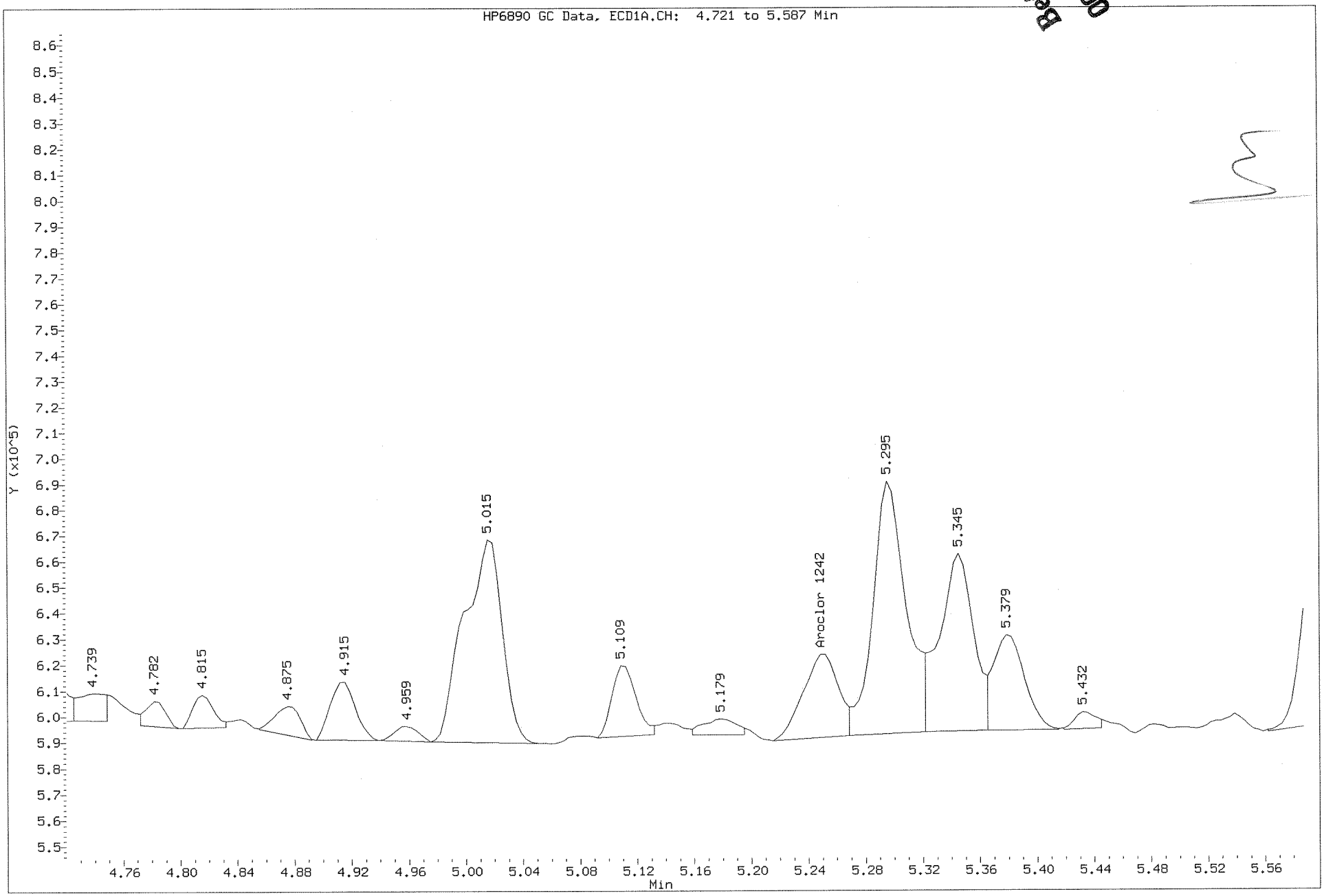
Instrument: GC32.i

Operator: JMSmith

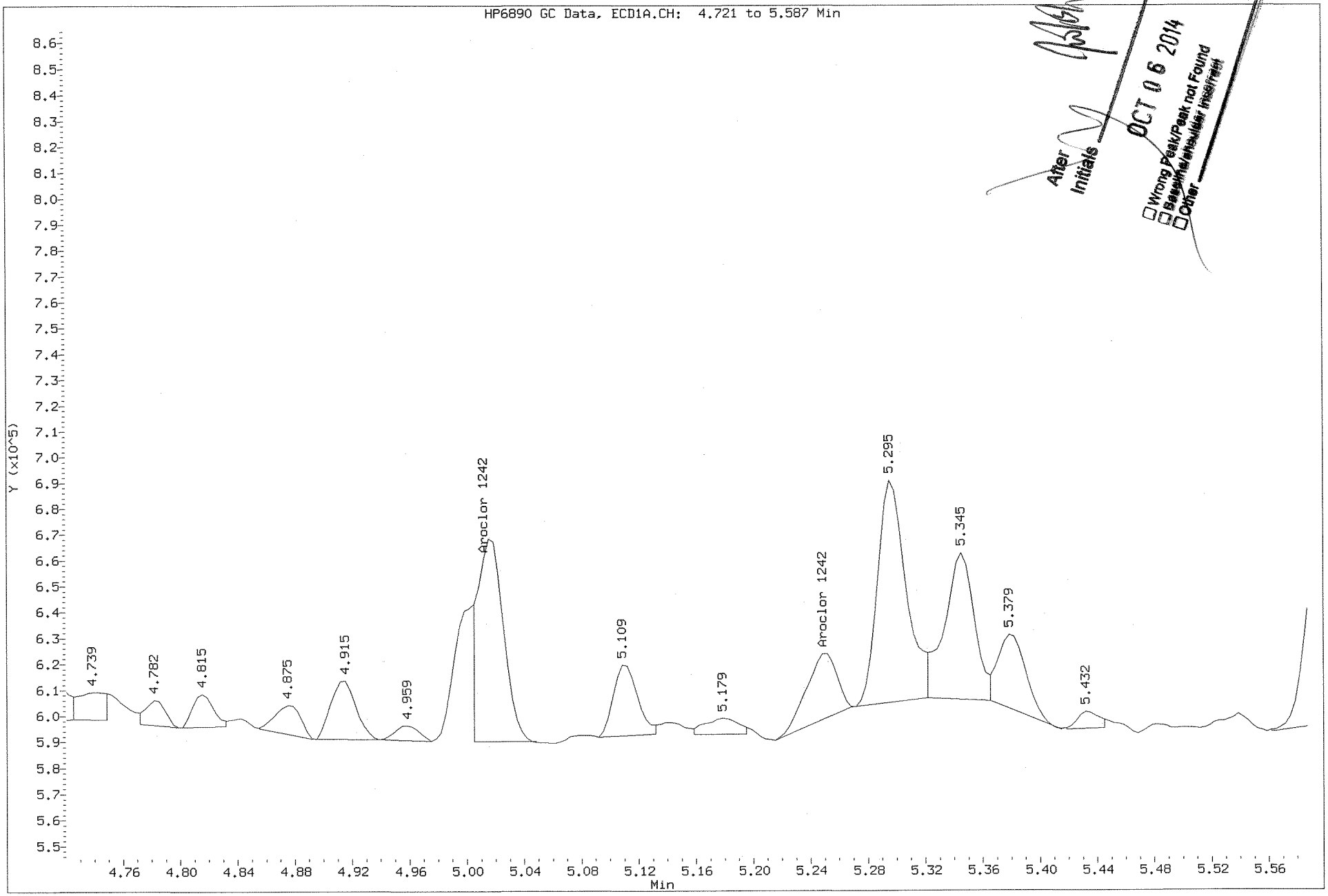
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F011.D
Injection Date: 04-OCT-2014 06:59
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F011.D
Injection Date: 04-OCT-2014 06:59
Instrument: GC32.i
Client Sample ID:



After Initials

OCT 06 2014

☐ Wrong Peak/Peak not Found
☐ Baseline/Integration Issue
☐ Other

1486

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F012.I
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 07:21
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 07:21
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F012.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D			**Vial:**	8
Acqu Date:	10/04/2014 07:21	**Quant Date:**	10/13/2014 19:08	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-016				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378575	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
			Quant based on Report List

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt	
Decachlorobiphenyl	12.45	0.00	14.43	0.00	3109635	4778652	5.82	6.04			121	OK
						%Recovery =	116 OK	121 OK	Limits =	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}	4.30	4.95	0m	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.8357	1.19	0.0016J	0.0023J	**0.0016J**
Aroclor 1242 {2}	4.81	5.33	5193m	28801m	0.5540	1.09	0.0011J	0.0021J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F012.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D			**Vial:**	8
Acqu Date:	10/04/2014 07:21	**Quant Date:**	10/13/2014 19:08	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-016				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.01	5.95	31214m	36863m	1.30	1.16	0.0025J	0.0023J	
Aroclor 1242 {4}	5.11	5.99	10772m	49779m	0.6550	1.29	0.0013J	0.0025J	
Aroclor 1242 {5}	5.25	6.19	0m	24880m	0.0000	1.22	0.00096U	0.0024J	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}	6.36	7.25	0m	48878m	0.0000	1.11	0.00096U	0.0022J	
Aroclor 1254			0	0	0.5320	1.23	0.0010J	0.0024J	**0.0010**JP
Aroclor 1254 {2}	6.79	7.30	8172m	25590m	0.3850	1.36	0.00096U	0.0027J	
Aroclor 1254 {3}	6.96	7.61	0m	84436m	0.0000	1.38	0.00096U	0.0027J	
Aroclor 1254 {4}	7.30	8.63	16880m	0m	0.6960	0.0000	0.0014J	0.00096U	
Aroclor 1254 {5}	7.92	9.42	7219m	28379m	0.5150	1.06	0.0010J	0.0021J	
Aroclor 1260 {1}	7.78 -0.01	8.45 +0.00	0	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.9980	1.19	0.0020J	0.0023J	**0.0020**J
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	24861	41612m	1.14	1.31	0.0022J	0.0026J	
Aroclor 1260 {3}	8.79 0.00	10.42 0.00	23374	36544m	1.05	1.13	0.0021J	0.0022J	
Aroclor 1260 {4}	9.25 -0.01	11.11 0.00	51147	87134m	1.06	1.23	0.0021J	0.0024J	
Aroclor 1260 {5}	10.05 -0.01	11.78 +0.00	28543	50708m	0.7470	1.09	0.0015J	0.0021J	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1020 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F012.D
Report Date: 13-Oct-2014 19:08

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F012.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Inj Date : 04-OCT-2014 07:21
Sample Info: K1409921-016
Misc Info :
Cal Date : 06-OCT-2014 13:58
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

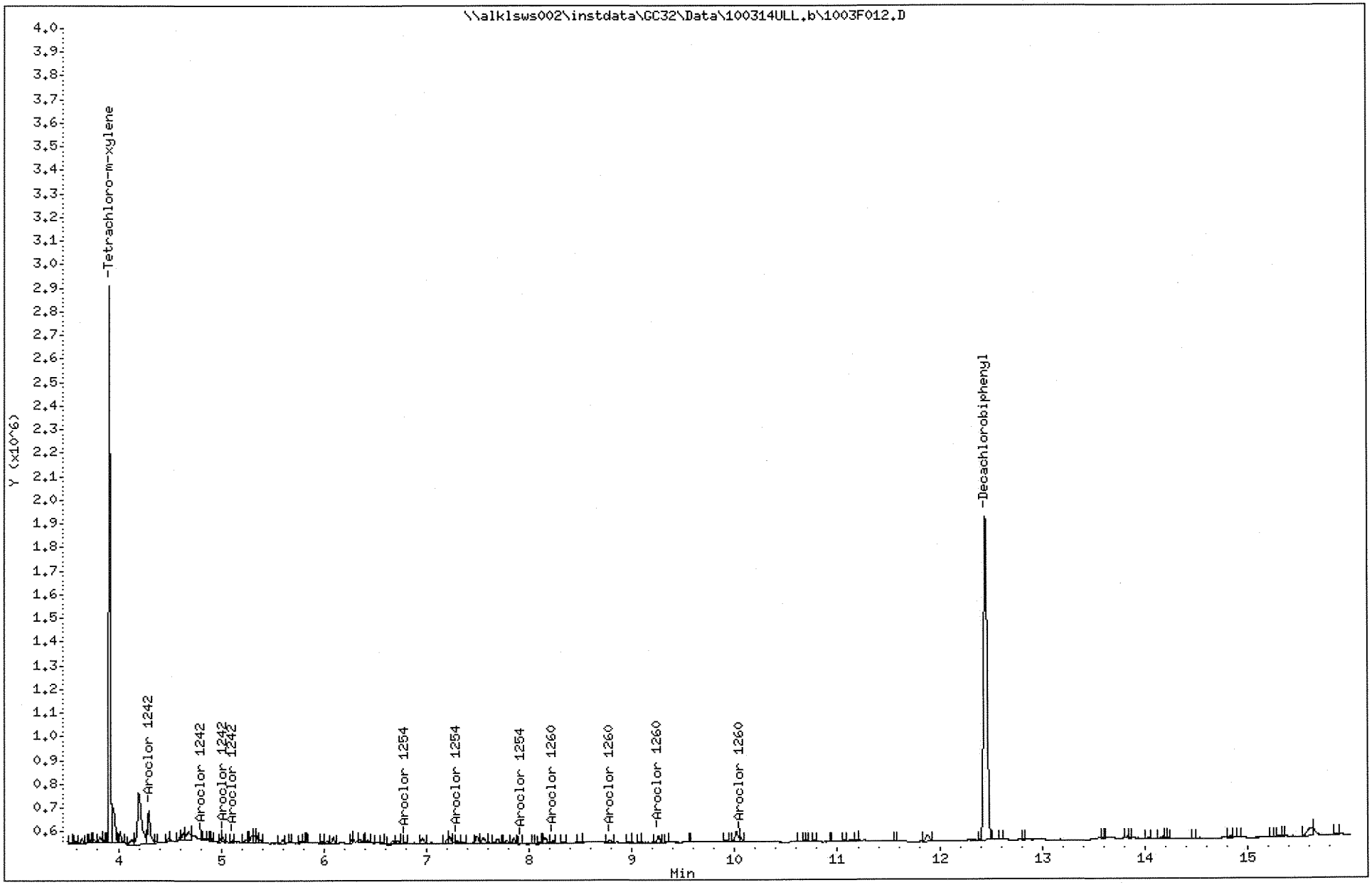
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.642	2256330	5046985	3.40	4.16		100.00(R)
Aroclor 1242	4.298	4.948					80.00- 120.00	0.00(M)
	4.811	5.325	5193	28801	0.554	1.09	67.74- 101.60	0.00(M)
	5.014	5.945	31214	36863	1.30	1.16	183.47- 275.21	0.00(M)
	5.111	5.985	10772	49779	0.655	1.29	127.13- 190.69	0.00(M)
	5.248	6.185		24880		1.22	97.67- 146.51	0.00(M)
			Average of Peak Amounts =		0.836	1.19		
Aroclor 1254	6.358	7.245		48878		1.11	80.00- 120.00	100.00(M)
	6.794	7.295	8172	25590	0.385	1.36	144.59- 216.89	45.78(M)
	6.958	7.612		84436		1.38	115.49- 173.24	172.75(M)
	7.298	8.632	16880		0.696		154.54- 231.81	94.57(M)
	7.918	9.422	7219	28379	0.515	1.06	99.03- 148.55	40.44(M)
			Average of Peak Amounts =		0.532	1.23		
Aroclor 1260	7.784	8.448					80.00- 120.00	0.00
	8.231	9.948	24861	41612	1.14	1.31	134.02- 201.03	96.47
	8.791	10.418	23374	36544	1.05	1.13	140.40- 210.60	90.70
	9.254	11.112	51147	87134	1.06	1.23	299.92- 449.88	198.47
	10.051	11.775	28543	50708	0.747	1.09	236.01- 354.01	110.76
			Average of Peak Amounts =		0.999	1.19		
Decachlorobiphenyl	12.448	14.432	3109635	4778652	5.82	6.04		100.00(R)
Aroclors, Total	1.000	1.000	58464	135901	2.37	3.60		0.00

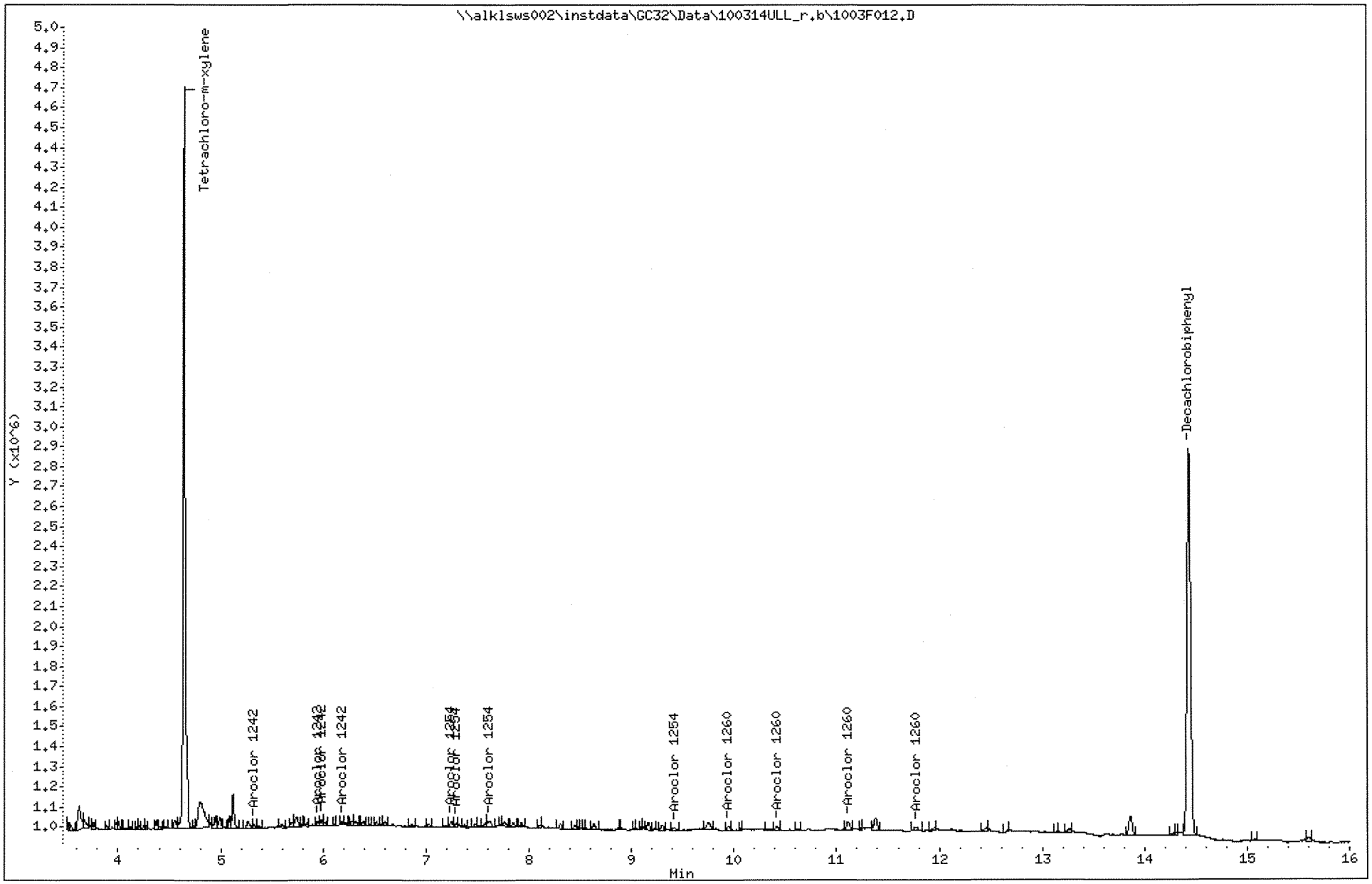
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

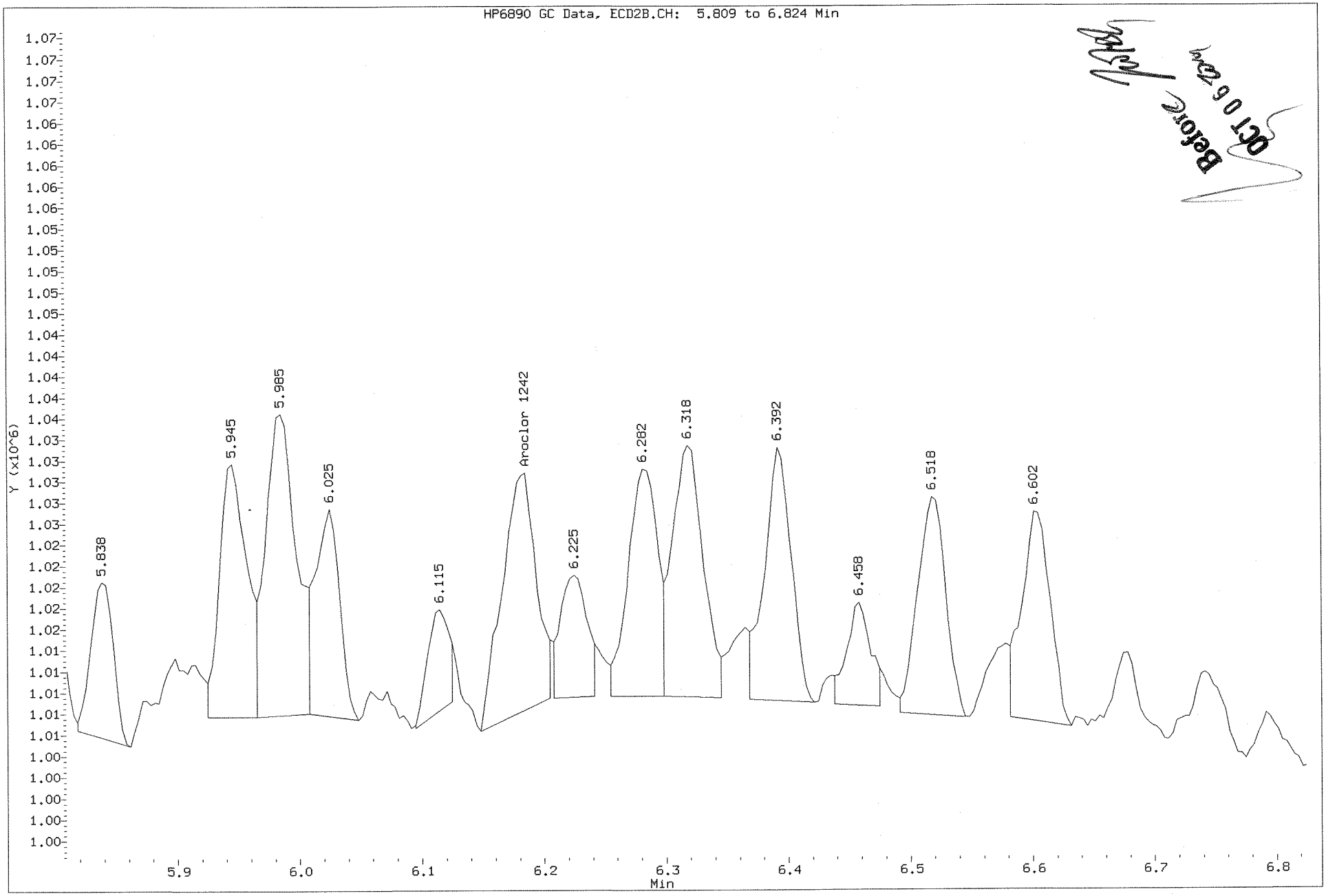
Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F012.D
Date : 04-OCT-2014 07:21
Client ID:
Instrument: GC32.i
Sample Info: K1409921-016
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Date : 04-OCT-2014 07:21
Client ID:
Instrument: GC32.i
Sample Info: K1409921-016
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32

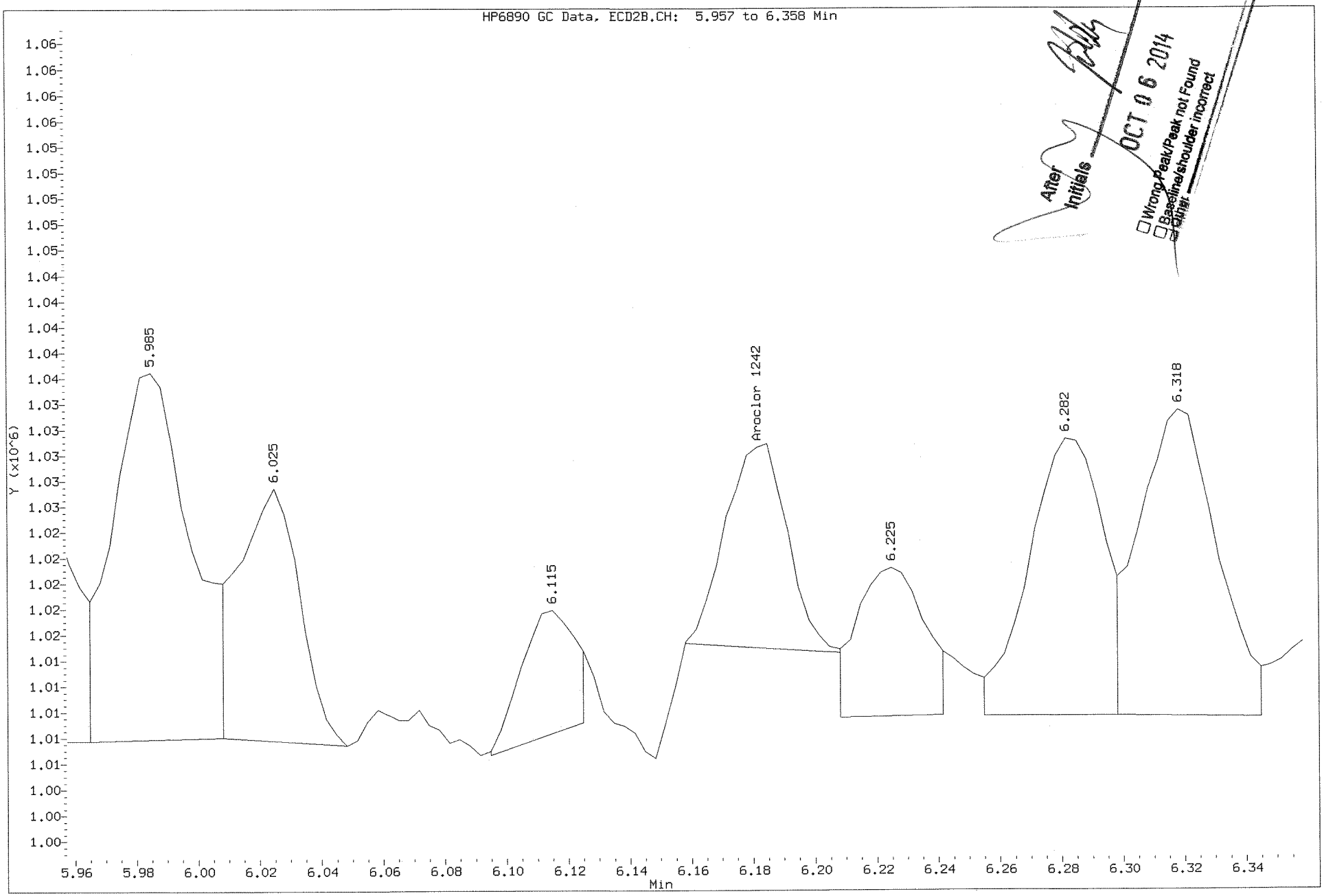


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Injection Date: 04-OCT-2014 07:21
Instrument: GC32.i
Client Sample ID:

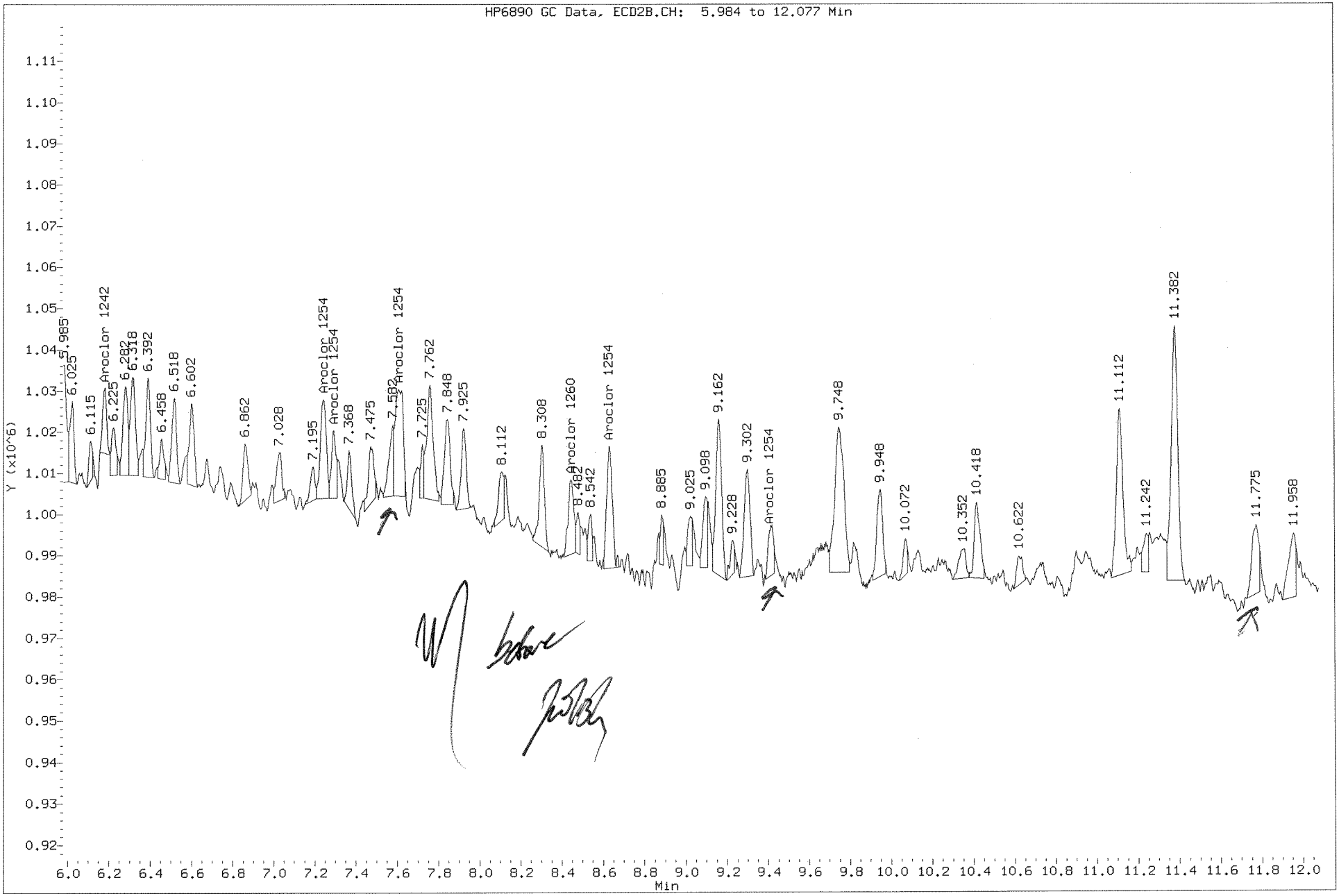


Beloit
OCT 06 2014

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Injection Date: 04-OCT-2014 07:21
Instrument: GC32.i
Client Sample ID:

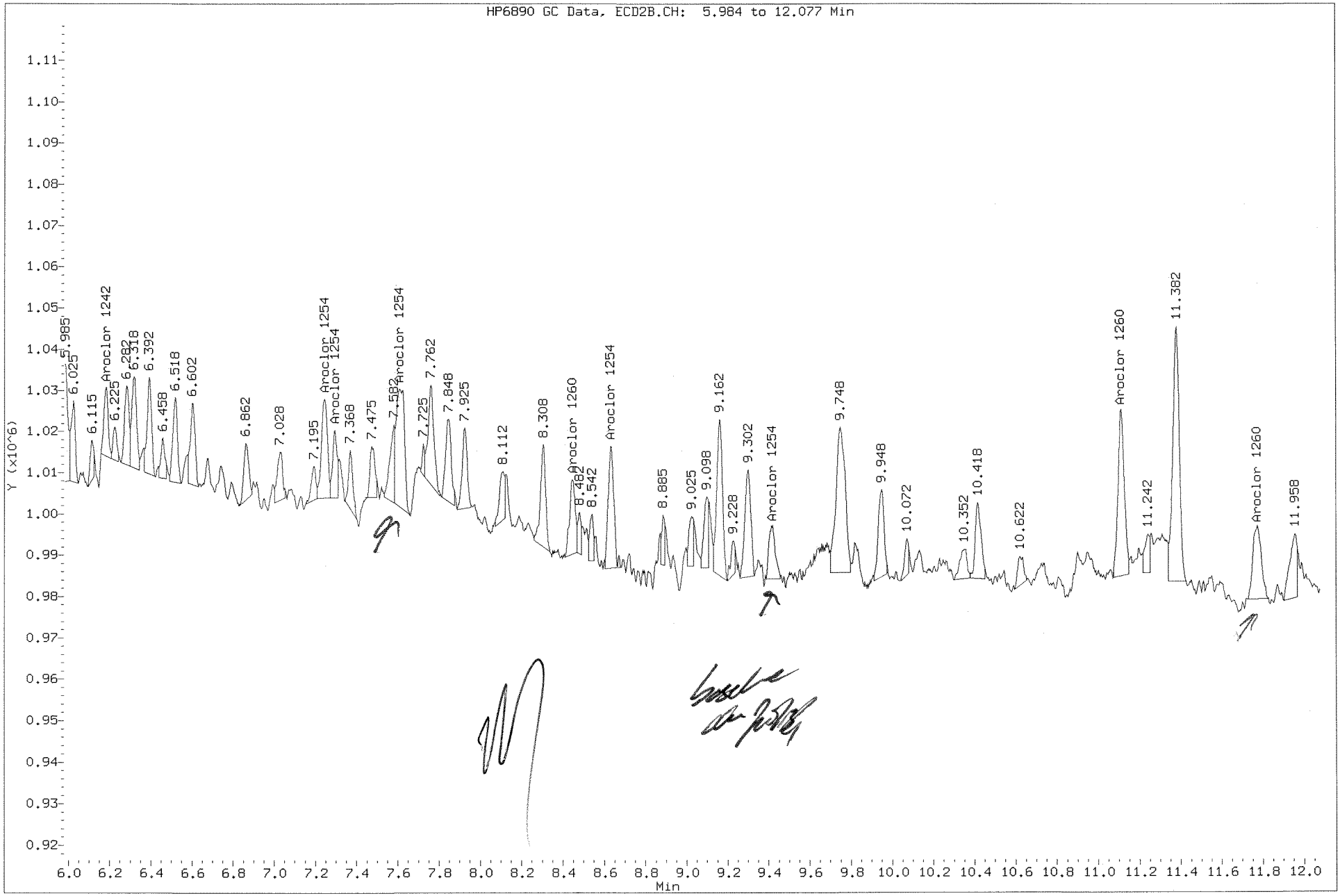


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Injection Date: 04-OCT-2014 07:21
Instrument: GC32.i
Client Sample ID:



1496

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F012.D
Injection Date: 04-OCT-2014 07:21
Instrument: GC32.i
Client Sample ID:



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F013.I
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 07:42
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 07:42
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review:

Secondary Review:

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F013.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F013.D			**Vial:**	9
Acqu Date:	10/04/2014 07:42	**Quant Date:**	10/13/2014 20:13	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-017				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378576	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt	
Decachlorobiphenyl	12.45	-0.01	14.43	0.00	2878977	4279525	5.39	5.41			108	OK
						%Recovery =	108 OK	108 OK	Limits =	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}	4.30	4.95	0m	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	1.47	2.04	0.0029J	0.0040J	**0.0029J**
Aroclor 1242 {2}	4.81	5.33	8280m	25885	0.8830	0.9820	0.0017J	0.0019J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F013.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F013.D			**Vial:**	9
Acqu Date:	10/04/2014 07:42	**Quant Date:**	10/13/2014 20:13	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-017				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}	5.02	5.94	54679m	55555	2.27	1.75	0.0045J	0.0035J	
Aroclor 1242 {4}	5.11	5.98	20409m	87891	1.24	2.27	0.0025J	0.0045J	
Aroclor 1242 {5}	5.25	6.18	0m	64827	0.0000	3.17	0.00096U	0.0063	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}	6.36	7.24	34780m	140949	2.86	3.21	0.0057	0.0064	
Aroclor 1254			0	0	2.10	3.12	0.0042J	0.0062	**0.0042J**
Aroclor 1254 {2}	6.80	7.29	37307m	65696	1.76	3.48	0.0035J	0.0069	
Aroclor 1254 {3}	6.95	7.62	0m	201709	0.0000	3.29	0.00096U	0.0065	
Aroclor 1254 {4}	7.30	8.63	49455m	0	2.04	0.0000	0.0040J	0.00096U	
Aroclor 1254 {5}	7.92	9.42	24355m	66896	1.74	2.49	0.0034J	0.0049J	
Aroclor 1260 {1}	7.79 0.00	8.44 -0.01	0	0m	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	1.25	1.54	0.0025J	0.0031J	**0.0025J**
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	28240	48970m	1.30	1.54	0.0026J	0.0030J	
Aroclor 1260 {3}	8.79 0.00	10.42 0.00	29906	47923m	1.34	1.48	0.0027J	0.0029J	
Aroclor 1260 {4}	9.25 -0.01	11.11 0.00	54296	84814m	1.12	1.20	0.0022J	0.0024J	
Aroclor 1260 {5}	10.02 -0.04	11.77 0.00	0	90968m	0.0000	1.95	0.00096U	0.0039J	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1010 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
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NR: Analyte not reported from this analysis

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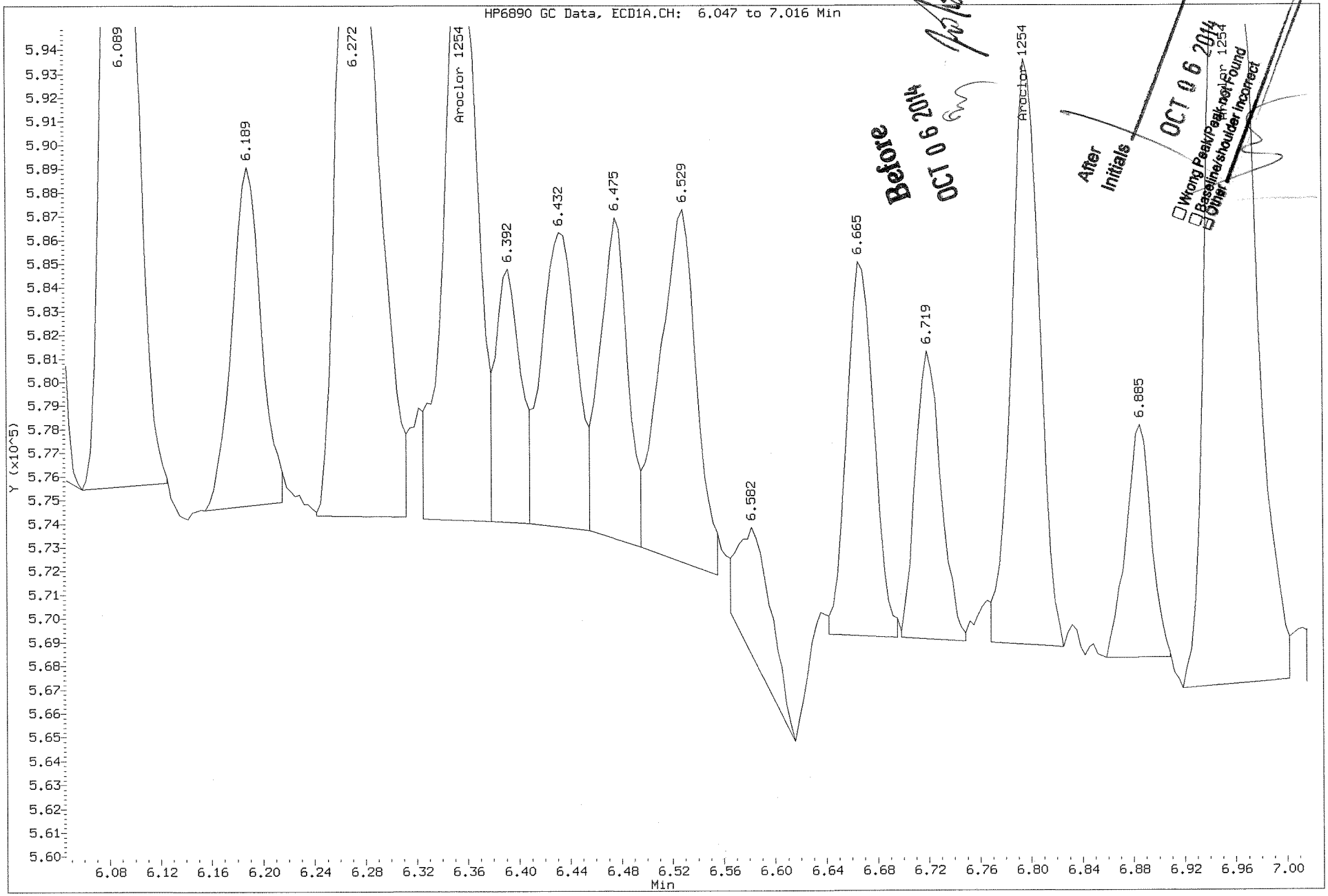
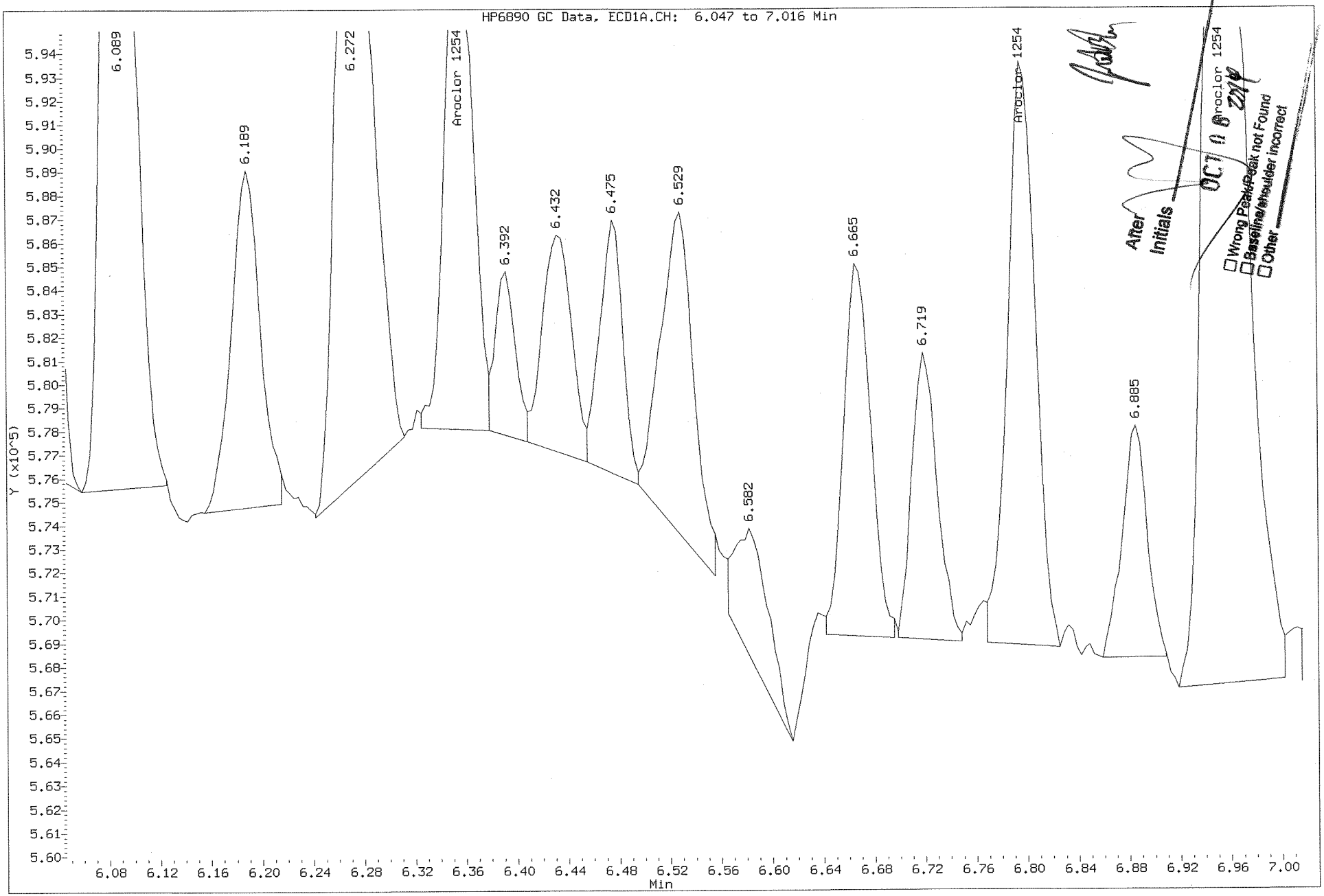
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:

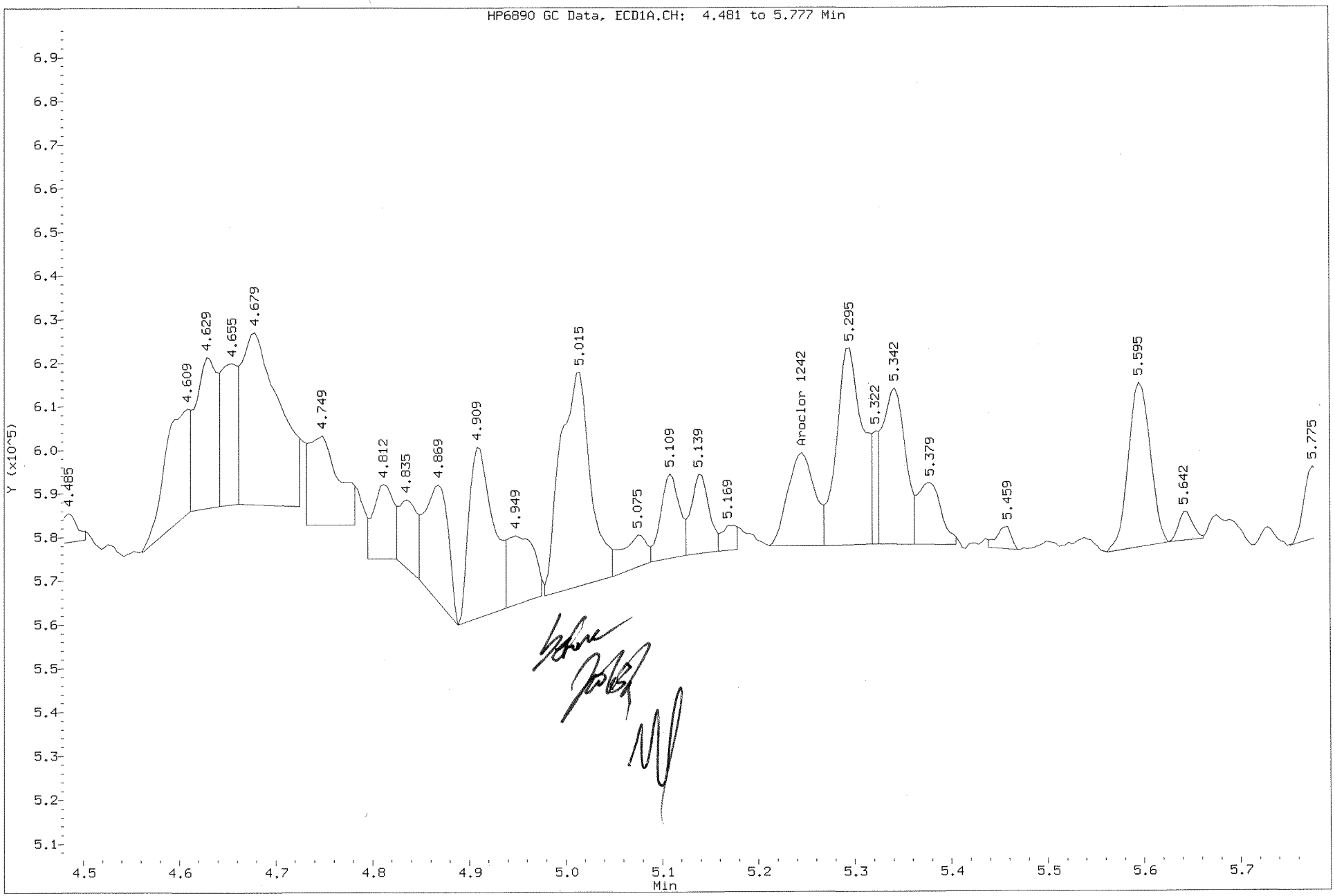


1502

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:

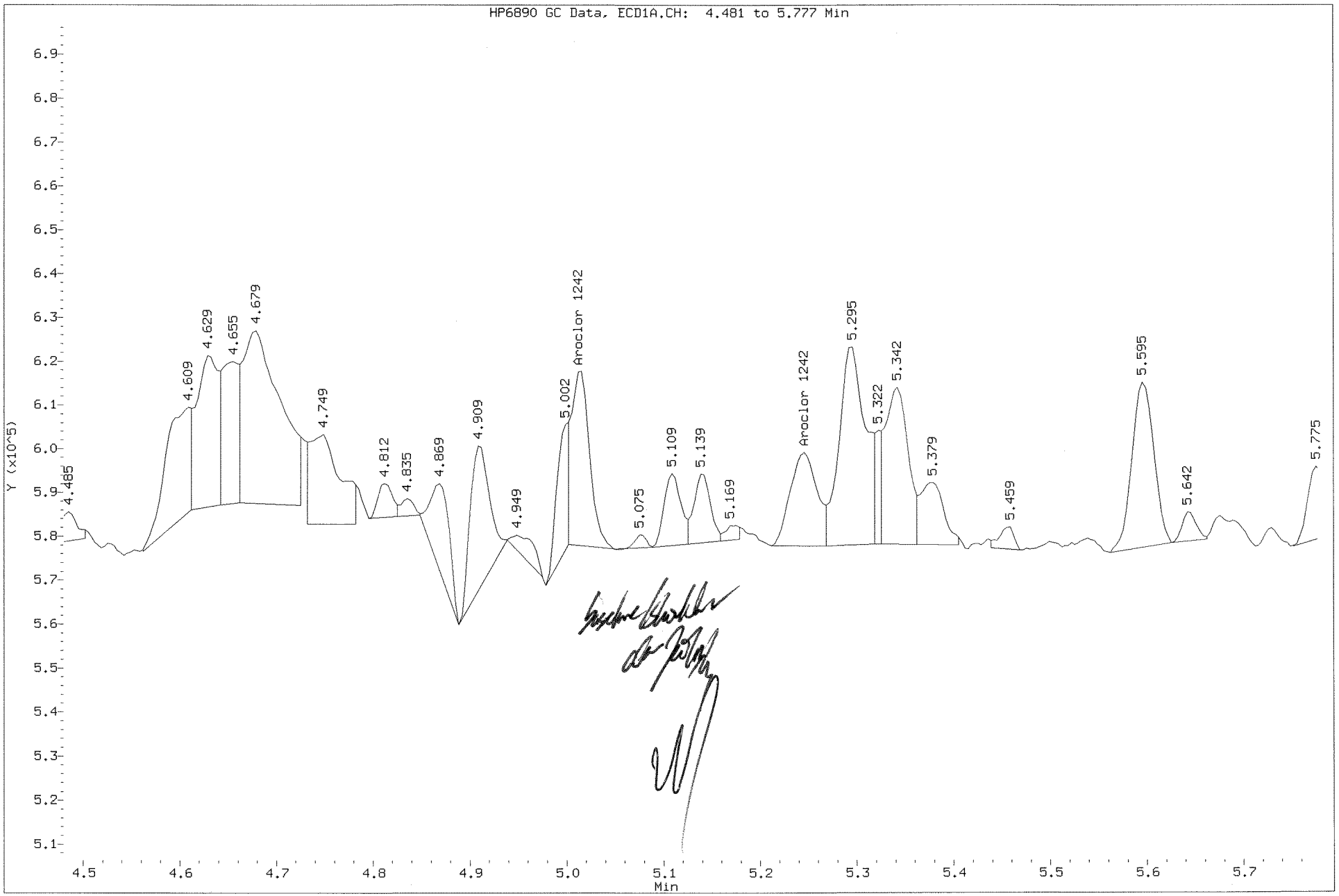


Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:



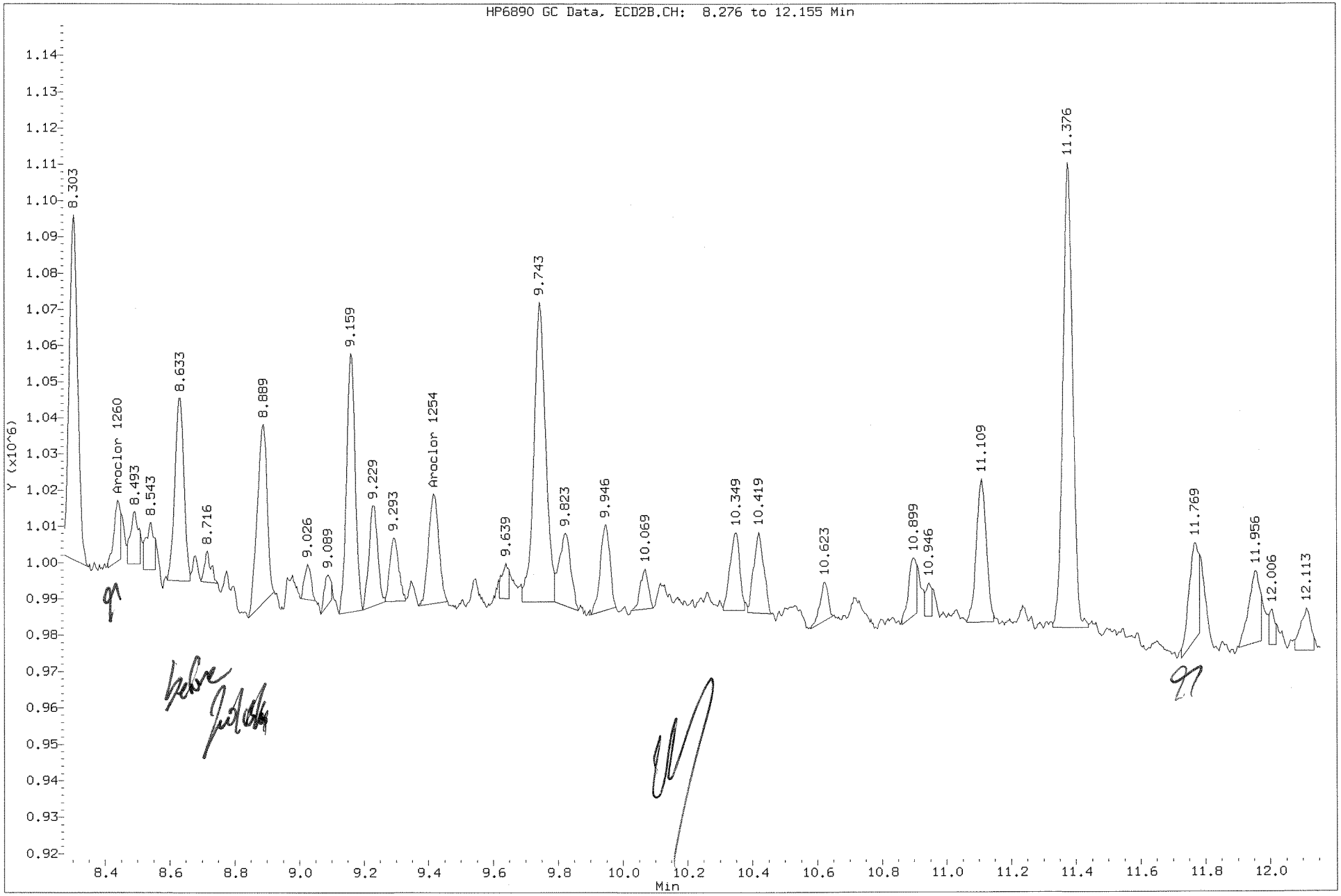
1504

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:

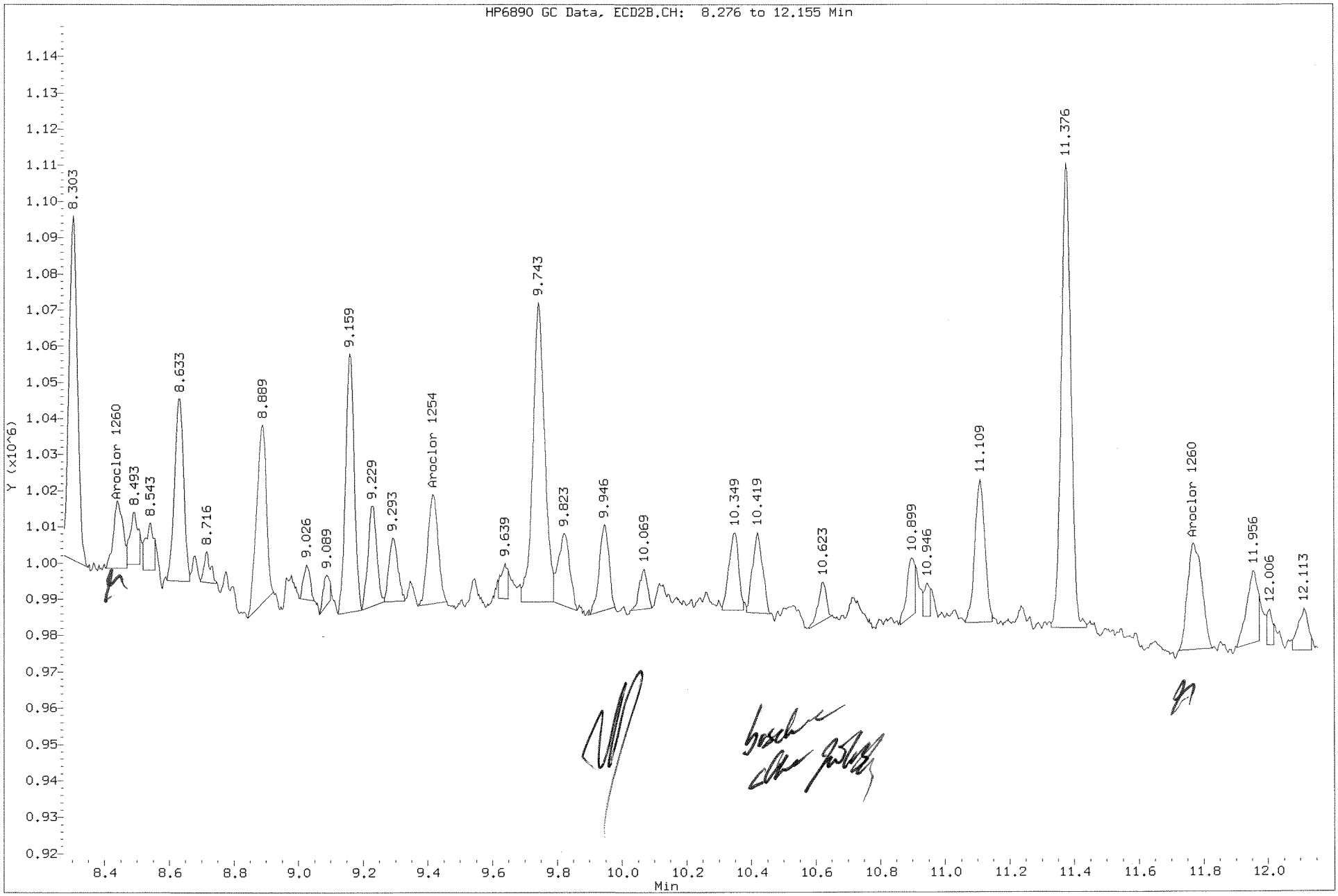


1505

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F013.D
Injection Date: 04-OCT-2014 07:42
Instrument: GC32.i
Client Sample ID:



1507

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F014.I
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 08:03
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 10/04/2014 08:03
Date Quantitated: 10/06/2014 14:00
Batch ID: KWG1413521
Analysis Method: 8082A
ListJoinID: LJ15289

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Aroclor 1260	106	60	103	
	Aroclor 1260 {2}	115	60	103	
	Aroclor 1260 {3}	111	60	103	
Duplicate Lab Control Spike	Aroclor 1260	104	60	103	
	Aroclor 1260 {2}	114	60	103	
	Aroclor 1260 {3}	110	60	103	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F014.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F014.D			**Vial:**	10
Acqu Date:	10/04/2014 08:03	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-018				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378570	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15289
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.45 -0.01	14.43 0.00	2646482	4214973	4.95	5.32			106 OK
			%Recovery =		99 OK	106 OK	**Limits =**	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

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J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
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Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F014.D			**Vial:**	10
Acqu Date:	10/04/2014 08:03	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-018				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {1}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {2}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.00096U	0.00096U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F014.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F014.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F014.D
Inj Date : 04-OCT-2014 08:03
Sample Info: K1409921-018
Misc Info :
Cal Date : 06-OCT-2014 00:16
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.912	4.640	2008363	4527702	3.03	3.73		100.00(R)
Decachlorobiphenyl	12.446	14.430	2646482	4214973	4.95	5.32		100.00(R)

QC Flag Legend

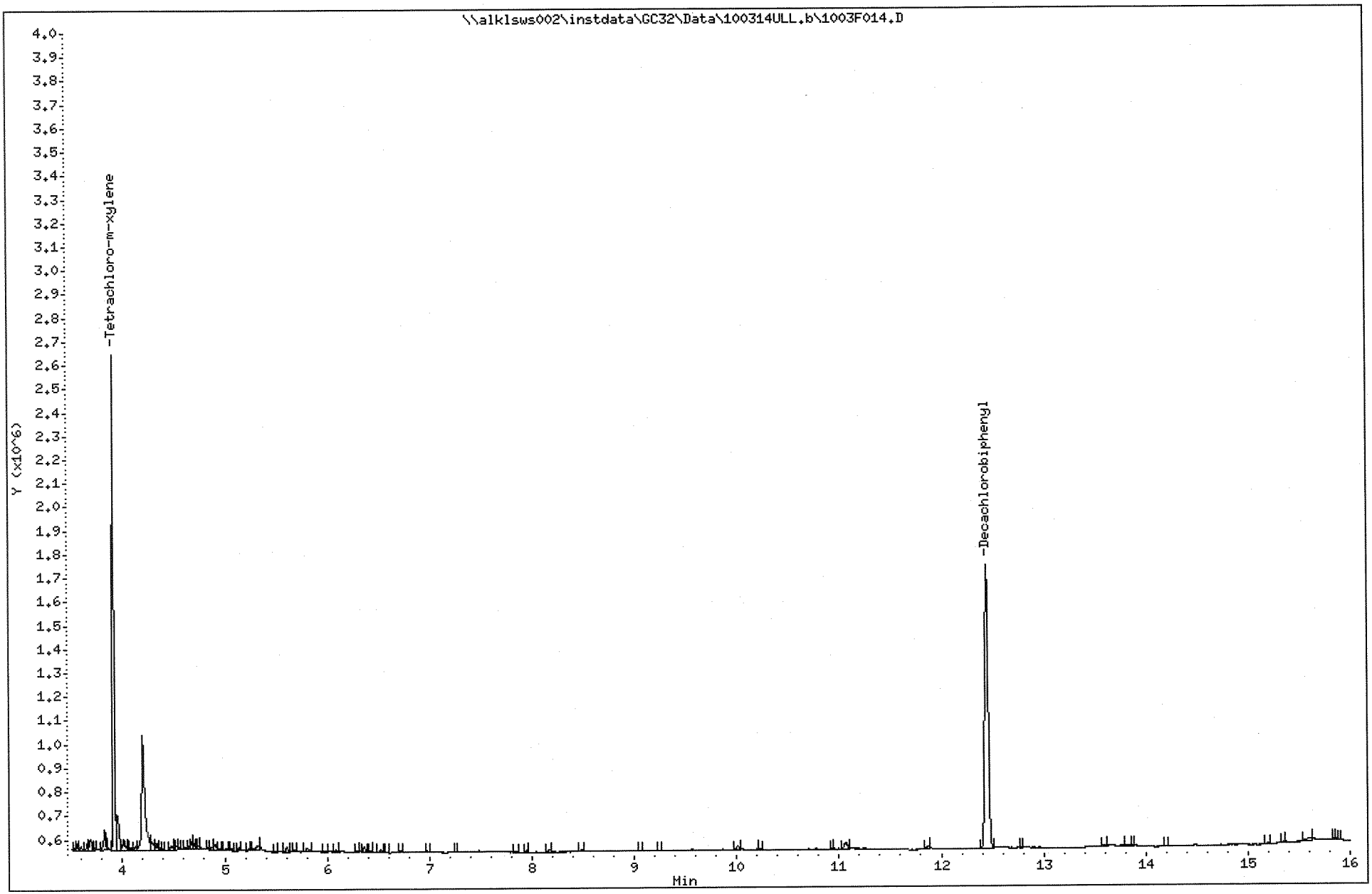
R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F014.D
Date : 04-OCT-2014 08:03
Client ID:
Sample Info: K1409921-018

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

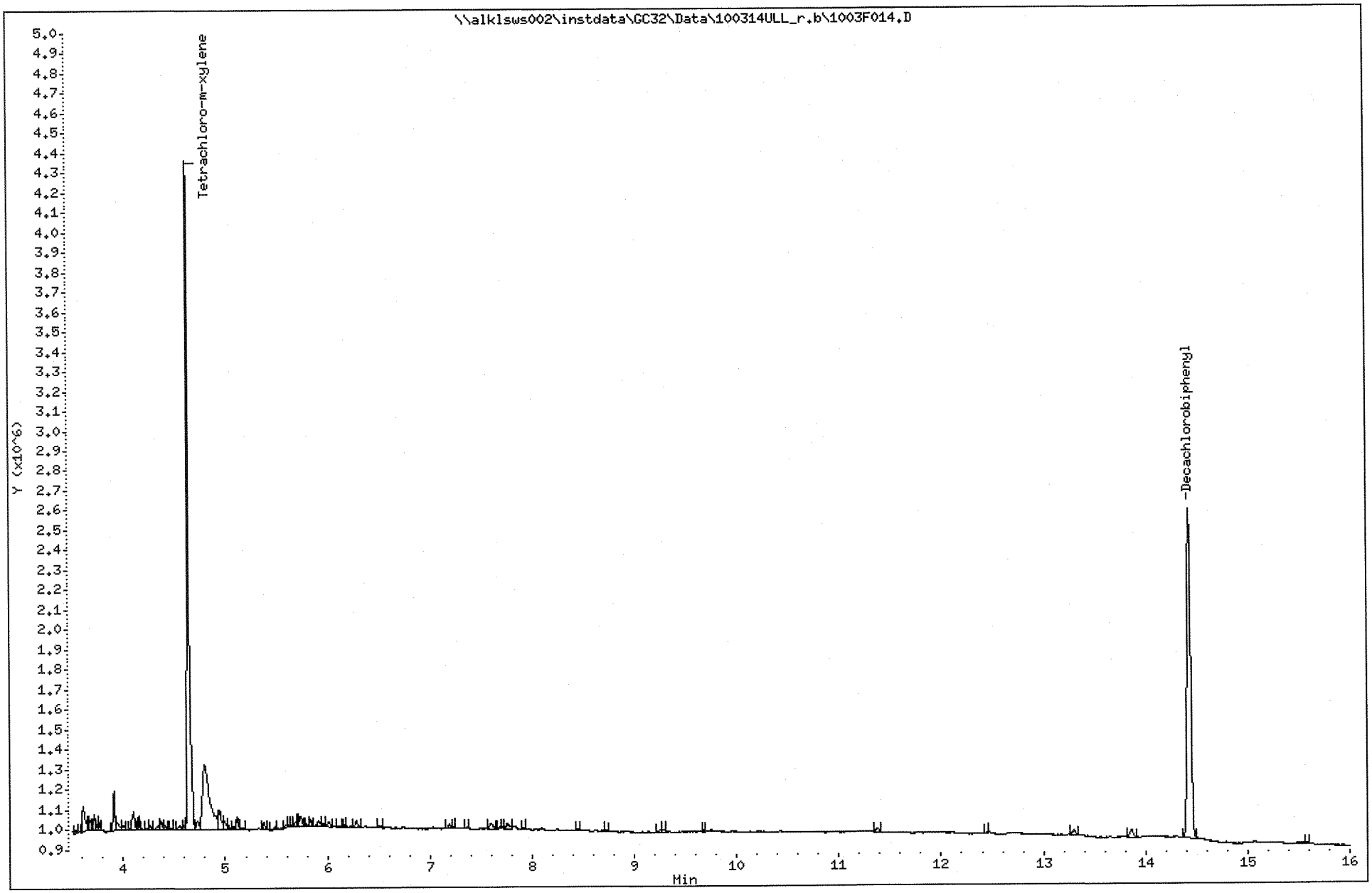


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F014.D
Date : 04-OCT-2014 08:03
Client ID:
Sample Info: K1409921-018

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F007.I	**Date Acquired:**	10/04/2014 05:35
Lab ID:	KWG1413166-3	**Date Quantitated:**	10/06/2014 13:59
RunType:	MB	**Batch ID:**	KWG1413521
Matrix:	WATER	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Tetrachloro-m-xylene	-31.1	NA	20	
Continuing Calibration Recovery (Closing)	Tetrachloro-m-xylene	-24.4	NA	20	NR

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: KWG1413166-3
RunType: MB
Matrix: WATER

Date Acquired: 10/04/2014 05:35
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/06/2014 14:07:03
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F007.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F007.D			**Vial:**	3
Acqu Date:	10/04/2014 05:35	**Quant Date:**	10/13/2014 04:06	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378569	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:		**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.92	4.64	2225064	4848052	3.35[CCV]	4.00			80 OK
				%Recovery =	67 OK	80 OK	Limits =	37-121	
Decachlorobiphenyl	12.45	14.43	2765230	4311795	5.18	5.45			109 OK
				%Recovery =	104 OK	109 OK	Limits =	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.000960U	0.000960U	0.000960U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221			0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F007.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F007.D			**Vial:**	3
Acqu Date:	10/04/2014 05:35	**Quant Date:**	10/13/2014 04:06	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.0000	0.0000	0.000960U	0.000960U	0.000960U
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1262 {1}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {2}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {3}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {4}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {5}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1268 {1}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {2}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {3}			0	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {4}			0	0	0.0000	0.0000	0.00096U	0.00096U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1010 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F007.D
Report Date: 13-Oct-2014 04:06

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F007.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F007.D
Inj Date : 04-OCT-2014 05:35
Sample Info: KQ1411532-07MB
Misc Info :
Cal Date : 06-OCT-2014 13:58
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.916	4.643	2225064	4848052	3.35	4.00		100.00(R)
Decachlorobiphenyl	12.452	14.433	2765230	4311795	5.18	5.45		100.00(R)

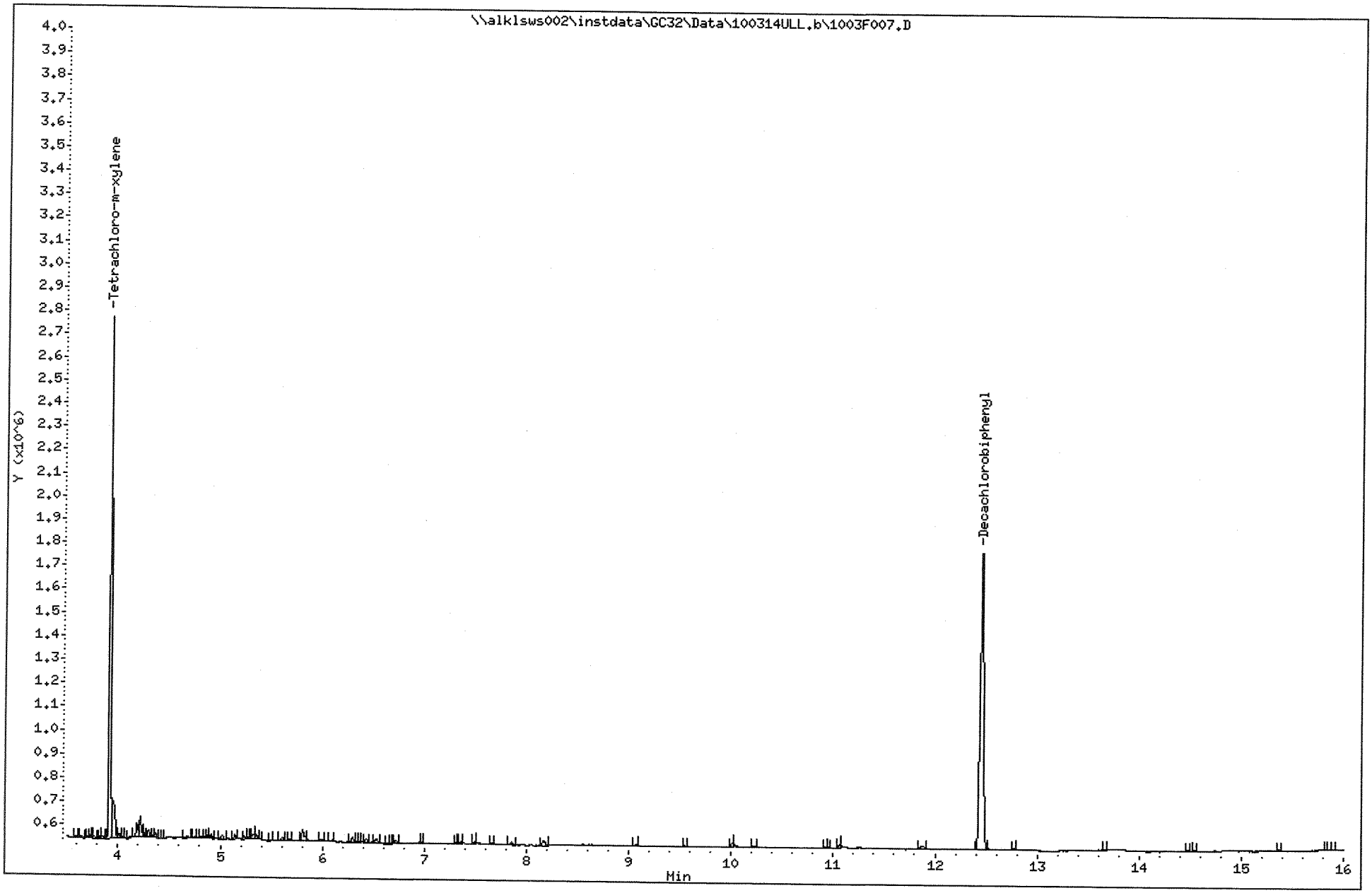
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F007.D
Date : 04-OCT-2014 05:35
Client ID:
Sample Info: KQ1411532-07MB

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

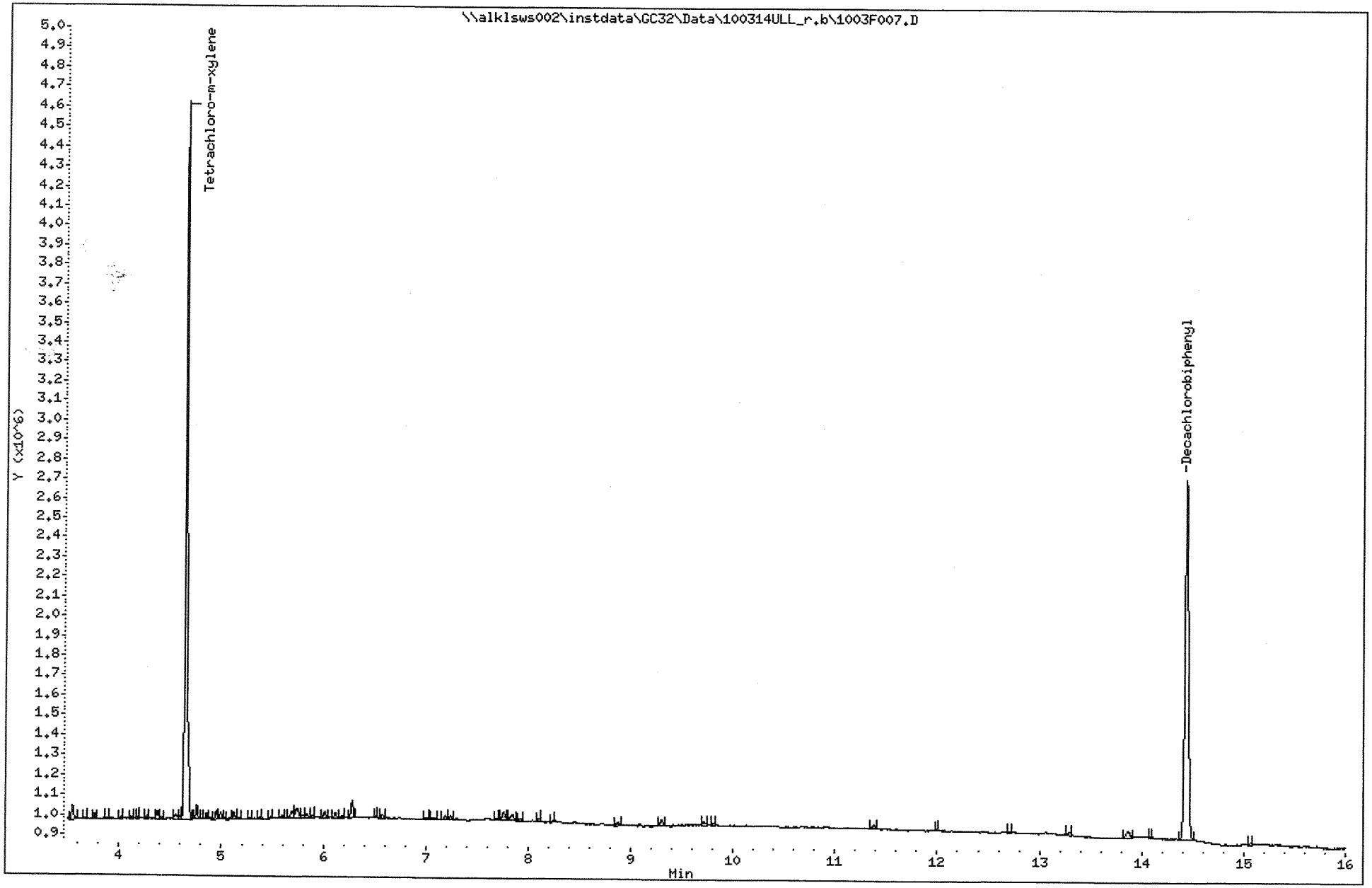


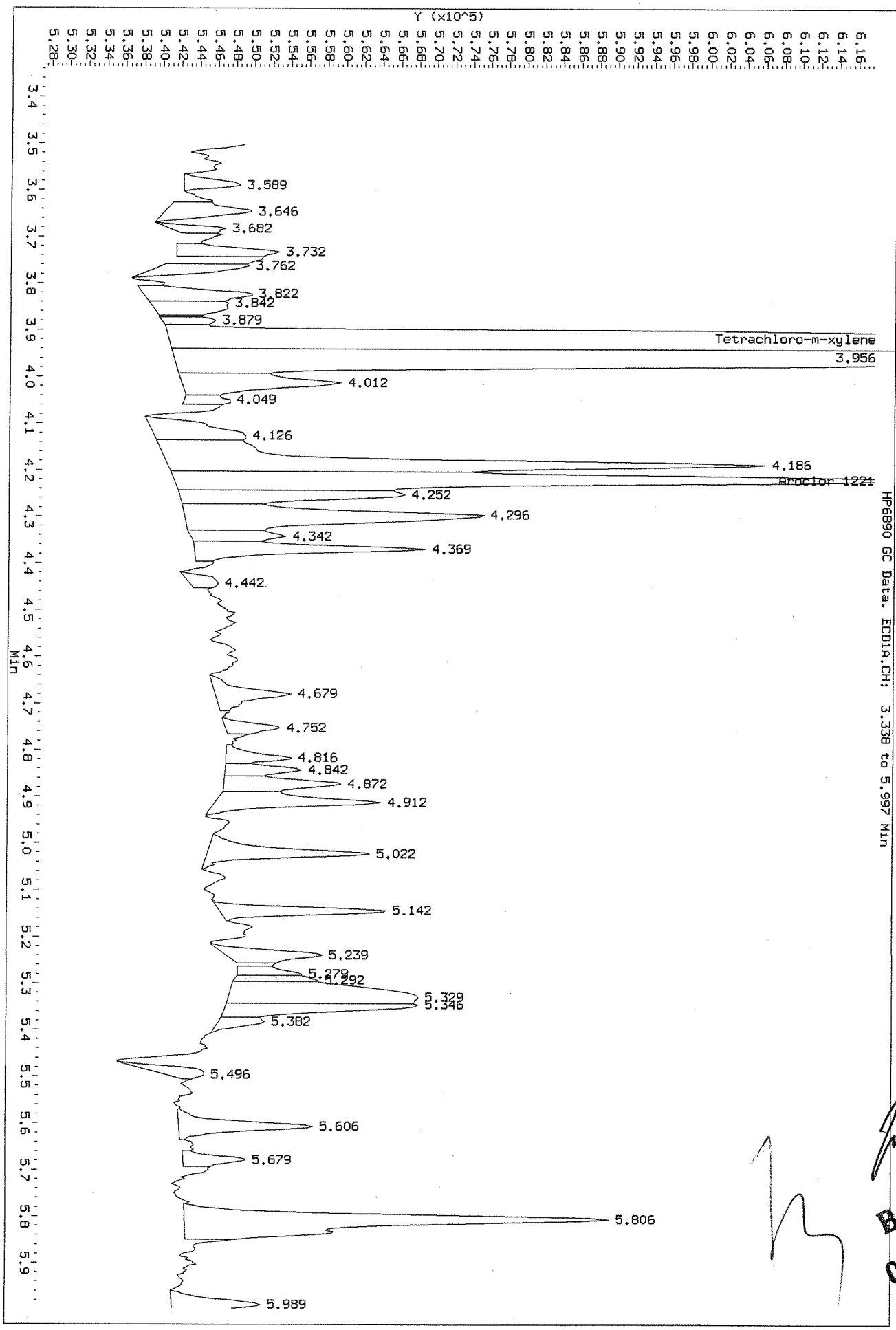
Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F007.D
Date : 04-OCT-2014 05:35
Client ID:
Sample Info: KQ1411532-07MB

Instrument: GC32.i

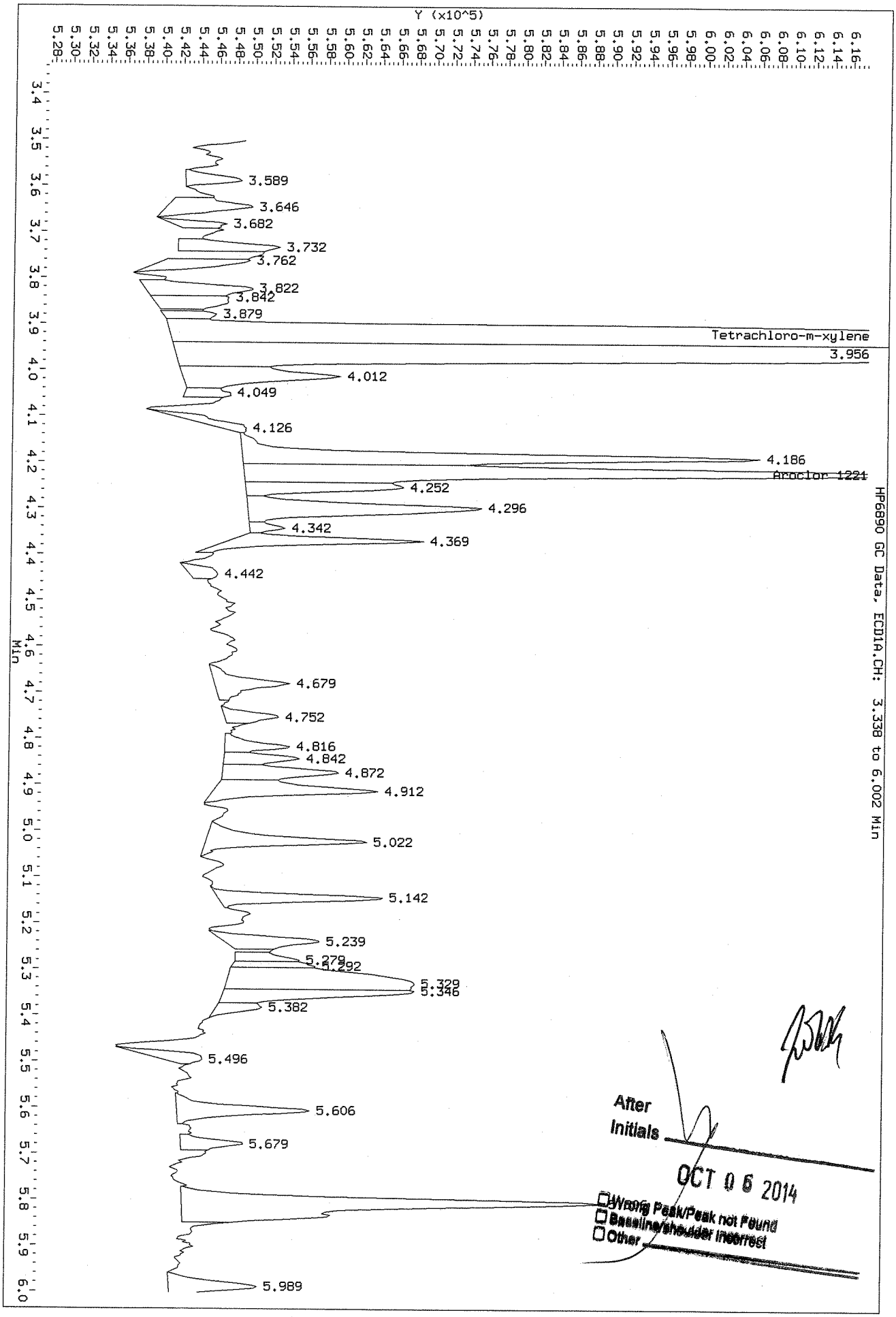
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB





Before
OCT 06 2014


Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F007.D
Injection Date: 04-OCT-2014 05:35
Instrument: GC32.i
Client Sample ID:
Y (x10^5)
Min
HP6890 GC Data, ECD1A.CH: 3.338 to 6.002 Min
3.589
3.646
3.682
3.732
3.762
3.822
3.842
3.879
Tetrachloro-m-xylene
3.956
4.012
4.049
4.126
4.186
Aroclor 1221
4.252
4.296
4.342
4.369
4.442
4.679
4.752
4.816
4.842
4.872
4.912
5.022
5.142
5.239
5.279
5.292
5.329
5.346
5.382
5.496
5.606
5.679
5.989
After
Initials
OCT 0 6 2014
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F114.D	**Date Acquired:**	10/07/2014 06:54
Lab ID:	K1409921-004	**Date Quantitated:**	10/08/2014 15:45
RunType:	SMPL	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		ListJoinID:	LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review:

Secondary Review:

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F114.I
Lab ID: K1409921-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 06:54
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/08/2014 16:14:17
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F114.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F114.D			**Vial:**	8
Acqu Date:	10/07/2014 06:54	**Quant Date:**	10/13/2014 22:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380529	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.57 +0.00	13.99 0.00	11990159	7523438	64.30	65.01			65 OK
				%Recovery =	64 OK	65 OK	Limits =	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F114.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F114.D			**Vial:**	8
Acqu Date:	10/07/2014 06:54	**Quant Date:**	10/13/2014 22:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.94	17283	14425	3.78	2.63	0.0085U	0.0085U	
Aroclor 1254			0	0	3.46	3.20	0.0085U	0.0085U	0.0085U
Aroclor 1254 {2}	6.89	7.31	0	21846	0.0000	2.64	0.0085U	0.0085U	
Aroclor 1254 {3}	7.04		42896	0	2.67	0.0000	0.0085U	0.0085U	
Aroclor 1254 {4}	7.35	8.29	0	12250	0.0000	3.90	0.0085U	0.0085U	
Aroclor 1254 {5}	8.02	9.05	26266	15699	3.92	3.64	0.0085U	0.0085U	
Aroclor 1260 {1}	7.29 0.00	8.12 +0.02	22172	11004	1.92	3.28	0.0085U	0.0085U	
Aroclor 1260			0	0	1.75	2.66	0.0085U	0.0085U	0.0085U
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	15326	12902	1.65	2.21	0.0085U	0.0085U	
Aroclor 1260 {3}	8.89 -0.01	10.02 -0.01	14321	0	1.56	0.0000	0.0085U	0.0085U	
Aroclor 1260 {4}	9.37 +0.00	10.71 -0.01	46979	33395	2.18	2.49	0.0085U	0.0085U	
Aroclor 1260 {5}	10.17 +0.00		23841	0	1.44	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.051 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	78.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F114.D
Report Date: 13-Oct-2014 22:45

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F114.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F114.D
Inj Date : 07-OCT-2014 06:54
Sample Info: K1409921-004
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.973	4.469	23338838	11988020	59.5	61.2		100.00
Aroclor 1254	6.443	6.942	17283	14425	3.78	2.63	80.00- 120.00	100.00(H)
	6.886	7.309		21846		2.64	119.56- 179.34	151.45(H)
	7.043	0.000	42896		2.67		284.20- 426.31	248.20(H)
	7.346	8.289		12250		3.90	43.78- 65.66	84.92(H)
	8.020	9.049	26266	15699	3.92	3.64	122.76- 184.15	151.98(H)
			Average of Peak Amounts =		3.46	3.20		
Aroclor 1260	7.290	8.116	22172	11004	1.92	3.28	80.00- 120.00	100.00(H)
	8.333	9.572	15326	12902	1.65	2.21	63.80- 95.69	69.12(H)
	8.886	10.019	14321		1.56		64.05- 96.07	64.59(H)
	9.370	10.712	46979	33395	2.18	2.49	145.21- 217.81	211.88(H)
	10.166	0.000	23841		1.44		112.20- 168.30	107.53(H)
			Average of Peak Amounts =		1.75	2.66		
Decachlorobiphenyl	12.566	13.986	11990159	7523438	64.3	65.0		100.00
Aroclors, Total	0.000	0.000	53342	35155	5.21	5.86		0.00

QC Flag Legend

H - Operator selected an alternate compound hit.

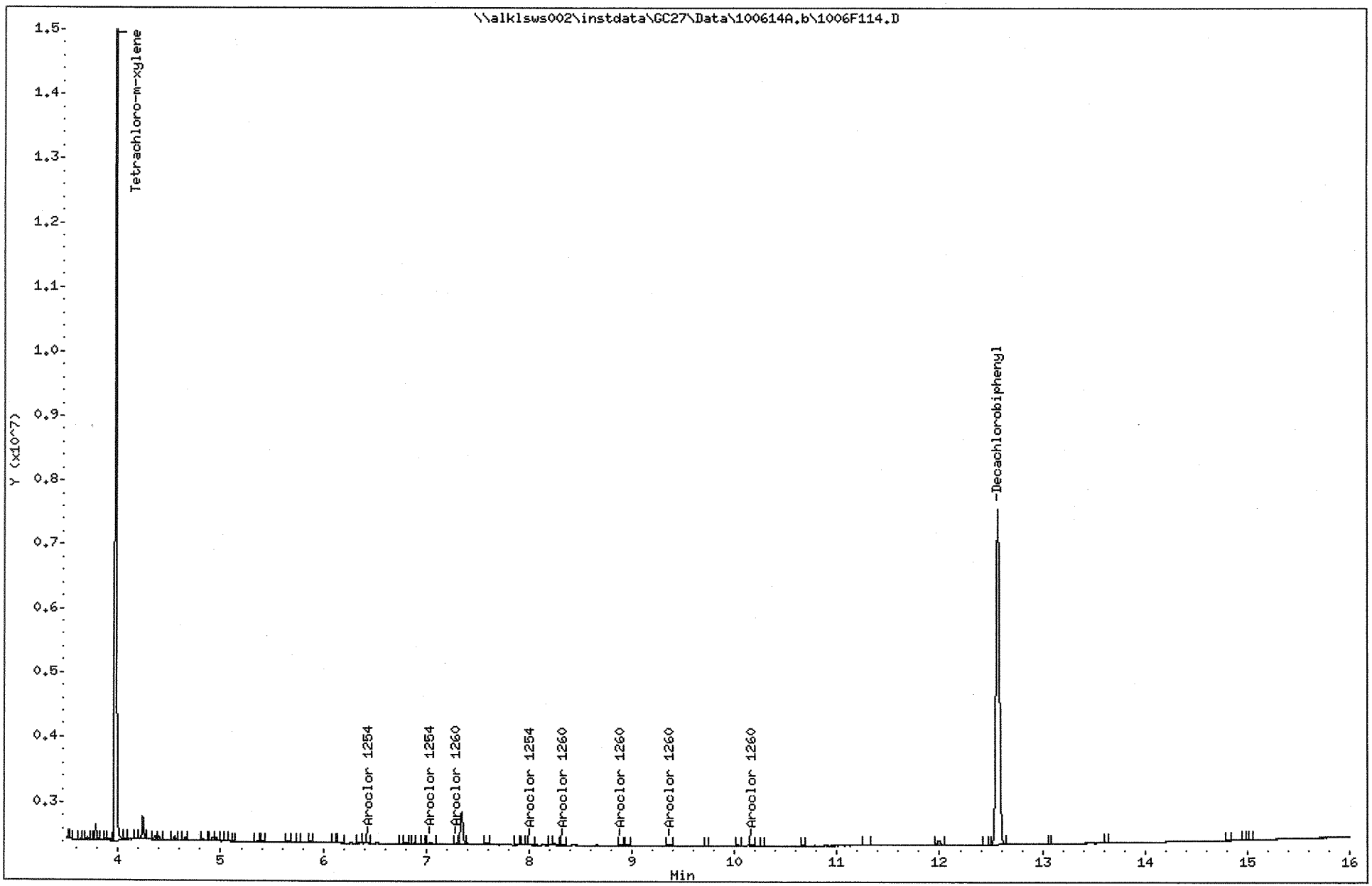
Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F114.D
Date : 07-OCT-2014 06:54
Client ID:
Sample Info: K1409921-004

Instrument: GC27.i

Operator: JMSmith

Column phase: DB-35MS

Column diameter: 0.32

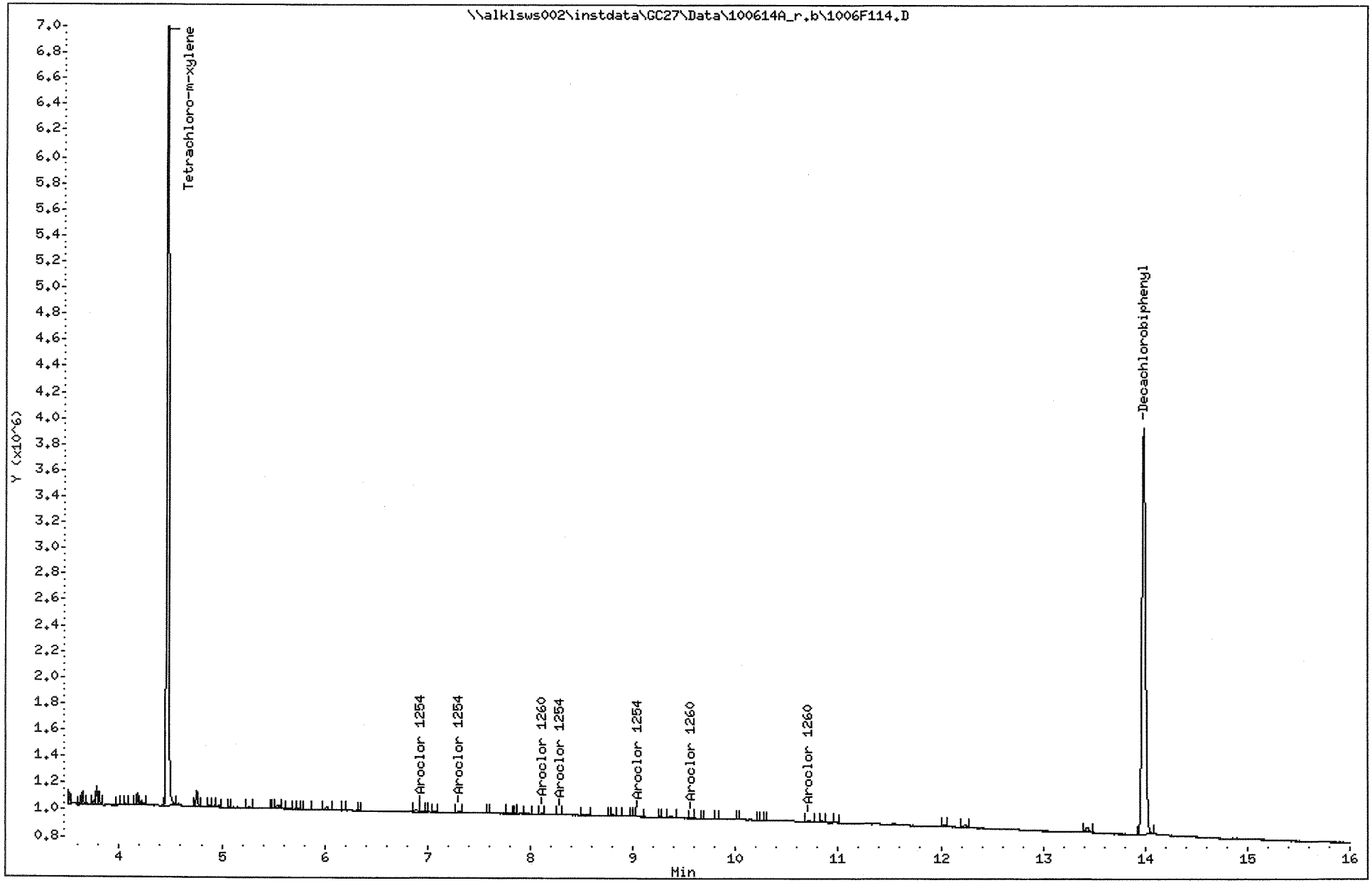


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F114.D
Date : 07-OCT-2014 06:54
Client ID:
Sample Info: K1409921-004

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F117.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:07
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F117.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:07
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/08/2014 16:14:35
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F117.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F117.D			**Vial:**	11
Acqu Date:	10/07/2014 08:07	**Quant Date:**	10/13/2014 23:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380530	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.56	0.00	13.99	12824094	7572612	68.77	65.44			69 OK
					%Recovery =	69 OK	65 OK	Limits =	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}	4.88	5.11	27358	29279	7.17	8.40	0.0085U	0.0085U	
Aroclor 1242			0	0	12.14	11.62	0.0096J	0.0092J	**0.0092J**
Aroclor 1242 {2}	5.08	5.74	157904	82703	13.43	13.70	0.011J	0.011J	

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J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F117.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F117.D			**Vial:**	11
Acqu Date:	10/07/2014 08:07	**Quant Date:**	10/13/2014 23:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.32	5.92	74565	38964	15.82	12.77	0.012J	0.010J	
Aroclor 1242 {4}	5.67	6.12	0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}	6.17	7.06	0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.94	0	168329m	0.0000	30.71	0.0085U	0.024	
Aroclor 1254			0	0	55.39	52.57	0.044	0.041	**0.041**
Aroclor 1254 {2}	6.89	7.31	380373	352017m	46.62	42.54	0.037	0.034	
Aroclor 1254 {3}	7.04	7.41	0	178668m	0.0000	64.28	0.0085U	0.051	
Aroclor 1254 {4}	7.39	8.29	536490	0m	51.15	0.0000	0.040	0.0085U	
Aroclor 1254 {5}	8.02	9.05	458464	313274m	68.40	72.73	0.054	0.057	
Aroclor 1260 {1}	7.29 0.00	8.10 +0.00	0	64518	0.0000	19.20	0.0085U	0.015J	
Aroclor 1260			0	0	34.83	31.33	0.027	0.025	**0.025**
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	305742	176421	32.90	30.23	0.026	0.024	
Aroclor 1260 {3}	8.90 0.00	10.03	329651	192167	35.97	35.62	0.028	0.028	
Aroclor 1260 {4}	9.37 0.00	10.71 0.00	662668	374269	30.70	27.86	0.024	0.022	
Aroclor 1260 {5}	10.16 0.00	11.37 +0.01	656113	365894	39.74	43.76	0.031	0.034	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.143 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	63 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F117.D
Report Date: 13-Oct-2014 23:18

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F117.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F117.D
Inj Date : 07-OCT-2014 08:07
Sample Info: K1409921-005
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

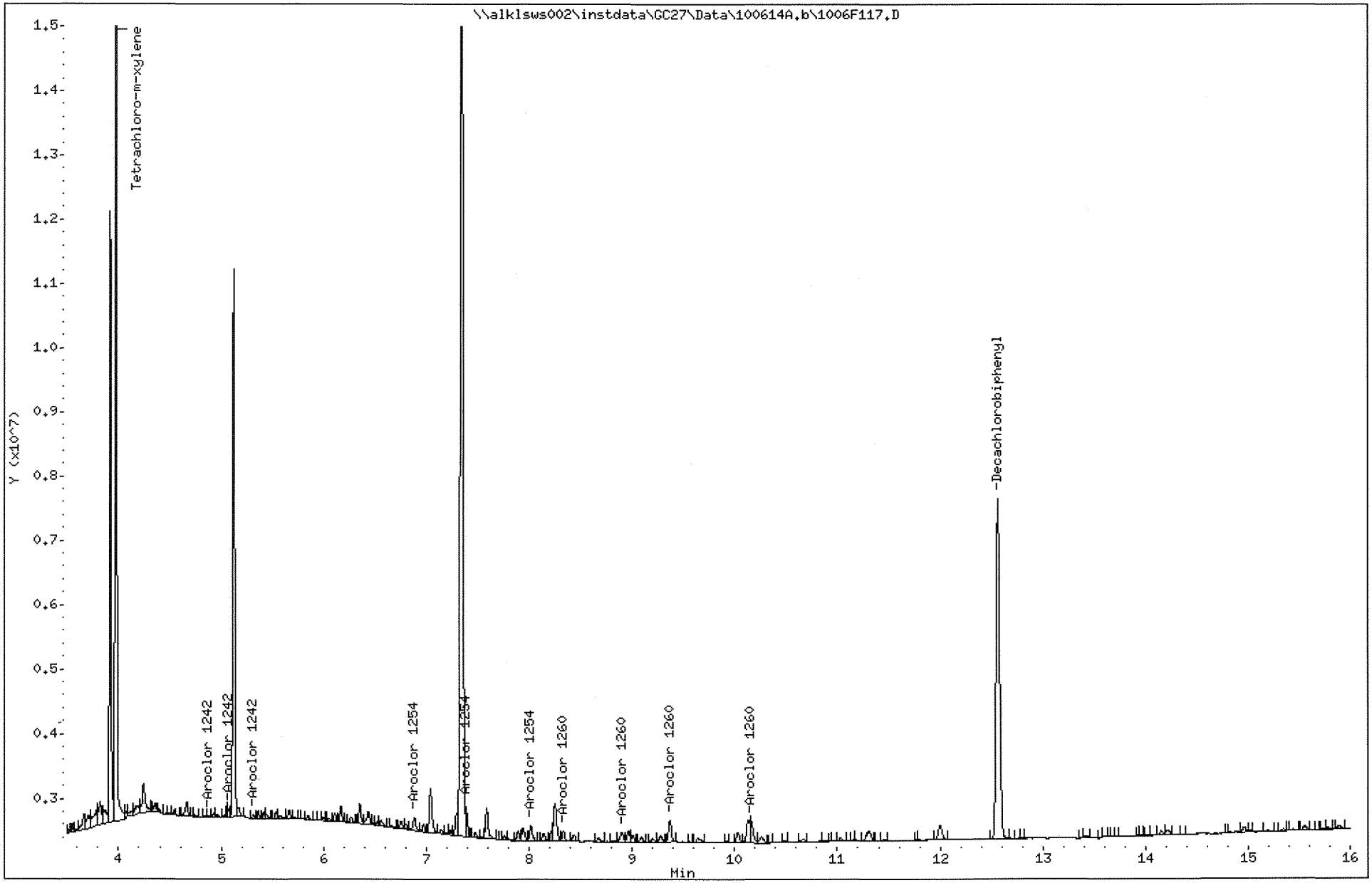
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.975	4.471	25727836	12756000	65.6	65.1		100.00
Aroclor 1242	4.875	5.114	27358	29279	7.17	8.40	80.00- 120.00	100.00
	5.075	5.738	157904	82703	13.4	13.7	261.43- 392.14	577.18
	5.315	5.924	74565	38964	15.8	12.8	106.66- 160.00	272.55
	5.665	6.124					62.67- 94.01	0.00
	6.168	7.064					71.63- 107.45	0.00
			Average of Peak Amounts =		12.1	11.6		
Aroclor 1254	6.438	6.944		168329		30.7	80.00- 120.00	100.00
	6.885	7.311	380373	352017	46.6	42.5	148.05- 222.07	96.97
	7.041	7.408		178668		64.3	41.12- 61.68	106.14
	7.391	8.288	536490		51.1		184.27- 276.41	136.78
	8.018	9.054	458464	313274	68.4	72.7	122.76- 184.15	116.88
			Average of Peak Amounts =		55.4	52.6		
Aroclor 1260	7.291	8.104		64518		19.2	80.00- 120.00	100.00
	8.331	9.574	305742	176421	32.9	30.2	63.80- 95.69	56.24
	8.898	10.031	329651	192167	36.0	35.6	64.05- 96.07	60.64
	9.368	10.714	662668	374269	30.7	27.9	145.21- 217.81	121.91
	10.161	11.371	656113	365894	39.7	43.8	112.20- 168.30	120.70
			Average of Peak Amounts =		34.8	31.3		
Decachlorobiphenyl	12.561	13.988	12824094	7572612	68.8	65.4		100.00
Aroclors, Total	0.000	0.000	1033594	538041	102	95.5		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F117.D
Date : 07-OCT-2014 08:07
Client ID:
Sample Info: K1409921-005

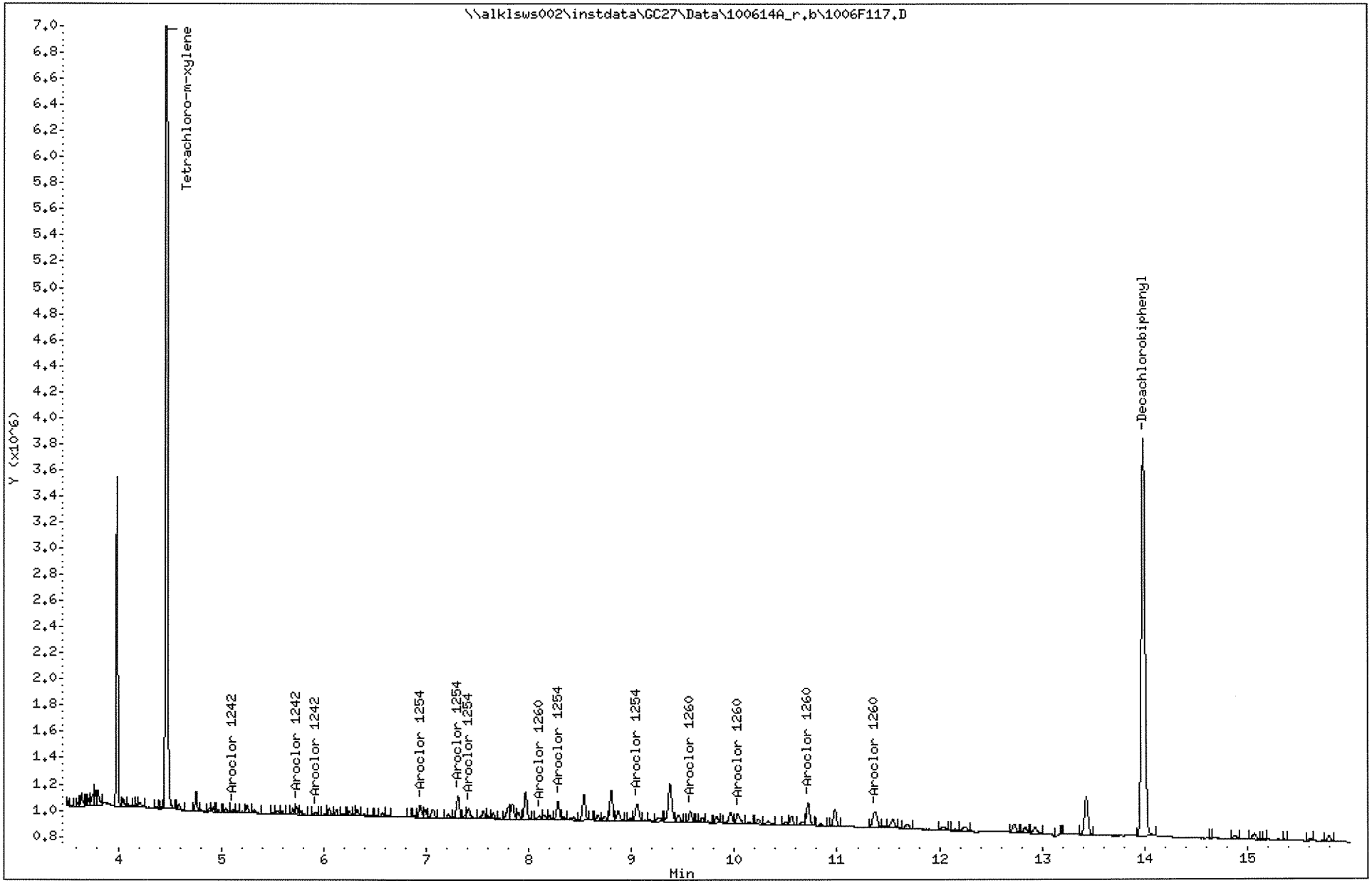
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F117.D
Date : 07-OCT-2014 08:07
Client ID:
Sample Info: K1409921-005

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F118.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:31
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/08/2014 16:14:38
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F118.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:31
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F118.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F118.D			**Vial:**	12
Acqu Date:	10/07/2014 08:31	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380531	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15149
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.57 +0.00	13.99 +0.00	13960774	8281454	74.87	71.56			75 OK
			%Recovery =		75 OK	72 OK	**Limits =**	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}	4.87	5.12	9140	13451	2.40	3.86	0.0085U	0.0085U	
Aroclor 1242			0	0	5.03	5.37	0.0085U	0.0085U	0.0085U
Aroclor 1242 {2}	5.08	5.74	71194	32410	6.05	5.37	0.0085U	0.0085U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F118.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F118.D			**Vial:**	12
Acqu Date:	10/07/2014 08:31	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.32	5.92	31231	12194	6.63	4.00	0.0085U	0.0085U	
Aroclor 1242 {4}	5.66	6.13	0	18376	0.0000	6.80	0.0085U	0.0085U	
Aroclor 1242 {5}	6.17	7.07	0	20374	0.0000	6.80	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.95	24417	29120	5.33	5.31	0.0085U	0.0085U	
Aroclor 1254			0	0	5.16	4.18	0.0085U	0.0085U	0.0085U
Aroclor 1254 {2}	6.89	7.31	43394	33875	5.32	4.09	0.0085U	0.0085U	
Aroclor 1254 {3}	7.05	7.37	92293	7512	5.75	2.70	0.0085U	0.0085U	
Aroclor 1254 {4}	7.39	8.28	58636	6654	5.59	2.12	0.0085U	0.0085U	
Aroclor 1254 {5}	8.02	9.06	25392	28796	3.79	6.69	0.0085U	0.0085U	
Aroclor 1260 {1}	7.29	8.12 +0.01	38353	5839	3.32	1.74	0.0085U	0.0085U	
Aroclor 1260			0	0	2.64	1.90	0.0085U	0.0085U	0.0085U
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	16960	9142	1.83	1.57	0.0085U	0.0085U	
Aroclor 1260 {3}	8.90 0.00	10.03 -0.01	28906	12267	3.15	2.27	0.0085U	0.0085U	
Aroclor 1260 {4}	9.37 0.00	10.72 0.00	48855	22262	2.26	1.66	0.0085U	0.0085U	
Aroclor 1260 {5}	10.13 -0.03	11.36 0.00	0	19128	0.0000	2.29	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.026 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	74.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F118.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F118.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F118.D
Inj Date : 07-OCT-2014 08:31
Sample Info: K1409921-006
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

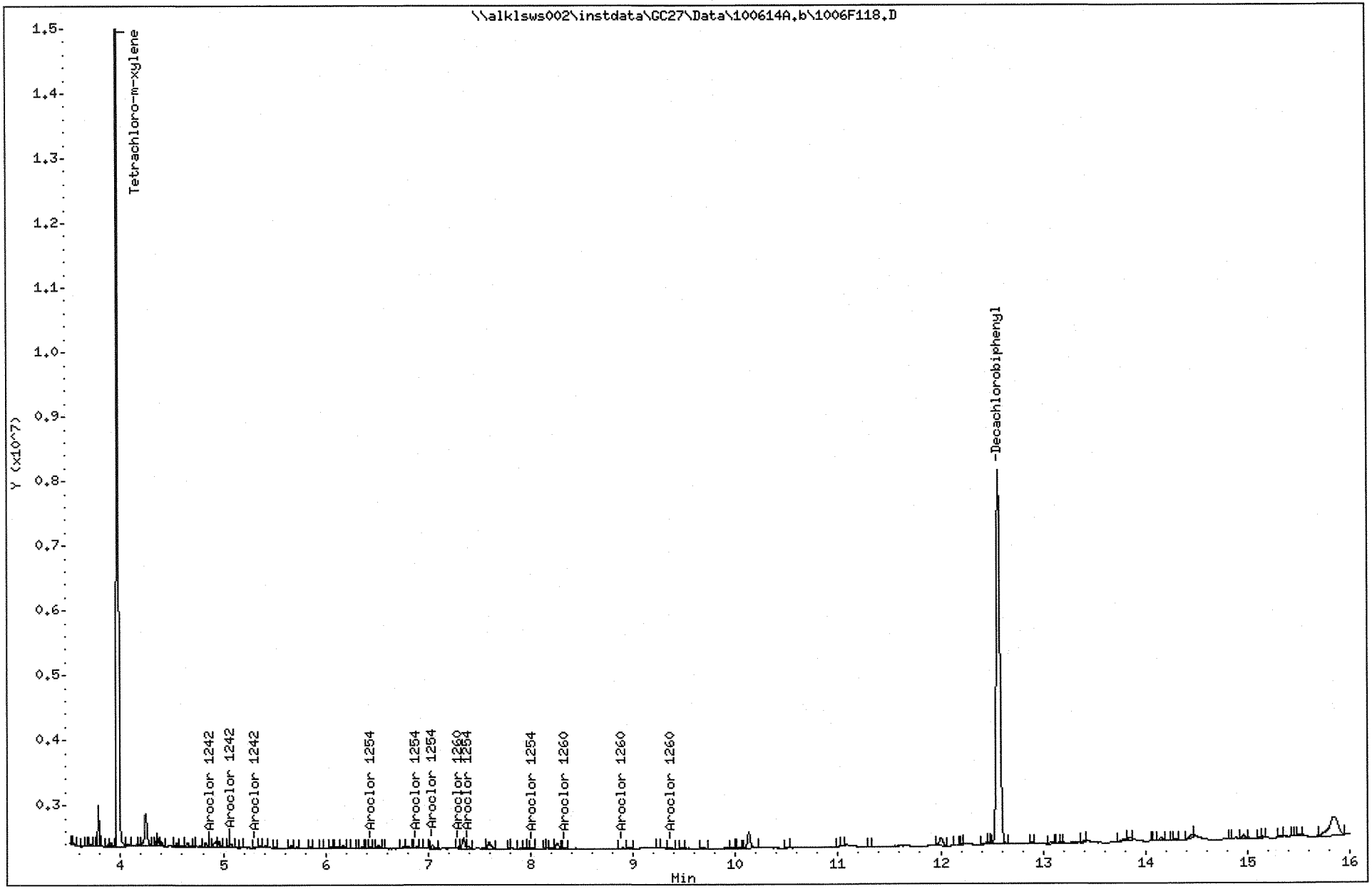
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.472	30007848	15295610	76.5	78.0		100.00
Aroclor 1242	4.869	5.115	9140	13451	2.39	3.86	80.00- 120.00	100.00
	5.076	5.739	71194	32410	6.05	5.37	261.43- 392.14	778.93
	5.316	5.922	31231	12194	6.63	4.00	106.66- 160.00	341.70
	5.662	6.129		18376		6.80	62.67- 94.01	136.61
	6.169	7.069		20374		6.80	71.63- 107.45	151.47
			Average of Peak Amounts =		5.02	5.37		
Aroclor 1254	6.442	6.945	24417	29120	5.33	5.31	80.00- 120.00	100.00
	6.889	7.305	43394	33875	5.32	4.09	148.05- 222.07	177.72
	7.046	7.372	92293	7512	5.75	2.70	284.20- 426.31	377.99
	7.392	8.279	58636	6654	5.59	2.12	184.27- 276.41	240.14
	8.016	9.055	25392	28796	3.79	6.68	122.76- 184.15	103.99
			Average of Peak Amounts =		5.16	4.18		
Aroclor 1260	7.292	8.115	38353	5839	3.32	1.74	80.00- 120.00	100.00
	8.332	9.572	16960	9142	1.83	1.57	63.80- 95.69	44.22
	8.896	10.025	28906	12267	3.15	2.27	64.05- 96.07	75.37
	9.366	10.715	48855	22262	2.26	1.66	145.21- 217.81	127.38
	10.132	11.359		19128		2.29	191.66- 287.48	327.59
			Average of Peak Amounts =		2.64	1.91		
Decachlorobiphenyl	12.566	13.989	13960774	8281454	74.9	71.6		100.00
Aroclors, Total	0.000	0.000	119283	54280	12.8	11.5		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F118.D
Date : 07-OCT-2014 08:31
Client ID:
Sample Info: K1409921-006

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

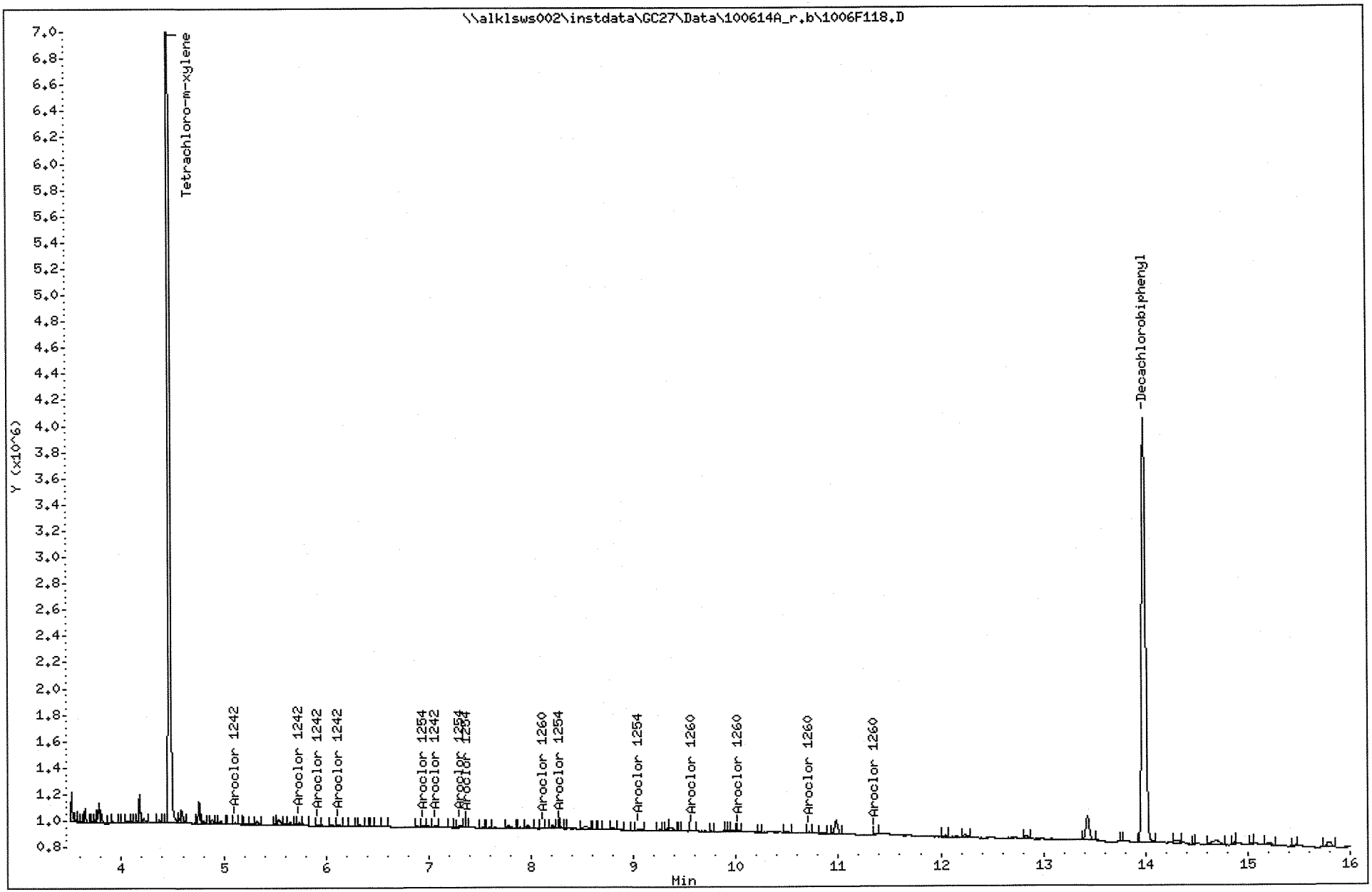


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F118.D
Date : 07-OCT-2014 08:31
Client ID:
Sample Info: K1409921-006

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F119.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:55
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F119.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 08:55
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/08/2014 16:14:47
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F119.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F119.D			**Vial:**	13
Acqu Date:	10/07/2014 08:55	**Quant Date:**	10/13/2014 23:51	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380532	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2				Rpt
Decachlorobiphenyl	12.57	13.99	13726456	8136166	73.61	70.31				74 OK
				%Recovery =	74 OK	70 OK	**Limits =**	43-148		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}	4.87	5.12	32508	29402	8.52	8.44	0.0085U	0.0085U	
Aroclor 1242			0	0	16.25	17.81	0.013J	0.014J	**0.013J**
Aroclor 1242 {2}	5.08	5.74	230307	129694	19.58	21.48	0.016J	0.017J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F119.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F119.D			**Vial:**	13
Acqu Date:	10/07/2014 08:55	**Quant Date:**	10/13/2014 23:51	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.32	5.92	97301	71750	20.65	23.51	0.016J	0.019J	
Aroclor 1242 {4}	5.67	6.13	0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}	6.17	7.07	0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.95	1415278	1012312	309.16	184.69	0.25	0.15	
Aroclor 1254			0	0	221.48	239.95	0.18	0.19	**0.18**
Aroclor 1254 {2}	6.89	7.31	1485990	1568871	182.11	189.60	0.14	0.15	
Aroclor 1254 {3}	7.05	7.41	0	828950	0.0000	298.25	0.0085U	0.24	
Aroclor 1254 {4}	7.39	8.29	1734532	0	165.36	0.0000	0.13	0.0085U	
Aroclor 1254 {5}	8.02	9.05	1536858	1237365	229.28	287.25	0.18	0.23	
Aroclor 1260 {1}	7.29	8.10	0	446594m	0.0000	132.92	0.0085U	0.11	
Aroclor 1260			0	0	200.18	168.06	0.16	0.13	**0.13**
Aroclor 1260 {2}	8.34	9.57	1979096	1069815m	212.99	183.32	0.17	0.15	
Aroclor 1260 {3}	8.90 0.00	10.03	1891688	1019056m	206.42	188.89	0.16	0.15	
Aroclor 1260 {4}	9.37 0.00	10.72	3909934	2244768m	181.14	167.09	0.14	0.13	
Aroclor 1260 {5}	10.17	11.38 +0.01	0	0m	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.087 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	62.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F119.D
Report Date: 13-Oct-2014 23:51

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F119.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F119.D
Inj Date : 07-OCT-2014 08:55
Sample Info: K1409921-007
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

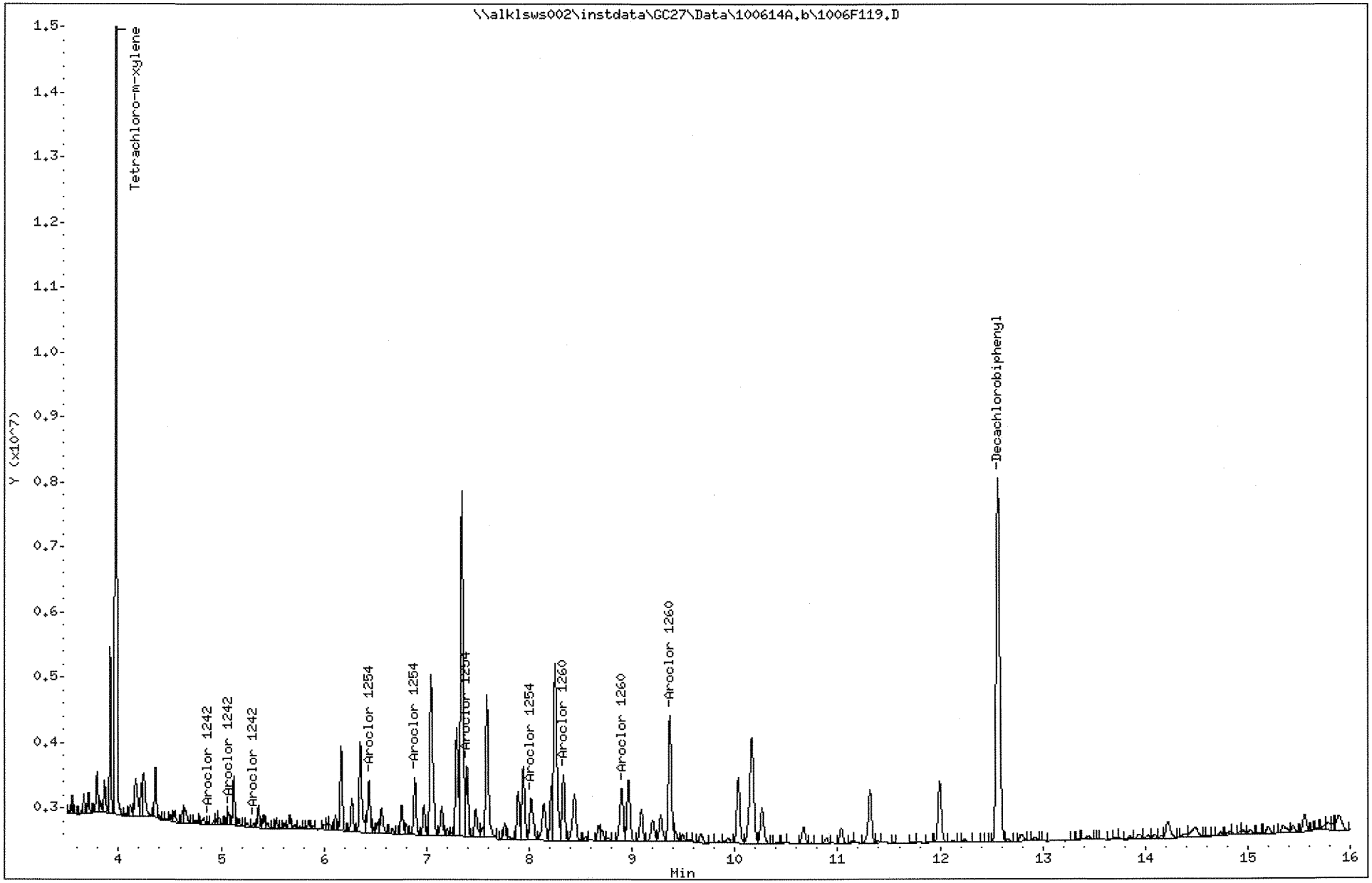
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.471	28018385	14622237	71.5	74.6		100.00
Aroclor 1242	4.872	5.115	32508	29402	8.52	8.44	80.00- 120.00	100.00
	5.075	5.738	230307	129694	19.6	21.5	261.43- 392.14	708.46
	5.315	5.921	97301	71750	20.6	23.5	106.66- 160.00	299.31
	5.665	6.128					62.67- 94.01	0.00
	6.168	7.065					71.63- 107.45	0.00
			Average of Peak Amounts =		16.2	17.8		
Aroclor 1254	6.438	6.945	1415278	1012312	309	185	80.00- 120.00	100.00
	6.885	7.311	1485990	1568871	182	190	148.05- 222.07	105.00
	7.045	7.411		828950		298	41.12- 61.68	81.89
	7.392	8.288	1734532		165		184.27- 276.41	122.56
	8.018	9.051	1536858	1237365	229	287	122.76- 184.15	108.59
			Average of Peak Amounts =		221	240		
Aroclor 1260	7.292	8.101		446594		133	80.00- 120.00	100.00
	8.335	9.571	1979096	1069815	213	183	63.80- 95.69	67.96
	8.898	10.031	1891688	1019056	206	189	64.05- 96.07	64.96
	9.368	10.718	3909934	2244768	181	167	145.21- 217.81	134.26
	10.165	11.375					191.66- 287.48	0.00
			Average of Peak Amounts =		200	168		
Decachlorobiphenyl	12.565	13.988	13726456	8136166	73.6	70.3		100.00
Aroclors, Total	0.000	0.000	4256775	2433881	438	426		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F119.D
Date : 07-OCT-2014 08:55
Client ID:
Sample Info: K1409921-007

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

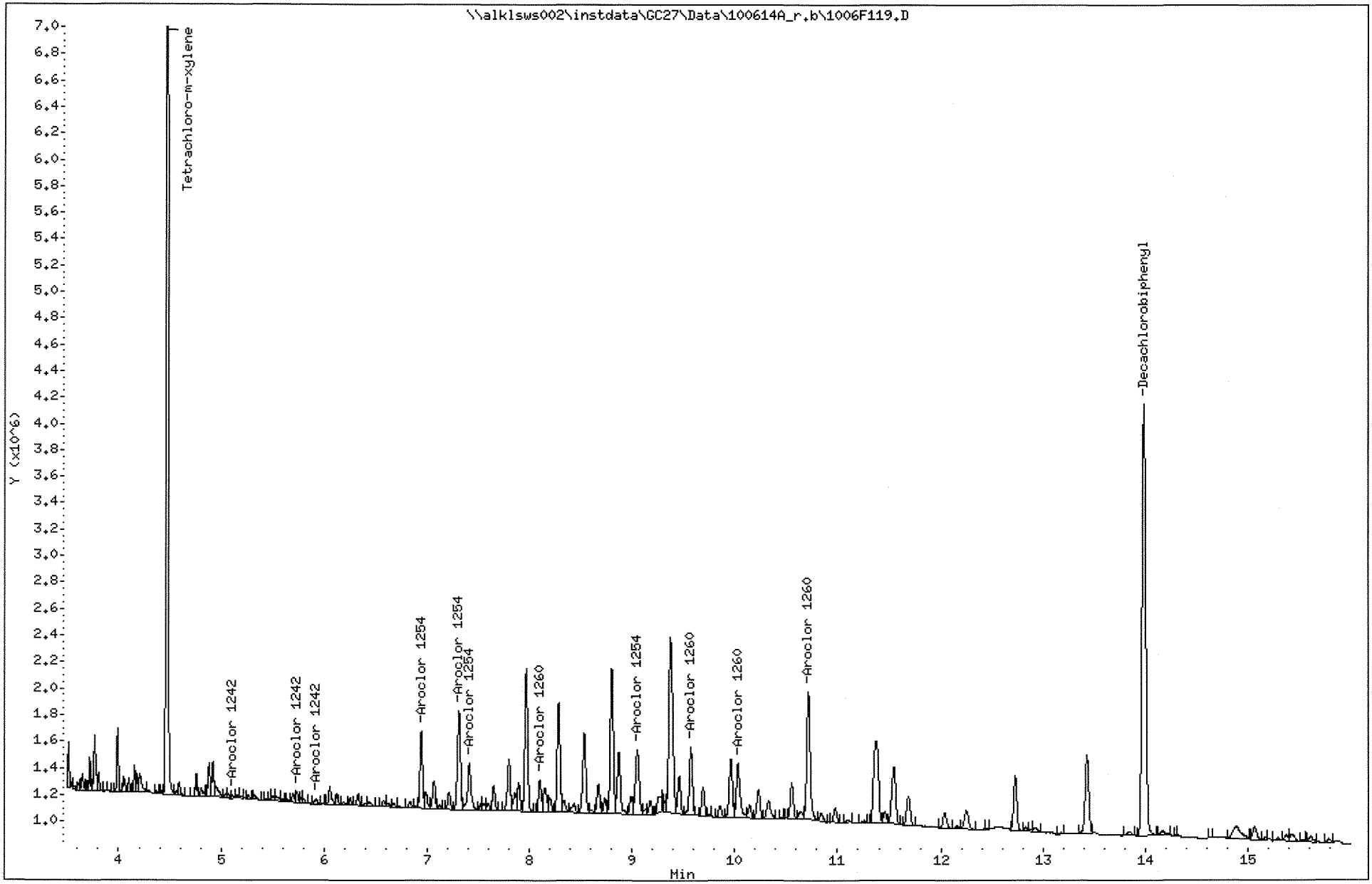


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F119.D
Date : 07-OCT-2014 08:55
Client ID:
Sample Info: K1409921-007

Instrument: GC27.i

Operator: JMSmith

Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F125.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 11:21
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F125.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 11:21
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10/8/14

Secondary Review:

Printed: 10/08/2014 16:15:23
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F125.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D			**Vial:**	17
Acqu Date:	10/07/2014 11:21	**Quant Date:**	10/14/2014 01:08	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380533	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.57 +0.00	13.99	20010550	8620379	107.31	74.49			107 OK
				%Recovery =	107 OK	74 OK	Limits =	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}	4.87	5.15	126539	0m	33.15	0.0000	0.026	0.0085U	
Aroclor 1242			0	0	64.96	137.12	0.051	0.111	**0.051P**
Aroclor 1242 {2}	5.08	5.74	1118976	641732m	95.13	106.30	0.074	0.083	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F125.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D			**Vial:**	17
Acqu Date:	10/07/2014 11:21	**Quant Date:**	10/14/2014 01:08	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.31	5.92	313784	287104m	66.58	94.07	0.052	0.073	
Aroclor 1242 {4}	5.66	6.13	0	569892m	0.0000	210.99	0.0085U	0.16	
Aroclor 1242 {5}	6.17	7.07	0	0m	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.94	4729739	3952507m	1,033	721.12	0.81	0.56	
Aroclor 1254			0	0	693.30	743.99	0.54	0.58	0.54
Aroclor 1254 {2}	6.89	7.31	4841575	5744729m	593.35	694.26	0.46	0.54	
Aroclor 1254 {3}	7.05	7.41	0	2198158m	0.0000	790.88	0.0085U	0.62	
Aroclor 1254 {4}	7.39	8.29	5570926	0m	531.11	0.0000	0.41	0.0085U	
Aroclor 1254 {5}	8.02	9.05	4125885	3315534m	615.53	769.69	0.48	0.60	
Aroclor 1260 {1}	7.29 +0.01	8.10 +0.00	0	1371008m	0.0000	408.05	0.0085U	0.32	
Aroclor 1260			0	0	527.38	471.46	0.41	0.37	0.37
Aroclor 1260 {2}	8.33	9.57 0.00	5151211	3037394m	554.37	520.48	0.43	0.41	
Aroclor 1260 {3}	8.90 0.00	10.03 +0.00	4945036	2522696m	539.59	467.60	0.42	0.37	
Aroclor 1260 {4}	9.37 +0.00	10.72	10537700	6578936m	488.19	489.71	0.38	0.38	
Aroclor 1260 {5}	10.17 +0.00	11.38 +0.02	0	0m	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.104 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	63.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F125.D
Report Date: 14-Oct-2014 01:08

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F125.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D
Inj Date : 07-OCT-2014 11:21
Sample Info: K1409921-008
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.973	4.472	25816853	13325988	65.9	68.0		100.00
Aroclor 1242	4.873	5.152	126539		33.2		80.00- 120.00	100.00
	5.076	5.735	1118976	641732	95.1	106	261.43- 392.14	884.29
	5.313	5.919	313784	287104	66.6	94.1	106.66- 160.00	247.97
	5.663	6.125		569892		211	62.67- 94.01	0.00
	6.166	7.065					71.63- 107.45	0.00
			Average of Peak Amounts =		65.0	137		
Aroclor 1254	6.439	6.942	4729739	3952507	1030	721	80.00- 120.00	100.00
	6.886	7.309	4841575	5744729	593	694	148.05- 222.07	102.36
	7.046	7.409		2198158		791	41.12- 61.68	55.61
	7.393	8.285	5570926		531		184.27- 276.41	117.79
	8.019	9.049	4125885	3315534	616	770	122.76- 184.15	87.23
			Average of Peak Amounts =		693	744		
Aroclor 1260	7.293	8.102		1371008		408	80.00- 120.00	100.00
	8.332	9.569	5151211	3037394	554	520	63.80- 95.69	66.93
	8.896	10.032	4945036	2522696	540	468	64.05- 96.07	64.25
	9.366	10.715	10537700	6578936	488	490	145.21- 217.81	136.92
	10.166	11.375					191.66- 287.48	0.00
			Average of Peak Amounts =		527	472		
Aroclor 1268	10.033	11.375	7271212		256		80.00- 120.00	100.00(MH)
	10.166	11.545		3591402		236	69.36- 104.04	60.61(MH)
	10.666	12.039	1675236	777506	81.1	59.5	61.43- 92.15	23.04(MH)
	11.996	13.429	6552217	5729639	108	151	183.61- 275.41	90.11(MH)
			Average of Peak Amounts =		148	149		
Decachlorobiphenyl	12.566	13.985	20010550	8620379	107	74.5		100.00
Aroclors, Total	0.000	0.000	17381001	11045998	1430	1500		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F125.D
Report Date: 14-Oct-2014 01:08

QC Flag Legend

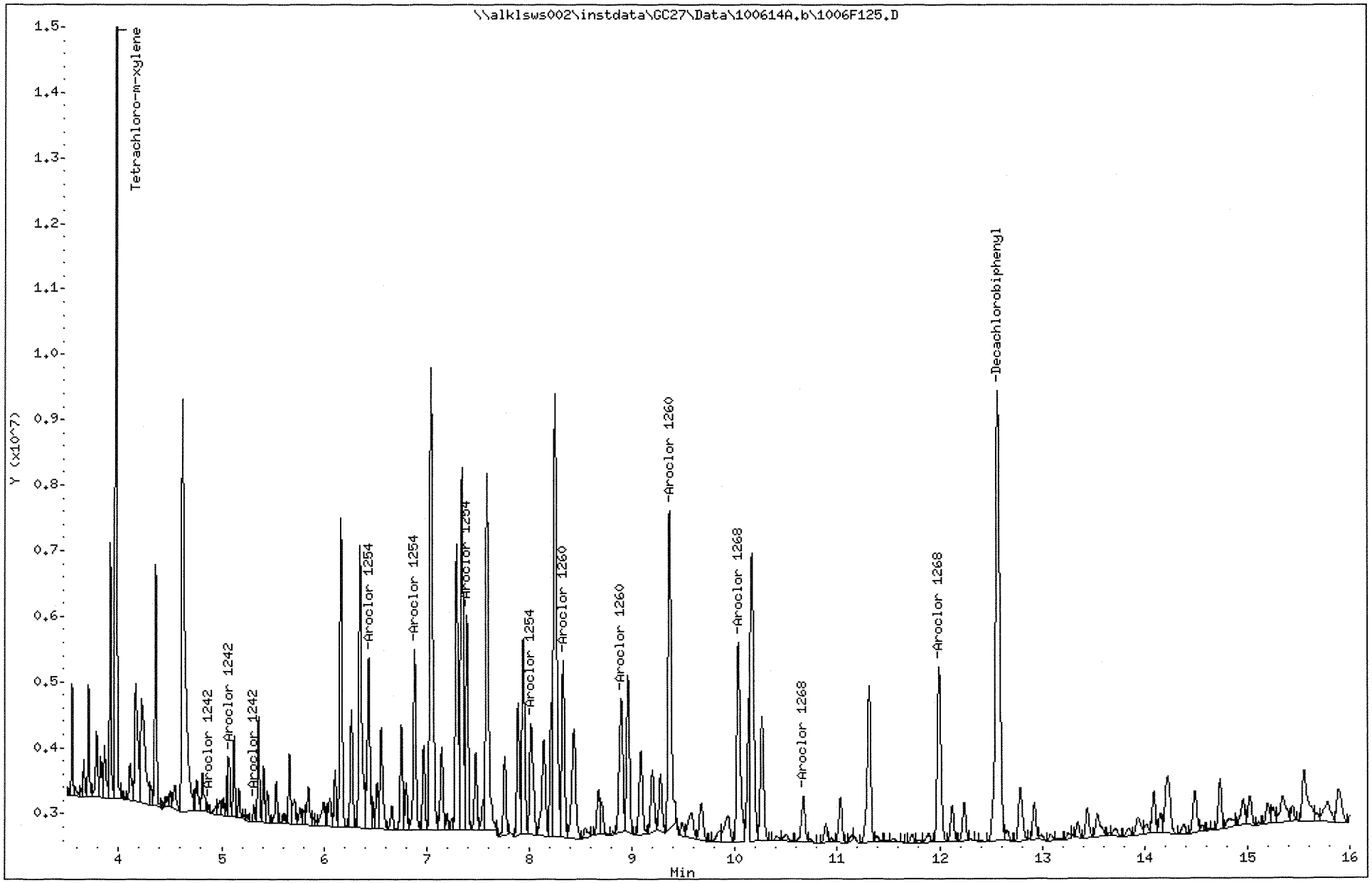
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F125.D
Date : 07-OCT-2014 11:21
Client ID:
Sample Info: K1409921-008

Instrument: GC27.i

Operator: JMSmith

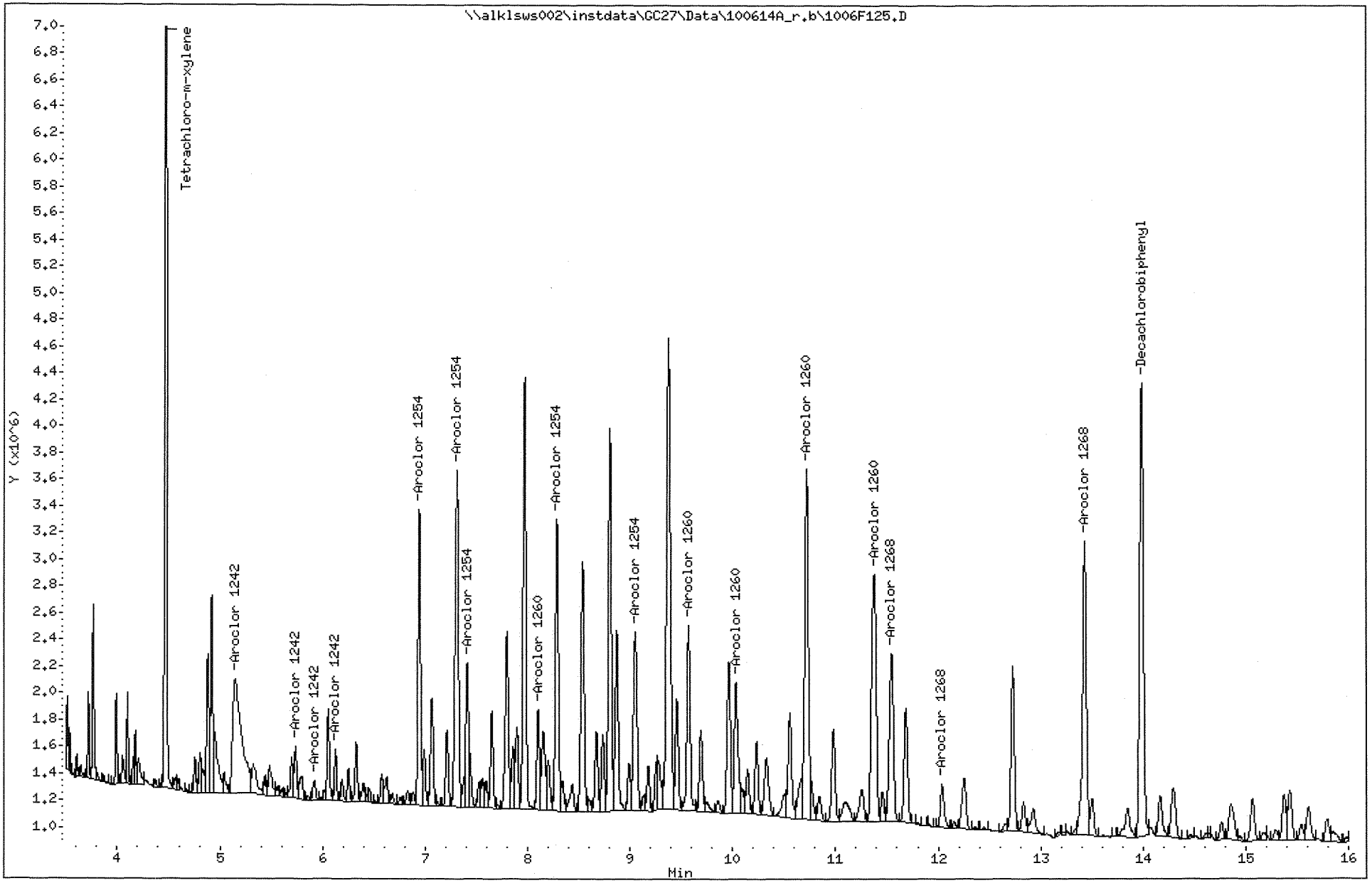
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D
Date : 07-OCT-2014 11:21
Client ID:
Sample Info: K1409921-008

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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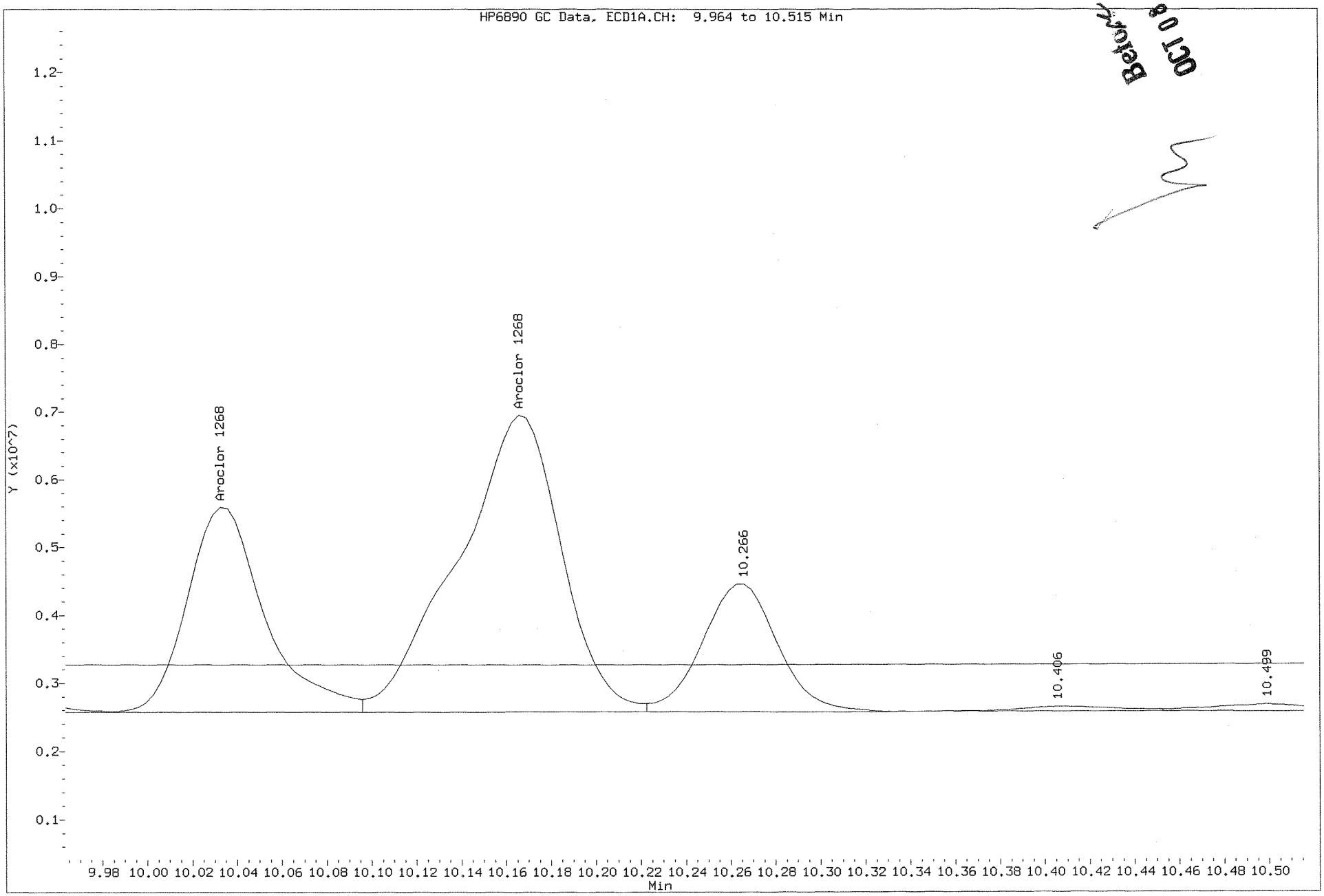
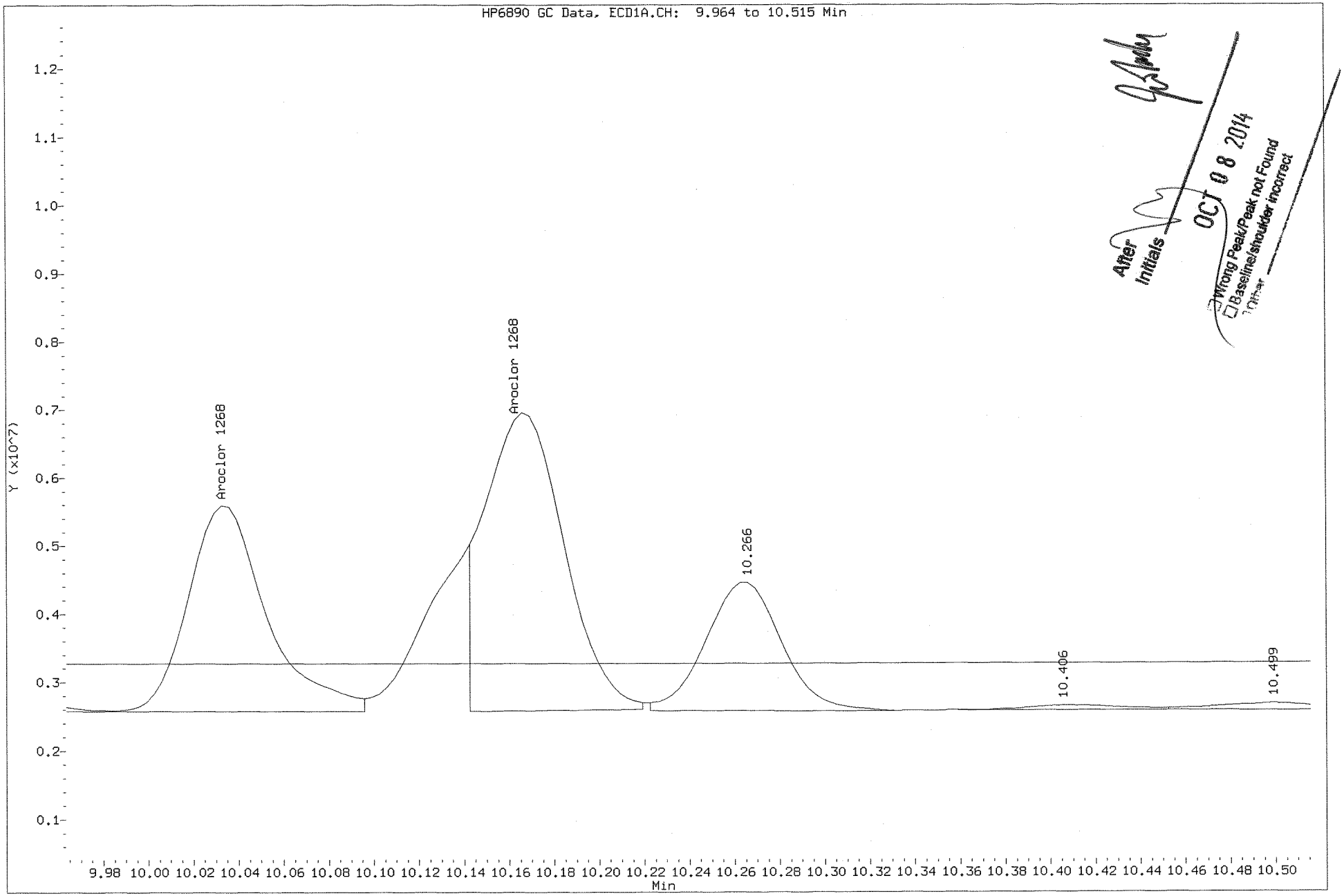
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



OCT 08 2014
Beckman Coulter

1560

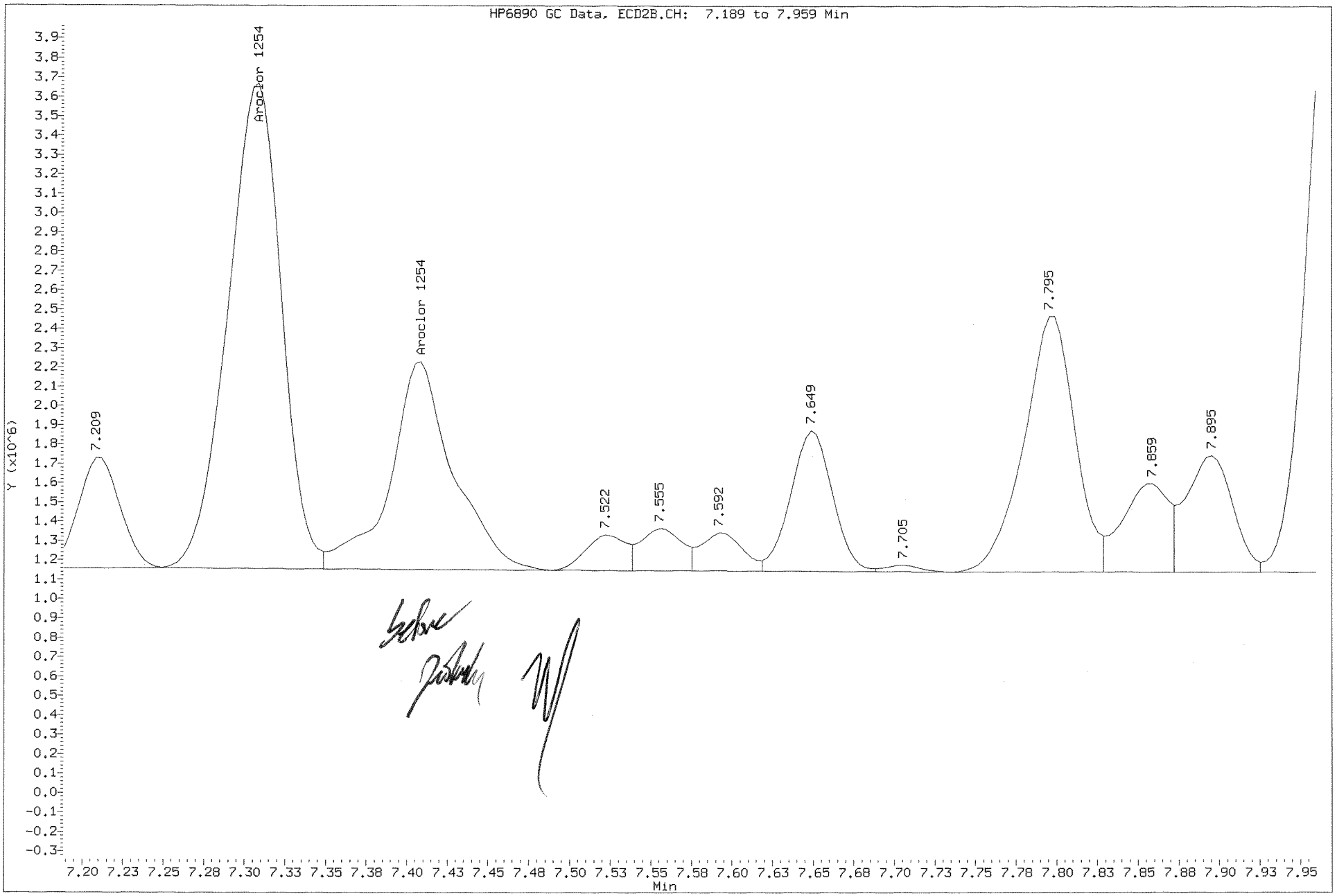
Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F125.D
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



After Initials
OCT 08 2014
☑ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

1561

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



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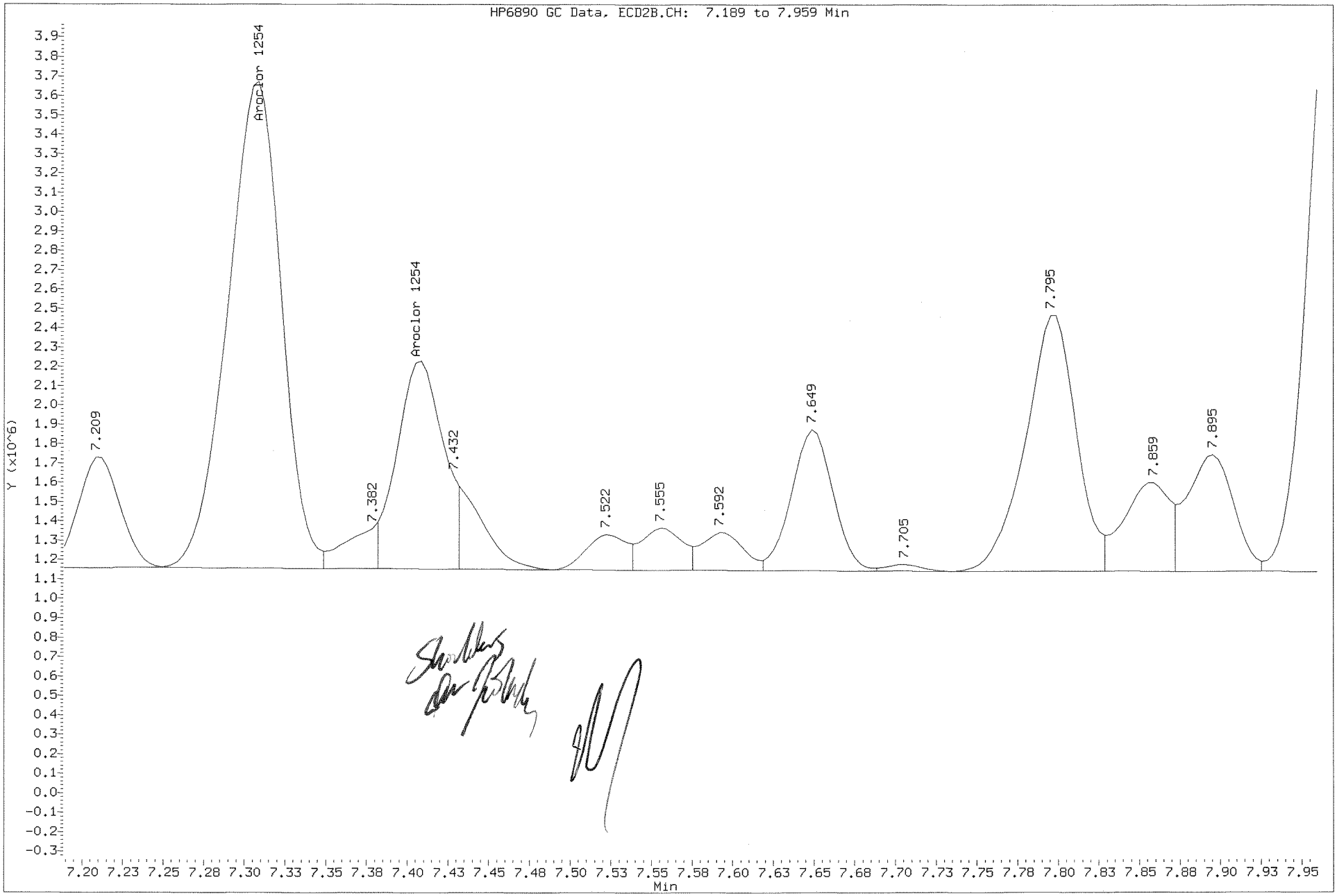
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



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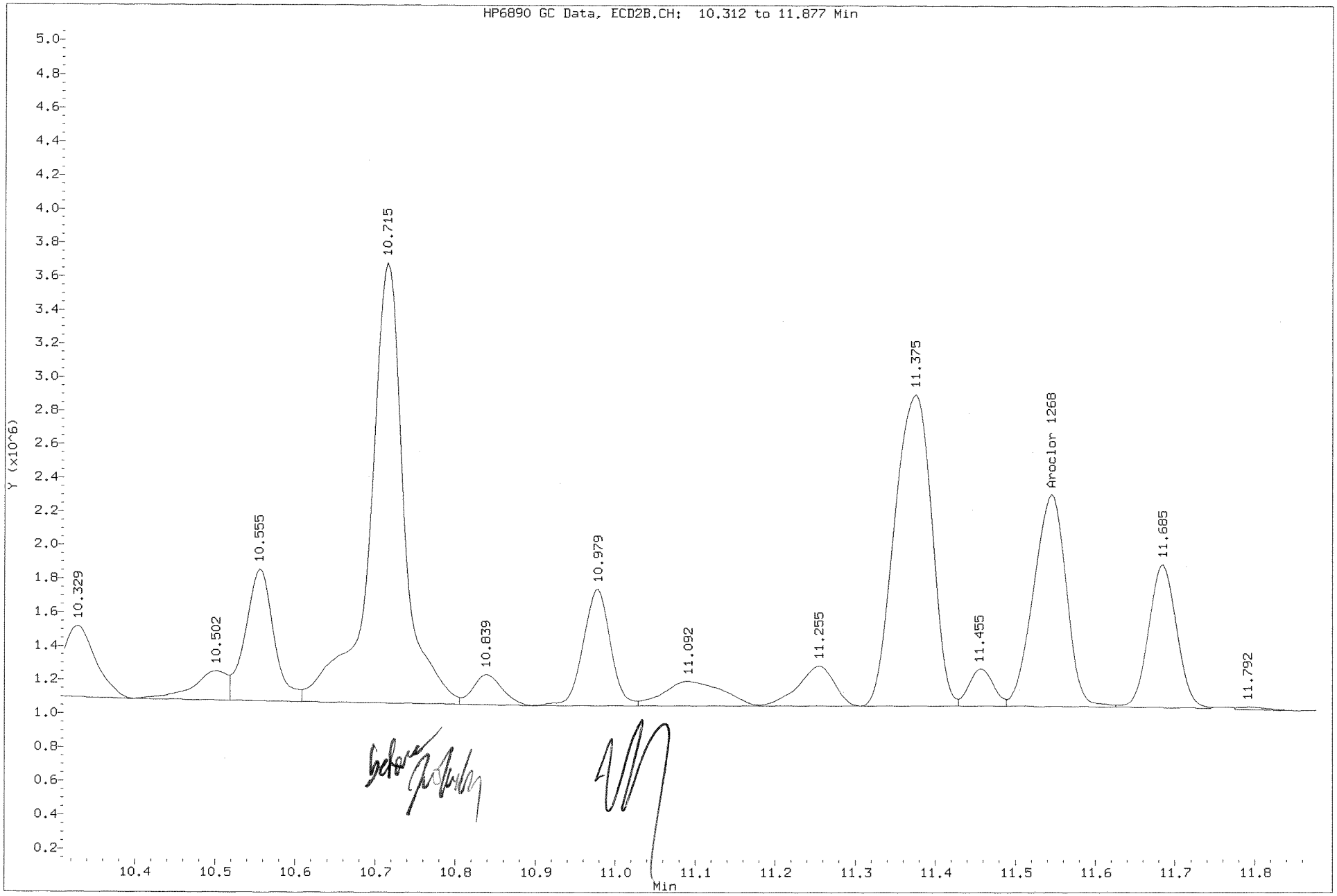
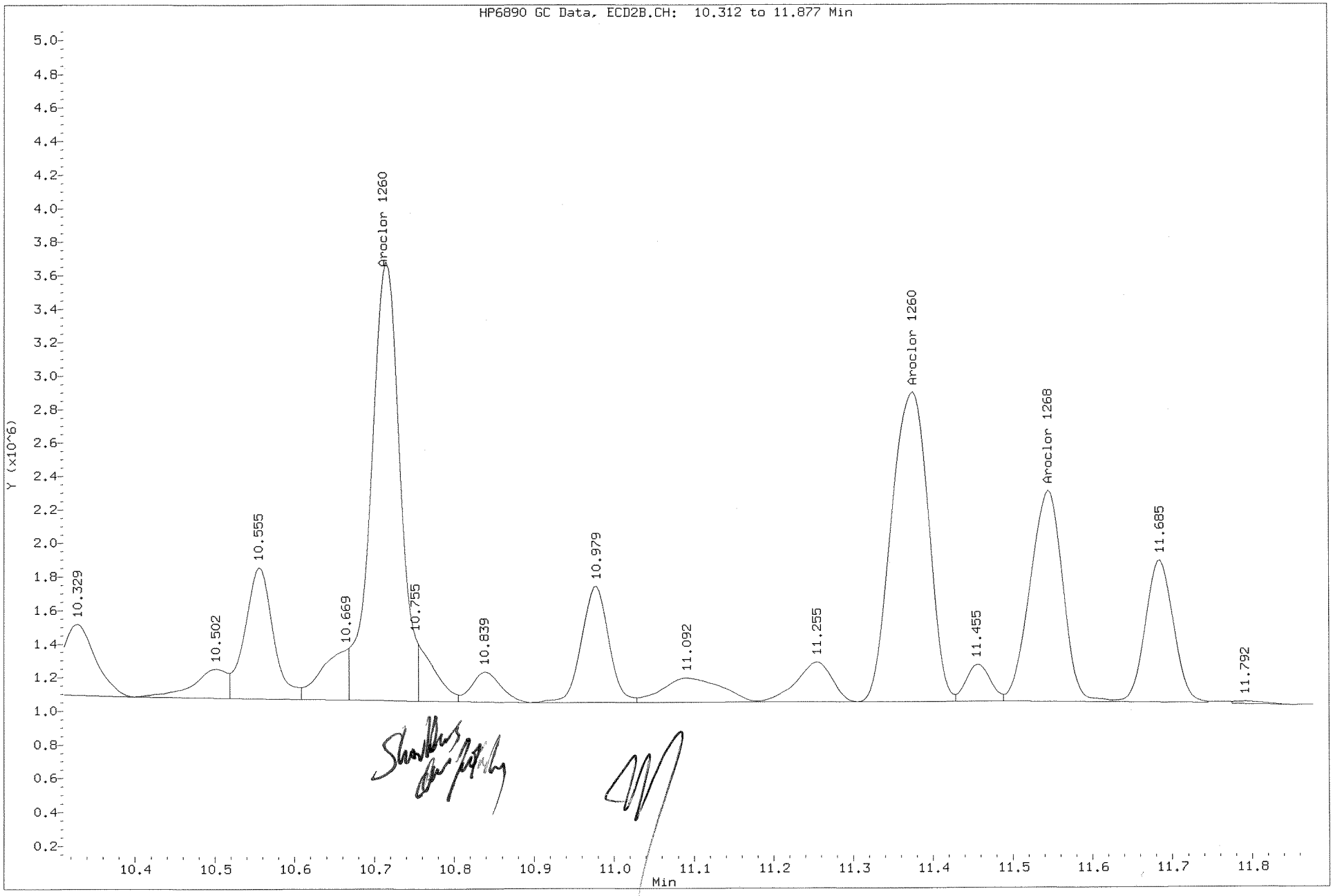
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F125.D
Injection Date: 07-OCT-2014 11:21
Instrument: GC27.i
Client Sample ID:



1565

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F120.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 09:20
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F120.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 09:20
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F120.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F120.D			**Vial:**	14
Acqu Date:	10/07/2014 09:20	**Quant Date:**	10/14/2014 00:20	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380534	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Rpt
Decachlorobiphenyl	12.56 0.00	13.99 +0.00	11098902	6862949	59.52	59.31	60 OK
			%Recovery =		60 OK	59 OK	**Limits =** 43-148

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}	4.36 +0.01	4.76 0.00	1823991m	274424	264.47	72.25	0.19	0.052	RPD
Aroclor 1016			0	0	135.97	56.68	0.097	0.041	**0.041**P RPD
Aroclor 1016 {2}	4.87 -0.01	5.11 0.00	507250m	66547	98.38	14.03	0.070	0.010J	RPD
Aroclor 1016 {3}	5.07 -0.01	5.80 +0.02	747447m	449680	45.08	83.75	0.032	0.060	
Aroclor 1016 {4}	5.36 +0.00	6.13 +0.00	0m	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}	5.66 0.00	6.33 +0.00	0m	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}	4.19	4.59	646581m	47365	187.52	25.57	0.13	0.018J	RPD
Aroclor 1221			0	0	204.35	74.47	0.15	0.053	**0.053**P RPD
Aroclor 1221 {2}	4.29	4.71	454555m	157941	202.69	133.89	0.15	0.096	
Aroclor 1221 {3}	4.36	4.76	1823991m	274424	222.83	63.95	0.16	0.046	RPD
Aroclor 1232 {1}	4.19	4.76	646581m	274424	242.11	68.20	0.17	0.049	RPD
Aroclor 1232			0	0	189.22	61.47	0.14	0.044	**0.044**P RPD
Aroclor 1232 {2}	4.65	5.11	1094412m	66547	178.39	32.62	0.13	0.023	RPD
Aroclor 1232 {3}	4.87	5.32	507250m	0	222.51	0.0000	0.16	0.0085U	
Aroclor 1232 {4}	5.06	5.70	875794m	233865	205.85	83.59	0.15	0.060	
Aroclor 1232 {5}	5.17	6.13	434982m	0	97.22	0.0000	0.070	0.0085U	
Aroclor 1242 {1}	4.87	5.11	507250m	66547	132.90	19.10	0.095	0.014J	RPD
Aroclor 1242			0	0	75.22	57.16	0.054	0.041	**0.041**
Aroclor 1242 {2}	5.07	5.74	747447m	508911	63.55	84.30	0.046	0.060	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F120.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F120.D			**Vial:**	14
Acqu Date:	10/07/2014 09:20	**Quant Date:**	10/14/2014 00:20	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.31	5.91	137752m	207769	29.23	68.08	0.021	0.049	
Aroclor 1242 {4}	5.66	6.13	0m	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}	6.17	7.07	0m	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {1}	5.06	5.11	875794m	66547	125.18	30.22	0.090	0.022	RPD
Aroclor 1248			0	0	103.35	68.37	0.074	0.049	**0.049**P
Aroclor 1248 {2}	5.44	5.70	0m	233865	0.0000	55.87	0.0085U	0.040	
Aroclor 1248 {3}	5.85	6.13	0m	539816	0.0000	119.02	0.0085U	0.085	
Aroclor 1248 {4}	6.05	6.58	553534m	0	91.79	0.0000	0.066	0.0085U	
Aroclor 1248 {5}	6.48	7.07	495683m	0	93.08	0.0000	0.067	0.0085U	
Aroclor 1254 {1}	6.44	6.94	5974286m	5337918m	1,305	973.88	0.94	0.70	
Aroclor 1254			0	0	783.21	985.55	0.56	0.71	**0.56**
Aroclor 1254 {2}	6.89	7.31	6651264m	8248138m	815.13	996.80	0.58	0.71	
Aroclor 1254 {3}	7.04	7.41	0m	3236901m	0.0000	1,165	0.0085U	0.83	
Aroclor 1254 {4}	7.39	8.29	5953773m	0m	567.61	0.0000	0.41	0.0085U	
Aroclor 1254 {5}	8.02	9.05	2982942m	3475860m	445.02	806.91	0.32	0.58	
Aroclor 1260 {1}	7.29 0.00	8.10 +0.00	0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1260			0	0	275.69	266.63	0.20	0.19	**0.19**
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	1892599	1125055	203.68	192.79	0.15	0.14	
Aroclor 1260 {3}	8.90 0.00	10.03 +0.00	2273476	1781771	248.07	330.26	0.18	0.24	
Aroclor 1260 {4}	9.36 -0.01	10.72 0.00	7077558	2858748	327.89	212.79	0.23	0.15	
Aroclor 1260 {5}	10.16 0.00	11.36 0.00	5334889	2764857	323.11	330.68	0.23	0.24	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.109 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	69.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F120.D
Report Date: 14-Oct-2014 00:20

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F120.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F120.D
Inj Date : 07-OCT-2014 09:20
Sample Info: K1409921-009
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.974	4.470	21124249	11668268	53.9	59.5		100.00
Aroclor 1016	4.357	4.760	1823991	274424	264	72.2	80.00- 120.00	100.00(MH)
	4.867	5.114	507250	66547	98.4	14.0	60.53- 90.80	27.81(MH)
	5.067	5.797	747447	449680	45.1	83.7	185.80- 278.70	40.98(MH)
	5.361	6.127					76.96- 115.43	0.00(MH)
	5.664	6.330					73.32- 109.99	0.00(MH)
			Average of Peak Amounts =		136	56.6		
Aroclor 1221	4.187	4.590	646581	47365	188	25.6	80.00- 120.00	100.00(MH)
	4.291	4.714	454555	157941	203	134	50.99- 76.49	70.30(MH)
	4.357	4.760	1823991	274424	223	63.9	183.90- 275.84	282.10(MH)
			Average of Peak Amounts =		205	74.5		
Aroclor 1232	4.187	4.760	646581	274424	242	68.2	80.00- 120.00	100.00(MH)
	4.651	5.114	1094412	66547	178	32.6	177.47- 266.20	169.26(MH)
	4.867	5.317	507250		223		67.42- 101.12	78.45(MH)
	5.061	5.697	875794	233865	206	83.6	135.59- 203.39	135.45(MH)
	5.171	6.127	434982		97.2		136.58- 204.87	67.27(MH)
			Average of Peak Amounts =		189	61.5		
Aroclor 1242	4.867	5.114	507250	66547	133	19.1	80.00- 120.00	100.00(MH)
	5.067	5.737	747447	508911	63.5	84.3	261.43- 392.14	147.35(MH)
	5.314	5.910	137752	207769	29.2	68.1	106.66- 160.00	27.16(MH)
	5.664	6.127					62.67- 94.01	0.00(MH)
	6.167	7.067					71.63- 107.45	0.00(MH)
			Average of Peak Amounts =		75.2	57.2		
Aroclor 1248	5.061	5.114	875794	66547	125	30.2	80.00- 120.00	100.00(MH)
	5.444	5.697		233865		55.9	152.83- 229.25	351.43(MH)
	5.851	6.127		539816		119	167.54- 251.32	811.18(MH)
	6.054	6.577	553534		91.8		67.44- 101.17	63.20(MH)
	6.477	7.067	495683		93.1		59.83- 89.74	56.60(MH)

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F120.D
Report Date: 14-Oct-2014 00:20

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
		Average of Peak Amounts =			103	68.4		
Aroclor 1254	6.437	6.944	5974286	5337918	1310	974	80.00- 120.00	100.00(M)
	6.887	7.310	6651264	8248138	815	997	148.05- 222.07	111.33(M)
	7.044	7.410		3236901		1160	41.12- 61.68	60.64(M)
	7.391	8.287	5953773		568		184.27- 276.41	99.66(M)
	8.017	9.050	2982942	3475860	445	807	122.76- 184.15	49.93(M)
		Average of Peak Amounts =			785	985		
Aroclor 1260	7.291	8.104					80.00- 120.00	0.00
	8.334	9.574	1892599	1125055	204	193	63.80- 95.69	25.25
	8.897	10.034	2273476	1781771	248	330	64.05- 96.07	30.33
	9.364	10.717	7077558	2858748	328	213	145.21- 217.81	94.43
	10.164	11.360	5334889	2764857	323	331	112.20- 168.30	71.18
		Average of Peak Amounts =			276	267		
Decachlorobiphenyl	12.561	13.990	11098902	6862949	59.5	59.3		100.00
Aroclors, Total	0.000	0.000	13354093	8363536	1770	1570		0.00

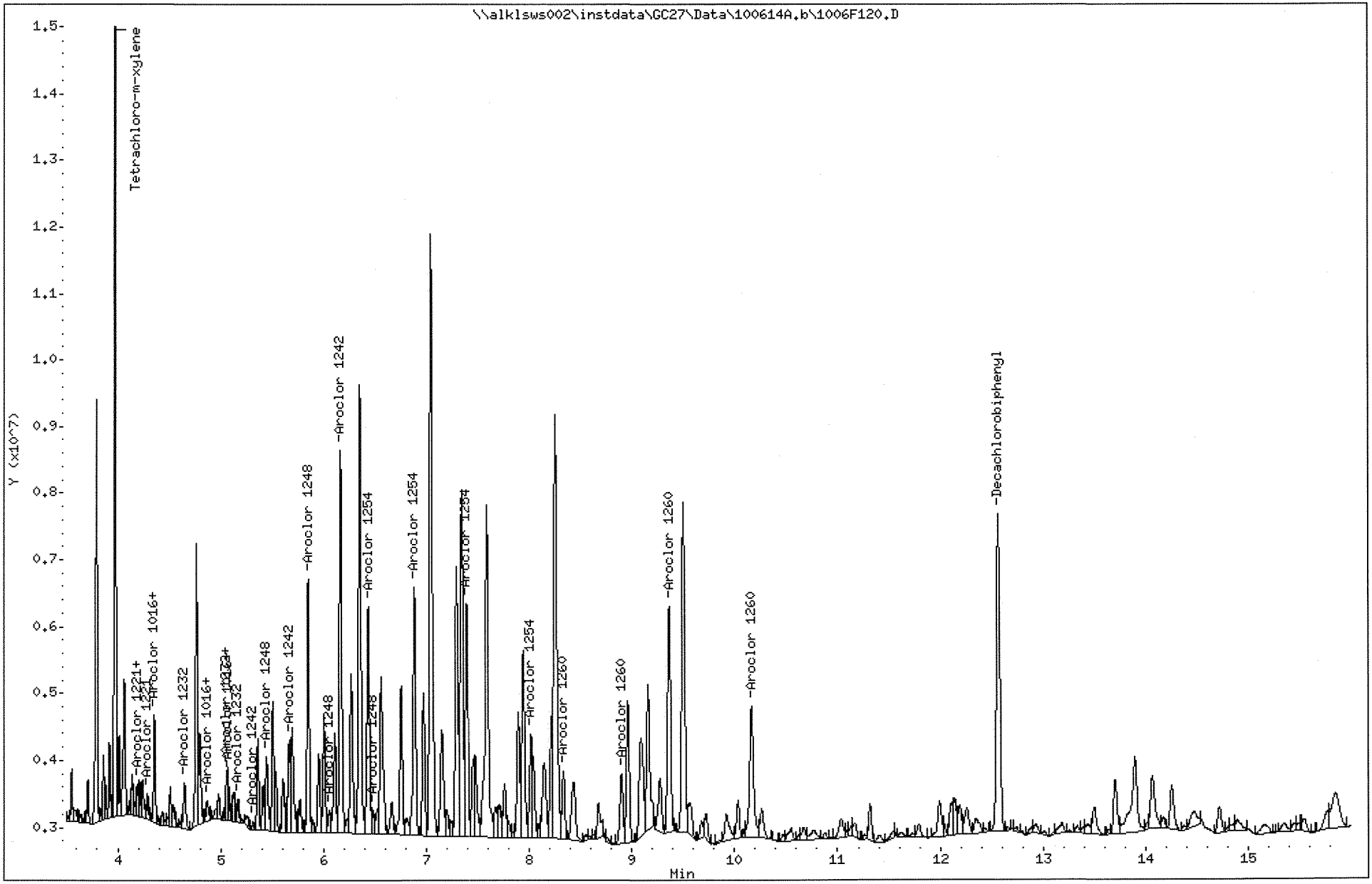
QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F120.D
Date : 07-OCT-2014 09:20
Client ID:
Sample Info: K1409921-009

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

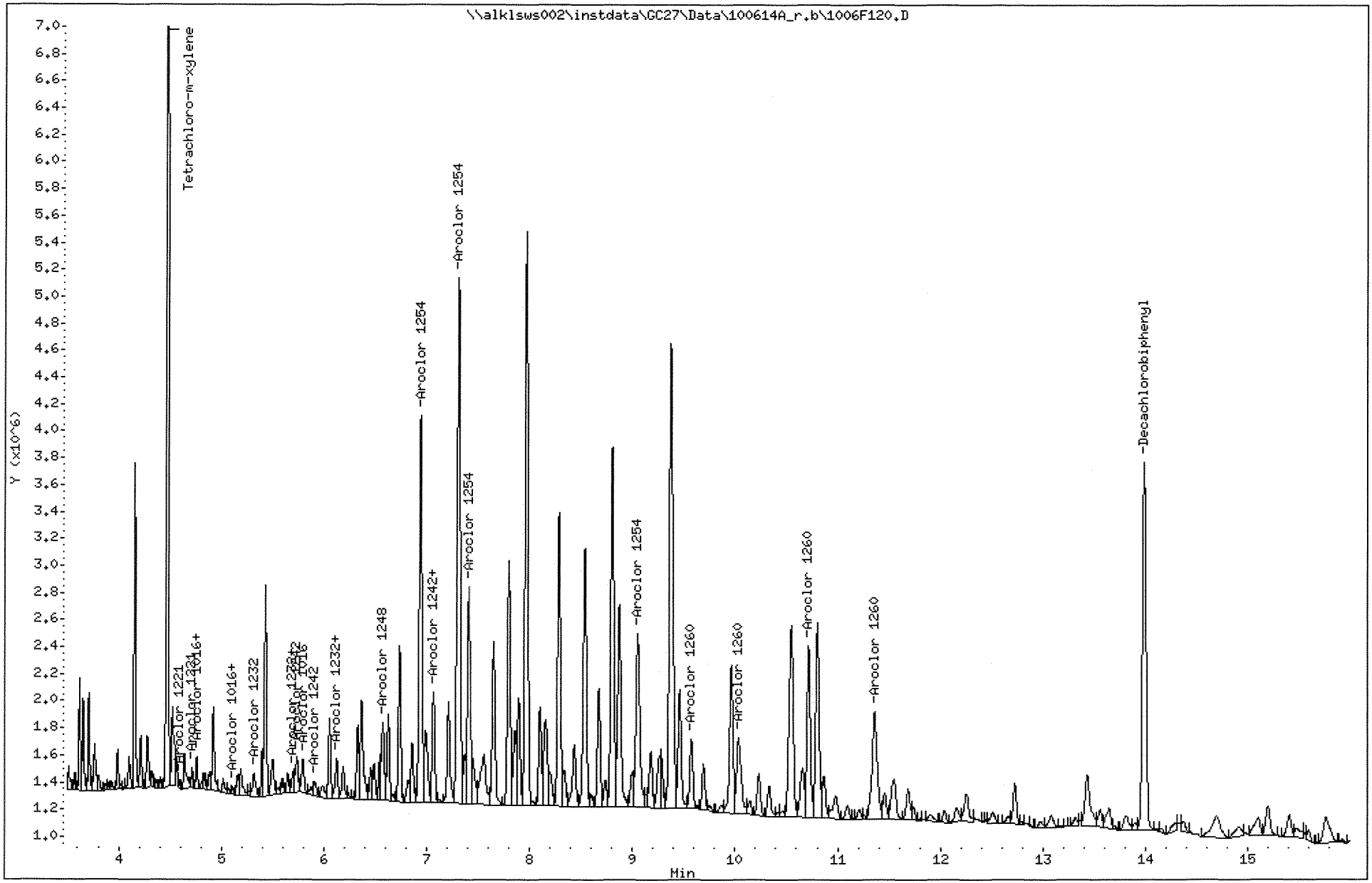


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F120.D
Date : 07-OCT-2014 09:20
Client ID:
Sample Info: K1409921-009

Instrument: GC27.i

Operator: JMSmith

Column phase: DB-XLB
Column diameter: 0.32



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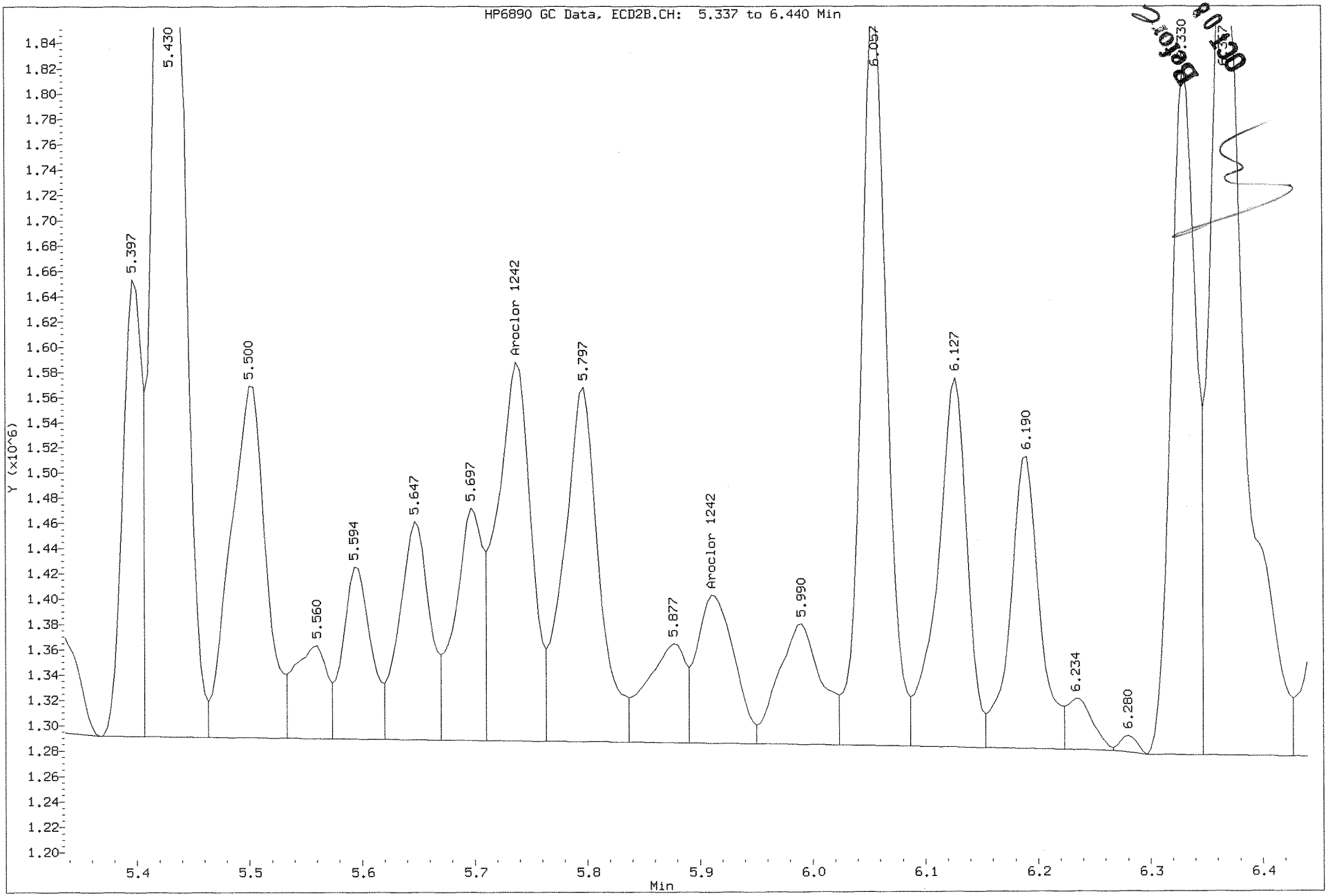
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



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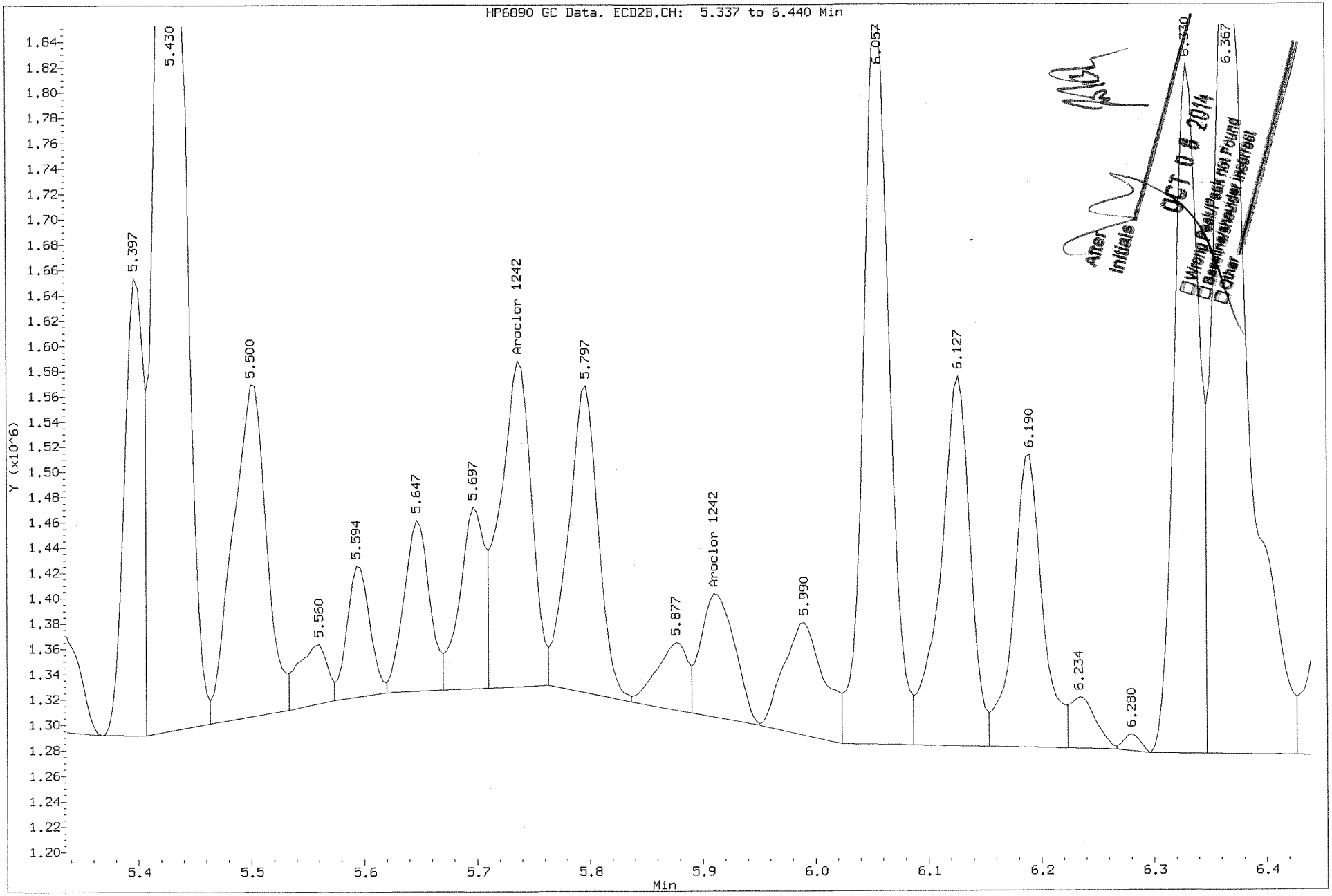
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



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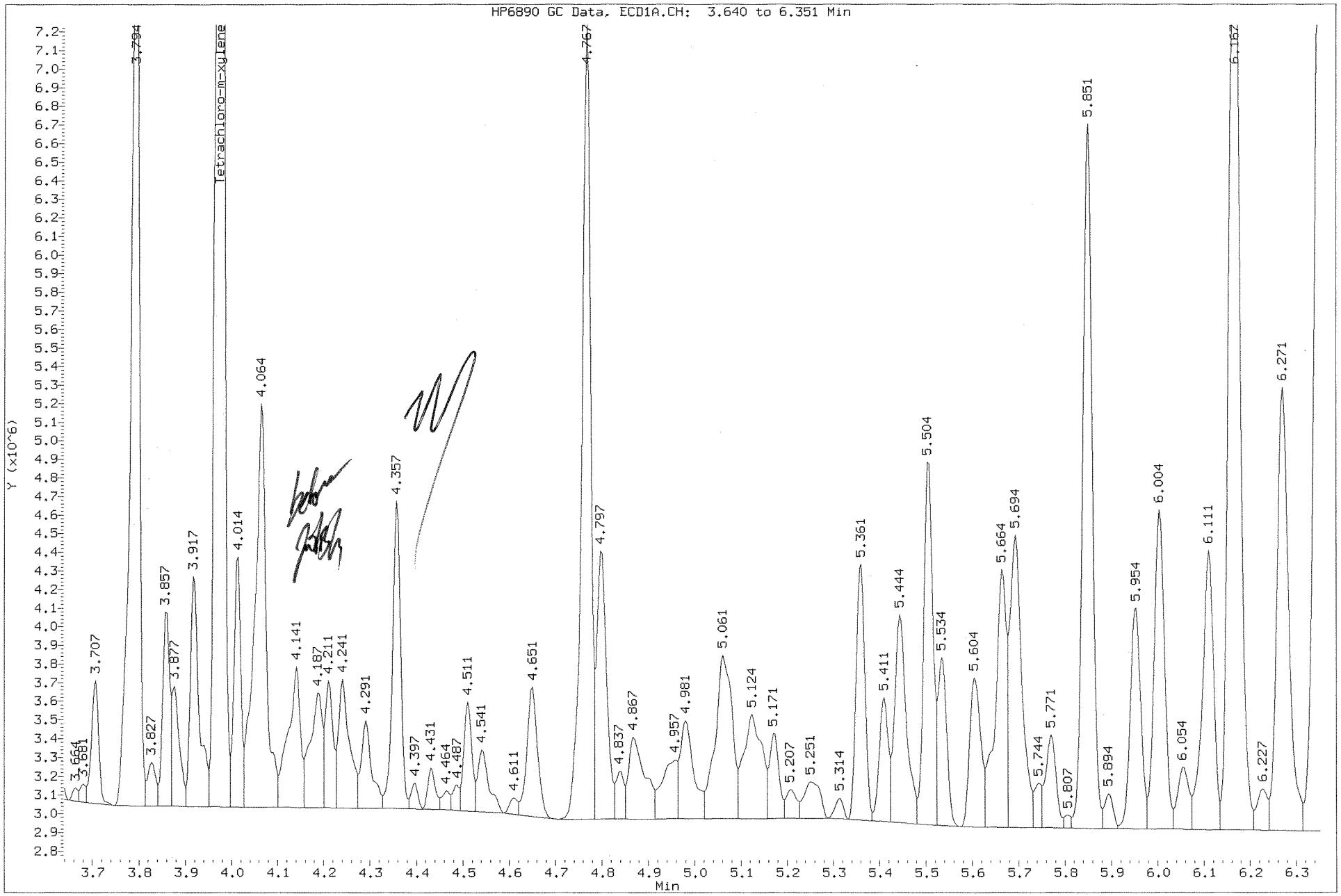
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



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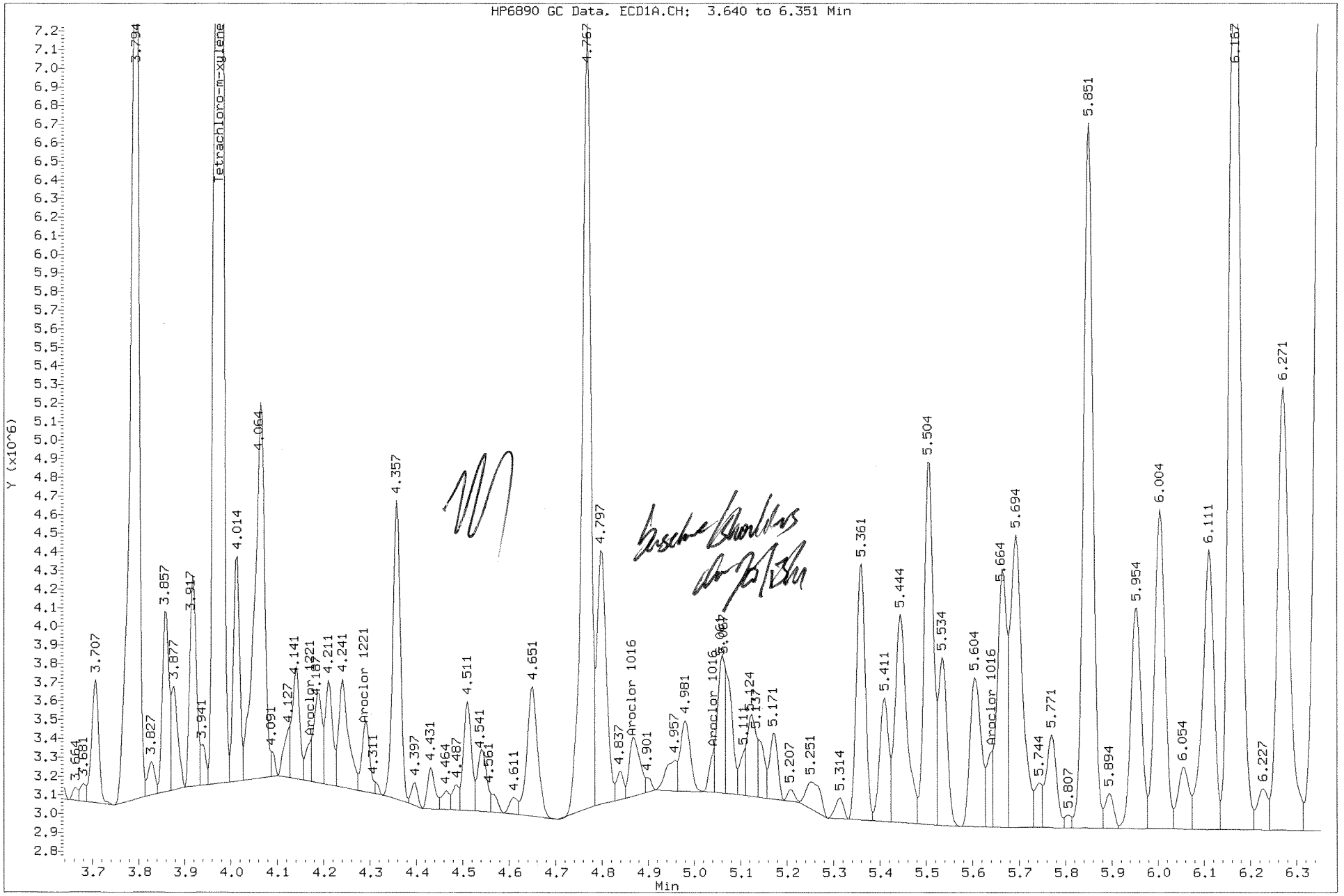
Instrument: GC27.i
Client Sample ID:



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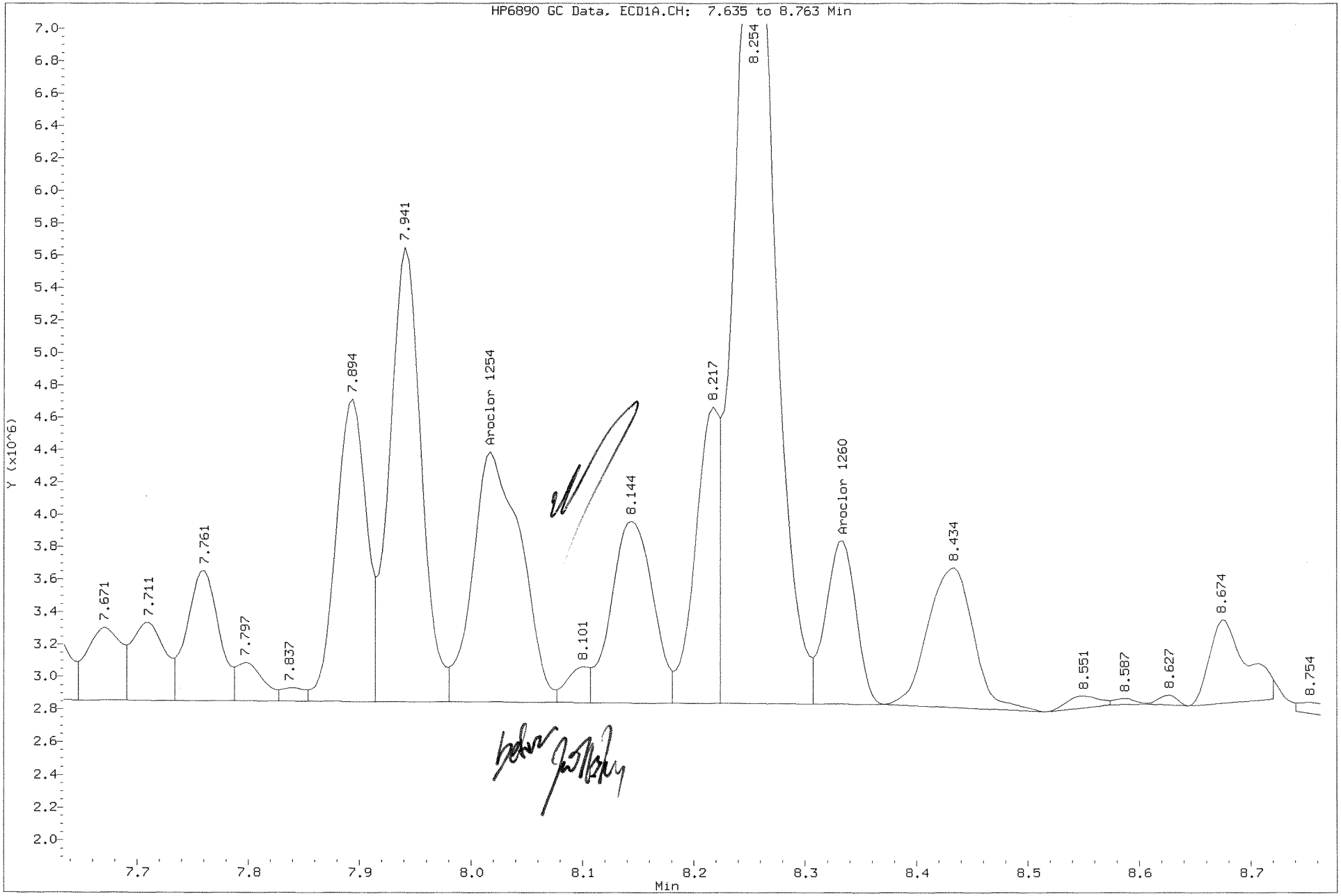
Instrument: GC27.i
Client Sample ID:



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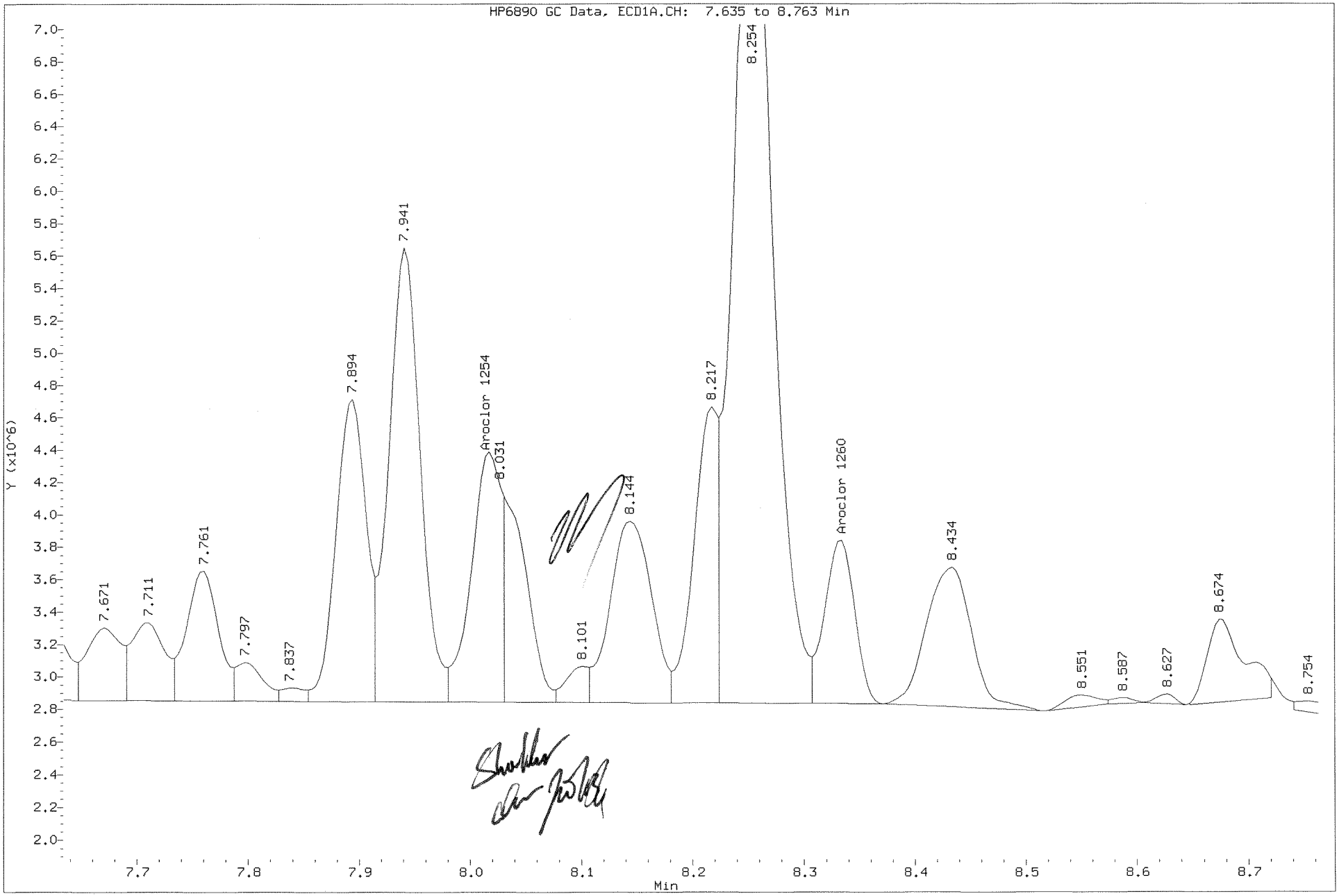
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



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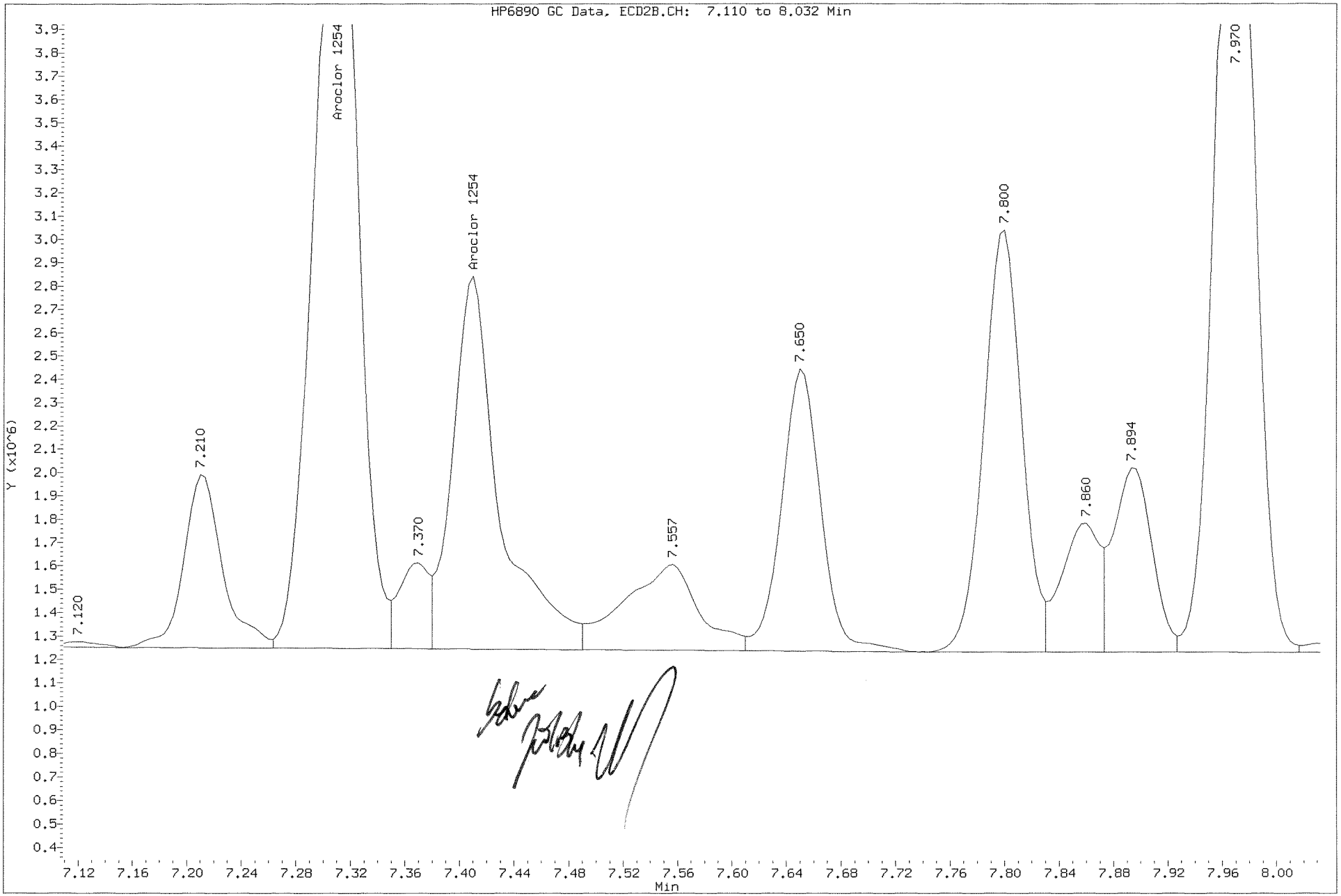
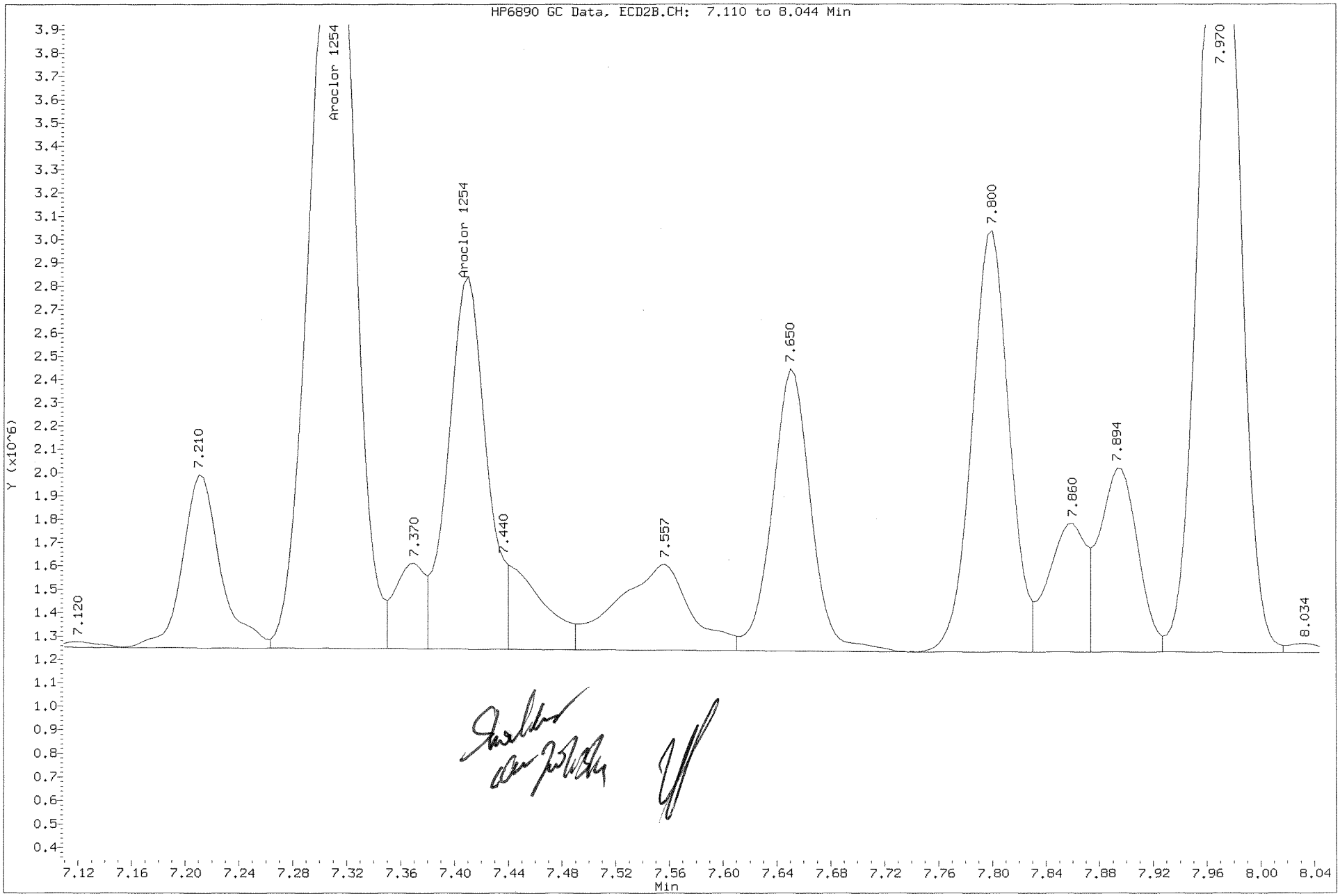
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



1580

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F120.D
Injection Date: 07-OCT-2014 09:20
Instrument: GC27.i
Client Sample ID:



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F121.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 09:44
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F121.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 09:44
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F121.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D			**Vial:**	15
Acqu Date:	10/07/2014 09:44	**Quant Date:**	10/14/2014 00:36	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380535	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15642
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	12.57	13.99 0.00	13053418	7882151	70.00	68.11			70 OK
				%Recovery =	70 OK	68 OK	Limits =	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1016			0	0	0.0000	0.0000	0.018U	0.018U	0.018U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1221			0	0	0.0000	0.0000	0.018U	0.018U	0.018U
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1232			0	0	0.0000	0.0000	0.018U	0.018U	0.018U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1242 {1}	4.87	5.11	79511m	65586m	20.83	18.82	0.043J	0.039J	
Aroclor 1242			0	0	31.20	33.73	0.065	0.070	**0.065**
Aroclor 1242 {2}	5.08	5.74	454069m	293375m	38.60	48.59	0.081	0.10	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F121.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D			**Vial:**	15
Acqu Date:	10/07/2014 09:44	**Quant Date:**	10/14/2014 00:36	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.32	5.92	160992m	103104m	34.16	33.78	0.071	0.071	
Aroclor 1242 {4}	5.67	6.13	0m	0m	0.0000	0.0000	0.018U	0.018U	
Aroclor 1242 {5}	6.17	7.06	0m	0m	0.0000	0.0000	0.018U	0.018U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1248			0	0	0.0000	0.0000	0.018U	0.018U	0.018U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.018U	0.018U	
Aroclor 1254 {1}	6.44	6.94	865047m	582084m	188.97	106.20	0.39	0.22	
Aroclor 1254			0	0	130.45	119.62	0.27	0.25	**0.25**
Aroclor 1254 {2}	6.89	7.31	839712m	1017980m	102.91	123.02	0.21	0.26	
Aroclor 1254 {3}	7.05	7.41	0m	427265m	0.0000	153.73	0.018U	0.32	
Aroclor 1254 {4}	7.39	8.29	1119466m	0m	106.73	0.0000	0.22	0.018U	
Aroclor 1254 {5}	8.02	9.06	825905m	411507m	123.22	95.53	0.26	0.20	
Aroclor 1260 {1}	7.29 0.00	8.10	0m	0m	0.0000	0.0000	0.018U	0.018U	
Aroclor 1260			0	0	71.38	57.56	0.15	0.12	**0.12**
Aroclor 1260 {2}	8.34	9.57	644296m	262744m	69.34	45.02	0.14	0.094	
Aroclor 1260 {3}	8.90 0.00	10.03	662588m	380709m	72.30	70.57	0.15	0.15	
Aroclor 1260 {4}	9.37 0.00	10.71 0.00	1449798m	598757m	67.17	44.57	0.14	0.093	
Aroclor 1260 {5}	10.17	11.36 +0.00	1266873m	586048m	76.73	70.09	0.16	0.15	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.298 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	23.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Report Date: 14-Oct-2014 00:36

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Inj Date : 07-OCT-2014 09:44
Sample Info: K1409921-010
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.975	4.471	27788975	14098374	70.9	71.9		100.00
Aroclor 1242	4.871	5.114	79511	65586	20.8	18.8	80.00- 120.00	100.00(M)
	5.078	5.737	454069	293375	38.6	48.6	261.43- 392.14	1083.03(M)
	5.315	5.921	160992	103104	34.2	33.8	106.66- 160.00	202.48(M)
	5.665	6.127					62.67- 94.01	0.00(M)
	6.168	7.064					71.63- 107.45	0.00(M)
			Average of Peak Amounts =		31.2	33.7		
Aroclor 1254	6.438	6.944	865047	582084	189	106	80.00- 120.00	100.00(M)
	6.888	7.307	839712	1017980	103	123	148.05- 222.07	97.07(M)
	7.045	7.411		427265		154	41.12- 61.68	73.40(M)
	7.391	8.287	1119466		107		184.27- 276.41	129.41(M)
	8.018	9.057	825905	411507	123	95.5	122.76- 184.15	95.48(M)
			Average of Peak Amounts =		131	120		
Aroclor 1260	7.291	8.101					80.00- 120.00	0.00(M)
	8.335	9.571	644296	262744	69.3	45.0	63.80- 95.69	53.22(M)
	8.898	10.031	662588	380709	72.3	70.6	64.05- 96.07	54.74(M)
	9.365	10.714	1449798	598757	67.2	44.6	145.21- 217.81	119.77(M)
	10.165	11.364	1266873	586048	76.7	70.1	112.20- 168.30	150.78(M)
			Average of Peak Amounts =		71.4	57.6		
Decachlorobiphenyl	12.565	13.987	13053418	7882151	70.0	68.1		100.00
Aroclors, Total	0.000	0.000	2149945	1220795	233	211		0.00

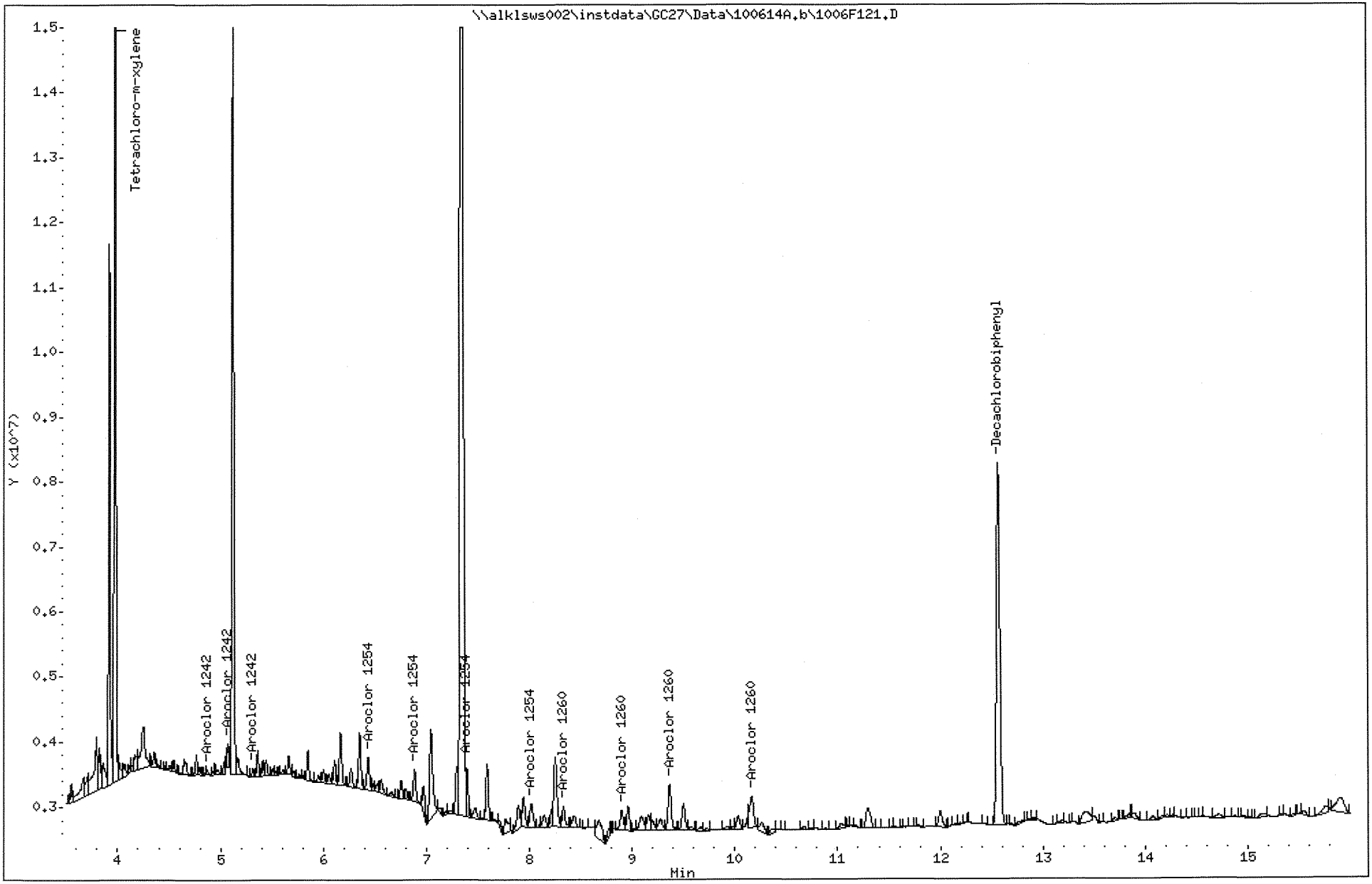
QC Flag Legend

M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Date : 07-OCT-2014 09:44
Client ID:
Sample Info: K1409921-010

Instrument: GC27.i

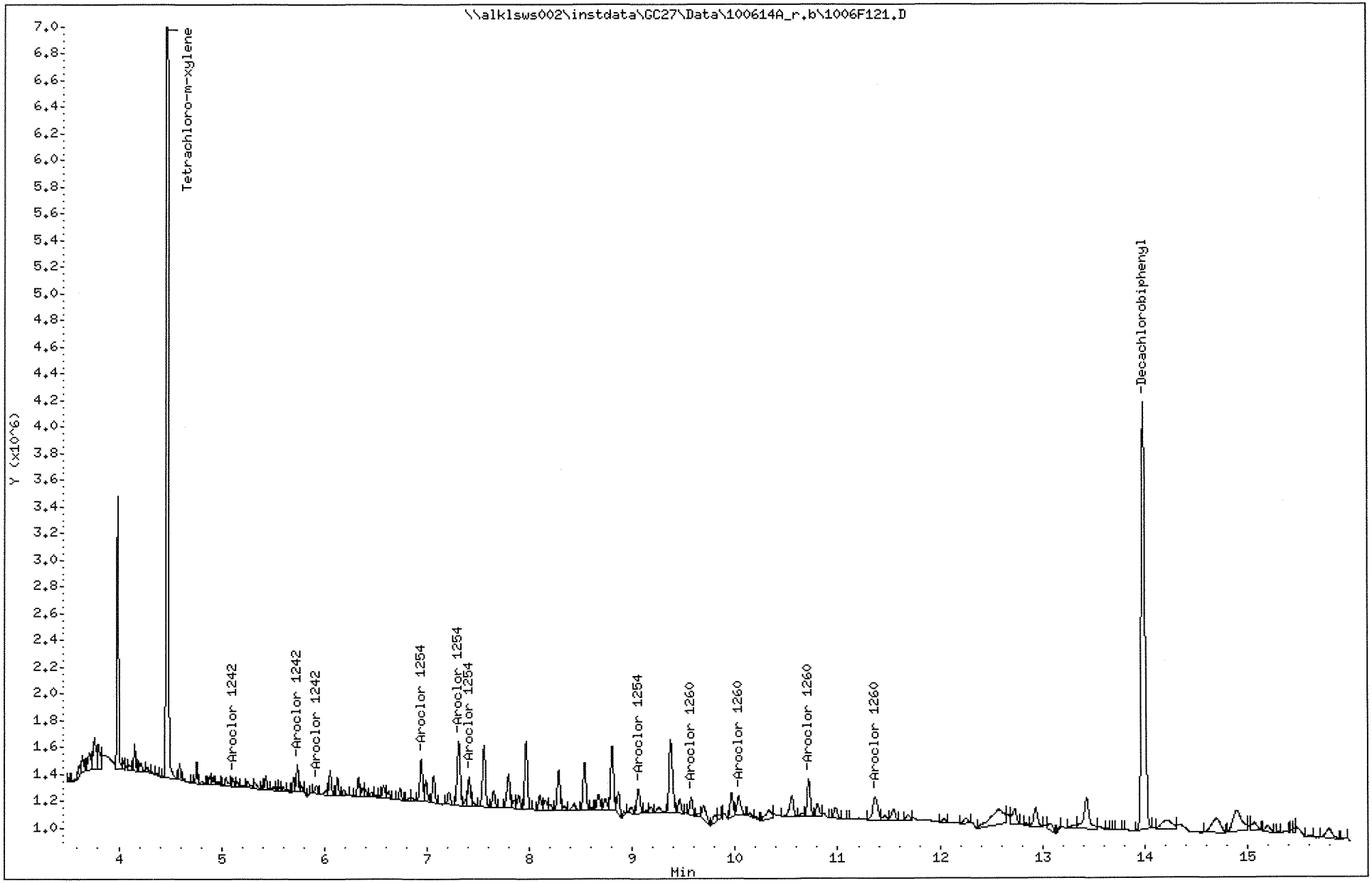
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

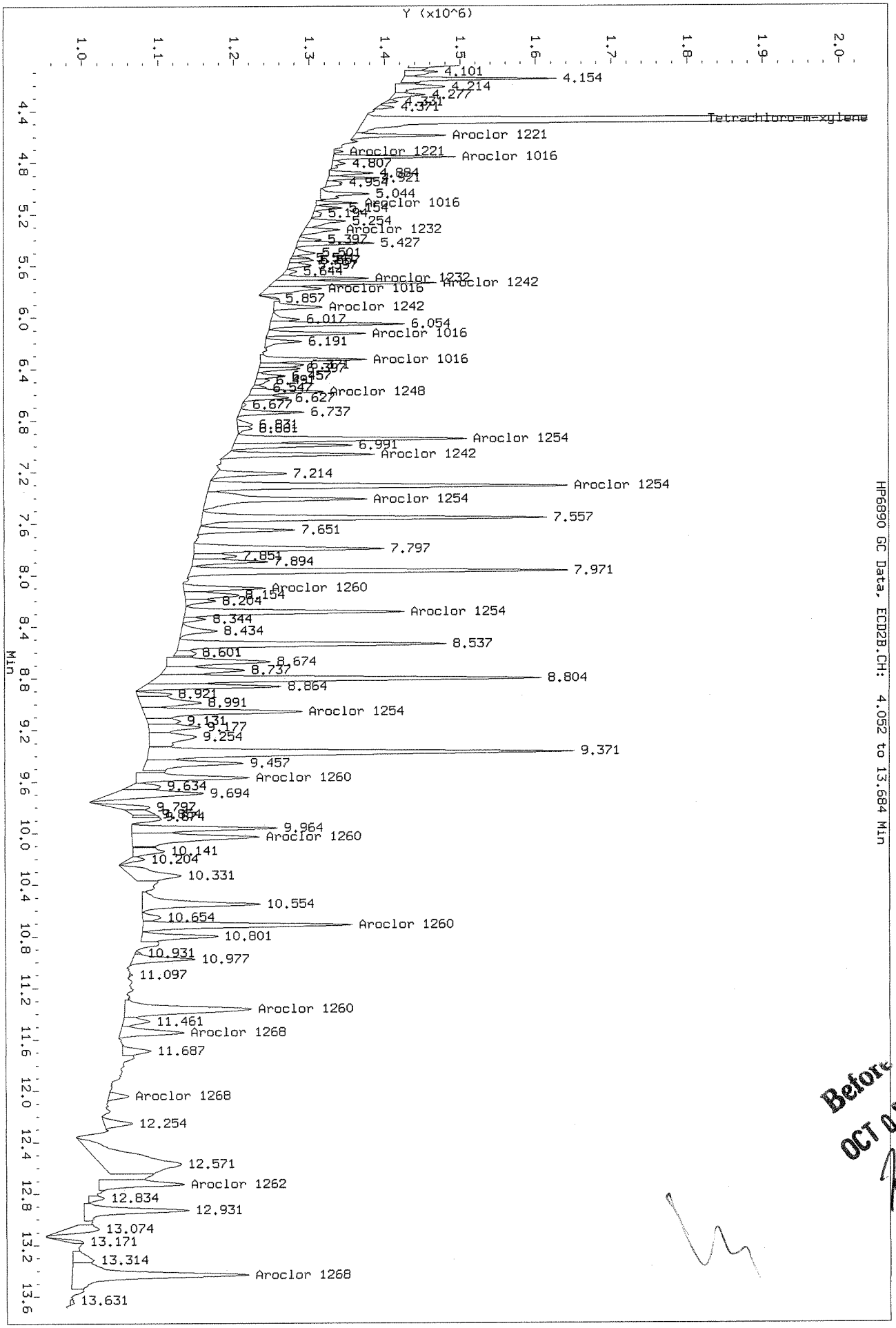


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Date : 07-OCT-2014 09:44
Client ID:
Sample Info: K1409921-010

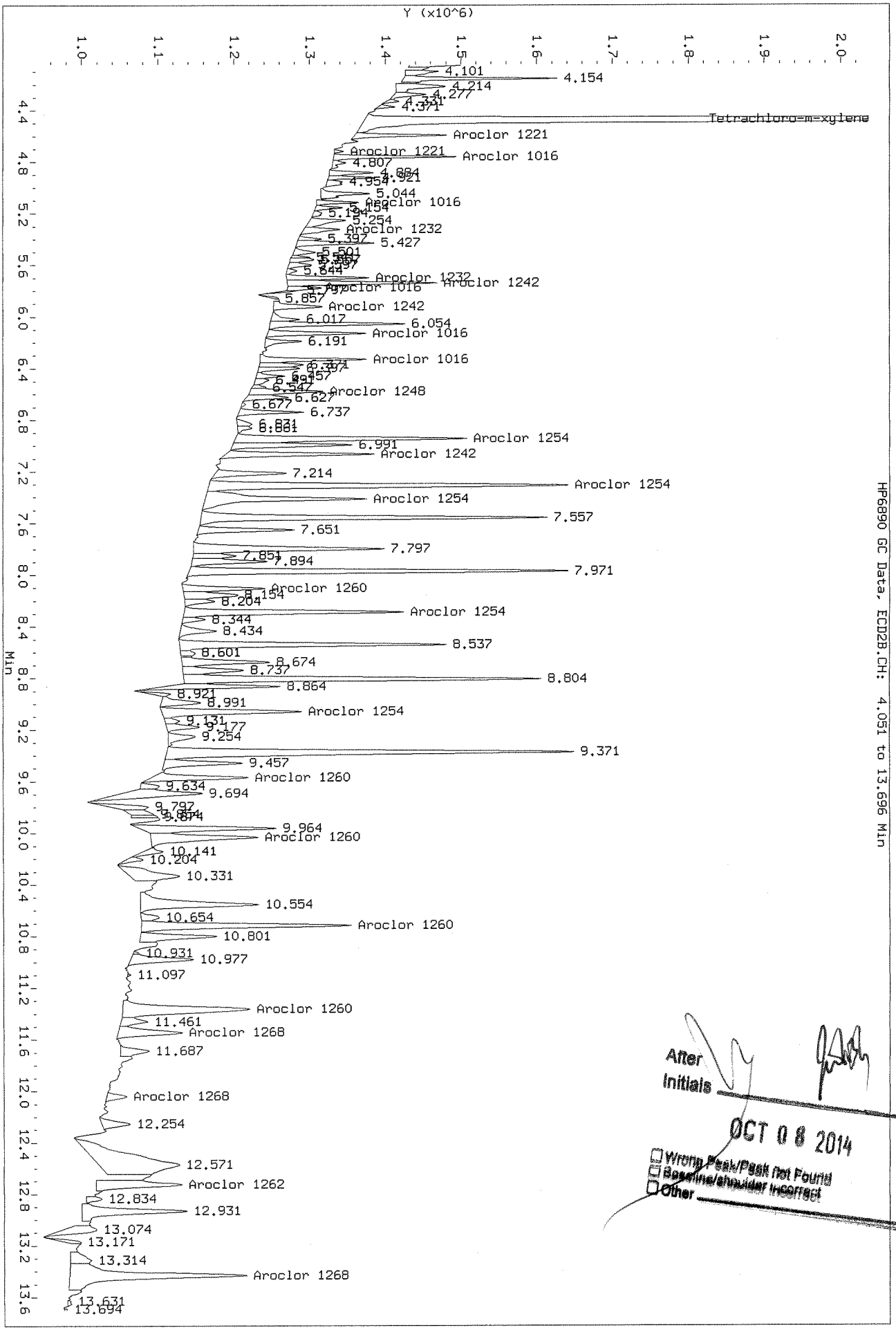
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32





Before
OCT 08 2014


Y (x10^6)
Min
4.101
4.154
4.214
4.277
4.371
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1221
Aroclor 1016
4.807
4.954
4.921
5.044
Aroclor 1016
5.254
Aroclor 1232
5.397
5.427
5.644
Aroclor 1232
Aroclor 1242
Aroclor 1016
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Aroclor 1242
6.017
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Aroclor 1248
6.627
6.677
6.737
Aroclor 1254
6.991
Aroclor 1242
7.214
Aroclor 1254
Aroclor 1254
7.557
7.651
7.797
7.851
7.894
7.971
Aroclor 1260
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Aroclor 1254
8.344
8.434
8.537
8.601
8.674
8.737
8.804
8.864
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Aroclor 1254
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9.254
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9.457
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10.331
10.554
10.654
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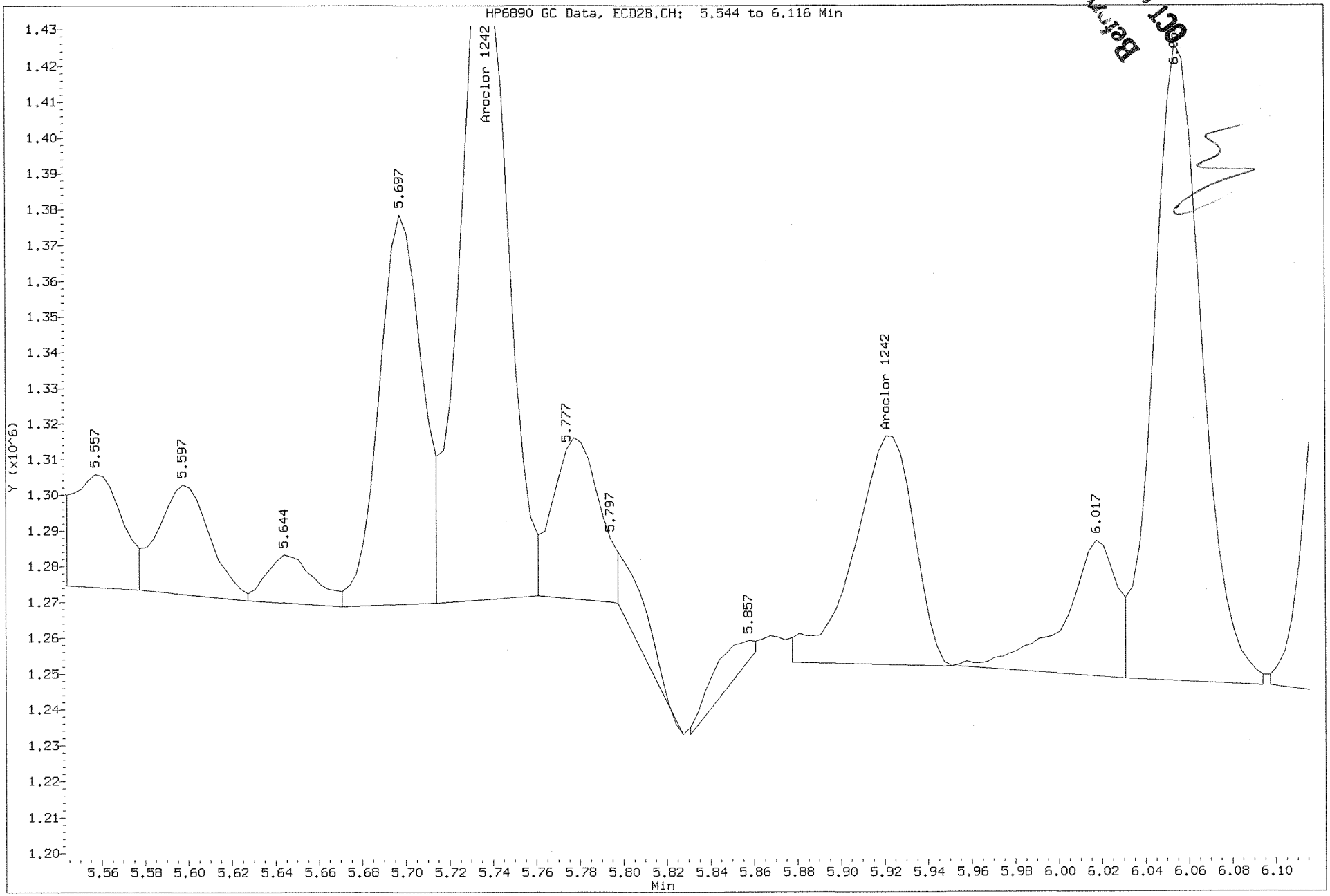
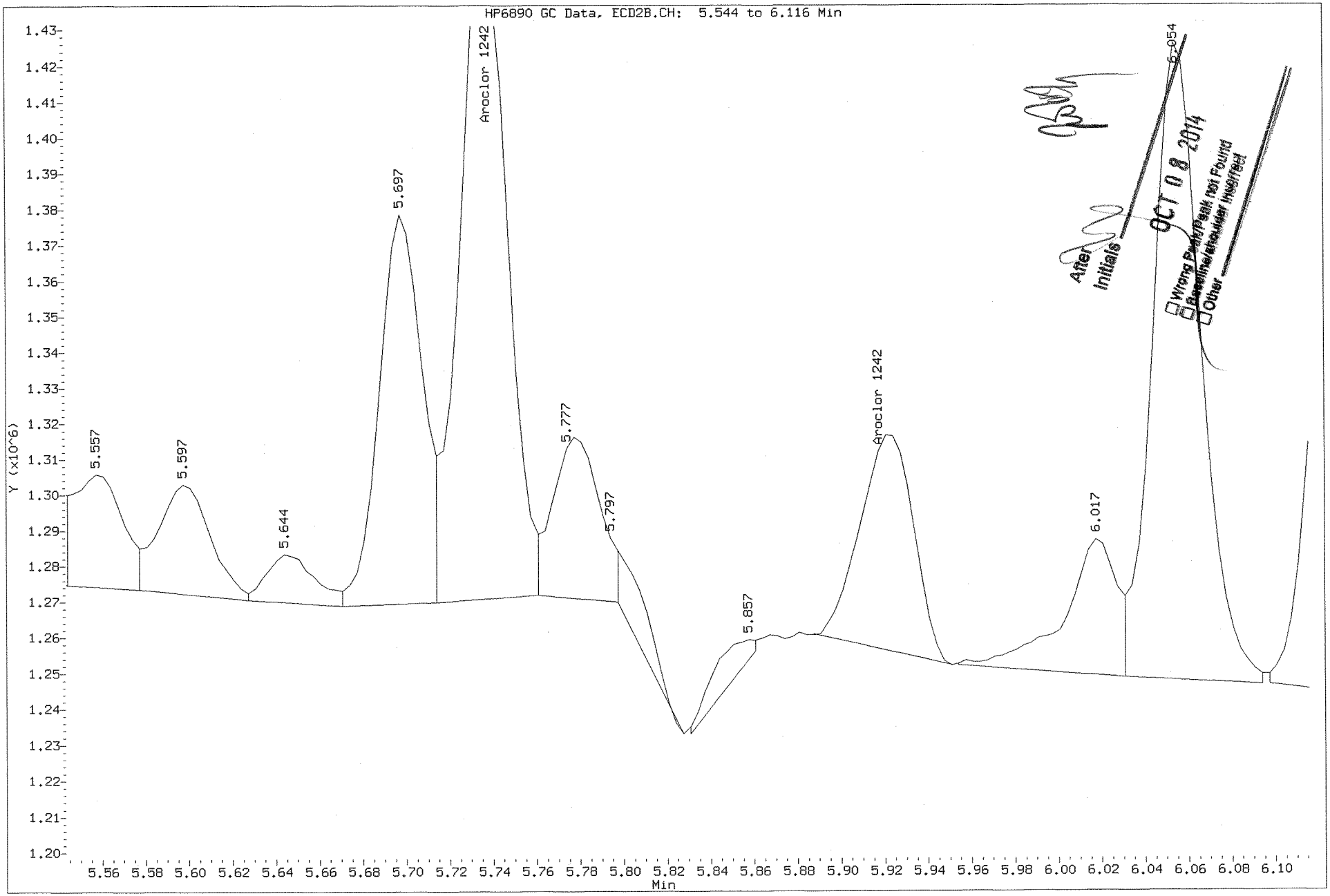
10.801
10.931
10.977
11.097
Aroclor 1260
11.461
Aroclor 1268
11.687
Aroclor 1268
12.254
12.571
Aroclor 1262
12.834
12.931
13.074
13.171
13.314
Aroclor 1268
13.631
13.694
Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 4.051 to 13.696 Min
After Initials
OCT 0 8 2014
Wrong Peak/Peak Not Found
Baseline/shoulder incorrect
Other

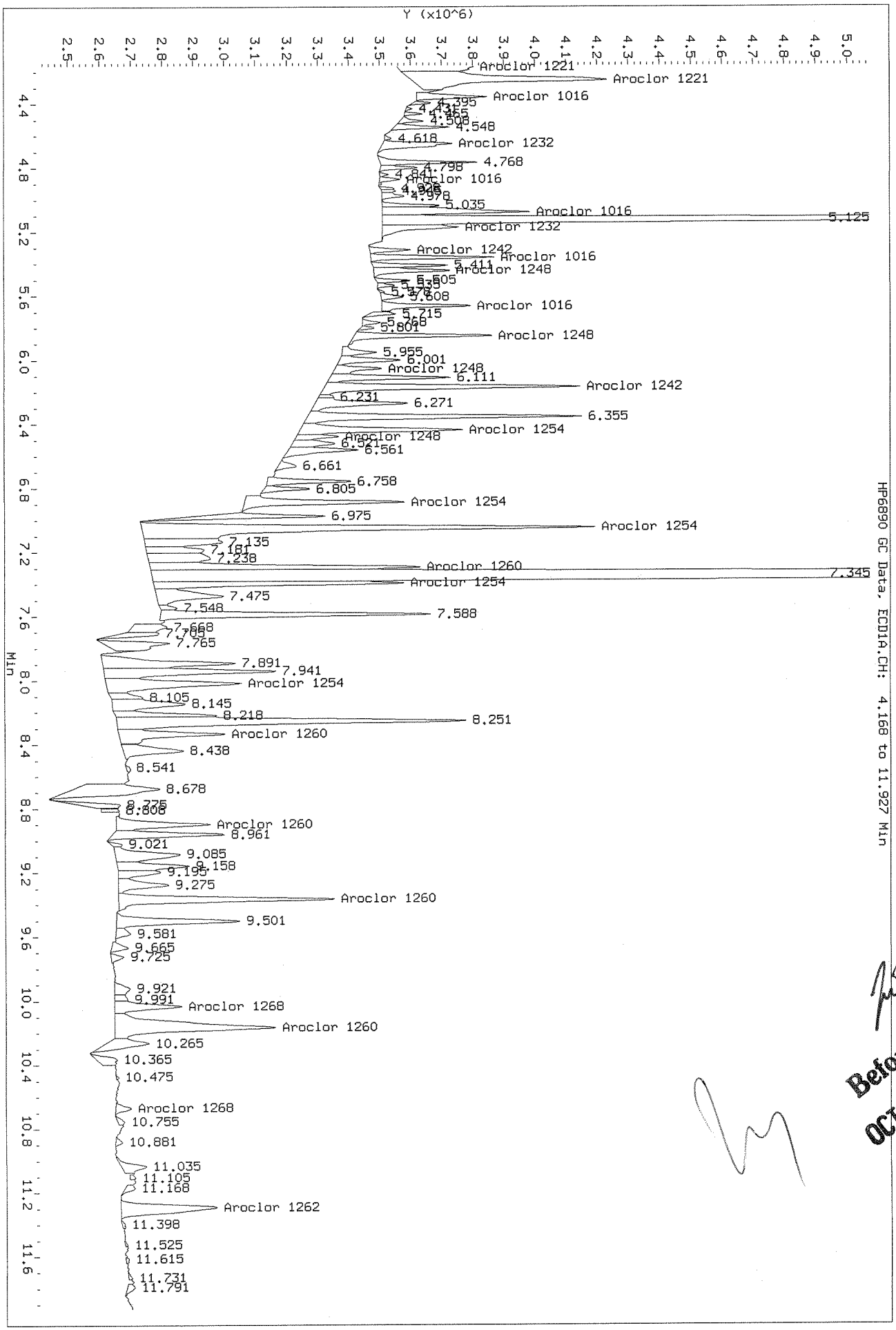
Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



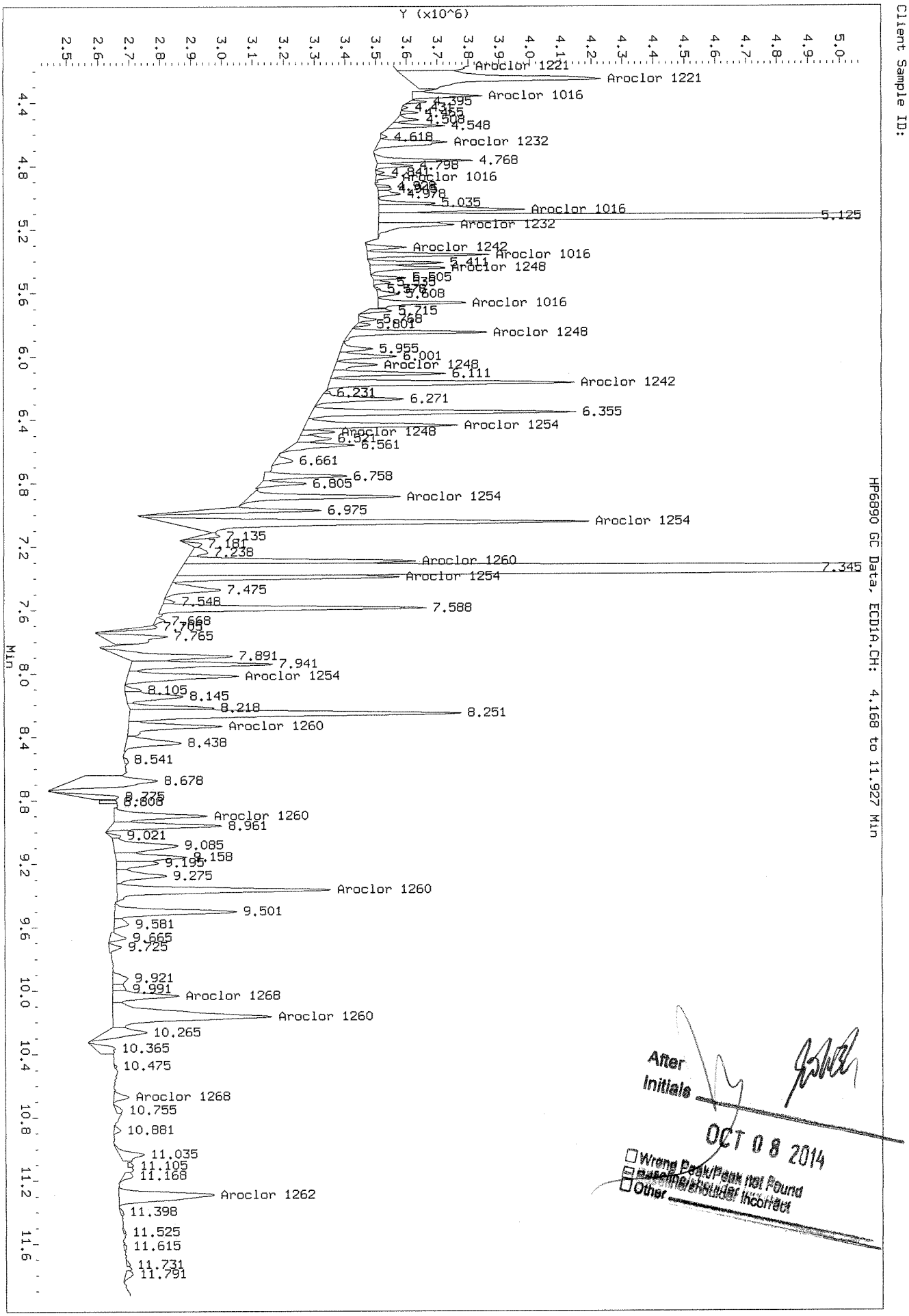
1591

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:

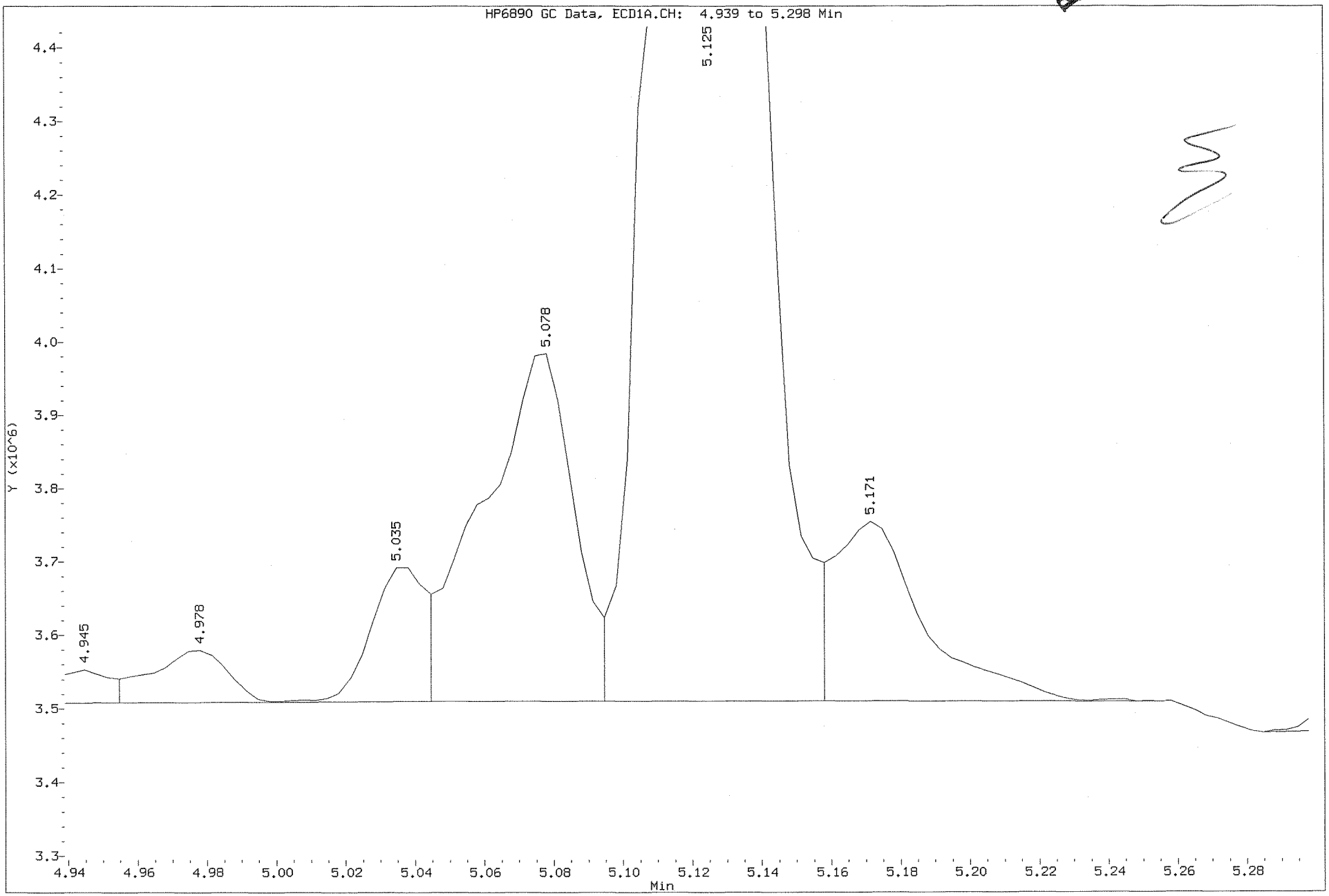




Before
OCT 08 2014


Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:
Y (x10^6)
Min
HP6890 GC Data, ECD1A.CH: 4.168 to 11.927 Min
Aroclor 1221
Aroclor 1016
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1268
Aroclor 1262
4.395
4.548
4.618
4.768
5.035
5.125
5.411
5.608
5.715
5.801
5.955
6.001
6.111
6.231
6.271
6.355
6.561
6.661
6.758
6.805
6.975
7.135
7.181
7.238
7.345
7.475
7.548
7.588
7.668
7.765
7.891
7.941
8.105
8.145
8.218
8.251
8.438
8.541
8.678
8.961
9.021
9.085
9.158
9.195
9.275
9.501
9.581
9.665
9.725
9.921
9.991
10.265
10.365
10.475
10.755
10.881
11.035
11.105
11.168
11.398
11.525
11.615
11.731
11.791
After Initials
OCT 08 2014
Wrong Peak/Peak Not Found
Baseline/Shoulder Incorrect
Other

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



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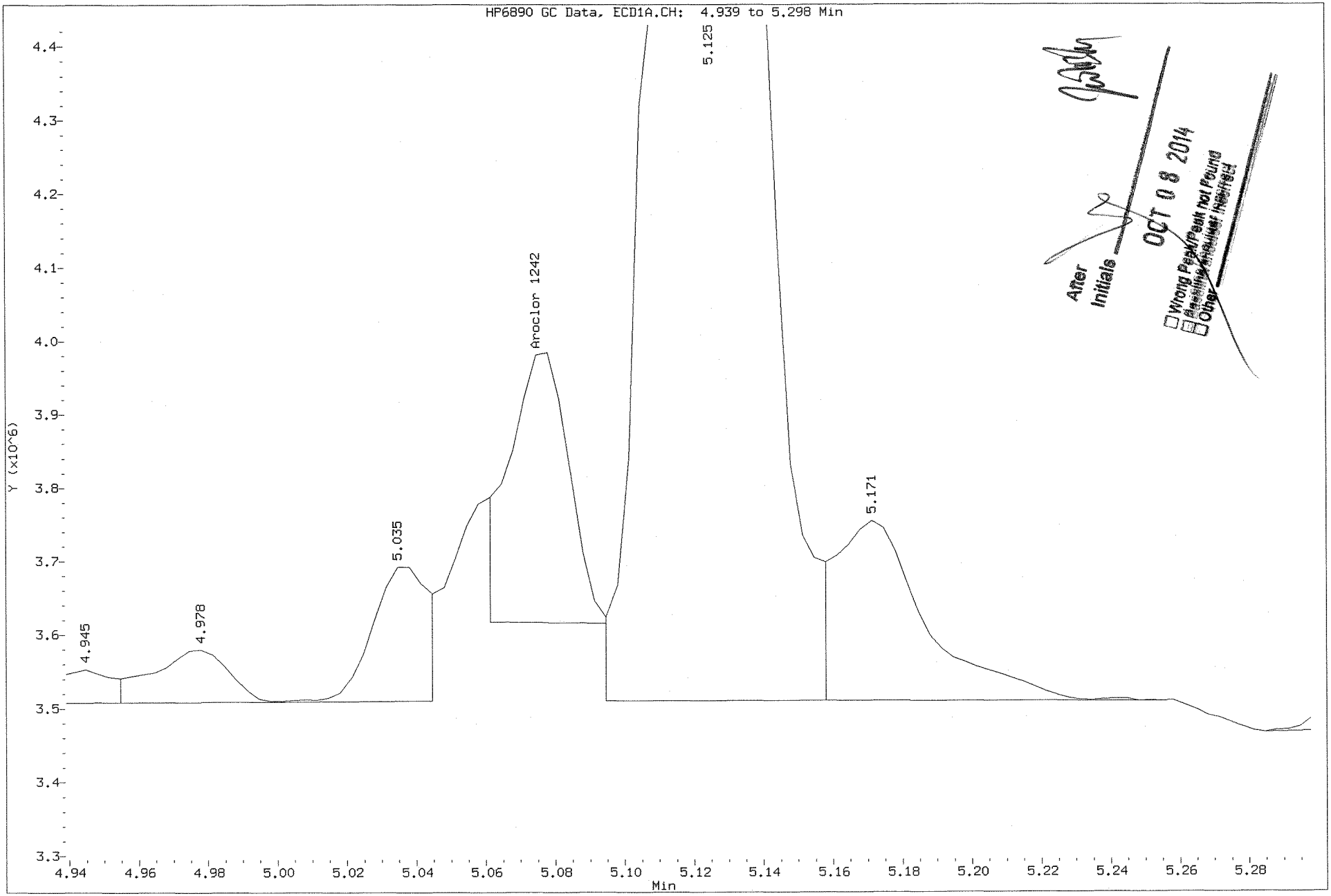
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



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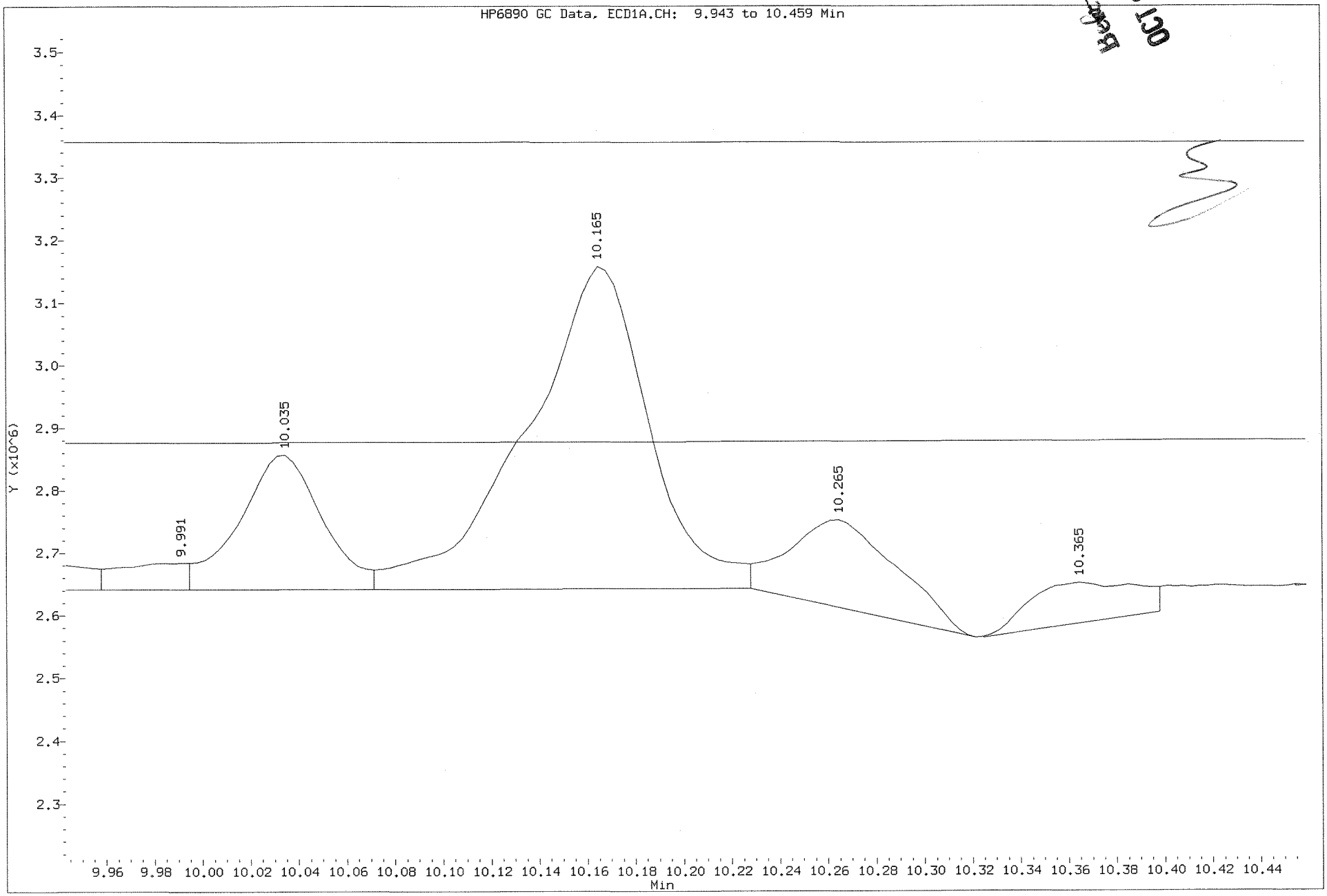
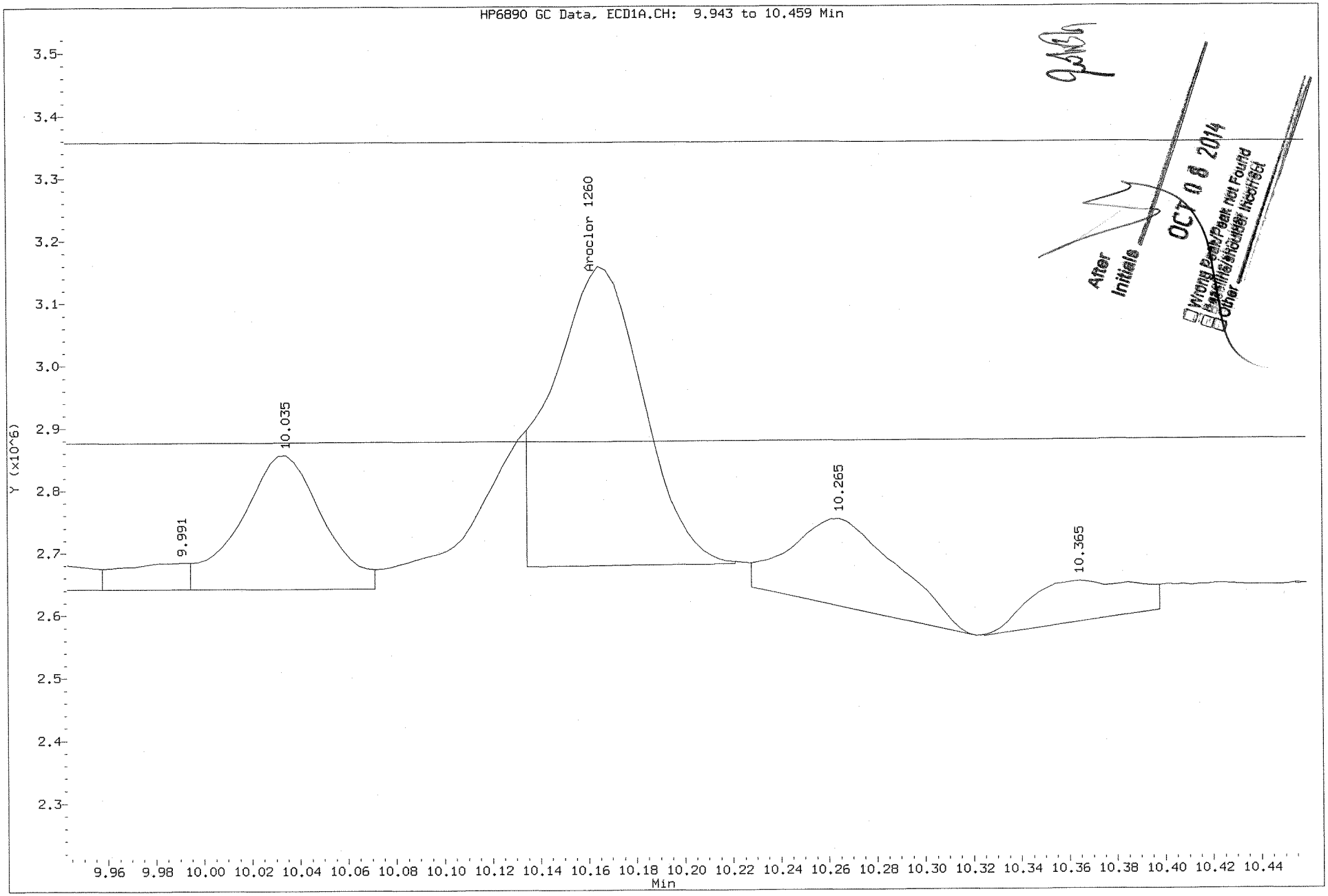
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



OCT 08 2014

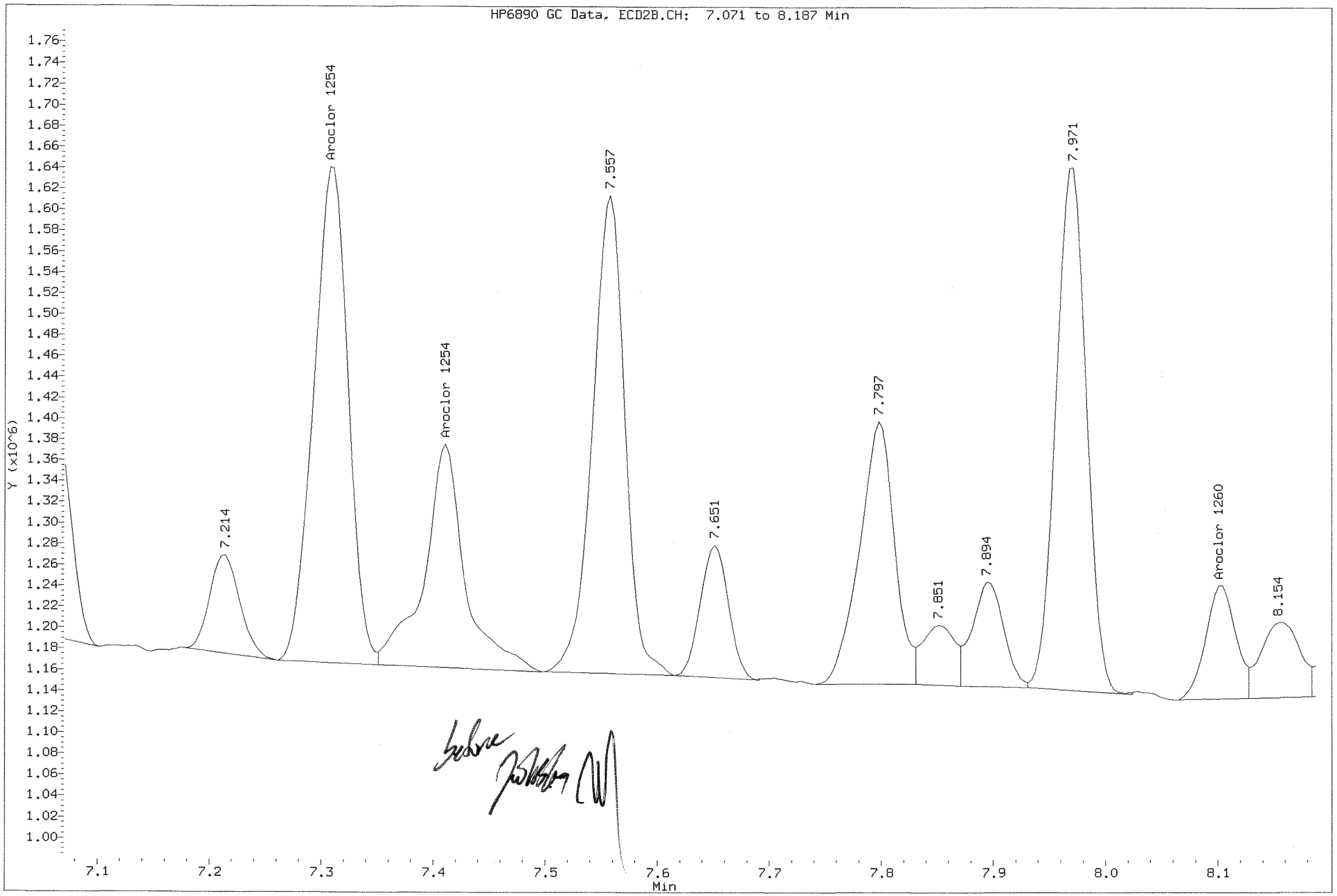
1597

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



OCT 08 2014
After Initials
Wrong Peak/Peak not Found
Other

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F121.D
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



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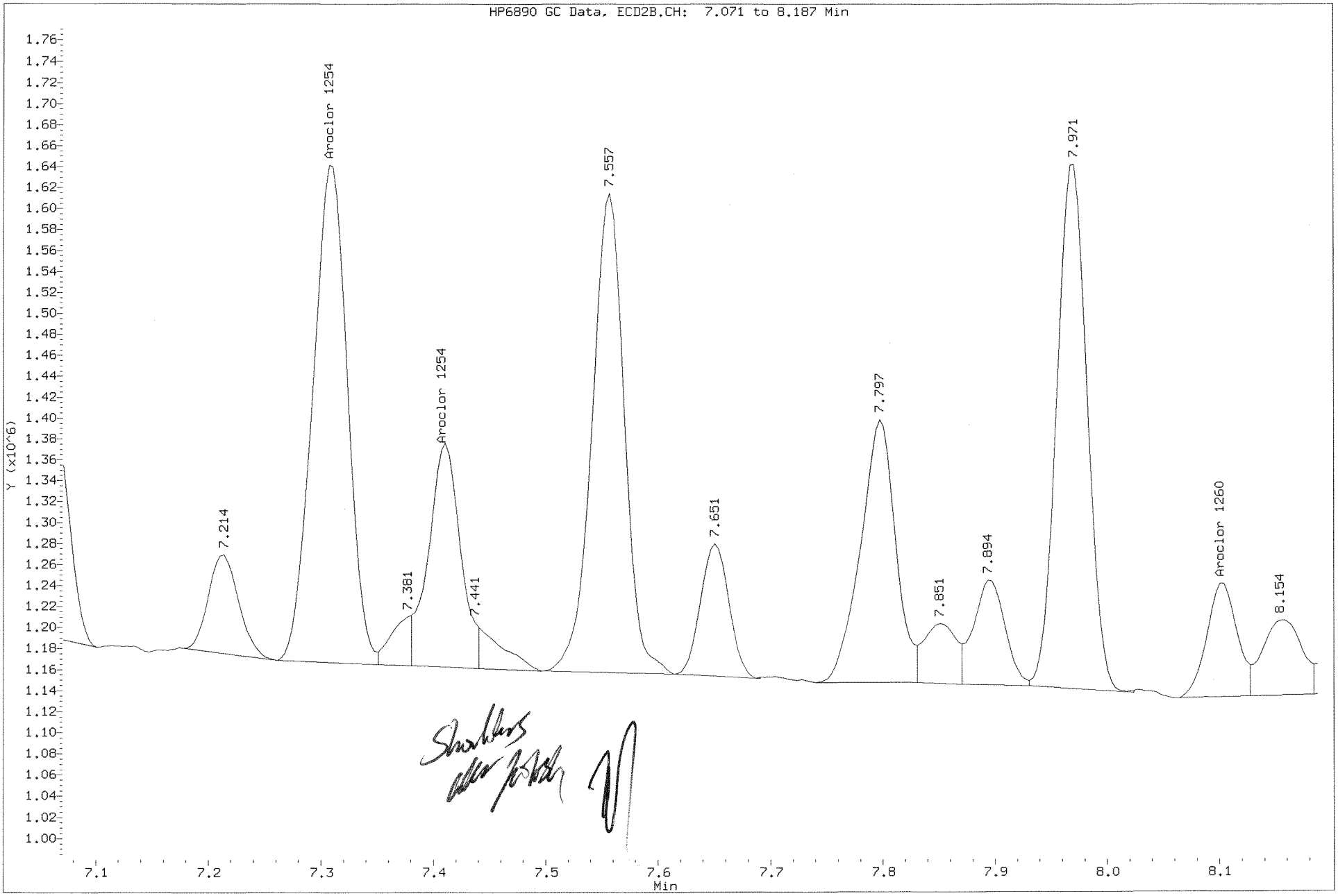
Injection Date: 07-OCT-2014 09:44
Instrument: GC27.i
Client Sample ID:



1600

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F122.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 10:08
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F122.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/07/2014 10:08
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
ListJoinID: LJ15149

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F122.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D			**Vial:**	16
Acqu Date:	10/07/2014 10:08	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-011				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	K1409921
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380536	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ15149
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2				Rpt
Decachlorobiphenyl	12.57	13.99	13050371	7626182	69.98	65.90				70 OK
				%Recovery =	70 OK	66 OK	**Limits =**	43-148		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {1}	4.87	5.12	29040	12604m	7.61	3.62	0.0085U	0.0085U	
Aroclor 1242			0	0	6.96	6.09	0.0085U	0.0085U	0.0085U
Aroclor 1242 {2}	5.08	5.74	78578	30350m	6.68	5.03	0.0085U	0.0085U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F122.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D			**Vial:**	16
Acqu Date:	10/07/2014 10:08	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1409921-011				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {3}	5.31	5.92	31121	21830m	6.60	7.15	0.0085U	0.0085U	
Aroclor 1242 {4}	5.66	6.12	0	14190m	0.0000	5.25	0.0085U	0.0085U	
Aroclor 1242 {5}	6.17	7.07	0	28075m	0.0000	9.38	0.0085U	0.0085U	
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {1}	6.44	6.95	47907	32791m	10.47	5.98	0.0085U	0.0085U	
Aroclor 1254			0	0	9.22	5.78	0.0085U	0.0085U	0.0085U
Aroclor 1254 {2}	6.89	7.29	65110	23532m	7.98	2.84	0.0085U	0.0085U	
Aroclor 1254 {3}	7.05	7.41	146368	6122m	9.12	2.20	0.0085U	0.0085U	
Aroclor 1254 {4}	7.39	8.29	86284	26324m	8.23	8.38	0.0085U	0.0085U	
Aroclor 1254 {5}	8.02	9.05	69225	40887m	10.33	9.49	0.0085U	0.0085U	
Aroclor 1260 {1}	7.29	8.11 +0.00	66484	7994	5.75	2.38	0.0085U	0.0085U	
Aroclor 1260			0	0	4.88	3.64	0.0085U	0.0085U	0.0085U
Aroclor 1260 {2}	8.33 0.00	9.57 0.00	44828	29797	4.82	5.11	0.0085U	0.0085U	
Aroclor 1260 {3}	8.89 -0.01	10.03 +0.00	33929	28254	3.70	5.24	0.0085U	0.0085U	
Aroclor 1260 {4}	9.37 0.00	10.72	113490	39131	5.26	2.91	0.0085U	0.0085U	
Aroclor 1260 {5}	10.13 -0.03	11.36 +0.00	0	21457	0.0000	2.57	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.388 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	77.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F122.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F122.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D
Inj Date : 07-OCT-2014 10:08
Sample Info: K1409921-011
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

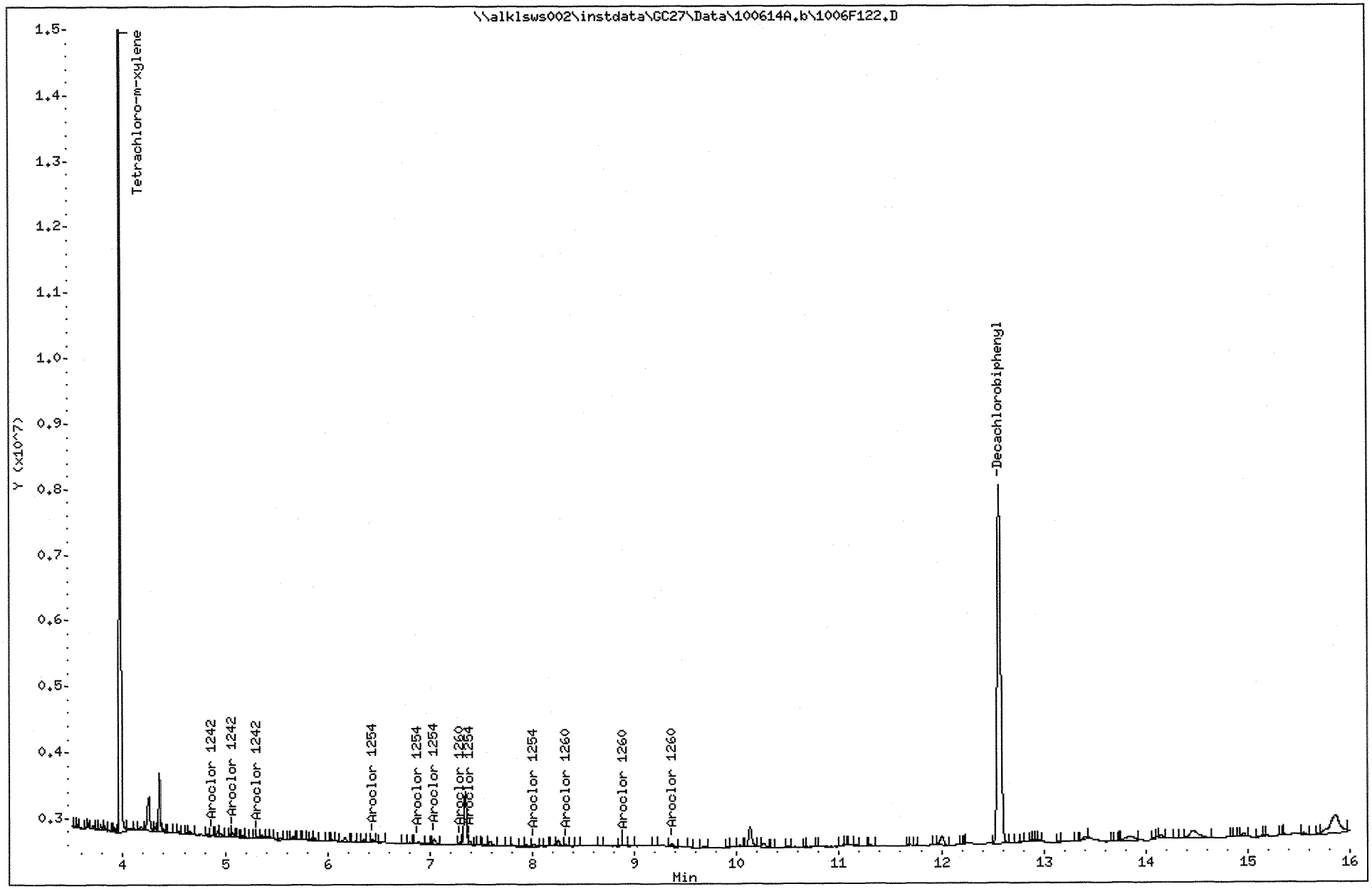
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.472	22721254	11521450	58.0	58.8		100.00
Aroclor 1242	4.872	5.115	29040	12604	7.61	3.62	80.00- 120.00	100.00
	5.075	5.735	78578	30350	6.68	5.03	261.43- 392.14	270.59
	5.312	5.922	31121	21830	6.60	7.15	106.66- 160.00	107.17
	5.662	6.122		14190		5.25	62.67- 94.01	112.58
	6.169	7.065		28075		9.38	71.63- 107.45	323.76
			Average of Peak Amounts =		6.96	6.09		
Aroclor 1254	6.439	6.948	47907	32791	10.5	5.98	80.00- 120.00	100.00
	6.889	7.292	65110	23532	7.98	2.84	148.05- 222.07	135.91
	7.045	7.408	146368	6122	9.12	2.20	284.20- 426.31	305.53
	7.392	8.285	86284	26324	8.23	8.38	184.27- 276.41	180.11
	8.015	9.052	69225	40887	10.3	9.49	122.76- 184.15	144.50
			Average of Peak Amounts =		9.23	5.78		
Aroclor 1260	7.292	8.105	66484	7994	5.75	2.38	80.00- 120.00	100.00
	8.332	9.568	44828	29797	4.82	5.11	63.80- 95.69	67.43
	8.892	10.032	33929	28254	3.70	5.24	64.05- 96.07	51.03
	9.365	10.718	113490	39131	5.26	2.91	145.21- 217.81	170.70
	10.132	11.362		21457		2.57	191.66- 287.48	268.41
			Average of Peak Amounts =		4.88	3.64		
Decachlorobiphenyl	12.565	13.988	13050371	7626182	70.0	65.9		100.00
Aroclors, Total	0.000	0.000	193907	72667	21.1	15.5		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F122.D
Date : 07-OCT-2014 10:08
Client ID:
Sample Info: K1409921-011

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



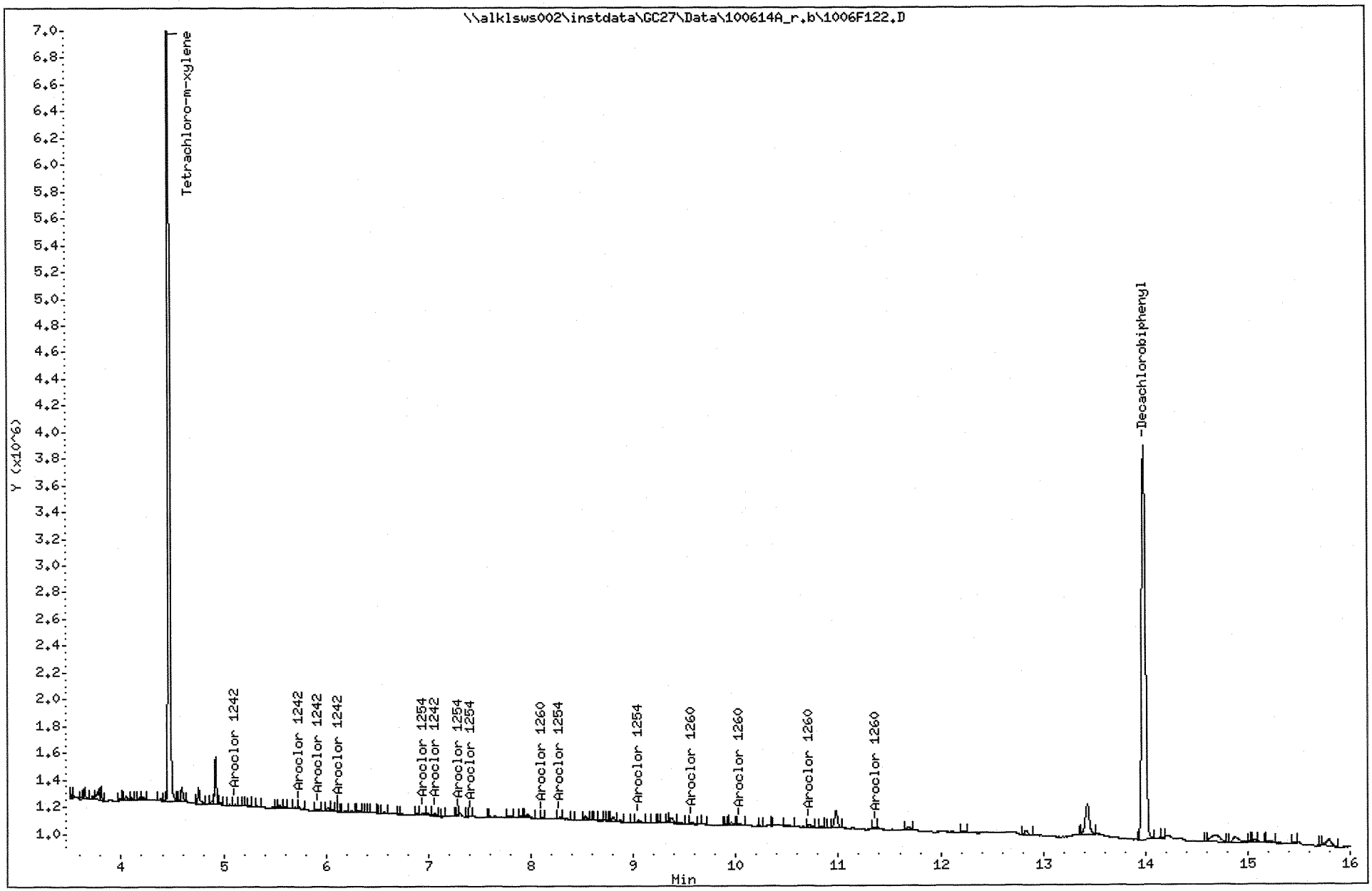
Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D
Date : 07-OCT-2014 10:08
Client ID:
Sample Info: K1409921-011

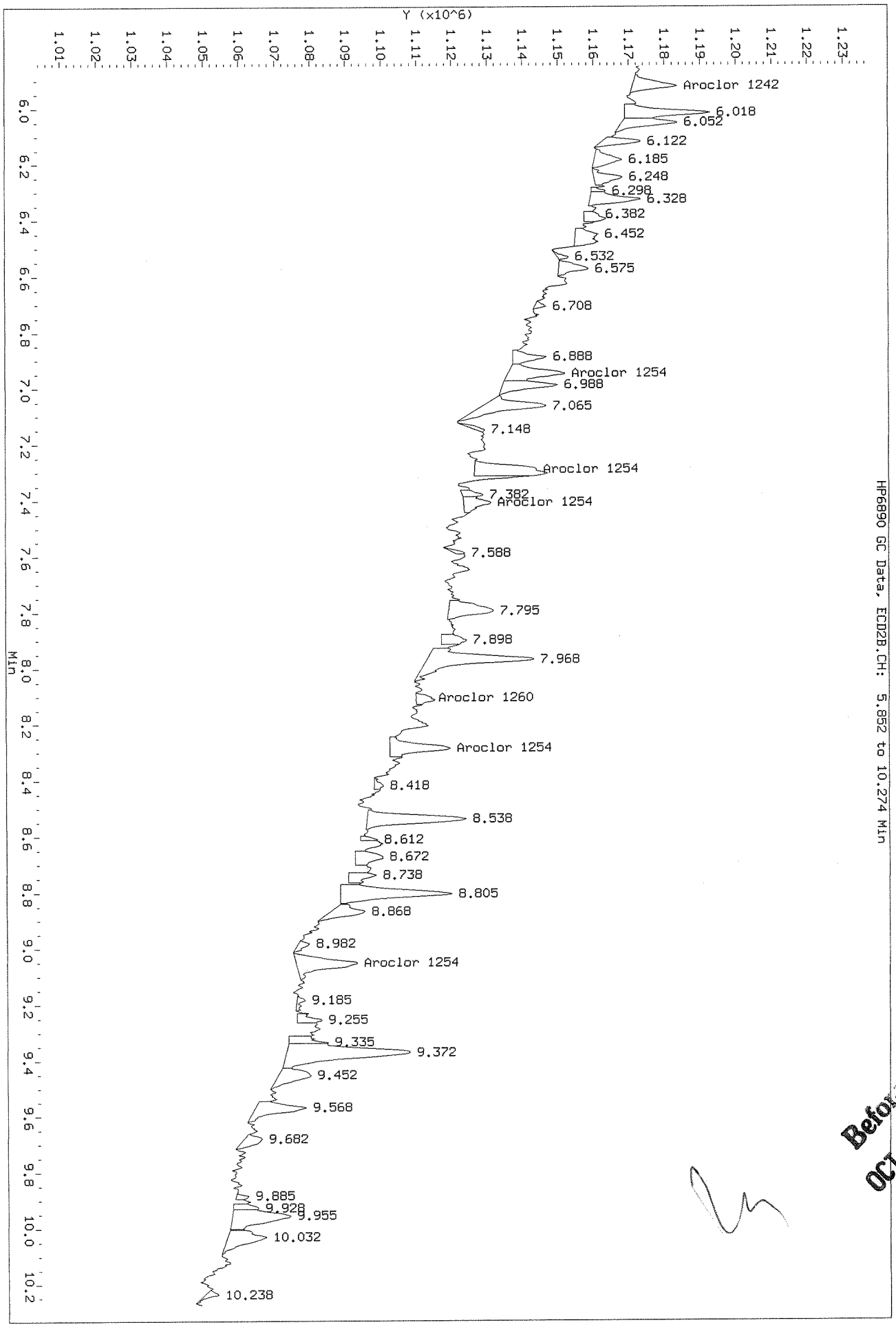
Instrument: GC27.i

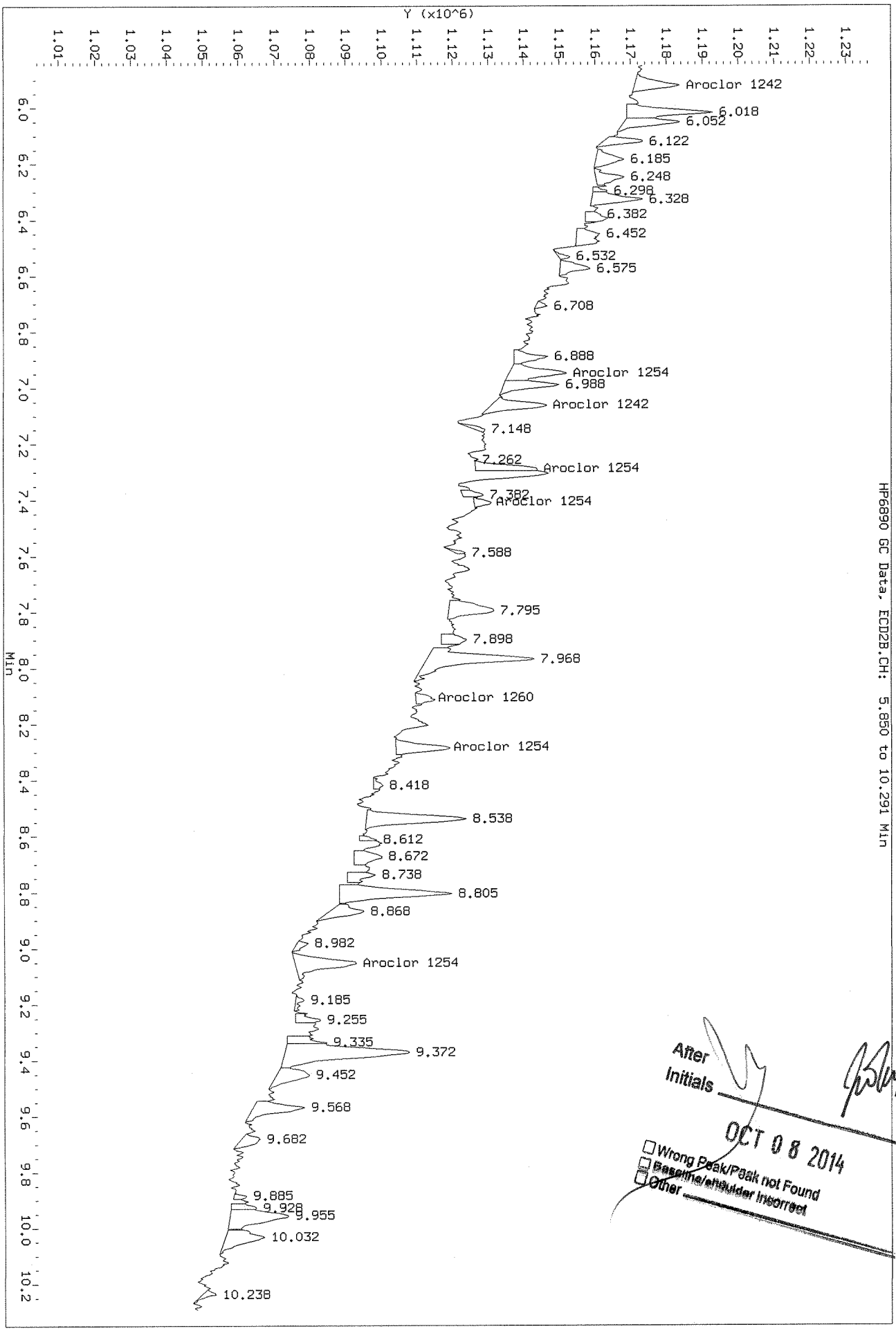
Operator: JMSmith

Column phase: DB-XLB

Column diameter: 0.32




Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D
Injection Date: 07-OCT-2014 10:08
Instrument: GC27.i
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 5.852 to 10.274 Min
Y (x10^6)
Min
Aroclor 1242
6.018
6.052
6.122
6.185
6.248
6.298
6.328
6.382
6.452
6.532
6.575
6.708
6.888
Aroclor 1254
6.988
7.065
7.148
Aroclor 1254
7.382
Aroclor 1254
7.588
7.795
7.898
7.968
Aroclor 1260
Aroclor 1254
8.418
8.538
8.612
8.672
8.738
8.805
8.868
8.982
Aroclor 1254
9.185
9.255
9.335
9.372
9.452
9.568
9.682
9.885
9.928
9.955
10.032
10.238


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F122.D
Injection Date: 07-OCT-2014 10:08
Instrument: GC27.i
Client Sample ID:
HP6890 GC Data, ECD2B.CH: 5.850 to 10.291 Min
Y (x10^6)
Min
Aroclor 1242
6.018
6.052
6.122
6.185
6.248
6.298
6.328
6.382
6.452
6.532
6.575
6.708
6.888
Aroclor 1254
6.988
Aroclor 1242
7.148
7.262
Aroclor 1254
7.382
Aroclor 1254
7.588
7.795
7.898
7.968
Aroclor 1260
Aroclor 1254
8.418
8.538
8.612
8.672
8.738
8.805
8.868
8.982
Aroclor 1254
9.185
9.255
9.335
9.372
9.452
9.568
9.682
9.885
9.928
9.955
10.032
10.238
After
Initials
OCT 08 2014
Wrong Peak/Peak not Found
Baseline/shoulder Incorrect
Other

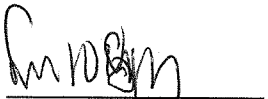
Exception Report

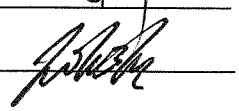
Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F113.D
Lab ID: KWG1413412-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/07/2014 06:29
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 

Secondary Review: 

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F113.D	**Date Acquired:**	10/07/2014 06:29
Lab ID:	KWG1413412-4	**Date Quantitated:**	10/08/2014 15:44
RunType:	MB	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F113.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F113.D			**Vial:**	7
Acqu Date:	10/07/2014 06:29	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380540	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97 +0.00	4.47 0.00	17679076	8838795	45.10	45.09			
			%Recovery =				Limits =	30-125	
Decachlorobiphenyl	12.56 0.00	13.99 0.00	8938028	5567229	47.93	48.11			48 OK
			%Recovery =		48 OK	48 OK	Limits =	43-148	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.00850U	0.00850U	0.00850U
Aroclor 1016 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {4}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1016 {5}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F113.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F113.D			**Vial:**	7
Acqu Date:	10/07/2014 06:29	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {2}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {3}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {4}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}			0d	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1254 {1}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {2}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {3}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {4}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {5}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclors, Total			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000	0.00850U	0.00850U	0.00850U
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1262 {1}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {2}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {3}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {4}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {5}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1268 {1}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {2}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {3}			0	0	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {4}			0	0	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.410 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	%		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F113.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F113.D			**Vial:**	7
Acqu Date:	10/07/2014 06:29	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F113.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F113.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F113.D
Inj Date : 07-OCT-2014 06:29
Sample Info: KQ1411615-07MB
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

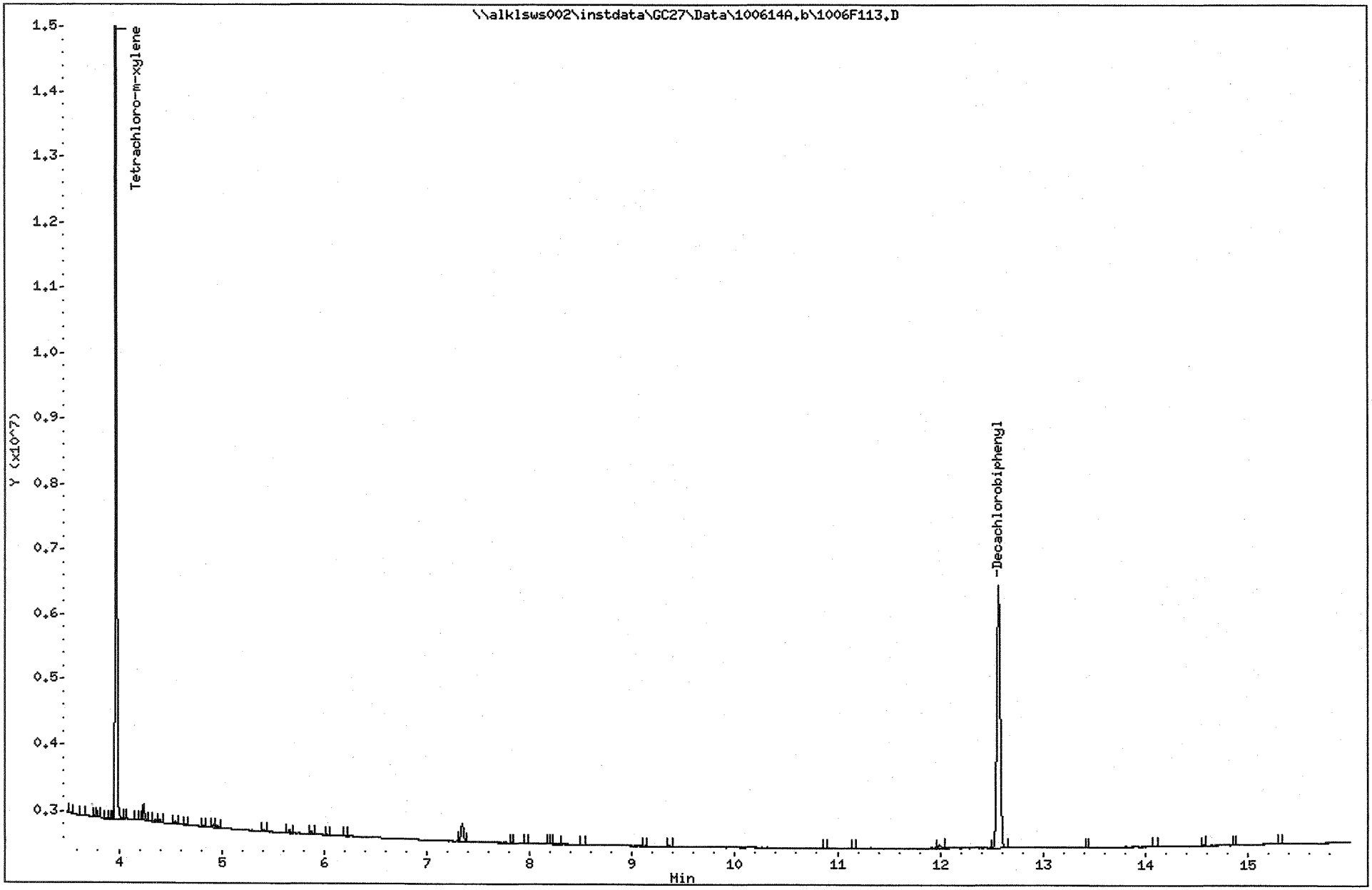
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.974	4.470	17679076	8838795	45.1	45.1		100.00
Decachlorobiphenyl	12.564	13.987	8938028	5567229	47.9	48.1		100.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F113.D
Date : 07-OCT-2014 06:29
Client ID:
Sample Info: KQ1411615-07MB

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

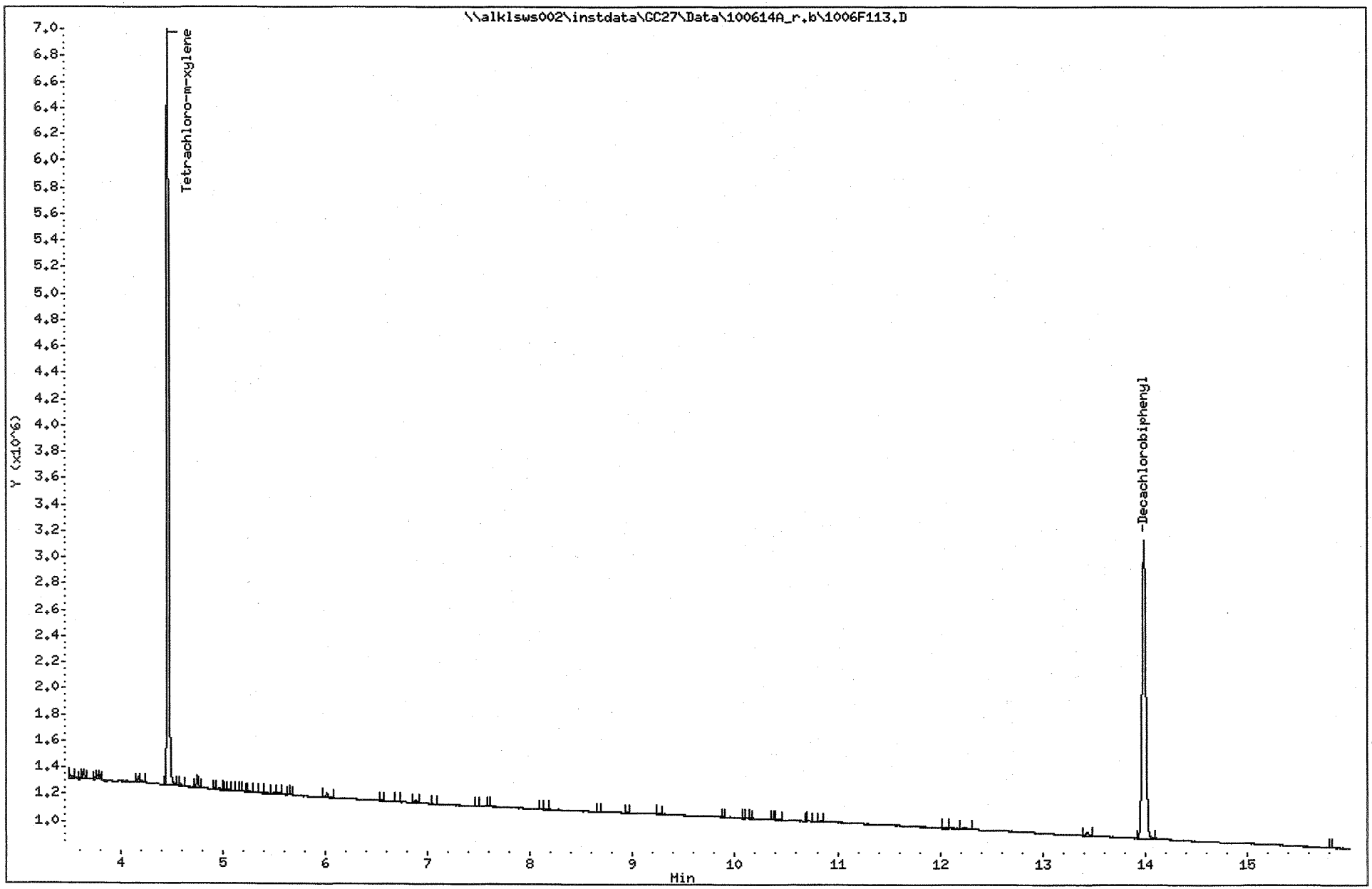


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F113.D
Date : 07-OCT-2014 06:29
Client ID:
Sample Info: KQ1411615-07MB

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F115.D	**Date Acquired:**	10/07/2014 07:18
Lab ID:	KWG1413412-1 -- K1409921-004MS	**Date Quantitated:**	10/08/2014 15:45
RunType:	MS	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F115.I	**Date Acquired:**	10/07/2014 07:18
Lab ID:	KWG1413412-1 -- K1409921-004MS	**Date Quantitated:**	10/08/2014 15:44
RunType:	MS	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F115.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F115.D			**Vial:**	9
Acqu Date:	10/07/2014 07:18	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-1 -- K1409921-004MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380537	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97	4.47 +0.00	19995832	10181269	51.01	51.94			
			%Recovery =				**Limits =**	30-125	
Decachlorobiphenyl	12.56 0.00	13.99	10215190	6486927	54.78	56.06			56 OK
			%Recovery =		55 OK	56 OK	**Limits =**	43-148	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	588.20	584.38	0.372	0.369	**0.369**
Aroclor 1016 {1}	4.35	4.76 +0.00	4218375	2270919	611.64	597.88	0.387	0.378	
Aroclor 1016 {2}	4.87	5.12	3129046	2725613	606.86	574.59	0.384	0.363	
Aroclor 1016 {3}	5.08	5.78	8694095	3034551	524.31	565.16	0.331	0.357	
Aroclor 1016 {4}	5.36	6.13 +0.00	4279318	2155719	587.96	580.02	0.372	0.367	
Aroclor 1016 {5}	5.67	6.33 +0.00	4490631	2161761	610.25	604.24	0.386	0.382	
Aroclor 1221			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F115.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F115.D			**Vial:**	9
Acqu Date:	10/07/2014 07:18	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-1 -- K1409921-004MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclors, Total			13347868	6966596	1,208	1,205			
Aroclor 1260			0	0	619.41	620.72	0.392	0.392	**0.392**
Aroclor 1260 {1}	7.29	8.11 +0.00	6571566	2089093	568.67	621.78	0.359	0.393	
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	6087495	3761437	655.13	644.55	0.414	0.407	
Aroclor 1260 {3}	8.90	10.03 +0.00	5956780	3342929	649.98	619.63	0.411	0.392	
Aroclor 1260 {4}	9.37 0.00	10.72	13251232	8235688	613.91	613.03	0.388	0.388	
Aroclor 1260 {5}	10.17	11.36 +0.00	10060804	5055270	609.35	604.62	0.385	0.382	
Aroclor 1262			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.153 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	78.5 %		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F115.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F115.D			**Vial:**	9
Acqu Date:	10/07/2014 07:18	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-1 -- K1409921-004MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F115.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F115.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F115.D
Inj Date : 07-OCT-2014 07:18
Sample Info: K1409921-004MS
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

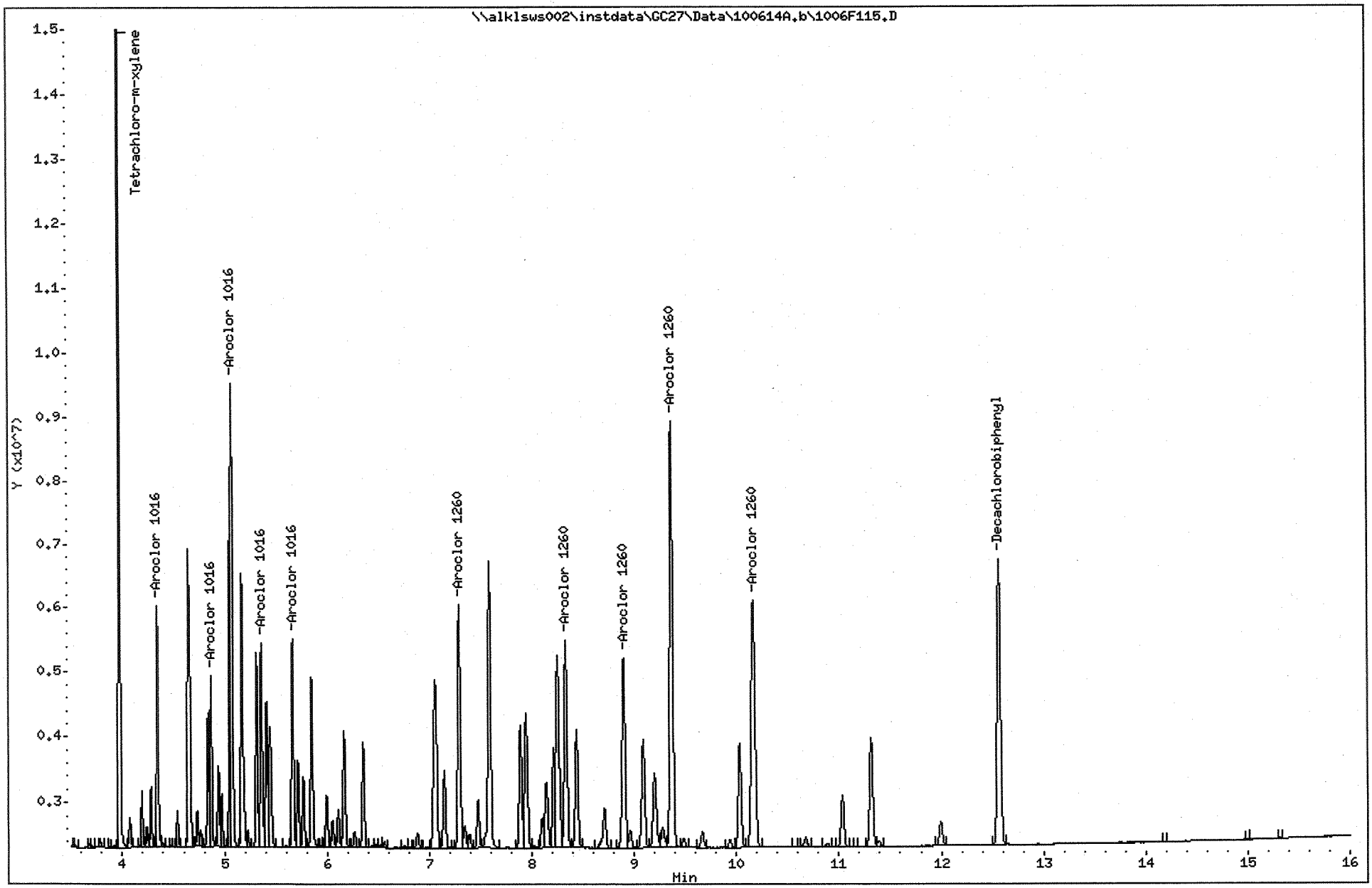
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.472	19995832	10181269	51.0	51.9		100.00
Aroclor 1016	4.345	4.762	4218375	2270919	612	598	80.00- 120.00	100.00
	4.872	5.115	3129046	2725613	607	575	60.53- 90.80	74.18
	5.075	5.778	8694095	3034551	524	565	185.80- 278.70	206.10
	5.359	6.128	4279318	2155719	588	580	83.80- 125.69	101.44
	5.665	6.332	4490631	2161761	610	604	83.92- 125.88	106.45
			Average of Peak Amounts =		588	584		
Aroclor 1260	7.292	8.105	6571566	2089093	569	622	80.00- 120.00	100.00
	8.332	9.572	6087495	3761437	655	645	63.80- 95.69	92.63
	8.899	10.032	5956780	3342929	650	620	64.05- 96.07	90.64
	9.365	10.718	13251232	8235688	614	613	145.21- 217.81	201.64
	10.165	11.362	10060804	5055270	609	605	112.20- 168.30	153.10
			Average of Peak Amounts =		619	621		
Decachlorobiphenyl	12.562	13.988	10215190	6486927	54.8	56.1		100.00
Aroclors, Total	0.000	0.000	13347868	6966596	1210	1210		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F115.D
Date : 07-OCT-2014 07:18
Client ID:
Sample Info: K1409921-004MS

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

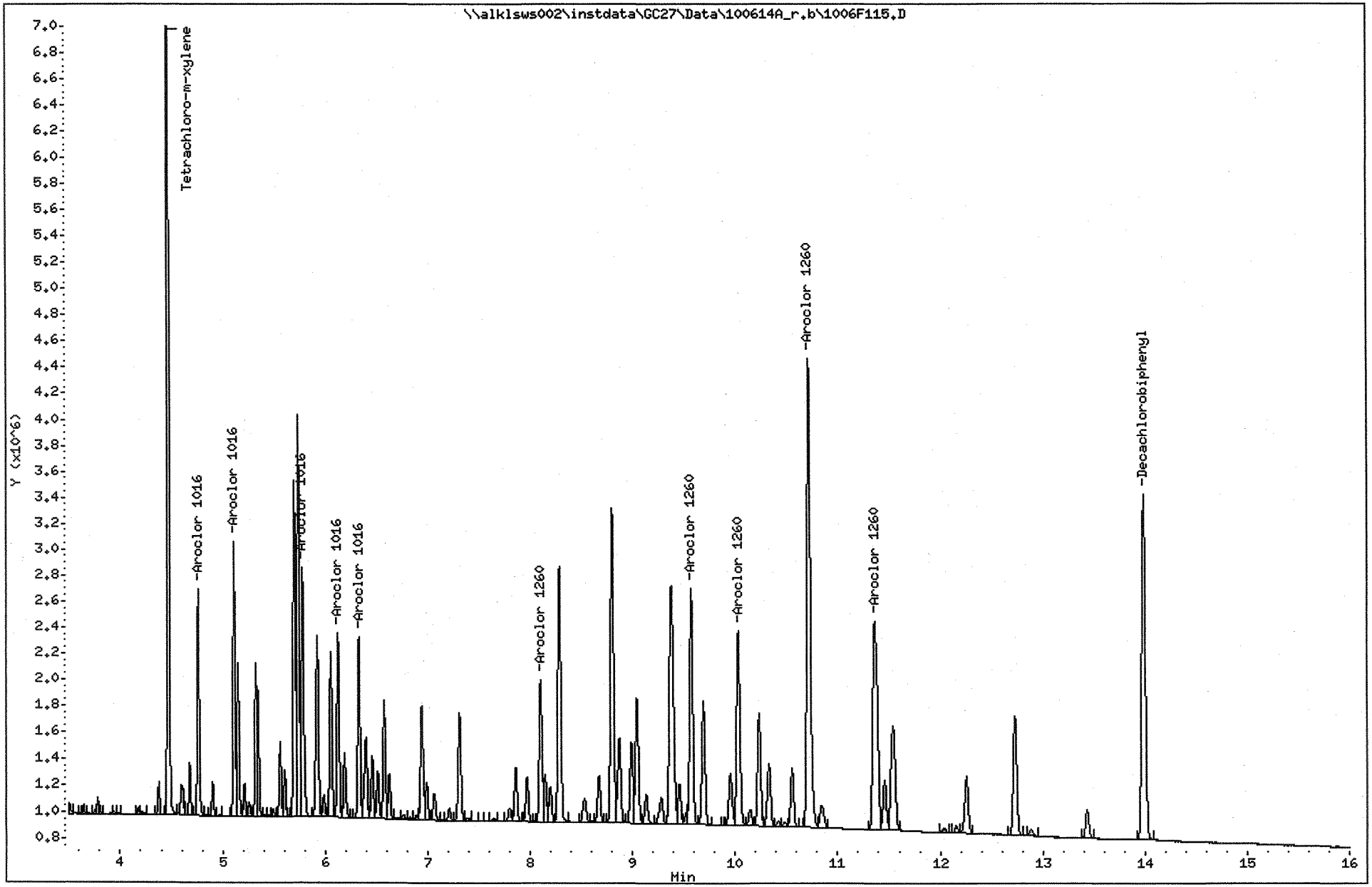
Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F115.D
Date : 07-OCT-2014 07:18
Client ID:
Sample Info: K1409921-004MS

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F116.D
Lab ID: KWG1413412-2 -- K1409921-004DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/07/2014 07:42
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F116.I	**Date Acquired:**	10/07/2014 07:42
Lab ID:	KWG1413412-2 -- K1409921-004DMS	**Date Quantitated:**	10/08/2014 15:44
RunType:	DMS	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F116.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F116.D			**Vial:**	10
Acqu Date:	10/07/2014 07:42	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-2 -- K1409921-004DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380538	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt	
Tetrachloro-m-xylene	3.97	+0.00	4.47	+0.00	23951595	12225583	61.10	62.37				
					%Recovery =				Limits =	30-125		
Decachlorobiphenyl	12.57	+0.00	13.99	+0.00	12832624	8229979	68.82	71.12			71	OK
					%Recovery =		69 OK	71 OK	Limits =	43-148		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016					0	0	695.08	697.42	0.440	0.442	**0.440**
Aroclor 1016 {1}	4.35	+0.00	4.76	+0.00	4959678	2681058	719.13	705.86	0.455	0.447	
Aroclor 1016 {2}	4.87	+0.00	5.12		3741522	3248834	725.64	684.90	0.460	0.434	
Aroclor 1016 {3}	5.08	+0.00	5.78	+0.00	10114256	3688352	609.95	686.92	0.386	0.435	
Aroclor 1016 {4}	5.36		6.13		5052891	2571091	694.24	691.78	0.440	0.438	
Aroclor 1016 {5}	5.66	0.00	6.33	+0.00	5345658	2567537	726.44	717.65	0.460	0.454	
Aroclor 1221					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {1}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {2}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {1}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {2}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F116.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F116.D			**Vial:**	10
Acqu Date:	10/07/2014 07:42	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-2 -- K1409921-004DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclors, Total			15976854	8428885	1,443	1,452			
Aroclor 1260			0	0	748.08	755.04	0.474	0.478	**0.474**
Aroclor 1260 {1}	7.29 +0.00	8.10 +0.00	7883176	2523350	682.17	751.03	0.432	0.476	
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	7341295	4586422	790.06	785.92	0.500	0.498	
Aroclor 1260 {3}	8.90	10.03 +0.00	7217050	4059337	787.50	752.43	0.499	0.476	
Aroclor 1260 {4}	9.37 0.00	10.72 0.00	16086010	10050235	745.24	748.10	0.472	0.474	
Aroclor 1260 {5}	10.17 +0.00	11.36 +0.00	12142734	6168213	735.44	737.73	0.466	0.467	
Aroclor 1262			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.116 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	78.5 %		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F116.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F116.D			**Vial:**	10
Acqu Date:	10/07/2014 07:42	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-2 -- K1409921-004DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F116.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F116.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F116.D
Inj Date : 07-OCT-2014 07:42
Sample Info: K1409921-004DMS
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.973	4.472	23951595	12225583	61.1	62.4		100.00
Aroclor 1016	4.346	4.762	4959678	2681058	719	706	80.00- 120.00	100.00
	4.873	5.115	3741522	3248834	726	685	60.53- 90.80	75.44
	5.076	5.779	10114256	3688352	610	687	185.80- 278.70	203.93
	5.359	6.125	5052891	2571091	694	692	83.80- 125.69	101.88
	5.663	6.332	5345658	2567537	726	718	83.92- 125.88	107.78
			Average of Peak Amounts =		695	698		
Aroclor 1260	7.293	8.102	7883176	2523350	682	751	80.00- 120.00	100.00(H)
	8.333	9.572	7341295	4586422	790	786	63.80- 95.69	93.13(H)
	8.899	10.032	7217050	4059337	788	752	64.05- 96.07	91.55(H)
	9.366	10.715	16086010	10050235	745	748	145.21- 217.81	204.05(H)
	10.166	11.362	12142734	6168213	735	738	112.20- 168.30	154.03(H)
			Average of Peak Amounts =		748	755		
Decachlorobiphenyl	12.566	13.989	12832624	8229979	68.8	71.1		100.00
Aroclors, Total	0.000	0.000	15976854	8428885	1440	1450		0.00

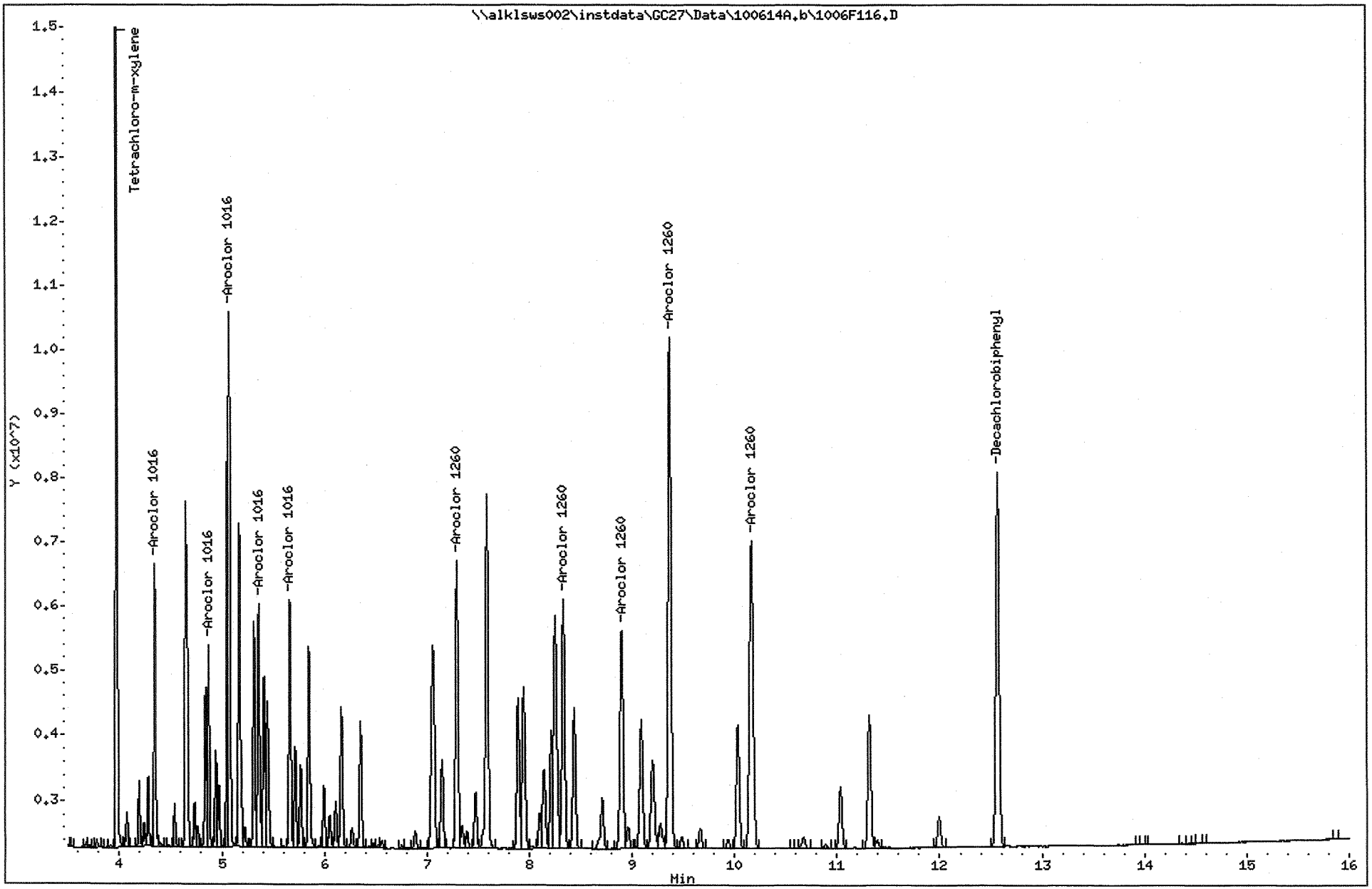
QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F116.D
Date : 07-OCT-2014 07:42
Client ID:
Sample Info: K1409921-004DMS

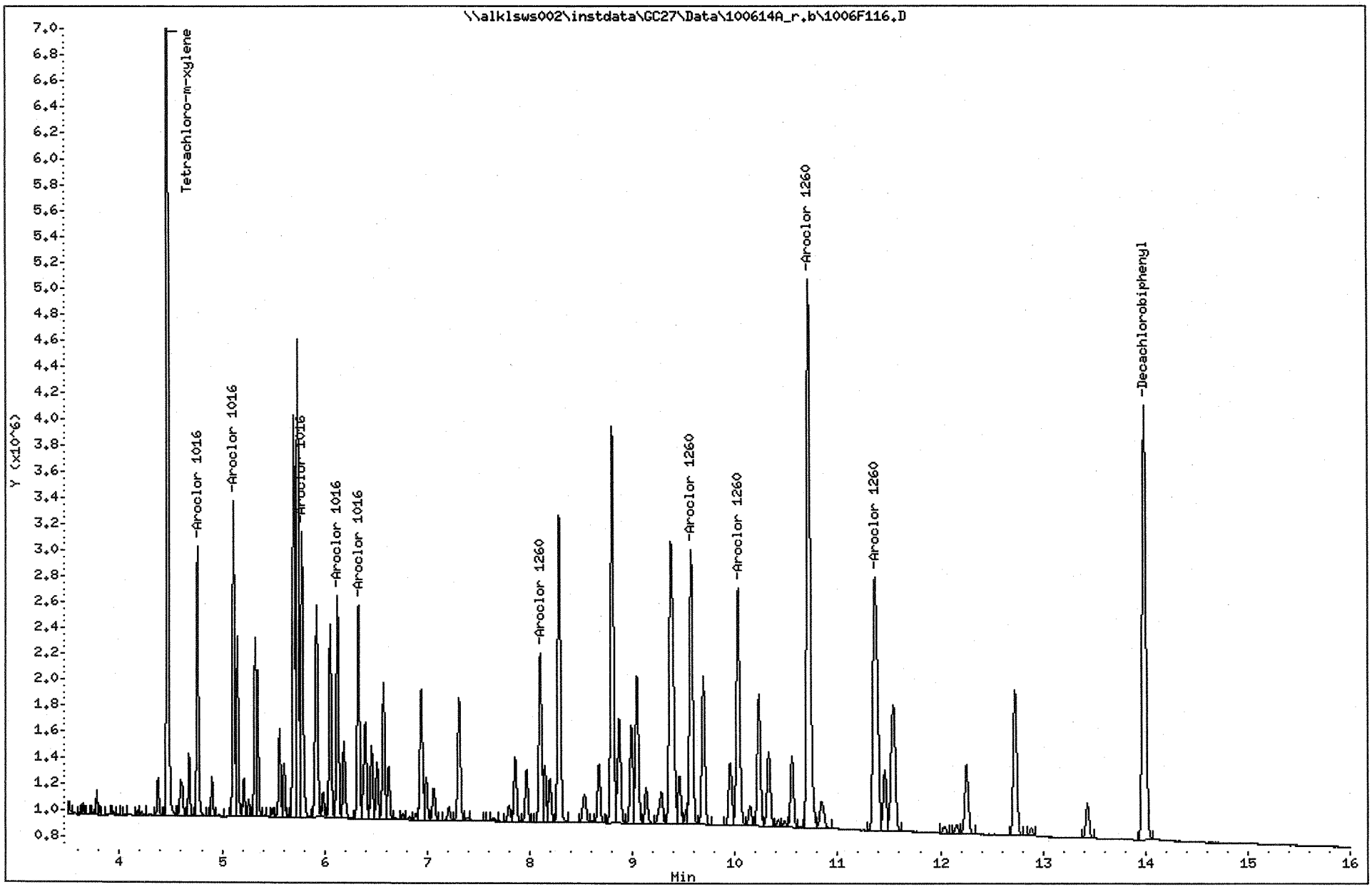
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F116.D
Date : 07-OCT-2014 07:42
Client ID:
Sample Info: K1409921-004DMS

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F005.I	**Date Acquired:**	10/04/2014 04:53
Lab ID:	KWG1413166-1	**Date Quantitated:**	10/06/2014 13:59
RunType:	LCS	**Batch ID:**	KWG1413521
Matrix:	WATER	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Tetrachloro-m-xylene	-31.1	NA	20	
Continuing Calibration Recovery (Closing)	Tetrachloro-m-xylene	-24.4	NA	20	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: KWG1413166-1
RunType: LCS
Matrix: WATER

Date Acquired: 10/04/2014 04:53
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Printed: 10/06/2014 14:06:51
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F005.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F005.D			**Vial:**	1
Acqu Date:	10/04/2014 04:53	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378567	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1		ng/mL #2				Rpt
Tetrachloro-m-xylene	3.91	0.00	4.64	0.00	2040371	4423936	3.07[CCV]		3.65				73 OK
					%Recovery =		61	OK	73	OK	Limits =	37-121	
Decachlorobiphenyl	12.45	0.00	14.43	+0.00	2430901	3856358	4.55		4.87				97 OK
					%Recovery =		91	OK	97	OK	Limits =	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016					0	0	84.37	92.43	0.169	0.185	**0.169**
Aroclor 1016 {1}	4.29	0.00	4.95	+0.00	1068000	1921810	86.14	90.09	0.172	0.180	
Aroclor 1016 {2}	4.81	0.00	5.32	0.00	887315	2641991	78.70	81.91	0.157	0.164	
Aroclor 1016 {3}	5.01	0.00	6.02	0.00	2482425	2999754	80.87	95.83	0.162	0.192	
Aroclor 1016 {4}	5.11	-0.01	6.39	0.00	1761793	2386427	85.80	93.04	0.172	0.186	
Aroclor 1016 {5}	5.59	0.00	6.60	0.00	1572792	2463450	90.36	101.28	0.181	0.203	
Aroclor 1221					0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {1}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {2}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232					0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242					0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F005.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F005.D			**Vial:**	1
Acqu Date:	10/04/2014 04:53	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	105.98	115.55	0.212	0.231	**0.212**
Aroclor 1260 {1}	7.79 0.00	8.44 -0.01	1348033	2709594	102.49	114.36	0.205	0.229	
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	2498910	4056697	114.80	127.47	0.230	0.255	
Aroclor 1260 {3}	8.79 0.00	10.42 0.00	2478125	3787918	110.99	116.79	0.222	0.234	
Aroclor 1260 {4}	9.26 0.00	11.11 0.00	4954081	7875748	102.28	111.04	0.205	0.222	
Aroclor 1260 {5}	10.05 0.00	11.77 0.00	3796338	5047414	99.37	108.11	0.199	0.216	
Aroclor 1262			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F005.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F005.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F005.D
Inj Date : 04-OCT-2014 04:53
Sample Info: KQ1411532-05LCS
Misc Info :
Cal Date : 06-OCT-2014 00:16
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.641	2040371	4423936	3.07	3.65		100.00(R)
Aroclor 1016	4.287	4.954	1068000	1921810	86.1	90.1	80.00- 120.00	100.00
	4.810	5.324	887315	2641991	78.7	81.9	72.36- 108.53	83.08
	5.014	6.024	2482425	2999754	80.9	95.8	208.80- 313.19	232.44
	5.107	6.391	1761793	2386427	85.8	93.0	143.05- 214.58	164.96
	5.594	6.604	1572792	2463450	90.4	101	125.59- 188.39	147.27
			Average of Peak Amounts =		84.4	92.4		
Aroclor 1260	7.790	8.441	1348033	2709594	102	114	80.00- 120.00	100.00
	8.230	9.948	2498910	4056697	115	127	134.02- 201.03	185.37
	8.790	10.418	2478125	3787918	111	117	140.40- 210.60	183.83
	9.257	11.111	4954081	7875748	102	111	299.92- 449.88	367.50
	10.054	11.768	3796338	5047414	99.4	108	236.01- 354.01	281.62
			Average of Peak Amounts =		106	115		
Decachlorobiphenyl	12.450	14.434	2430901	3856358	4.55	4.87		100.00(R)
Aroclors, Total	1.000	1.000	4569562	7178160	190	208		0.00

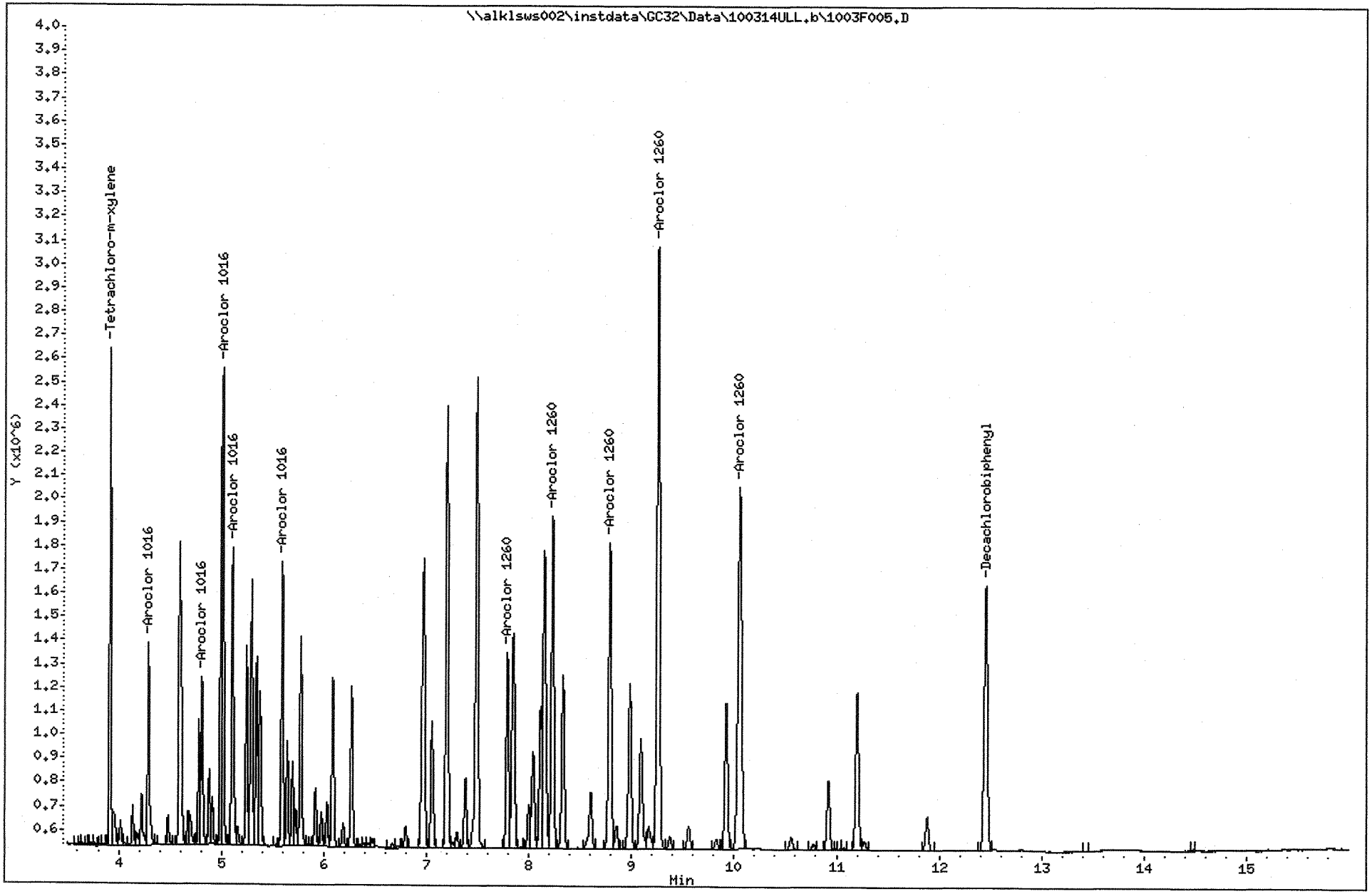
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F005.D
Date : 04-OCT-2014 04:53
Client ID:
Sample Info: KQ1411532-05LCS

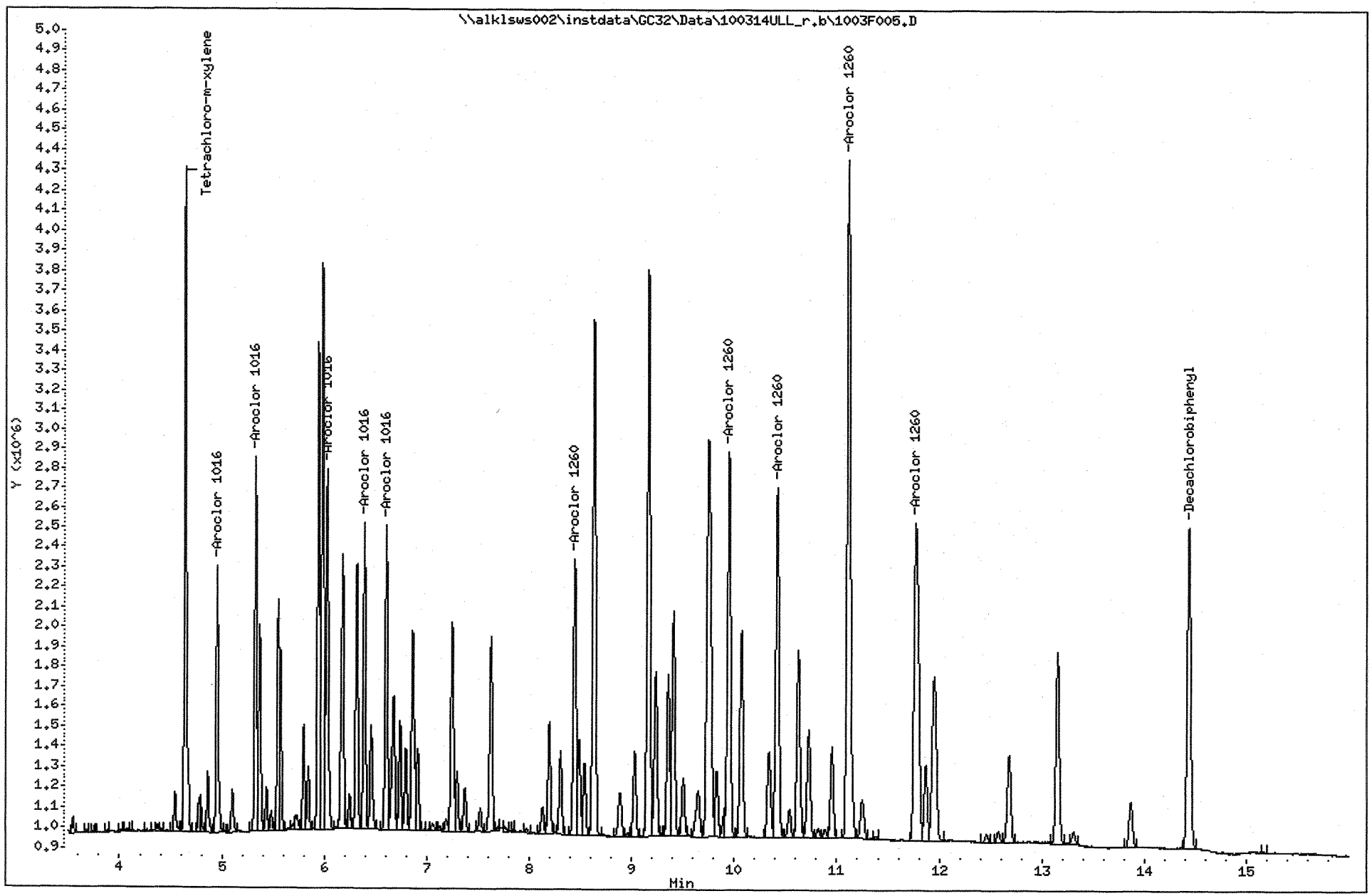
Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F005.D
Date : 04-OCT-2014 04:53
Client ID:
Sample Info: KQ1411532-05LCS

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F006.I	**Date Acquired:**	10/04/2014 05:14
Lab ID:	KWG1413166-2	**Date Quantitated:**	10/06/2014 13:59
RunType:	DLCS	**Batch ID:**	KWG1413521
Matrix:	WATER	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Tetrachloro-m-xylene	-31.1	NA	20	
Continuing Calibration Recovery (Closing)	Tetrachloro-m-xylene	-24.4	NA	20	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: KWG1413166-2
RunType: DLCS
Matrix: WATER

Date Acquired: 10/04/2014 05:14
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F006.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F006.D			**Vial:**	2
Acqu Date:	10/04/2014 05:14	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	KWG1413166	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3535A		
Prep Ref:	1378568	**Prep Date:**	09/19/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:	J:\GC32\DATA\100314ULL.B\1003F007.D	**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1		ng/mL #2				Rpt	
Tetrachloro-m-xylene	3.91	0.00	4.64	0.00	1964185	4287883	2.96[CCV]		3.54				71	OK
					%Recovery =		59	OK	71	OK	Limits =	37-121		
Decachlorobiphenyl	12.45	-0.01	14.43		2581203	4118294	4.83		5.20				104	OK
					%Recovery =		97	OK	104	OK	Limits =	39-140		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016					0	0	78.52	83.49	0.157	0.167	**0.157**
Aroclor 1016 {1}	4.29	0.00	4.95	0.00	944789	1708926	76.20	80.11	0.152	0.160	
Aroclor 1016 {2}	4.81	0.00	5.32	0.00	843976	2379182	74.86	73.77	0.150	0.148	
Aroclor 1016 {3}	5.01	-0.01	6.02	0.00	2467336	2702577	80.38	86.34	0.161	0.173	
Aroclor 1016 {4}	5.11	-0.01	6.39	-0.01	1595095	2182526	77.68	85.09	0.155	0.170	
Aroclor 1016 {5}	5.59	-0.01	6.60	0.00	1453342	2240798	83.50	92.13	0.167	0.184	
Aroclor 1221					0	0	0.0000	0.0000	0.0024U	0.0024U	0.0024U
Aroclor 1221 {1}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {2}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1221 {3}					0d	0d	0.0000	0.0000	0.0024U	0.0024U	
Aroclor 1232					0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {5}					0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242					0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F006.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F006.D			**Vial:**	2
Acqu Date:	10/04/2014 05:14	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413166-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	103.91	112.31	0.208	0.225	0.208
Aroclor 1260 {1}	7.79 0.00	8.44 -0.01	1320891	2558532	100.43	107.98	0.201	0.216	
Aroclor 1260 {2}	8.23 0.00	9.95 0.00	2480509	4006478	113.95	125.89	0.228	0.252	
Aroclor 1260 {3}	8.79 0.00	10.42 0.00	2447017	3733940	109.59	115.13	0.219	0.230	
Aroclor 1260 {4}	9.25 -0.01	11.11 0.00	4783000	7614595	98.75	107.36	0.197	0.215	
Aroclor 1260 {5}	10.05 0.00	11.77	3699584	4912304	96.84	105.22	0.194	0.210	
Aroclor 1262			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F006.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F006.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F006.D
Inj Date : 04-OCT-2014 05:14
Sample Info: KQ1411532-06DLCS
Misc Info :
Cal Date : 06-OCT-2014 00:16
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.912	4.640	1964185	4287883	2.96	3.54		100.00(R)
Aroclor 1016	4.286	4.950	944789	1708926	76.2	80.1	80.00- 120.00	100.00
	4.809	5.323	843976	2379182	74.9	73.8	72.36- 108.53	89.33
	5.009	6.023	2467336	2702577	80.4	86.3	208.80- 313.19	261.15
	5.106	6.386	1595095	2182526	77.7	85.1	143.05- 214.58	168.83
	5.589	6.603	1453342	2240798	83.5	92.1	125.59- 188.39	153.83
			Average of Peak Amounts =		78.5	83.5		
Aroclor 1260	7.789	8.440	1320891	2558532	100	108	80.00- 120.00	100.00
	8.229	9.946	2480509	4006478	114	126	134.02- 201.03	187.79
	8.789	10.416	2447017	3733940	110	115	140.40- 210.60	185.26
	9.252	11.110	4783000	7614595	98.7	107	299.92- 449.88	362.10
	10.052	11.770	3699584	4912304	96.8	105	236.01- 354.01	280.08
			Average of Peak Amounts =		104	112		
Decachlorobiphenyl	12.446	14.433	2581203	4118294	4.83	5.20		100.00(R)
Aroclors, Total	1.000	1.000	4407107	6807971	182	196		0.00

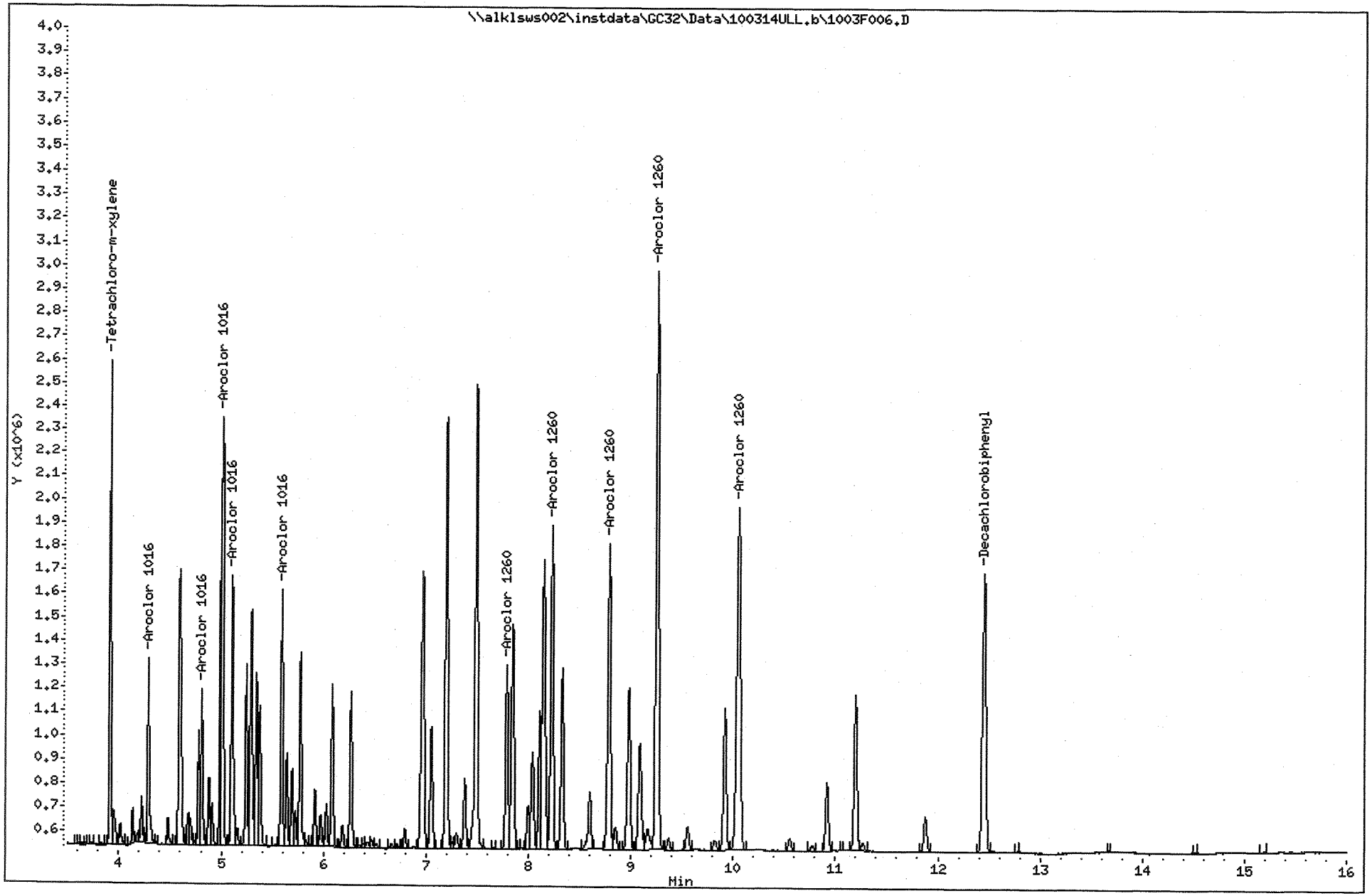
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F006.D
Date : 04-OCT-2014 05:14
Client ID:
Sample Info: KQ1411532-06DLCS

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

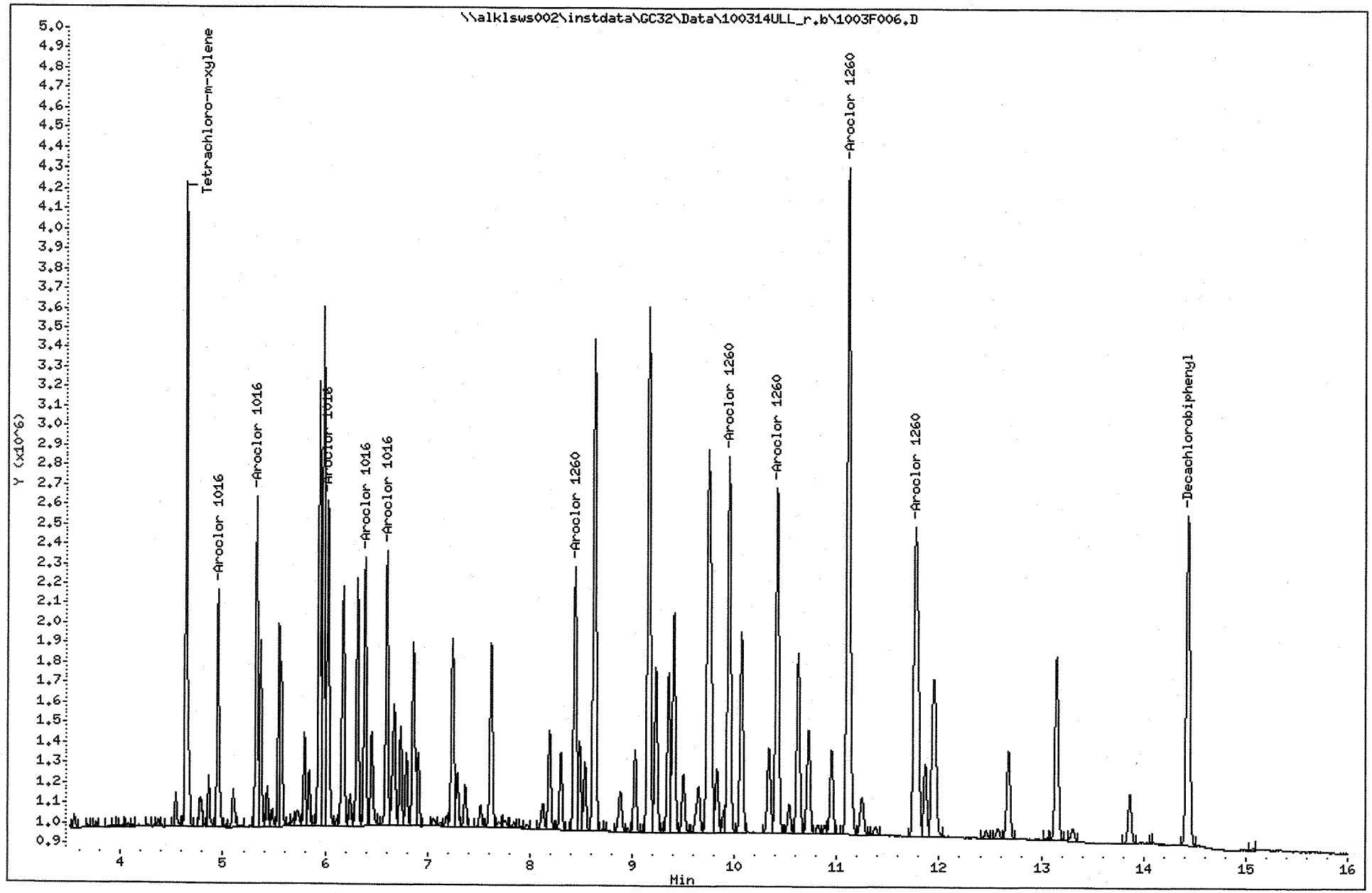


Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F006.D
Date : 04-OCT-2014 05:14
Client ID:
Sample Info: KQ1411532-06DLCS

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



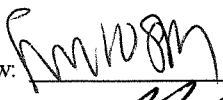
Exception Report

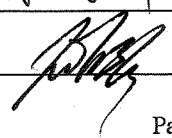
Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F112.D
Lab ID: KWG1413412-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/07/2014 06:05
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 

Secondary Review: 

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F112.I	**Date Acquired:**	10/07/2014 06:05
Lab ID:	KWG1413412-3	**Date Quantitated:**	10/08/2014 15:44
RunType:	LCS	**Batch ID:**	KWG1413671
Matrix:	SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F112.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F112.D			**Vial:**	6
Acqu Date:	10/07/2014 06:05	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413671	**Prep Lot:**	KWG1413412	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1380539	**Prep Date:**	09/25/2014		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:	J:\GC27\DATA\100614A.B\1006F113.D	**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97	+0.00	4.47	0.00	29066454	14311954	74.14	73.02			
					%Recovery =				**Limits =**	30-125	
Decachlorobiphenyl	12.56	0.00	13.99	+0.00	12904396	7750002	69.20	66.97			69 OK
					%Recovery =		69 OK	67 OK	**Limits =**	43-148	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016					0	0	745.62	700.79	0.746	0.701	**0.701**
Aroclor 1016 {1}	4.34	0.00	4.76	+0.00	5466068	2846363	792.55	749.38	0.793	0.749	
Aroclor 1016 {2}	4.87	+0.00	5.11	0.00	3959557	3400492	767.93	716.87	0.768	0.717	
Aroclor 1016 {3}	5.08	+0.00	5.78	+0.00	11741487	3645324	708.09	678.91	0.708	0.679	
Aroclor 1016 {4}	5.36	+0.00	6.13	+0.00	5248521	2489960	721.12	669.95	0.721	0.670	
Aroclor 1016 {5}	5.66	0.00	6.33	+0.00	5433651	2464402	738.40	688.83	0.738	0.689	
Aroclor 1221					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1221 {1}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {2}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1221 {3}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1232 {1}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {2}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {3}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {4}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1232 {5}					0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242					0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F112.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F112.D			**Vial:**	6
Acqu Date:	10/07/2014 06:05	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclors, Total			16069655	7708194	1,462	1,355			
Aroclor 1260			0	0	716.17	654.50	0.716	0.655	**0.655**
Aroclor 1260 {1}	7.29 +0.00	8.10 +0.00	7554759	2216662	653.75	659.75	0.654	0.660	
Aroclor 1260 {2}	8.33 0.00	9.57 +0.00	7022055	3956863	755.70	678.04	0.756	0.678	
Aroclor 1260 {3}	8.90 +0.00	10.03 0.00	6919625	3518614	755.05	652.20	0.755	0.652	
Aroclor 1260 {4}	9.37 0.00	10.72 +0.00	15388801	8682817	712.94	646.31	0.713	0.646	
Aroclor 1260 {5}	10.17 +0.00	11.36 +0.00	11613753	5319475	703.40	636.22	0.703	0.636	
Aroclor 1262			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268			0	0	0.0000	0.0000	0.0085U	0.0085U	0.0085U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0085U	0.0085U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.000 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	%		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F112.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F112.D			**Vial:**	6
Acqu Date:	10/07/2014 06:05	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413412-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F112.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F112.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F112.D
Inj Date : 07-OCT-2014 06:05
Sample Info: KQ1411615-06LCS
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

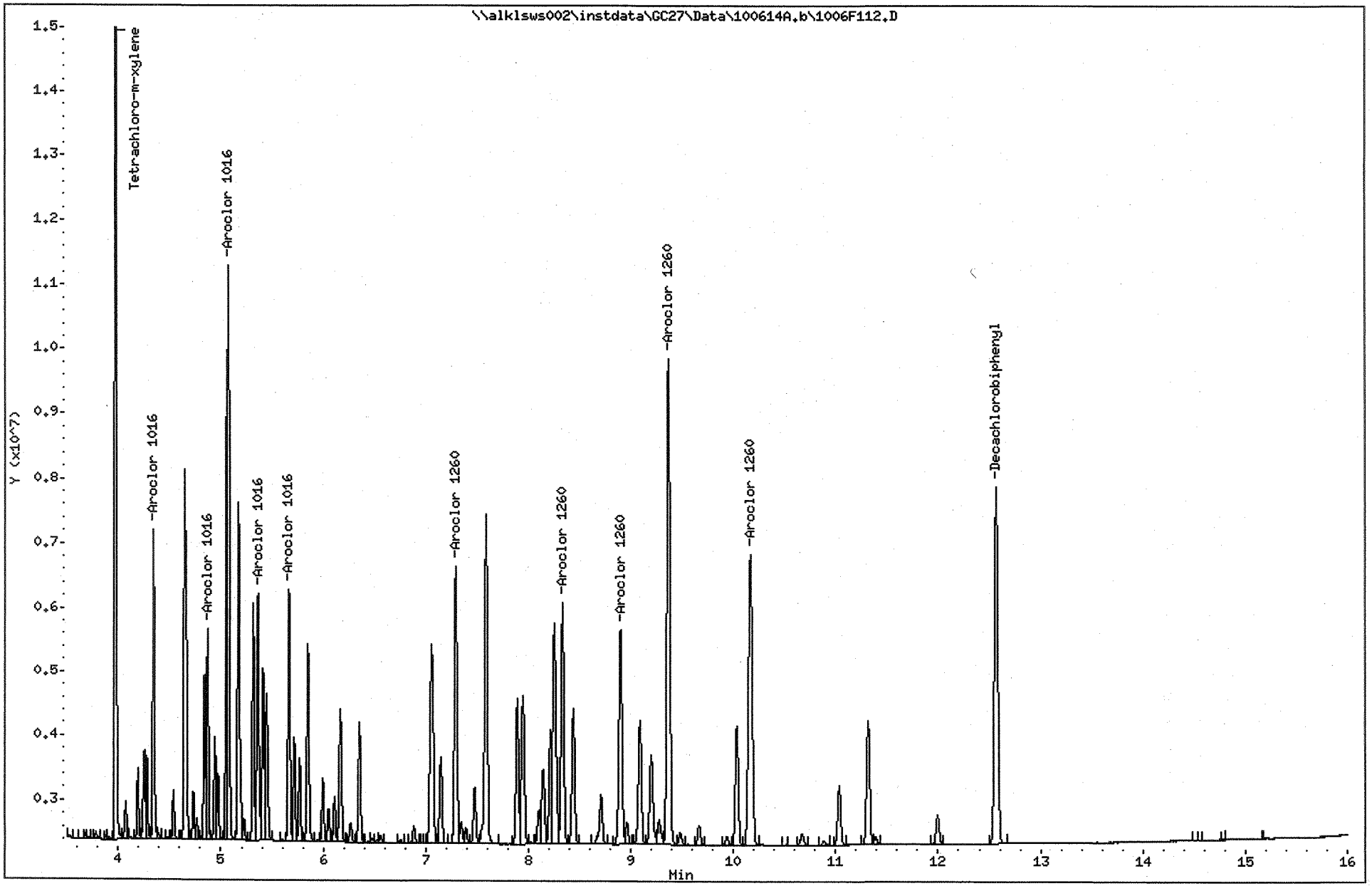
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.973	4.469	29066454	14311954	74.1	73.0		100.00
Aroclor 1016	4.343	4.763	5466068	2846363	793	749	80.00- 120.00	100.00
	4.873	5.113	3959557	3400492	768	717	60.53- 90.80	72.44
	5.076	5.779	11741487	3645324	708	679	185.80- 278.70	214.81
	5.360	6.126	5248521	2489960	721	670	83.80- 125.69	96.02
	5.663	6.329	5433651	2464402	738	689	83.92- 125.88	99.41
			Average of Peak Amounts =		746	701		
Aroclor 1260	7.293	8.103	7554759	2216662	654	660	80.00- 120.00	100.00
	8.333	9.573	7022055	3956863	756	678	63.80- 95.69	92.95
	8.900	10.029	6919625	3518614	755	652	64.05- 96.07	91.59
	9.366	10.719	15388801	8682817	713	646	145.21- 217.81	203.70
	10.166	11.363	11613753	5319475	703	636	112.20- 168.30	153.73
			Average of Peak Amounts =		716	654		
Decachlorobiphenyl	12.563	13.989	12904396	7750002	69.2	67.0		100.00
Aroclors, Total	0.000	0.000	16069655	7708194	1460	1360		0.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F112.D
Date : 07-OCT-2014 06:05
Client ID:
Sample Info: KQ1411615-06LCS

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

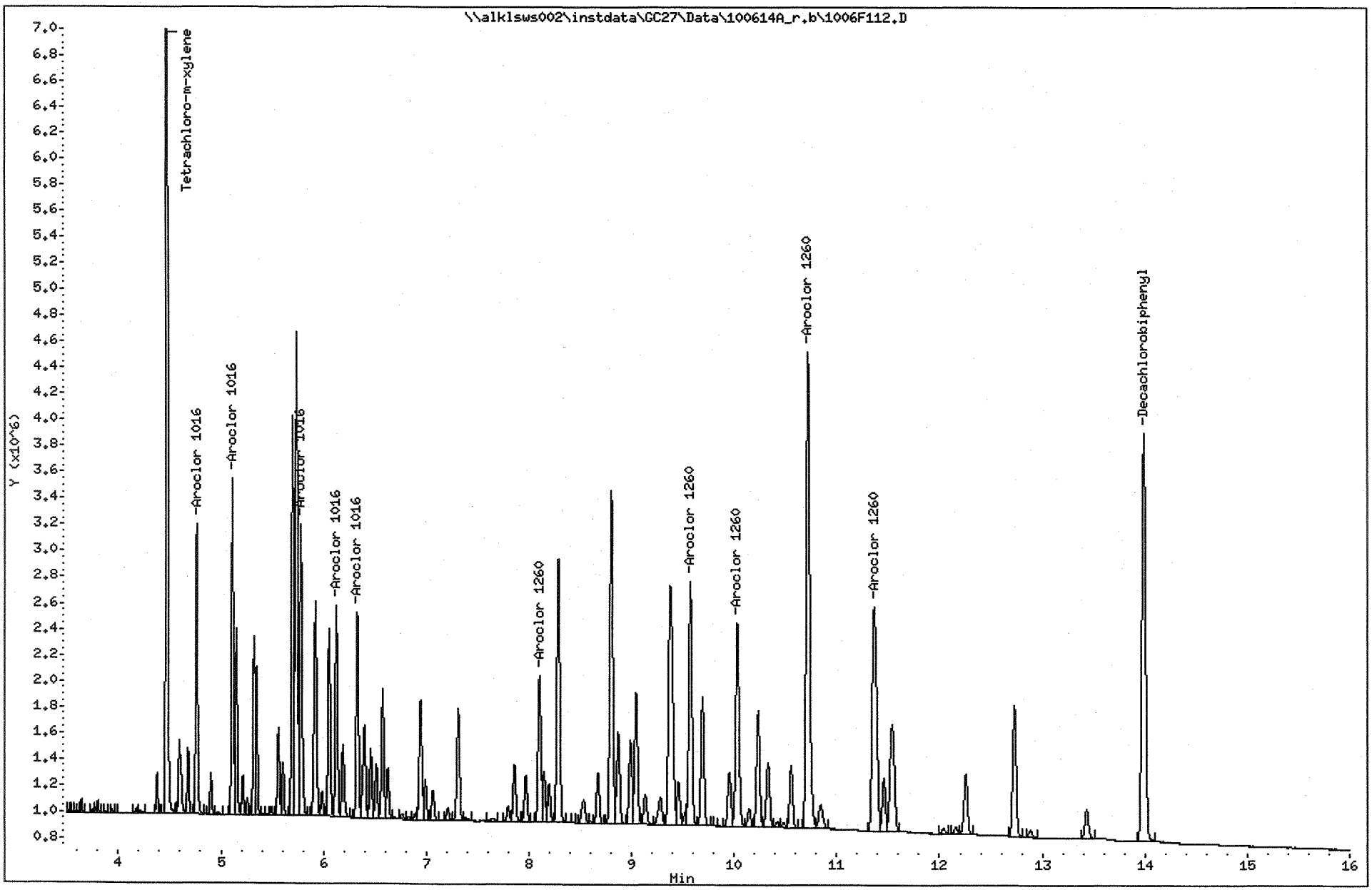


Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F112.D
Date : 07-OCT-2014 06:05
Client ID:
Sample Info: KQ1411615-06LCS

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Sequence Name: C:\GC27\SEQUENCE\100214CAL.S
Comment: PCB Aroclors by EPA 8082A
Operator: JMSmith
Data Path: C:\GC27\DATA\100214CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

CAL13590

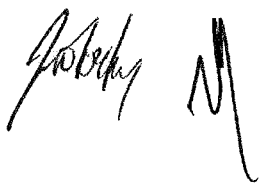
Line	Type	Vial	DataFile	Method	Sample Name
1	SOLN	90	1002F201	PCB_REG	HEXANE
2	SOLN	90	1002F202	PCB_REG	HEXANE
3	SOLN	100	1002F203	PCB_REG	2,4'/4,4'-DDx MARKER PCB6-27H
4	IB	86	1002F204	PCB_REG	IB
5	ICAL	1	1002F205	PCB_REG	1660 @ 2.5-25ppb PCB6-55C
6	ICAL	2	1002F206	PCB_REG	1660 @ 5.0-50ppb PCB6-54K
7	ICAL	3	1002F207	PCB_REG	1660 @ 50-500ppb PCB6-53H
8	ICAL	4	1002F208	PCB_REG	1660 @ 100-1000ppb PCB6-46E
9	ICAL	5	1002F209	PCB_REG	1660 @ 200-2000ppb PCB6-46D
10	ICAL	6	1002F210	PCB_REG	1660 @ 500-5000ppb PCB6-46C
11	ICAL	7	1002F211	PCB_REG	2154 @ 50-25ppb PCB6-55B
12	ICAL	8	1002F212	PCB_REG	2154 @ 100-50ppb PCB6-55A
13	ICAL	9	1002F213	PCB_REG	2154 @ 1000-500ppb PCB6-54O
14	ICAL	10	1002F214	PCB_REG	2154 @ 2000-1000ppb PCB6-54N
15	ICAL	11	1002F215	PCB_REG	2154 @ 4000-2000ppb PCB6-54M
16	ICAL	12	1002F216	PCB_REG	2154 @ 10000-5000ppb PCB6-54L
17	ICAL	13	1002F217	PCB_REG	3262 @ 25ppb PCB6-54A
18	ICAL	14	1002F218	PCB_REG	3262 @ 50ppb PCB6-53N
19	ICAL	15	1002F219	PCB_REG	3262 @ 500ppb PCB6-53M
20	ICAL	16	1002F220	PCB_REG	3262 @ 1000ppb PCB6-53L
21	ICAL	17	1002F221	PCB_REG	3262 @ 2000ppb PCB6-53K
22	ICAL	18	1002F222	PCB_REG	3262 @ 5000ppb PCB6-53J
23	ICAL	19	1002F223	PCB_REG	4268 @ 25ppb PCB6-55J
24	ICAL	20	1002F224	PCB_REG	4268 @ 50ppb PCB6-55I
25	ICAL	21	1002F225	PCB_REG	4268 @ 500ppb PCB6-55H
26	ICAL	22	1002F226	PCB_REG	4268 @ 1000ppb PCB6-55G
27	ICAL	23	1002F227	PCB_REG	4268 @ 2000ppb PCB6-55F
28	ICAL	24	1002F228	PCB_REG	4268 @ 5000ppb PCB6-55E
29	ICAL	25	1002F229	PCB_REG	48 @ 25ppb PCB6-48J
30	ICAL	26	1002F230	PCB_REG	48 @ 50ppb PCB6-48I
31	ICAL	27	1002F231	PCB_REG	48 @ 500ppb PCB6-48H
32	ICAL	28	1002F232	PCB_REG	48 @ 1000ppb PCB6-48G
33	ICAL	29	1002F233	PCB_REG	48 @ 2000ppb PCB6-48F
34	ICAL	30	1002F234	PCB_REG	48 @ 5000ppb PCB6-48E
35	ICV	31	1002F235	PCB_REG	1016 ICV @ 1000ppb PCB6-54B
36	ICV	32	1002F236	PCB_REG	1221 ICV @ 1000ppb PCB6-54C
37	ICV	33	1002F237	PCB_REG	1232 ICV @ 1000ppb PCB6-54D
38	ICV	34	1002F238	PCB_REG	1242 ICV @ 1000ppb PCB6-54E
39	ICV	35	1002F239	PCB_REG	1248 ICV @ 1000ppb PCB6-54F
40	ICV	36	1002F240	PCB_REG	1254 ICV @ 1000ppb PCB6-54G
41	ICV	37	1002F241	PCB_REG	1260 ICV @ 1000ppb PCB6-54H
42	ICV	38	1002F242	PCB_REG	1262 ICV @ 1000ppb PCB6-54I
43	ICV	39	1002F243	PCB_REG	1268 ICV @ 1000ppb PCB6-54J

Last Modified: Fri Oct 03 03:16:01 2014

Initial Calibration - Summary Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		3.4E+3	20	11.8			OK	
Aroclor 1221 {2}	MULTI	AverageRF		2.2E+3	20	11.8			OK	
Aroclor 1221 {3}	MULTI	AverageRF		8.2E+3	20	16.0			OK	
Aroclor 1232 {1}	MULTI	AverageRF		2.7E+3	20	16.1			OK	
Aroclor 1232 {2}	MULTI	AverageRF		6.1E+3	20	18.7			OK	
Aroclor 1232 {3}	MULTI	AverageRF		2.3E+3	20	14.5			OK	
Aroclor 1232 {4}	MULTI	AverageRF		4.3E+3	20	12.4			OK	
Aroclor 1232 {5}	MULTI	AverageRF		4.5E+3	20	14.2			OK	
Aroclor 1242 {1}	MULTI	AverageRF		3.8E+3	20	12.8			OK	
Aroclor 1242 {2}	MULTI	AverageRF		1.2E+4	20	13.6			OK	
Aroclor 1242 {3}	MULTI	AverageRF		4.7E+3	20	9.7			OK	
Aroclor 1242 {4}	MULTI	AverageRF		5.6E+3	20	14.0			OK	
Aroclor 1242 {5}	MULTI	AverageRF		6.2E+3	20	13.2			OK	
Aroclor 1248 {1}	MULTI	AverageRF		7.0E+3	20	15.8			OK	
Aroclor 1248 {2}	MULTI	AverageRF		5.8E+3	20	15.0			OK	
Aroclor 1248 {3}	MULTI	AverageRF		8.1E+3	20	12.7			OK	
Aroclor 1248 {4}	MULTI	AverageRF		6.0E+3	20	13.3			OK	
Aroclor 1248 {5}	MULTI	AverageRF		5.3E+3	20	12.8			OK	
Aroclor 1254 {1}	MULTI	AverageRF		4.6E+3	20	13.5			OK	
Aroclor 1254 {2}	MULTI	AverageRF		8.2E+3	20	12.4			OK	
Aroclor 1254 {3}	MULTI	AverageRF		1.6E+4	20	16.5			OK	
Aroclor 1254 {4}	MULTI	AverageRF		1.0E+4	20	14.7			OK	
Aroclor 1254 {5}	MULTI	AverageRF		6.7E+3	20	11.0			OK	
Aroclor 1262 {1}	MULTI	AverageRF		1.4E+4	20	18.5			OK	
Aroclor 1262 {2}	MULTI	AverageRF		1.2E+4	20	17.6			OK	
Aroclor 1262 {3}	MULTI	AverageRF		2.4E+4	20	16.6			OK	
Aroclor 1262 {4}	MULTI	AverageRF		1.8E+4	20	14.2			OK	
Aroclor 1262 {5}	MULTI	AverageRF		8.7E+3	20	12.3			OK	
Aroclor 1268 {1}	MULTI	AverageRF		2.8E+4	20	19.0			OK	
Aroclor 1268 {2}	MULTI	AverageRF		2.5E+4	20	17.7			OK	
Aroclor 1268 {3}	MULTI	AverageRF		2.1E+4	20	12.9			OK	
Aroclor 1268 {4}	MULTI	AverageRF		6.1E+4	20	14.6			OK	
Decachlorobiphenyl	SURR	AverageRF		1.9E+5	20	9.5			NA	
Aroclor 1016 {1}	MULTI	AverageRF		6.9E+3	20	15.2			OK	
Aroclor 1016 {2}	MULTI	AverageRF		5.2E+3	20	14.0			OK	
Aroclor 1016 {3}	MULTI	AverageRF		1.7E+4	20	11.3			OK	
Aroclor 1016 {4}	MULTI	AverageRF		7.3E+3	20	12.1			OK	
Aroclor 1016 {5}	MULTI	AverageRF		7.4E+3	20	10.7			OK	
Aroclor 1260 {1}	MULTI	AverageRF		1.2E+4	20	9.7			OK	
Aroclor 1260 {2}	MULTI	AverageRF		9.3E+3	20	8.8			OK	
Aroclor 1260 {3}	MULTI	AverageRF		9.2E+3	20	7.0			OK	
Aroclor 1260 {4}	MULTI	AverageRF		2.2E+4	20	7.4			OK	
Aroclor 1260 {5}	MULTI	AverageRF		1.7E+4	20	8.6			OK	



Initial Calibration - Summary Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		1.9E+3	20	8.2			OK	
Aroclor 1221 {2}	MULTI	AverageRF		1.2E+3	20	8.9			OK	
Aroclor 1221 {3}	MULTI	AverageRF		4.3E+3	20	12.1			OK	
Aroclor 1232 {1}	MULTI	AverageRF		4.0E+3	20	18.1			OK	
Aroclor 1232 {2}	MULTI	AverageRF		2.0E+3	20	16.5			OK	
Aroclor 1232 {3}	MULTI	AverageRF		1.7E+3	20	13.5			OK	
Aroclor 1232 {4}	MULTI	AverageRF		2.8E+3	20	16.5			OK	
Aroclor 1232 {5}	MULTI	AverageRF		1.4E+3	20	14.7			OK	
Aroclor 1242 {1}	MULTI	AverageRF		3.5E+3	20	14.9			OK	
Aroclor 1242 {2}	MULTI	AverageRF		6.0E+3	20	12.1			OK	
Aroclor 1242 {3}	MULTI	AverageRF		3.1E+3	20	10.0			OK	
Aroclor 1242 {4}	MULTI	AverageRF		2.7E+3	20	13.3			OK	
Aroclor 1242 {5}	MULTI	AverageRF		3.0E+3	20	9.9			OK	
Aroclor 1248 {1}	MULTI	AverageRF		2.2E+3	20	16.3			OK	
Aroclor 1248 {2}	MULTI	AverageRF		4.2E+3	20	16.8			OK	
Aroclor 1248 {3}	MULTI	AverageRF		4.5E+3	20	16.3			OK	
Aroclor 1248 {4}	MULTI	AverageRF		3.6E+3	20	11.1			OK	
Aroclor 1248 {5}	MULTI	AverageRF		6.0E+3	20	16.4			OK	
Aroclor 1254 {1}	MULTI	AverageRF		5.5E+3	20	13.0			OK	
Aroclor 1254 {2}	MULTI	AverageRF		8.3E+3	20	14.0			OK	
Aroclor 1254 {3}	MULTI	AverageRF		2.8E+3	20	9.1			OK	
Aroclor 1254 {4}	MULTI	AverageRF		3.1E+3	20	14.5			OK	
Aroclor 1254 {5}	MULTI	AverageRF		4.3E+3	20	12.1			OK	
Aroclor 1262 {1}	MULTI	AverageRF		8.9E+3	20	14.5			OK	
Aroclor 1262 {2}	MULTI	AverageRF		6.2E+3	20	14.5			OK	
Aroclor 1262 {3}	MULTI	AverageRF		1.5E+4	20	11.1			OK	
Aroclor 1262 {4}	MULTI	AverageRF		1.0E+4	20	11.4			OK	
Aroclor 1262 {5}	MULTI	AverageRF		5.4E+3	20	8.9			OK	
Aroclor 1268 {1}	MULTI	AverageRF		1.8E+4	20	16.9			OK	
Aroclor 1268 {2}	MULTI	AverageRF		1.5E+4	20	13.6			OK	
Aroclor 1268 {3}	MULTI	AverageRF		1.3E+4	20	11.8			OK	
Aroclor 1268 {4}	MULTI	AverageRF		3.8E+4	20	12.3			OK	
Decachlorobiphenyl	SURR	AverageRF		1.2E+5	20	6.3			NA	
Aroclor 1016 {1}	MULTI	AverageRF		3.8E+3	20	12.8			OK	
Aroclor 1016 {2}	MULTI	AverageRF		4.7E+3	20	12.7			OK	
Aroclor 1016 {3}	MULTI	AverageRF		5.4E+3	20	10.9			OK	
Aroclor 1016 {4}	MULTI	AverageRF		3.7E+3	20	9.8			OK	
Aroclor 1016 {5}	MULTI	AverageRF		3.6E+3	20	9.5			OK	
Aroclor 1260 {1}	MULTI	AverageRF		3.4E+3	20	9.8			OK	
Aroclor 1260 {2}	MULTI	AverageRF		5.8E+3	20	7.1			OK	
Aroclor 1260 {3}	MULTI	AverageRF		5.4E+3	20	6.5			OK	
Aroclor 1260 {4}	MULTI	AverageRF		1.3E+4	20	7.1			OK	
Aroclor 1260 {5}	MULTI	AverageRF		8.4E+3	20	6.1			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	253993	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D	10/03/2014 04:51	10/04/2014 00:39	10/04/2014 01:34
2	253995	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D	10/03/2014 05:14	10/04/2014 00:39	10/04/2014 01:34
3	253997	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D	10/03/2014 05:38	10/04/2014 00:39	10/04/2014 01:34
4	253999	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D	10/03/2014 06:01	10/04/2014 00:39	10/04/2014 01:34
5	254001	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D	10/03/2014 06:24	10/04/2014 00:39	10/04/2014 01:34
6	254003	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D	10/03/2014 06:48	10/04/2014 00:39	10/04/2014 01:34
7	254005	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D	10/03/2014 07:11	10/04/2014 00:39	10/04/2014 01:34
8	254007	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D	10/03/2014 07:35	10/04/2014 00:39	10/04/2014 01:34
9	254009	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D	10/03/2014 07:58	10/04/2014 00:39	10/04/2014 01:34
10	254011	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D	10/03/2014 08:22	10/04/2014 00:39	10/04/2014 01:34
11	254013	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D	10/03/2014 08:45	10/04/2014 00:40	10/04/2014 01:34
12	254015	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D	10/03/2014 09:09	10/04/2014 00:40	10/04/2014 01:34
13	254017	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D	10/03/2014 09:32	10/04/2014 00:40	10/04/2014 01:34
14	254019	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D	10/03/2014 09:56	10/04/2014 00:40	10/04/2014 01:34
15	254021	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D	10/03/2014 10:19	10/04/2014 00:40	10/04/2014 01:35
16	254023	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F220.D	10/03/2014 10:43	10/04/2014 00:40	10/04/2014 01:35
17	254025	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D	10/03/2014 11:07	10/04/2014 00:40	10/04/2014 01:35
18	254027	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F222.D	10/03/2014 11:30	10/04/2014 00:40	10/04/2014 01:35
19	254029	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D	10/03/2014 11:54	10/04/2014 00:40	10/04/2014 01:35
20	254031	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D	10/03/2014 12:18	10/04/2014 00:40	10/04/2014 01:35
21	254033	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F225.D	10/03/2014 12:42	10/04/2014 00:40	10/04/2014 01:35
22	254035	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D	10/03/2014 13:05	10/04/2014 00:40	10/04/2014 01:35
23	254037	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F227.D	10/03/2014 13:28	10/04/2014 00:40	10/04/2014 01:35
24	254039	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D	10/03/2014 13:52	10/04/2014 00:40	10/04/2014 01:35
25	254041	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D	10/03/2014 14:16	10/04/2014 00:41	10/04/2014 01:35
26	254043	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D	10/03/2014 14:39	10/04/2014 00:41	10/04/2014 01:35
27	254045	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D	10/03/2014 15:03	10/04/2014 00:41	10/04/2014 01:35
28	254047	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D	10/03/2014 15:26	10/04/2014 00:41	10/04/2014 01:35
29	254049	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D	10/03/2014 15:50	10/04/2014 00:41	10/04/2014 01:35
30	254051	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D	10/03/2014 16:13	10/04/2014 00:41	10/04/2014 01:35

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl	1	1.9E+5	2	2.1E+5	3	1.7E+5	4	2.0E+5	5	1.8E+5	6	1.7E+5	1.9E+5	9.5
Aroclor 1016 {1}	1	8.0E+3	2	7.5E+3	3	5.6E+3	4	7.9E+3	5	6.5E+3	6	5.9E+3	6.9E+3	15.2
Aroclor 1016 {2}	1	5.8E+3	2	5.3E+3	3	4.3E+3	4	6.1E+3	5	5.1E+3	6	4.4E+3	5.2E+3	14.0
Aroclor 1016 {3}	1	1.8E+4	2	1.8E+4	3	1.4E+4	4	1.8E+4	5	1.7E+4	6	1.5E+4	1.7E+4	11.3
Aroclor 1016 {4}	1	8.0E+3	2	7.8E+3	3	6.2E+3	4	8.4E+3	5	7.0E+3	6	6.4E+3	7.3E+3	12.1
Aroclor 1016 {5}	1	7.9E+3	2	7.7E+3	3	6.3E+3	4	8.4E+3	5	7.2E+3	6	6.6E+3	7.4E+3	10.7
Aroclor 1221 {1}	7	3.9E+3	8	3.8E+3	9	3.7E+3	10	3.2E+3	11	3.2E+3	12	2.9E+3	3.4E+3	11.8
Aroclor 1221 {2}	7	2.5E+3	8	2.4E+3	9	2.4E+3	10	2.1E+3	11	2.1E+3	12	1.8E+3	2.2E+3	11.8
Aroclor 1221 {3}	7	9.9E+3	8	9.5E+3	9	8.3E+3	10	7.3E+3	11	7.4E+3	12	6.6E+3	8.2E+3	16.0
Aroclor 1232 {1}	13	3.2E+3	14	3.1E+3	15	2.6E+3	16	2.6E+3	17	2.3E+3	18	2.1E+3	2.7E+3	16.1
Aroclor 1232 {2}	13	7.7E+3	14	7.2E+3	15	6.0E+3	16	6.0E+3	17	5.1E+3	18	4.7E+3	6.1E+3	18.7
Aroclor 1232 {3}	13	2.7E+3	14	2.5E+3	15	2.3E+3	16	2.3E+3	17	2.1E+3	18	1.8E+3	2.3E+3	14.5
Aroclor 1232 {4}	13	4.7E+3	14	5.0E+3	15	4.4E+3	16	4.1E+3	17	3.8E+3	18	3.6E+3	4.3E+3	12.4
Aroclor 1232 {5}	13	5.4E+3	14	5.0E+3	15	4.4E+3	16	4.5E+3	17	4.0E+3	18	3.7E+3	4.5E+3	14.2
Aroclor 1242 {1}	19	4.5E+3	20	4.1E+3	21	3.8E+3	22	3.9E+3	23	3.4E+3	24	3.2E+3	3.8E+3	12.8
Aroclor 1242 {2}	19	1.4E+4	20	1.3E+4	21	1.1E+4	22	1.2E+4	23	1.0E+4	24	1.0E+4	1.2E+4	13.6
Aroclor 1242 {3}	19	5.4E+3	20	5.0E+3	21	4.5E+3	22	4.8E+3	23	4.3E+3	24	4.2E+3	4.7E+3	9.7

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1242 {4}	19	6.9E+3	20	6.1E+3	21	5.4E+3	22	5.7E+3	23	4.9E+3	24	4.7E+3	5.6E+3	14.0
Aroclor 1242 {5}	19	7.4E+3	20	6.8E+3	21	6.0E+3	22	6.2E+3	23	5.5E+3	24	5.2E+3	6.2E+3	13.2
Aroclor 1248 {1}	25	8.5E+3	26	8.1E+3	27	6.8E+3	28	6.8E+3	29	5.8E+3	30	6.0E+3	7.0E+3	15.8
Aroclor 1248 {2}	25	6.8E+3	26	6.6E+3	27	6.2E+3	28	5.5E+3	29	5.0E+3	30	4.7E+3	5.8E+3	15.0
Aroclor 1248 {3}	25	9.0E+3	26	9.3E+3	27	8.5E+3	28	7.7E+3	29	6.9E+3	30	6.9E+3	8.1E+3	12.7
Aroclor 1248 {4}	25	6.9E+3	26	6.9E+3	27	6.4E+3	28	5.8E+3	29	5.2E+3	30	5.0E+3	6.0E+3	13.3
Aroclor 1248 {5}	25	6.0E+3	26	6.0E+3	27	5.7E+3	28	5.2E+3	29	4.6E+3	30	4.5E+3	5.3E+3	12.8
Aroclor 1254 {1}	7	5.4E+3	8	5.1E+3	9	4.7E+3	10	4.4E+3	11	4.1E+3	12	3.8E+3	4.6E+3	13.5
Aroclor 1254 {2}	7	9.6E+3	8	9.1E+3	9	8.3E+3	10	7.7E+3	11	7.4E+3	12	6.9E+3	8.2E+3	12.4
Aroclor 1254 {3}	7	2.0E+4	8	1.9E+4	9	1.6E+4	10	1.5E+4	11	1.4E+4	12	1.3E+4	1.6E+4	16.5
Aroclor 1254 {4}	7	1.3E+4	8	1.2E+4	9	1.1E+4	10	9.8E+3	11	9.3E+3	12	8.6E+3	1.0E+4	14.7
Aroclor 1254 {5}	7	7.9E+3	8	7.0E+3	9	6.9E+3	10	6.5E+3	11	6.2E+3	12	5.8E+3	6.7E+3	11.0
Aroclor 1260 {1}	1	1.3E+4	2	1.3E+4	3	1.0E+4	4	1.2E+4	5	1.1E+4	6	1.0E+4	1.2E+4	9.7
Aroclor 1260 {2}	1	1.0E+4	2	9.9E+3	3	8.4E+3	4	1.0E+4	5	8.9E+3	6	8.4E+3	9.3E+3	8.8
Aroclor 1260 {3}	1	9.5E+3	2	9.6E+3	3	8.4E+3	4	1.0E+4	5	8.9E+3	6	8.5E+3	9.2E+3	7.0
Aroclor 1260 {4}	1	2.2E+4	2	2.3E+4	3	1.9E+4	4	2.3E+4	5	2.1E+4	6	2.1E+4	2.2E+4	7.4
Aroclor 1260 {5}	1	1.7E+4	2	1.9E+4	3	1.5E+4	4	1.8E+4	5	1.6E+4	6	1.6E+4	1.7E+4	8.6
Aroclor 1262 {1}	13	1.7E+4	14	1.6E+4	15	1.4E+4	16	1.3E+4	17	1.2E+4	18	1.1E+4	1.4E+4	18.5
Aroclor 1262 {2}	13	1.5E+4	14	1.4E+4	15	1.2E+4	16	1.1E+4	17	1.0E+4	18	9.3E+3	1.2E+4	17.6
Aroclor 1262 {3}	13	3.0E+4	14	2.8E+4	15	2.3E+4	16	2.2E+4	17	2.1E+4	18	2.0E+4	2.4E+4	16.6
Aroclor 1262 {4}	13	2.1E+4	14	2.0E+4	15	1.8E+4	16	1.7E+4	17	1.6E+4	18	1.5E+4	1.8E+4	14.2
Aroclor 1262 {5}	13	1.0E+4	14	9.4E+3	15	8.8E+3	16	8.4E+3	17	7.8E+3	18	7.4E+3	8.7E+3	12.3
Aroclor 1268 {1}	19	3.7E+4	20	3.3E+4	21	2.7E+4	22	2.6E+4	23	2.4E+4	24	2.3E+4	2.8E+4	19.0
Aroclor 1268 {2}	19	3.2E+4	20	2.8E+4	21	2.4E+4	22	2.3E+4	23	2.2E+4	24	2.0E+4	2.5E+4	17.7
Aroclor 1268 {3}	19	2.4E+4	20	2.3E+4	21	2.0E+4	22	2.0E+4	23	1.8E+4	24	1.7E+4	2.1E+4	12.9
Aroclor 1268 {4}	19	7.4E+4	20	6.9E+4	21	5.8E+4	22	5.7E+4	23	5.4E+4	24	5.2E+4	6.1E+4	14.6

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	253993	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D	10/03/2014 04:51	10/04/2014 00:39	10/04/2014 01:34
2	253995	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D	10/03/2014 05:14	10/04/2014 00:39	10/04/2014 01:34
3	253997	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D	10/03/2014 05:38	10/04/2014 00:39	10/04/2014 01:34
4	253999	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D	10/03/2014 06:01	10/04/2014 00:39	10/04/2014 01:34
5	254001	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D	10/03/2014 06:24	10/04/2014 00:39	10/04/2014 01:34
6	254003	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D	10/03/2014 06:48	10/04/2014 00:39	10/04/2014 01:34
7	254005	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D	10/03/2014 07:11	10/04/2014 00:39	10/04/2014 01:34
8	254007	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D	10/03/2014 07:35	10/04/2014 00:39	10/04/2014 01:34
9	254009	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D	10/03/2014 07:58	10/04/2014 00:39	10/04/2014 01:34
10	254011	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D	10/03/2014 08:22	10/04/2014 00:39	10/04/2014 01:34
11	254013	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D	10/03/2014 08:45	10/04/2014 00:40	10/04/2014 01:34
12	254015	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D	10/03/2014 09:09	10/04/2014 00:40	10/04/2014 01:34
13	254017	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D	10/03/2014 09:32	10/04/2014 00:40	10/04/2014 01:34
14	254019	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D	10/03/2014 09:56	10/04/2014 00:40	10/04/2014 01:34
15	254021	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D	10/03/2014 10:19	10/04/2014 00:40	10/04/2014 01:35
16	254023	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F220.D	10/03/2014 10:43	10/04/2014 00:40	10/04/2014 01:35
17	254025	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D	10/03/2014 11:07	10/04/2014 00:40	10/04/2014 01:35
18	254027	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F222.D	10/03/2014 11:30	10/04/2014 00:40	10/04/2014 01:35
19	254029	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D	10/03/2014 11:54	10/04/2014 00:40	10/04/2014 01:35
20	254031	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D	10/03/2014 12:18	10/04/2014 00:40	10/04/2014 01:35
21	254033	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F225.D	10/03/2014 12:42	10/04/2014 00:40	10/04/2014 01:35
22	254035	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D	10/03/2014 13:05	10/04/2014 00:40	10/04/2014 01:35
23	254037	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F227.D	10/03/2014 13:28	10/04/2014 00:40	10/04/2014 01:35
24	254039	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D	10/03/2014 13:52	10/04/2014 00:40	10/04/2014 01:35
25	254041	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D	10/03/2014 14:16	10/04/2014 00:41	10/04/2014 01:35
26	254043	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D	10/03/2014 14:39	10/04/2014 00:41	10/04/2014 01:35
27	254045	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D	10/03/2014 15:03	10/04/2014 00:41	10/04/2014 01:35
28	254047	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D	10/03/2014 15:26	10/04/2014 00:41	10/04/2014 01:35
29	254049	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D	10/03/2014 15:50	10/04/2014 00:41	10/04/2014 01:35
30	254051	\\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D	10/03/2014 16:13	10/04/2014 00:41	10/04/2014 01:35

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Decachlorobiphenyl	1	2.5	2.595	3.8	2	5	5.711	14.2	3	50	44.50	-11.0
	4	100	105.6	5.6	5	200	188.4	-5.8	6	500	465.7	-6.9
Aroclor 1016 {1}	1	25	29.00	16.0	2	50	54.27	8.5	3	500	405.0	-19.0
	4	1000	1148	14.8	5	2000	1889	-5.6	6	5000	4259	-14.8
Aroclor 1016 {2}	1	25	28.07	12.3	2	50	51.33	2.7	3	500	416.7	-16.7
	4	1000	1180	18.0	5	2000	1969	-1.5	6	5000	4260	-14.8
Aroclor 1016 {3}	1	25	27.02	8.1	2	50	55.53	11.1	3	500	412.0	-17.6
	4	1000	1060	6.0	5	2000	2051	2.6	6	5000	4496	-10.1
Aroclor 1016 {4}	1	25	27.33	9.3	2	50	53.35	6.7	3	500	428.0	-14.4
	4	1000	1149	14.9	5	2000	1919	-4.1	6	5000	4376	-12.5
Aroclor 1016 {5}	1	25	26.93	7.7	2	50	51.99	4.0	3	500	430.5	-13.9
	4	1000	1144	14.4	5	2000	1952	-2.4	6	5000	4513	-9.7
Aroclor 1221 {1}	7	50	56.81	13.6	8	100	110.6	10.6	9	1000	1059	5.9
	10	2000	1860	-7.0	11	4000	3724	-6.9	12	10000	8375	-16.2
Aroclor 1221 {2}	7	50	56.36	12.7	8	100	108.4	8.4	9	1000	1084	8.4
	10	2000	1895	-5.2	11	4000	3748	-6.3	12	10000	8208	-17.9

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1221 {3}	7	50	60.39	20.8	8	100	116.6	16.6	9	1000	1018	1.8
	10	2000	1790	-10.5	11	4000	3608	-9.8	12	10000	8110	-18.9
Aroclor 1232 {1}	13	25	30.13	20.5	14	50	58.28	16.6	15	500	492.5	-1.5
	16	1000	988.1	-1.2	17	2000	1710	-14.5	18	5000	4006	-19.9
Aroclor 1232 {2}	13	25	31.36	25.4	14	50	58.90	17.8	15	500	490.6	-1.9
	16	1000	975.8	-2.4	17	2000	1674	-16.3	18	5000	3868	-22.6 *
Aroclor 1232 {3}	13	25	30.04	20.2	14	50	55.22	10.4	15	500	506.3	1.3
	16	1000	989.6	-1.0	17	2000	1801	-9.9	18	5000	3955	-20.9 *
Aroclor 1232 {4}	13	25	27.61	10.4	14	50	58.40	16.8	15	500	513.6	2.7
	16	1000	964.0	-3.6	17	2000	1768	-11.6	18	5000	4262	-14.8
Aroclor 1232 {5}	13	25	30.09	20.3	14	50	55.56	11.1	15	500	490.3	-1.9
	16	1000	1003	0.3	17	2000	1771	-11.5	18	5000	4082	-18.4
Aroclor 1242 {1}	19	25	29.52	18.1	20	50	53.70	7.4	21	500	501.2	0.2
	22	1000	1031	3.1	23	2000	1765	-11.8	24	5000	4150	-17.0
Aroclor 1242 {2}	19	25	29.74	18.9	20	50	56.59	13.2	21	500	455.5	-8.9
	22	1000	1015	1.5	23	2000	1745	-12.7	24	5000	4400	-12.0
Aroclor 1242 {3}	19	25	28.78	15.1	20	50	52.77	5.5	21	500	477.6	-4.5
	22	1000	1029	2.9	23	2000	1826	-8.7	24	5000	4481	-10.4
Aroclor 1242 {4}	19	25	30.60	22.4	20	50	53.86	7.7	21	500	482.6	-3.5
	22	1000	1014	1.4	23	2000	1755	-12.3	24	5000	4210	-15.8
Aroclor 1242 {5}	19	25	29.83	19.3	20	50	55.29	10.6	21	500	486.0	-2.8
	22	1000	1003	0.3	23	2000	1771	-11.5	24	5000	4204	-15.9
Aroclor 1248 {1}	25	25	30.52	22.1	26	50	57.65	15.3	27	500	487.1	-2.6
	28	1000	972.6	-2.7	29	2000	1648	-17.6	30	5000	4277	-14.5
Aroclor 1248 {2}	25	25	29.38	17.5	26	50	56.91	13.8	27	500	533.5	6.7
	28	1000	951.6	-4.8	29	2000	1715	-14.3	30	5000	4052	-19.0
Aroclor 1248 {3}	25	25	27.89	11.6	26	50	57.67	15.3	27	500	524.9	5.0
	28	1000	961.4	-3.9	29	2000	1726	-13.7	30	5000	4284	-14.3
Aroclor 1248 {4}	25	25	28.43	13.7	26	50	57.05	14.1	27	500	527.9	5.6
	28	1000	967.3	-3.3	29	2000	1724	-13.8	30	5000	4183	-16.3
Aroclor 1248 {5}	25	25	28.03	12.1	26	50	56.75	13.5	27	500	533.9	6.8
	28	1000	969.5	-3.0	29	2000	1732	-13.4	30	5000	4202	-16.0
Aroclor 1254 {1}	7	25	29.61	18.5	8	50	55.58	11.2	9	500	512.7	2.5
	10	1000	956.7	-4.3	11	2000	1805	-9.8	12	5000	4096	-18.1
Aroclor 1254 {2}	7	25	29.30	17.2	8	50	55.73	11.5	9	500	506.7	1.3
	10	1000	945.3	-5.5	11	2000	1809	-9.6	12	5000	4253	-14.9
Aroclor 1254 {3}	7	25	30.83	23.3	8	50	58.53	17.1	9	500	491.5	-1.7
	10	1000	910.3	-9.0	11	2000	1745	-12.7	12	5000	4150	-17.0
Aroclor 1254 {4}	7	25	30.35	21.4	8	50	55.97	11.9	9	500	508.9	1.8
	10	1000	938.5	-6.1	11	2000	1773	-11.4	12	5000	4118	-17.6
Aroclor 1254 {5}	7	25	29.35	17.4	8	50	52.17	4.3	9	500	517.3	3.5
	10	1000	971.4	-2.9	11	2000	1836	-8.2	12	5000	4293	-14.1
Aroclor 1260 {1}	1	25	27.24	9.0	2	50	55.26	10.5	3	500	443.6	-11.3
	4	1000	1063	6.3	5	2000	1903	-4.9	6	5000	4518	-9.6
Aroclor 1260 {2}	1	25	27.29	9.1	2	50	53.18	6.4	3	500	449.5	-10.1
	4	1000	1078	7.8	5	2000	1923	-3.9	6	5000	4531	-9.4
Aroclor 1260 {3}	1	25	26.04	4.2	2	50	52.30	4.6	3	500	458.3	-8.3
	4	1000	1090	9.0	5	2000	1952	-2.4	6	5000	4650	-7.0

* Aroclor 1232 @ 5000 ppb average %D = -19.3 > -20

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1260 {4}	1	25	25.89	3.6	2	50	53.71	7.4	3	500	438.8	-12.2
	4	1000	1063	6.3	5	2000	1951	-2.5	6	5000	4870	-2.6
Aroclor 1260 {5}	1	25	25.23	0.9	2	50	56.30	12.6	3	500	444.7	-11.1
	4	1000	1067	6.7	5	2000	1924	-3.8	6	5000	4731	-5.4
Aroclor 1262 {1}	13	25	31.46	25.9	14	50	59.17	18.3	15	500	493.2	-1.4
	16	1000	931.2	-6.9	17	2000	1700	-15.0	18	5000	3953	-20.9 *
Aroclor 1262 {2}	13	25	31.31	25.2	14	50	57.87	15.7	15	500	499.2	-0.2
	16	1000	938.6	-6.1	17	2000	1718	-14.1	18	5000	3972	-20.6 *
Aroclor 1262 {3}	13	25	31.19	24.7	14	50	58.09	16.2	15	500	479.6	-4.1
	16	1000	924.0	-7.6	17	2000	1734	-13.3	18	5000	4202	-16.0
Aroclor 1262 {4}	13	25	30.08	20.3	14	50	56.46	12.9	15	500	499.2	-0.2
	16	1000	948.1	-5.2	17	2000	1763	-11.8	18	5000	4198	-16.0
Aroclor 1262 {5}	13	25	29.78	19.1	14	50	53.92	7.8	15	500	504.5	0.9
	16	1000	968.6	-3.1	17	2000	1797	-10.2	18	5000	4272	-14.6
Aroclor 1268 {1}	19	25	32.26	29.0	20	50	58.58	17.2	21	500	475.5	-4.9
	22	1000	930.8	-6.9	23	2000	1706	-14.7	24	5000	4016	-19.7
Aroclor 1268 {2}	19	25	32.28	29.1	20	50	56.39	12.8	21	500	477.7	-4.5
	22	1000	938.6	-6.1	23	2000	1736	-13.2	24	5000	4095	-18.1
Aroclor 1268 {3}	19	25	29.24	17.0	20	50	56.91	13.8	21	500	492.3	-1.5
	22	1000	966.4	-3.4	23	2000	1787	-10.6	24	5000	4238	-15.2
Aroclor 1268 {4}	19	25	30.57	22.3	20	50	56.90	13.8	21	500	475.4	-4.9
	22	1000	942.6	-5.7	23	2000	1773	-11.4	24	5000	4297	-14.1

*Aroclor 1262 @ 5000 ppb range %D = -17.6 > -20

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	253994	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F205.D	10/03/2014 04:51	10/04/2014 00:39	10/04/2014 01:34
2	253996	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F206.D	10/03/2014 05:14	10/04/2014 00:39	10/04/2014 01:34
3	253998	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F207.D	10/03/2014 05:38	10/04/2014 00:39	10/04/2014 01:34
4	254000	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F208.D	10/03/2014 06:01	10/04/2014 00:39	10/04/2014 01:34
5	254002	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F209.D	10/03/2014 06:24	10/04/2014 00:39	10/04/2014 01:34
6	254004	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F210.D	10/03/2014 06:48	10/04/2014 00:39	10/04/2014 01:34
7	254006	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F211.D	10/03/2014 07:11	10/04/2014 00:39	10/04/2014 01:34
8	254008	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F212.D	10/03/2014 07:35	10/04/2014 00:39	10/04/2014 01:34
9	254010	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F213.D	10/03/2014 07:58	10/04/2014 00:39	10/04/2014 01:34
10	254012	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F214.D	10/03/2014 08:22	10/04/2014 00:39	10/04/2014 01:34
11	254014	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F215.D	10/03/2014 08:45	10/04/2014 00:40	10/04/2014 01:34
12	254016	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F216.D	10/03/2014 09:09	10/04/2014 00:40	10/04/2014 01:34
13	254018	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F217.D	10/03/2014 09:32	10/04/2014 00:40	10/04/2014 01:34
14	254020	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F218.D	10/03/2014 09:56	10/04/2014 00:40	10/04/2014 01:34
15	254022	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F219.D	10/03/2014 10:19	10/04/2014 00:40	10/04/2014 01:35
16	254024	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F220.D	10/03/2014 10:43	10/04/2014 00:40	10/04/2014 01:35
17	254026	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D	10/03/2014 11:07	10/04/2014 00:40	10/04/2014 01:35
18	254028	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F222.D	10/03/2014 11:30	10/04/2014 00:40	10/04/2014 01:35
19	254030	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F223.D	10/03/2014 11:54	10/04/2014 00:40	10/04/2014 01:35
20	254032	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F224.D	10/03/2014 12:18	10/04/2014 00:40	10/04/2014 01:35
21	254034	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F225.D	10/03/2014 12:42	10/04/2014 00:40	10/04/2014 01:35
22	254036	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F226.D	10/03/2014 13:05	10/04/2014 00:40	10/04/2014 01:35
23	254038	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F227.D	10/03/2014 13:28	10/04/2014 00:40	10/04/2014 01:35
24	254040	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F228.D	10/03/2014 13:52	10/04/2014 00:41	10/04/2014 01:35
25	254042	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D	10/03/2014 14:16	10/04/2014 00:41	10/04/2014 01:35
26	254044	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D	10/03/2014 14:39	10/04/2014 00:41	10/04/2014 01:35
27	254046	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D	10/03/2014 15:03	10/04/2014 00:41	10/04/2014 01:35
28	254048	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D	10/03/2014 15:26	10/04/2014 00:41	10/04/2014 01:35
29	254050	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D	10/03/2014 15:50	10/04/2014 00:41	10/04/2014 01:35
30	254052	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F234.D	10/03/2014 16:13	10/04/2014 00:41	10/04/2014 01:35

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl	1	1.1E+5	2	1.2E+5	3	1.0E+5	4	1.3E+5	5	1.1E+5	6	1.1E+5	1.2E+5	6.3
Aroclor 1016 {1}	1	4.1E+3	2	4.0E+3	3	3.1E+3	4	4.4E+3	5	3.7E+3	6	3.5E+3	3.8E+3	12.8
Aroclor 1016 {2}	1	5.2E+3	2	5.1E+3	3	3.8E+3	4	5.4E+3	5	4.6E+3	6	4.3E+3	4.7E+3	12.7
Aroclor 1016 {3}	1	5.4E+3	2	5.7E+3	3	4.5E+3	4	6.3E+3	5	5.3E+3	6	5.1E+3	5.4E+3	10.9
Aroclor 1016 {4}	1	3.9E+3	2	3.8E+3	3	3.2E+3	4	4.2E+3	5	3.7E+3	6	3.5E+3	3.7E+3	9.8
Aroclor 1016 {5}	1	3.6E+3	2	3.7E+3	3	3.1E+3	4	4.1E+3	5	3.6E+3	6	3.4E+3	3.6E+3	9.5
Aroclor 1221 {1}	7	2.0E+3	8	2.0E+3	9	2.0E+3	10	1.8E+3	11	1.8E+3	12	1.6E+3	1.9E+3	8.2
Aroclor 1221 {2}	7	1.3E+3	8	1.3E+3	9	1.3E+3	10	1.1E+3	11	1.1E+3	12	1.0E+3	1.2E+3	8.9
Aroclor 1221 {3}	7	4.9E+3	8	4.9E+3	9	4.4E+3	10	3.9E+3	11	4.0E+3	12	3.7E+3	4.3E+3	12.1
Aroclor 1232 {1}	13	5.0E+3	14	4.8E+3	15	3.9E+3	16	3.9E+3	17	3.3E+3	18	3.2E+3	4.0E+3	18.1
Aroclor 1232 {2}	13	2.5E+3	14	2.4E+3	15	2.0E+3	16	2.0E+3	17	1.7E+3	18	1.7E+3	2.0E+3	16.5
Aroclor 1232 {3}	13	1.9E+3	14	2.0E+3	15	1.6E+3	16	1.7E+3	17	1.4E+3	18	1.4E+3	1.7E+3	13.5
Aroclor 1232 {4}	13	3.4E+3	14	3.3E+3	15	2.7E+3	16	2.7E+3	17	2.4E+3	18	2.3E+3	2.8E+3	16.5
Aroclor 1232 {5}	13	1.8E+3	14	1.6E+3	15	1.4E+3	16	1.4E+3	17	1.3E+3	18	1.2E+3	1.4E+3	14.7
Aroclor 1242 {1}	19	4.3E+3	20	3.9E+3	21	3.2E+3	22	3.4E+3	23	3.1E+3	24	3.0E+3	3.5E+3	14.9
Aroclor 1242 {2}	19	7.2E+3	20	6.6E+3	21	5.5E+3	22	6.0E+3	23	5.4E+3	24	5.5E+3	6.0E+3	12.1
Aroclor 1242 {3}	19	3.5E+3	20	3.3E+3	21	2.9E+3	22	3.1E+3	23	2.8E+3	24	2.8E+3	3.1E+3	10.0

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1242 {4}	19	3.3E+3	20	3.0E+3	21	2.6E+3	22	2.7E+3	23	2.4E+3	24	2.3E+3	2.7E+3	13.3
Aroclor 1242 {5}	19	3.4E+3	20	3.2E+3	21	2.9E+3	22	3.1E+3	23	2.7E+3	24	2.7E+3	3.0E+3	9.9
Aroclor 1248 {1}	25	2.5E+3	26	2.7E+3	27	2.2E+3	28	2.1E+3	29	1.8E+3	30	1.8E+3	2.2E+3	16.3
Aroclor 1248 {2}	25	5.1E+3	26	4.9E+3	27	4.2E+3	28	3.9E+3	29	3.5E+3	30	3.5E+3	4.2E+3	16.8
Aroclor 1248 {3}	25	5.5E+3	26	5.3E+3	27	4.6E+3	28	4.3E+3	29	3.7E+3	30	3.9E+3	4.5E+3	16.3
Aroclor 1248 {4}	25	4.0E+3	26	4.0E+3	27	3.7E+3	28	3.5E+3	29	3.0E+3	30	3.2E+3	3.6E+3	11.1
Aroclor 1248 {5}	25	7.3E+3	26	7.1E+3	27	6.0E+3	28	5.6E+3	29	4.9E+3	30	5.2E+3	6.0E+3	16.4
Aroclor 1254 {1}	7	6.4E+3	8	6.3E+3	9	5.5E+3	10	5.2E+3	11	4.9E+3	12	4.7E+3	5.5E+3	13.0
Aroclor 1254 {2}	7	9.7E+3	8	9.6E+3	9	8.3E+3	10	7.7E+3	11	7.3E+3	12	7.0E+3	8.3E+3	14.0
Aroclor 1254 {3}	7	3.1E+3	8	3.0E+3	9	2.9E+3	10	2.7E+3	11	2.6E+3	12	2.4E+3	2.8E+3	9.1
Aroclor 1254 {4}	7	3.7E+3	8	3.6E+3	9	3.2E+3	10	3.0E+3	11	2.8E+3	12	2.6E+3	3.1E+3	14.5
Aroclor 1254 {5}	7	5.1E+3	8	4.6E+3	9	4.4E+3	10	4.2E+3	11	3.9E+3	12	3.6E+3	4.3E+3	12.1
Aroclor 1260 {1}	1	2.9E+3	2	3.6E+3	3	3.1E+3	4	3.8E+3	5	3.5E+3	6	3.3E+3	3.4E+3	9.8
Aroclor 1260 {2}	1	5.5E+3	2	6.2E+3	3	5.3E+3	4	6.3E+3	5	5.8E+3	6	5.8E+3	5.8E+3	7.1
Aroclor 1260 {3}	1	5.1E+3	2	5.8E+3	3	4.9E+3	4	5.8E+3	5	5.4E+3	6	5.4E+3	5.4E+3	6.5
Aroclor 1260 {4}	1	1.3E+4	2	1.4E+4	3	1.2E+4	4	1.4E+4	5	1.4E+4	6	1.4E+4	1.3E+4	7.1
Aroclor 1260 {5}	1	8.1E+3	2	8.5E+3	3	7.6E+3	4	9.1E+3	5	8.4E+3	6	8.5E+3	8.4E+3	6.1
Aroclor 1262 {1}	13	1.1E+4	14	1.0E+4	15	8.7E+3	16	8.5E+3	17	7.9E+3	18	7.5E+3	8.9E+3	14.5
Aroclor 1262 {2}	13	7.5E+3	14	6.9E+3	15	6.1E+3	16	5.9E+3	17	5.4E+3	18	5.2E+3	6.2E+3	14.5
Aroclor 1262 {3}	13	1.7E+4	14	1.7E+4	15	1.5E+4	16	1.4E+4	17	1.3E+4	18	1.3E+4	1.5E+4	11.1
Aroclor 1262 {4}	13	1.2E+4	14	1.1E+4	15	1.0E+4	16	9.8E+3	17	9.1E+3	18	8.9E+3	1.0E+4	11.4
Aroclor 1262 {5}	13	6.1E+3	14	5.7E+3	15	5.4E+3	16	5.2E+3	17	4.9E+3	18	4.8E+3	5.4E+3	8.9
Aroclor 1268 {1}	19	2.3E+4	20	2.1E+4	21	1.7E+4	22	1.7E+4	23	1.6E+4	24	1.5E+4	1.8E+4	16.9
Aroclor 1268 {2}	19	1.8E+4	20	1.7E+4	21	1.4E+4	22	1.5E+4	23	1.4E+4	24	1.3E+4	1.5E+4	13.6
Aroclor 1268 {3}	19	1.5E+4	20	1.5E+4	21	1.2E+4	22	1.3E+4	23	1.2E+4	24	1.2E+4	1.3E+4	11.8
Aroclor 1268 {4}	19	4.5E+4	20	4.2E+4	21	3.5E+4	22	3.6E+4	23	3.4E+4	24	3.4E+4	3.8E+4	12.3

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	253994	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F205.D	10/03/2014 04:51	10/04/2014 00:39	10/04/2014 01:34
2	253996	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F206.D	10/03/2014 05:14	10/04/2014 00:39	10/04/2014 01:34
3	253998	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F207.D	10/03/2014 05:38	10/04/2014 00:39	10/04/2014 01:34
4	254000	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F208.D	10/03/2014 06:01	10/04/2014 00:39	10/04/2014 01:34
5	254002	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F209.D	10/03/2014 06:24	10/04/2014 00:39	10/04/2014 01:34
6	254004	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F210.D	10/03/2014 06:48	10/04/2014 00:39	10/04/2014 01:34
7	254006	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F211.D	10/03/2014 07:11	10/04/2014 00:39	10/04/2014 01:34
8	254008	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F212.D	10/03/2014 07:35	10/04/2014 00:39	10/04/2014 01:34
9	254010	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F213.D	10/03/2014 07:58	10/04/2014 00:39	10/04/2014 01:34
10	254012	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F214.D	10/03/2014 08:22	10/04/2014 00:39	10/04/2014 01:34
11	254014	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F215.D	10/03/2014 08:45	10/04/2014 00:40	10/04/2014 01:34
12	254016	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F216.D	10/03/2014 09:09	10/04/2014 00:40	10/04/2014 01:34
13	254018	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F217.D	10/03/2014 09:32	10/04/2014 00:40	10/04/2014 01:34
14	254020	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F218.D	10/03/2014 09:56	10/04/2014 00:40	10/04/2014 01:34
15	254022	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F219.D	10/03/2014 10:19	10/04/2014 00:40	10/04/2014 01:35
16	254024	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F220.D	10/03/2014 10:43	10/04/2014 00:40	10/04/2014 01:35
17	254026	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D	10/03/2014 11:07	10/04/2014 00:40	10/04/2014 01:35
18	254028	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F222.D	10/03/2014 11:30	10/04/2014 00:40	10/04/2014 01:35
19	254030	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F223.D	10/03/2014 11:54	10/04/2014 00:40	10/04/2014 01:35
20	254032	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F224.D	10/03/2014 12:18	10/04/2014 00:40	10/04/2014 01:35
21	254034	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F225.D	10/03/2014 12:42	10/04/2014 00:40	10/04/2014 01:35
22	254036	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F226.D	10/03/2014 13:05	10/04/2014 00:40	10/04/2014 01:35
23	254038	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F227.D	10/03/2014 13:28	10/04/2014 00:40	10/04/2014 01:35
24	254040	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F228.D	10/03/2014 13:52	10/04/2014 00:41	10/04/2014 01:35
25	254042	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D	10/03/2014 14:16	10/04/2014 00:41	10/04/2014 01:35
26	254044	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D	10/03/2014 14:39	10/04/2014 00:41	10/04/2014 01:35
27	254046	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D	10/03/2014 15:03	10/04/2014 00:41	10/04/2014 01:35
28	254048	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D	10/03/2014 15:26	10/04/2014 00:41	10/04/2014 01:35
29	254050	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D	10/03/2014 15:50	10/04/2014 00:41	10/04/2014 01:35
30	254052	\\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F234.D	10/03/2014 16:13	10/04/2014 00:41	10/04/2014 01:35

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Decachlorobiphenyl	1	2.5	2.468	-1.3	2	5	5.140	2.8	3	50	45.30	-9.4
	4	100	109.9	9.9	5	200	197.6	-1.2	6	500	495.9	-0.8
Aroclor 1016 {1}	1	25	27.26	9.1	2	50	52.36	4.7	3	500	403.9	-19.2
	4	1000	1162	16.2	5	2000	1960	-2.0	6	5000	4561	-8.8
Aroclor 1016 {2}	1	25	27.53	10.1	2	50	53.60	7.2	3	500	403.8	-19.2
	4	1000	1140	14.0	5	2000	1933	-3.3	6	5000	4561	-8.8
Aroclor 1016 {3}	1	25	25.22	0.9	2	50	52.81	5.6	3	500	420.5	-15.9
	4	1000	1167	16.7	5	2000	1956	-2.2	6	5000	4746	-5.1
Aroclor 1016 {4}	1	25	26.32	5.3	2	50	51.68	3.4	3	500	428.1	-14.4
	4	1000	1139	13.9	5	2000	1968	-1.6	6	5000	4673	-6.5
Aroclor 1016 {5}	1	25	25.24	1.0	2	50	51.53	3.1	3	500	427.6	-14.5
	4	1000	1147	14.7	5	2000	2002	0.1	6	5000	4783	-4.3
Aroclor 1221 {1}	7	50	53.02	6.0	8	100	106.5	6.5	9	1000	1082	8.2
	10	2000	1902	-4.9	11	4000	3865	-3.4	12	10000	8755	-12.5
Aroclor 1221 {2}	7	50	53.10	6.2	8	100	107.4	7.4	9	1000	1085	8.5
	10	2000	1915	-4.3	11	4000	3856	-3.6	12	10000	8577	-14.2

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1221 {3}	7	50	57.41	14.8	8	100	113.1	13.1	9	1000	1024	2.4
	10	2000	1824	-8.8	11	4000	3721	-7.0	12	10000	8548	-14.5
Aroclor 1232 {1}	13	25	30.77	23.1	14	50	60.24	20.5 *	15	500	480.4	-3.9
	16	1000	965.0	-3.5	17	2000	1665	-16.8	18	5000	4032	-19.4
Aroclor 1232 {2}	13	25	30.52	22.1	14	50	58.34	16.7	15	500	484.6	-3.1
	16	1000	983.9	-1.6	17	2000	1695	-15.3	18	5000	4060	-18.8
Aroclor 1232 {3}	13	25	27.58	10.3	14	50	59.52	19.0	15	500	486.0	-2.8
	16	1000	1027	2.7	17	2000	1697	-15.1	18	5000	4292	-14.2
Aroclor 1232 {4}	13	25	30.54	22.2	14	50	58.84	17.7	15	500	485.3	-2.9
	16	1000	956.2	-4.4	17	2000	1715	-14.2	18	5000	4086	-18.3
Aroclor 1232 {5}	13	25	30.52	22.1	14	50	55.27	10.5	15	500	490.8	-1.8
	16	1000	999.4	-0.1	17	2000	1743	-12.8	18	5000	4105	-17.9
Aroclor 1242 {1}	19	25	30.85	23.4	20	50	56.07	12.1	21	500	465.1	-7.0
	22	1000	983.2	-1.7	23	2000	1756	-12.2	24	5000	4266	-14.7
Aroclor 1242 {2}	19	25	29.79	19.2	20	50	54.85	9.7	21	500	459.4	-8.1
	22	1000	991.5	-0.8	23	2000	1787	-10.7	24	5000	4538	-9.2
Aroclor 1242 {3}	19	25	28.92	15.7	20	50	53.53	7.1	21	500	469.3	-6.1
	22	1000	1017	1.7	23	2000	1816	-9.2	24	5000	4546	-9.1
Aroclor 1242 {4}	19	25	30.26	21.0	20	50	54.79	9.6	21	500	472.8	-5.4
	22	1000	1001	0.1	23	2000	1769	-11.5	24	5000	4311	-13.8
Aroclor 1242 {5}	19	25	28.68	14.7	20	50	53.67	7.3	21	500	480.2	-4.0
	22	1000	1020	2.0	23	2000	1821	-8.9	24	5000	4445	-11.1
Aroclor 1248 {1}	25	25	28.93	15.7	26	50	61.00	22.0 *	27	500	505.4	1.1
	28	1000	951.3	-4.9	29	2000	1650	-17.5	30	5000	4180	-16.4
Aroclor 1248 {2}	25	25	30.58	22.3	26	50	58.71	17.4	27	500	504.7	0.9
	28	1000	920.9	-7.9	29	2000	1664	-16.8	30	5000	4201	-16.0
Aroclor 1248 {3}	25	25	30.29	21.2	26	50	58.36	16.7	27	500	505.9	1.2
	28	1000	942.3	-5.8	29	2000	1634	-18.3	30	5000	4251	-15.0
Aroclor 1248 {4}	25	25	28.06	12.2	26	50	55.82	11.6	27	500	517.5	3.5
	28	1000	970.2	-3.0	29	2000	1704	-14.8	30	5000	4520	-9.6
Aroclor 1248 {5}	25	25	30.38	21.5	26	50	58.71	17.4	27	500	503.3	0.7
	28	1000	927.9	-7.2	29	2000	1635	-18.3	30	5000	4294	-14.1
Aroclor 1254 {1}	7	25	29.11	16.4	8	50	57.30	14.6	9	500	499.8	0.0
	10	1000	941.0	-5.9	11	2000	1790	-10.5	12	5000	4271	-14.6
Aroclor 1254 {2}	7	25	29.40	17.6	8	50	57.84	15.7	9	500	502.9	0.6
	10	1000	931.6	-6.8	11	2000	1768	-11.6	12	5000	4228	-15.4
Aroclor 1254 {3}	7	25	27.71	10.8	8	50	53.17	6.3	9	500	526.9	5.4
	10	1000	977.0	-2.3	11	2000	1864	-6.8	12	5000	4329	-13.4
Aroclor 1254 {4}	7	25	29.49	18.0	8	50	57.44	14.9	9	500	512.5	2.5
	10	1000	950.7	-4.9	11	2000	1761	-12.0	12	5000	4078	-18.4
Aroclor 1254 {5}	7	25	29.82	19.3	8	50	52.87	5.7	9	500	512.6	2.5
	10	1000	966.6	-3.3	11	2000	1825	-8.7	12	5000	4227	-15.5
Aroclor 1260 {1}	1	25	21.53	-13.9	2	50	53.93	7.9	3	500	458.2	-8.4
	4	1000	1123	12.3	5	2000	2058	2.9	6	5000	4960	-0.8
Aroclor 1260 {2}	1	25	23.56	-5.7	2	50	53.53	7.1	3	500	451.1	-9.8
	4	1000	1087	8.7	5	2000	2000	0.0	6	5000	4988	-0.2
Aroclor 1260 {3}	1	25	23.52	-5.9	2	50	53.34	6.7	3	500	458.1	-8.4
	4	1000	1079	7.9	5	2000	1992	-0.4	6	5000	5005	0.1

* Aroclor 1232 @ 50 ppb average %D = 16.9 < 20 * Aroclor 1248 @ 50 ppb average %D = 17.0 < 20

Initial Calibration - Detailed Report

Calibration ID:	CAL13590	**Instrument ID:**	GC27.i
Method ID:	MJ696	**Column Name:**	DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1260 {4}	1	25	23.70	-5.2	2	50	51.49	3.0	3	500	442.3	-11.5
	4	1000	1072	7.2	5	2000	2026	1.3	6	5000	5266	5.3
Aroclor 1260 {5}	1	25	24.21	-3.2	2	50	50.55	1.1	3	500	452.2	-9.6
	4	1000	1090	9.0	5	2000	2014	0.7	6	5000	5098	2.0
Aroclor 1262 {1}	13	25	30.35	21.4	14	50	56.60	13.2	15	500	486.5	-2.7
	16	1000	958.9	-4.1	17	2000	1768	-11.6	18	5000	4192	-16.2
Aroclor 1262 {2}	13	25	30.54	22.1	14	50	55.81	11.6	15	500	495.0	-1.0
	16	1000	954.0	-4.6	17	2000	1748	-12.6	18	5000	4223	-15.5
Aroclor 1262 {3}	13	25	28.98	15.9	14	50	55.63	11.3	15	500	489.1	-2.2
	16	1000	950.8	-4.9	17	2000	1798	-10.1	18	5000	4500	-10.0
Aroclor 1262 {4}	13	25	29.21	16.9	14	50	54.82	9.6	15	500	498.7	-0.3
	16	1000	964.5	-3.5	17	2000	1792	-10.4	18	5000	4385	-12.3
Aroclor 1262 {5}	13	25	28.33	13.3	14	50	53.35	6.7	15	500	503.1	0.6
	16	1000	975.6	-2.4	17	2000	1834	-8.3	18	5000	4506	-9.9
Aroclor 1268 {1}	19	25	31.70	26.8	20	50	57.47	14.9	21	500	457.2	-8.6
	22	1000	941.7	-5.8	23	2000	1752	-12.4	24	5000	4254	-14.9
Aroclor 1268 {2}	19	25	30.14	20.6	20	50	56.69	13.4	21	500	463.7	-7.3
	22	1000	959.9	-4.0	23	2000	1794	-10.3	24	5000	4381	-12.4
Aroclor 1268 {3}	19	25	29.13	16.5	20	50	56.36	12.7	21	500	471.2	-5.8
	22	1000	973.3	-2.7	23	2000	1816	-9.2	24	5000	4420	-11.6
Aroclor 1268 {4}	19	25	29.72	18.9	20	50	55.83	11.7	21	500	467.0	-6.6
	22	1000	961.5	-3.8	23	2000	1813	-9.3	24	5000	4463	-10.7

Second Source Calibration Verification Summary

CalibrationID: CAL13590

Method ID: MJ696

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\100214CAL.B\1002F2

Units: ppb

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1016	254053	NA	20				1000.00	888.8	-11.1
Aroclor 1016 {1}	254053	AverageRF	100	6.9E+3	6.4E+3	-6.7	1000.00	933.4	
Aroclor 1016 {2}	254053	AverageRF	100	5.2E+3	4.6E+3	-11.2	1000.00	888.0	
Aroclor 1016 {3}	254053	AverageRF	100	1.7E+4	1.4E+4	-16.6	1000.00	834.0	
Aroclor 1016 {4}	254053	AverageRF	100	7.3E+3	6.3E+3	-13.5	1000.00	864.7	
Aroclor 1016 {5}	254053	AverageRF	100	7.4E+3	6.8E+3	-7.6	1000.00	923.6	
Aroclor 1221	254055	NA	20				1000.00	1040.3	4.0
Aroclor 1221 {1}	254055	AverageRF	100	3.4E+3	3.6E+3	3.9	1000.00	1039.4	
Aroclor 1221 {2}	254055	AverageRF	100	2.2E+3	2.4E+3	7.3	1000.00	1072.9	
Aroclor 1221 {3}	254055	AverageRF	100	8.2E+3	8.3E+3	0.9	1000.00	1008.6	
Aroclor 1232	254057	NA	20				1000.00	940.3	-6.0
Aroclor 1232 {1}	254057	AverageRF	100	2.7E+3	2.3E+3	-13.5	1000.00	865.5	
Aroclor 1232 {2}	254057	AverageRF	100	6.1E+3	5.9E+3	-4.3	1000.00	957.3	
Aroclor 1232 {3}	254057	AverageRF	100	2.3E+3	2.2E+3	-1.4	1000.00	986.4	
Aroclor 1232 {4}	254057	AverageRF	100	4.3E+3	3.9E+3	-8.7	1000.00	913.4	
Aroclor 1232 {5}	254057	AverageRF	100	4.5E+3	4.4E+3	-2.1	1000.00	979.2	
Aroclor 1242	254059	NA	20				1000.00	944.0	-5.6
Aroclor 1242 {1}	254059	AverageRF	100	3.8E+3	3.5E+3	-8.1	1000.00	919.5	
Aroclor 1242 {2}	254059	AverageRF	100	1.2E+4	1.1E+4	-7.0	1000.00	930.1	
Aroclor 1242 {3}	254059	AverageRF	100	4.7E+3	4.4E+3	-6.5	1000.00	935.0	
Aroclor 1242 {4}	254059	AverageRF	100	5.6E+3	5.4E+3	-3.8	1000.00	962.3	
Aroclor 1242 {5}	254059	AverageRF	100	6.2E+3	6.0E+3	-2.7	1000.00	973.3	
Aroclor 1248	254061	NA	20				1000.00	852.1	-14.8
Aroclor 1248 {1}	254061	AverageRF	100	7.0E+3	6.1E+3	-12.1	1000.00	878.6	
Aroclor 1248 {2}	254061	AverageRF	100	5.8E+3	5.0E+3	-14.0	1000.00	860.2	
Aroclor 1248 {3}	254061	AverageRF	100	8.1E+3	6.9E+3	-14.6	1000.00	853.8	
Aroclor 1248 {4}	254061	AverageRF	100	6.0E+3	5.0E+3	-16.5	1000.00	835.2	
Aroclor 1248 {5}	254061	AverageRF	100	5.3E+3	4.4E+3	-16.7	1000.00	832.7	
Aroclor 1254	254063	NA	20				1000.00	932.4	-6.8
Aroclor 1254 {1}	254063	AverageRF	100	4.6E+3	4.3E+3	-5.6	1000.00	943.9	
Aroclor 1254 {2}	254063	AverageRF	100	8.2E+3	7.7E+3	-5.8	1000.00	941.8	
Aroclor 1254 {3}	254063	AverageRF	100	1.6E+4	1.4E+4	-11.4	1000.00	886.5	
Aroclor 1254 {4}	254063	AverageRF	100	1.0E+4	9.8E+3	-6.8	1000.00	932.1	
Aroclor 1254 {5}	254063	AverageRF	100	6.7E+3	6.4E+3	-4.2	1000.00	957.6	
Aroclor 1260	254065	NA	20				1000.00	987.4	-1.3
Aroclor 1260 {1}	254065	AverageRF	100	1.2E+4	1.0E+4	-12.3	1000.00	877.1	
Aroclor 1260 {2}	254065	AverageRF	100	9.3E+3	9.7E+3	3.9	1000.00	1038.7	
Aroclor 1260 {3}	254065	AverageRF	100	9.2E+3	9.5E+3	3.2	1000.00	1032.4	
Aroclor 1260 {4}	254065	AverageRF	100	2.2E+4	2.2E+4	0.0	1000.00	1000.2	
Aroclor 1260 {5}	254065	AverageRF	100	1.7E+4	1.6E+4	-1.1	1000.00	988.6	
Aroclor 1262	254067	NA	20				1000.00	940.5	-5.9
Aroclor 1262 {1}	254067	AverageRF	100	1.4E+4	1.3E+4	-6.5	1000.00	935.2	
Aroclor 1262 {2}	254067	AverageRF	100	1.2E+4	1.1E+4	-8.7	1000.00	912.9	
Aroclor 1262 {3}	254067	AverageRF	100	2.4E+4	2.2E+4	-6.0	1000.00	939.8	
Aroclor 1262 {4}	254067	AverageRF	100	1.8E+4	1.7E+4	-5.9	1000.00	941.4	
Aroclor 1262 {5}	254067	AverageRF	100	8.7E+3	8.5E+3	-2.7	1000.00	973.3	
Aroclor 1268	254069	NA	20				1000.00	995.8	-0.4

Second Source Calibration Verification Summary

CalibrationID: CAL13590

Method ID: MJ696

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\100214CAL.B\1002F2

Units: ppb

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	254069	AverageRF	100	2.8E+4	2.9E+4	1.6	1000.00	1015.6	
Aroclor 1268 {2}	254069	AverageRF	100	2.5E+4	2.8E+4	13.8	1000.00	1137.7	
Aroclor 1268 {3}	254069	AverageRF	100	2.1E+4	2.0E+4	-5.5	1000.00	945.4	
Aroclor 1268 {4}	254069	AverageRF	100	6.1E+4	5.4E+4	-11.6	1000.00	884.4	

Second Source Calibration Verification Summary

CalibrationID: CAL13590

Method ID: MJ696

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\100214CAL_R.B\100

Units: ppb

Column: DB-XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1016	254054	NA	20				1000.00	906.8	-9.3
Aroclor 1016 {1}	254054	AverageRF	100	3.8E+3	3.4E+3	-10.7	1000.00	893.2	
Aroclor 1016 {2}	254054	AverageRF	100	4.7E+3	4.2E+3	-11.0	1000.00	890.1	
Aroclor 1016 {3}	254054	AverageRF	100	5.4E+3	4.9E+3	-9.1	1000.00	909.0	
Aroclor 1016 {4}	254054	AverageRF	100	3.7E+3	3.4E+3	-8.8	1000.00	911.9	
Aroclor 1016 {5}	254054	AverageRF	100	3.6E+3	3.3E+3	-7.0	1000.00	929.6	
Aroclor 1221	254056	NA	20				1000.00	1052.2	5.2
Aroclor 1221 {1}	254056	AverageRF	100	1.9E+3	2.0E+3	6.2	1000.00	1061.7	
Aroclor 1221 {2}	254056	AverageRF	100	1.2E+3	1.3E+3	7.9	1000.00	1079.1	
Aroclor 1221 {3}	254056	AverageRF	100	4.3E+3	4.4E+3	1.6	1000.00	1015.8	
Aroclor 1232	254058	NA	20				1000.00	958.7	-4.1
Aroclor 1232 {1}	254058	AverageRF	100	4.0E+3	3.6E+3	-11.0	1000.00	889.9	
Aroclor 1232 {2}	254058	AverageRF	100	2.0E+3	2.0E+3	-3.5	1000.00	964.9	
Aroclor 1232 {3}	254058	AverageRF	100	1.7E+3	1.7E+3	-0.3	1000.00	997.0	
Aroclor 1232 {4}	254058	AverageRF	100	2.8E+3	2.7E+3	-2.1	1000.00	978.8	
Aroclor 1232 {5}	254058	AverageRF	100	1.4E+3	1.4E+3	-3.7	1000.00	962.7	
Aroclor 1242	254060	NA	20				1000.00	918.0	-8.2
Aroclor 1242 {1}	254060	AverageRF	100	3.5E+3	3.1E+3	-11.0	1000.00	889.9	
Aroclor 1242 {2}	254060	AverageRF	100	6.0E+3	5.3E+3	-12.6	1000.00	873.9	
Aroclor 1242 {3}	254060	AverageRF	100	3.1E+3	2.8E+3	-7.0	1000.00	930.3	
Aroclor 1242 {4}	254060	AverageRF	100	2.7E+3	2.6E+3	-5.4	1000.00	946.0	
Aroclor 1242 {5}	254060	AverageRF	100	3.0E+3	2.8E+3	-5.0	1000.00	950.1	
Aroclor 1248	254062	NA	20				1000.00	844.9	-15.5
Aroclor 1248 {1}	254062	AverageRF	100	2.2E+3	2.0E+3	-8.5	1000.00	915.4	
Aroclor 1248 {2}	254062	AverageRF	100	4.2E+3	3.6E+3	-13.9	1000.00	860.9	
Aroclor 1248 {3}	254062	AverageRF	100	4.5E+3	3.8E+3	-17.0	1000.00	830.2	
Aroclor 1248 {4}	254062	AverageRF	100	3.6E+3	3.0E+3	-16.1	1000.00	839.2	
Aroclor 1248 {5}	254062	AverageRF	100	6.0E+3	4.7E+3	-22.1	1000.00	778.9	
Aroclor 1254	254064	NA	20				1000.00	944.5	-5.6
Aroclor 1254 {1}	254064	AverageRF	100	5.5E+3	5.0E+3	-8.7	1000.00	912.6	
Aroclor 1254 {2}	254064	AverageRF	100	8.3E+3	7.6E+3	-8.6	1000.00	914.3	
Aroclor 1254 {3}	254064	AverageRF	100	2.8E+3	2.7E+3	-3.6	1000.00	964.4	
Aroclor 1254 {4}	254064	AverageRF	100	3.1E+3	3.0E+3	-4.0	1000.00	960.3	
Aroclor 1254 {5}	254064	AverageRF	100	4.3E+3	4.2E+3	-2.9	1000.00	970.7	
Aroclor 1260	254066	NA	20				1000.00	1023.7	2.4
Aroclor 1260 {1}	254066	AverageRF	100	3.4E+3	3.4E+3	-0.1	1000.00	998.9	
Aroclor 1260 {2}	254066	AverageRF	100	5.8E+3	6.2E+3	6.8	1000.00	1067.9	
Aroclor 1260 {3}	254066	AverageRF	100	5.4E+3	5.5E+3	1.9	1000.00	1019.0	
Aroclor 1260 {4}	254066	AverageRF	100	1.3E+4	1.4E+4	2.7	1000.00	1026.5	
Aroclor 1260 {5}	254066	AverageRF	100	8.4E+3	8.4E+3	0.6	1000.00	1006.3	
Aroclor 1262	254068	NA	20				1000.00	948.4	-5.2
Aroclor 1262 {1}	254068	AverageRF	100	8.9E+3	8.3E+3	-6.3	1000.00	937.5	
Aroclor 1262 {2}	254068	AverageRF	100	6.2E+3	5.7E+3	-7.6	1000.00	924.4	
Aroclor 1262 {3}	254068	AverageRF	100	1.5E+4	1.4E+4	-3.5	1000.00	965.4	
Aroclor 1262 {4}	254068	AverageRF	100	1.0E+4	9.6E+3	-5.6	1000.00	943.8	
Aroclor 1262 {5}	254068	AverageRF	100	5.4E+3	5.2E+3	-2.9	1000.00	971.1	
Aroclor 1268	254070	NA	20				1000.00	1028.4	2.8

Second Source Calibration Verification Summary

CalibrationID: CAL13590

Method ID: MJ696

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\100214CAL_R.B\100

Units: ppb

Column: DB-XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	254070	AverageRF	100	1.8E+4	1.9E+4	5.0	1000.00	1050.5	
Aroclor 1268 {2}	254070	AverageRF	100	1.5E+4	1.8E+4	19.0	1000.00	1189.5	
Aroclor 1268 {3}	254070	AverageRF	100	1.3E+4	1.3E+4	-3.7	1000.00	962.8	
Aroclor 1268 {4}	254070	AverageRF	100	3.8E+4	3.4E+4	-8.9	1000.00	910.8	

Report Date : 03-Oct-2014 23:27

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2014 04:51
End Cal Date : 03-OCT-2014 16:13
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Cal Date : 03-Oct-2014 23:11 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D
Level 2: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D
Level 3: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D
Level 4: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D
Level 5: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D
Level 6: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D

Compound	25.000 Level 1	50.000 Level 2	500.000 Level 3	1000.000 Level 4	2000.000 Level 5	5000.000 Level 6	RRF	% RSD
2 Aroclor 1016(1)	8001	7486	5586	7921	6512	5874	6897	15.242
(2)	5790	5293	4297	6087	5077	4393	5156	14.022
(3)	17919	18416	13663	17578	17007	14909	16582	11.329
(4)	7956	7766	6230	8364	6983	6370	7278	12.114
(5)	7927	7651	6336	8416	7180	6642	7359	10.733
3 Aroclor 1221(1)	3918	3815	3652	3206	3210	2888	3448	11.785
(2)	2528	2430	2431	2125	2101	1841	2243	11.752
(3)	9887	9546	8330	7327	7384	6638	8185	15.967
4 Aroclor 1232(1)	3218	3113	2630	2639	2284	2140	2671	16.144
(2)	7696	7227	6019	5986	5135	4746	6135	18.720
(3)	2740	2518	2308	2256	2053	1803	2280	14.521
(4)	4699	4969	4370	4101	3761	3626	4254	12.362
(5)	5385	4972	4387	4487	3962	3653	4474	14.210
5 Aroclor 1242(1)	4506	4099	3826	3933	3368	3168	3817	12.791
(2)	13990	13312	10715	11940	10265	10351	11762	13.564
(3)	5426	4974	4502	4849	4304	4223	4713	9.708
(4)	6897	6070	5439	5715	4944	4744	5635	13.967
(5)	7389	6849	6020	6213	5483	5208	6193	13.245
6 Aroclor 1248(1)	8540	8066	6816	6804	5766	5985	6996	15.830
(2)	6804	6589	6178	5509	4964	4691	5789	15.030
(3)	8983	9288	8453	7741	6948	6899	8052	12.665
(4)	6858	6881	6367	5833	5199	5046	6031	13.312
(5)	5971	6044	5687	5163	4612	4476	5326	12.795
7 Aroclor 1254(1)	5423	5089	4694	4380	4131	3750	4578	13.506
(2)	9563	9094	8269	7713	7379	6941	8160	12.437
(3)	19794	18790	15779	14611	14006	13324	16051	16.550
(4)	12736	11743	10676	9844	9298	8639	10489	14.715
(5)	7868	6994	6935	6511	6155	5755	6703	11.027

Report Date : 03-Oct-2014 23:27

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2014 04:51
End Cal Date : 03-OCT-2014 16:13
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Cal Date : 03-Oct-2014 23:11 tuser
Curve Type : Average

Compound	25.000 Level 1	50.000 Level 2	500.000 Level 3	1000.000 Level 4	2000.000 Level 5	5000.000 Level 6	RRF	% RSD
8 Aroclor 1260(1)	12592	12771	10252	12285	10994	10442	11556	9.742
(2)	10141	9883	8354	10020	8934	8420	9292	8.833
(3)	9547	9586	8400	9985	8946	8523	9165	6.975
(4)	22353	23186	18942	22955	21052	21022	21585	7.358
(5)	16664	18590	14685	17623	15882	15622	16511	8.608
9 Aroclor 1262(1)	17228	16200	13502	12747	11635	10821	13689	18.536
(2)	14710	13597	11728	11026	10089	9333	11747	17.571
(3)	29615	27579	22773	21936	20583	19953	23740	16.611
(4)	21216	19914	17607	16720	15548	14805	17635	14.169
(5)	10345	9364	8763	8412	7801	7420	8684	12.270
10 Aroclor 1268(1)	36614	33244	26982	26412	24209	22788	28375	19.040
(2)	32208	28132	23832	23413	21653	20429	24945	17.723
(3)	24146	23498	20329	19953	18447	17499	20645	12.944
(4)	74430	69262	57868	57367	53946	52301	60862	14.640
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	412724	378620	292737	461974	402185	403981	392037	14.250
$ 11 Decachlorobiphenyl	193595	213007	165955	196984	175627	173702	186478	9.493

Report Date : 04-Oct-2014 00:28

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INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2014 04:51
End Cal Date : 03-OCT-2014 16:13
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Cal Date : 04-Oct-2014 00:19 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D
Level 2: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D
Level 3: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D
Level 4: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D
Level 5: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D
Level 6: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F234.D

Compound	25.000 Level 1	50.000 Level 2	500.000 Level 3	1000.000 Level 4	2000.000 Level 5	5000.000 Level 6	___ RRF	% RSD
2 Aroclor 1016(1)	4142	3977	3069	4415	3722	3465	3798	12.794
(2)	5224	5085	3831	5410	4585	4327	4744	12.730
(3)	5417	5672	4516	6265	5250	5097	5369	10.899
(4)	3912	3841	3182	4233	3658	3474	3717	9.838
(5)	3613	3687	3059	4103	3581	3422	3578	9.537
3 Aroclor 1221(1)	1964	1973	2004	1761	1790	1622	1852	8.199
(2)	1253	1267	1280	1129	1137	1012	1180	8.934
(3)	4927	4852	4394	3914	3993	3668	4291	12.103
4 Aroclor 1232(1)	4953	4848	3866	3883	3349	3244	4024	18.090
(2)	2490	2380	1977	2007	1729	1656	2040	16.509
(3)	1856	2003	1635	1729	1428	1444	1682	13.524
(4)	3418	3292	2715	2675	2399	2286	2798	16.542
(5)	1766	1599	1420	1446	1261	1188	1446	14.744
5 Aroclor 1242(1)	4300	3907	3242	3426	3060	2973	3485	14.901
(2)	7195	6623	5547	5986	5393	5479	6037	12.064
(3)	3531	3267	2865	3103	2770	2775	3052	10.041
(4)	3269	2960	2554	2704	2390	2329	2701	13.316
(5)	3435	3214	2876	3053	2727	2662	2995	9.927
6 Aroclor 1248(1)	2548	2686	2226	2095	1816	1841	2202	16.313
(2)	5120	4915	4225	3855	3482	3517	4186	16.754
(3)	5496	5293	4589	4274	3705	3856	4535	16.261
(4)	3995	3975	3685	3454	3034	3218	3560	11.107
(5)	7298	7052	6046	5572	4908	5158	6006	16.445
7 Aroclor 1254(1)	6383	6281	5479	5158	4905	4682	5481	12.975
(2)	9732	9573	8323	7708	7315	6997	8275	13.973
(3)	3080	2955	2929	2716	2590	2406	2779	9.140
(4)	3705	3608	3219	2986	2766	2562	3141	14.539
(5)	5138	4555	4416	4164	3932	3642	4308	12.140

Report Date : 04-Oct-2014 00:28

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INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2014 04:51
End Cal Date : 03-OCT-2014 16:13
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Cal Date : 04-Oct-2014 00:19 tuser
Curve Type : Average

Compound	25.000 Level 1	50.000 Level 2	500.000 Level 3	1000.000 Level 4	2000.000 Level 5	5000.000 Level 6	RRF	% RSD
8 Aroclor 1260(1)	2894	3624	3079	3772	3457	3333	3360	9.836
(2)	5500	6248	5266	6343	5836	5821	5836	7.129
(3)	5076	5755	4943	5823	5374	5400	5395	6.525
(4)	12735	13835	11884	14396	13606	14150	13434	7.076
(5)	8097	8453	7561	9110	8421	8525	8361	6.122
9 Aroclor 1262(1)	10806	10076	8661	8535	7867	7463	8902	14.509
(2)	7523	6875	6097	5876	5382	5202	6159	14.484
(3)	17348	16651	14641	14229	13456	13469	14965	11.055
(4)	11895	11162	10154	9819	9122	8927	10180	11.395
(5)	6079	5723	5397	5233	4917	4834	5364	8.900
10 Aroclor 1268(1)	22964	20813	16560	17053	15860	15407	18110	16.886
(2)	18380	17287	14139	14635	13679	13358	15246	13.635
(3)	15233	14738	12320	12724	11869	11558	13074	11.786
(4)	45022	42289	35378	36418	34340	33806	37875	12.269
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	187541	177313	145489	237451	212355	215904	196009	16.695
$ 11 Decachlorobiphenyl	114263	118953	104841	127162	114337	114784	115723	6.287

Front	TCMX	1016	1221	1232	1242	1248	1254	1260	1262	1268	2,4'/4,4'-DDx
	3.975	4.345	4.194	4.194	4.875	5.062	6.437	**7.295**	8.334	10.038	6.367
		4.875	**4.284**	**4.651**	5.078	**5.446**	**6.887**	8.335	8.901	10.165	6.804
		5.079	4.347	4.874	5.318	5.852	7.047	8.899	8.367	10.668	7.127
		5.362		5.061	5.668	6.056	7.394	9.369	10.167	**11.998**	7.597
		5.665		5.174	**6.178**	6.479	8.017	10.169	**11.317**		7.764
											8.267

Rear	TCMX	1016	1221	1232	1242	1248	1254	1260	1262	1268	2,4'/4,4'-DDx
	4.472	4.762	**4.613**	4.764	5.115	5.115	**6.943**	**8.102**	9.570	11.385	7.170
		5.115	4.680	5.114	5.738	5.698	7.310	9.572	10.030	11.551	7.777
		5.778	4.763	**5.324**	**5.925**	6.128	7.407	10.032	10.717	12.041	7.947
		6.125		5.697	6.128	**6.578**	8.287	10.718	11.377	**13.435**	8.513
		6.328		6.127	7.065	7.065	9.057	11.365	**12.727**		8.737
											9.340

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F203.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

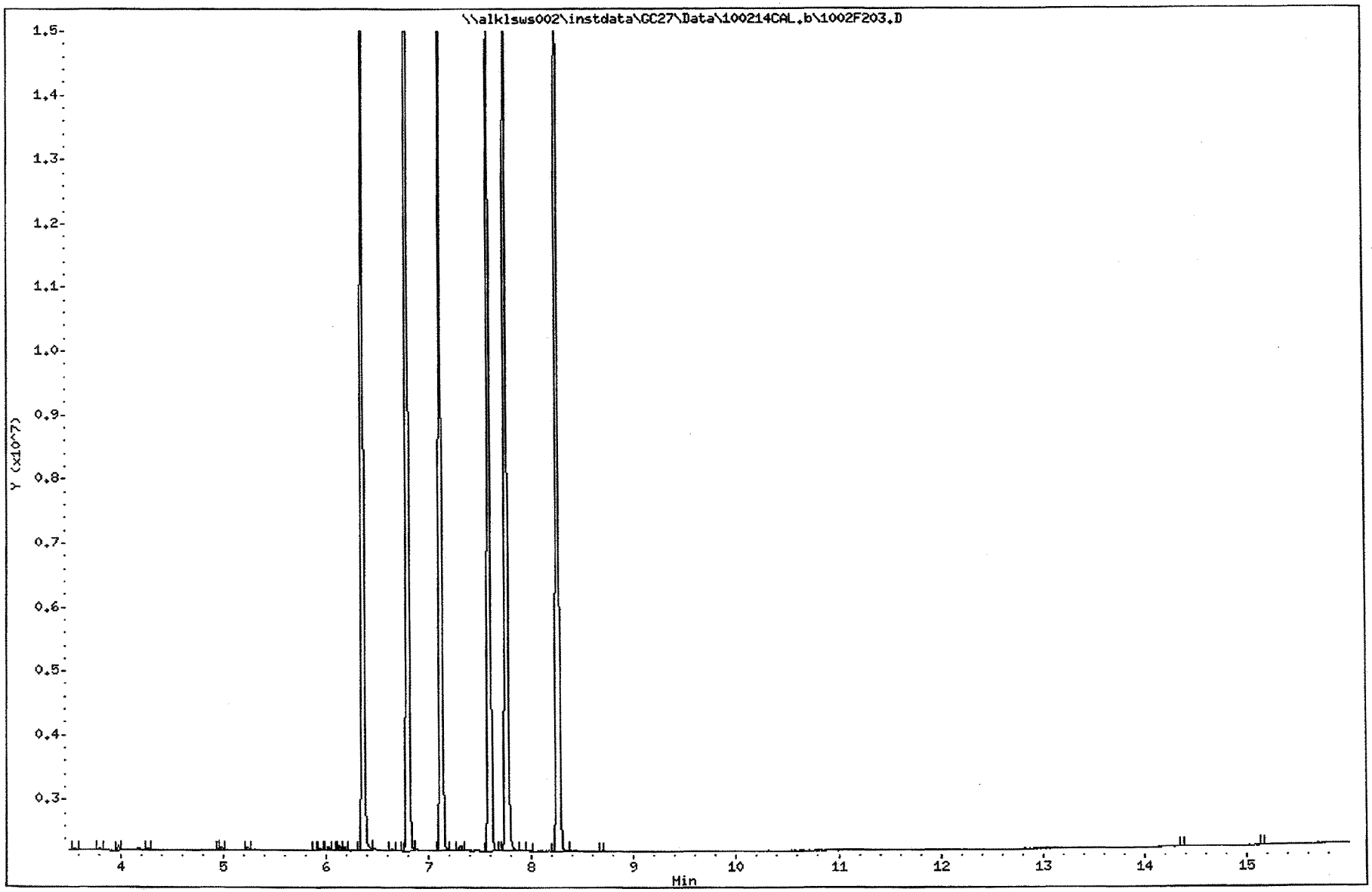
Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F203.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F203.D
Inj Date : 03-OCT-2014 04:04
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H
Misc Info :
Cal Date : 03-OCT-2014 23:27
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F203.D
Date : 03-OCT-2014 04:04
Client ID:
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

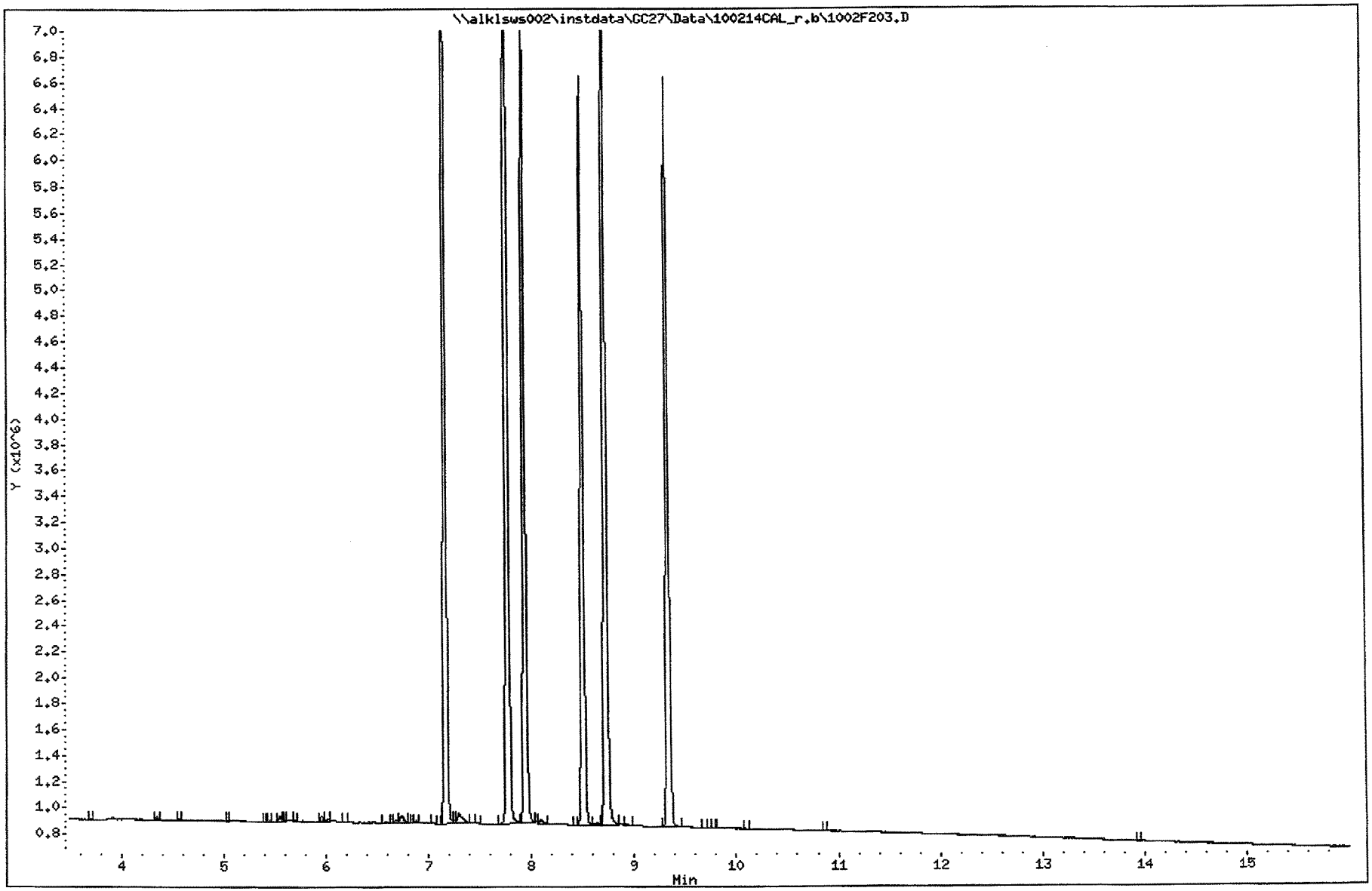


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F203.D
Date : 03-OCT-2014 04:04
Client ID:
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F204.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

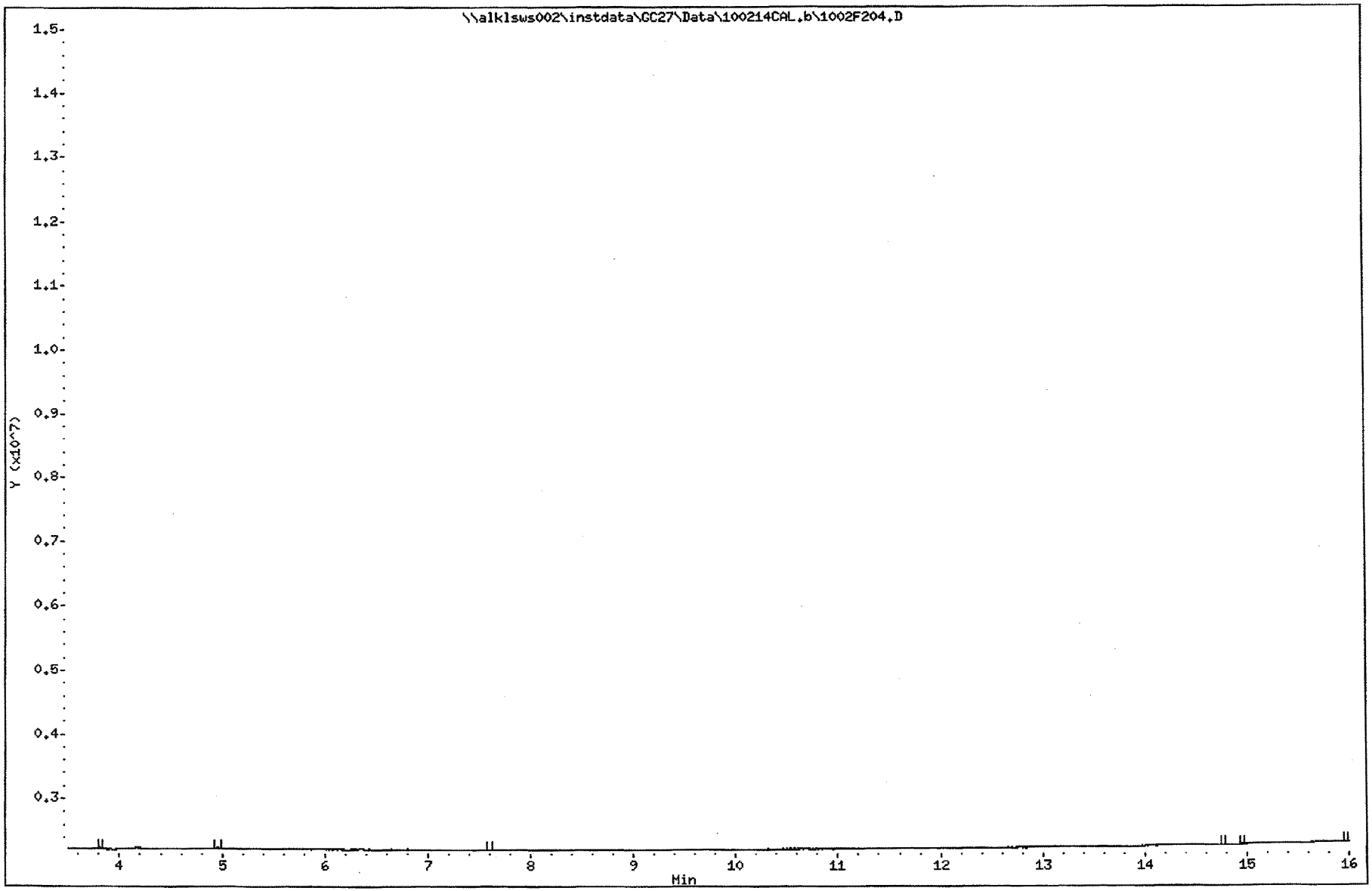
Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F204.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F204.D
Inj Date : 03-OCT-2014 04:27
Sample Info: IB
Misc Info :
Cal Date : 03-OCT-2014 23:27
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F204.D
Date : 03-OCT-2014 04:27
Client ID:
Sample Info: IB

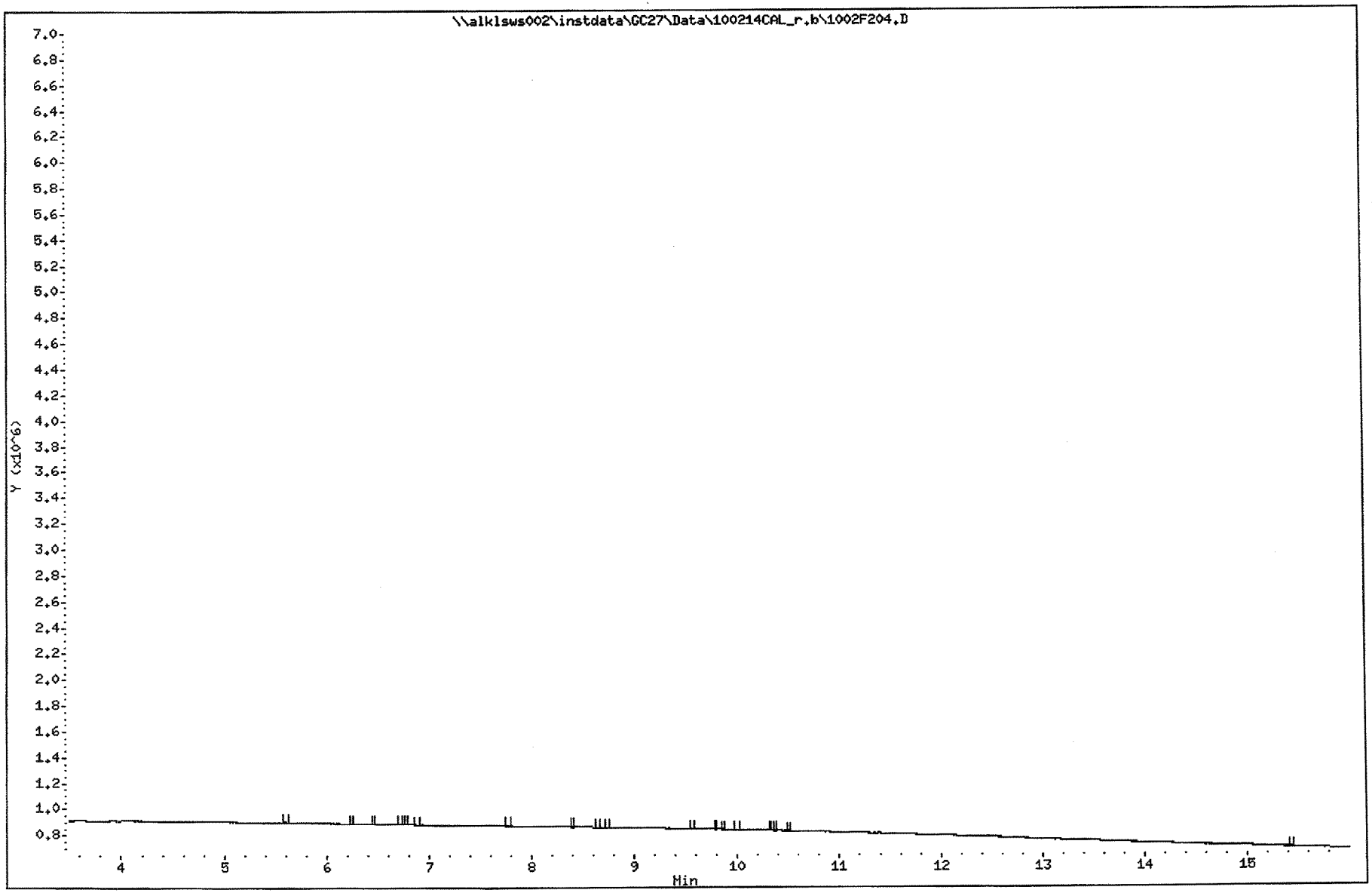
Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F204.D
Date : 03-OCT-2014 04:27
Client ID:
Sample Info: IB

Instrument: GC27.i
Operator: JHSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

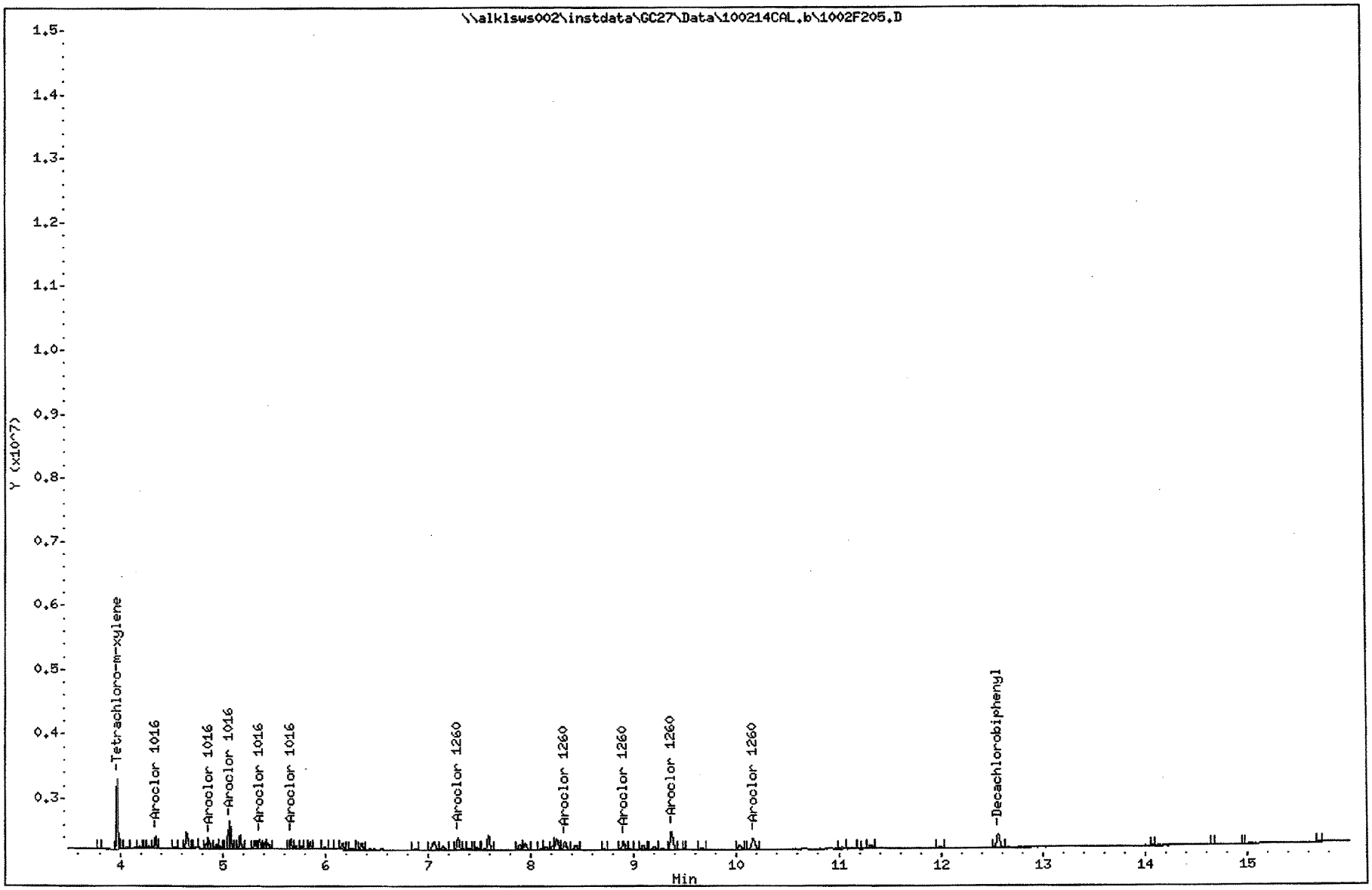
Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F205.D
Inj Date : 03-OCT-2014 04:51
Sample Info: 1660 @ 2.5-25ppb PCB6-55C
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.974	4.470	1031811	468853	2.63	2.39		100.00
Aroclor 1016	4.347	4.763	200014	103557	29.0	27.3	80.00- 120.00	100.00
	4.874	5.113	144759	130595	28.1	27.5	57.90- 86.85	72.37
	5.077	5.777	447975	135433	27.0	25.2	179.18- 268.77	223.97
	5.360	6.127	198898	97804	27.3	26.3	79.55- 119.33	99.44
	5.664	6.330	198173	90317	26.9	25.2	79.26- 118.90	99.08
		Average of Peak Amounts =			27.7	26.3		
Aroclor 1260	7.290	8.103	314797	72346	27.2	21.5	80.00- 120.00	100.00
	8.334	9.570	253536	137506	27.3	23.6	64.43- 96.65	80.54
	8.897	10.030	238685	126891	26.0	23.5	60.66- 90.99	75.82
	9.367	10.717	558834	318375	25.9	23.7	142.02- 213.03	177.52
	10.167	11.360	416604	202427	25.2	24.2	105.87- 158.81	132.34
		Average of Peak Amounts =			26.3	23.3		
Decachlorobiphenyl	12.560	13.983	483988	285658	2.60	2.47		100.00

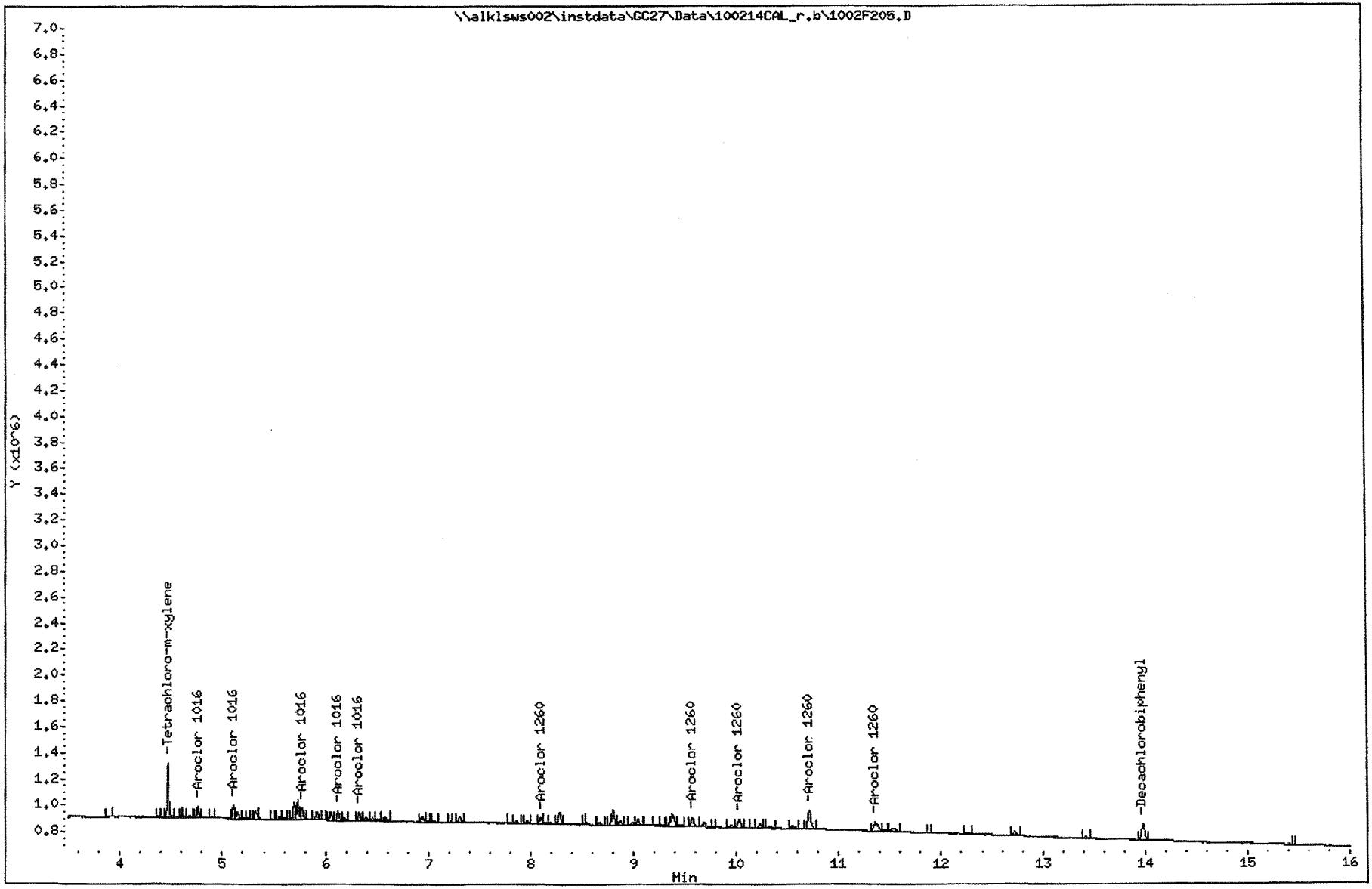
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F205.D
Date : 03-OCT-2014 04:51
Client ID:
Sample Info: 1660 @ 2.5-25ppb PCB6-55C

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F205.D
Date : 03-OCT-2014 04:51
Client ID:
Sample Info: 1660 @ 2.5-25ppb PCB6-55C

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D
Report Date: 04-Oct-2014 00:39

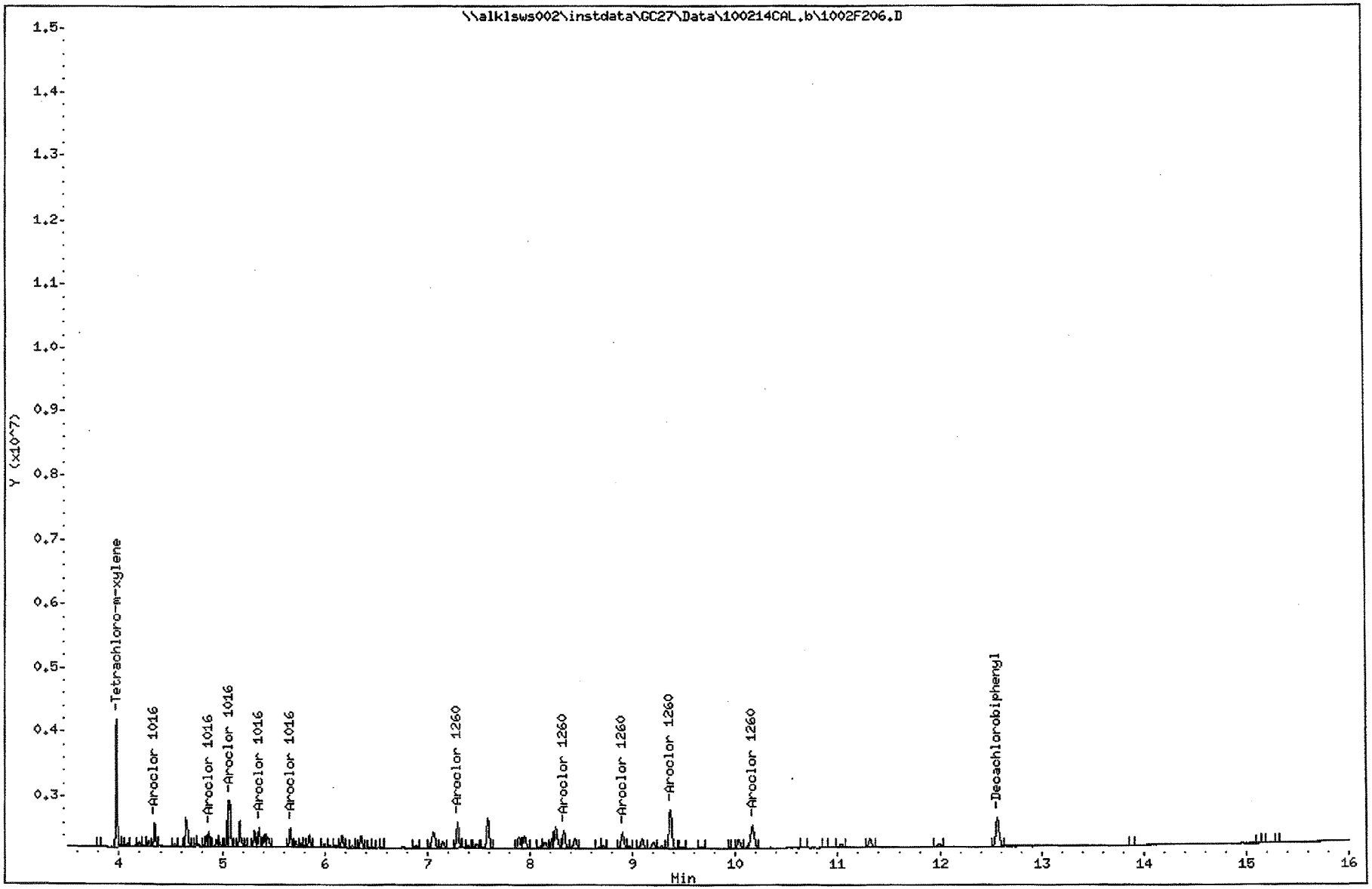
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F206.D
Inj Date : 03-OCT-2014 05:14
Sample Info: 1660 @ 5.0-50ppb PCB6-54K
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

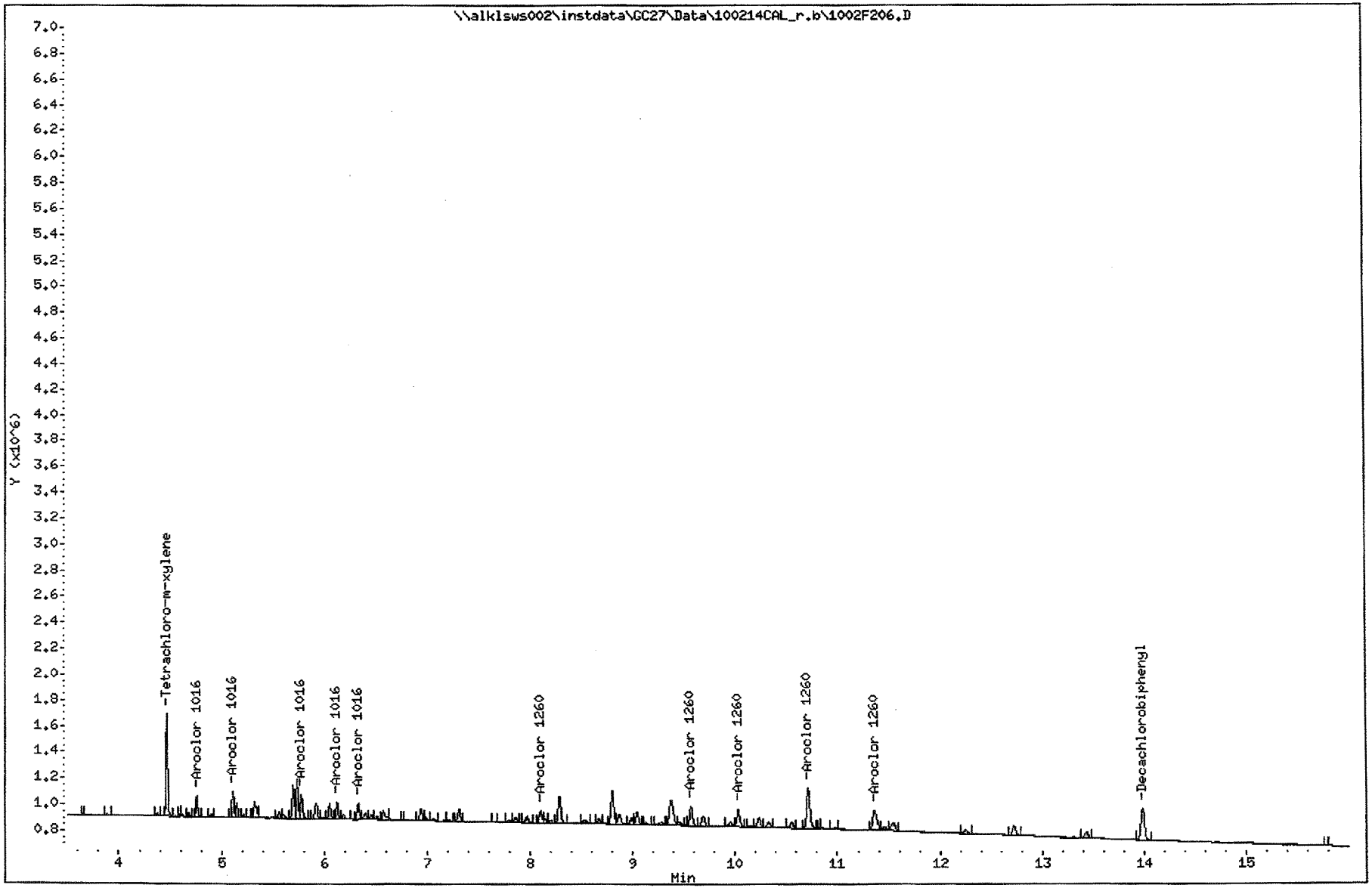
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.975	4.471	1893099	886564	4.83	4.52		100.00
Aroclor 1016	4.345	4.761	374323	198864	54.3	52.4	80.00- 120.00	100.00
	4.875	5.114	264643	254238	51.3	53.6	56.56- 84.84	70.70
	5.078	5.778	920791	283577	55.5	52.8	196.79- 295.19	245.99
	5.362	6.128	388321	192067	53.4	51.7	82.99- 124.49	103.74
	5.665	6.331	382545	184371	52.0	51.5	81.76- 122.64	102.20
			Average of Peak Amounts =		53.3	52.4		
Aroclor 1260	7.295	8.104	638533	181194	55.3	53.9	80.00- 120.00	100.00
	8.335	9.571	494147	312414	53.2	53.5	61.91- 92.87	77.39
	8.902	10.031	479313	287744	52.3	53.3	60.05- 90.08	75.06
	9.368	10.714	1159281	691769	53.7	51.5	145.24- 217.86	181.55
	10.165	11.361	929483	422637	56.3	50.5	116.45- 174.68	145.57
			Average of Peak Amounts =		54.2	52.5		
Decachlorobiphenyl	12.565	13.988	1065034	594765	5.71	5.14		100.00

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F206.D
Date : 03-OCT-2014 05:14
Client ID:
Instrument: GC27.i
Sample Info: 1660 @ 5.0-50ppb PCB6-54K
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F206.D
Date : 03-OCT-2014 05:14
Client ID:
Instrument: GC27.i
Sample Info: 1660 @ 5.0-50ppb PCB6-54K
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



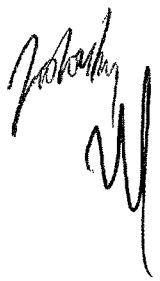
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F207.D
Inj Date : 03-OCT-2014 05:38
Sample Info: 1660 @ 50-500ppb PCB6-53H
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.975	4.472	14636835	7274450	37.3	37.1		100.00
Aroclor 1016	4.345	4.762	2793212	1534300	405	404	80.00- 120.00	100.00
	4.875	5.115	2148328	1915294	417	404	61.53- 92.29	76.91
	5.079	5.778	6831276	2257788	412	420	195.65- 293.48	244.57
	5.362	6.125	3115180	1590958	428	428	89.22- 133.83	111.53
	5.665	6.328	3167949	1529710	431	428	90.73- 136.10	113.42
			Average of Peak Amounts =		419	417		
Aroclor 1260	7.295	8.102	5126233	1539539	444	458	80.00- 120.00	100.00
	8.335	9.572	4177032	2632792	450	451	65.19- 97.78	81.48
	8.899	10.032	4199803	2471275	458	458	65.54- 98.31	81.93
	9.369	10.718	9471166	5942212	439	442	147.81- 221.71	184.76
	10.169	11.365	7342611	3780523	445	452	114.59- 171.88	143.24
			Average of Peak Amounts =		447	452		
Decachlorobiphenyl	12.565	13.985	8297726	5242053	44.5	45.3		100.00

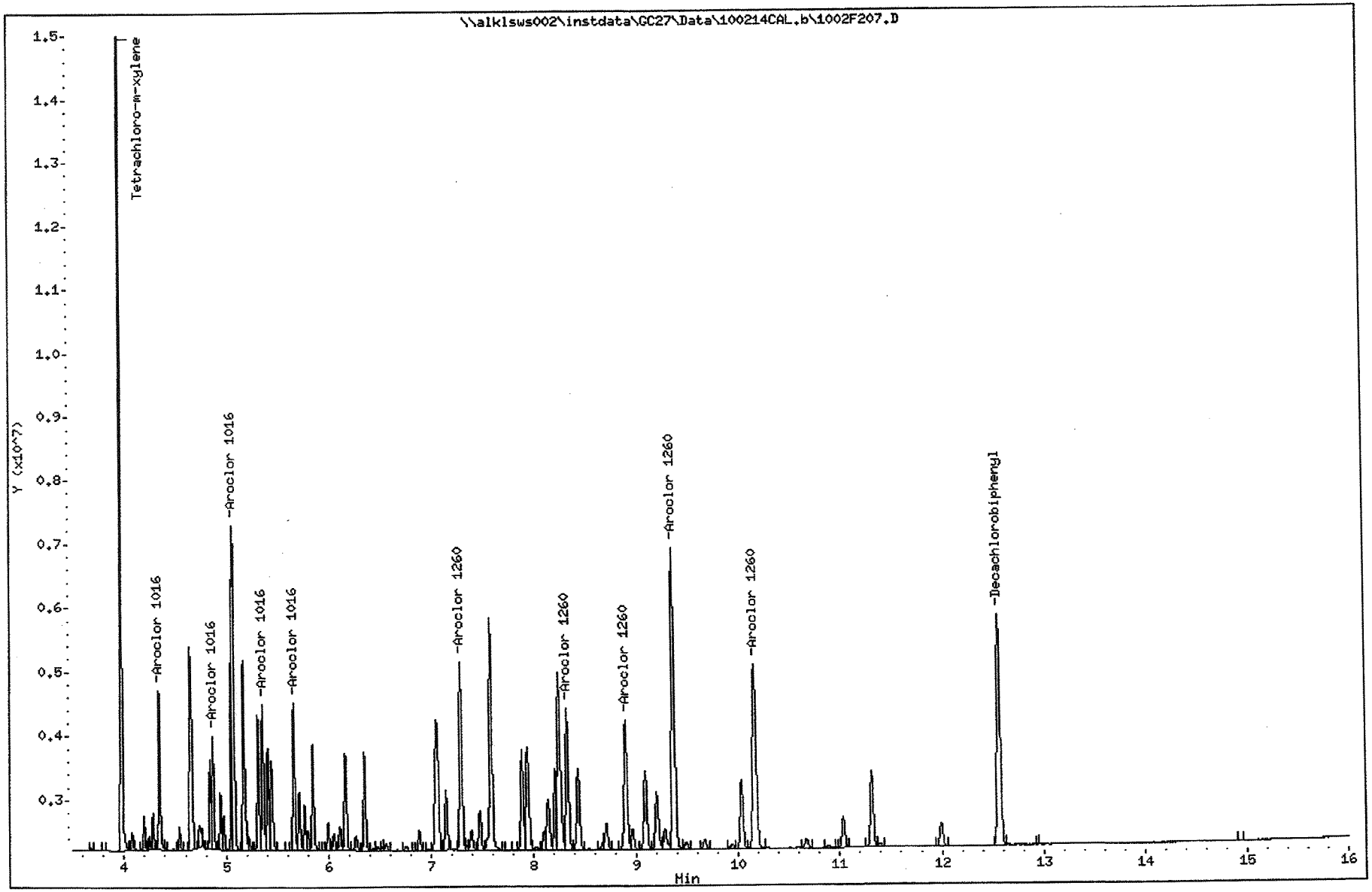


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F207.D
Date : 03-OCT-2014 05:38
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

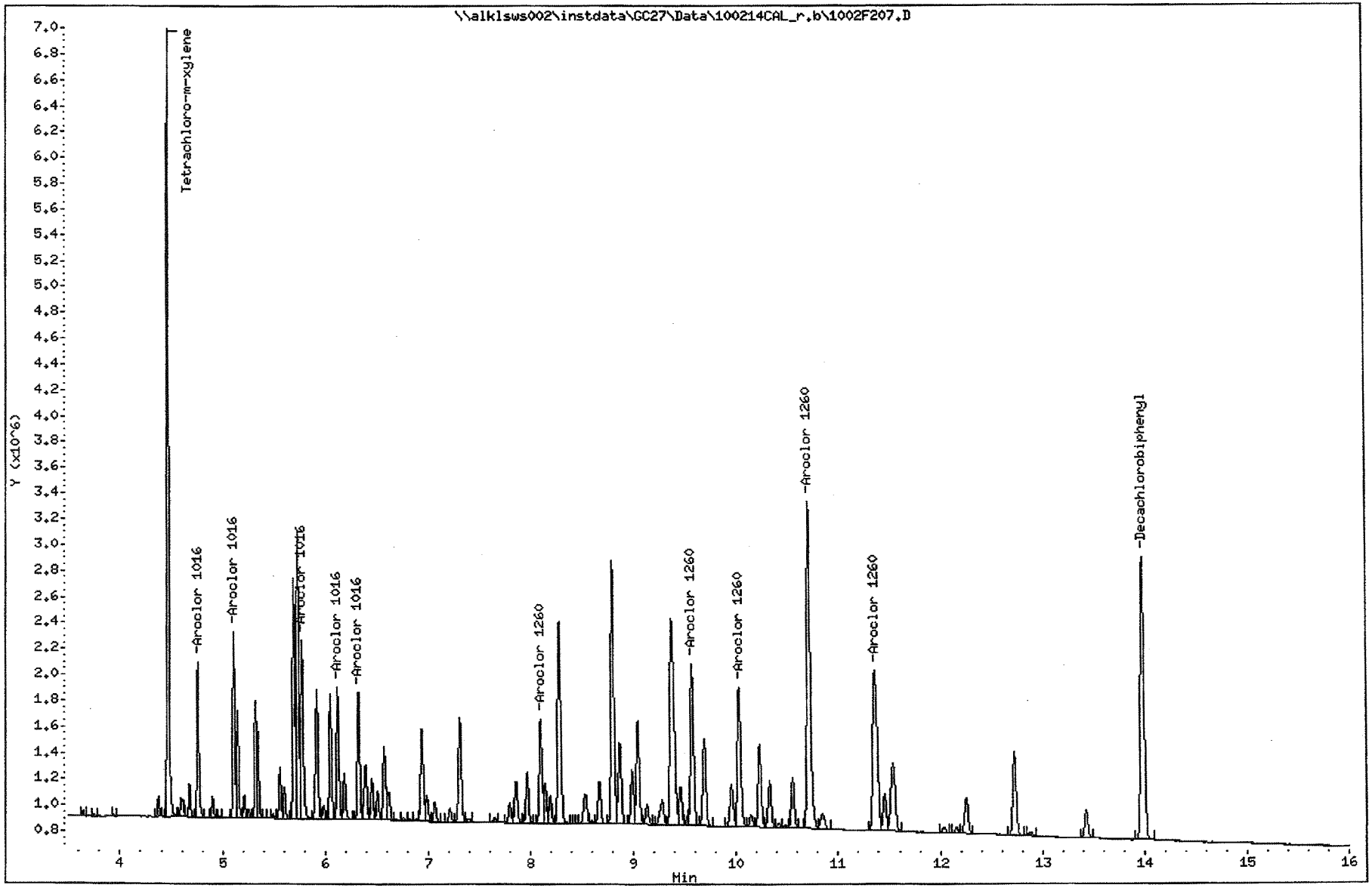
Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F207.D
Date : 03-OCT-2014 05:38
Client ID:
Instrument: GC27.i
Sample Info: 1660 @ 50-500ppb PCB6-53H
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



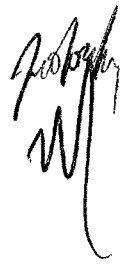
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F208.D
Inj Date : 03-OCT-2014 06:01
Sample Info: 1660 @ 100-1000ppb PCB6-46E
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.974	4.470	46197417	23745149	118	121		100.00
Aroclor 1016	4.348	4.760	7920832	4415354	1150	1160	80.00- 120.00	100.00
	4.874	5.114	6086735	5409900	1180	1140	61.48- 92.21	76.84
	5.078	5.777	17578066	6264618	1060	1170	177.54- 266.31	221.92
	5.361	6.127	8363924	4232662	1150	1140	84.48- 126.71	105.59
	5.668	6.330	8416455	4103091	1140	1150	85.01- 127.51	106.26
			Average of Peak Amounts =		1140	1150		
Aroclor 1260	7.294	8.100	12285085	3772401	1060	1120	80.00- 120.00	100.00
	8.334	9.570	10019632	6343091	1080	1090	65.25- 97.87	81.56
	8.901	10.030	9985173	5822625	1090	1080	65.02- 97.53	81.28
	9.368	10.714	22954792	14395918	1060	1070	149.48- 224.22	186.85
	10.168	11.360	17622522	9110350	1070	1090	114.76- 172.14	143.45
			Average of Peak Amounts =		1070	1090		
Decachlorobiphenyl	12.564	13.987	19698364	12716203	106	110		100.00

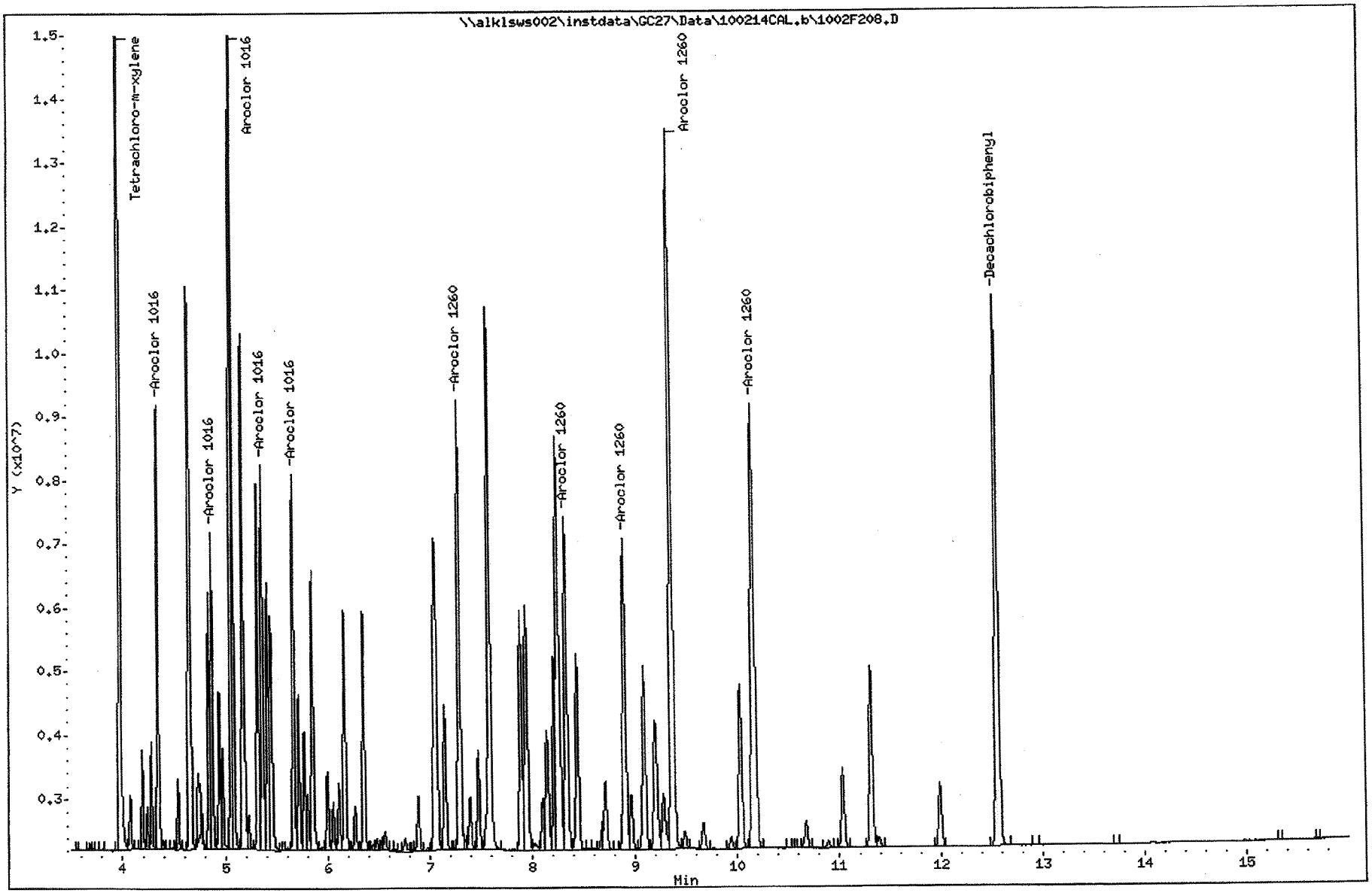


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F208.D
Date : 03-OCT-2014 06:01
Client ID:
Sample Info: 1660 @ 100-1000ppb PCB6-46E

Instrument: GC27.i

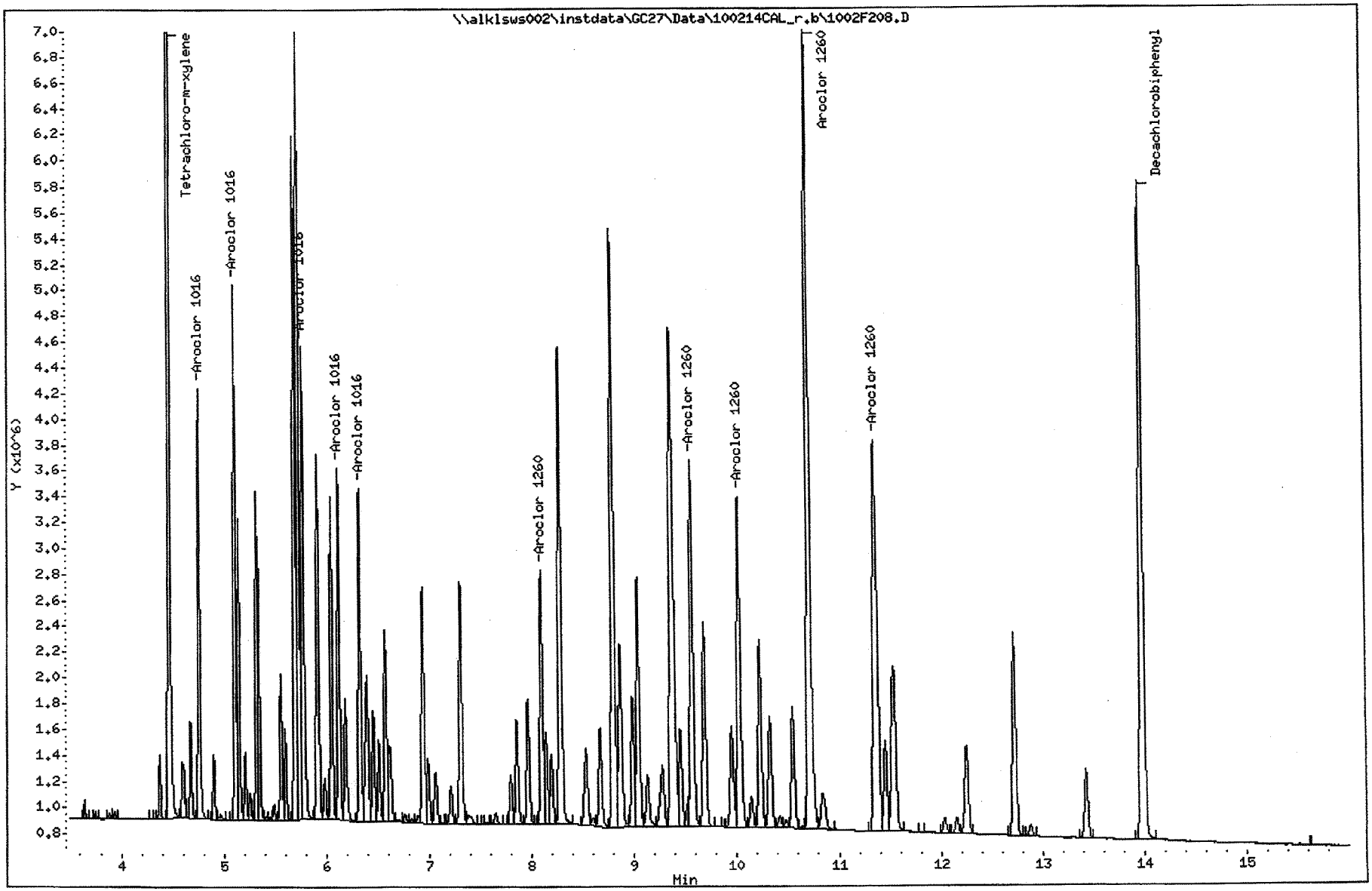
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F208.D
Date : 03-OCT-2014 06:01
Client ID:
Sample Info: 1660 @ 100-1000ppb PCB6-46E

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



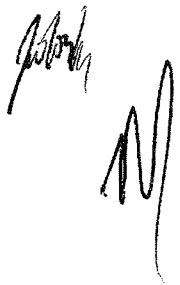
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F209.D
Inj Date : 03-OCT-2014 06:24
Sample Info: 1660 @ 200-2000ppb PCB6-46D
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.974	4.470	80437082	42471036	205	217		100.00
Aroclor 1016	4.348	4.764	13024784	7443405	1890	1960	80.00- 120.00	100.00
	4.874	5.114	10153798	9170137	1970	1930	62.37- 93.55	77.96
	5.078	5.777	34014696	10500665	2050	1960	208.92- 313.38	261.15
	5.361	6.127	13966453	7315722	1920	1970	85.78- 128.68	107.23
	5.664	6.330	14360507	7162286	1950	2000	88.20- 132.31	110.26
			Average of Peak Amounts =		1960	1960		
Aroclor 1260	7.294	8.100	21988364	6914104	1900	2060	80.00- 120.00	100.00
	8.334	9.570	17868023	11672322	1920	2000	65.01- 97.51	81.26
	8.901	10.030	17891940	10748019	1950	1990	65.10- 97.64	81.37
	9.368	10.717	42104437	27212128	1950	2030	153.19- 229.78	191.49
	10.168	11.360	31763394	16841774	1920	2010	115.56- 173.35	144.46
			Average of Peak Amounts =		1930	2020		
Decachlorobiphenyl	12.564	13.987	35125396	22867317	188	198		100.00

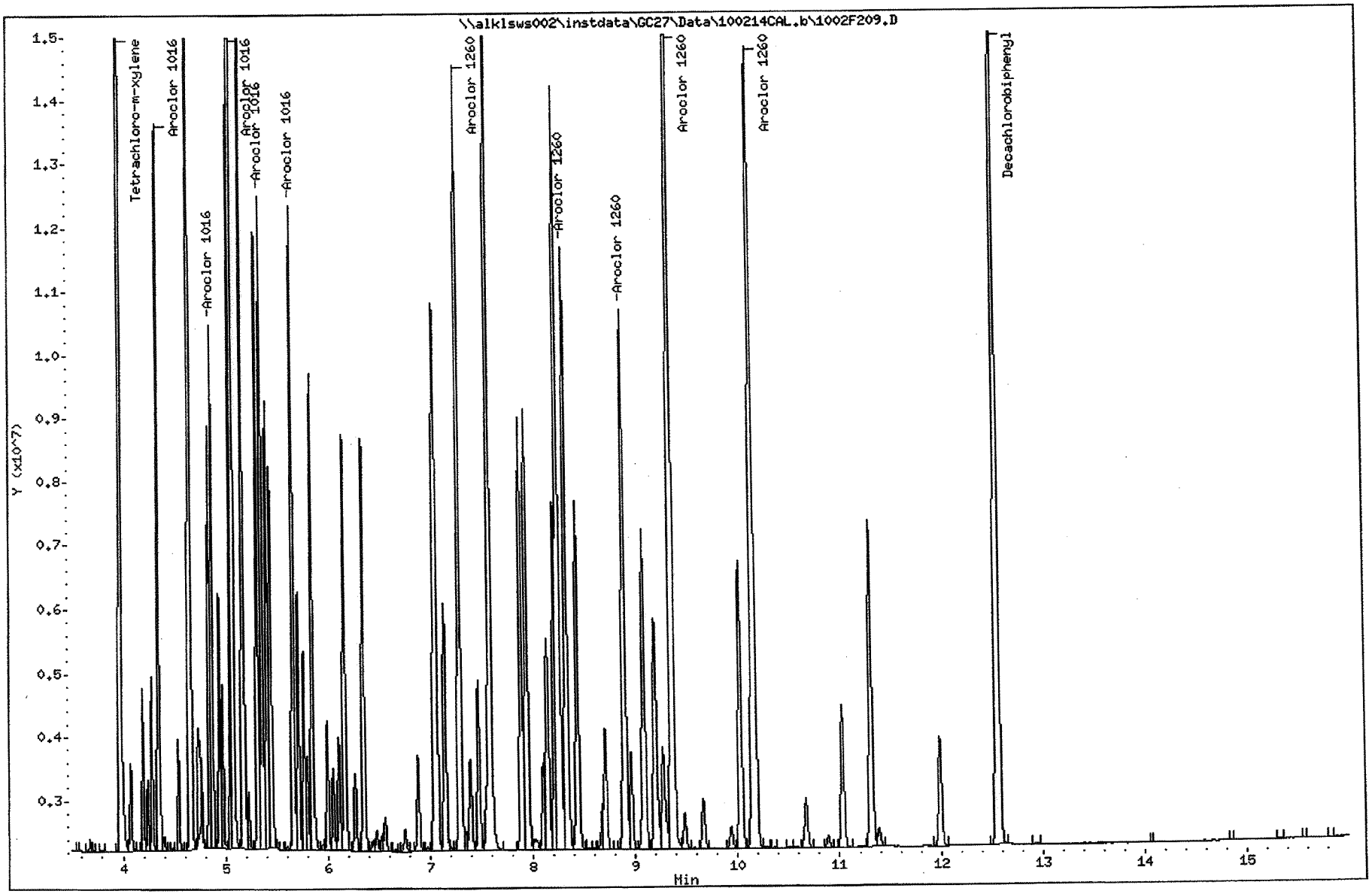


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F209.D
Date : 03-OCT-2014 06:24
Client ID:
Sample Info: 1660 @ 200-2000ppb PCB6-46D

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

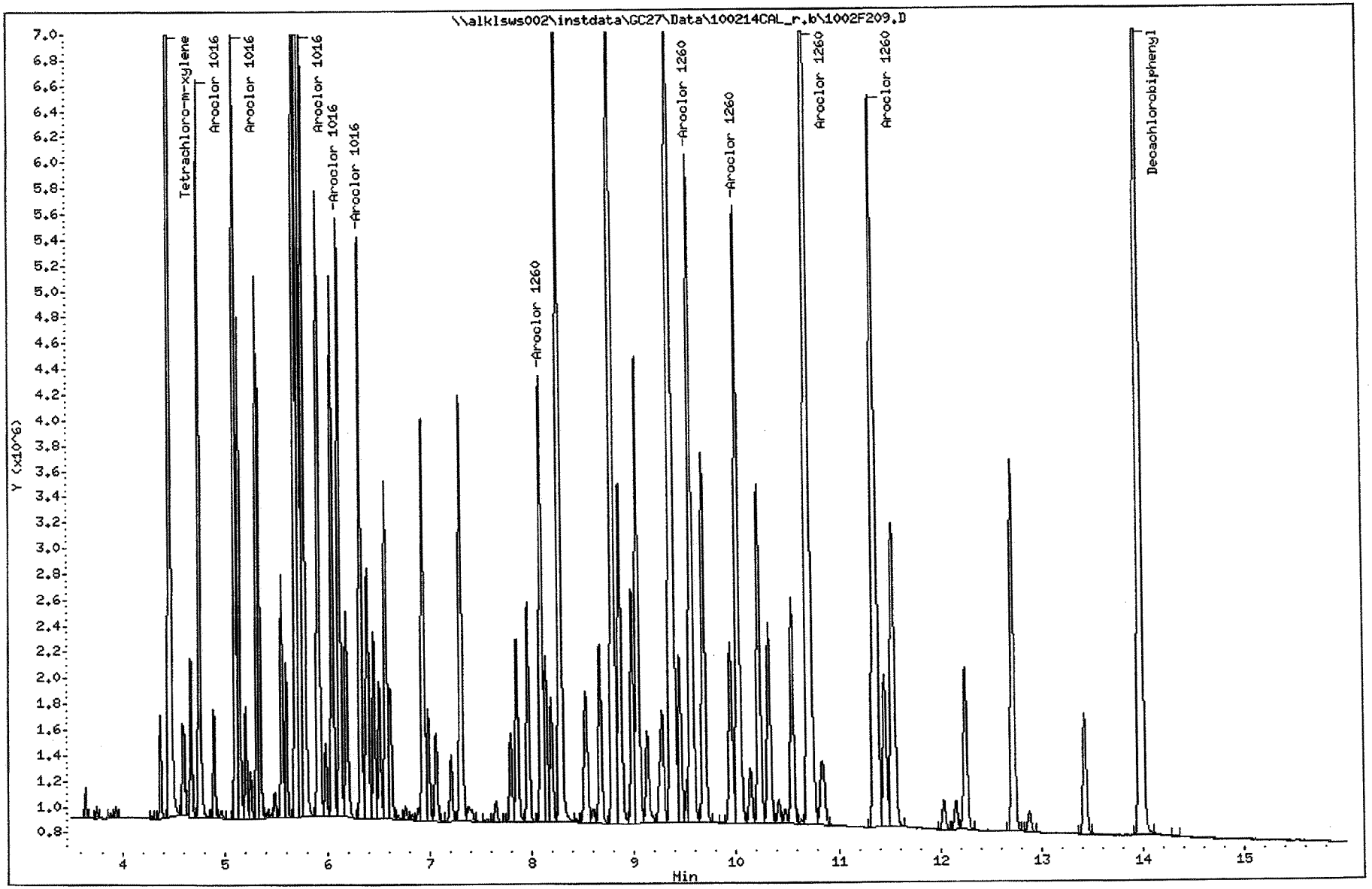


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F209.D
Date : 03-OCT-2014 06:24
Client ID:
Sample Info: 1660 @ 200-2000ppb PCB6-46D

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F210.D
Inj Date : 03-OCT-2014 06:48
Sample Info: 1660 @ 500-5000ppb PCB6-46C
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

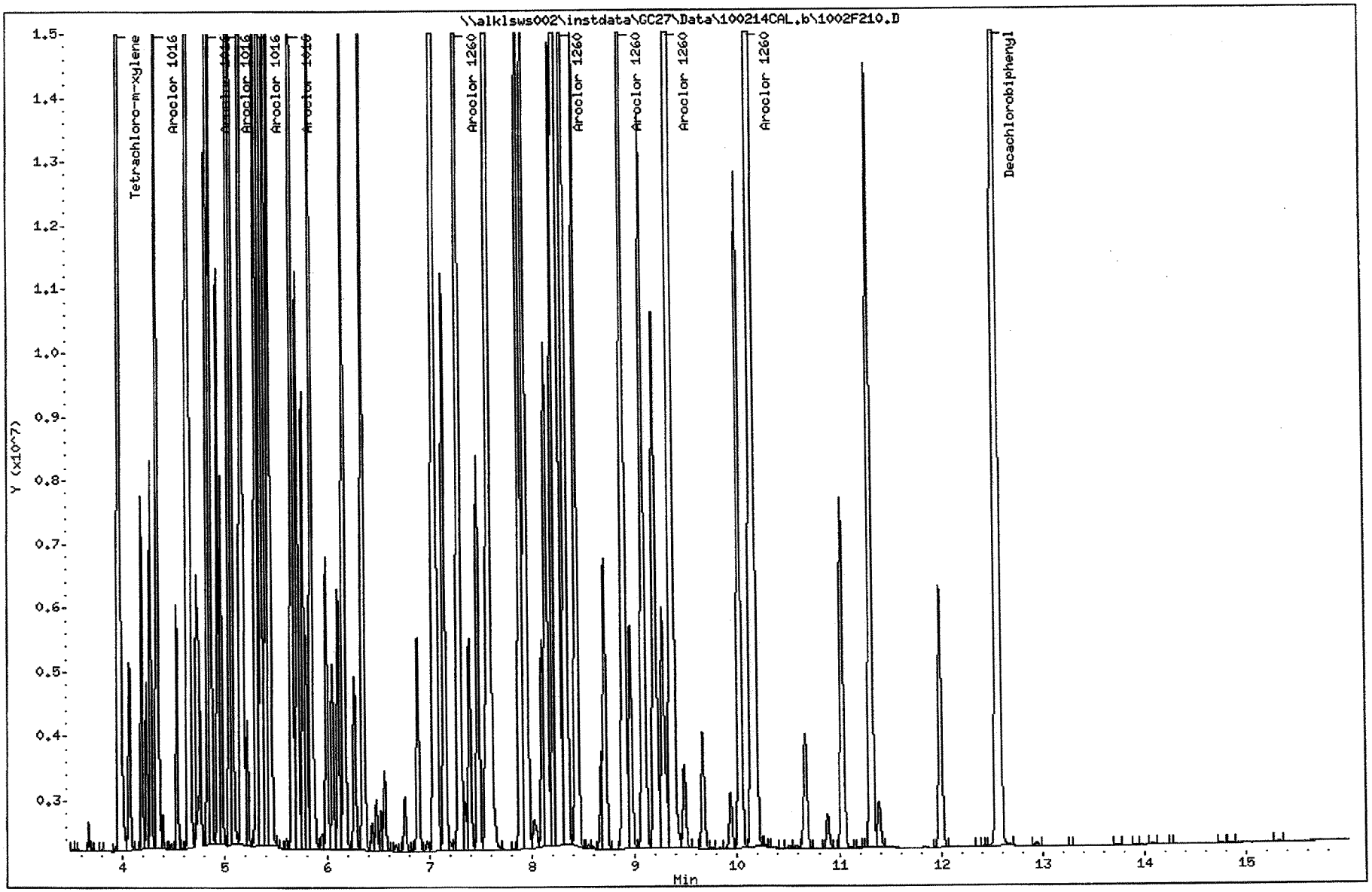
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.977	4.470	201990454	107951755	515	551		100.00
Aroclor 1016	4.347	4.763	29371124	17323246	4260	4560	80.00- 120.00	100.00
	4.873	5.113	21967158	21635717	4260	4560	59.83- 89.75	74.79
	5.077	5.780	74546918	25484827	4500	4750	203.05- 304.57	253.81
	5.360	6.126	31848774	17368853	4380	4670	86.75- 130.12	108.44
	5.667	6.330	33208731	17111610	4510	4780	90.45- 135.68	113.07
			Average of Peak Amounts =		4380	4660		
Aroclor 1260	7.293	8.103	52208496	16664900	4520	4960	80.00- 120.00	100.00
	8.337	9.573	42101507	29106376	4530	4990	64.51- 96.77	80.64
	8.900	10.030	42613112	27001607	4650	5000	65.30- 97.95	81.62
	9.370	10.716	105112472	70747892	4870	5270	161.07- 241.60	201.33
	10.167	11.363	78109177	42622963	4730	5100	119.69- 179.53	149.61
			Average of Peak Amounts =		4660	5060		
Decachlorobiphenyl	12.567	13.986	86850782	57391836	466	496		100.00

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F210.D
Date : 03-OCT-2014 06:48
Client ID:
Sample Info: 1660 @ 500-5000ppb PCB6-46C

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

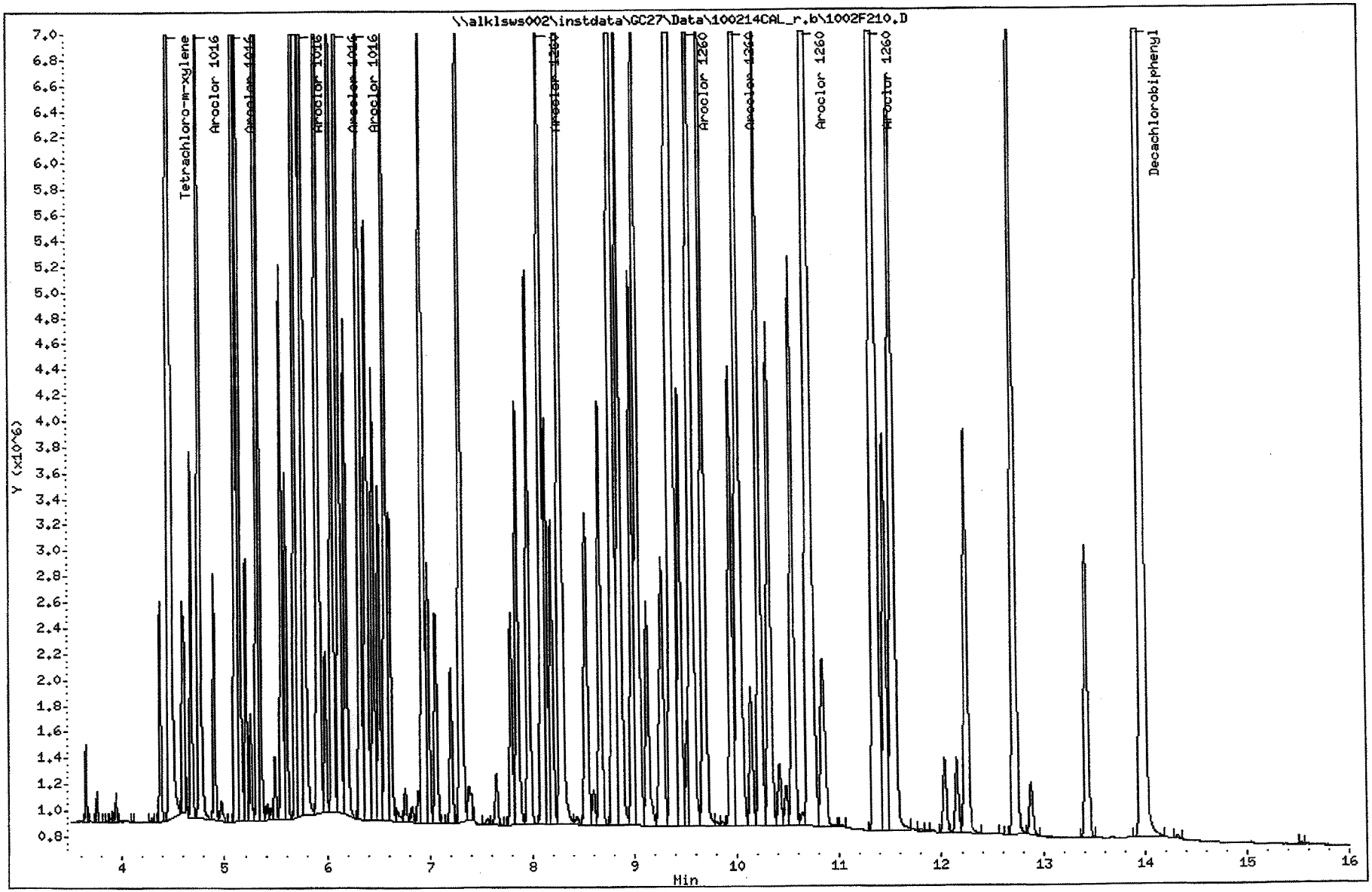


1700

Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F210.D
Date : 03-OCT-2014 06:48
Client ID:
Sample Info: 1660 @ 500-5000ppb PCB6-46C

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



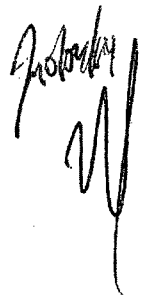
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F211.D
Inj Date : 03-OCT-2014 07:11
Sample Info: 2154 @ 50-25ppb PCB6-55B
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.196	4.612	195881	98212	56.8	53.0	80.00- 120.00	100.00
	4.283	4.679	126390	62633	56.4	53.1	51.62- 77.43	64.52
	4.346	4.762	494358	246371	60.4	57.4	201.90- 302.85	252.38
			Average of Peak Amounts =		57.9	54.5		
Aroclor 1254	6.439	6.942	135563	159568	29.6	29.1	80.00- 120.00	100.00
	6.889	7.309	239063	243298	29.3	29.4	141.08- 211.62	176.35
	7.046	7.409	494854	77005	30.8	27.7	292.03- 438.04	365.04
	7.393	8.285	318394	92625	30.4	29.5	187.89- 281.84	234.87
	8.019	9.055	196704	128440	29.3	29.8	116.08- 174.12	145.10
			Average of Peak Amounts =		29.9	29.1		

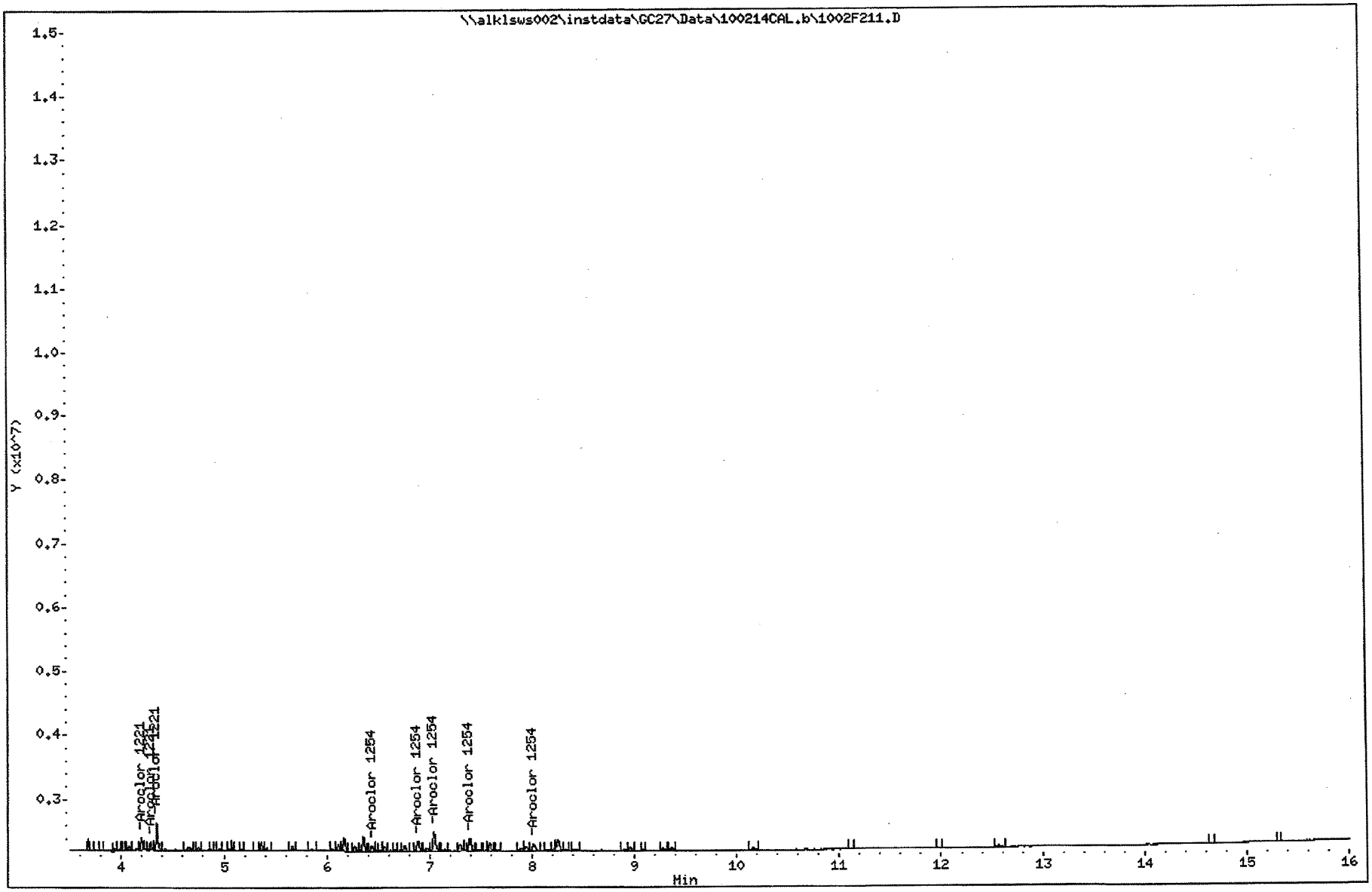


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F211.D
Date : 03-OCT-2014 07:11
Client ID:
Sample Info: 2154 @ 50-25ppb PCB6-55B

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

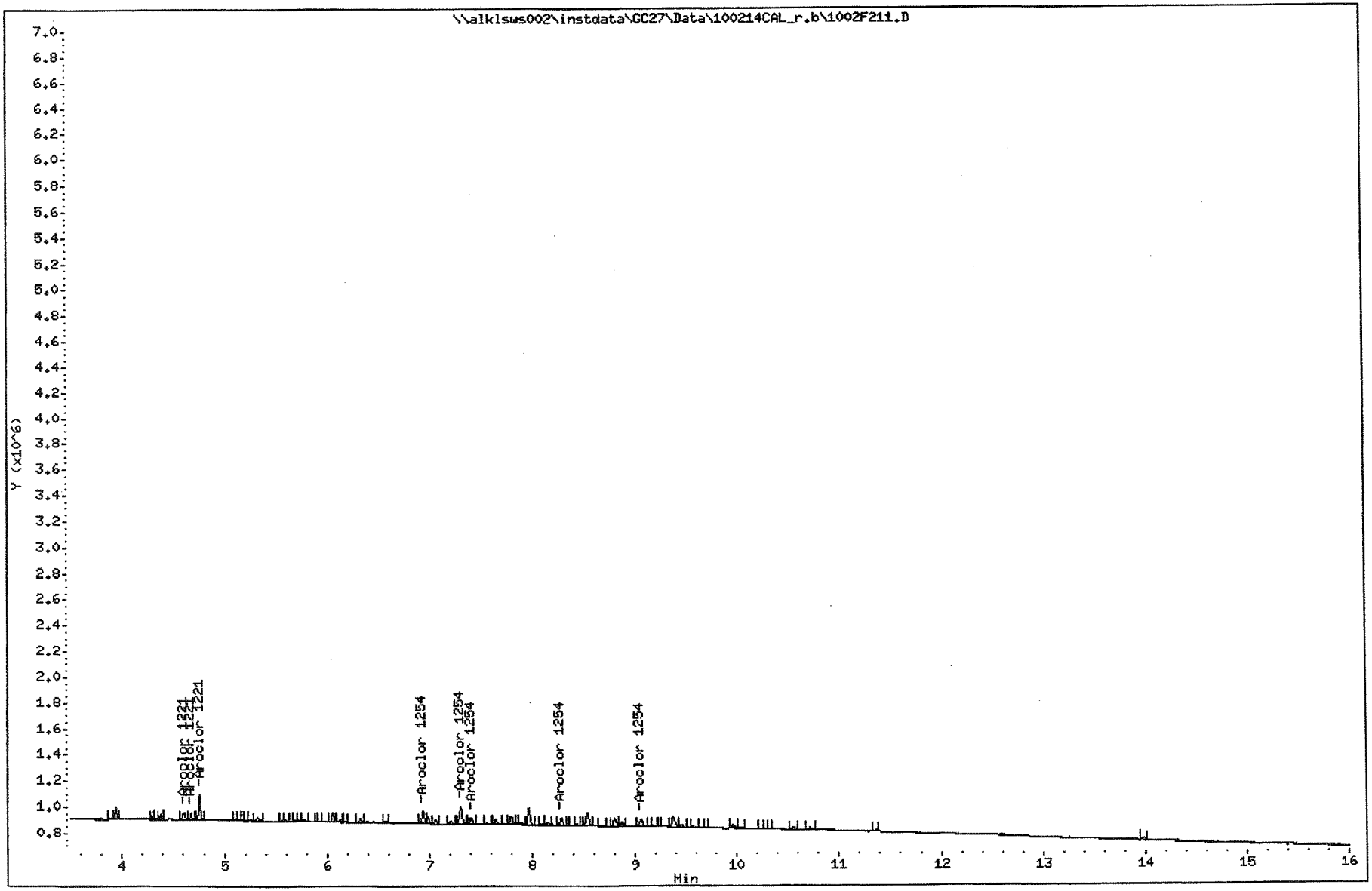
Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F211.D
Date : 03-OCT-2014 07:11
Client ID:
Sample Info: 2154 @ 50-25ppb PCB6-55B

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F212.D
Inj Date : 03-OCT-2014 07:35
Sample Info: 2154 @ 100-50ppb PCB6-55A
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

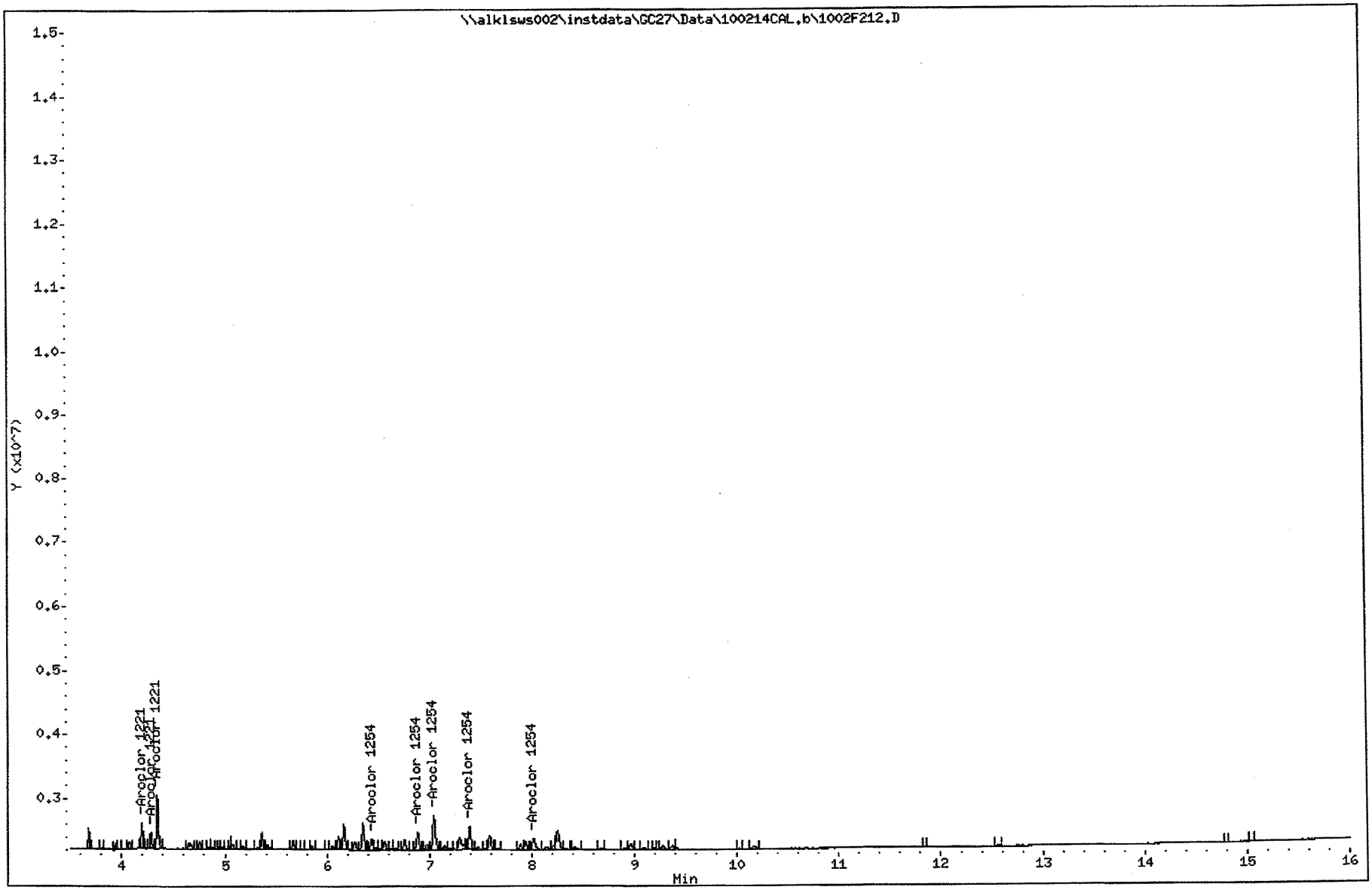
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.196	4.612	381480	197299	111	107	80.00- 120.00	100.00
	4.283	4.679	243033	126684	108	107	50.97- 76.45	63.71
	4.346	4.762	954602	485184	117	113	200.19- 300.28	250.24
			Average of Peak Amounts =		112	109		
Aroclor 1254	6.439	6.942	254431	314061	55.6	57.3	80.00- 120.00	100.00
	6.889	7.309	454713	478627	55.7	57.8	142.97- 214.46	178.72
	7.046	7.409	939506	147769	58.5	53.2	295.41- 443.11	369.26
	7.393	8.285	587130	180409	56.0	57.4	184.61- 276.91	230.76
	8.019	9.055	349681	227748	52.2	52.9	109.95- 164.92	137.44
			Average of Peak Amounts =		55.6	55.7		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F212.D
Date : 03-OCT-2014 07:35
Client ID:
Sample Info: 2154 @ 100-50ppb PCB6-55A

Instrument: GC27.i

Operator: JMSmith

Column phase: DB-35MS
Column diameter: 0.32

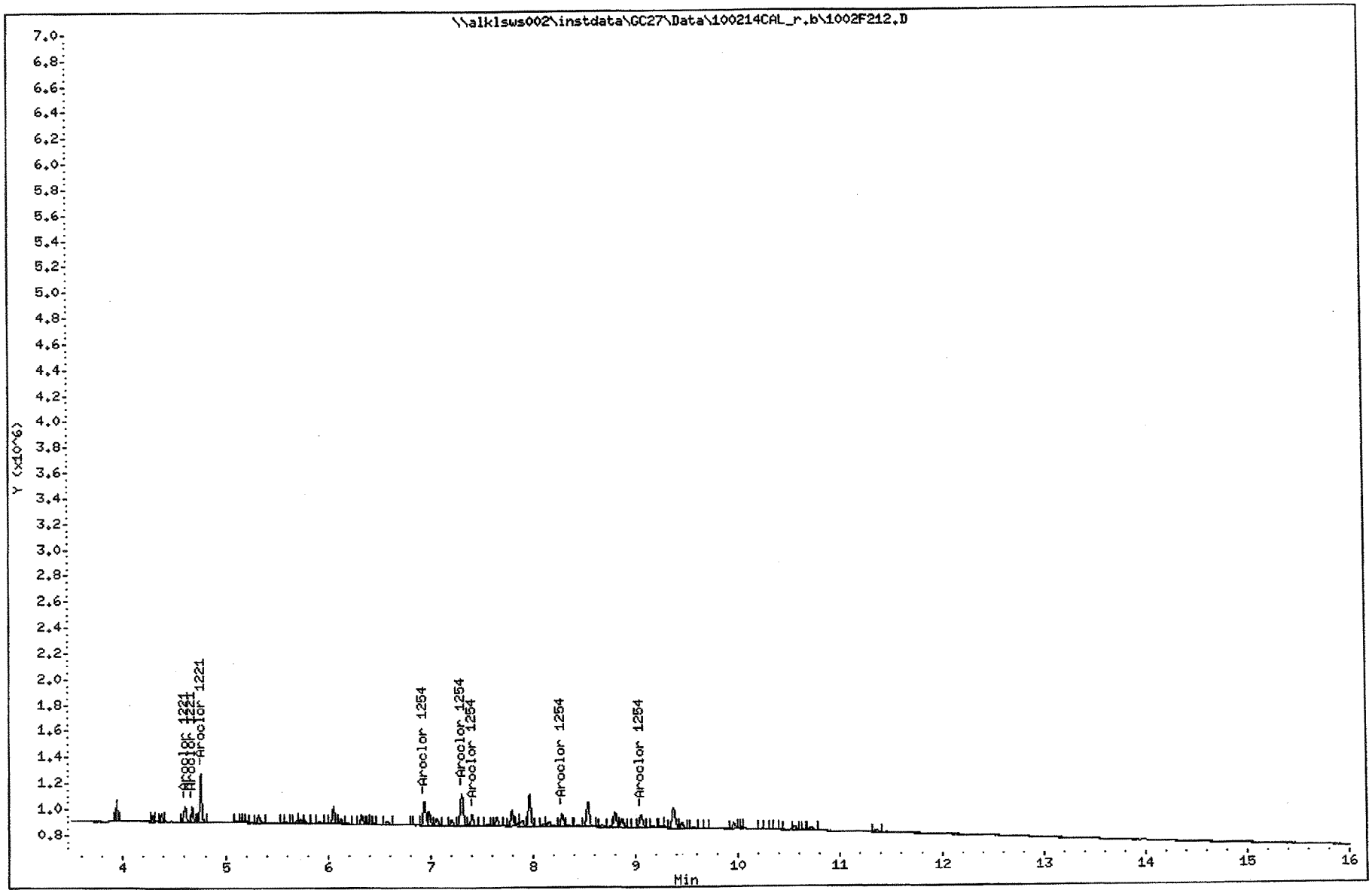


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F212.D
Date : 03-OCT-2014 07:35
Client ID:
Sample Info: 2154 @ 100-50ppb PCB6-55A

Column phase: DB-XLB

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F213.D
Inj Date : 03-OCT-2014 07:58
Sample Info: 2154 @ 1000-500ppb PCB6-540
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

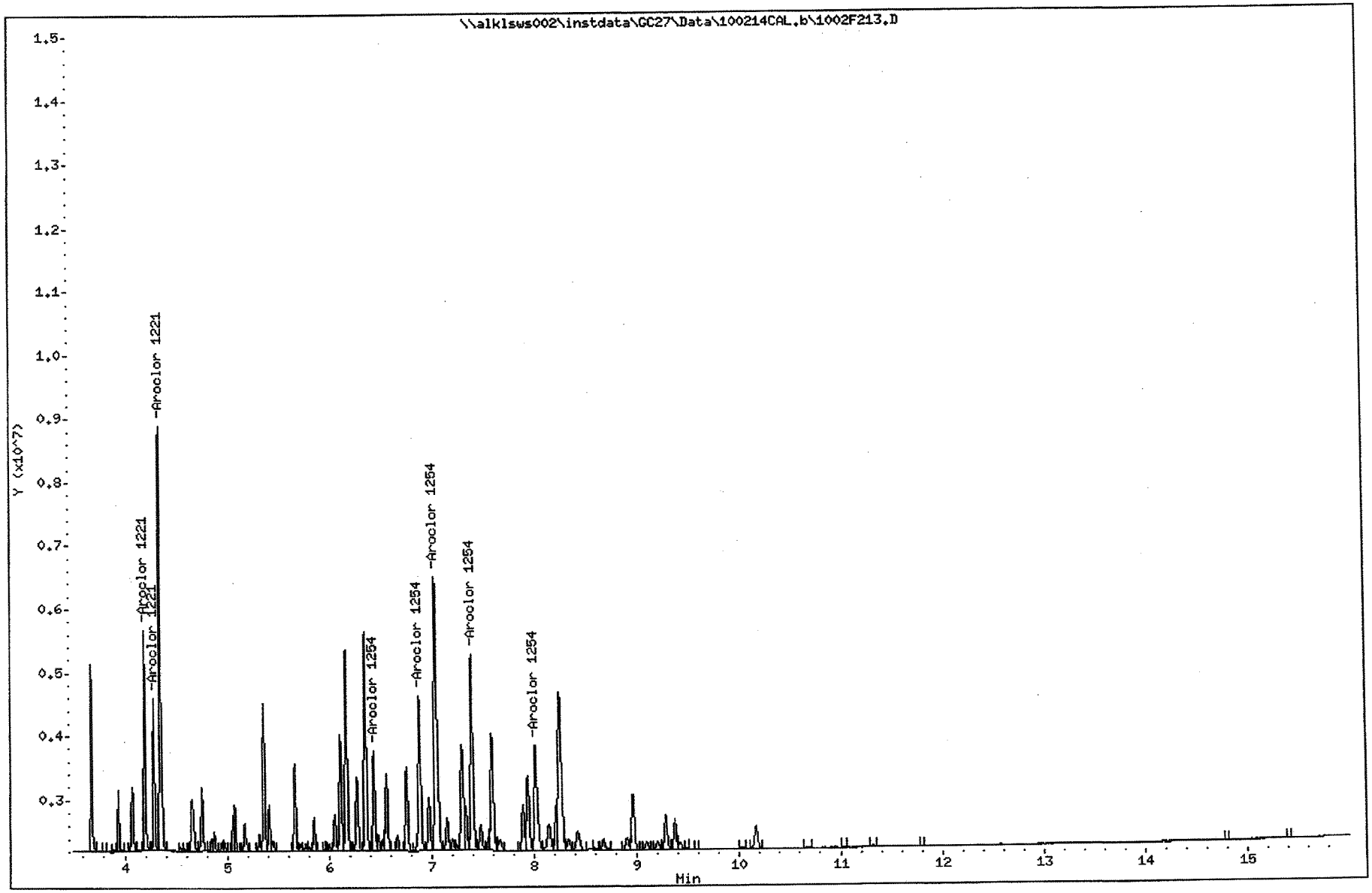
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.194	4.613	3652225	2003746	1060	1080	80.00- 120.00	100.00
	4.284	4.680	2430688	1280045	1080	1090	53.24- 79.86	66.55
	4.347	4.763	8330169	4394386	1020	1020	182.47- 273.70	228.08
			Average of Peak Amounts =		1050	1060		
Aroclor 1254	6.437	6.943	2347171	2739259	513	500	80.00- 120.00	100.00
	6.887	7.310	4134715	4161423	507	503	140.93- 211.39	176.16
	7.047	7.407	7889657	1464333	492	527	268.91- 403.36	336.13
	7.394	8.287	5337843	1609660	509	512	181.93- 272.90	227.42
	8.017	9.057	3467423	2207977	517	513	118.18- 177.27	147.73
			Average of Peak Amounts =		508	511		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F213.D
Date : 03-OCT-2014 07:58
Client ID:
Sample Info: 2154 @ 1000-500ppb PCB6-540

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

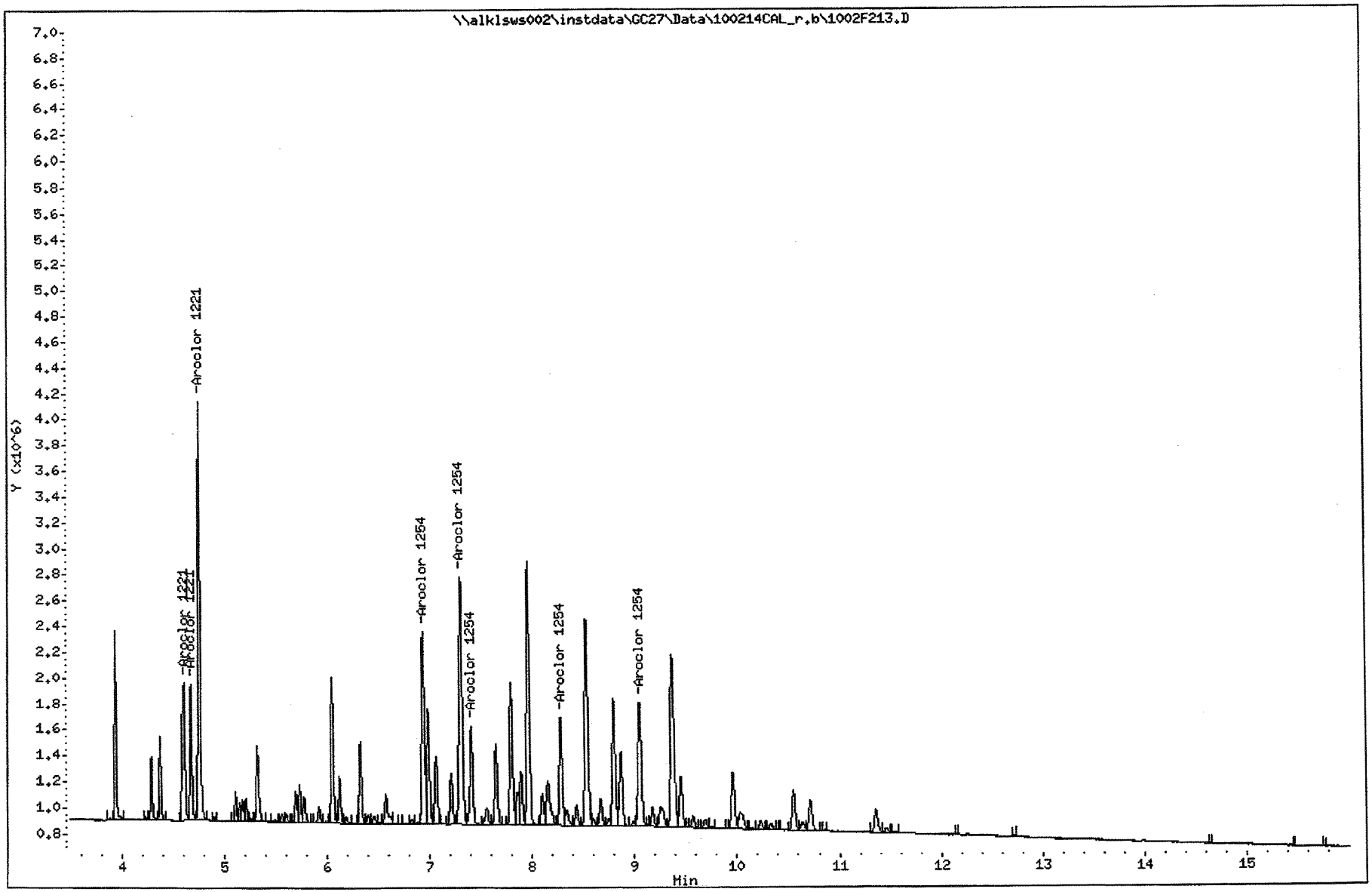
Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F213.D
Date : 03-OCT-2014 07:58
Client ID:
Sample Info: 2154 @ 1000-500ppb PCB6-540

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D
Report Date: 04-Oct-2014 00:39

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F214.D
Inj Date : 03-OCT-2014 08:22
Sample Info: 2154 @ 2000-1000ppb PCB6-54N
Misc Info :
Cal Date : 04-OCT-2014 00:39
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

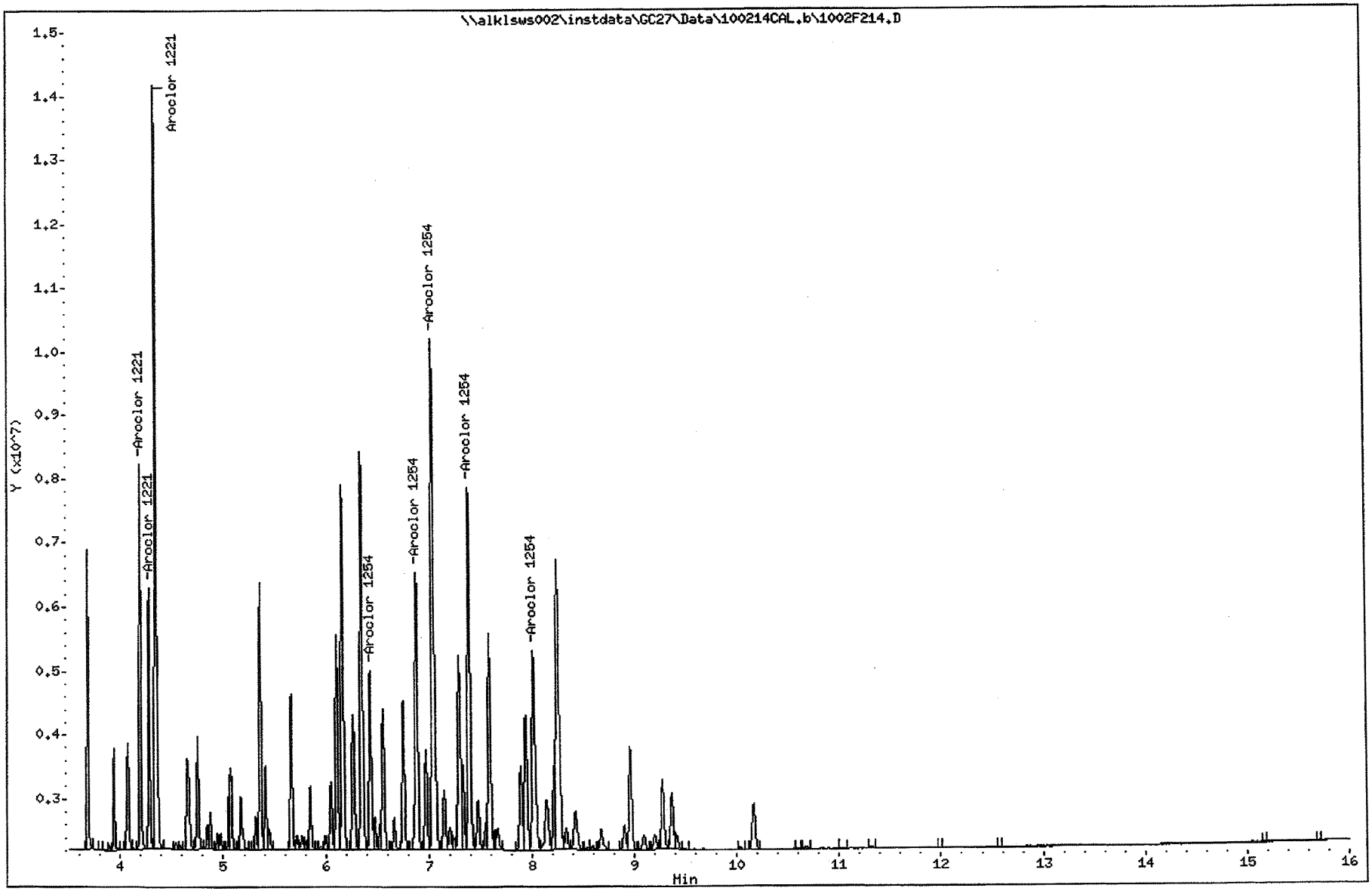
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.196	4.613	6412327	3522964	1860	1900	80.00- 120.00	100.00
	4.283	4.679	4250169	2258727	1900	1910	53.02- 79.54	66.28
	4.346	4.763	14654522	7828567	1790	1820	182.83- 274.24	228.54
			Average of Peak Amounts =		1850	1880		
Aroclor 1254	6.440	6.946	4379601	5157537	957	941	80.00- 120.00	100.00
	6.890	7.309	7713131	7708428	945	932	140.89- 211.34	176.11
	7.046	7.409	14610966	2715506	910	977	266.89- 400.34	333.61
	7.393	8.286	9844142	2986218	939	951	179.82- 269.73	224.77
	8.020	9.056	6511211	4163704	971	967	118.94- 178.41	148.67
			Average of Peak Amounts =		944	954		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F214.D
Date : 03-OCT-2014 08:22
Client ID:
Sample Info: 2154 @ 2000-1000ppb PCB6-54N

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

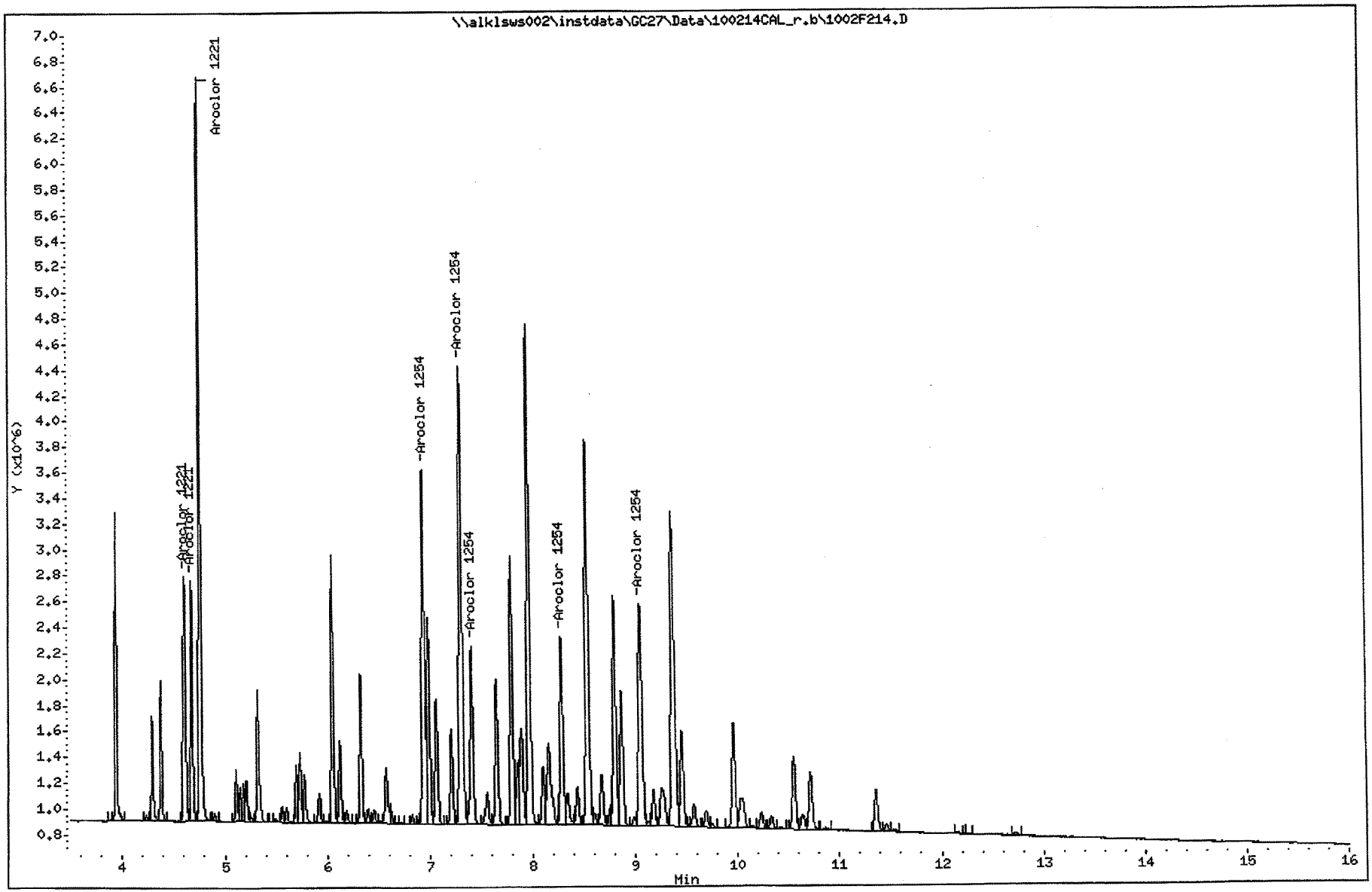
Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F214.D
Date : 03-OCT-2014 08:22
Client ID:
Sample Info: 2154 @ 2000-1000ppb PCB6-54N

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



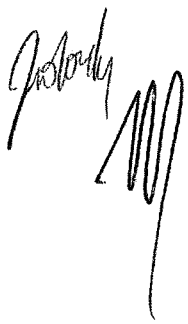
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F215.D
Inj Date : 03-OCT-2014 08:45
Sample Info: 2154 @ 4000-2000ppb PCB6-54M
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.195	4.611	12839365	7160012	3720	3870	80.00- 120.00	100.00
	4.282	4.678	8404507	4548077	3750	3860	52.37- 78.55	65.46
	4.348	4.761	29534174	15970079	3610	3720	184.02- 276.03	230.03
			Average of Peak Amounts =		3690	3820		
Aroclor 1254	6.438	6.944	8262422	9809400	1800	1790	80.00- 120.00	100.00
	6.888	7.308	14757107	14630441	1810	1770	142.88- 214.33	178.61
	7.048	7.408	28012168	5180338	1750	1860	271.22- 406.84	339.03
	7.395	8.284	18595924	5531048	1770	1760	180.05- 270.08	225.07
	8.018	9.054	12309005	7863489	1840	1830	119.18- 178.77	148.98
			Average of Peak Amounts =		1790	1800		

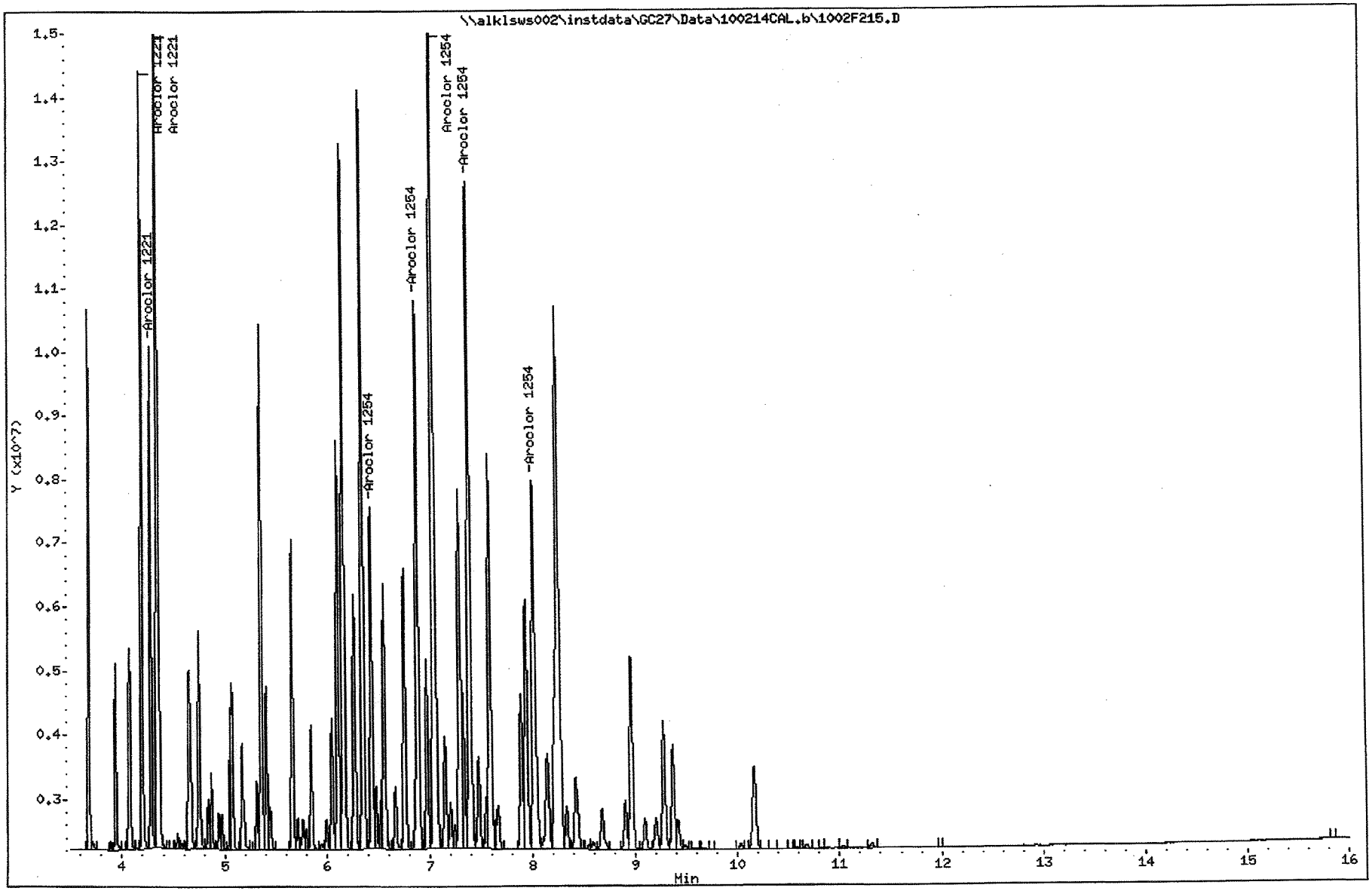


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F215.D
Date : 03-OCT-2014 08:45
Client ID:
Sample Info: 2154 @ 4000-2000ppb PCB6-54M

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

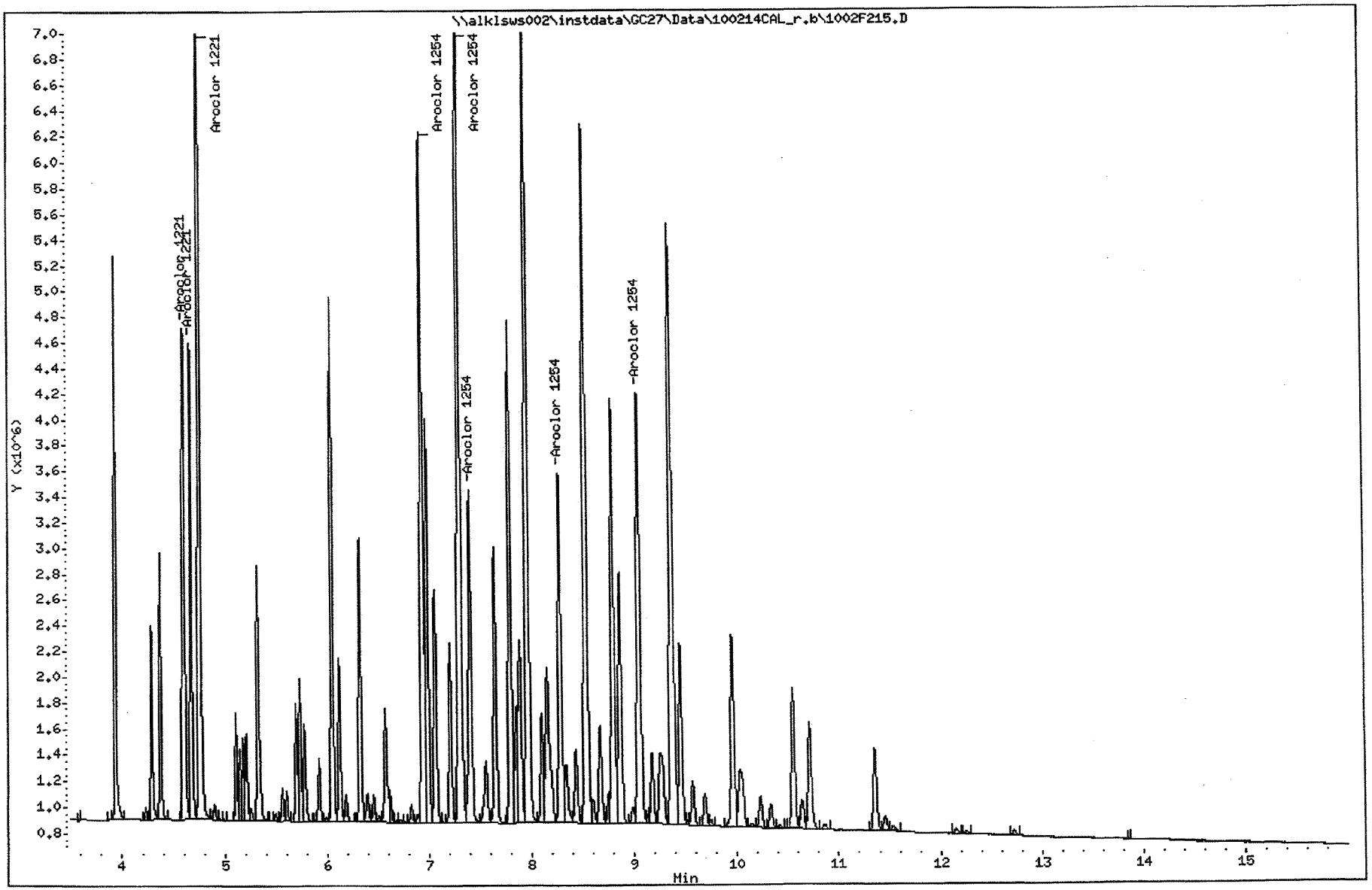
Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F215.D
Date : 03-OCT-2014 08:45
Client ID:
Sample Info: 2154 @ 4000-2000ppb PCB6-54M

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



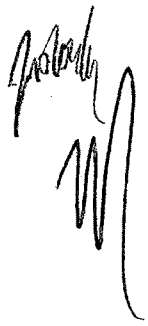
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F216.D
Inj Date : 03-OCT-2014 09:09
Sample Info: 2154 @ 10000-5000ppb PCB6-54L
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.195	4.611	28879351	16217348	8380	8750	80.00- 120.00	100.00
	4.282	4.678	18407344	10118040	8210	8580	50.99- 76.49	63.74
	4.345	4.761	66384959	36684787	8110	8550	183.90- 275.84	229.87
			Average of Peak Amounts =		8230	8630		
Aroclor 1254	6.439	6.945	18752273	23409309	4100	4270	80.00- 120.00	100.00
	6.889	7.308	34702914	34984519	4250	4230	148.05- 222.07	185.06
	7.049	7.408	66618267	12032335	4150	4330	284.20- 426.31	355.25
	7.395	8.285	43194176	12809396	4120	4080	184.27- 276.41	230.34
	8.019	9.055	28776229	18208142	4290	4230	122.76- 184.15	153.45
			Average of Peak Amounts =		4180	4230		

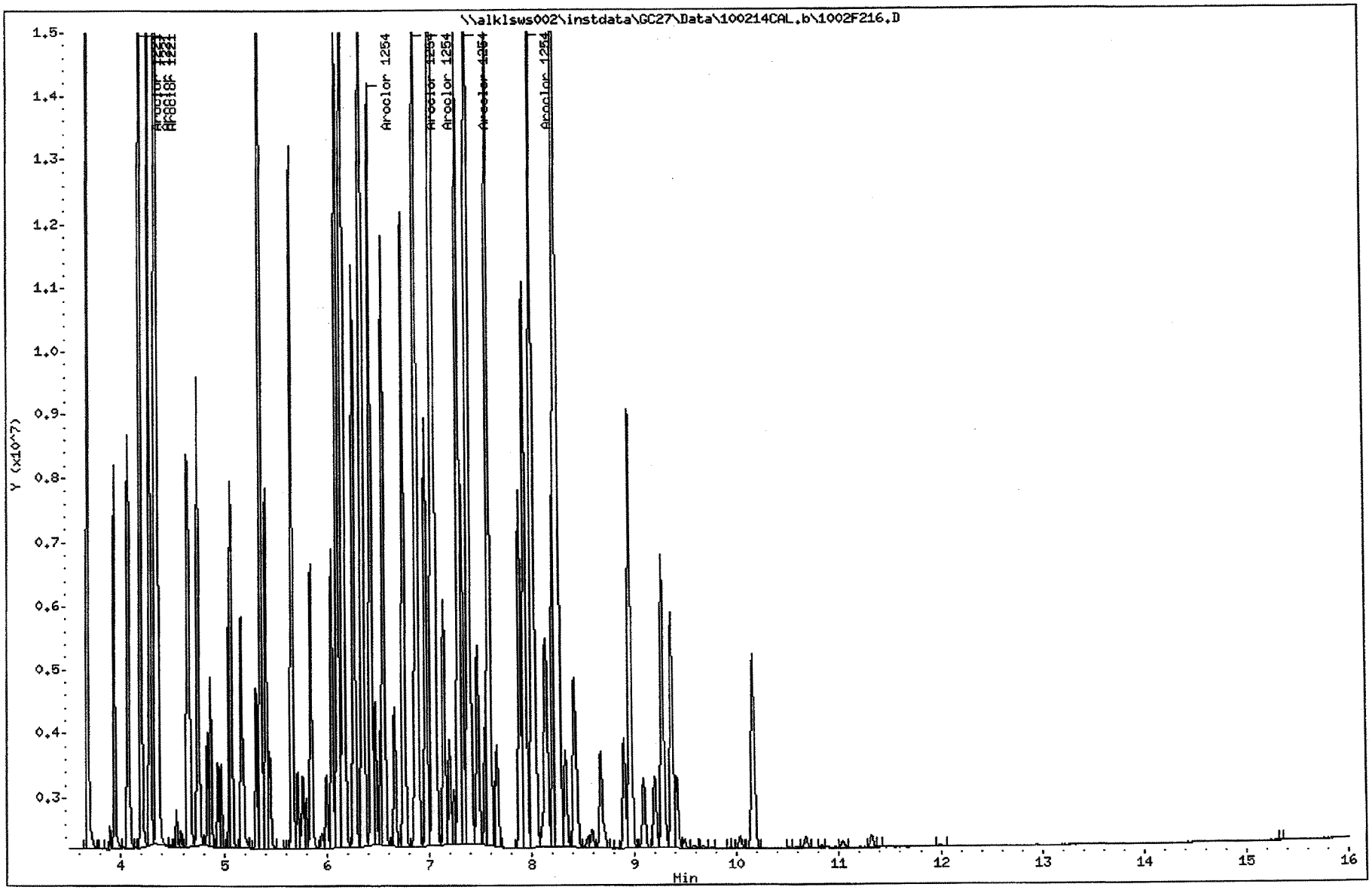


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F216.D
Date : 03-OCT-2014 09:09
Client ID:
Sample Info: 2154 @ 10000-5000ppb PCB6-54L

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

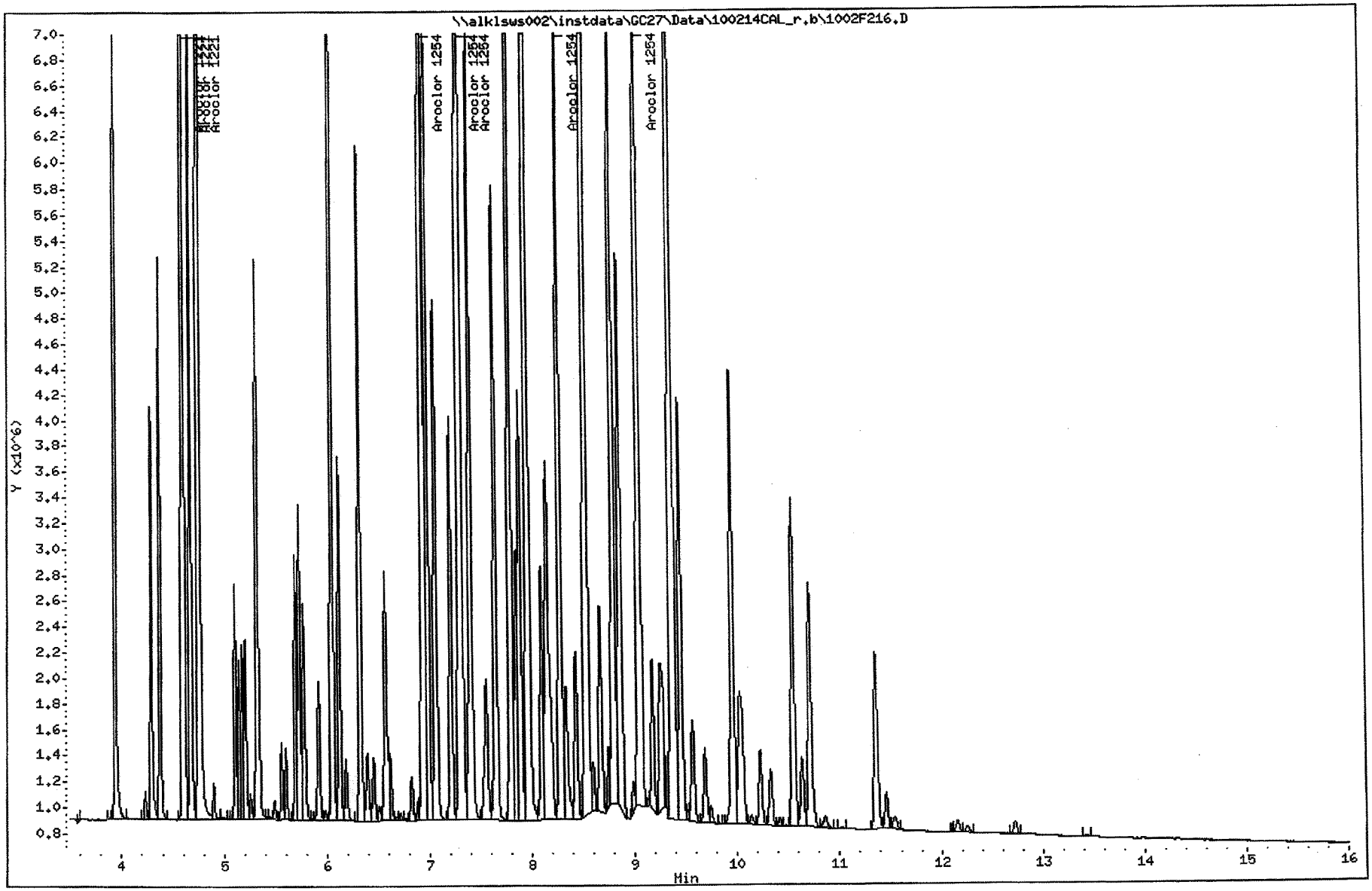


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F216.D
Date : 03-OCT-2014 09:09
Client ID:
Sample Info: 2154 @ 10000-5000ppb PCB6-54L

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



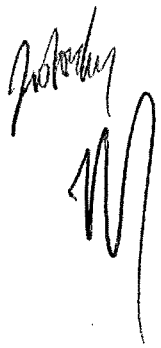
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F217.D
Inj Date : 03-OCT-2014 09:32
Sample Info: 3262 @ 25ppb PCB6-54A
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.194	4.764	80458	123816	30.1	30.8	80.00- 120.00	100.00
	4.651	5.114	192407	62250	31.4	30.5	191.31- 286.97	239.14
	4.874	5.324	68489	46404	30.0	27.6	68.10- 102.15	85.12
	5.061	5.700	117472	85443	27.6	30.5	116.80- 175.20	146.00
	5.174	6.127	134615	44144	30.1	30.5	133.85- 200.77	167.31
			Average of Peak Amounts =		29.8	30.0		
Aroclor 1262	8.334	9.570	430699	270160	31.5	30.3	80.00- 120.00	100.00
	8.901	10.030	367762	188082	31.3	30.5	68.31- 102.46	85.39
	9.368	10.714	740374	433692	31.2	29.0	137.52- 206.28	171.90
	10.168	11.377	530391	297382	30.1	29.2	98.52- 147.78	123.15
	11.314	12.724	258620	151980	29.8	28.3	48.04- 72.06	60.05
			Average of Peak Amounts =		30.8	29.5		

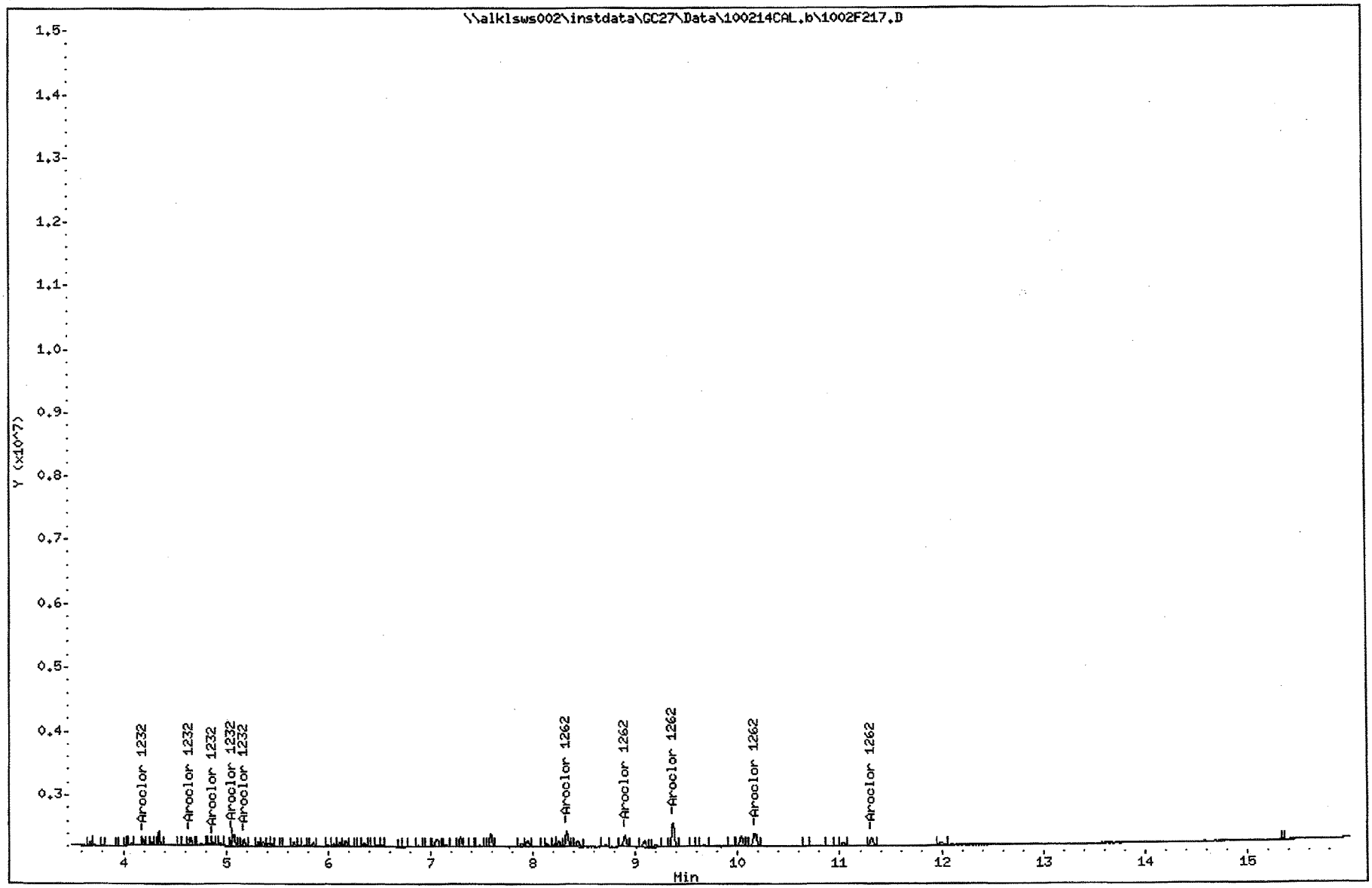


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F217.D
Date : 03-OCT-2014 09:32
Client ID:
Sample Info: 3262 @ 25ppb PCB6-54A

Column phase: DB-35MS

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32



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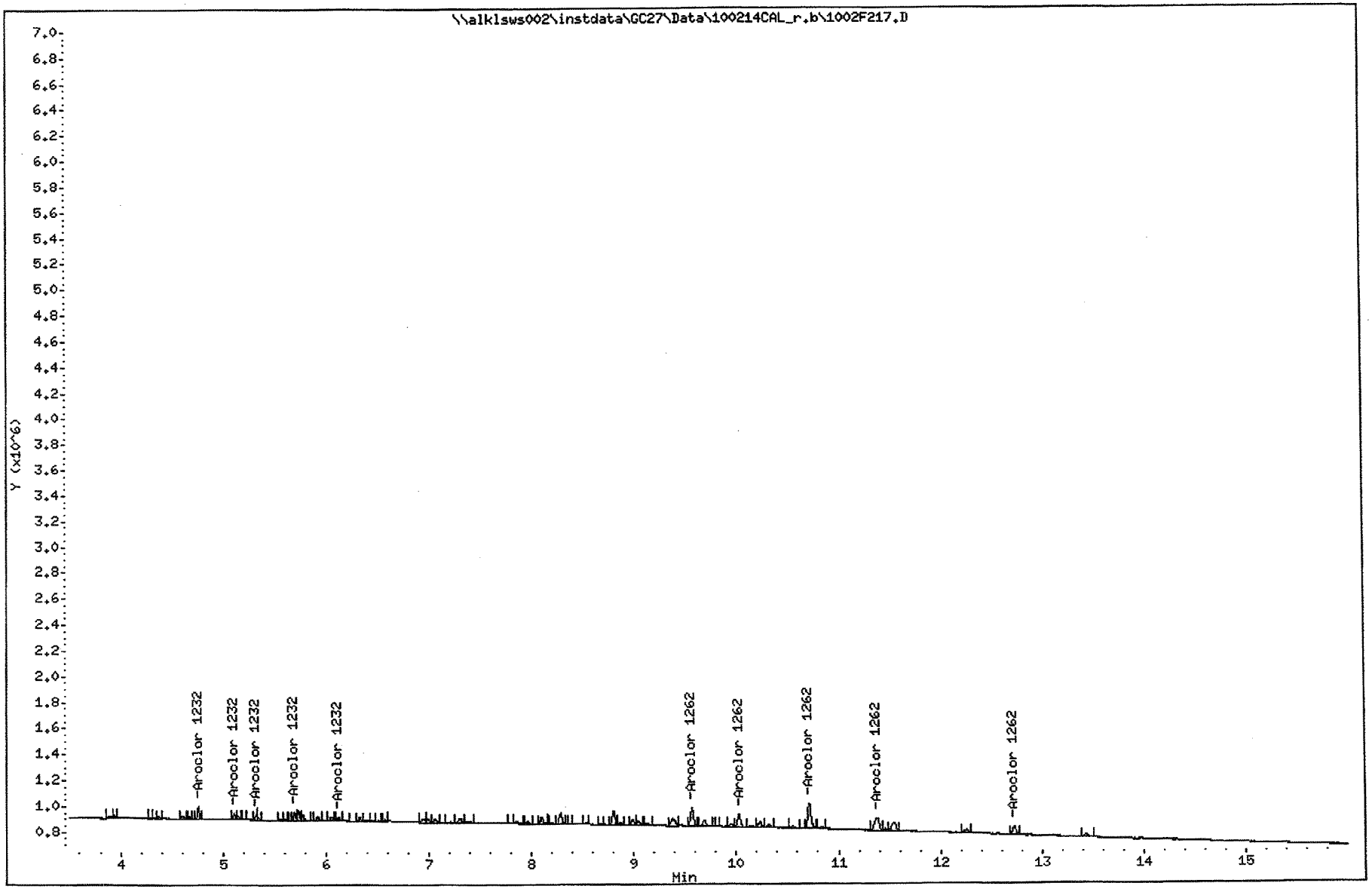
Date : 03-OCT-2014 09:32
Client ID:
Sample Info: 3262 @ 25ppb PCB6-54A

Column phase: DB-XLB

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32



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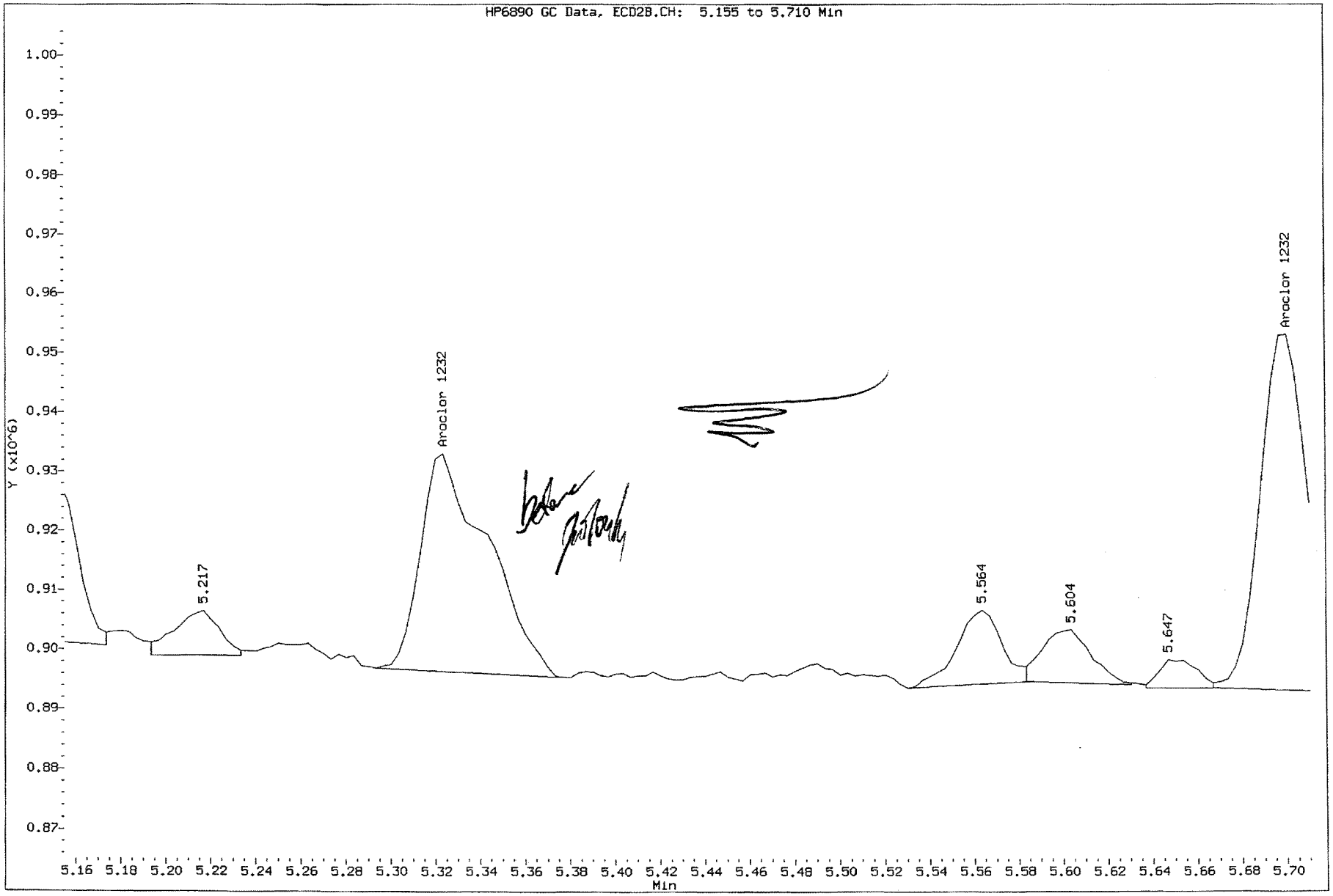
Instrument: GC27.i
Client Sample ID:



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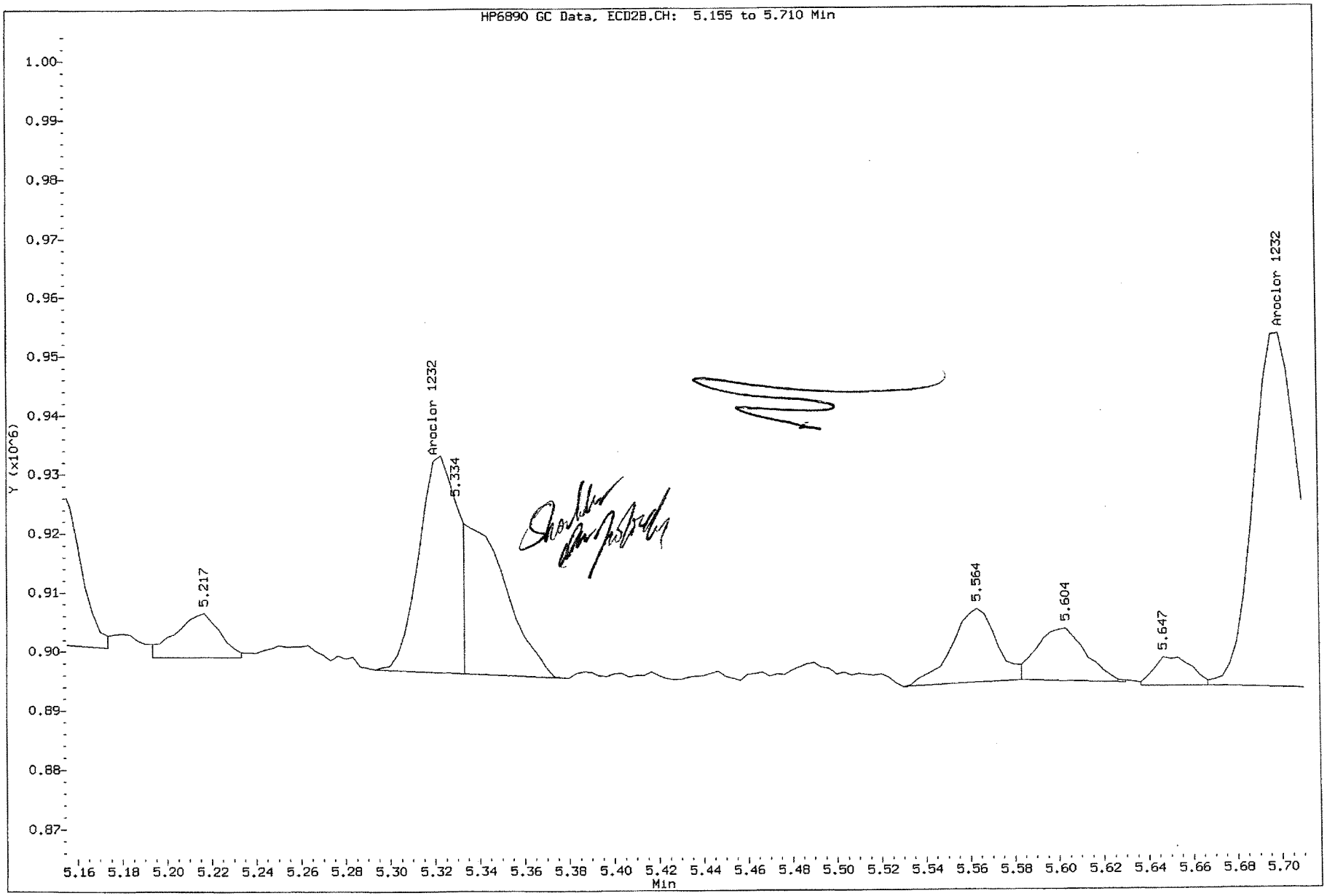
Injection Date: 03-OCT-2014 09:32
Instrument: GC27.1
Client Sample ID:



1724

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F218.D
Inj Date : 03-OCT-2014 09:56
Sample Info: 3262 @ 50ppb PCB6-53N
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

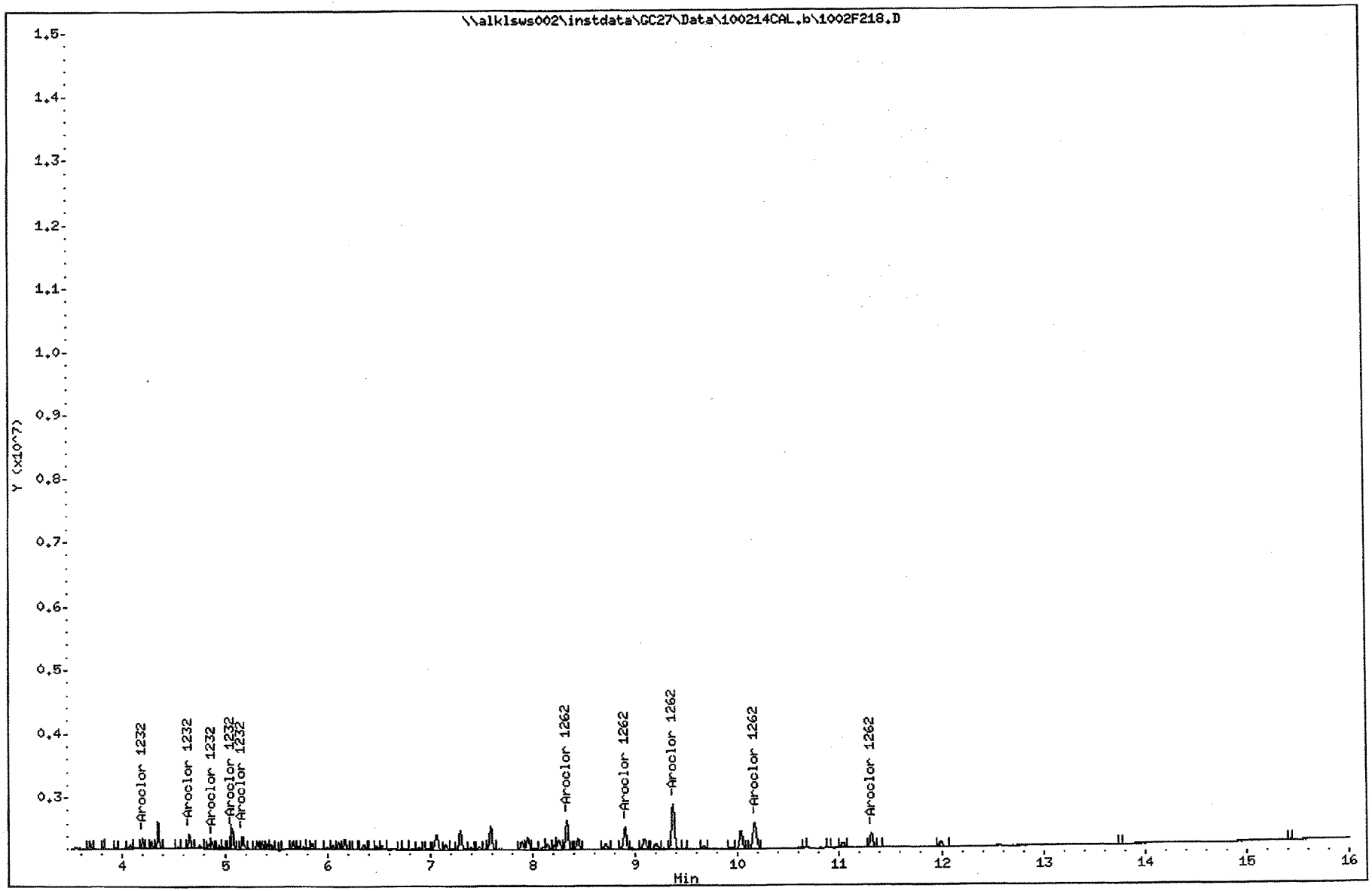
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.196	4.762	155630	242383	58.3	60.2	80.00- 120.00	100.00
	4.652	5.115	361362	118998	58.9	58.3	185.75- 278.63	232.19
	4.876	5.325	125885	100148	55.2	59.5	64.71- 97.06	80.89
	5.062	5.699	248464	164624	58.4	58.8	127.72- 191.58	159.65
	5.172	6.125	248585	79943	55.6	55.3	127.78- 191.67	159.73
			Average of Peak Amounts =		57.3	58.4		
Aroclor 1262	8.336	9.569	809977	503814	59.2	56.6	80.00- 120.00	100.00
	8.899	10.029	679833	343770	57.9	55.8	67.15- 100.72	83.93
	9.369	10.719	1378939	832565	58.1	55.6	136.20- 204.29	170.24
	10.166	11.379	995690	558098	56.5	54.8	98.34- 147.51	122.93
	11.316	12.725	468216	286160	53.9	53.3	46.24- 69.37	57.81
			Average of Peak Amounts =		57.1	55.2		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F218.D
Date : 03-OCT-2014 09:56
Client ID:
Sample Info: 3262 @ 50ppb PCB6-53N

Column phase: DB-35MS

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32



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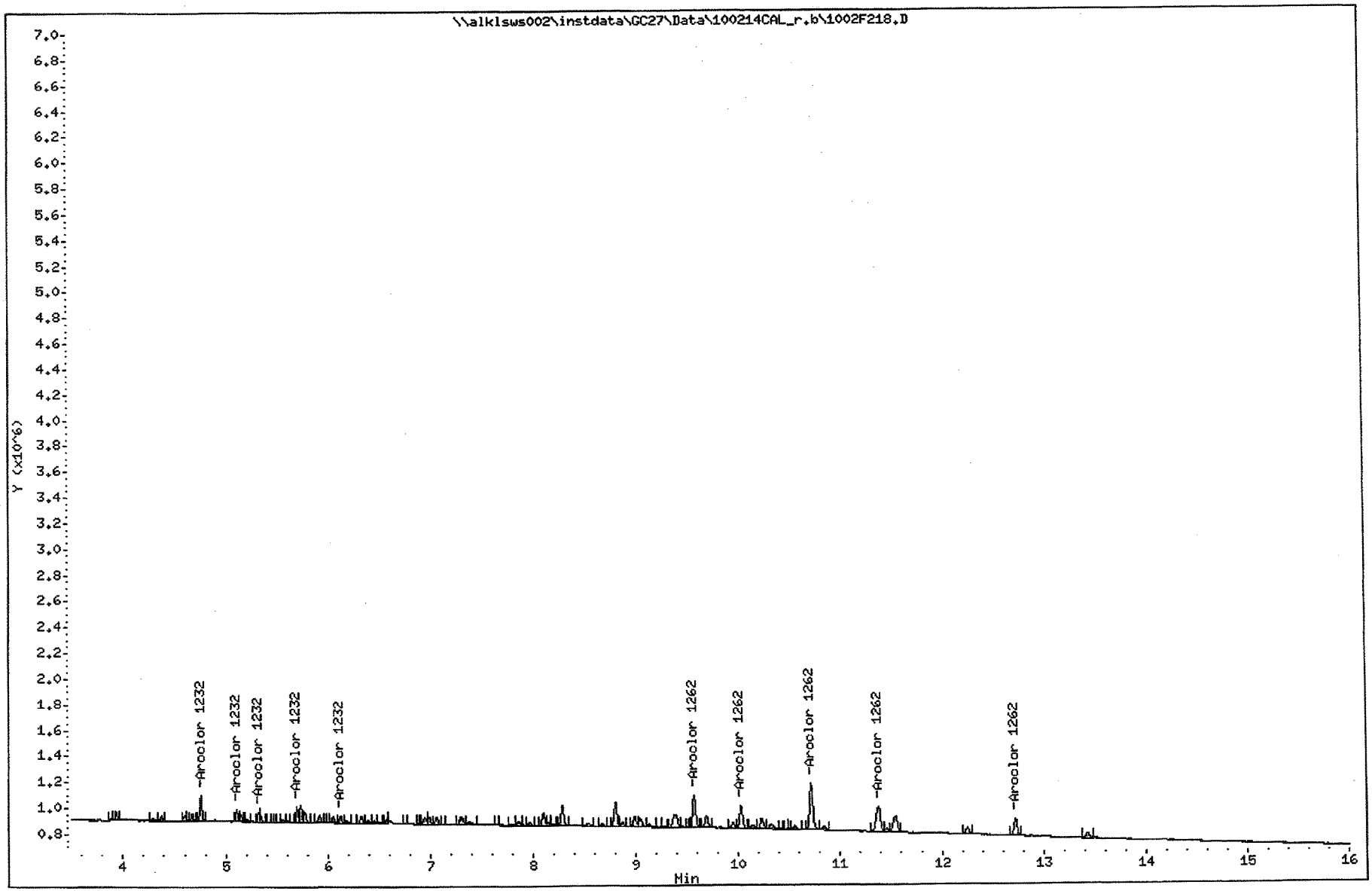
Date : 03-OCT-2014 09:56
Client ID:
Sample Info: 3262 @ 50ppb PCB6-53N

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



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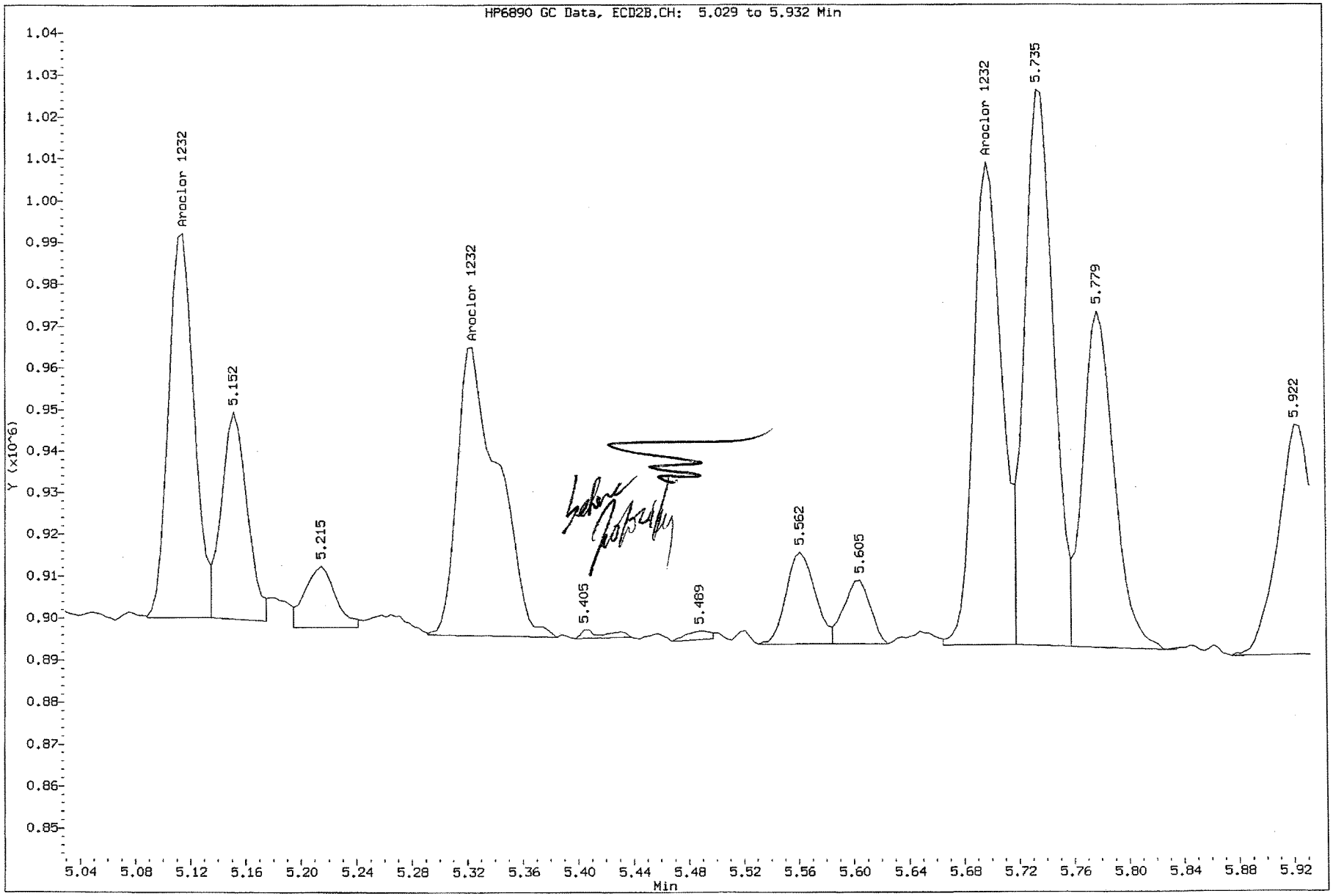
Injection Date: 03-OCT-2014 09:56
Instrument: GC27.i
Client Sample ID:



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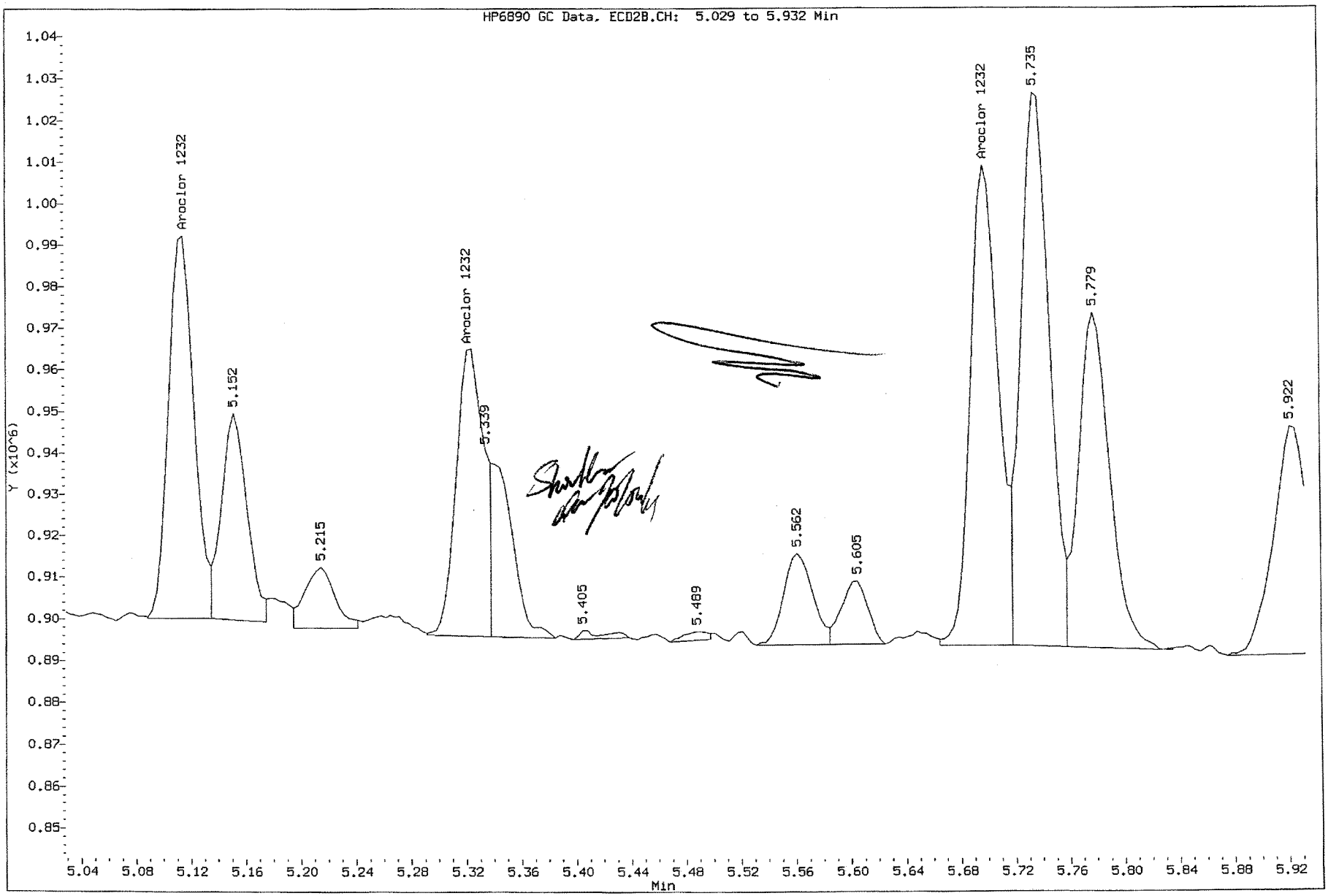
Injection Date: 03-OCT-2014 09:56
Instrument: GC27.i
Client Sample ID:



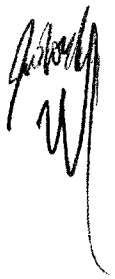
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F219.D
Inj Date : 03-OCT-2014 10:19
Sample Info: 3262 @ 500ppb PCB6-53M
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.194	4.764	1315234	1933161	492	480	80.00- 120.00	100.00
	4.651	5.114	3009643	988613	491	485	183.06- 274.60	228.83
	4.874	5.324	1154101	817611	506	486	70.20- 105.30	87.75
	5.061	5.697	2185022	1357740	514	485	132.91- 199.36	166.13
	5.174	6.127	2193717	709961	490	491	133.43- 200.15	166.79
			Average of Peak Amounts =		499	485		
Aroclor 1262	8.334	9.570	6750904	4330571	493	486	80.00- 120.00	100.00
	8.901	10.030	5863929	3048621	499	495	69.49- 104.23	86.86
	9.367	10.717	11386308	7320272	480	489	134.93- 202.40	168.66
	10.167	11.377	8803609	5076920	499	499	104.33- 156.49	130.41
	11.317	12.727	4381630	2698330	505	503	51.92- 77.89	64.90
			Average of Peak Amounts =		495	494		

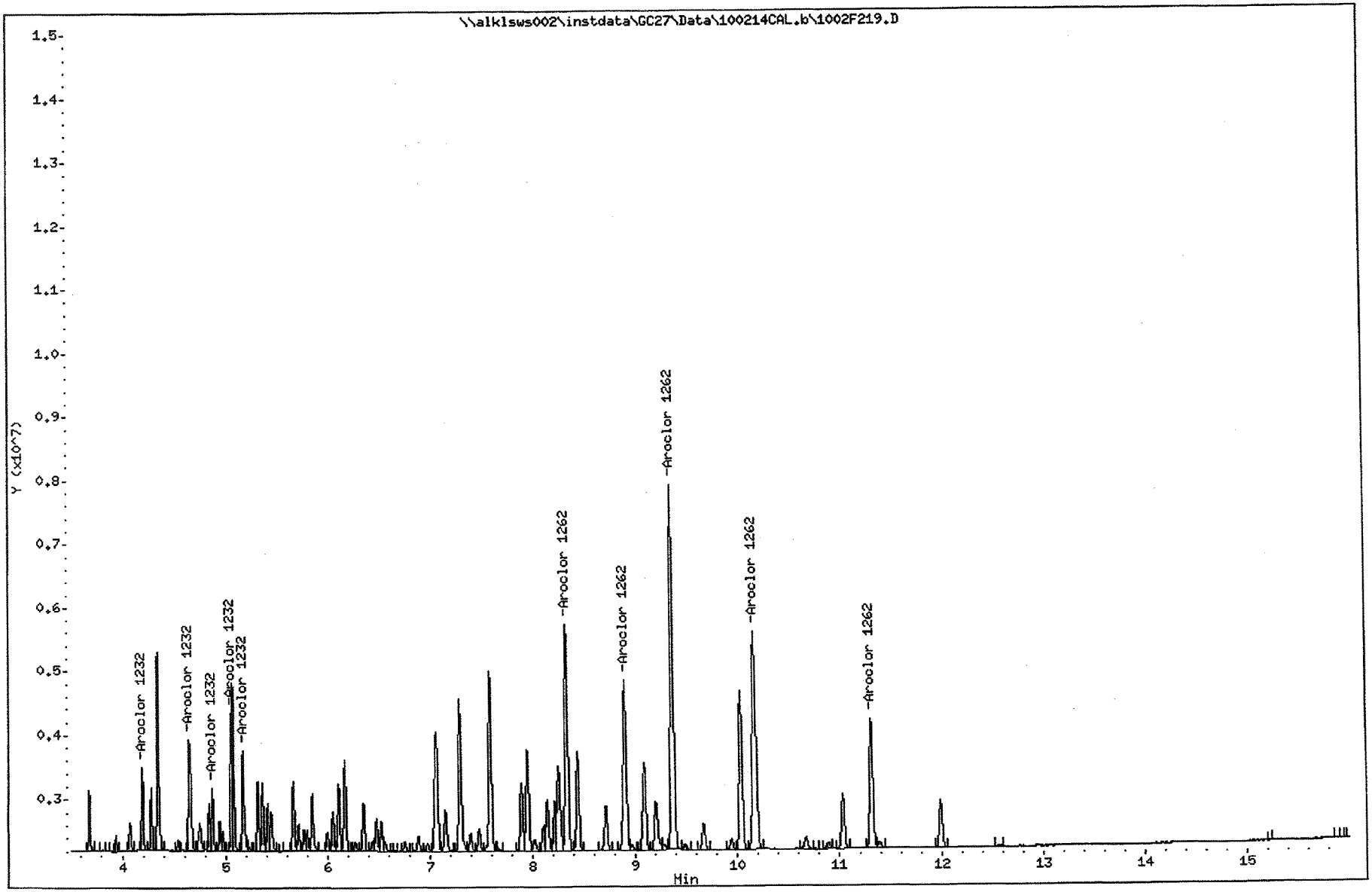


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F219.D
Date : 03-OCT-2014 10:19
Client ID:
Sample Info: 3262 @ 500ppb PCB6-53M

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

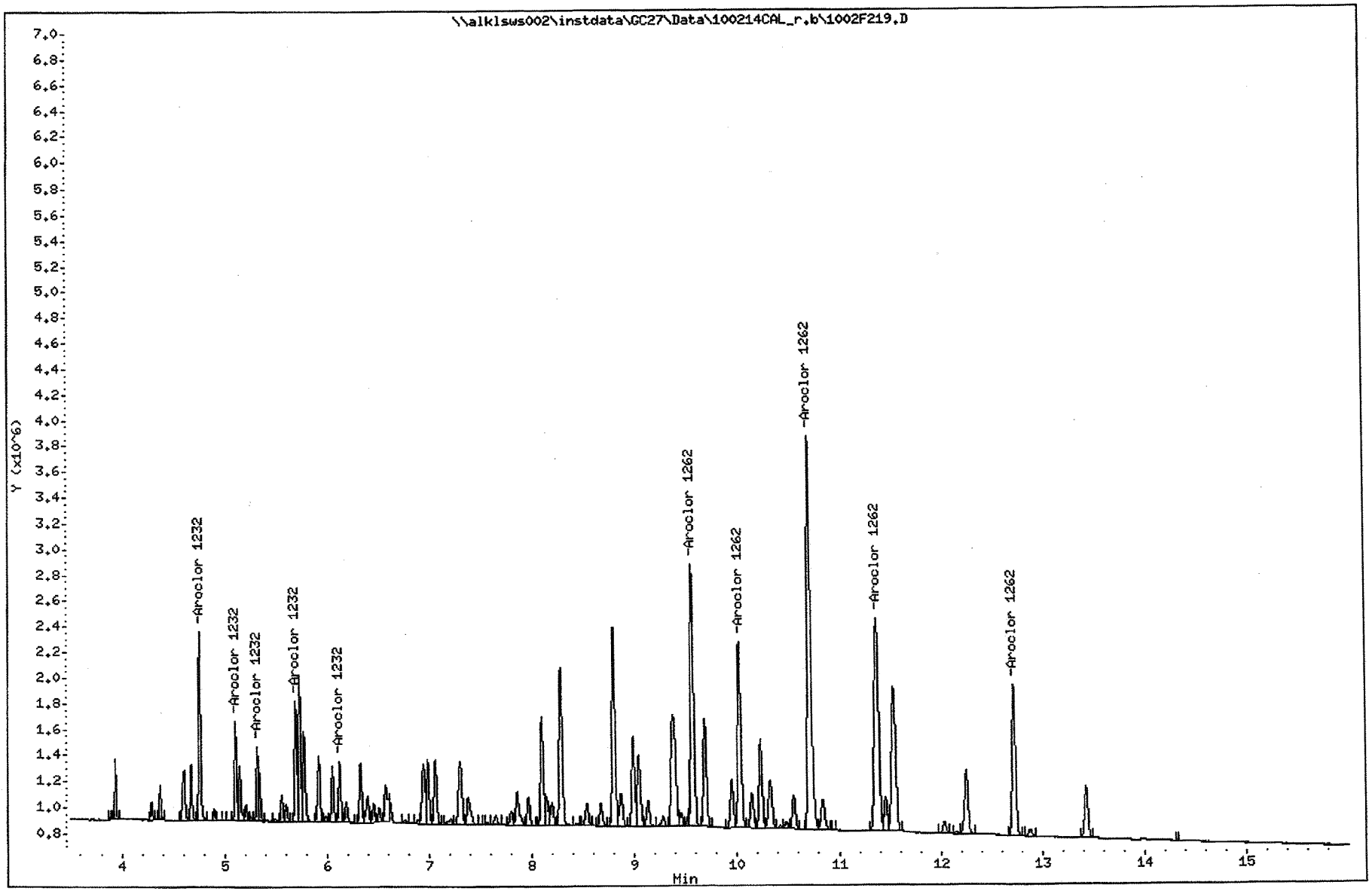


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F219.D
Date : 03-OCT-2014 10:19
Client ID:
Sample Info: 3262 @ 500ppb PCB6-53M

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



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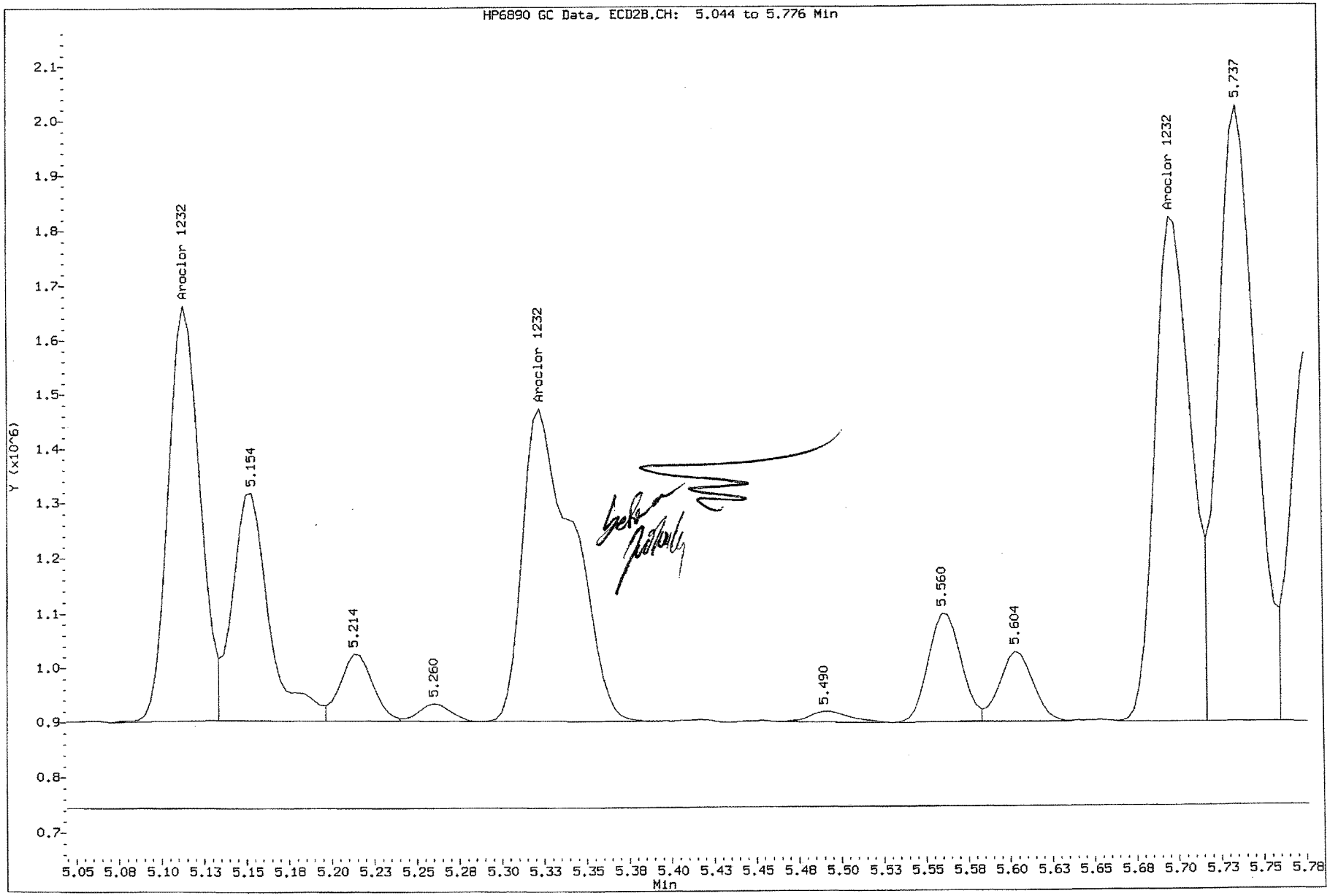
Injection Date: 03-OCT-2014 10:19
Instrument: GC27.i
Client Sample ID:



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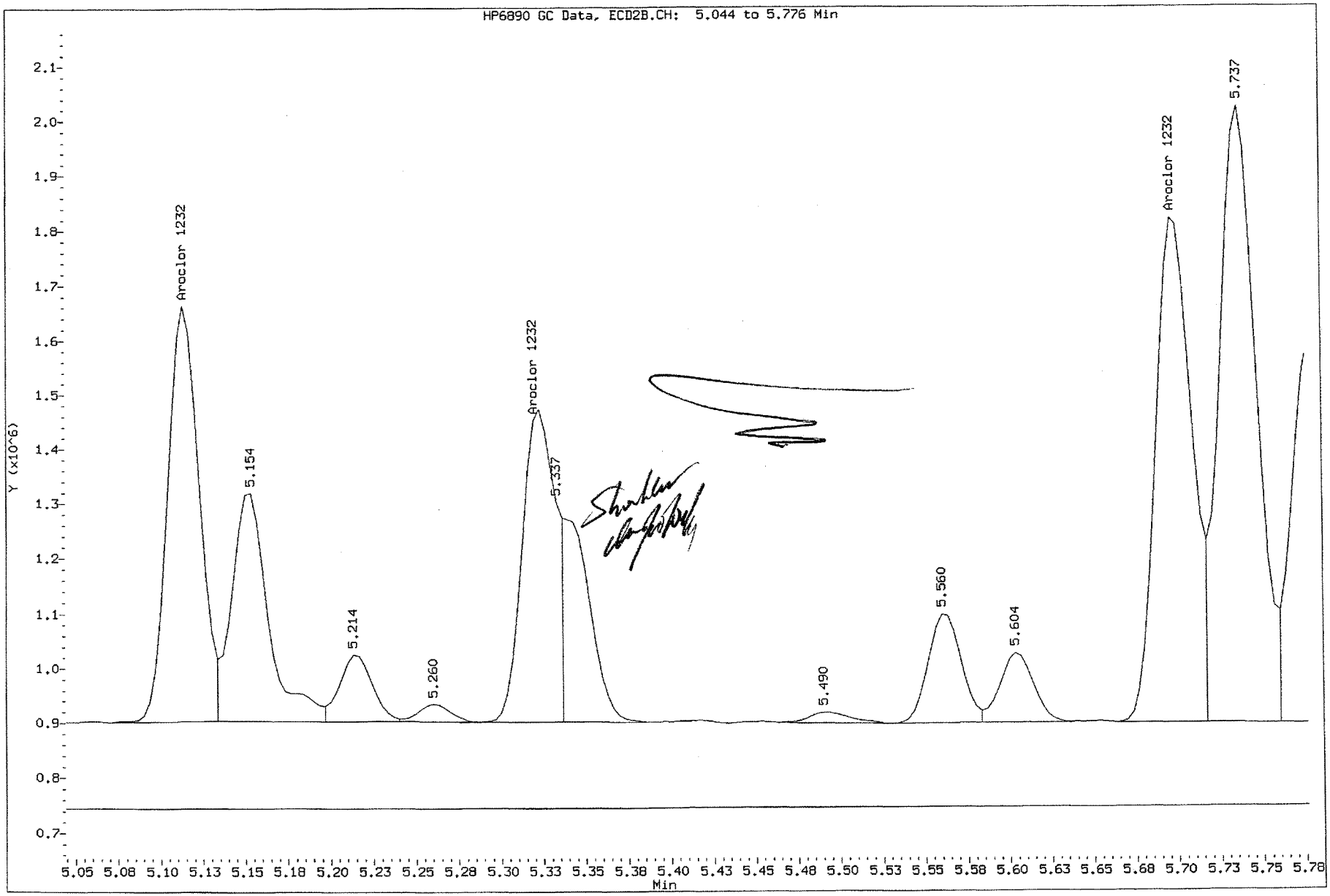
Injection Date: 03-OCT-2014 10:19
Instrument: GC27.i
Client Sample ID:



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Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F220.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F220.D
Inj Date : 03-OCT-2014 10:43
Sample Info: 3262 @ 1000ppb PCB6-53L
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

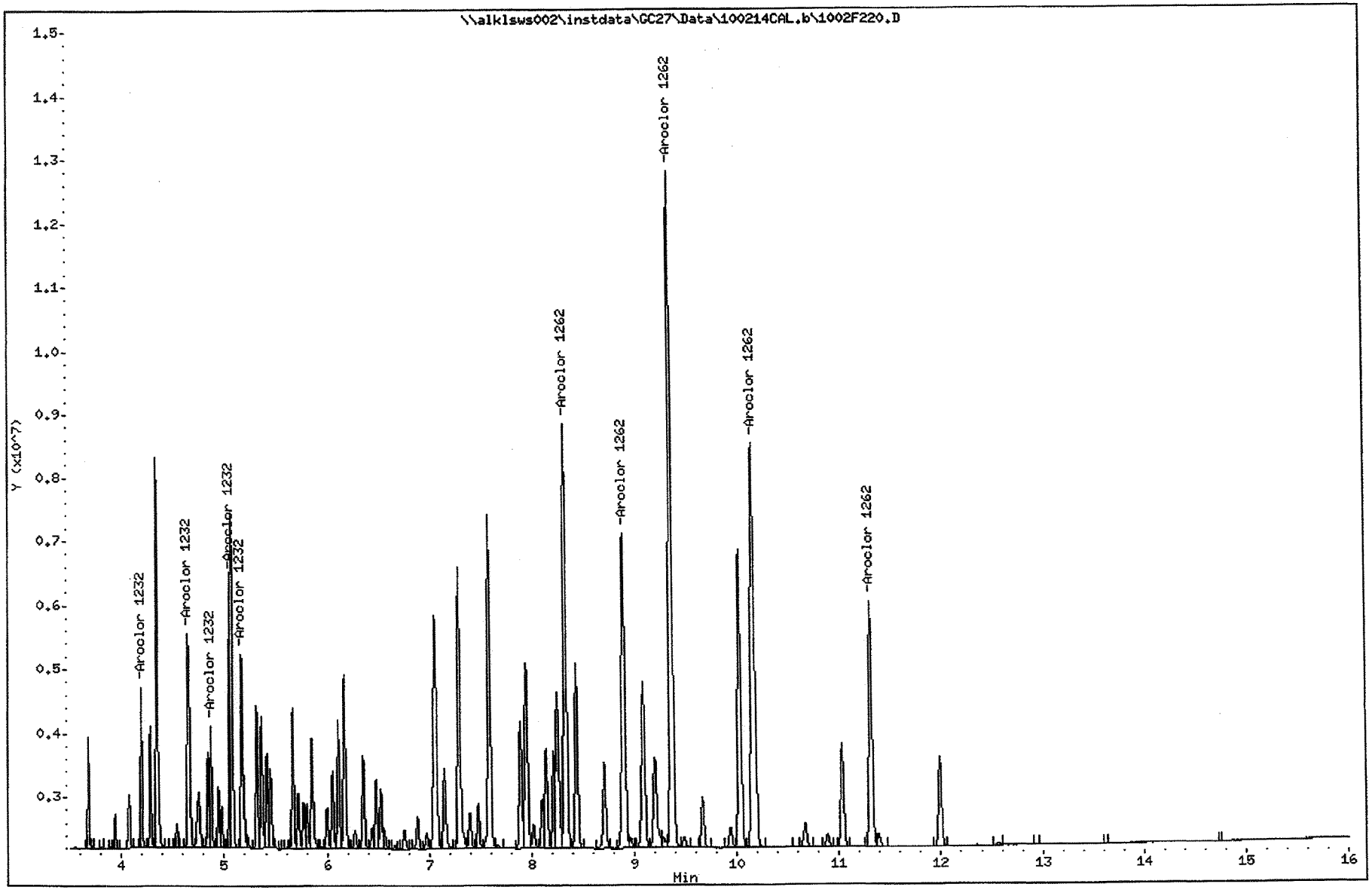
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.197	4.763	2638754	3882859	988	965	80.00- 120.00	100.00
	4.650	5.113	5986492	2007017	976	984	181.49- 272.24	226.87
	4.873	5.323	2256031	1728500	990	1030	68.40- 102.60	85.50
	5.063	5.699	4101191	2675317	964	956	124.34- 186.51	155.42
	5.173	6.126	4487030	1445553	1000	999	136.03- 204.05	170.04
			Average of Peak Amounts =		984	987		
Aroclor 1262	8.337	9.573	12747268	8535452	931	959	80.00- 120.00	100.00
	8.900	10.029	11026432	5875700	939	954	69.20- 103.80	86.50
	9.370	10.716	21935721	14228619	924	951	137.67- 206.50	172.08
	10.167	11.379	16719897	9818544	948	965	104.93- 157.40	131.16
	11.317	12.726	8411987	5233173	969	976	52.79- 79.19	65.99
			Average of Peak Amounts =		942	961		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F220.D
Date : 03-OCT-2014 10:43
Client ID:
Sample Info: 3262 @ 1000ppb PCB6-53L

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS



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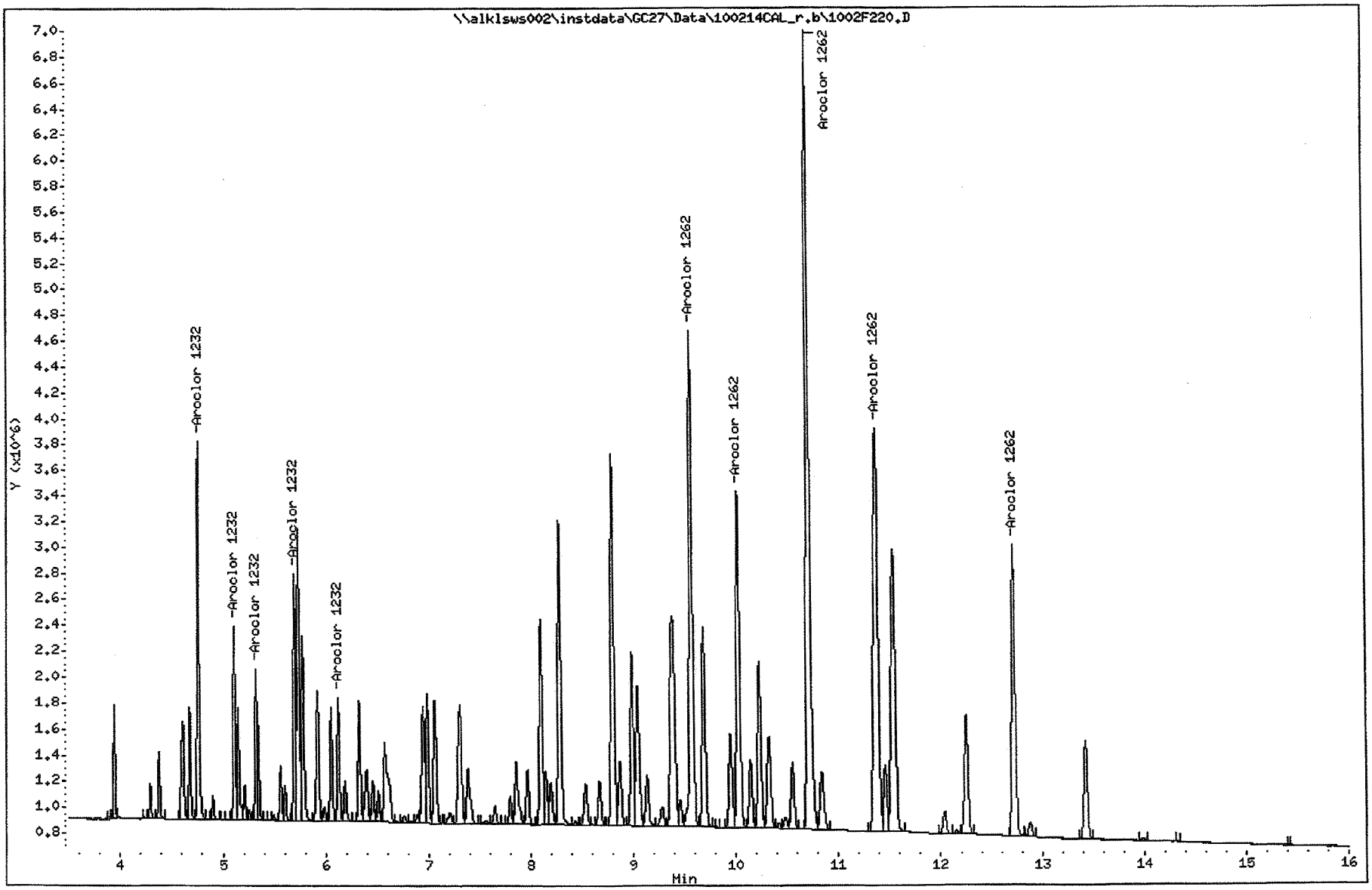
Date : 03-OCT-2014 10:43
Client ID:
Sample Info: 3262 @ 1000ppb PCB6-53L

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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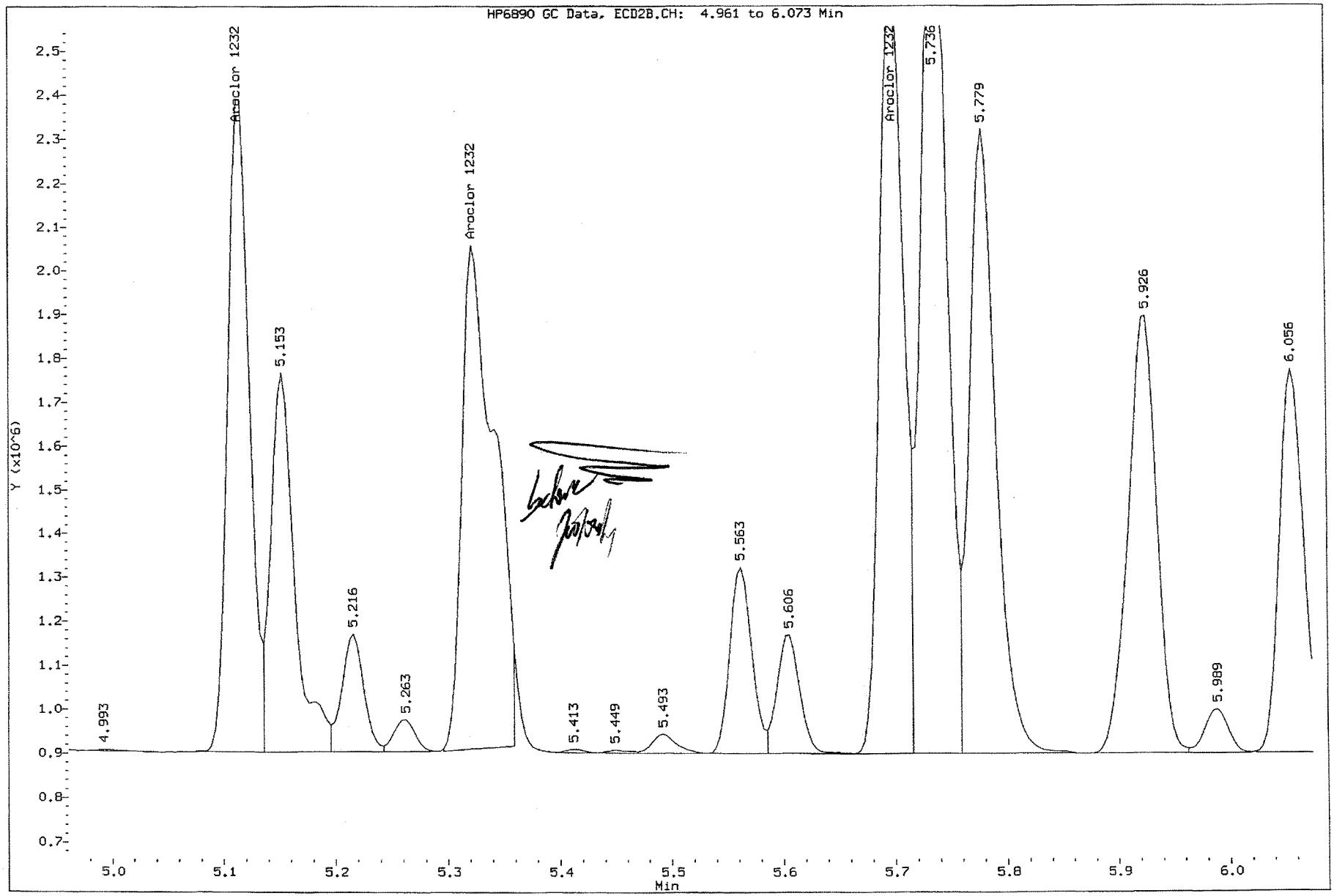
Injection Date: 03-OCT-2014 10:43
Instrument: GC27.i
Client Sample ID:



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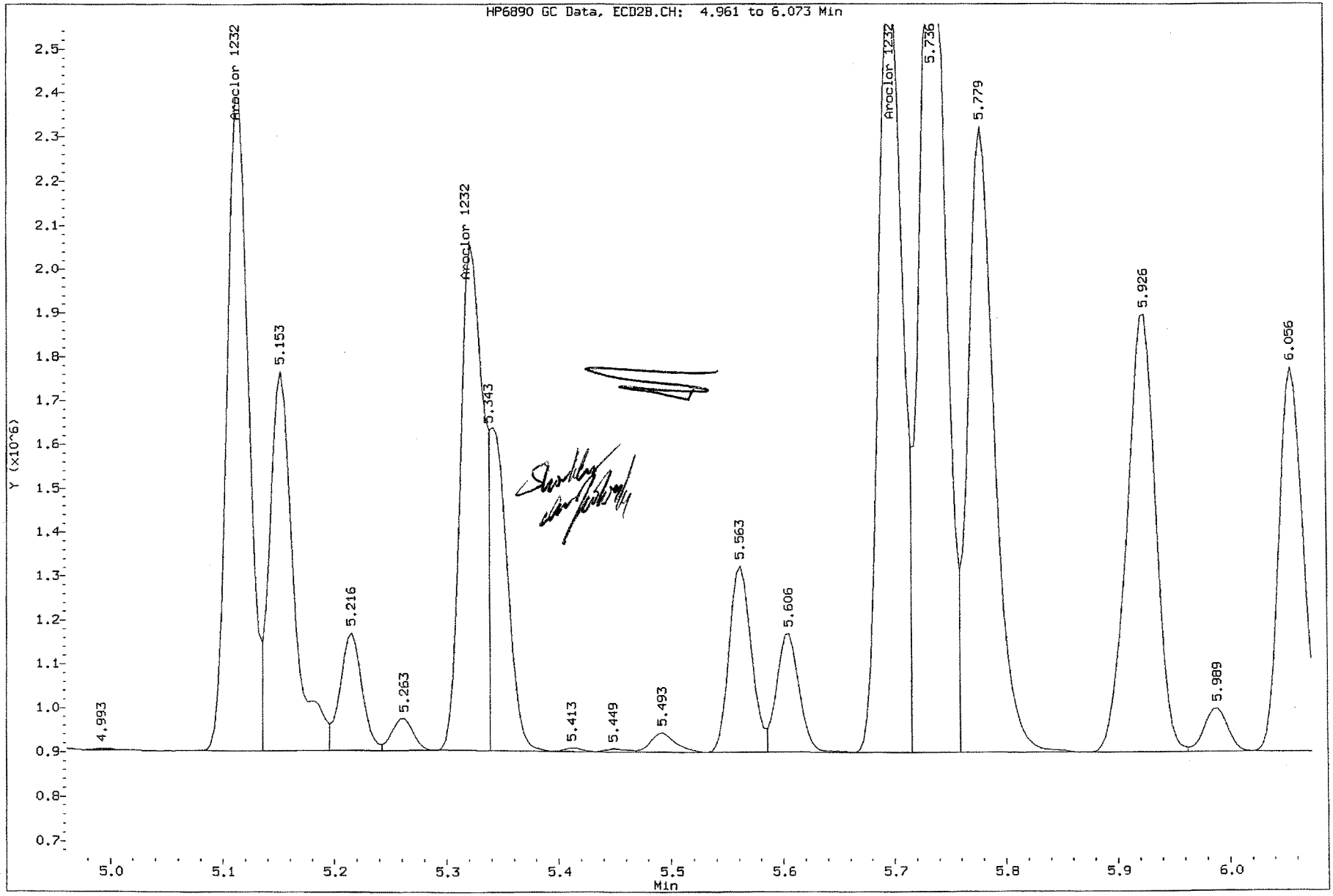
Instrument: GC27.i
Client Sample ID:



1739

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D
Inj Date : 03-OCT-2014 11:07
Sample Info: 3262 @ 2000ppb PCB6-53K
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

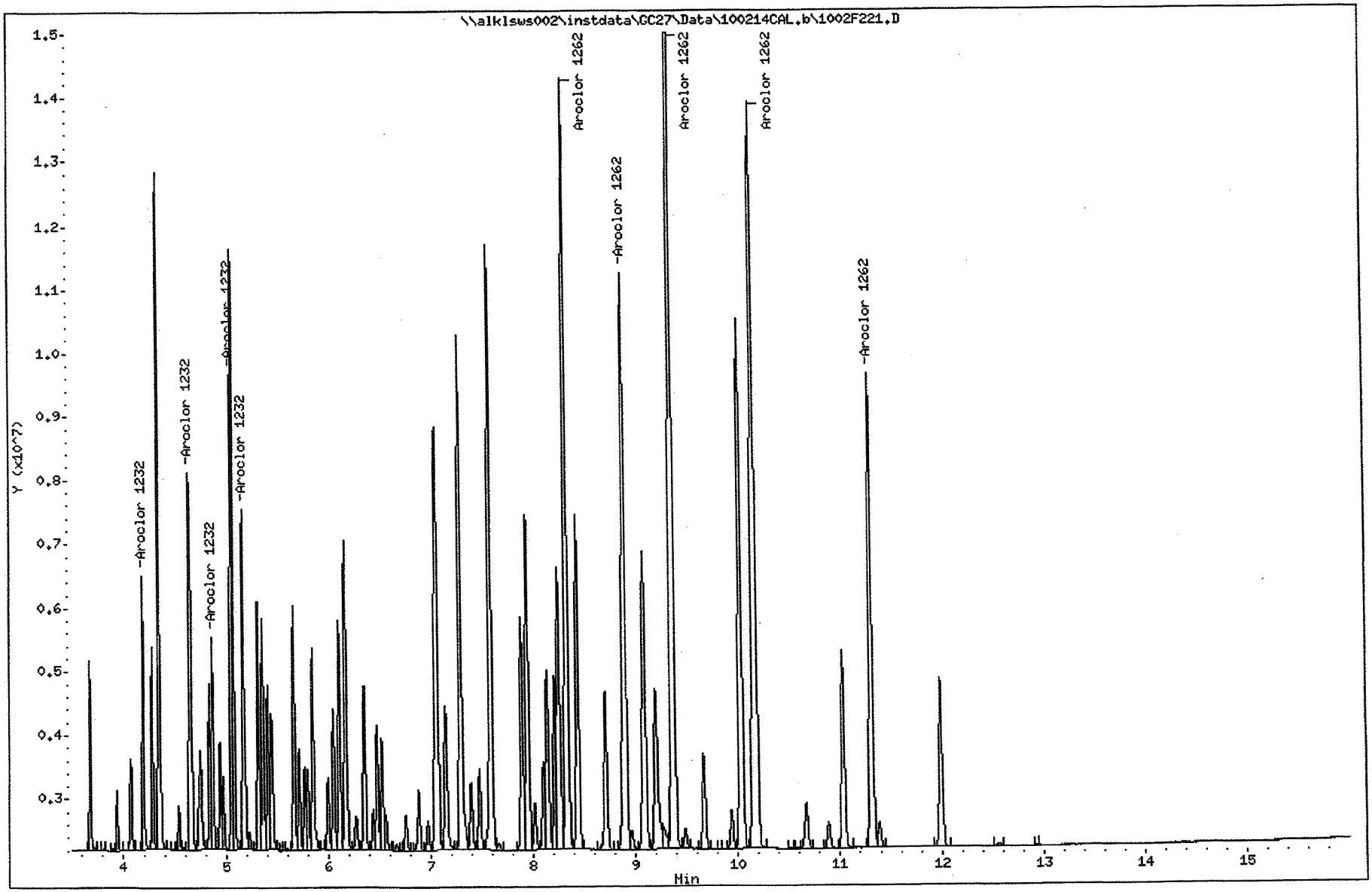
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.194	4.764	4567791	6697618	1710	1660	80.00- 120.00	100.00
	4.651	5.114	10269071	3457470	1670	1690	179.85- 269.78	224.81
	4.874	5.324	4106739	2855304	1800	1700	71.93- 107.89	89.91
	5.064	5.701	7522050	4798796	1770	1720	131.74- 197.61	164.68
	5.174	6.127	7923634	2521541	1770	1740	138.77- 208.16	173.47
			Average of Peak Amounts =		1740	1700		
Aroclor 1262	8.334	9.571	23270743	15734279	1700	1770	80.00- 120.00	100.00
	8.901	10.031	20177670	10763659	1720	1750	69.37- 104.05	86.71
	9.368	10.717	41165410	26911582	1730	1800	141.52- 212.28	176.90
	10.168	11.381	31096238	18243208	1760	1790	106.90- 160.35	133.63
	11.314	12.727	15602435	9834895	1800	1830	53.64- 80.46	67.05
			Average of Peak Amounts =		1740	1790		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F221.D
Date : 03-OCT-2014 11:07
Client ID:
Sample Info: 3262 @ 2000ppb PCB6-53K

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

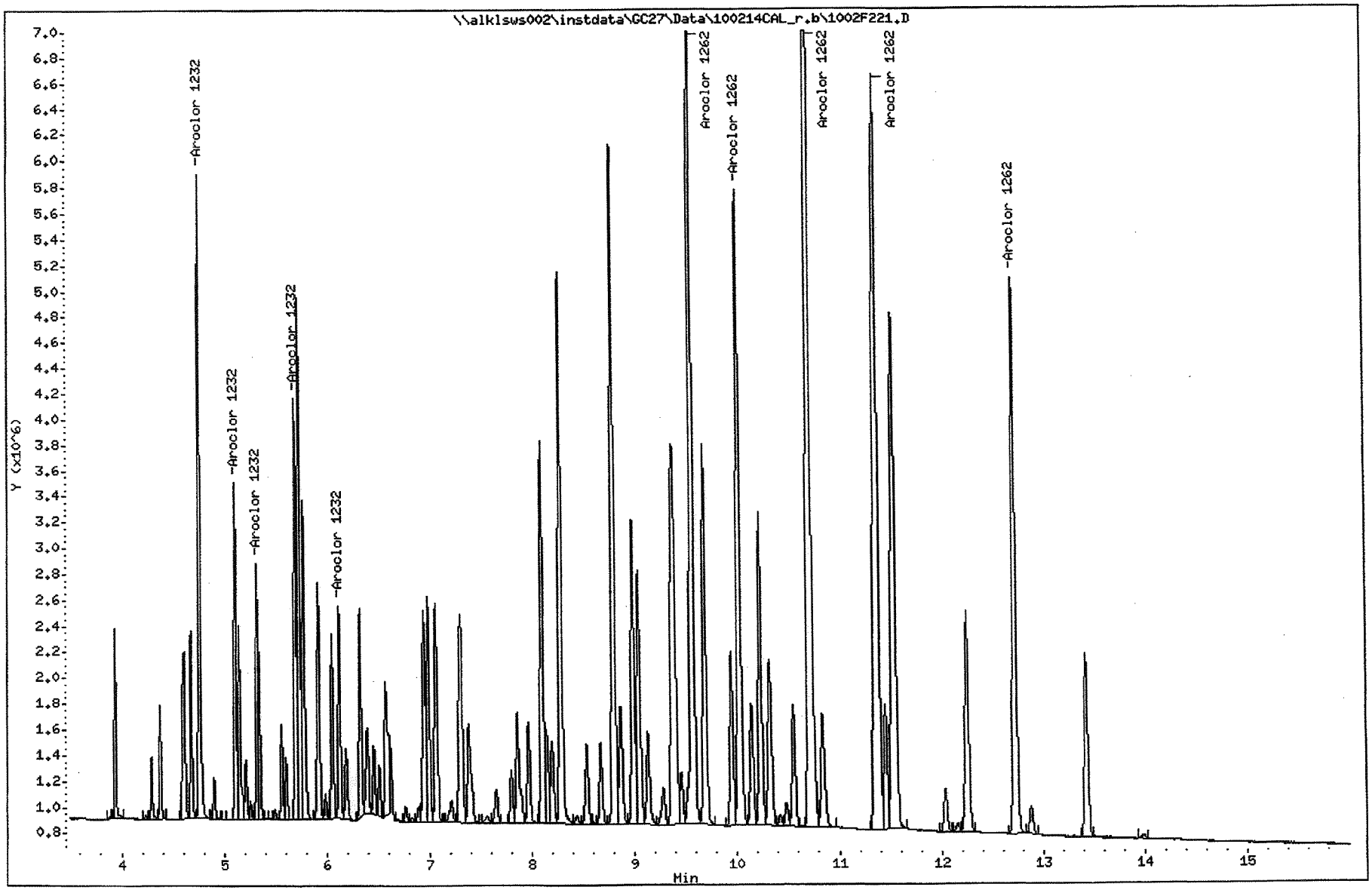


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D
Date : 03-OCT-2014 11:07
Client ID:
Sample Info: 3262 @ 2000ppb PCB6-53K

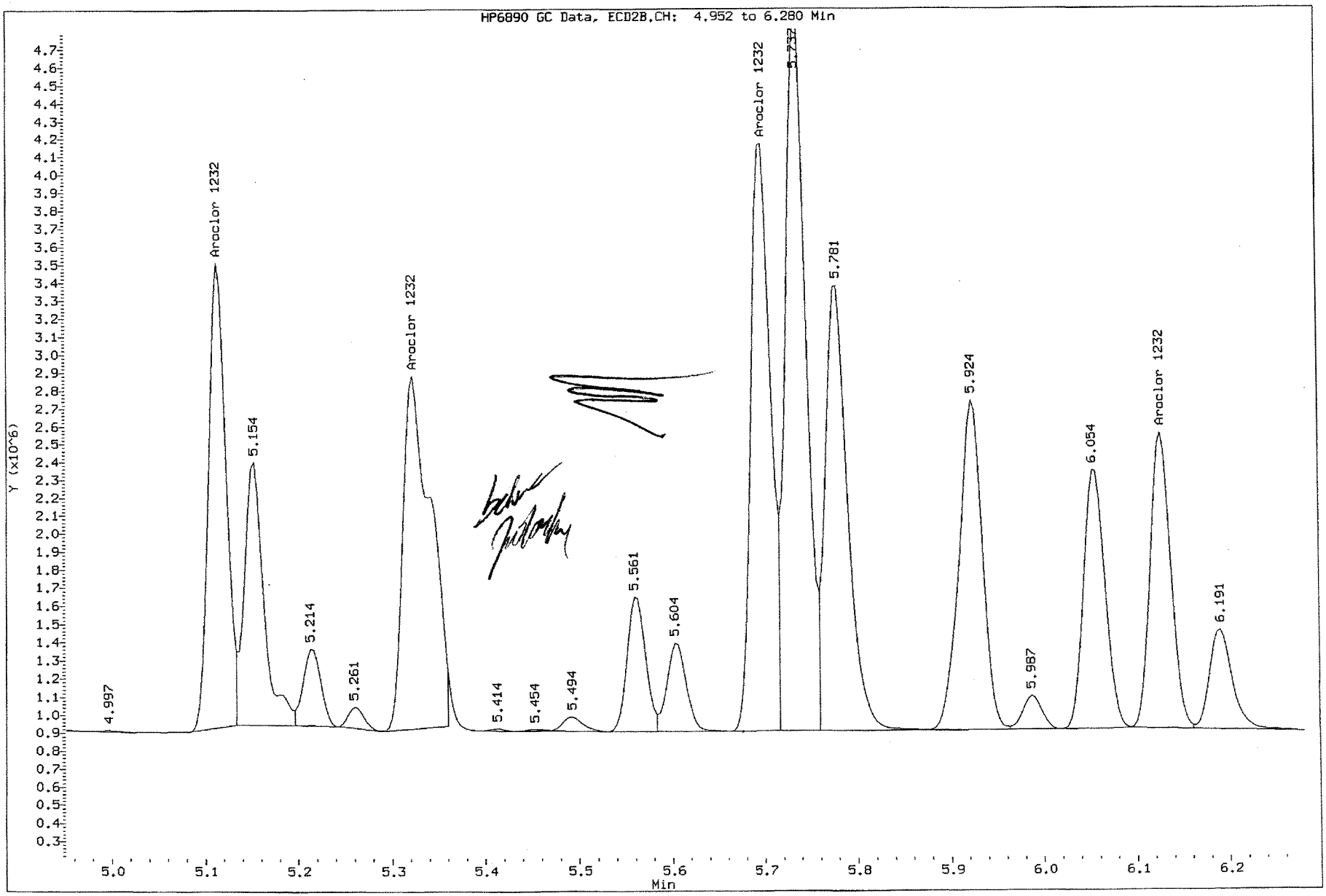
Column phase: DB-XLB

Instrument: GC27.i

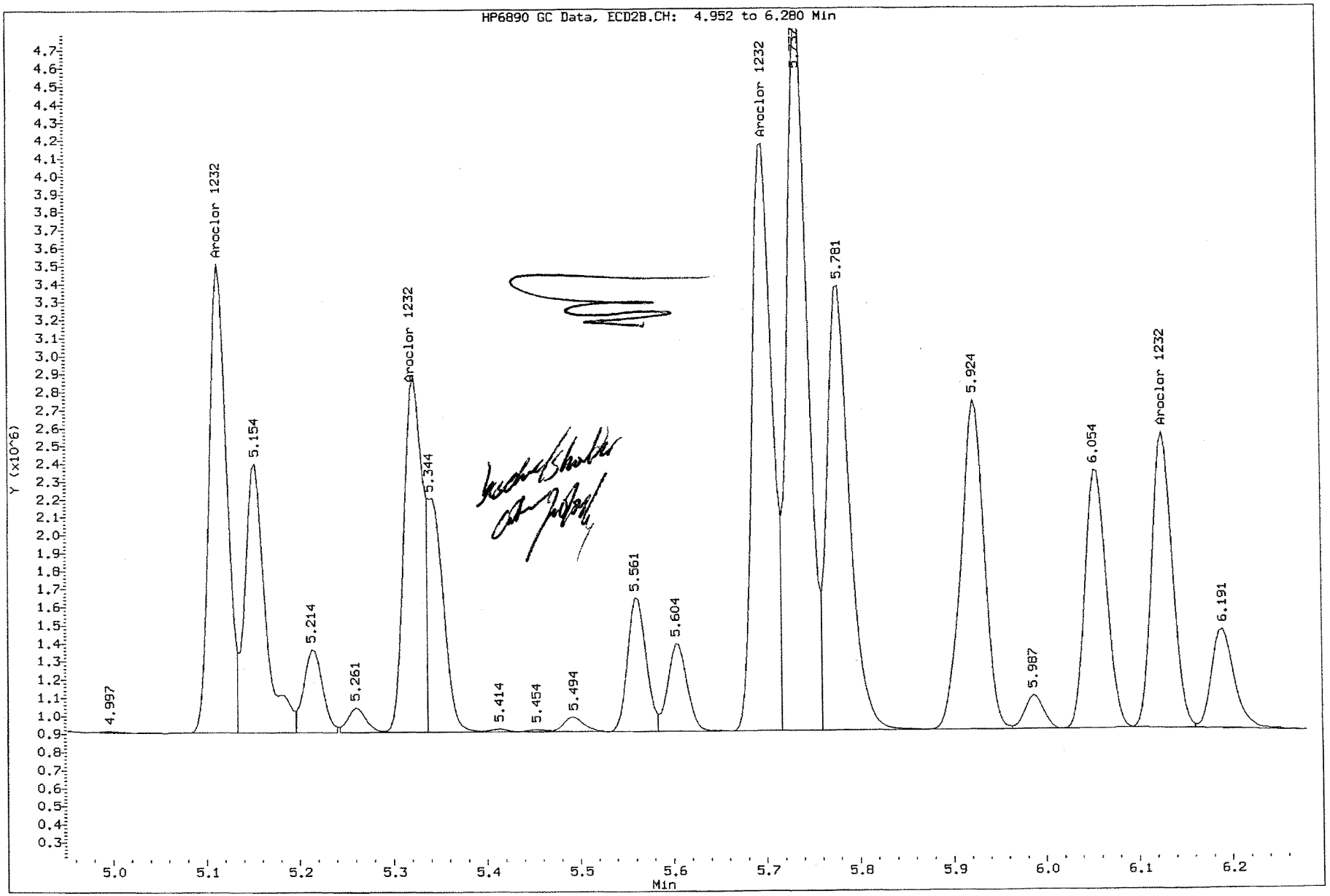
Operator: JMSmith
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D
Injection Date: 03-OCT-2014 11:07
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F221.D
Injection Date: 03-OCT-2014 11:07
Instrument: GC27.i
Client Sample ID:



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Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F222.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F222.D
Inj Date : 03-OCT-2014 11:30
Sample Info: 3262 @ 5000ppb PCB6-53J
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

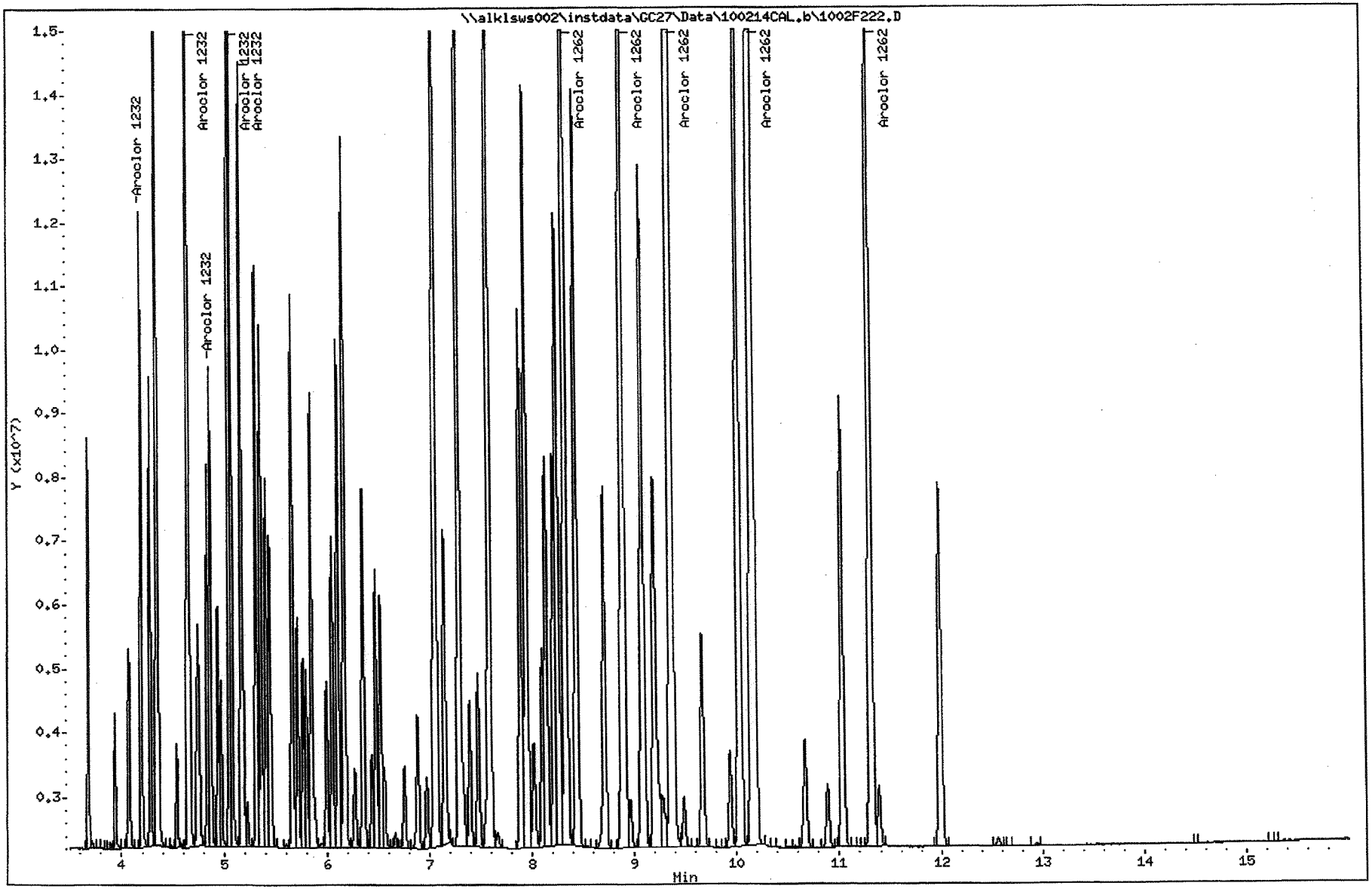
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.195	4.764	10698124	16222319	4010	4030	80.00- 120.00	100.00
	4.651	5.114	23732371	8282435	3870	4060	177.47- 266.20	221.84
	4.875	5.324	9015353	7221872	3950	4290	67.42- 101.12	84.27
	5.061	5.701	18132490	11432299	4260	4090	135.59- 203.39	169.49
	5.175	6.127	18264103	5937774	4080	4110	136.58- 204.87	170.72
			Average of Peak Amounts =		4030	4120		
Aroclor 1262	8.338	9.574	54106811	37314502	3950	4190	80.00- 120.00	100.00
	8.901	10.031	46663275	26008614	3970	4220	68.99- 103.49	86.24
	9.368	10.717	99763452	67344027	4200	4500	147.51- 221.26	184.38
	10.171	11.381	74025283	44636122	4200	4380	109.45- 164.18	136.81
	11.318	12.727	37101762	24167720	4270	4510	54.86- 82.29	68.57
			Average of Peak Amounts =		4120	4360		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F222.D
Date : 03-OCT-2014 11:30
Client ID:
Sample Info: 3262 @ 5000ppb PCB6-53J

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS



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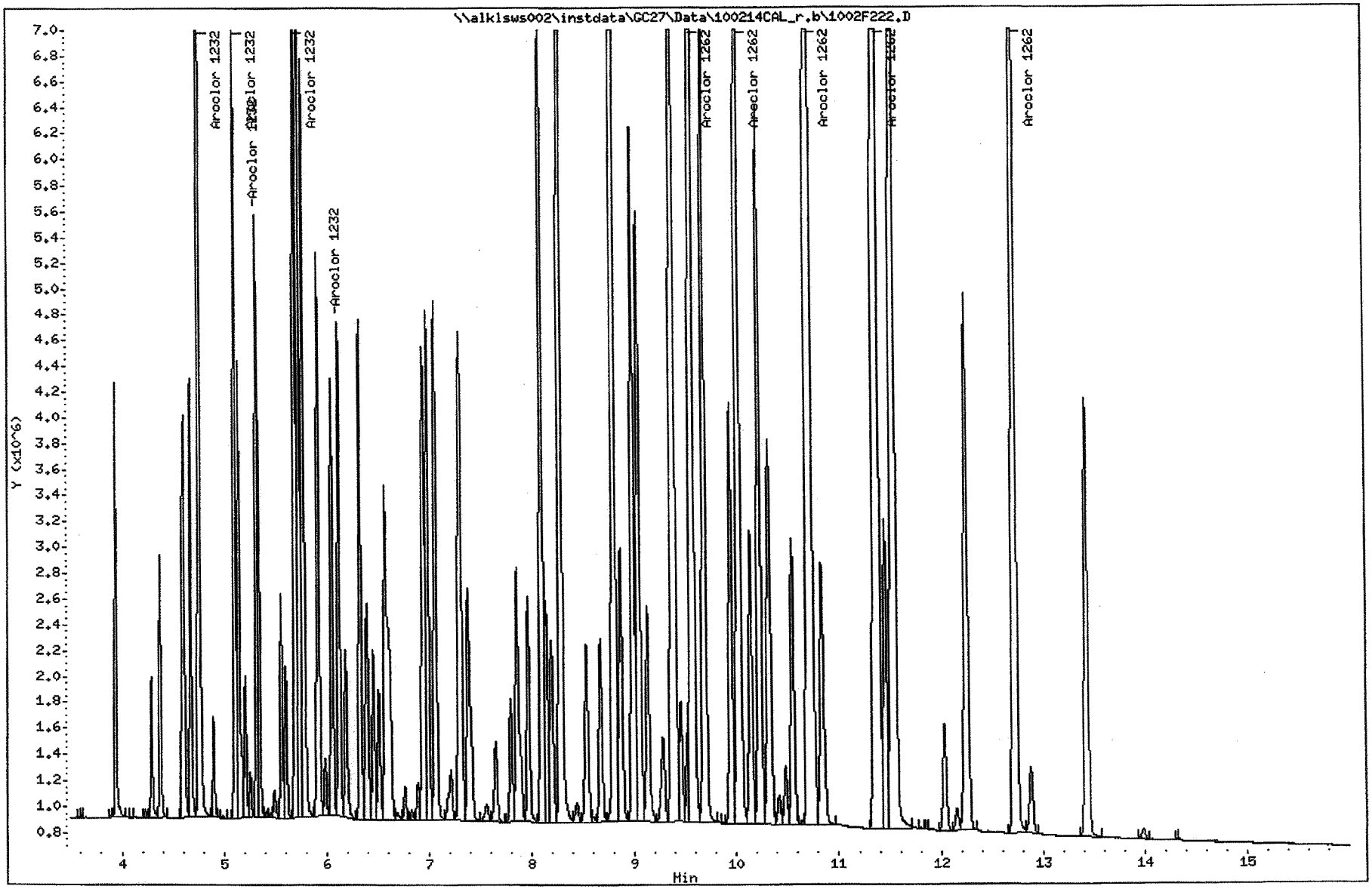
Date : 03-OCT-2014 11:30
Client ID:
Sample Info: 3262 @ 5000ppb PCB6-53J

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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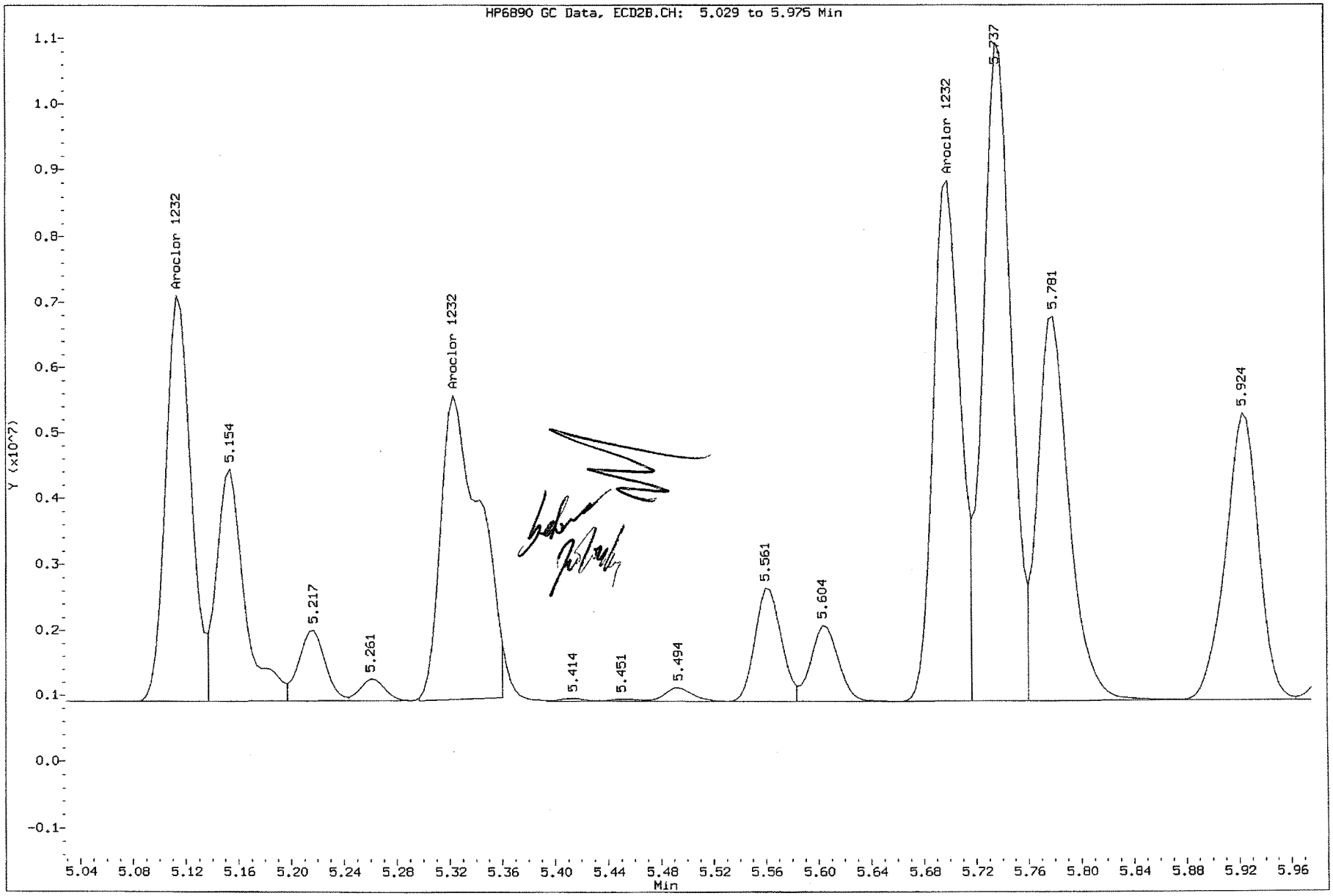
Injection Date: 03-OCT-2014 11:30
Instrument: GC27.i
Client Sample ID:



1748

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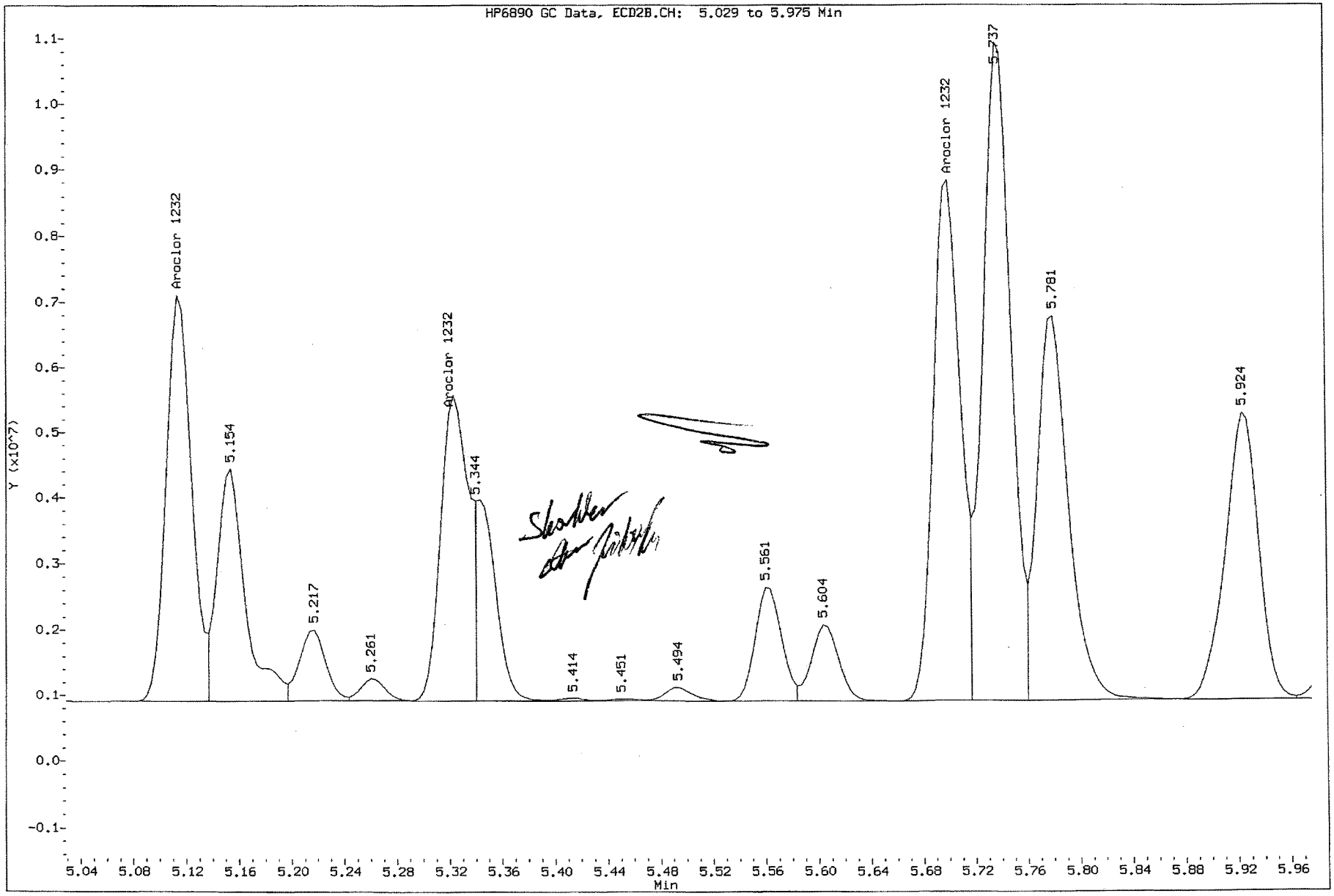
Injection Date: 03-OCT-2014 11:30
Instrument: GC27.i
Client Sample ID:



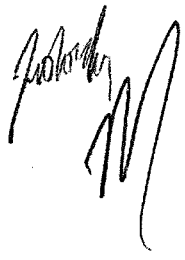
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F223.D
Inj Date : 03-OCT-2014 11:54
Sample Info: 4268 @ 25ppb PCB6-55J
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.876	5.115	112654	107493	29.5	30.8	80.00- 120.00	100.00
	5.079	5.739	349752	179869	29.7	29.8	248.37- 372.56	310.47
	5.316	5.925	135647	88276	28.8	28.9	96.33- 144.49	120.41
	5.669	6.129	172419	81731	30.6	30.3	122.44- 183.66	153.05
	6.176	7.065	184721	85877	29.8	28.7	131.18- 196.77	163.97
			Average of Peak Amounts =		29.7	29.7		
Aroclor 1268	10.036	11.385	915340	574099	32.3	31.7	80.00- 120.00	100.00
	10.166	11.552	805200	459489	32.3	30.1	70.37- 105.56	87.97
	10.669	12.039	603659	380823	29.2	29.1	52.76- 79.14	65.95
	11.996	13.432	1860741	1125549	30.6	29.7	162.63- 243.94	203.28
			Average of Peak Amounts =		31.1	30.2		

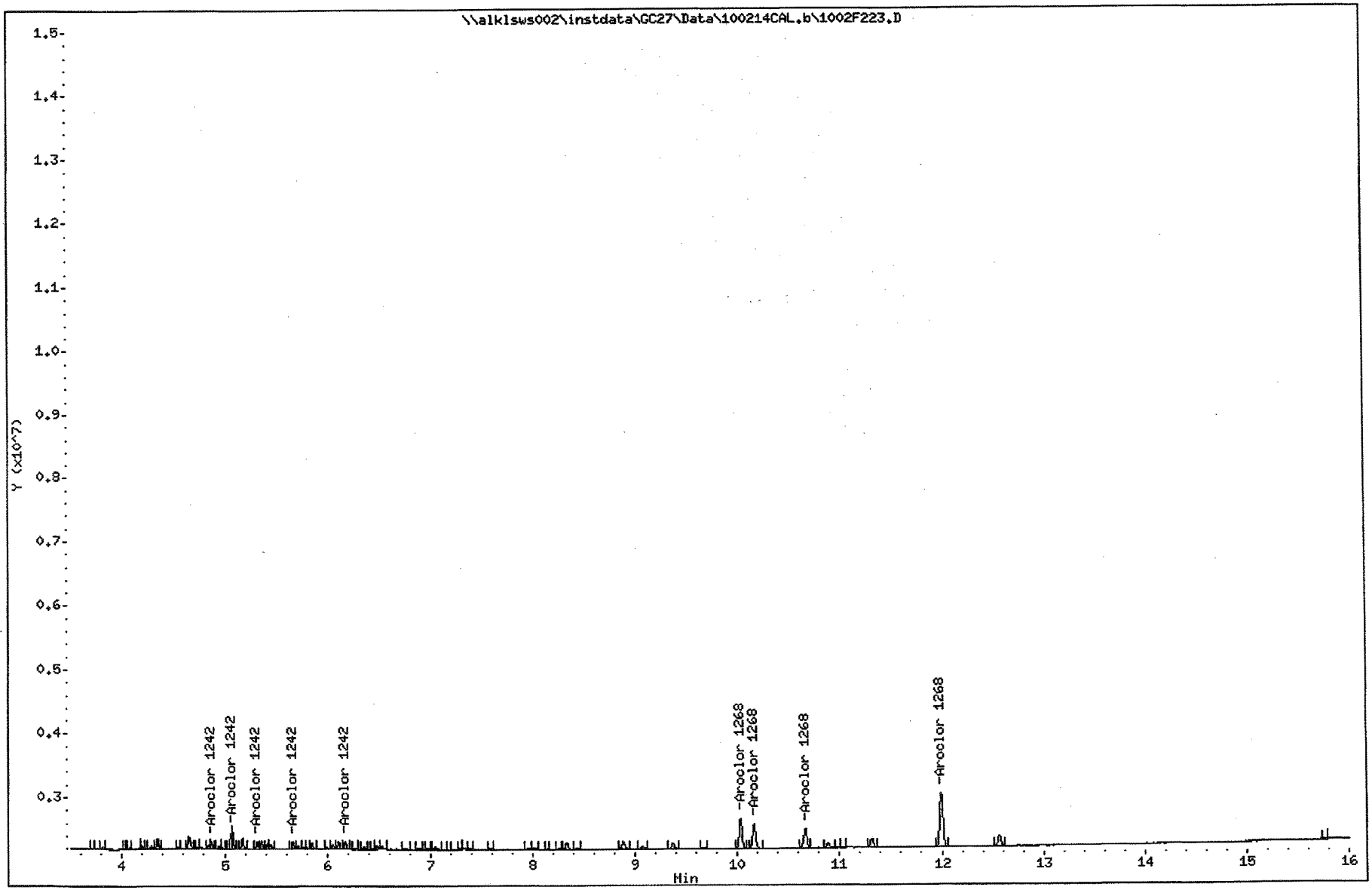


Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F223.D
Date : 03-OCT-2014 11:54
Client ID:
Sample Info: 4268 @ 25ppb PCB6-55J

Instrument: GC27.i

Operator: JHSmith
Column diameter: 0.32

Column phase: DB-35MS

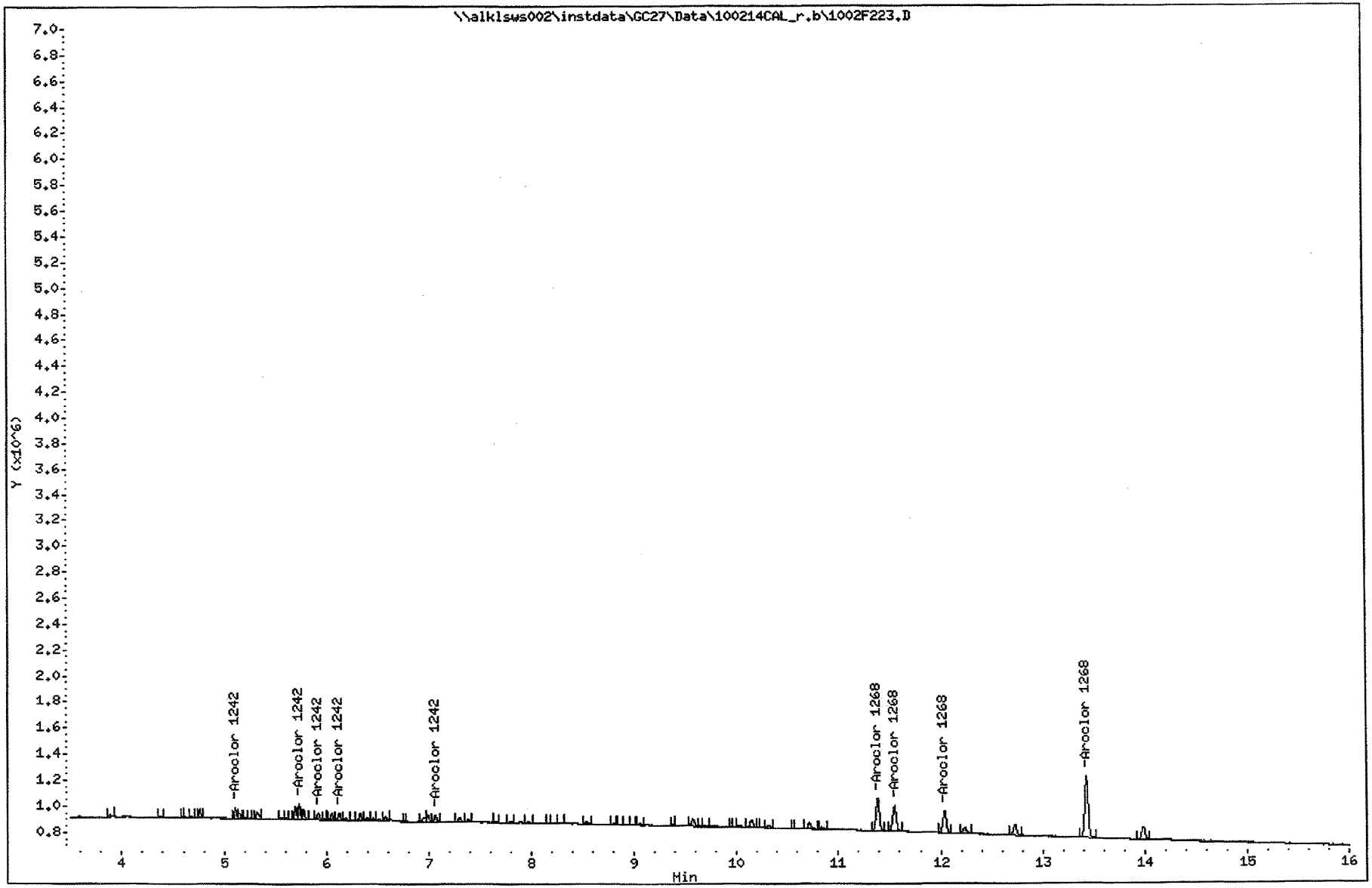


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F223.D
Date : 03-OCT-2014 11:54
Client ID:
Sample Info: 4268 @ 25ppb PCB6-55J

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F224.D
Inj Date : 03-OCT-2014 12:18
Sample Info: 4268 @ 50ppb PCB6-55I
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

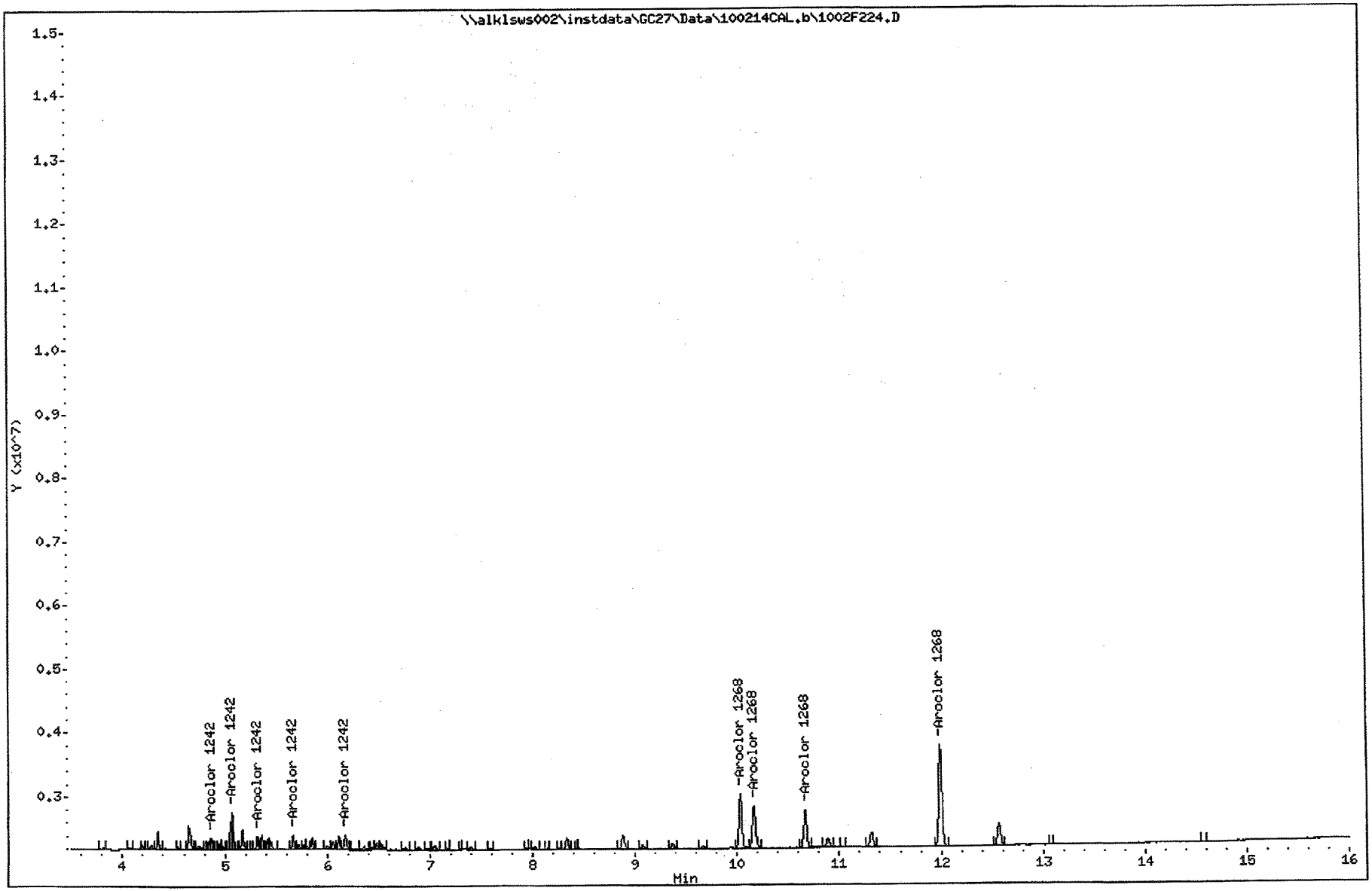
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.875	5.115	204963	195371	53.7	56.1	80.00- 120.00	100.00
	5.078	5.738	665614	331167	56.6	54.9	259.80- 389.70	324.75
	5.318	5.925	248708	163353	52.8	53.5	97.07- 145.61	121.34
	5.668	6.128	303510	147990	53.9	54.8	118.46- 177.70	148.08
	6.178	7.065	342427	160709	55.3	53.7	133.65- 200.48	167.07
			Average of Peak Amounts =		54.5	54.6		
Aroclor 1268	10.035	11.385	1662211	1040672	58.6	57.5	80.00- 120.00	100.00
	10.165	11.551	1406578	864334	56.4	56.7	67.70- 101.55	84.62
	10.668	12.041	1174886	736882	56.9	56.4	56.55- 84.82	70.68
	11.995	13.431	3463110	2114451	56.9	55.8	166.67- 250.01	208.34
			Average of Peak Amounts =		57.2	56.6		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F224.D
Date : 03-OCT-2014 12:18
Client ID:
Sample Info: 4268 @ 50ppb PCB6-55I

Instrument: GC27.i

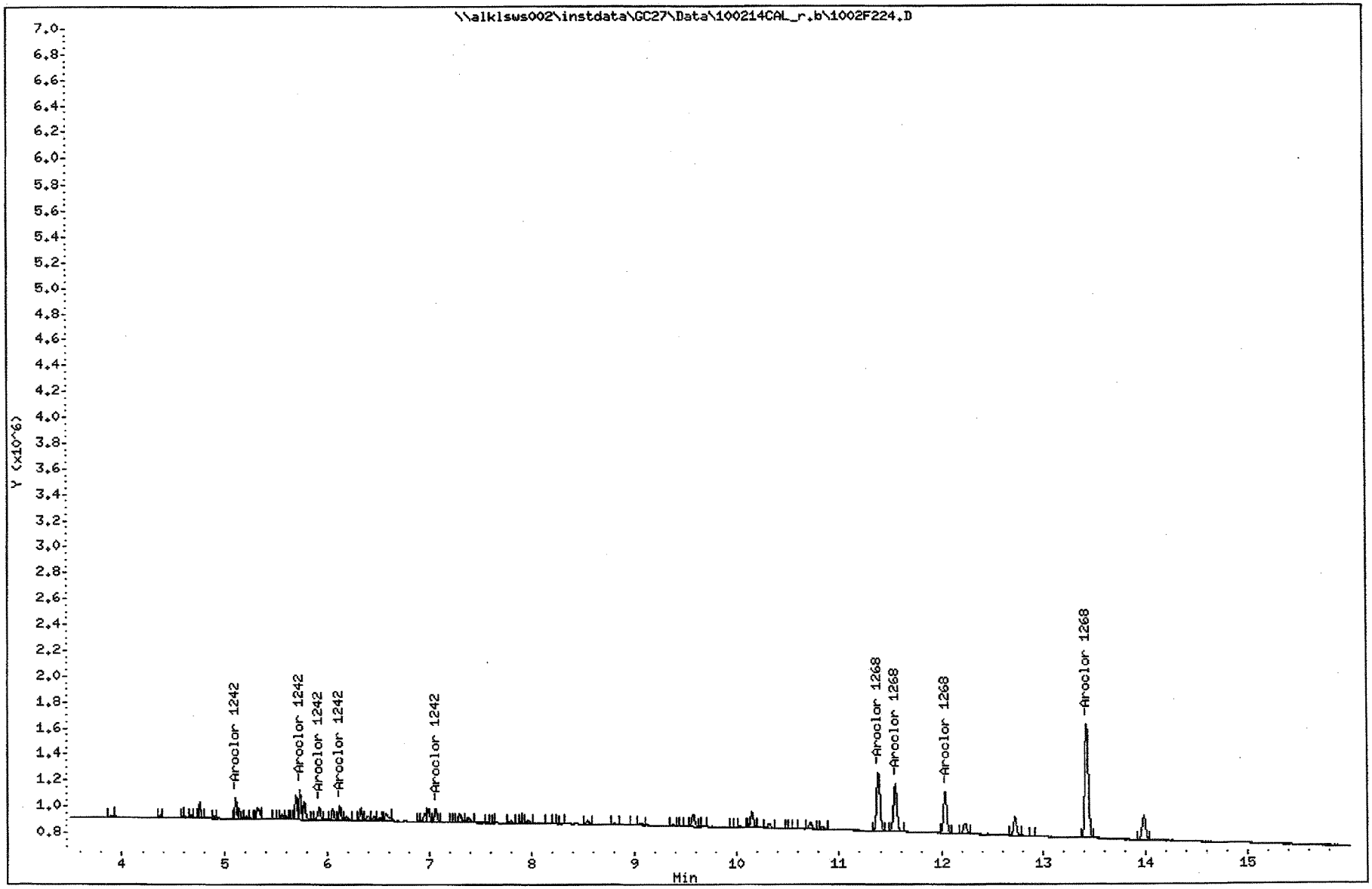
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F224.D
Date : 03-OCT-2014 12:18
Client ID:
Sample Info: 4268 @ 50ppb PCB6-55I

Instrument: GC27.i
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



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Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F225.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F225.D
Inj Date : 03-OCT-2014 12:42
Sample Info: 4268 @ 500ppb PCB6-55H
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

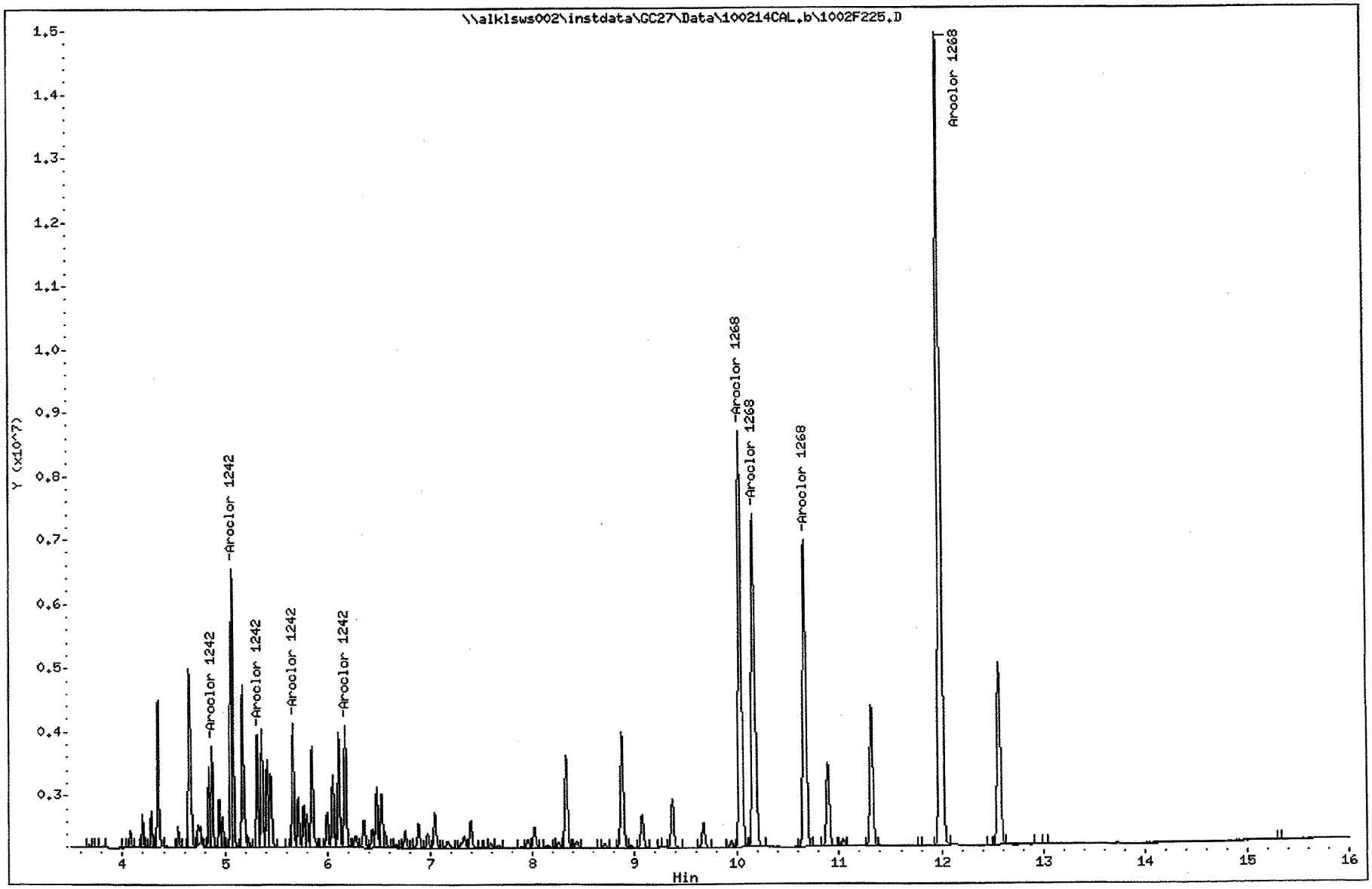
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.875	5.115	1913157	1620783	501	465	80.00- 120.00	100.00
	5.078	5.738	5357609	2773527	455	459	224.03- 336.05	280.04
	5.318	5.925	2251022	1432369	478	469	94.13- 141.19	117.66
	5.668	6.128	2719346	1276984	483	473	113.71- 170.57	142.14
	6.178	7.065	3009872	1438090	486	480	125.86- 188.79	157.32
			Average of Peak Amounts =		481	469		
Aroclor 1268	10.038	11.385	13490962	8279758	475	457	80.00- 120.00	100.00
	10.165	11.551	11915888	7069392	478	464	70.66- 105.99	88.32
	10.668	12.041	10164615	6160149	492	471	60.28- 90.41	75.34
	11.998	13.435	28933831	17688864	475	467	171.57- 257.36	214.47
			Average of Peak Amounts =		480	465		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F225.D
Date : 03-OCT-2014 12:42
Client ID:
Sample Info: 4268 @ 500ppb PCB6-55H

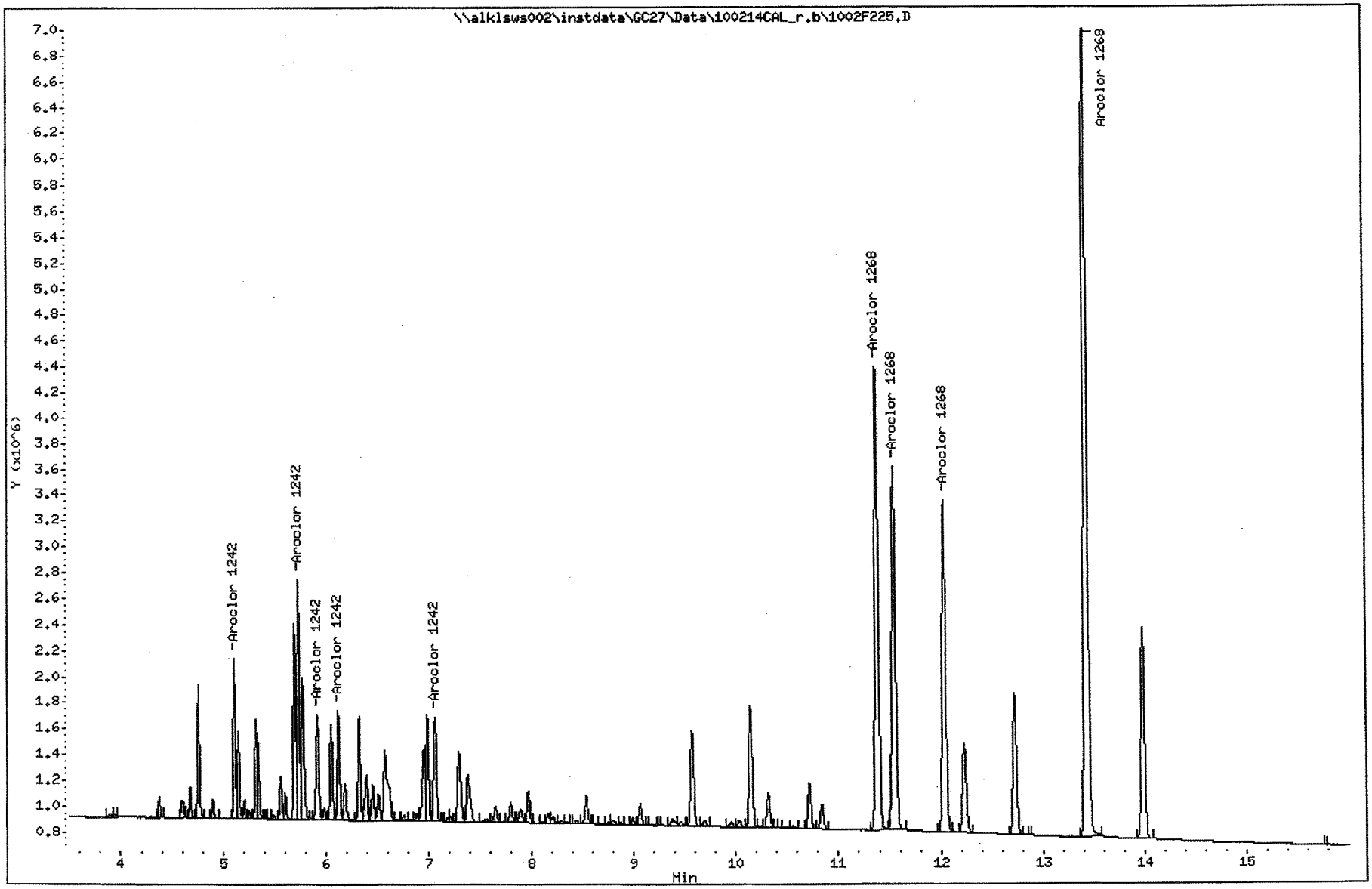
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F225.D
Date : 03-OCT-2014 12:42
Client ID:
Sample Info: 4268 @ 500ppb PCB6-55H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F226.D
Inj Date : 03-OCT-2014 13:05
Sample Info: 4268 @ 1000ppb PCB6-55G
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

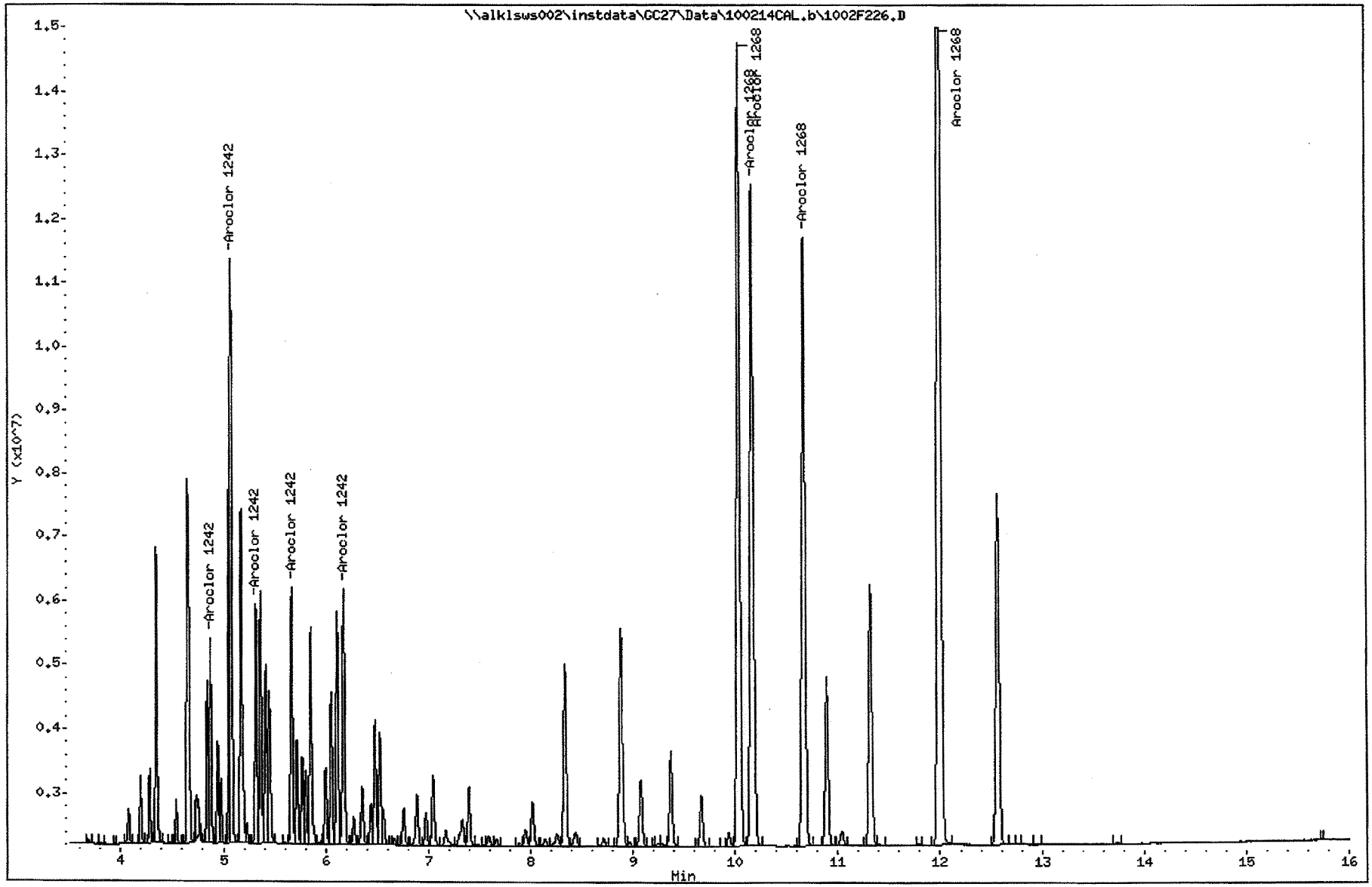
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.876	5.116	3933471	3426197	1030	983	80.00- 120.00	100.00
	5.076	5.739	11939762	5986119	1020	992	242.83- 364.25	303.54
	5.316	5.926	4848818	3103310	1030	1020	98.62- 147.92	123.27
	5.666	6.129	5714596	2704432	1010	1000	116.23- 174.34	145.28
	6.176	7.066	6212966	3053130	1000	1020	126.36- 189.54	157.95
			Average of Peak Amounts =		1020	1000		
Aroclor 1268	10.036	11.386	26412084	17053318	931	942	80.00- 120.00	100.00
	10.166	11.549	23413408	14634697	939	960	70.92- 106.38	88.65
	10.669	12.042	19952533	12724071	966	973	60.43- 90.65	75.54
	11.996	13.436	57366871	36417846	943	962	173.76- 260.64	217.20
			Average of Peak Amounts =		945	959		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F226.D
Date : 03-OCT-2014 13:05
Client ID:
Sample Info: 4268 @ 1000ppb PCB6-55C

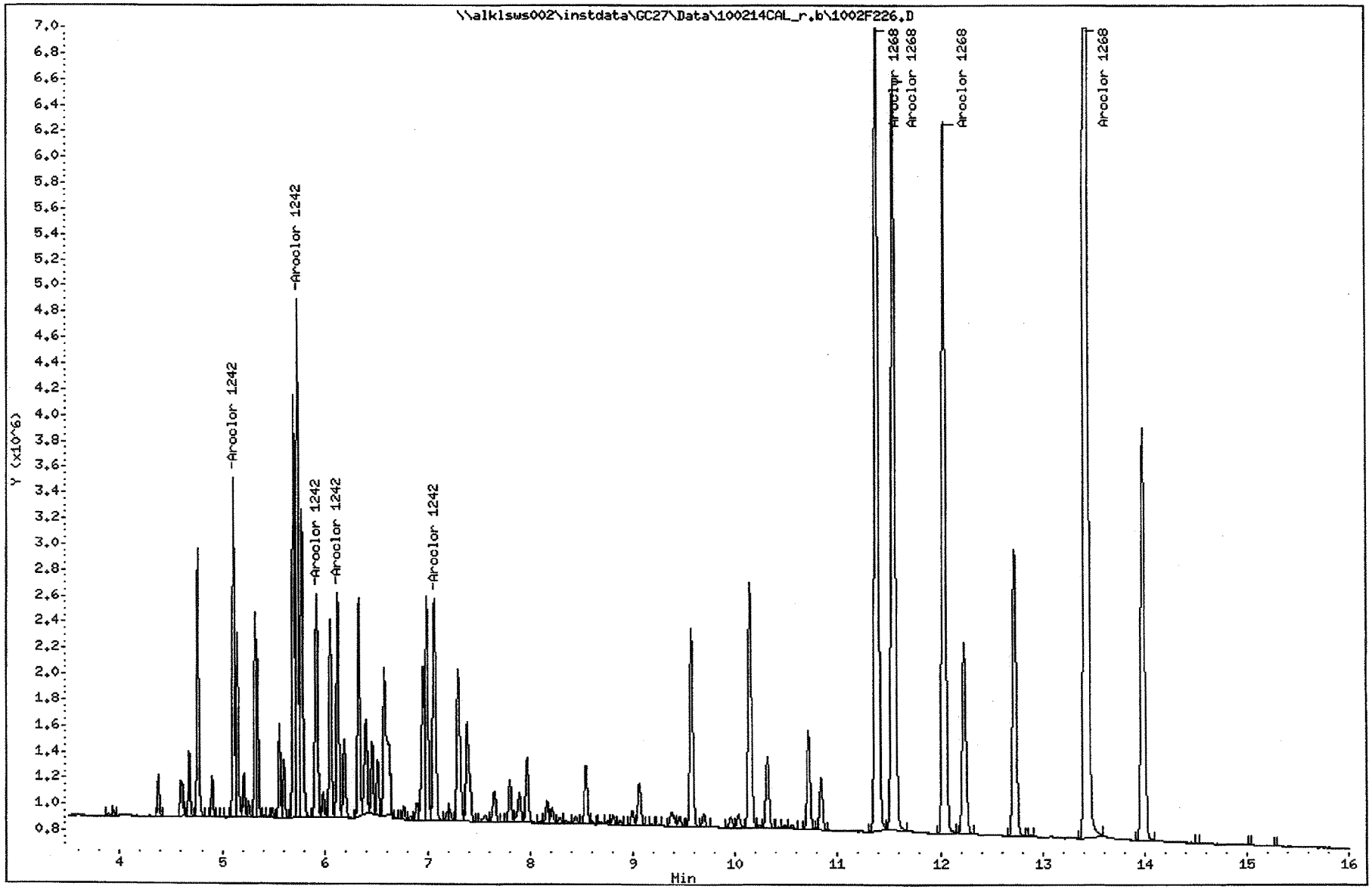
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F226.D
Date : 03-OCT-2014 13:05
Client ID:
Sample Info: 4268 @ 1000ppb PCB6-55G

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F227.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F227.D
Inj Date : 03-OCT-2014 13:28
Sample Info: 4268 @ 2000ppb PCB6-55F
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

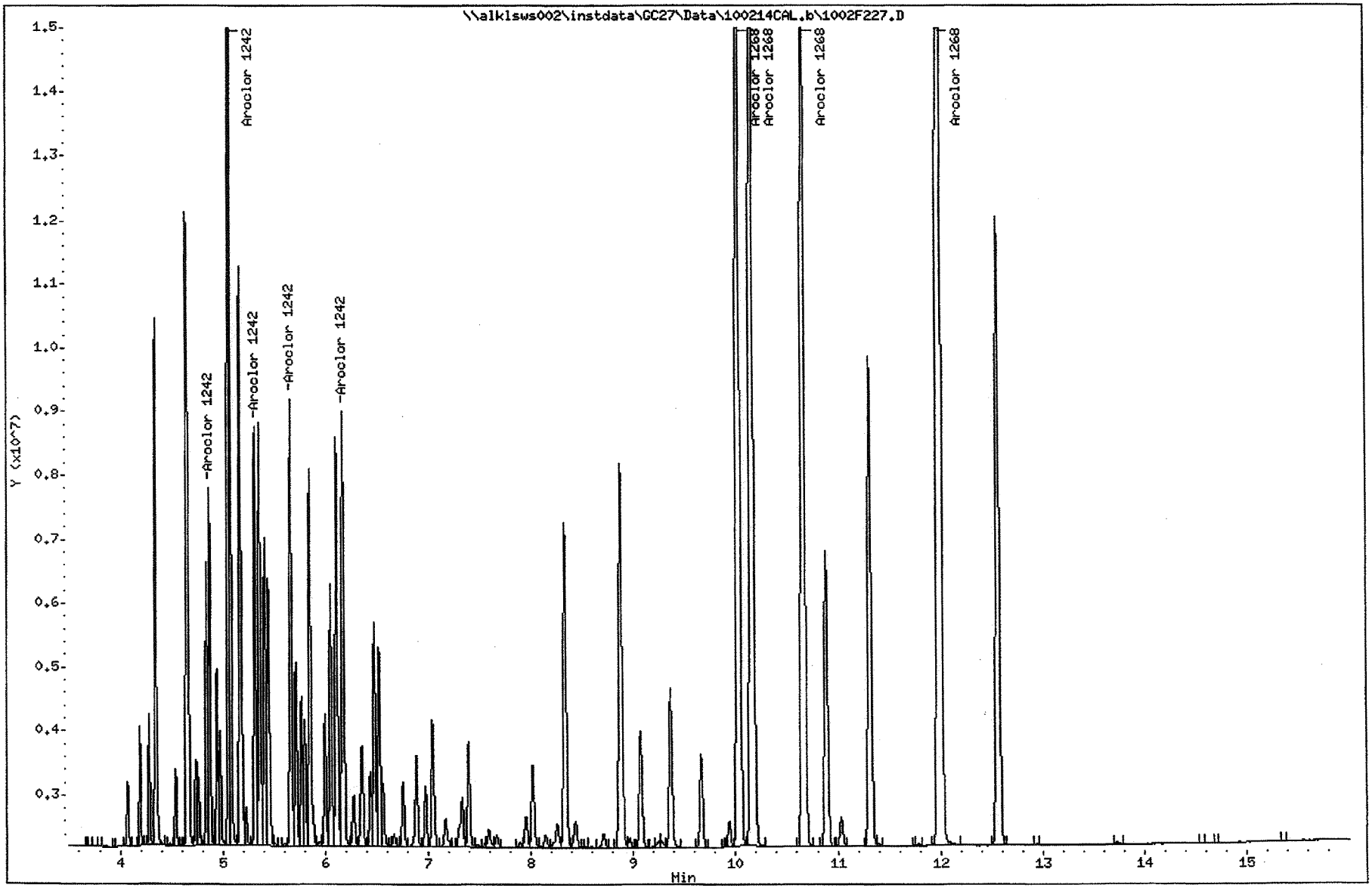
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.874	5.113	6735783	6119493	1760	1760	80.00- 120.00	100.00
	5.077	5.736	20530119	10785932	1750	1790	243.83- 365.75	304.79
	5.317	5.923	8607455	5540802	1830	1820	102.23- 153.34	127.79
	5.667	6.126	9888214	4779429	1750	1770	117.44- 176.16	146.80
	6.177	7.063	10965781	5454249	1770	1820	130.24- 195.36	162.80
			Average of Peak Amounts =		1770	1790		
Aroclor 1268	10.034	11.383	48418270	31720544	1710	1750	80.00- 120.00	100.00
	10.164	11.550	43306207	27357164	1740	1790	71.55- 107.33	89.44
	10.667	12.040	36893427	23737812	1790	1820	60.96- 91.44	76.20
	11.997	13.433	107891957	68680186	1770	1810	178.27- 267.40	222.83
			Average of Peak Amounts =		1750	1790		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F227.D
Date : 03-OCT-2014 13:28
Client ID:
Sample Info: 4268 @ 2000ppb PCB6-55F

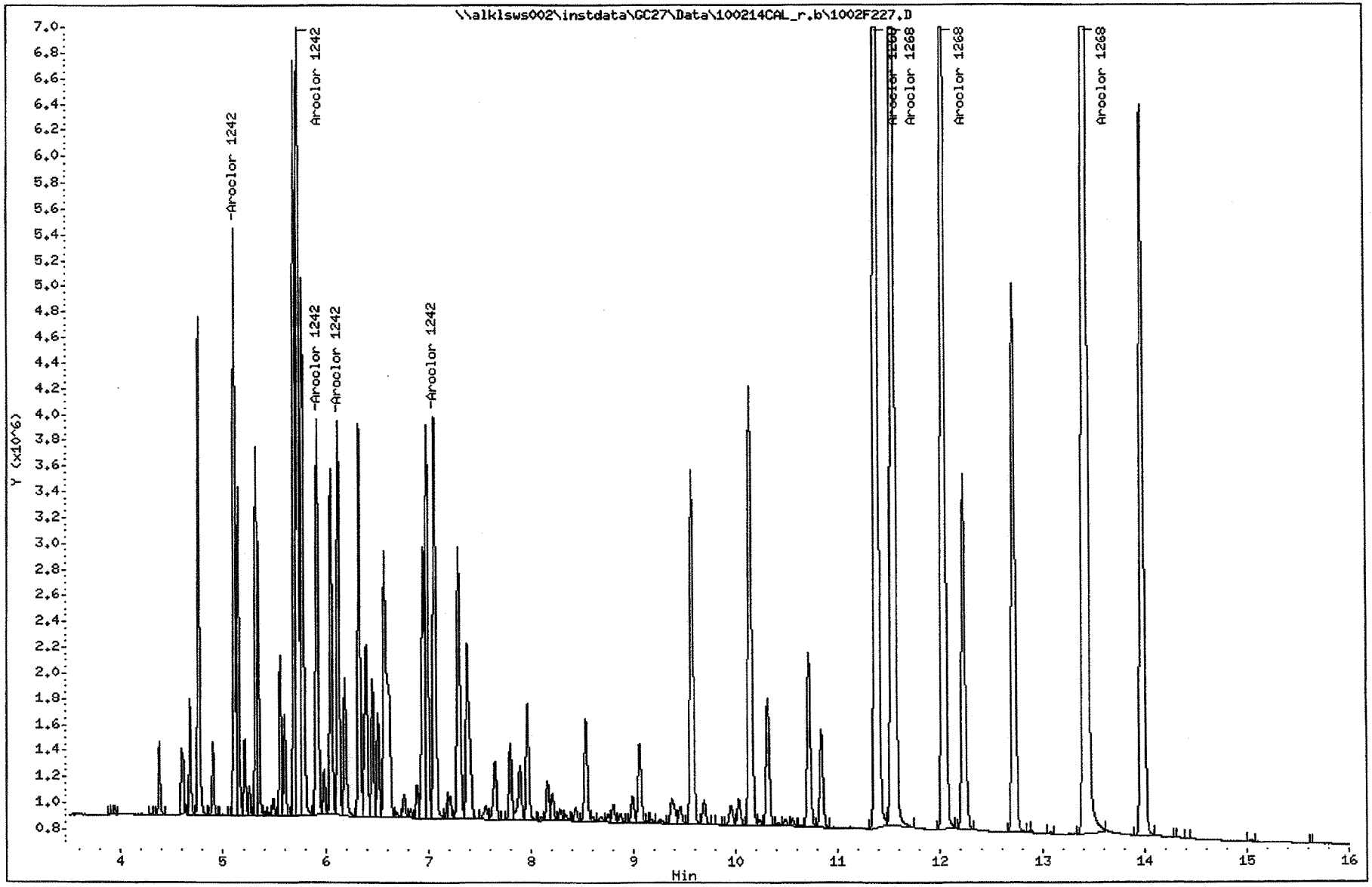
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F227.D
Date : 03-OCT-2014 13:28
Client ID:
Sample Info: 4268 @ 2000ppb PCB6-55F

Instrument: GC27.i
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D
Report Date: 04-Oct-2014 00:40

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F228.D
Inj Date : 03-OCT-2014 13:52
Sample Info: 4268 @ 5000ppb PCB6-55E
Misc Info :
Cal Date : 04-OCT-2014 00:40
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.874	5.113	15837752	14864276	4150	4270	80.00- 120.00	100.00
	5.077	5.737	51755278	27396849	4400	4540	261.43- 392.14	326.78
	5.317	5.923	21116615	13874107	4480	4550	106.66- 160.00	133.33
	5.667	6.127	23722221	11644886	4210	4310	119.83- 179.74	149.78
	6.177	7.067	26039797	13309950	4200	4440	131.53- 197.30	164.42
			Average of Peak Amounts =		4290	4420		
Aroclor 1268	10.034	11.383	113940438	77036390	4020	4250	80.00- 120.00	100.00
	10.167	11.550	102146099	66788303	4090	4380	71.72- 107.58	89.65
	10.667	12.037	87496039	57789104	4240	4420	61.43- 92.15	76.79
	11.997	13.433	261503885	169031216	4300	4460	183.61- 275.41	229.51
			Average of Peak Amounts =		4160	4380		

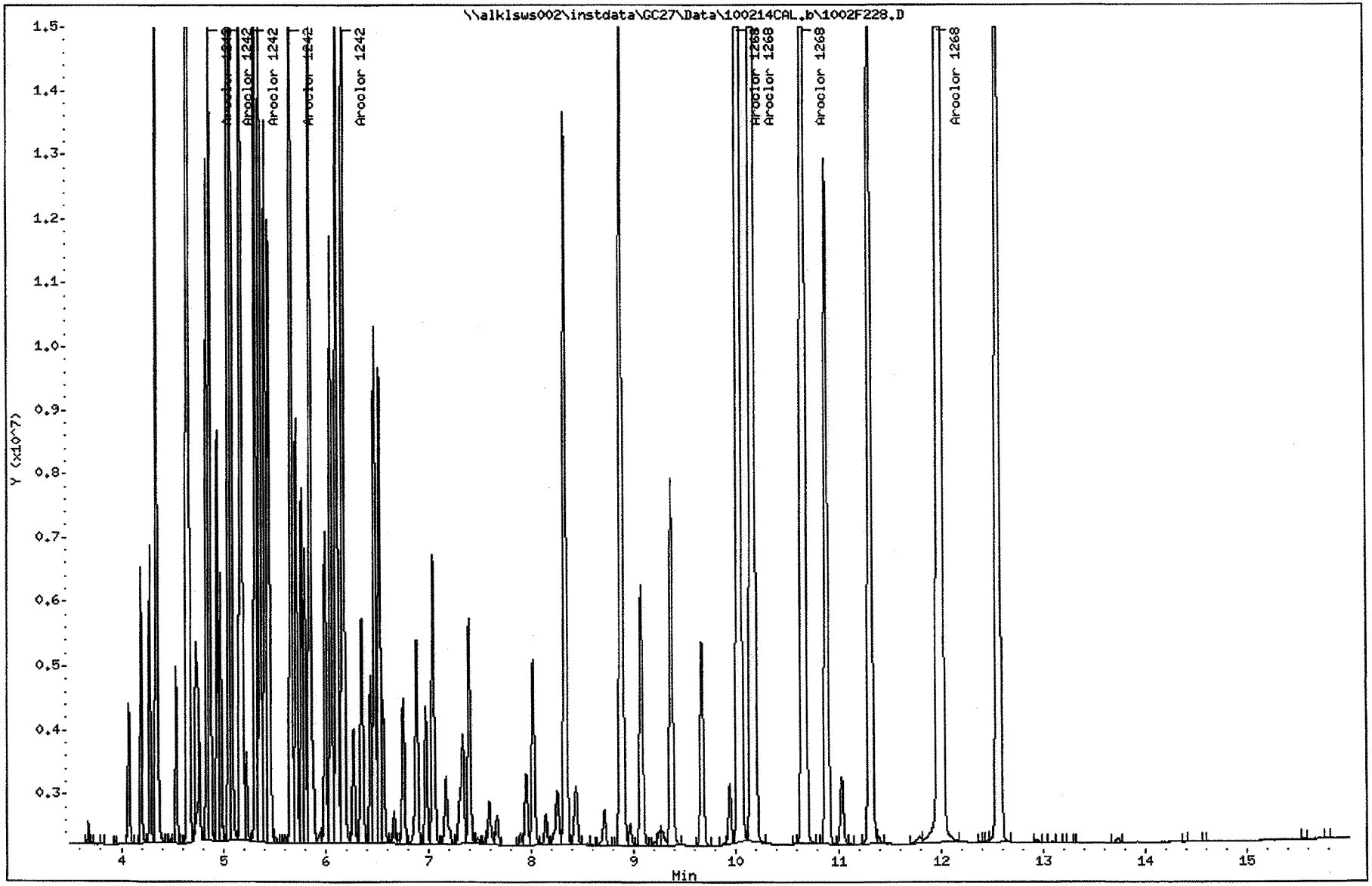
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F228.D
Date : 03-OCT-2014 13:52
Client ID:
Sample Info: 4268 @ 5000ppb PCB6-55E

Instrument: GC27.i

Operator: JMSmith

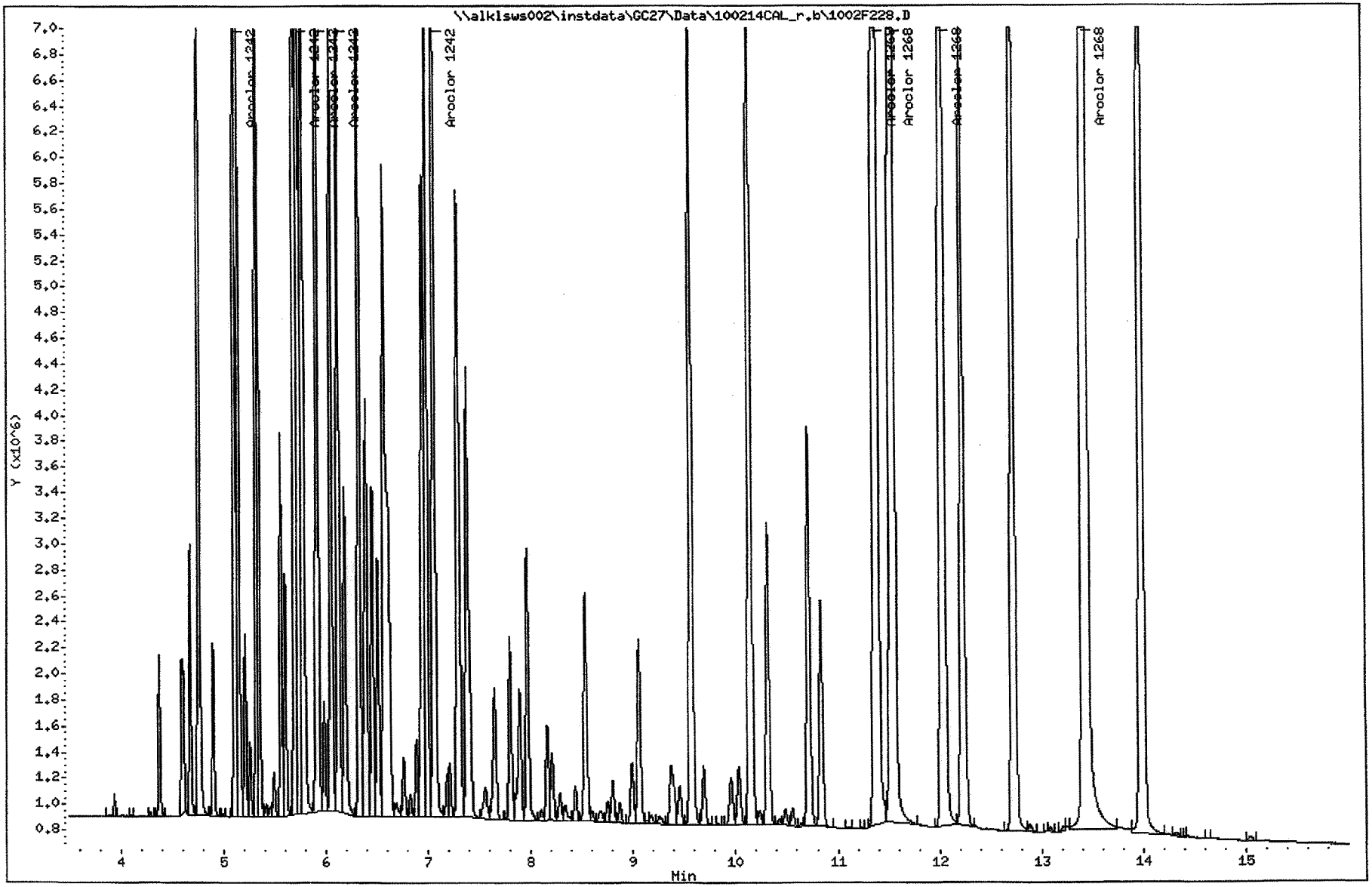
Column phase: DB-35MS

Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F228.D
Date : 03-OCT-2014 13:52
Client ID:
Sample Info: 4268 @ 5000ppb PCB6-55E

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D
Inj Date : 03-OCT-2014 14:16
Sample Info: 48 @ 25ppb PCB6-48J
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

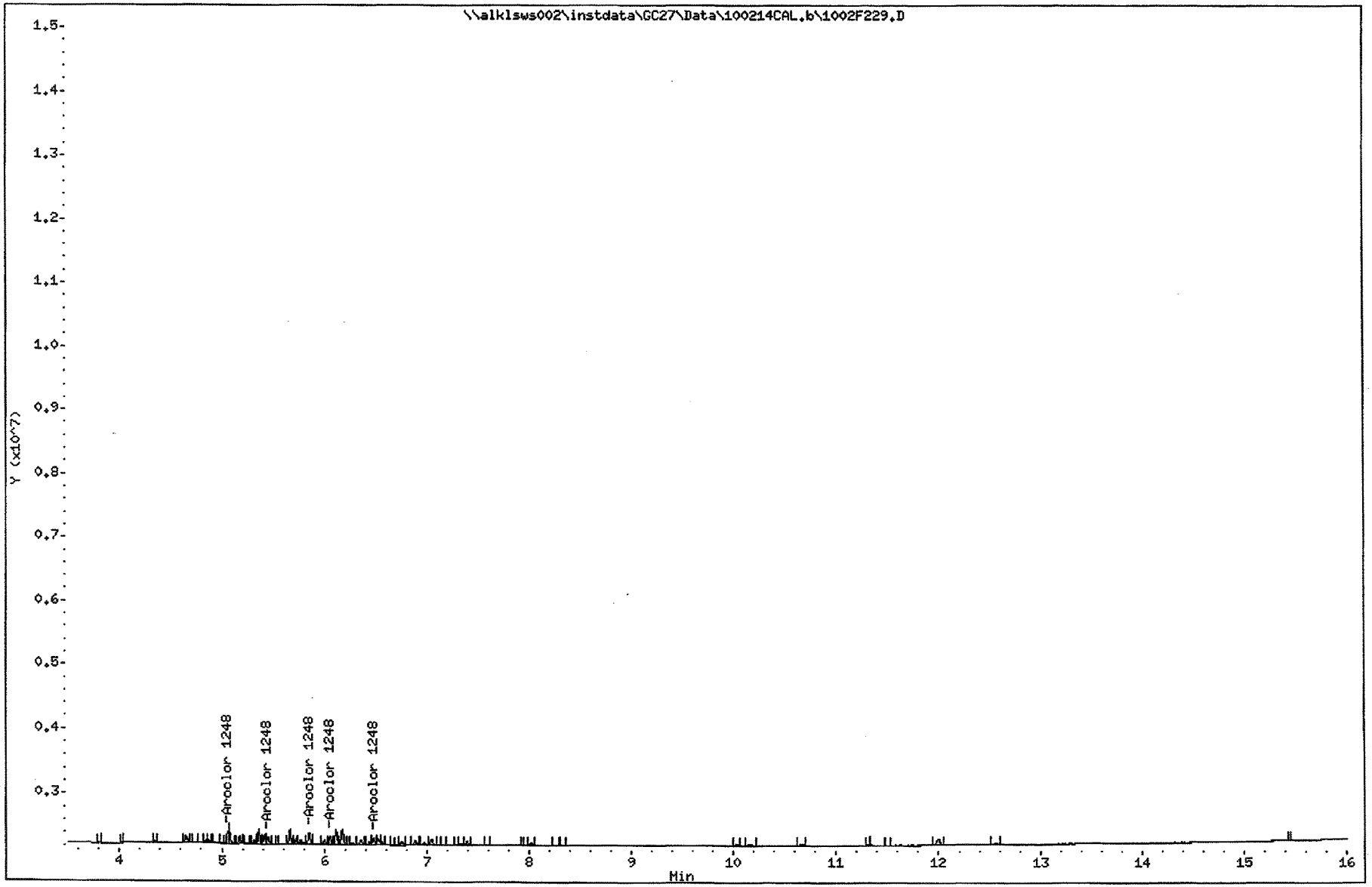
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.063	5.115	213492	63695	30.5	28.9	80.00- 120.00	100.00
	5.446	5.699	170109	128009	29.4	30.6	63.74- 95.62	79.68
	5.853	6.129	224579	137391	27.9	30.3	84.15- 126.23	105.19
	6.056	6.579	171450	99886	28.4	28.1	64.25- 96.37	80.31
	6.479	7.065	149278	182439	28.0	30.4	55.94- 83.91	69.92
			Average of Peak Amounts =		28.8	29.7		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F229.D
Date : 03-OCT-2014 14:16
Client ID:
Sample Info: 48 @ 25ppb PCB6-48J

Instrument: GC27.i

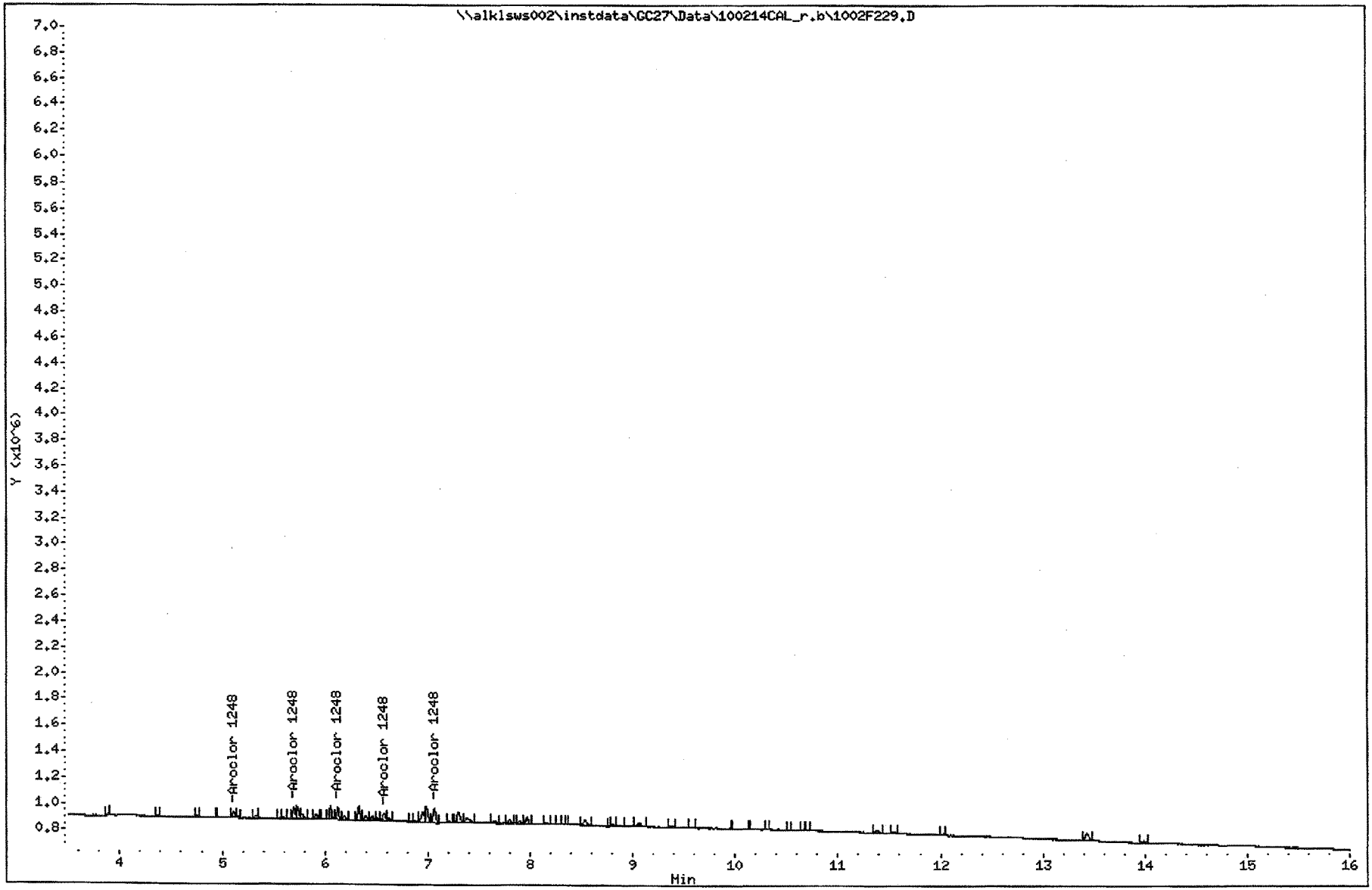
Operator: JMSmith

Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F229.D
Date : 03-OCT-2014 14:16
Client ID:
Sample Info: 48 @ 25ppb PCB6-48J

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D
Inj Date : 03-OCT-2014 14:39
Sample Info: 48 @ 50ppb PCB6-48I
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

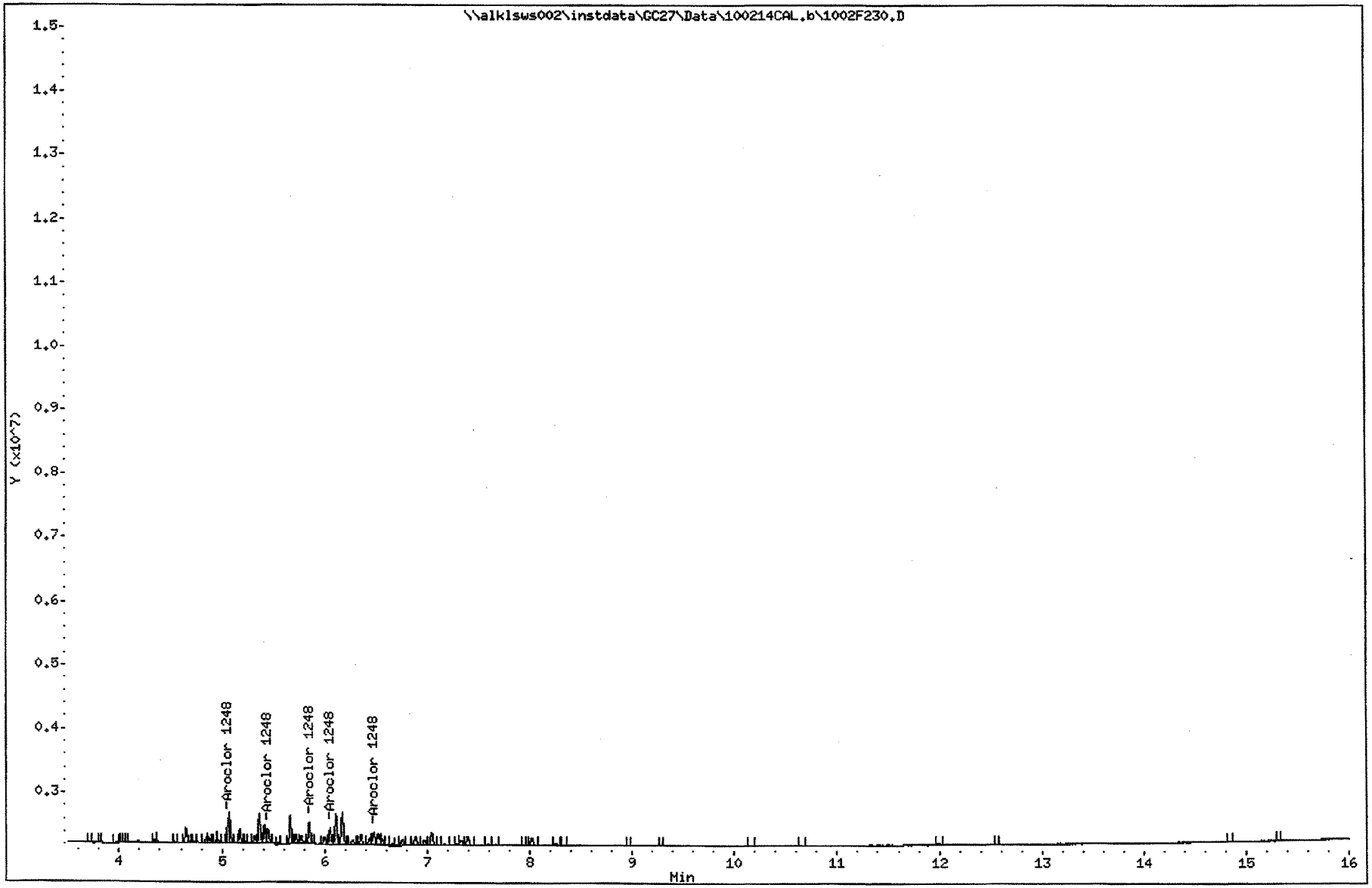
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.062	5.115	403300	134309	57.6	61.0	80.00- 120.00	100.00
	5.448	5.698	329468	245743	56.9	58.7	65.35- 98.03	81.69
	5.852	6.125	464397	264673	57.7	58.4	92.12- 138.18	115.15
	6.055	6.578	344068	198740	57.1	55.8	68.25- 102.38	85.31
	6.482	7.065	302224	352597	56.7	58.7	59.95- 89.93	74.94
			Average of Peak Amounts =		57.2	58.5		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F230.D
Date : 03-OCT-2014 14:39
Client ID:
Sample Info: 48 @ 50ppb PCB6-48I

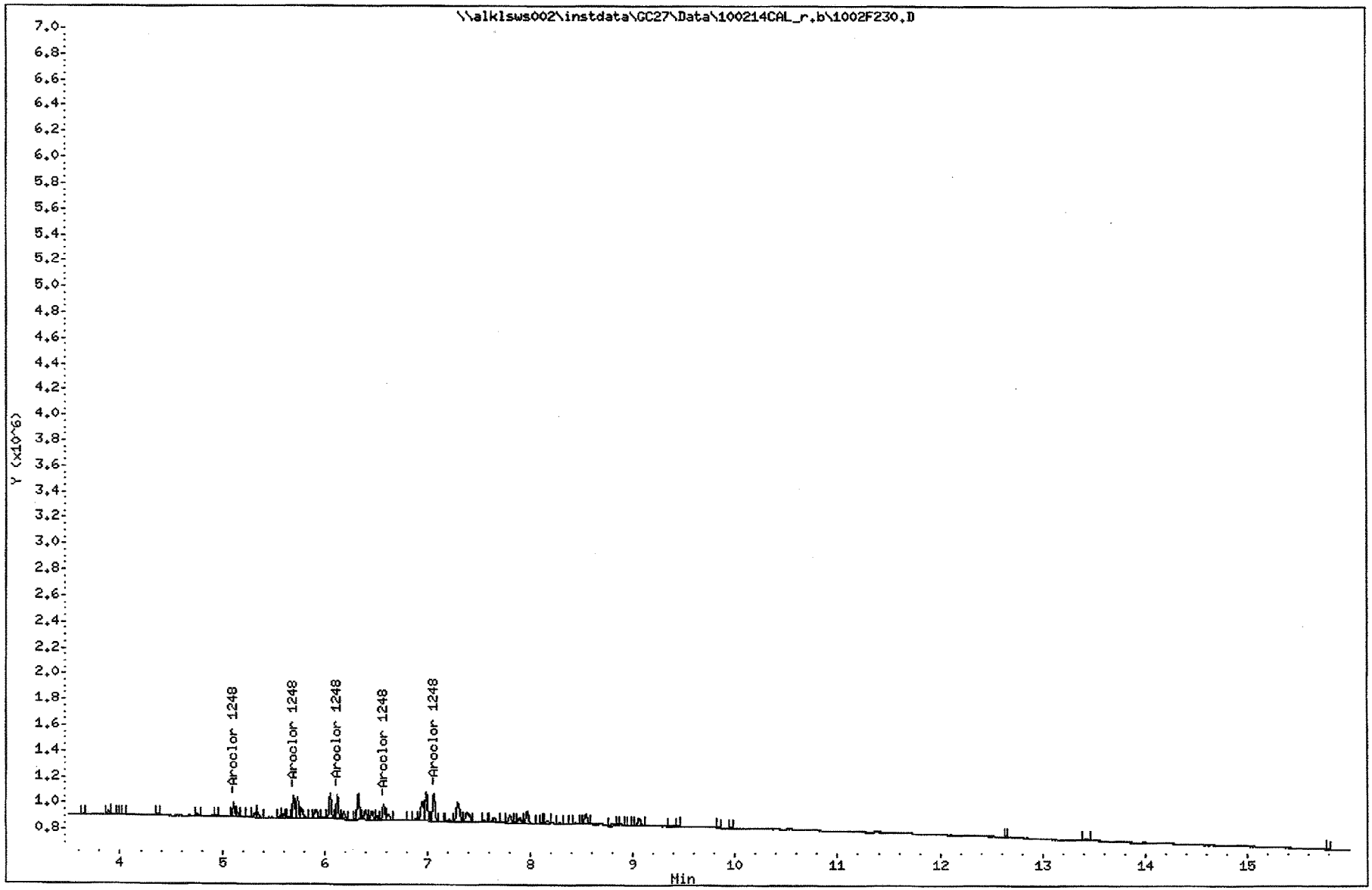
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F230.D
Date : 03-OCT-2014 14:39
Client ID:
Sample Info: 48 @ 50ppb PCB6-48I

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

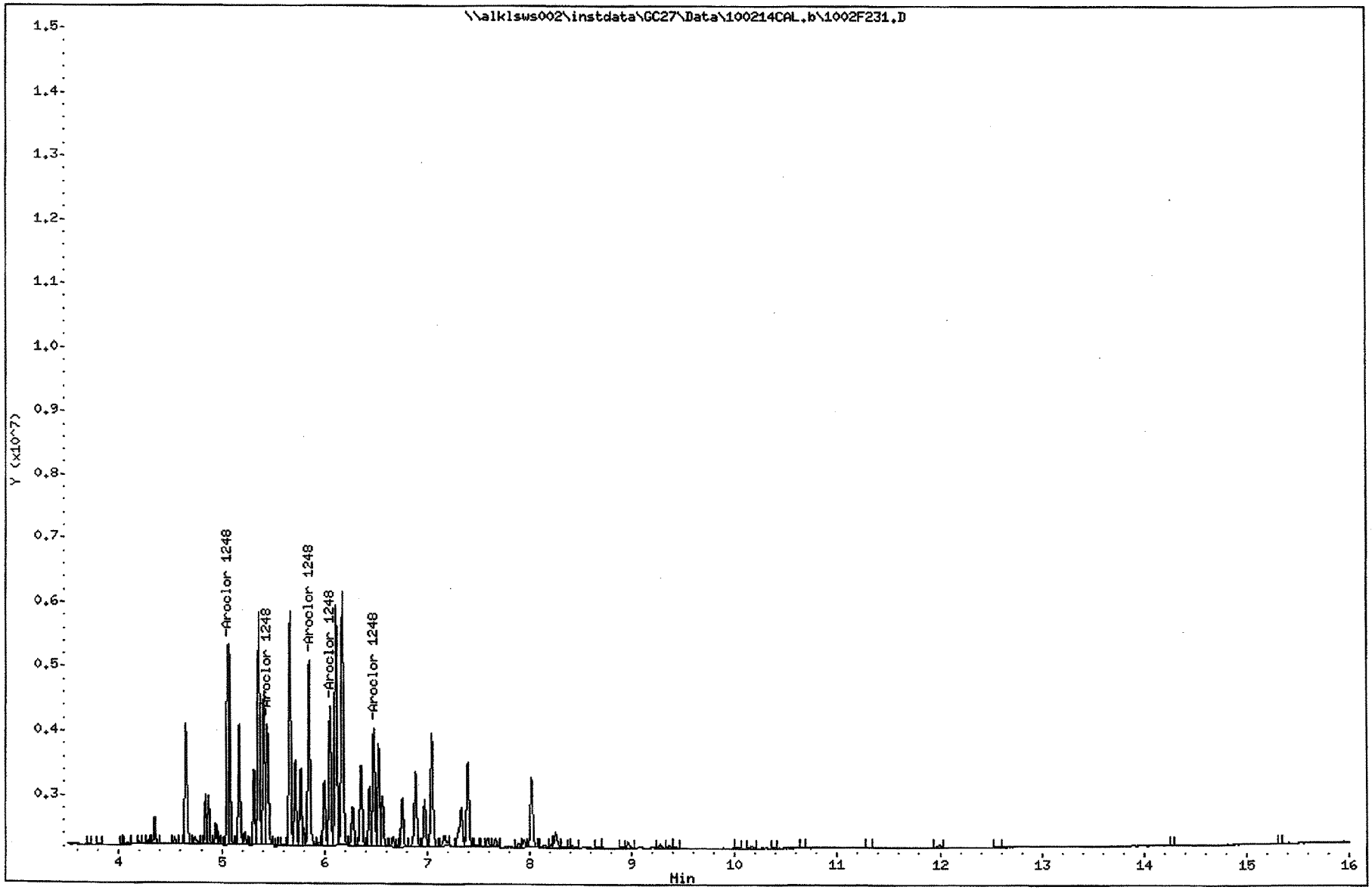
Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D
Inj Date : 03-OCT-2014 15:03
Sample Info: 48 @ 500ppb PCB6-48H
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.062	5.115	3408044	1112788	487	505	80.00- 120.00	100.00
	5.446	5.698	3088901	2112734	534	505	72.51- 108.76	90.64
	5.852	6.128	4226298	2294322	525	506	99.21- 148.81	124.01
	6.056	6.578	3183602	1842269	528	517	74.73- 112.10	93.41
	6.479	7.065	2843413	3022763	534	503	66.75- 100.12	83.43
			Average of Peak Amounts =		522	507		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F231.D
Date : 03-OCT-2014 15:03
Client ID:
Sample Info: 48 @ 500ppb PCB6-48H

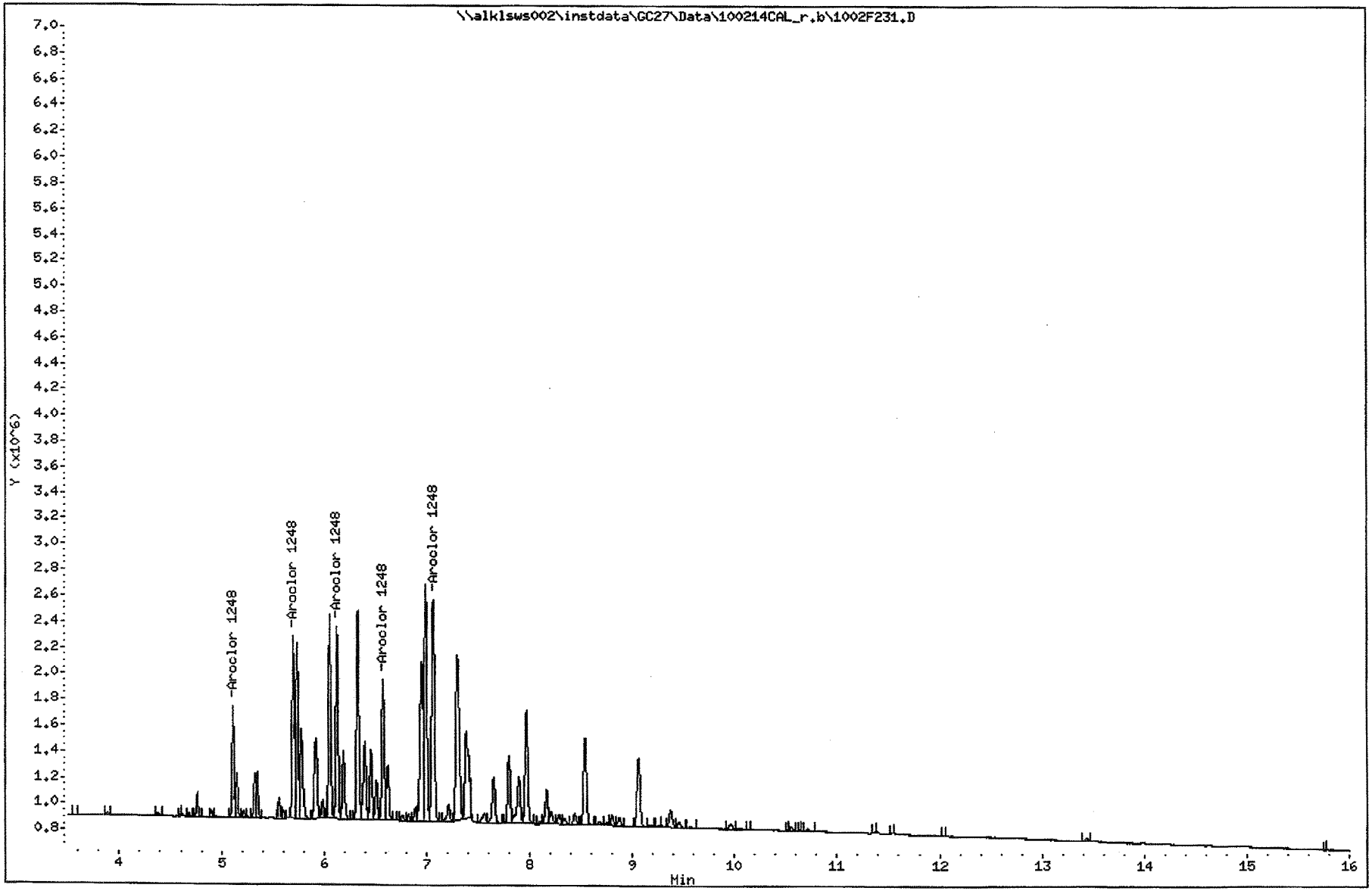
Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F231.D
Date : 03-OCT-2014 15:03
Client ID:
Sample Info: 48 @ 500ppb PCB6-48H

Instrument: GC27.i

Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D
Inj Date : 03-OCT-2014 15:26
Sample Info: 48 @ 1000ppb PCB6-48G
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

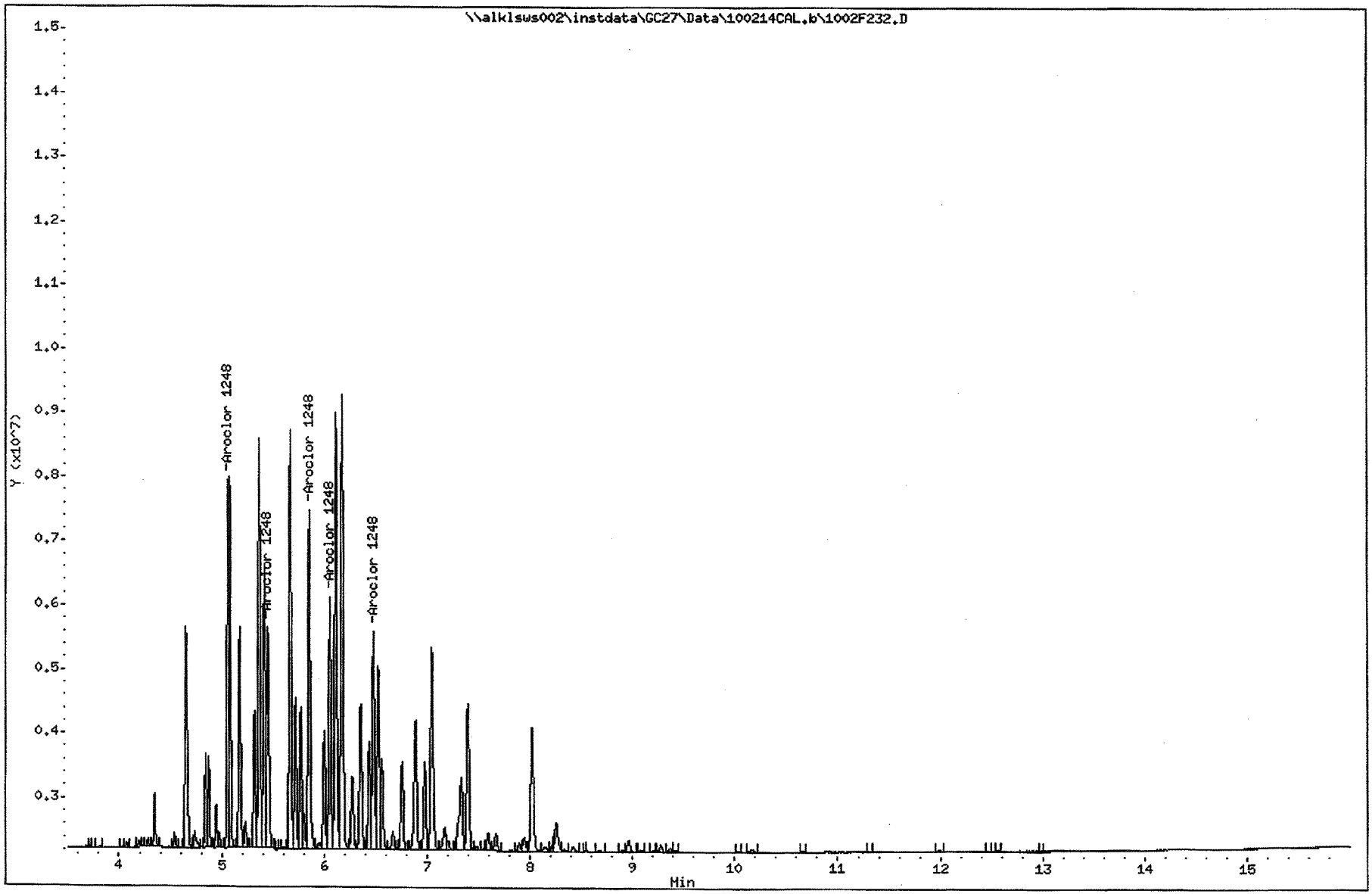
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.061	5.114	6804216	2094619	973	951	80.00- 120.00	100.00
	5.448	5.700	5508953	3854837	952	921	64.77- 97.16	80.96
	5.851	6.127	7741177	4273871	961	942	91.02- 136.52	113.77
	6.054	6.577	5833314	3454223	967	970	68.58- 102.88	85.73
	6.481	7.067	5163253	5572242	970	928	60.71- 91.06	75.88
			Average of Peak Amounts =		965	942		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F232.D
Date : 03-OCT-2014 15:26
Client ID:
Sample Info: 48 @ 1000ppb PCB6-48G

Instrument: GC27.i

Operator: JHSmith
Column phase: DB-35MS
Column diameter: 0.32

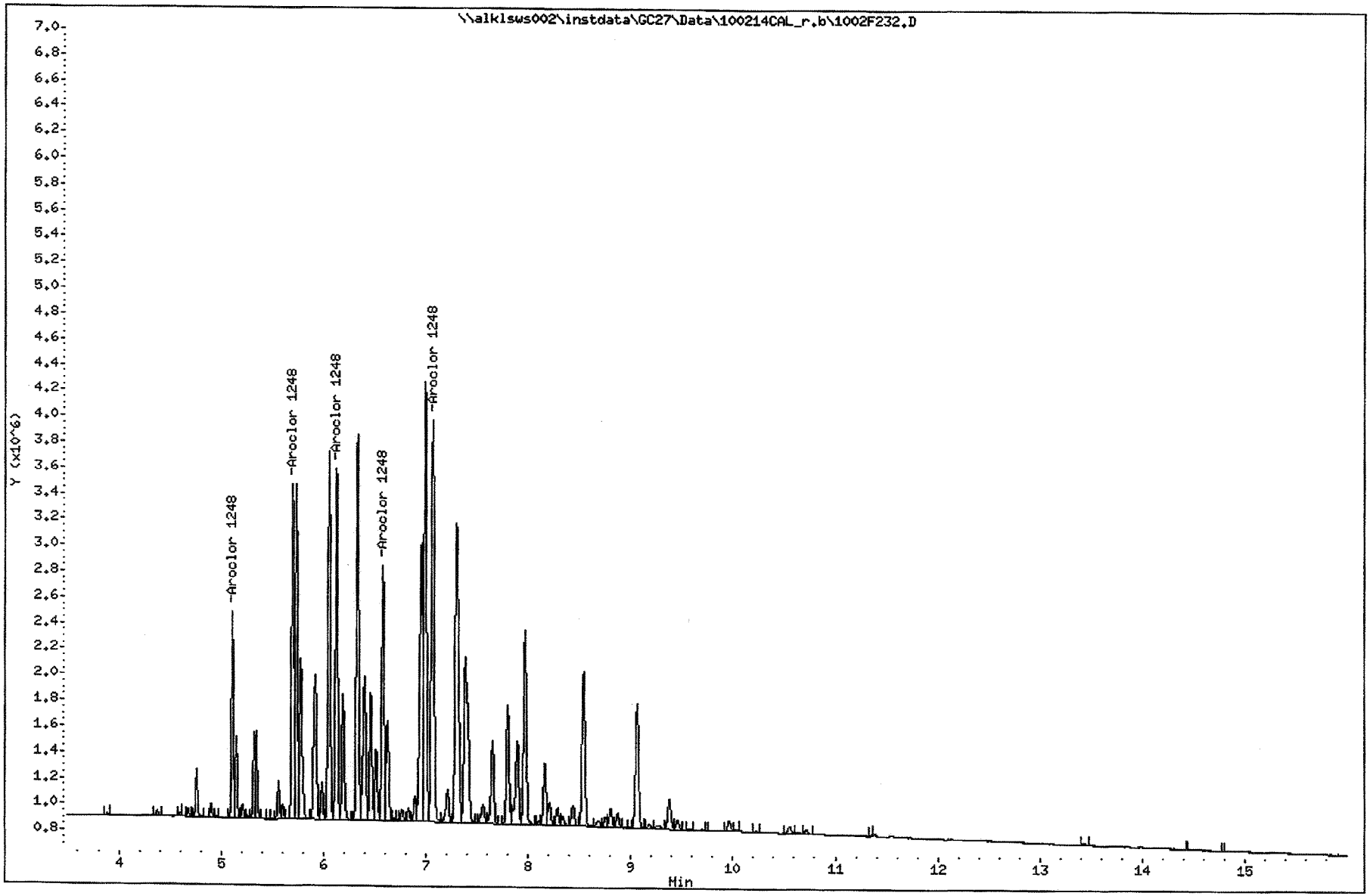


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F232.D
Date : 03-OCT-2014 15:26
Client ID:
Sample Info: 48 @ 1000ppb PCB6-48G

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



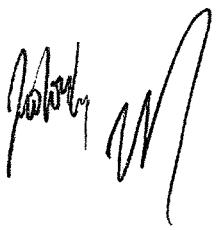
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D
Inj Date : 03-OCT-2014 15:50
Sample Info: 48 @ 2000ppb PCB6-48F
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

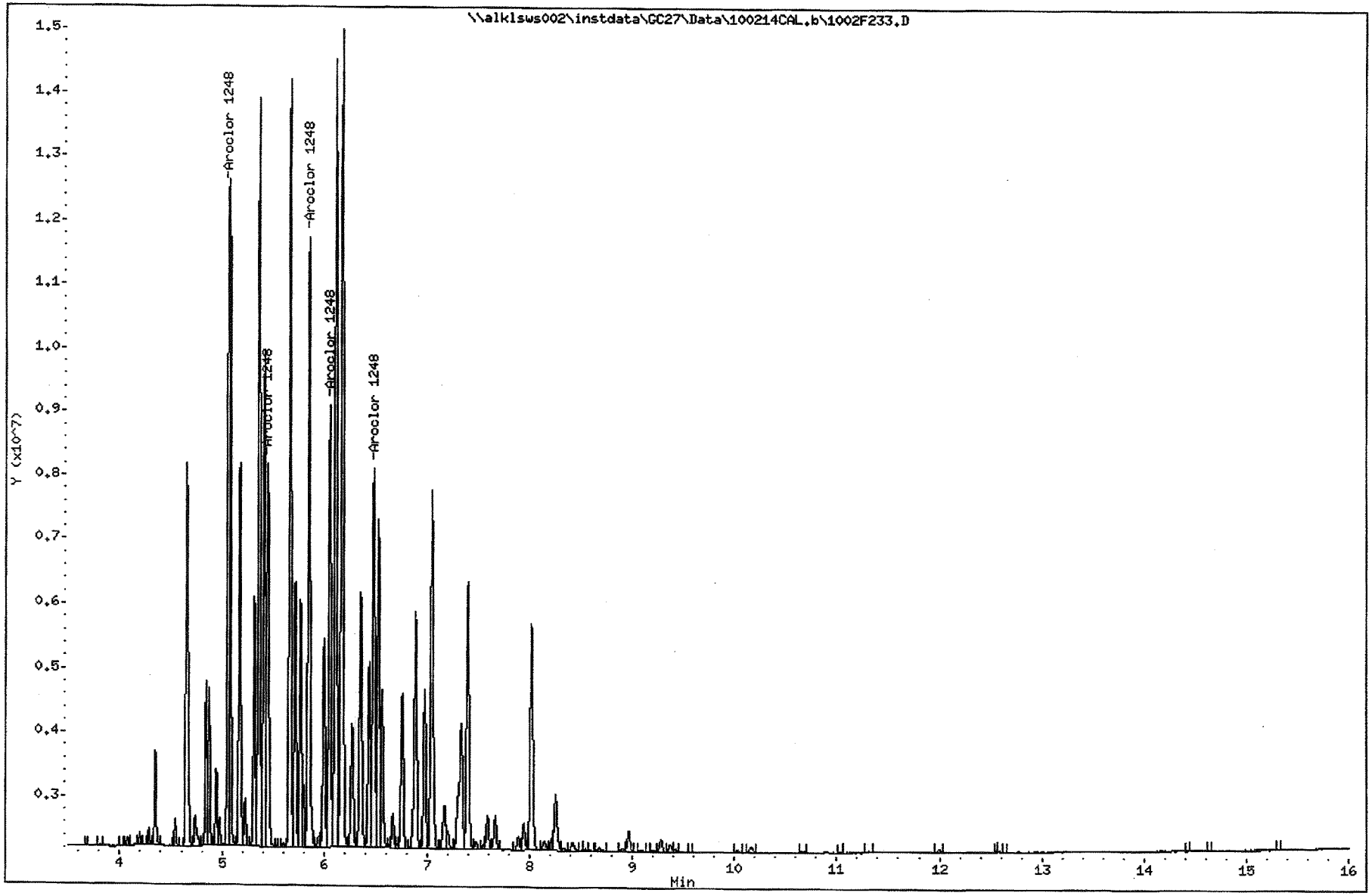
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.062	5.115	11531566	3632765	1650	1650	80.00- 120.00	100.00
	5.445	5.698	9928355	6963645	1710	1660	68.88- 103.32	86.10
	5.852	6.128	13895559	7410187	1730	1630	96.40- 144.60	120.50
	6.055	6.578	10397778	6068241	1720	1700	72.13- 108.20	90.17
	6.479	7.065	9224464	9816123	1730	1630	63.99- 95.99	79.99
			Average of Peak Amounts =		1710	1650		



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F233.D
Date : 03-OCT-2014 15:50
Client ID:
Sample Info: 48 @ 2000ppb PCB6-48F

Instrument: GC27.i

Operator: JHSmith
Column phase: DB-35MS
Column diameter: 0.32

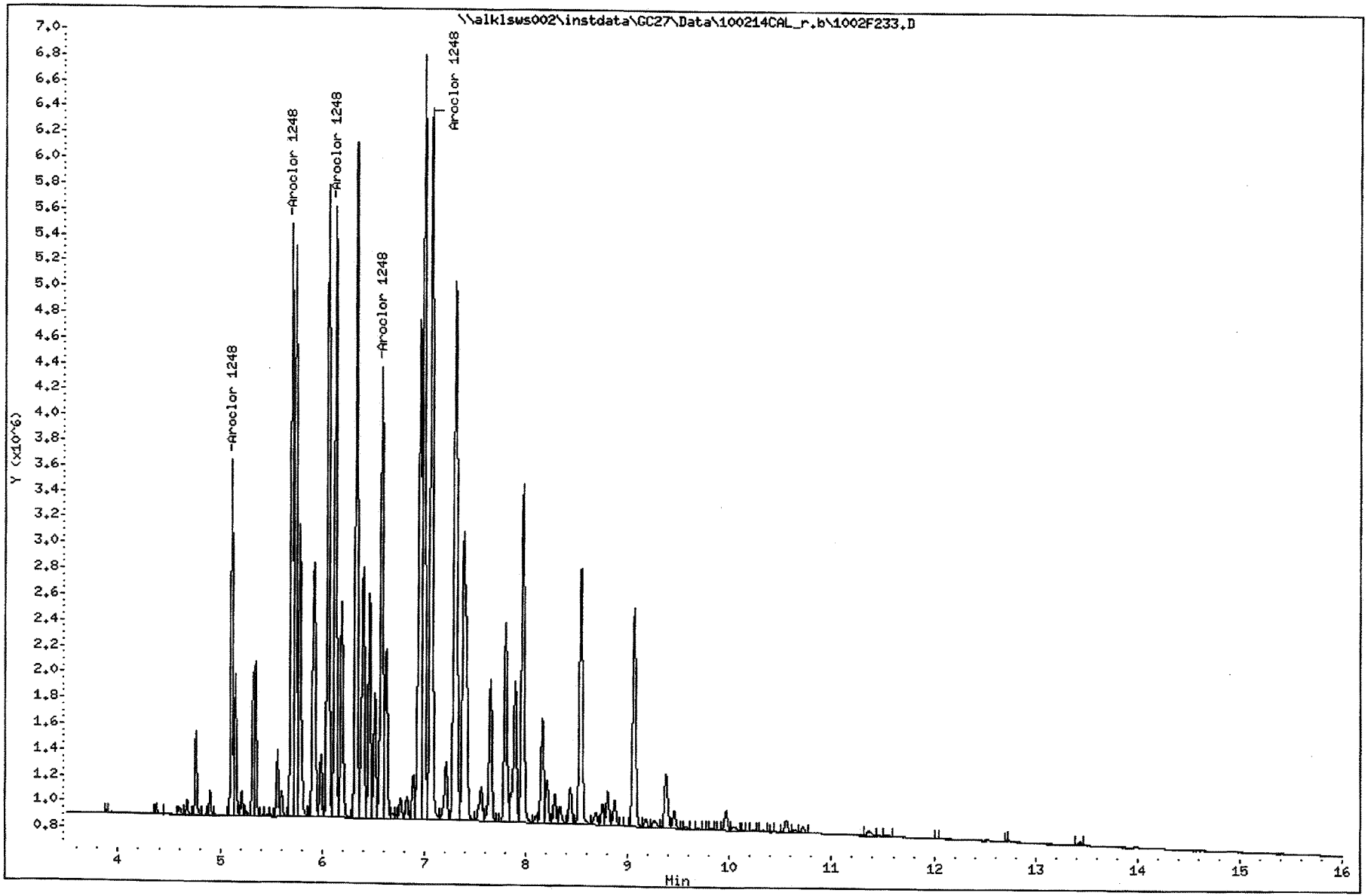


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F233.D
Date : 03-OCT-2014 15:50
Client ID:
Sample Info: 48 @ 2000ppb PCB6-48F

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



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Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F234.D
Inj Date : 03-OCT-2014 16:13
Sample Info: 48 @ 5000ppb PCB6-48E
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

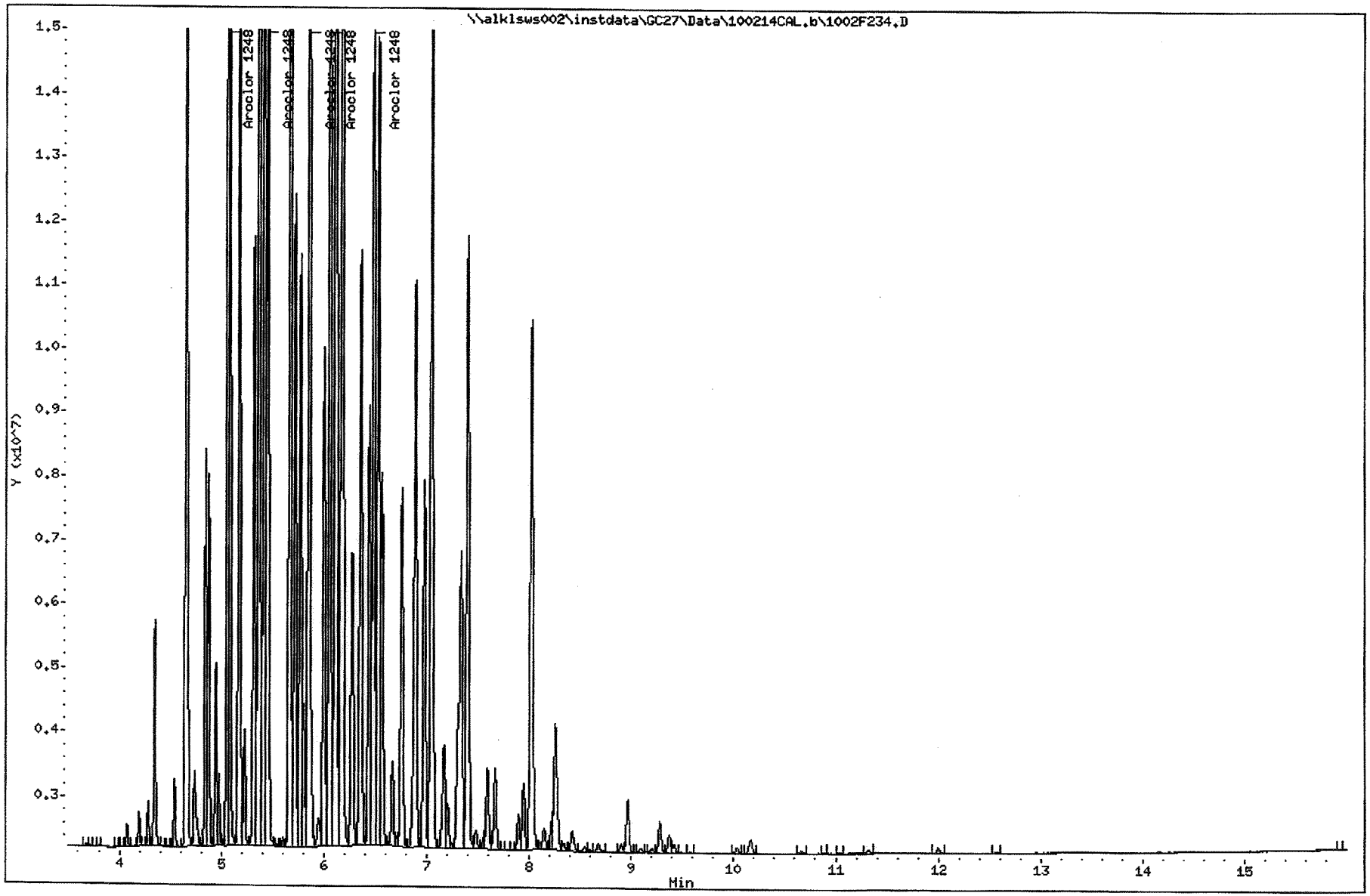
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.061	5.113	29924971	9204780	4280	4180	80.00- 120.00	100.00
	5.447	5.700	23457477	17584952	4050	4200	62.71- 94.07	78.39
	5.854	6.127	34495885	19277643	4280	4250	92.22- 138.33	115.27
	6.054	6.577	25228150	16090674	4180	4520	67.44- 101.17	84.30
	6.481	7.067	22378781	25788664	4200	4290	59.83- 89.74	74.78
			Average of Peak Amounts =		4200	4290		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F234.D
Date : 03-OCT-2014 16:13
Client ID:
Sample Info: 48 @ 5000ppb PCB6-48E

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



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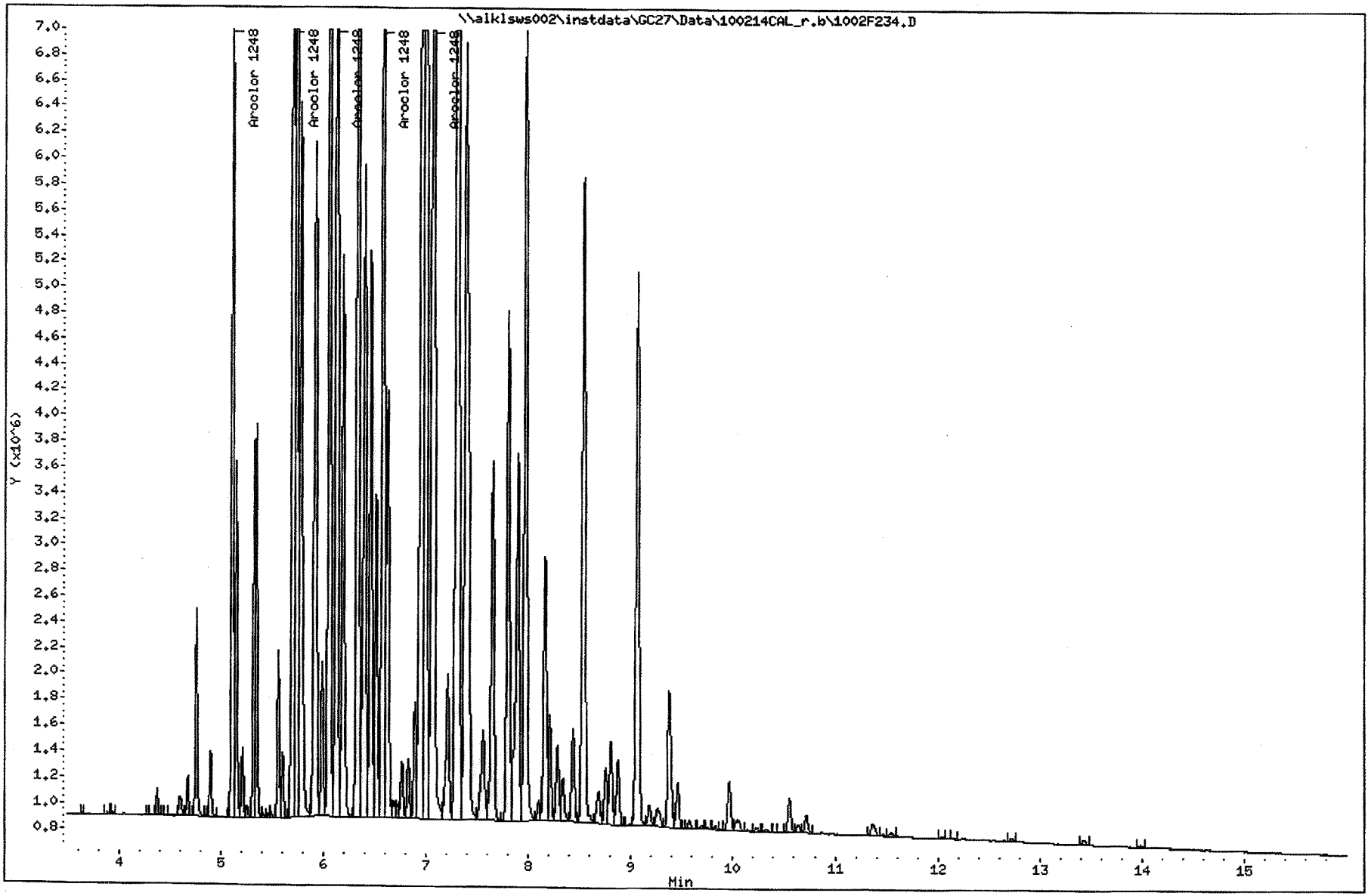
Date : 03-OCT-2014 16:13
Client ID:
Sample Info: 48 @ 5000ppb PCB6-48E

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



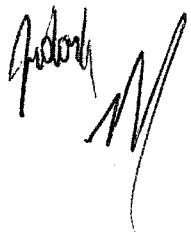
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F235.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F235.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F235.D
Inj Date : 03-OCT-2014 16:37
Sample Info: 1016 ICV @ 1000ppb PCB6-54B
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

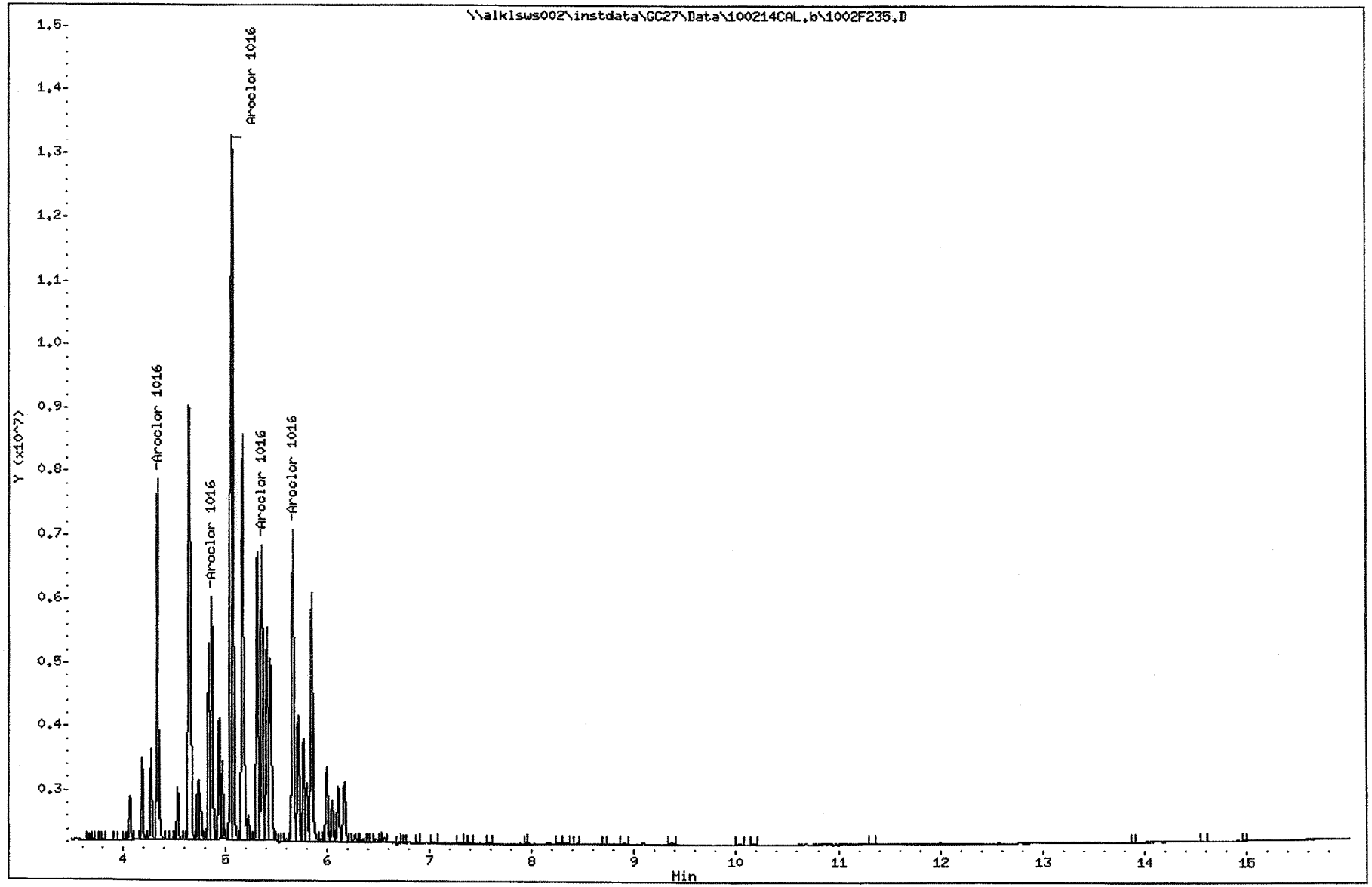
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	4.347	4.763	6437807	3392804	933	893	80.00- 120.00	100.00
	4.873	5.113	4578721	4222088	888	890	59.83- 89.75	71.12
	5.077	5.780	13829232	4880645	834	909	203.05- 304.57	214.81
	5.360	6.126	6293858	3389352	865	912	86.75- 130.12	97.76
	5.667	6.333	6796641	3325977	924	930	90.45- 135.68	105.57
			Average of Peak Amounts =		889	907		



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F235.D
Date : 03-OCT-2014 16:37
Client ID:
Sample Info: 1016 ICV @ 1000ppb PCB6-54B

Instrument: GC27.i

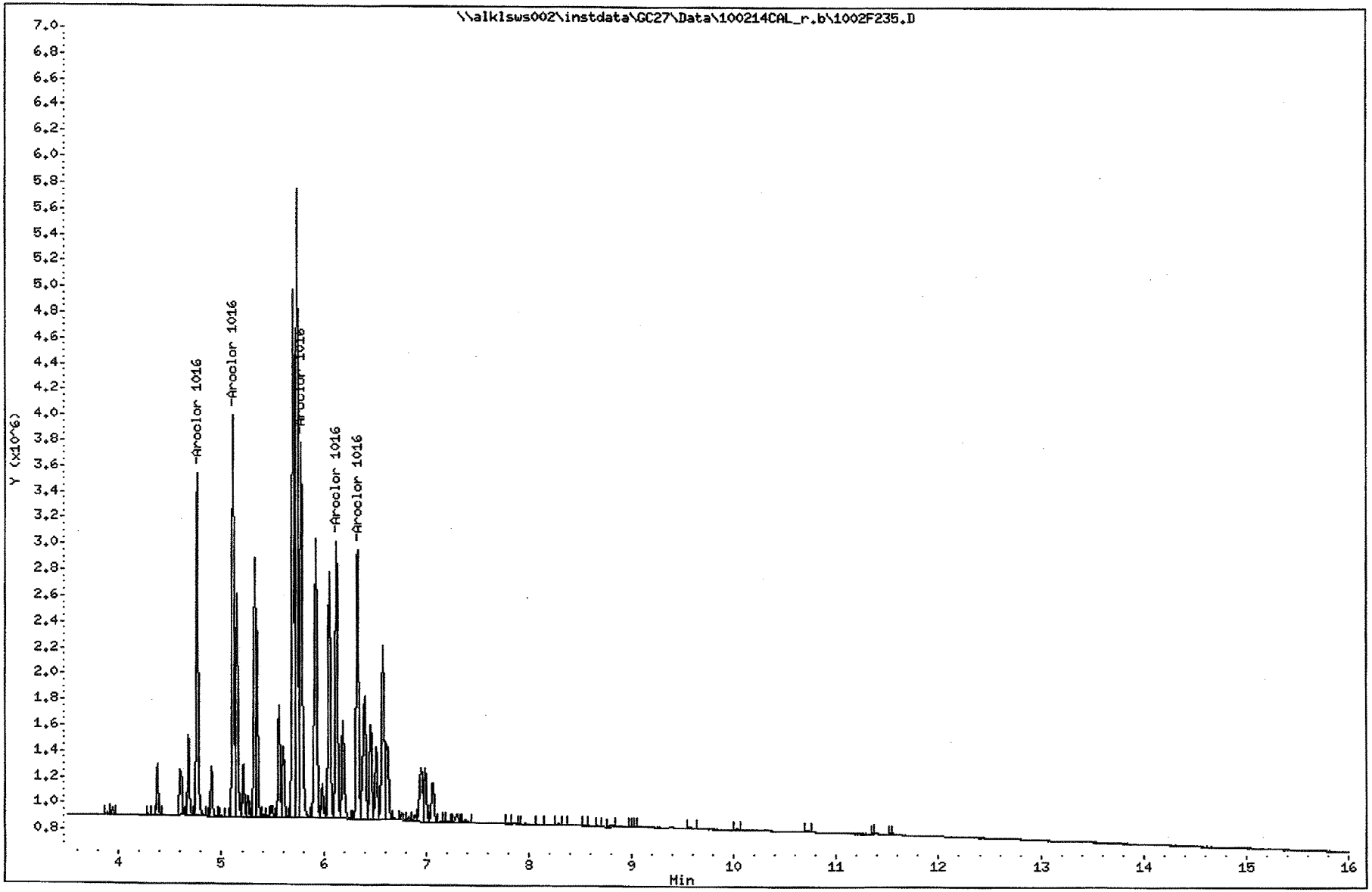
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F235.D
Date : 03-OCT-2014 16:37
Client ID:
Sample Info: 1016 ICV @ 1000ppb PCB6-54B

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F236.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F236.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F236.D
Inj Date : 03-OCT-2014 17:01
Sample Info: 1221 ICV @ 1000ppb PCB6-54C
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

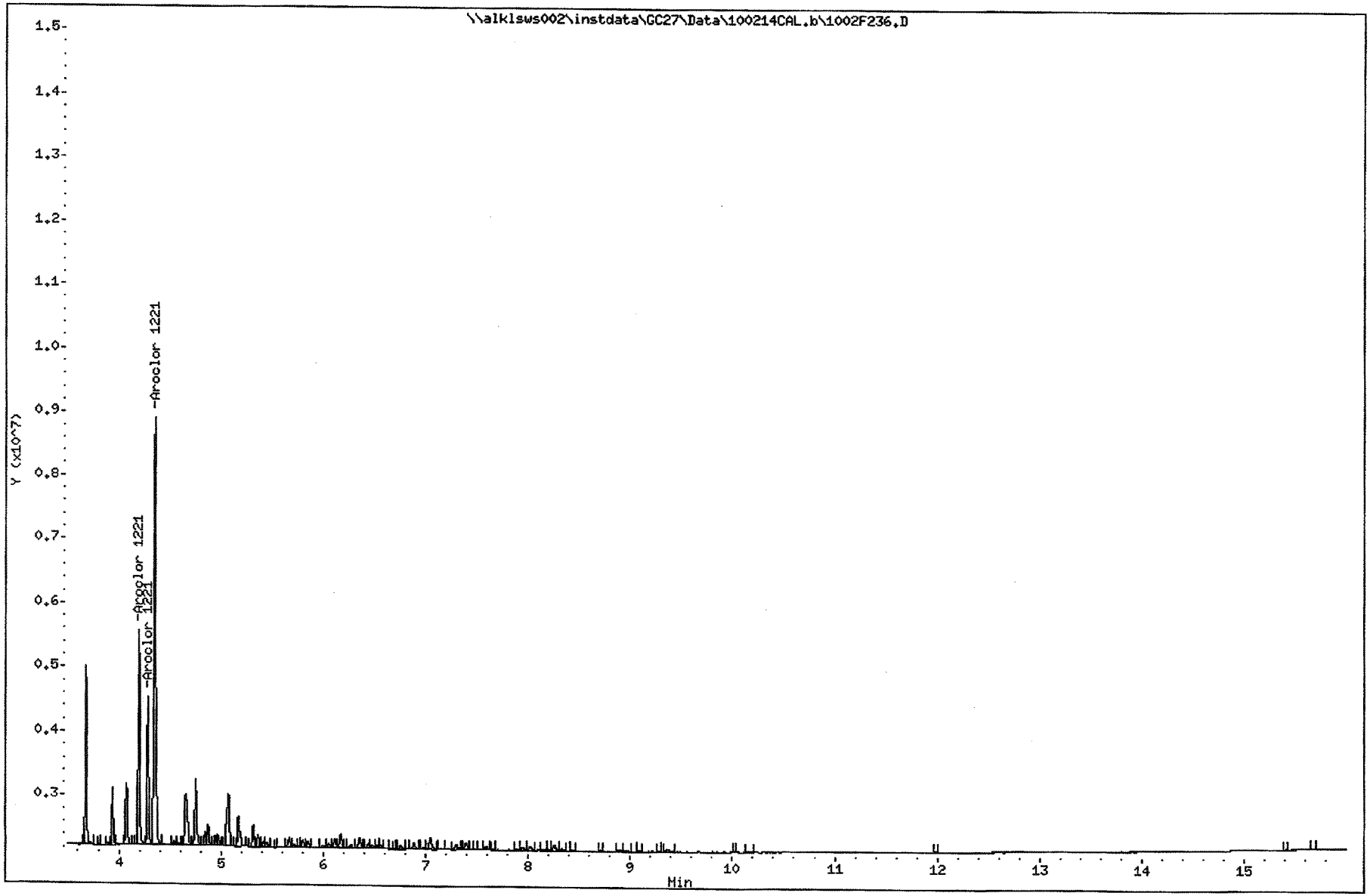
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.194	4.613	3583944	1966608	1040	1060	80.00- 120.00	100.00
	4.284	4.680	2406071	1272988	1070	1080	50.99- 76.49	67.13
	4.347	4.763	8255443	4359359	1010	1020	183.90- 275.84	230.35
			Average of Peak Amounts =		1040	1050		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F236.D
Date : 03-OCT-2014 17:01
Client ID:
Sample Info: 1221 ICV @ 1000ppb PCB6-54C

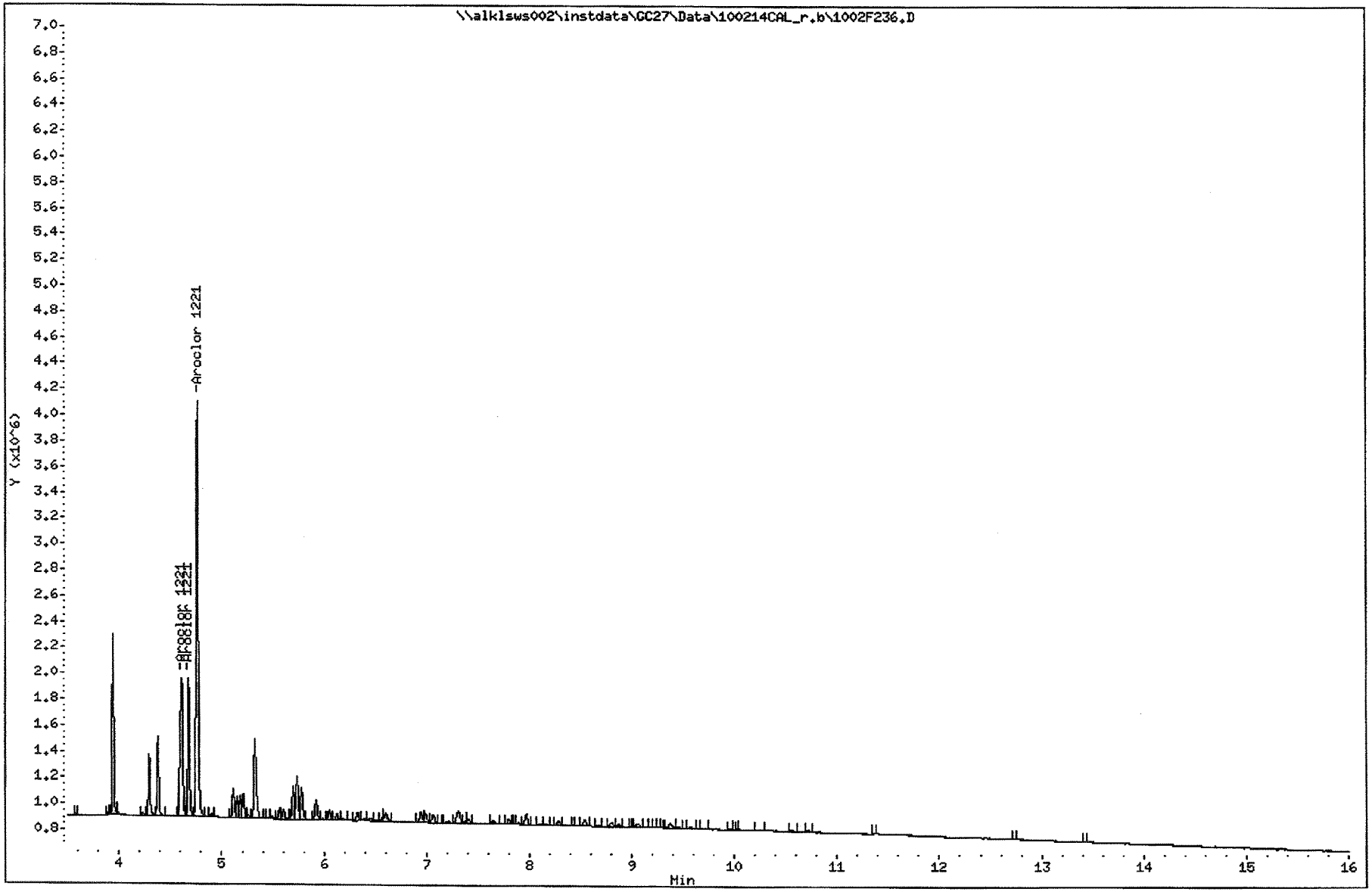
Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F236.D
Date : 03-OCT-2014 17:01
Client ID:
Sample Info: 1221 ICV @ 1000ppb PCB6-54C

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



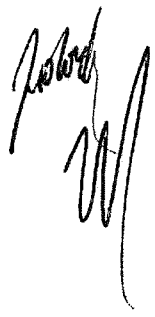
Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F237.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F237.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F237.D
Inj Date : 03-OCT-2014 17:24
Sample Info: 1232 ICV @ 1000ppb PCB6-54D
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

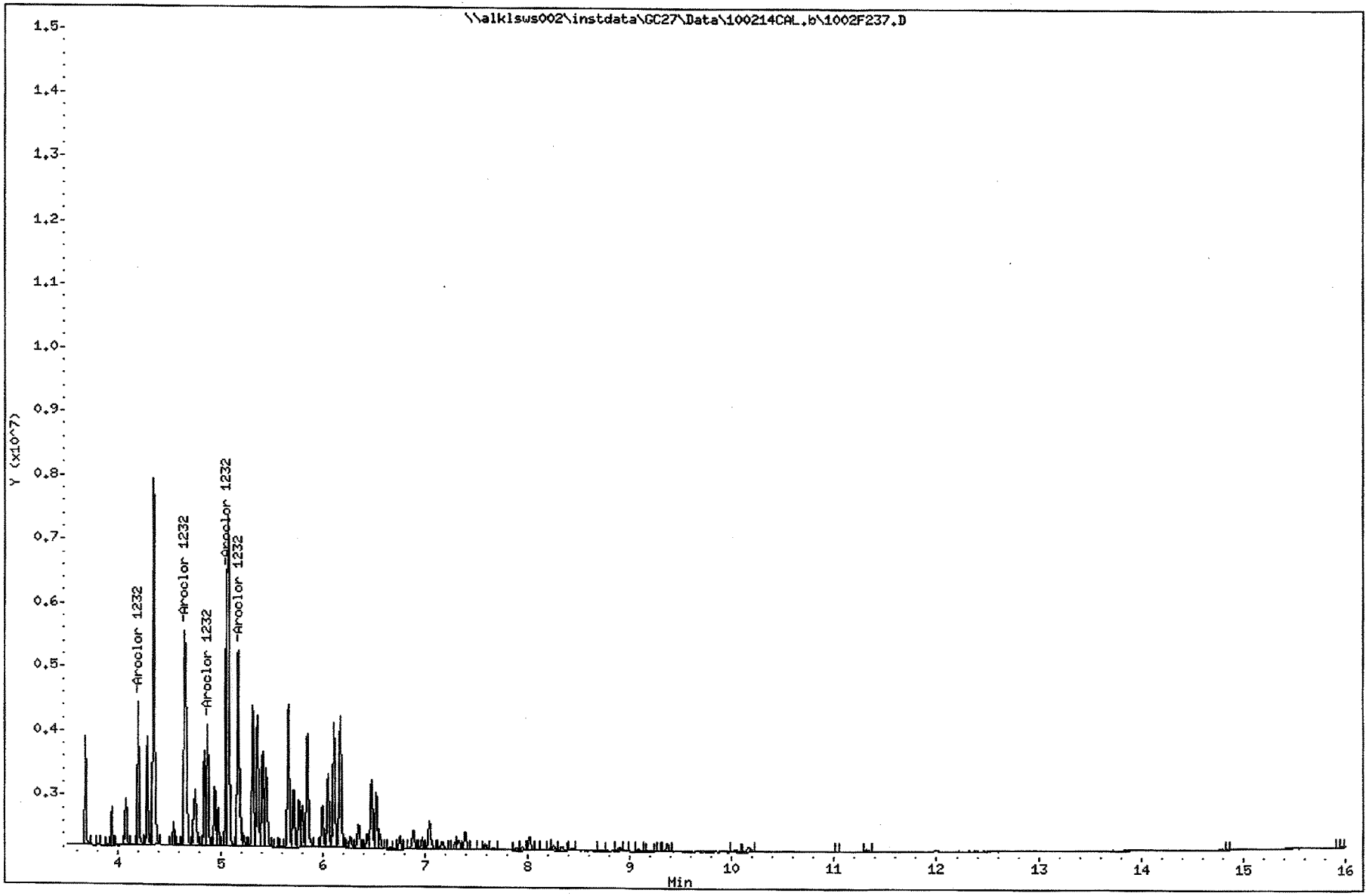
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.196	4.762	2311380	3580781	865	890	80.00- 120.00	100.00
	4.653	5.115	5872820	1968305	957	965	177.47- 266.20	254.08
	4.876	5.325	2248683	1677496	986	997	67.42- 101.12	97.29
	5.063	5.699	3885848	2738496	913	979	135.59- 203.39	168.12
	5.176	6.125	4381301	1392381	979	963	136.58- 204.87	189.55
			Average of Peak Amounts =		940	959		



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F237.D
Date : 03-OCT-2014 17:24
Client ID:
Sample Info: 1232 ICV @ 1000ppb PCB6-54D

Instrument: GC27.i

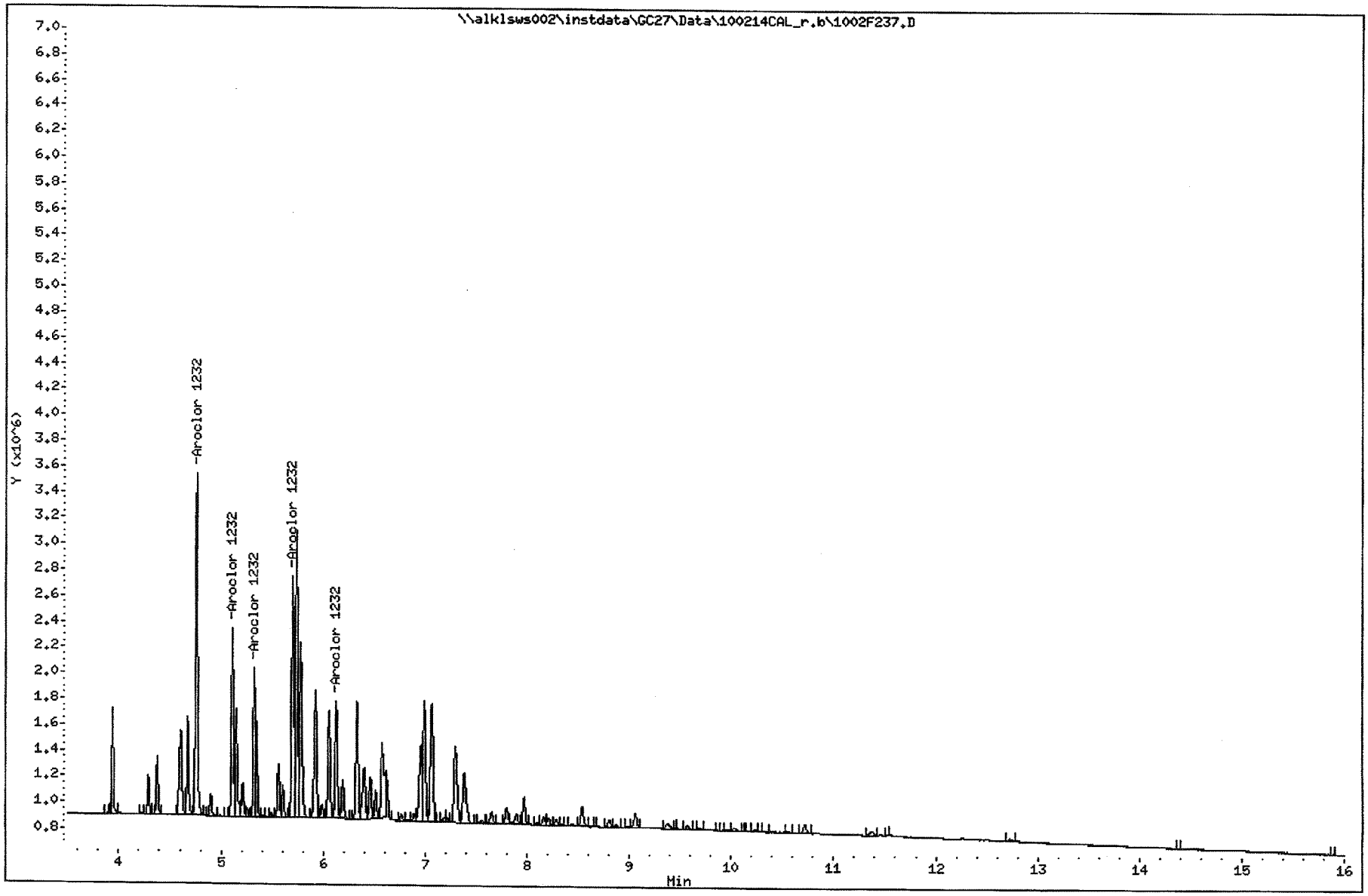
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



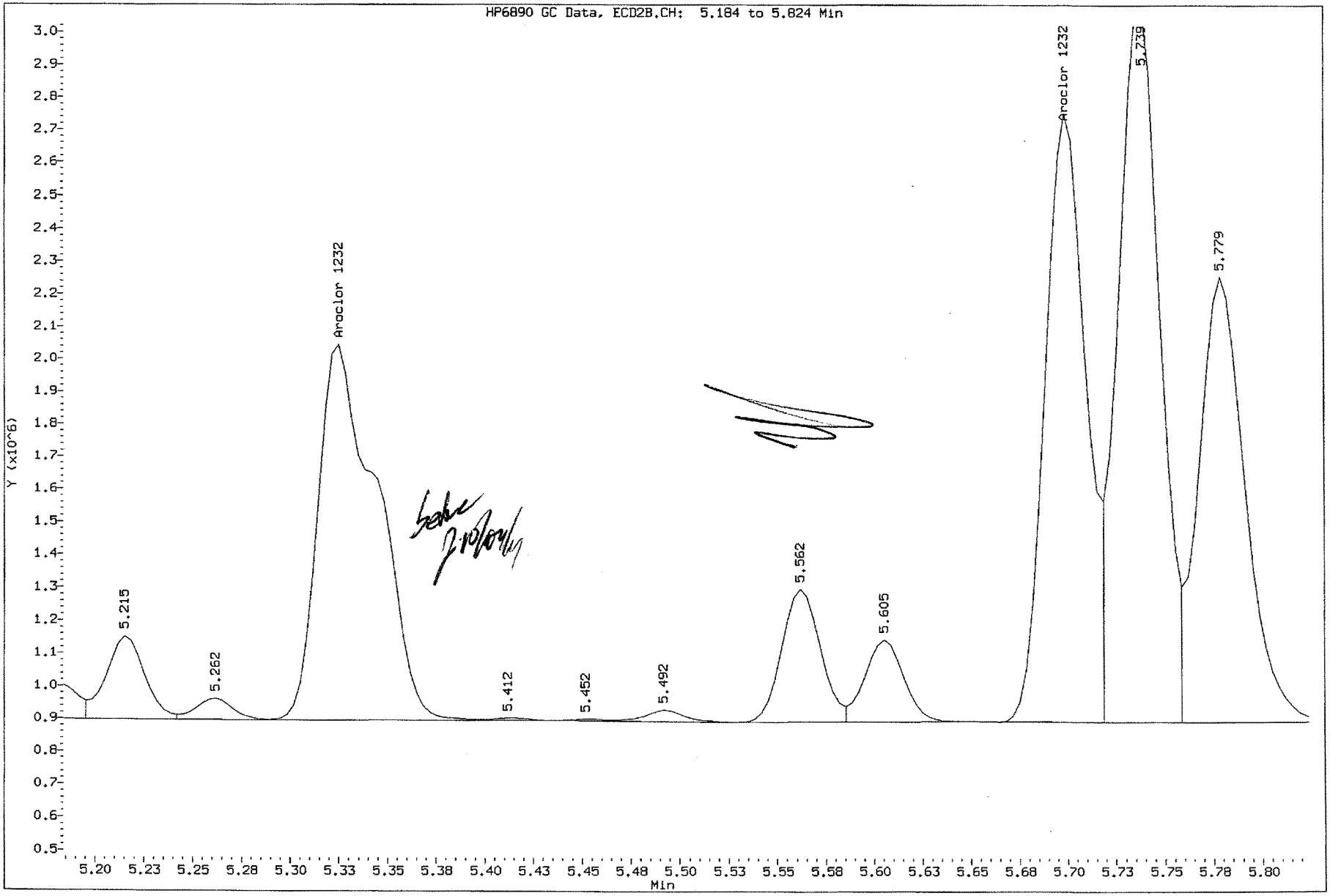
Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F237.D
Date : 03-OCT-2014 17:24
Client ID:
Sample Info: 1232 ICV @ 1000ppb PCB6-54D

Instrument: GC27.i

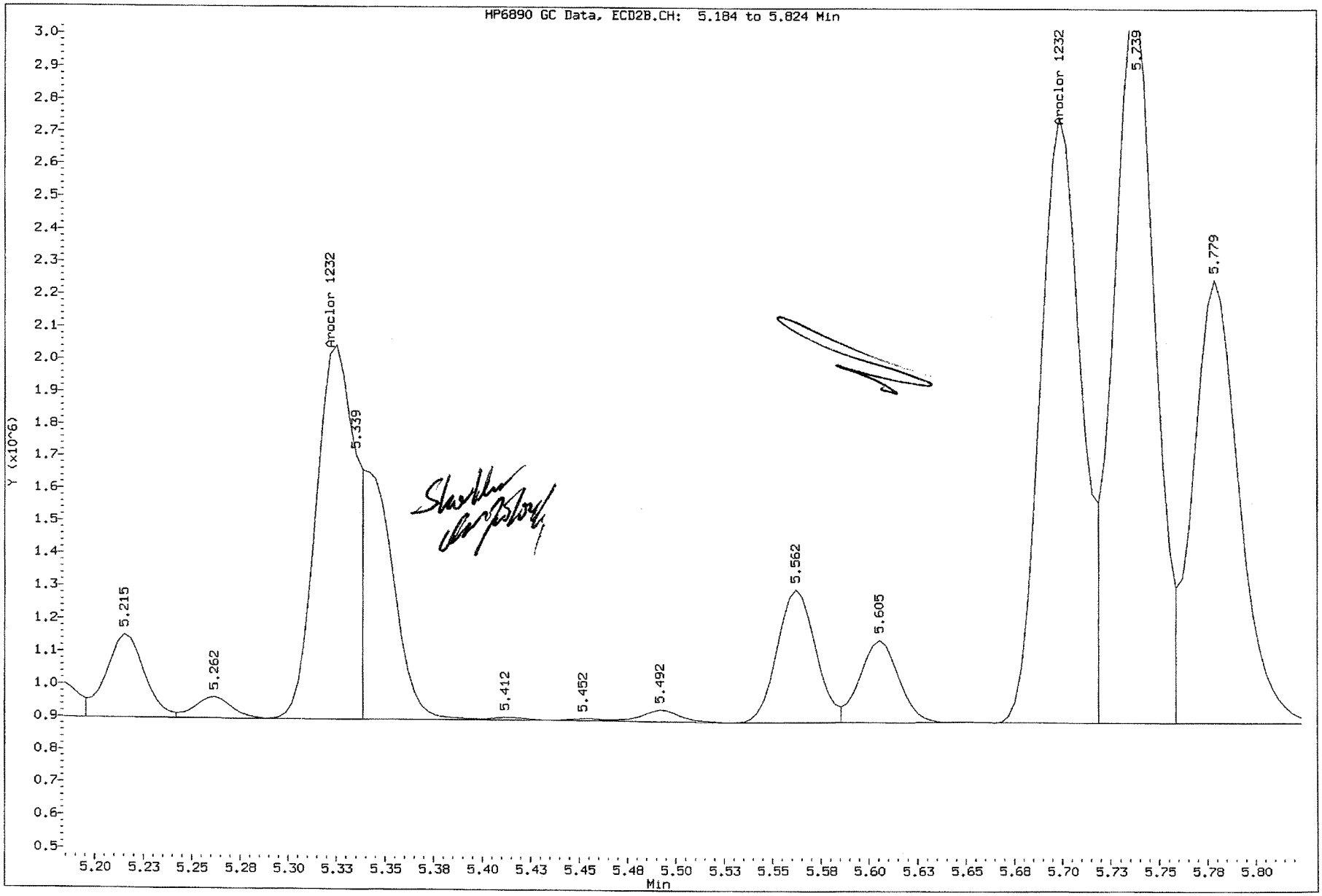
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F237.D
Injection Date: 03-OCT-2014 17:24
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F237.D
Injection Date: 03-OCT-2014 17:24
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F238.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F238.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F238.D
Inj Date : 03-OCT-2014 17:48
Sample Info: 1242 ICV @ 1000ppb PCB6-54E
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

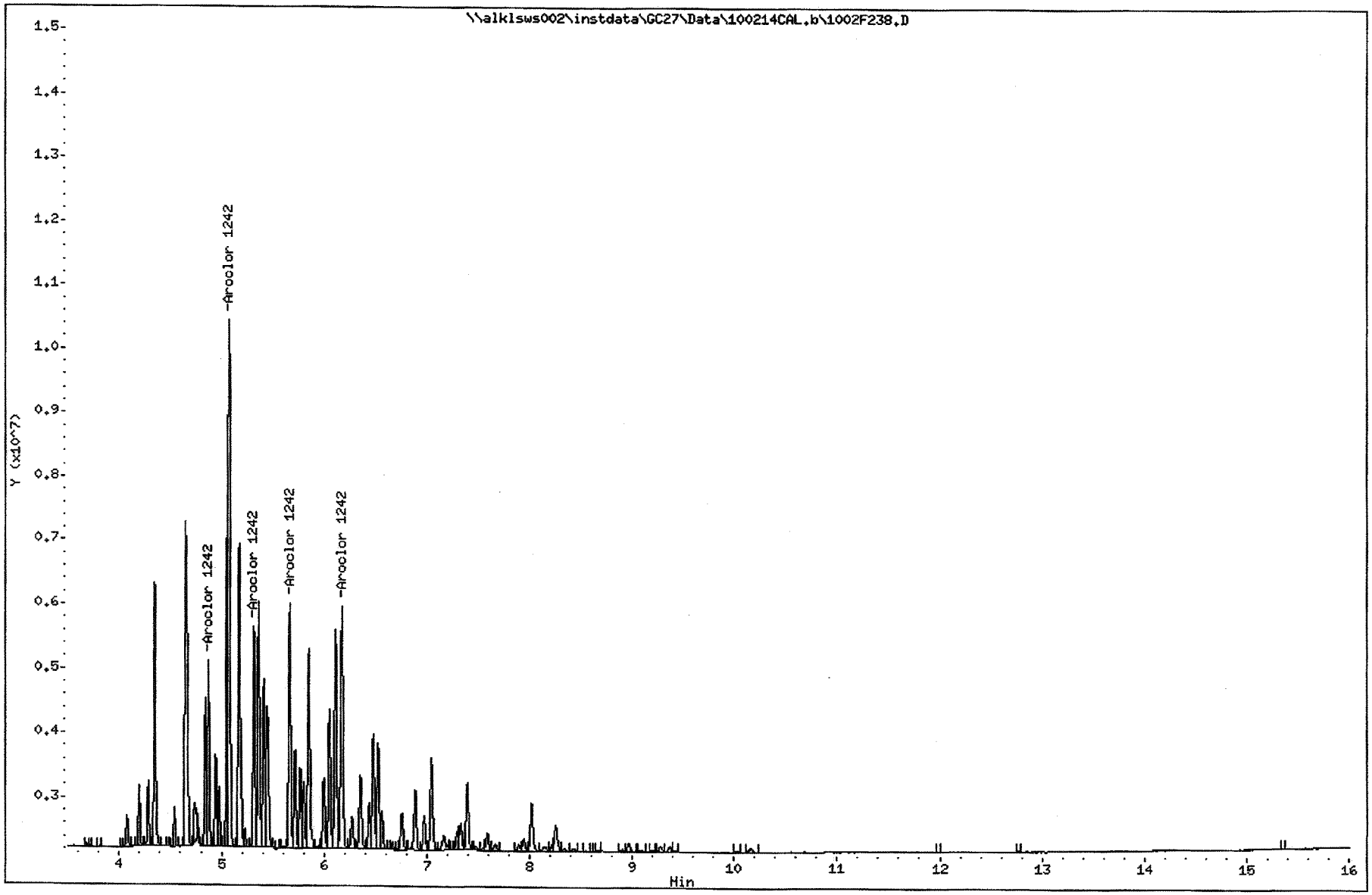
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.876	5.115	3509359	3101046	919	890	80.00- 120.00	100.00
	5.079	5.739	10939790	5276051	930	874	261.43- 392.14	311.73
	5.316	5.925	4406875	2839170	935	930	106.66- 160.00	125.57
	5.666	6.129	5422588	2555099	962	946	119.83- 179.74	154.52
	6.176	7.065	6028120	2845152	973	950	131.53- 197.30	171.77
			Average of Peak Amounts =		944	918		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F238.D
Date : 03-OCT-2014 17:48
Client ID:
Sample Info: 1242 ICV @ 1000ppb PCB6-54E

Instrument: GC27.i

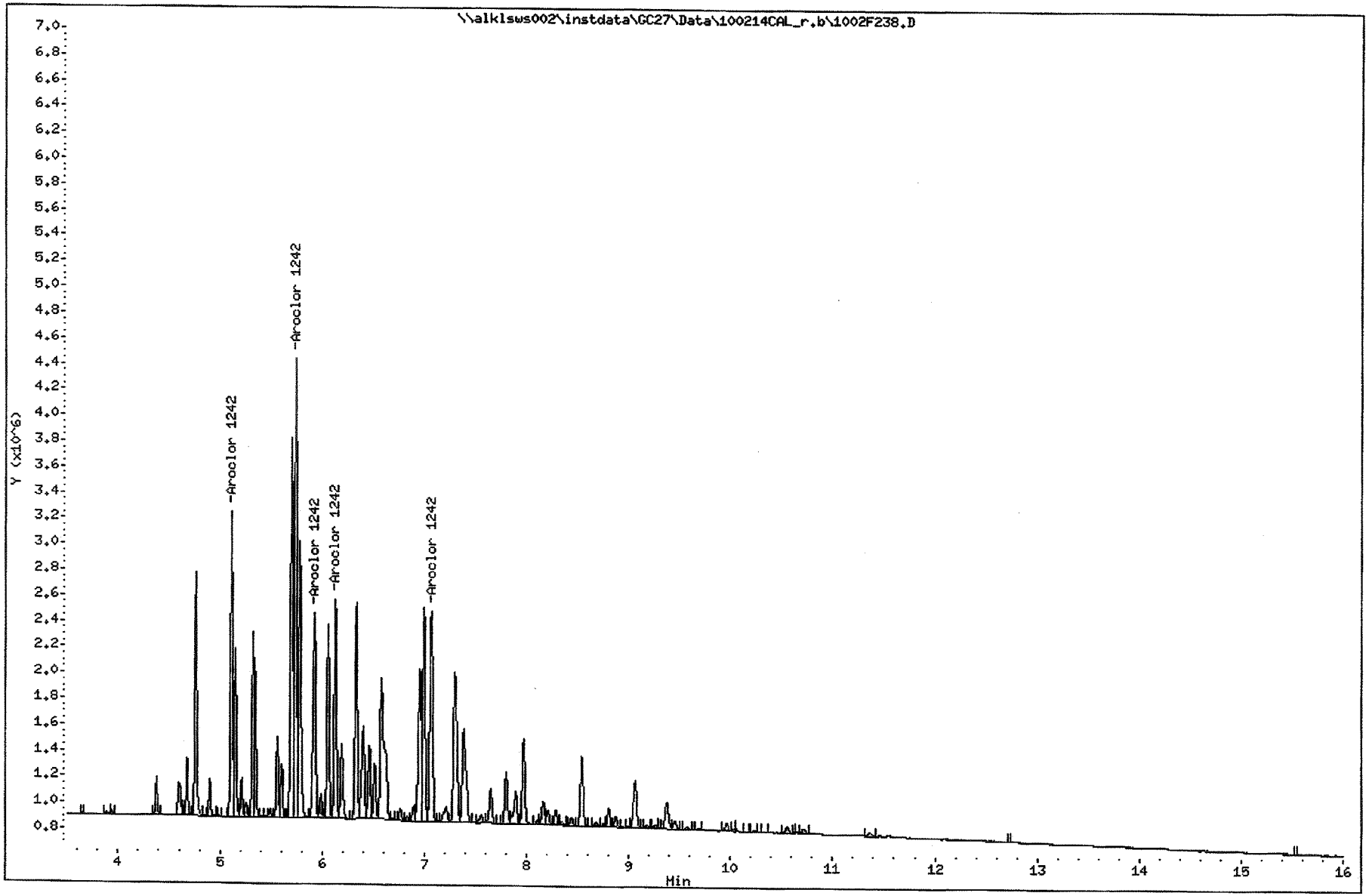
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F238.D
Date : 03-OCT-2014 17:48
Client ID:
Sample Info: 1242 ICV @ 1000ppb PCB6-54E

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F239.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F239.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F239.D
Inj Date : 03-OCT-2014 18:11
Sample Info: 1248 ICV @ 1000ppb PCB6-54F
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

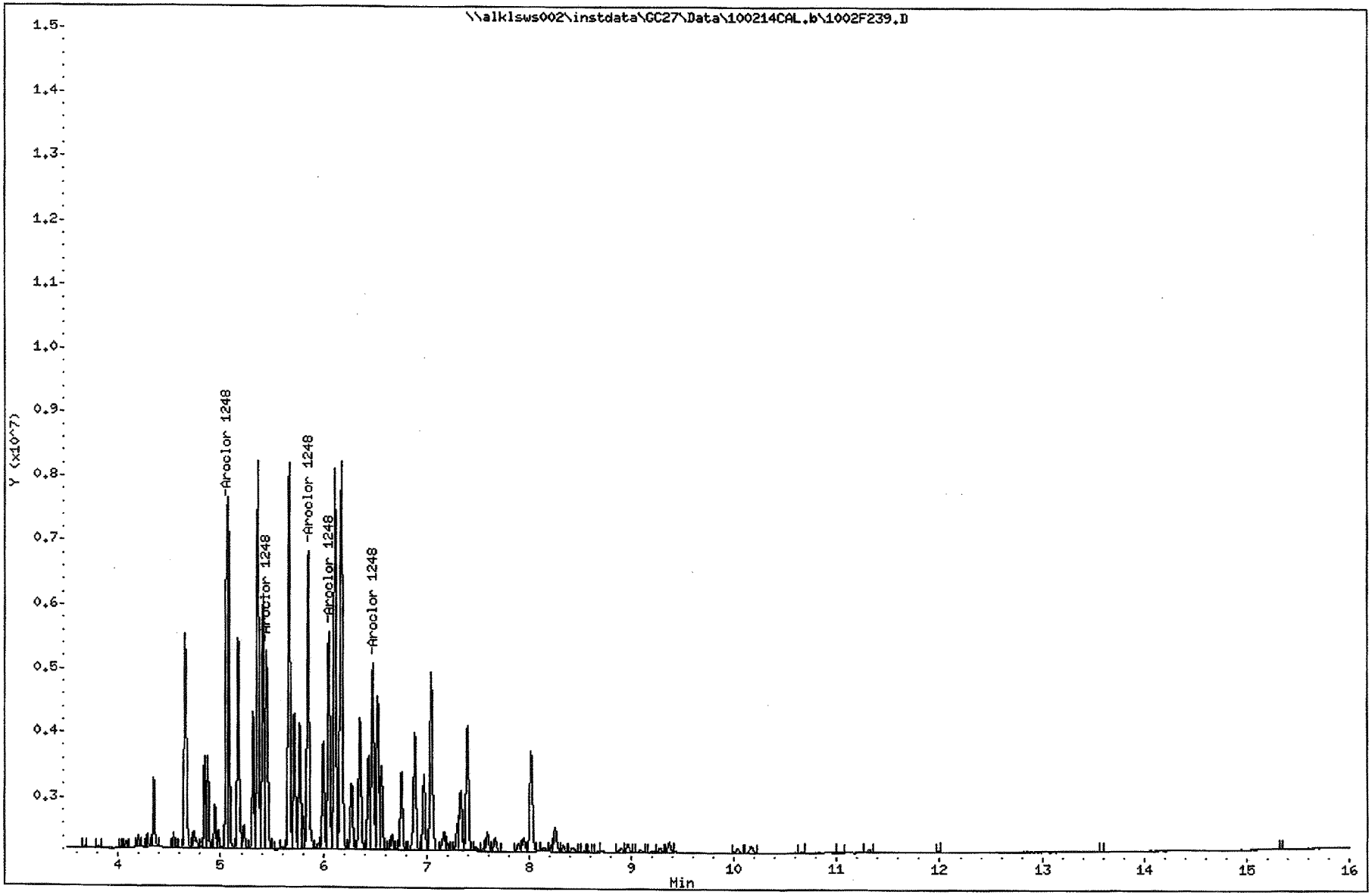
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.059	5.116	6147064	2015563	879	915	80.00- 120.00	100.00
	5.446	5.699	4979851	3603593	860	861	62.71- 94.07	81.01
	5.853	6.126	6874456	3765104	854	830	92.22- 138.33	111.83
	6.053	6.579	5036819	2987861	835	839	67.44- 101.17	81.94
	6.479	7.066	4434527	4677687	833	779	59.83- 89.74	72.14
			Average of Peak Amounts =		852	845		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F239.D
Date : 03-OCT-2014 18:11
Client ID:
Sample Info: 1248 ICV @ 1000ppb PCB6-54F

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

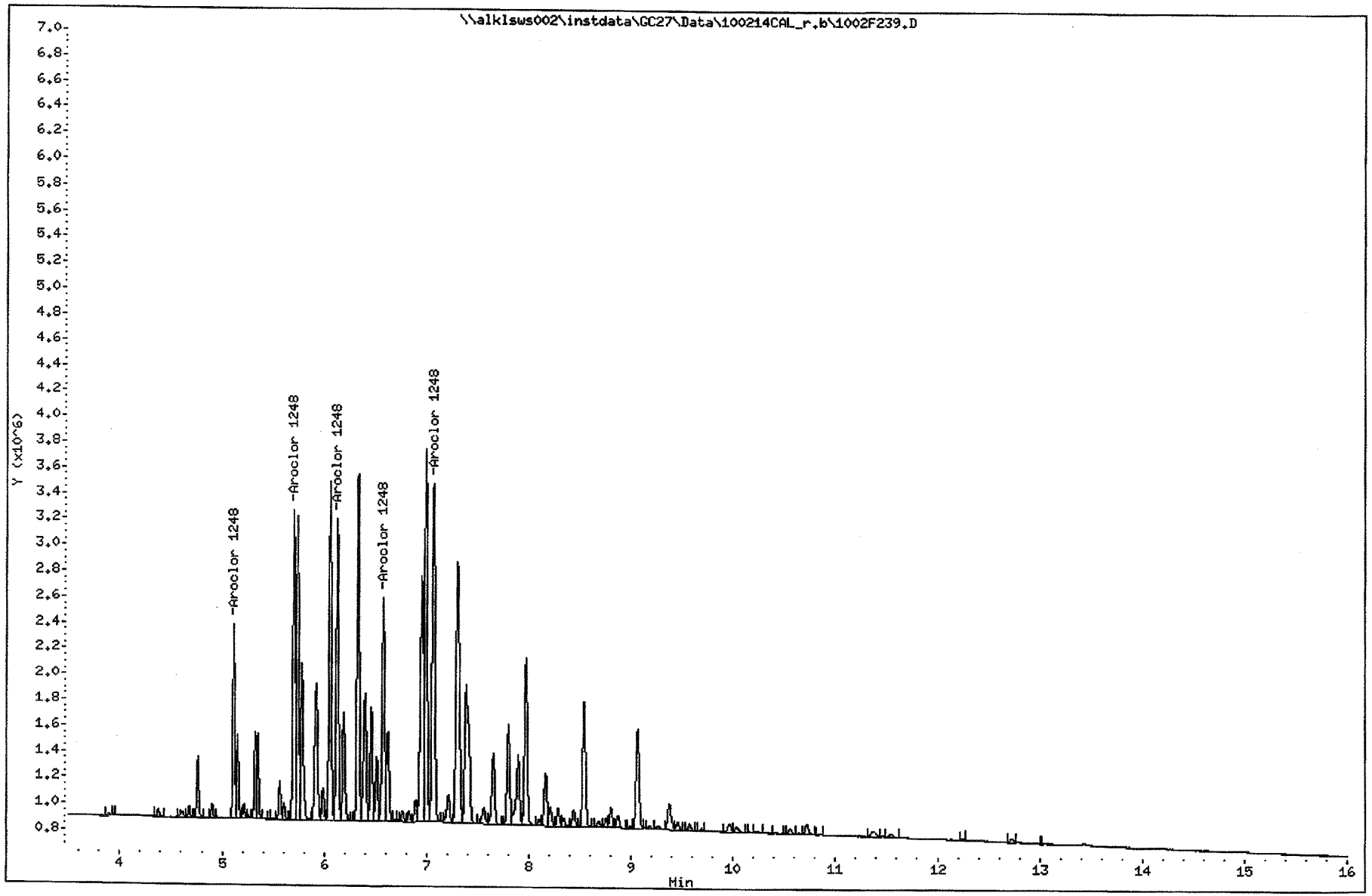


Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F239.D
Date : 03-OCT-2014 18:11
Client ID:
Sample Info: 1248 ICV @ 1000ppb PCB6-54F

Instrument: GC27.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F240.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F240.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F240.D
Inj Date : 03-OCT-2014 18:35
Sample Info: 1254 ICV @ 1000ppb PCB6-54G
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

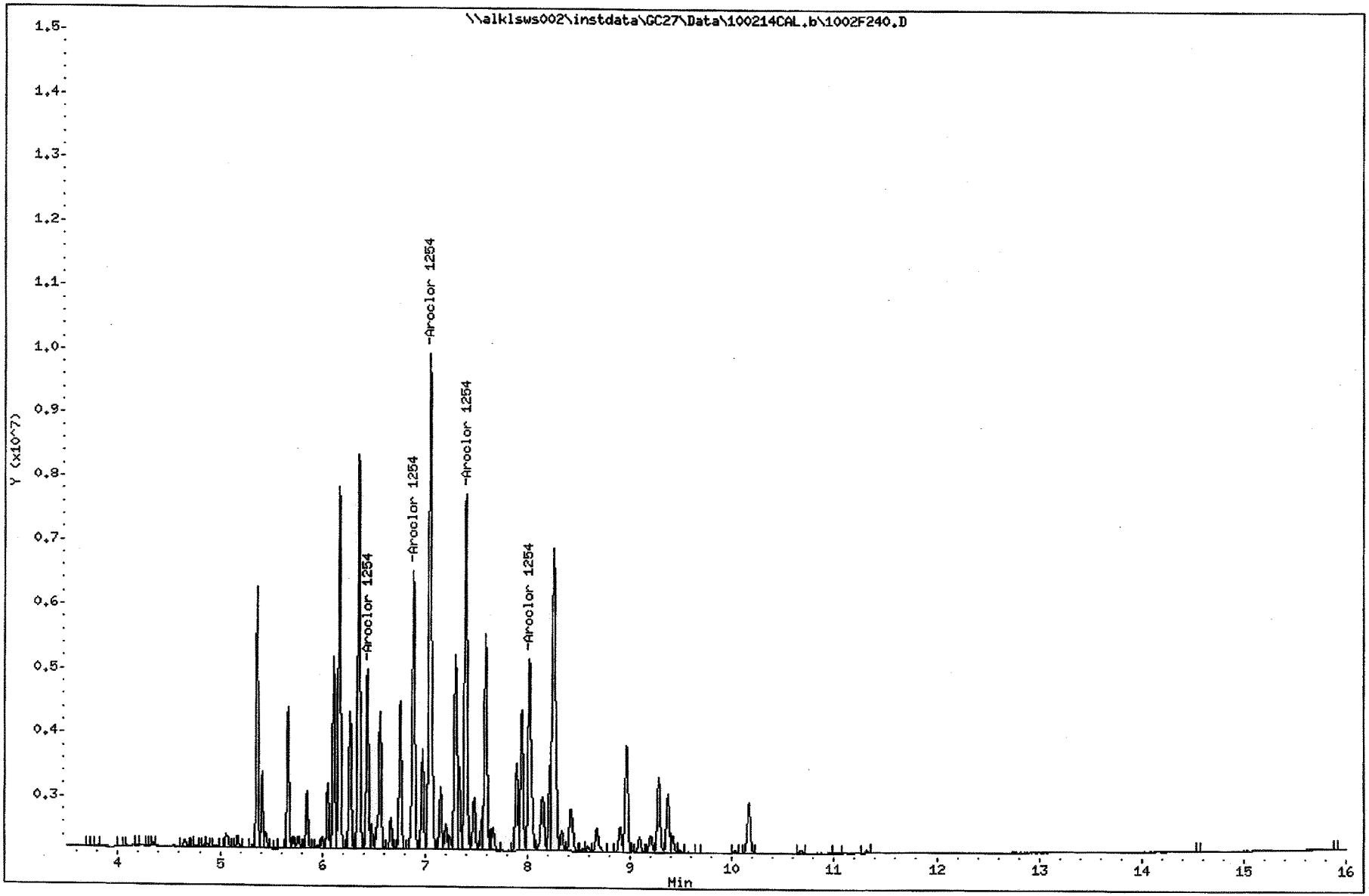
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	6.439	6.945	4321112	5002281	944	913	80.00- 120.00	100.00
	6.889	7.312	7684962	7565442	942	914	148.05- 222.07	177.85
	7.049	7.412	14228792	2680565	886	964	284.20- 426.31	329.29
	7.396	8.288	9776866	3016336	932	960	184.27- 276.41	226.26
	8.019	9.055	6418623	4181192	958	971	122.76- 184.15	148.54
			Average of Peak Amounts =		932	944		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F240.D
Date : 03-OCT-2014 18:35
Client ID:
Sample Info: 1254 ICV @ 1000ppb PCB6-54C

Instrument: GC27.i

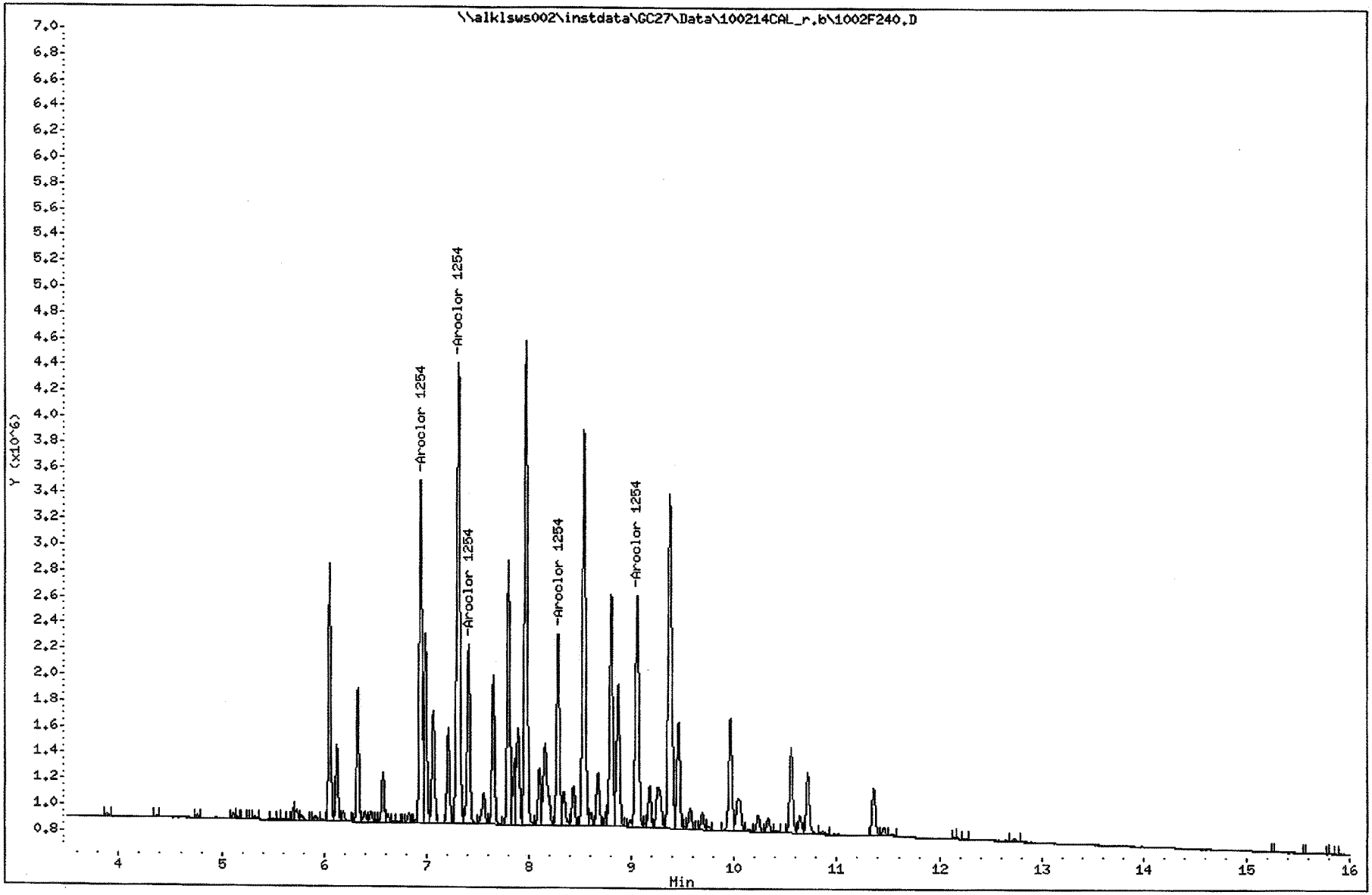
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F240.D
Date : 03-OCT-2014 18:35
Client ID:
Sample Info: 1254 ICV @ 1000ppb PCB6-54G

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F241.D
Report Date: 04-Oct-2014 00:41

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F241.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F241.D
Inj Date : 03-OCT-2014 18:59
Sample Info: 1260 ICV @ 1000ppb PCB6-54H
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

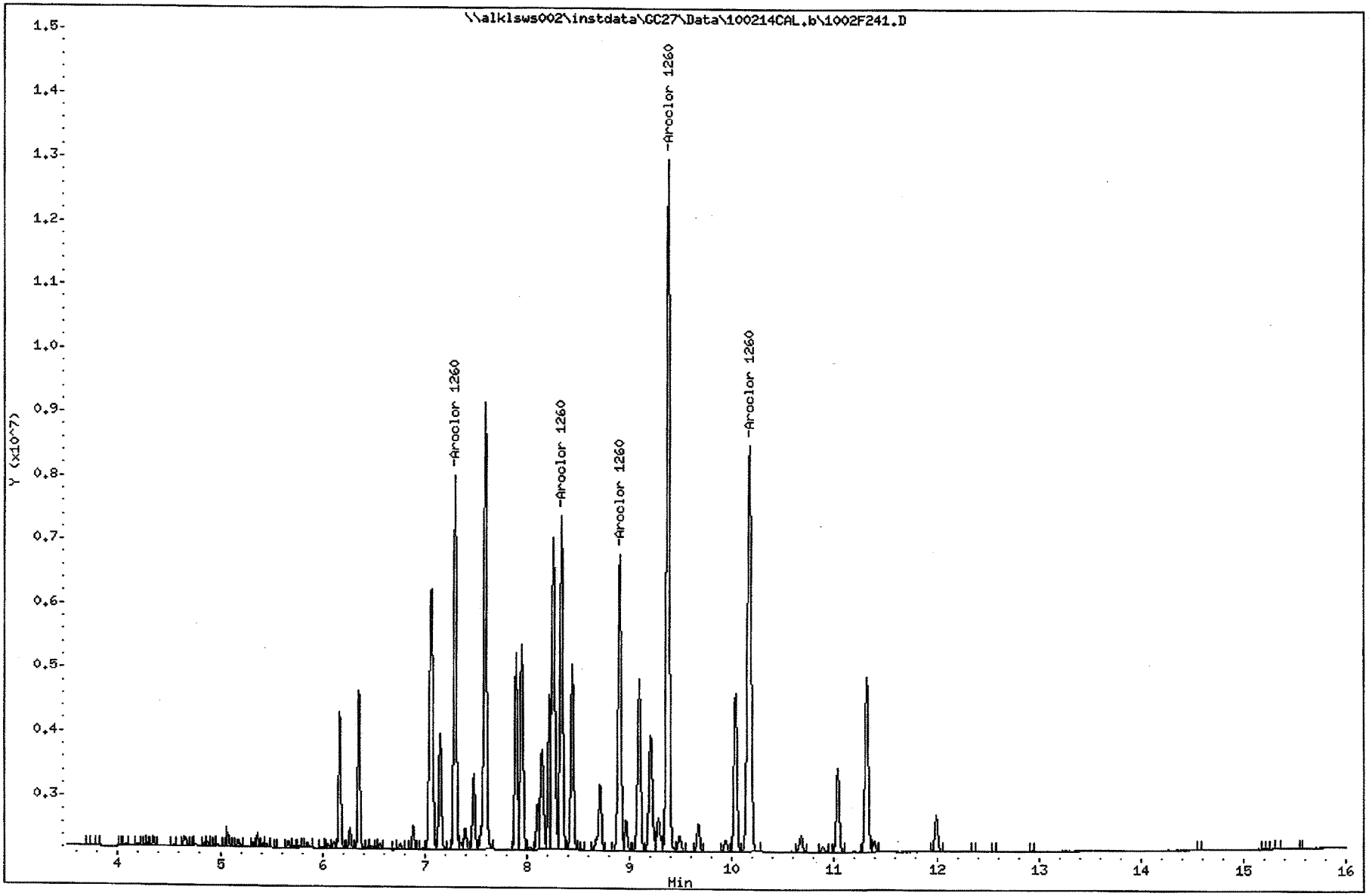
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	7.292	8.102	10135962	3356181	877	999	80.00- 120.00	100.00
	8.336	9.572	9651369	6231885	1040	1070	64.51- 96.77	95.22
	8.902	10.032	9461536	5497615	1030	1020	65.30- 97.95	93.35
	9.369	10.715	21589342	13790699	1000	1030	161.07- 241.60	213.00
	10.166	11.365	16322830	8413559	989	1010	119.69- 179.53	161.04
			Average of Peak Amounts =		987	1030		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F241.D
Date : 03-OCT-2014 18:59
Client ID:
Sample Info: 1260 ICV @ 1000ppb PCB6-54H

Instrument: GC27.i

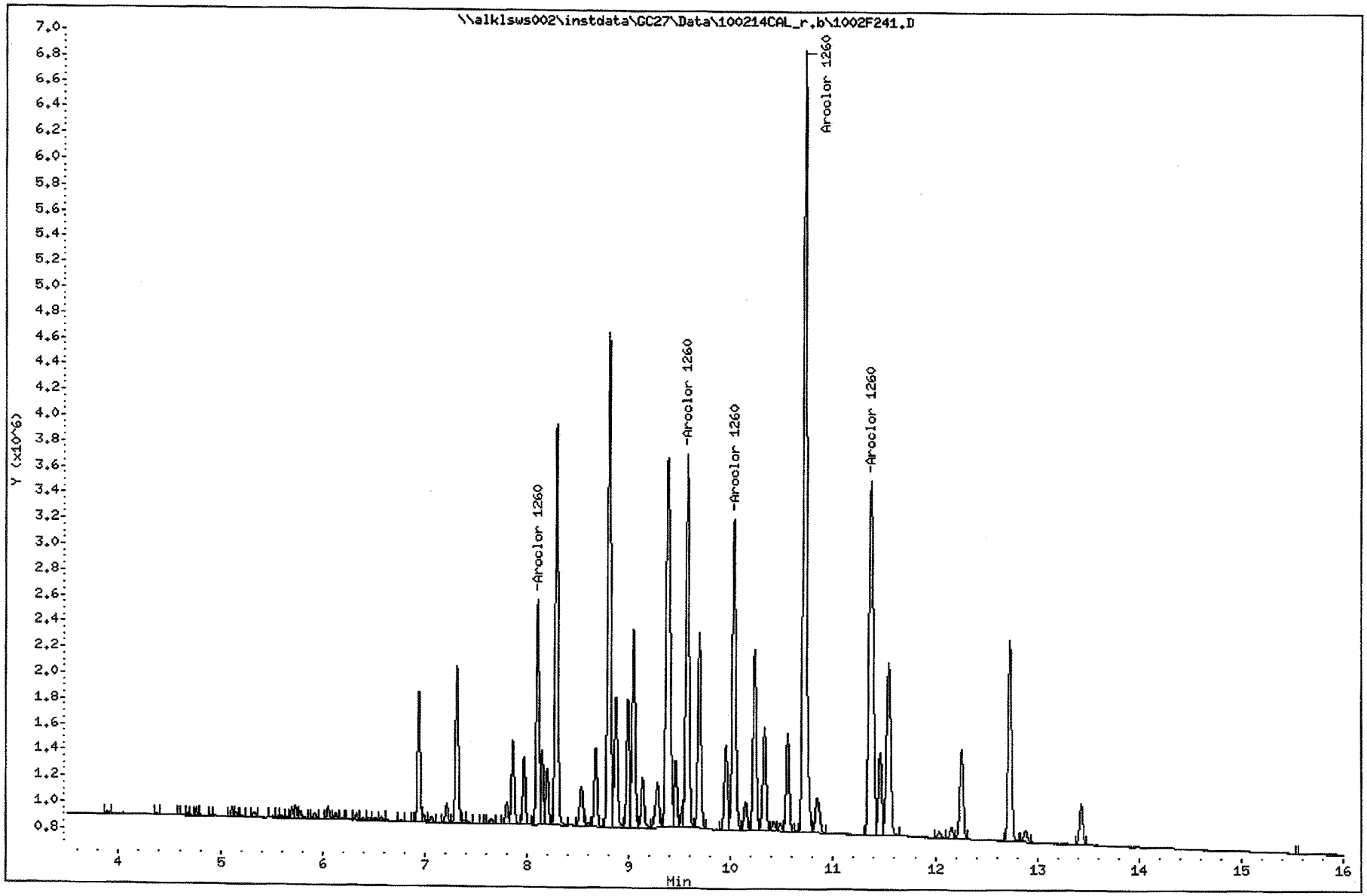
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F241.D
Date : 03-OCT-2014 18:59
Client ID:
Sample Info: 1260 ICV @ 1000ppb PCB6-54H

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F242.D
Report Date: 04-Oct-2014 00:42

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F242.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F242.D
Inj Date : 03-OCT-2014 19:22
Sample Info: 1262 ICV @ 1000ppb PCB6-54I
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

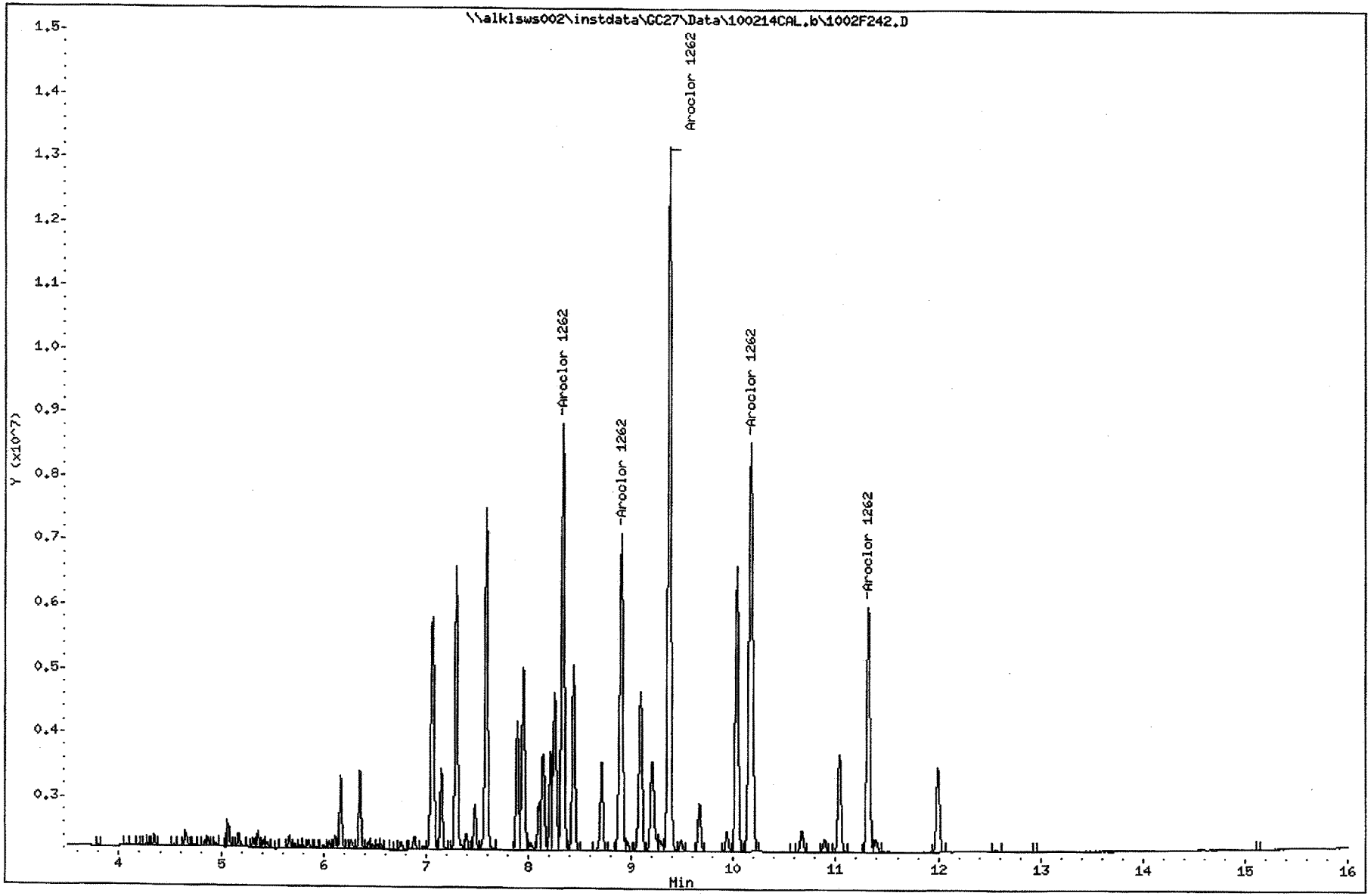
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	8.335	9.571	12802366	8344879	935	937	80.00- 120.00	100.00
	8.902	10.031	10724087	5693591	913	924	68.99- 103.49	83.77
	9.368	10.718	22309535	14447056	940	965	147.51- 221.26	174.26
	10.168	11.381	16601450	9607420	941	944	109.45- 164.18	129.67
	11.318	12.728	8452284	5208649	973	971	54.86- 82.29	66.02
			Average of Peak Amounts =		940	948		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F242.D
Date : 03-OCT-2014 19:22
Client ID:
Sample Info: 1262 ICV @ 1000ppb PCB6-54I

Instrument: GC27.i

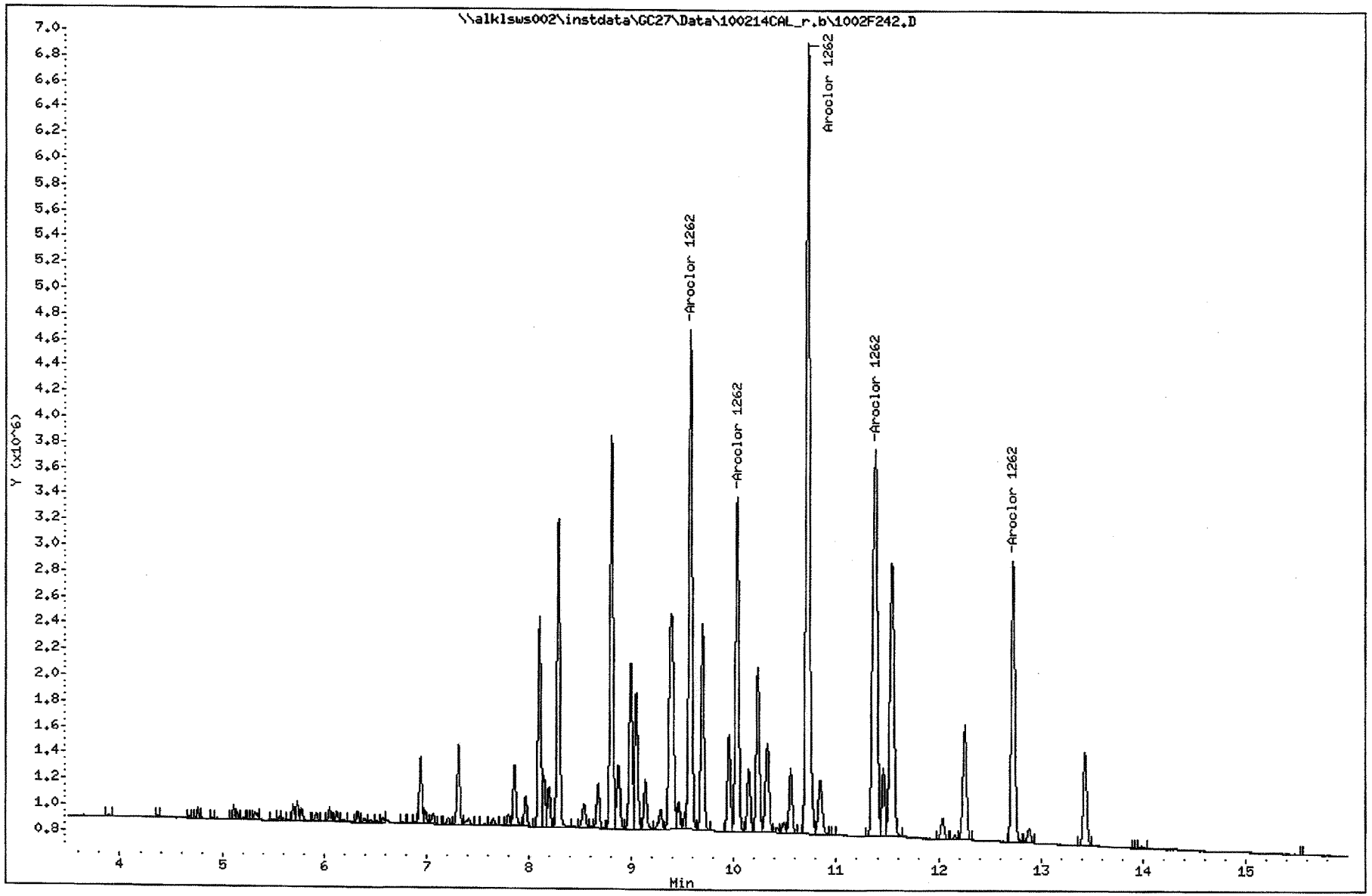
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F242.D
Date : 03-OCT-2014 19:22
Client ID:
Sample Info: 1262 ICV @ 1000ppb PCB6-54I

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F243.D
Report Date: 04-Oct-2014 00:42

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F243.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\1002F243.D
Inj Date : 03-OCT-2014 19:46
Sample Info: 1268 ICV @ 1000ppb PCB6-54J
Misc Info :
Cal Date : 04-OCT-2014 00:41
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

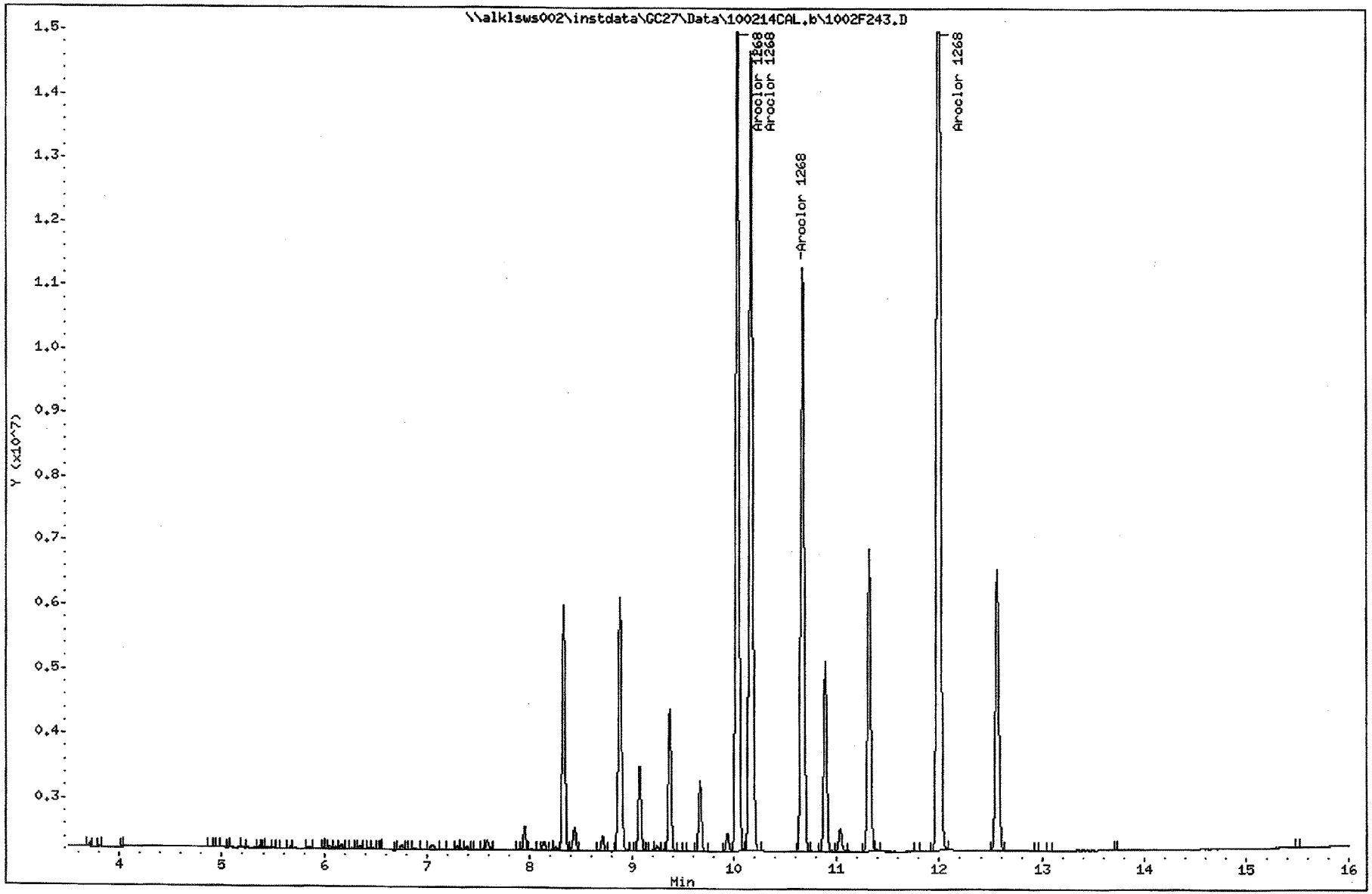
Method #1 : \\alklsws002\instdata\GC27\Data\100214CAL.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100214CAL_r.b\100214_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	10.033	11.386	28816317	19023491	1020	1050	80.00- 120.00	100.00
	10.163	11.549	28379881	18135205	1140	1190	71.72- 107.58	98.49
	10.667	12.039	19518825	12587683	945	963	61.43- 92.15	67.74
	11.997	13.433	53828968	34497200	884	911	183.61- 275.41	186.80
			Average of Peak Amounts =		997	1030		

Data File: \\alklsws002\instdata\GC27\Data\100214CAL.b\1002F243.D
Date : 03-OCT-2014 19:46
Client ID:
Sample Info: 1268 ICV @ 1000ppb PCB6-54J

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



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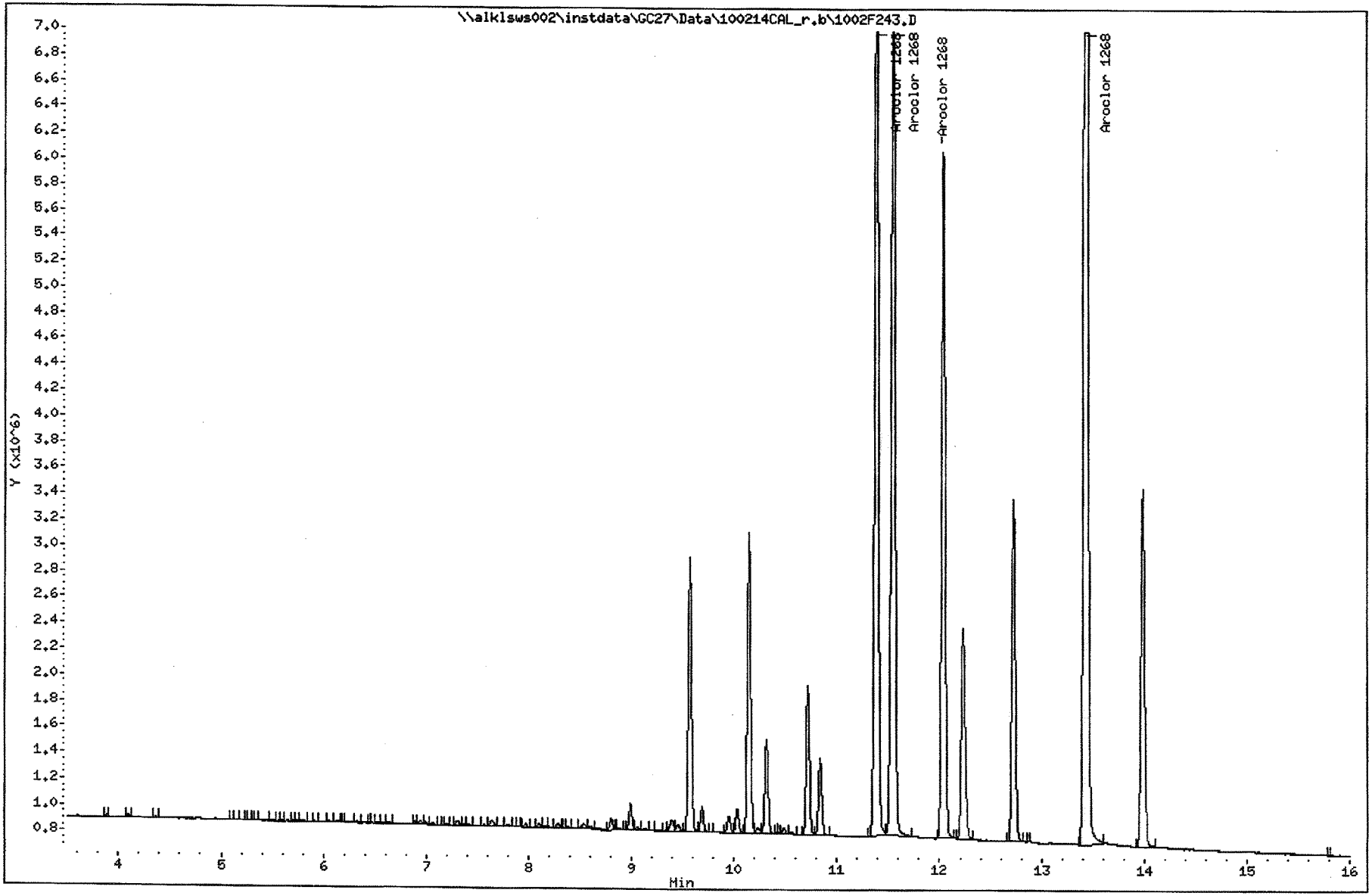
Date : 03-OCT-2014 19:46
Client ID:
Sample Info: 1268 ICV @ 1000ppb PCB6-54J

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Sequence Name: C:\GC32\SEQUENCE\062414CAL.S
Comment: Ultra Low Level PCB Aroclors by EPA 8082A
Operator: JMSmith
Data Path: C:\GC32\DATA\062414CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

CAL 13402

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	90	0624F101	PCB_ULL	HEXANE
2	IB	90	0624F102	PCB_ULL	HEXANE
3	SOLN	100	0624F103	PCB_ULL	2,4'/4,4'-DDx MARKER PCB6-27H
4	IB	86	0624F104	PCB_ULL	IB
5	ICAL	1	0624F105	PCB_ULL	1660 @ 0.25-2.5ppb PCB6-35M
6	ICAL	2	0624F106	PCB_ULL	1660 @ 0.50-5.0ppb PCB6-36A
7	ICAL	3	0624F107	PCB_ULL	1660 @ 2.5-25ppb PCB6-35L
8	ICAL	4	0624F108	PCB_ULL	1660 @ 5.0-50ppb PCB6-42K
9	ICAL	5	0624F109	PCB_ULL	1660 @ 25-250ppb PCB6-35K
10	ICAL	6	0624F110	PCB_ULL	1660 @ 50-500ppb PCB6-35N
11	ICAL	7	0624F111	PCB_ULL	2154 @ 5.0-2.5ppb PCB6-43C
12	ICAL	8	0624F112	PCB_ULL	2154 @ 10-5.0ppb PCB6-43B
13	ICAL	9	0624F113	PCB_ULL	2154 @ 50-25ppb PCB6-43A
14	ICAL	10	0624F114	PCB_ULL	2154 @ 100-50ppb PCB6-42O
15	ICAL	11	0624F115	PCB_ULL	2154 @ 500-250ppb PCB6-42N
16	ICAL	12	0624F116	PCB_ULL	2154 @ 1000-500ppb PCB6-42M
17	ICAL	13	0624F117	PCB_ULL	3262 @ 2.5ppb PCB6-35G
18	ICAL	14	0624F118	PCB_ULL	3262 @ 5.0ppb PCB6-35J
19	ICAL	15	0624F119	PCB_ULL	3262 @ 25ppb PCB6-35F
20	ICAL	16	0624F120	PCB_ULL	3262 @ 50ppb PCB6-35I
21	ICAL	17	0624F121	PCB_ULL	3262 @ 250ppb PCB6-35E
22	ICAL	18	0624F122	PCB_ULL	3262 @ 500ppb PCB6-35H
23	ICAL	19	0624F123	PCB_ULL	4268 @ 2.5ppb PCB6-34M
24	ICAL	20	0624F124	PCB_ULL	4268 @ 5.0ppb PCB6-34J
25	ICAL	21	0624F125	PCB_ULL	4268 @ 25ppb PCB6-34L
26	ICAL	22	0624F126	PCB_ULL	4268 @ 50ppb PCB6-34I
27	ICAL	23	0624F127	PCB_ULL	4268 @ 250ppb PCB6-34K
28	ICAL	24	0624F128	PCB_ULL	4268 @ 500ppb PCB6-34H
29	ICAL	25	0624F129	PCB_ULL	48 @ 2.5ppb PCB6-35A
30	ICAL	26	0624F130	PCB_ULL	48 @ 5.0ppb PCB6-35D
31	ICAL	27	0624F131	PCB_ULL	48 @ 25ppb PCB6-34O
32	ICAL	28	0624F132	PCB_ULL	48 @ 50ppb PCB6-35C
33	ICAL	29	0624F133	PCB_ULL	48 @ 250ppb PCB6-34N
34	ICAL	30	0624F134	PCB_ULL	48 @ 500ppb PCB6-35B
35	ICV	31	0624F135	PCB_ULL	1016 ICV @ 100ppb PCB6-37D
36	ICV	32	0624F136	PCB_ULL	1221 ICV @ 100ppb PCB6-37C
37	ICV	33	0624F137	PCB_ULL	1232 ICV @ 100ppb PCB6-37E
38	ICV	34	0624F138	PCB_ULL	1242 ICV @ 100ppb PCB6-37F
39	ICV	35	0624F139	PCB_ULL	1248 ICV @ 100ppb PCB6-37G
40	ICV	36	0624F140	PCB_ULL	1254 ICV @ 100ppb PCB6-37H
41	ICV	37	0624F141	PCB_ULL	1260 ICV @ 100ppb PCB6-37I
42	ICV	38	0624F142	PCB_ULL	1262 ICV @ 100ppb PCB6-37J
43	ICV	39	0624F143	PCB_ULL	1268 ICV @ 100ppb PCB6-37K

6/24/14

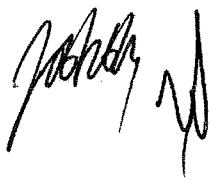
Last Modified: Wed Jun 25 03:10:42 2014

Page: 1

Initial Calibration - Summary Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		8.0E+3	20	9.2			OK	
Aroclor 1221 {2}	MULTI	AverageRF		5.1E+3	20	7.1			OK	
Aroclor 1221 {3}	MULTI	AverageRF		2.0E+4	20	18.6			OK	
Aroclor 1232 {1}	MULTI	AverageRF		5.2E+3	20	6.9			OK	
Aroclor 1232 {2}	MULTI	AverageRF		1.6E+4	20	9.5			OK	
Aroclor 1232 {3}	MULTI	AverageRF		1.5E+4	20	10.5			OK	
Aroclor 1232 {4}	MULTI	AverageRF		5.9E+3	20	12.2			OK	
Aroclor 1232 {5}	MULTI	AverageRF		9.4E+3	20	6.9			OK	
Aroclor 1242 {1}	MULTI	AverageRF		1.1E+4	20	10.7			OK	
Aroclor 1242 {2}	MULTI	AverageRF		9.4E+3	20	13.4			OK	
Aroclor 1242 {3}	MULTI	AverageRF		2.4E+4	20	10.2			OK	
Aroclor 1242 {4}	MULTI	AverageRF		1.6E+4	20	8.5			OK	
Aroclor 1242 {5}	MULTI	AverageRF		1.1E+4	20	17.9			OK	
Aroclor 1248 {1}	MULTI	AverageRF		1.3E+4	20	7.9			OK	
Aroclor 1248 {2}	MULTI	AverageRF		9.2E+3	20	6.3			OK	
Aroclor 1248 {3}	MULTI	AverageRF		1.3E+4	20	7.7			OK	
Aroclor 1248 {4}	MULTI	AverageRF		1.7E+4	20	6.9			OK	
Aroclor 1248 {5}	MULTI	AverageRF		1.1E+4	20	4.2			OK	
Aroclor 1254 {1}	MULTI	AverageRF		1.2E+4	20	7.8			OK	
Aroclor 1254 {2}	MULTI	AverageRF		2.1E+4	20	5.9			OK	
Aroclor 1254 {3}	MULTI	AverageRF		4.3E+4	20	9.5			OK	
Aroclor 1254 {4}	MULTI	AverageRF		2.4E+4	20	9.7			OK	
Aroclor 1254 {5}	MULTI	AverageRF		1.4E+4	20	4.7			OK	
Aroclor 1262 {1}	MULTI	AverageRF		3.7E+4	20	12.6			OK	
Aroclor 1262 {2}	MULTI	AverageRF		3.3E+4	20	11.6			OK	
Aroclor 1262 {3}	MULTI	AverageRF		6.1E+4	20	12.7			OK	
Aroclor 1262 {4}	MULTI	AverageRF		4.8E+4	20	12.8			OK	
Aroclor 1262 {5}	MULTI	AverageRF		2.2E+4	20	8.9			OK	
Aroclor 1268 {1}	MULTI	AverageRF		8.2E+4	20	14.0			OK	
Aroclor 1268 {2}	MULTI	AverageRF		7.4E+4	20	13.2			OK	
Aroclor 1268 {3}	MULTI	AverageRF		6.6E+4	20	10.8			OK	
Aroclor 1268 {4}	MULTI	AverageRF		1.9E+5	20	12.1			OK	
Tetrachloro-m-xylene	SURR	AverageRF		6.6E+5	20	6.0			NA	
Decachlorobiphenyl	SURR	AverageRF		5.3E+5	20	16.3			NA	
Aroclor 1016 {1}	MULTI	AverageRF		1.2E+4	20	7.9			OK	
Aroclor 1016 {2}	MULTI	AverageRF		1.1E+4	20	9.5			OK	
Aroclor 1016 {3}	MULTI	AverageRF		3.1E+4	20	9.0			OK	
Aroclor 1016 {4}	MULTI	AverageRF		2.1E+4	20	7.1			OK	
Aroclor 1016 {5}	MULTI	AverageRF		1.7E+4	20	10.2			OK	
Aroclor 1260 {1}	MULTI	AverageRF		1.3E+4	20	4.5			OK	
Aroclor 1260 {2}	MULTI	AverageRF		2.2E+4	20	12.6			OK	
Aroclor 1260 {3}	MULTI	AverageRF		2.2E+4	20	9.3			OK	
Aroclor 1260 {4}	MULTI	AverageRF		4.8E+4	20	13.2			OK	
Aroclor 1260 {5}	MULTI	AverageRF		3.8E+4	20	14.5			OK	



Initial Calibration - Summary Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		8.5E+3	20	9.9			OK	
Aroclor 1221 {2}	MULTI	AverageRF		7.9E+3	20	7.9			OK	
Aroclor 1221 {3}	MULTI	AverageRF		2.9E+4	20	10.7			OK	
Aroclor 1232 {1}	MULTI	AverageRF		2.6E+4	20	9.8			OK	
Aroclor 1232 {2}	MULTI	AverageRF		1.5E+4	20	13.6			OK	
Aroclor 1232 {3}	MULTI	AverageRF		1.1E+4	20	10.7			OK	
Aroclor 1232 {4}	MULTI	AverageRF		1.9E+4	20	10.7			OK	
Aroclor 1232 {5}	MULTI	AverageRF		2.3E+4	20	9.0			OK	
Aroclor 1242 {1}	MULTI	AverageRF		1.7E+4	20	8.6			OK	
Aroclor 1242 {2}	MULTI	AverageRF		2.6E+4	20	15.4			OK	
Aroclor 1242 {3}	MULTI	AverageRF		3.2E+4	20	8.6			OK	
Aroclor 1242 {4}	MULTI	AverageRF		3.9E+4	20	8.2			OK	
Aroclor 1242 {5}	MULTI	AverageRF		2.0E+4	20	8.9			OK	
Aroclor 1248 {1}	MULTI	AverageRF		1.5E+4	20	15.9			OK	
Aroclor 1248 {2}	MULTI	AverageRF		2.5E+4	20	8.3			OK	
Aroclor 1248 {3}	MULTI	AverageRF		3.1E+4	20	9.5			OK	
Aroclor 1248 {4}	MULTI	AverageRF		2.3E+4	20	6.3			OK	
Aroclor 1248 {5}	MULTI	AverageRF		3.4E+4	20	11.0			OK	
Aroclor 1254 {1}	MULTI	AverageRF		4.4E+4	20	12.0			OK	
Aroclor 1254 {2}	MULTI	AverageRF		1.9E+4	20	7.8			OK	
Aroclor 1254 {3}	MULTI	AverageRF		6.1E+4	20	8.9			OK	
Aroclor 1254 {4}	MULTI	AverageRF		2.3E+4	20	13.6			OK	
Aroclor 1254 {5}	MULTI	AverageRF		2.7E+4	20	8.3			OK	
Aroclor 1262 {1}	MULTI	AverageRF		5.4E+4	20	11.8			OK	
Aroclor 1262 {2}	MULTI	AverageRF		4.1E+4	20	10.9			OK	
Aroclor 1262 {3}	MULTI	AverageRF		8.9E+4	20	11.9			OK	
Aroclor 1262 {4}	MULTI	AverageRF		6.3E+4	20	13.0			OK	
Aroclor 1262 {5}	MULTI	AverageRF		3.3E+4	20	12.6			OK	
Aroclor 1268 {1}	MULTI	AverageRF		1.2E+5	20	14.2			OK	
Aroclor 1268 {2}	MULTI	AverageRF		1.1E+5	20	16.1			OK	
Aroclor 1268 {3}	MULTI	AverageRF		9.2E+4	20	13.0			OK	
Aroclor 1268 {4}	MULTI	AverageRF		2.7E+5	20	12.4			OK	
Tetrachloro-m-xylene	SURR	AverageRF		1.2E+6	20	8.8			NA	
Decachlorobiphenyl	SURR	AverageRF		7.9E+5	20	18.1			NA	
Aroclor 1016 {1}	MULTI	AverageRF		2.1E+4	20	8.1			OK	
Aroclor 1016 {2}	MULTI	AverageRF		3.2E+4	20	16.1			OK	
Aroclor 1016 {3}	MULTI	AverageRF		3.1E+4	20	7.6			OK	
Aroclor 1016 {4}	MULTI	AverageRF		2.6E+4	20	11.9			OK	
Aroclor 1016 {5}	MULTI	AverageRF		2.4E+4	20	9.5			OK	
Aroclor 1260 {1}	MULTI	AverageRF		2.4E+4	20	15.9			OK	
Aroclor 1260 {2}	MULTI	AverageRF		3.2E+4	20	12.5			OK	
Aroclor 1260 {3}	MULTI	AverageRF		3.2E+4	20	13.5			OK	
Aroclor 1260 {4}	MULTI	AverageRF		7.1E+4	20	13.3			OK	
Aroclor 1260 {5}	MULTI	AverageRF		4.7E+4	20	12.7			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	250998	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D	06/25/2014 04:37	06/26/2014 00:46	06/26/2014 00:54
2	251000	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D	06/25/2014 04:58	06/26/2014 00:46	06/26/2014 00:54
3	251002	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D	06/25/2014 05:19	06/26/2014 00:46	06/26/2014 00:54
4	251004	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D	06/25/2014 05:40	06/26/2014 00:46	06/26/2014 00:54
5	251006	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D	06/25/2014 06:01	06/26/2014 00:46	06/26/2014 00:54
6	251008	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F110.D	06/25/2014 06:22	06/26/2014 00:46	06/26/2014 00:54
7	251010	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D	06/25/2014 06:43	06/26/2014 00:46	06/26/2014 00:54
8	251012	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D	06/25/2014 07:04	06/26/2014 00:46	06/26/2014 00:54
9	251014	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D	06/25/2014 07:25	06/26/2014 00:46	06/26/2014 00:54
10	251016	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D	06/25/2014 07:46	06/26/2014 00:47	06/26/2014 00:54
11	251018	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D	06/25/2014 08:07	06/26/2014 00:47	06/26/2014 00:55
12	251020	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D	06/25/2014 08:28	06/26/2014 00:47	06/26/2014 00:55
13	251022	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D	06/25/2014 08:49	06/26/2014 00:47	06/26/2014 00:55
14	251024	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D	06/25/2014 09:10	06/26/2014 00:47	06/26/2014 00:55
15	251026	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D	06/25/2014 09:31	06/26/2014 00:47	06/26/2014 00:55
16	251028	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D	06/25/2014 09:52	06/26/2014 00:47	06/26/2014 00:55
17	251030	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D	06/25/2014 10:13	06/26/2014 00:47	06/26/2014 00:55
18	251032	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D	06/25/2014 10:34	06/26/2014 00:47	06/26/2014 00:55
19	251034	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D	06/25/2014 10:55	06/26/2014 00:47	06/26/2014 00:55
20	251036	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D	06/25/2014 11:16	06/26/2014 00:47	06/26/2014 00:55
21	251038	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D	06/25/2014 11:37	06/26/2014 00:47	06/26/2014 00:55
22	251040	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D	06/25/2014 11:58	06/26/2014 00:47	06/26/2014 00:55
23	251042	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D	06/25/2014 12:19	06/26/2014 00:47	06/26/2014 00:55
24	251044	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D	06/25/2014 12:41	06/26/2014 00:48	06/26/2014 00:55
25	251046	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D	06/25/2014 13:02	06/26/2014 00:48	06/26/2014 00:55
26	251048	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D	06/25/2014 13:23	06/26/2014 00:48	06/26/2014 00:55
27	251050	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D	06/25/2014 13:44	06/26/2014 00:48	06/26/2014 00:55
28	251052	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D	06/25/2014 14:05	06/26/2014 00:48	06/26/2014 00:55
29	251054	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D	06/25/2014 14:26	06/26/2014 00:48	06/26/2014 00:55
30	251056	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D	06/25/2014 14:47	06/26/2014 00:48	06/26/2014 00:55

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	7.2E+5	2	7.0E+5	3	6.5E+5	4	6.3E+5	5	6.2E+5	6	6.5E+5	6.6E+5	6.0
Decachlorobiphenyl	1	6.5E+5	2	6.0E+5	3	5.5E+5	4	5.1E+5	5	4.5E+5	6	4.3E+5	5.3E+5	16.3
Aroclor 1016 {1}	1	1.3E+4	2	1.3E+4	3	1.3E+4	4	1.3E+4	5	1.1E+4	6	1.1E+4	1.2E+4	7.9
Aroclor 1016 {2}	1	1.2E+4	2	1.2E+4	3	1.2E+4	4	1.2E+4	5	1.0E+4	6	9.7E+3	1.1E+4	9.5
Aroclor 1016 {3}	1	3.3E+4	2	3.3E+4	3	3.3E+4	4	3.0E+4	5	2.9E+4	6	2.6E+4	3.1E+4	9.0
Aroclor 1016 {4}	1	2.2E+4	2	2.1E+4	3	2.1E+4	4	2.1E+4	5	1.9E+4	6	1.9E+4	2.1E+4	7.1
Aroclor 1016 {5}	1	2.0E+4	2	1.7E+4	3	1.8E+4	4	1.7E+4	5	1.6E+4	6	1.6E+4	1.7E+4	10.2
Aroclor 1221 {1}	7	8.4E+3	8	8.6E+3	9	8.1E+3	10	7.8E+3	11	6.8E+3			8.0E+3	9.2
Aroclor 1221 {2}	7	5.3E+3	8	5.3E+3	9	5.2E+3	10	5.1E+3	11	4.5E+3			5.1E+3	7.1
Aroclor 1221 {3}	7	2.5E+4	8	2.3E+4	9	2.0E+4	10	1.8E+4	11	1.5E+4			2.0E+4	18.6
Aroclor 1232 {1}	13	5.6E+3	14	4.7E+3	15	5.3E+3	16	5.5E+3	17	5.0E+3	18	4.8E+3	5.2E+3	6.9
Aroclor 1232 {2}	13	1.6E+4	14	1.6E+4	15	1.7E+4	16	1.7E+4	17	1.4E+4	18	1.3E+4	1.6E+4	9.5
Aroclor 1232 {3}	13	1.6E+4	14	1.5E+4	15	1.6E+4	16	1.6E+4	17	1.3E+4	18	1.3E+4	1.5E+4	10.5
Aroclor 1232 {4}	13	6.9E+3	14	6.4E+3	15	5.8E+3	16	5.9E+3	17	5.2E+3	18	5.0E+3	5.9E+3	12.2
Aroclor 1232 {5}	13	8.6E+3	14	9.3E+3	15	1.0E+4	16	1.0E+4	17	9.2E+3	18	8.9E+3	9.4E+3	6.9
Aroclor 1242 {1}	19	1.2E+4	20	1.2E+4	21	1.2E+4	22	1.1E+4	23	9.6E+3	24	9.1E+3	1.1E+4	10.7
Aroclor 1242 {2}	19	1.1E+4	20	9.7E+3	21	1.0E+4	22	9.5E+3	23	8.2E+3	24	7.7E+3	9.4E+3	13.4

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1242 {3}	19	2.7E+4	20	2.6E+4	21	2.4E+4	22	2.4E+4	23	2.2E+4	24	2.1E+4	2.4E+4	10.2
Aroclor 1242 {4}	19	1.7E+4	20	1.7E+4	21	1.7E+4	22	1.7E+4	23	1.5E+4	24	1.4E+4	1.6E+4	8.5
Aroclor 1242 {5}	19	1.3E+4	20	1.3E+4	21	1.0E+4	22	1.0E+4	23	8.9E+3	24	8.5E+3	1.1E+4	17.9
Aroclor 1248 {1}	25	1.4E+4	26	1.4E+4	27	1.5E+4	28	1.3E+4	29	1.2E+4	30	1.3E+4	1.3E+4	7.9
Aroclor 1248 {2}	25	8.5E+3	26	9.2E+3	27	1.0E+4	28	9.7E+3	29	9.1E+3	30	8.7E+3	9.2E+3	6.3
Aroclor 1248 {3}	25	1.4E+4	26	1.3E+4	27	1.4E+4	28	1.3E+4	29	1.2E+4	30	1.2E+4	1.3E+4	7.7
Aroclor 1248 {4}	25	1.9E+4	26	1.7E+4	27	1.8E+4	28	1.7E+4	29	1.6E+4	30	1.6E+4	1.7E+4	6.9
Aroclor 1248 {5}	25	1.1E+4	26	1.2E+4	27	1.2E+4	28	1.2E+4	29	1.1E+4	30	1.1E+4	1.1E+4	4.2
Aroclor 1254 {1}	7	1.2E+4	8	1.4E+4	9	1.3E+4	10	1.2E+4	11	1.1E+4	12	1.1E+4	1.2E+4	7.8
Aroclor 1254 {2}	7	2.3E+4	8	2.2E+4	9	2.2E+4	10	2.1E+4	11	2.0E+4	12	2.0E+4	2.1E+4	5.9
Aroclor 1254 {3}	7	4.8E+4	8	4.7E+4	9	4.5E+4	10	4.2E+4	11	3.8E+4	12	3.9E+4	4.3E+4	9.5
Aroclor 1254 {4}	7	2.5E+4	8	2.6E+4	9	2.7E+4	10	2.5E+4	11	2.1E+4	12	2.1E+4	2.4E+4	9.7
Aroclor 1254 {5}	7	1.3E+4	8	1.4E+4	9	1.5E+4	10	1.5E+4	11	1.4E+4	12	1.4E+4	1.4E+4	4.7
Aroclor 1260 {1}	1	1.4E+4	2	1.3E+4	3	1.3E+4	4	1.3E+4	5	1.3E+4	6	1.2E+4	1.3E+4	4.5
Aroclor 1260 {2}	1	2.6E+4	2	2.3E+4	3	2.2E+4	4	2.1E+4	5	1.9E+4	6	1.9E+4	2.2E+4	12.6
Aroclor 1260 {3}	1	2.5E+4	2	2.3E+4	3	2.4E+4	4	2.3E+4	5	2.0E+4	6	1.9E+4	2.2E+4	9.3
Aroclor 1260 {4}	1	5.8E+4	2	5.4E+4	3	5.0E+4	4	4.6E+4	5	4.2E+4	6	4.2E+4	4.8E+4	13.2
Aroclor 1260 {5}	1	4.7E+4	2	4.1E+4	3	3.9E+4	4	3.7E+4	5	3.3E+4	6	3.2E+4	3.8E+4	14.5
Aroclor 1262 {1}	13	4.1E+4	14	4.1E+4	15	3.9E+4	16	3.8E+4	17	3.2E+4	18	3.1E+4	3.7E+4	12.6
Aroclor 1262 {2}	13	3.6E+4	14	3.5E+4	15	3.5E+4	16	3.5E+4	17	2.9E+4	18	2.7E+4	3.3E+4	11.6
Aroclor 1262 {3}	13	7.0E+4	14	6.8E+4	15	6.2E+4	16	6.1E+4	17	5.3E+4	18	5.1E+4	6.1E+4	12.7
Aroclor 1262 {4}	13	5.4E+4	14	5.3E+4	15	5.0E+4	16	5.0E+4	17	4.2E+4	18	3.9E+4	4.8E+4	12.8
Aroclor 1262 {5}	13	2.3E+4	14	2.3E+4	15	2.3E+4	16	2.4E+4	17	2.0E+4	18	1.9E+4	2.2E+4	8.9
Aroclor 1268 {1}	19	9.4E+4	20	9.5E+4	21	8.5E+4	22	8.0E+4	23	7.1E+4	24	6.8E+4	8.2E+4	14.0
Aroclor 1268 {2}	19	8.4E+4	20	8.4E+4	21	7.6E+4	22	7.2E+4	23	6.4E+4	24	6.2E+4	7.4E+4	13.2
Aroclor 1268 {3}	19	7.2E+4	20	7.4E+4	21	6.9E+4	22	6.5E+4	23	5.9E+4	24	5.7E+4	6.6E+4	10.8
Aroclor 1268 {4}	19	2.2E+5	20	2.2E+5	21	1.9E+5	22	1.8E+5	23	1.7E+5	24	1.7E+5	1.9E+5	12.1

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	250998	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D	06/25/2014 04:37	06/26/2014 00:46	06/26/2014 00:54
2	251000	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D	06/25/2014 04:58	06/26/2014 00:46	06/26/2014 00:54
3	251002	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D	06/25/2014 05:19	06/26/2014 00:46	06/26/2014 00:54
4	251004	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D	06/25/2014 05:40	06/26/2014 00:46	06/26/2014 00:54
5	251006	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D	06/25/2014 06:01	06/26/2014 00:46	06/26/2014 00:54
6	251008	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F110.D	06/25/2014 06:22	06/26/2014 00:46	06/26/2014 00:54
7	251010	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D	06/25/2014 06:43	06/26/2014 00:46	06/26/2014 00:54
8	251012	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D	06/25/2014 07:04	06/26/2014 00:46	06/26/2014 00:54
9	251014	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D	06/25/2014 07:25	06/26/2014 00:46	06/26/2014 00:54
10	251016	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D	06/25/2014 07:46	06/26/2014 00:47	06/26/2014 00:54
11	251018	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D	06/25/2014 08:07	06/26/2014 00:47	06/26/2014 00:55
12	251020	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D	06/25/2014 08:28	06/26/2014 00:47	06/26/2014 00:55
13	251022	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D	06/25/2014 08:49	06/26/2014 00:47	06/26/2014 00:55
14	251024	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D	06/25/2014 09:10	06/26/2014 00:47	06/26/2014 00:55
15	251026	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D	06/25/2014 09:31	06/26/2014 00:47	06/26/2014 00:55
16	251028	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D	06/25/2014 09:52	06/26/2014 00:47	06/26/2014 00:55
17	251030	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D	06/25/2014 10:13	06/26/2014 00:47	06/26/2014 00:55
18	251032	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D	06/25/2014 10:34	06/26/2014 00:47	06/26/2014 00:55
19	251034	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D	06/25/2014 10:55	06/26/2014 00:47	06/26/2014 00:55
20	251036	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D	06/25/2014 11:16	06/26/2014 00:47	06/26/2014 00:55
21	251038	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D	06/25/2014 11:37	06/26/2014 00:47	06/26/2014 00:55
22	251040	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D	06/25/2014 11:58	06/26/2014 00:47	06/26/2014 00:55
23	251042	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D	06/25/2014 12:19	06/26/2014 00:47	06/26/2014 00:55
24	251044	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D	06/25/2014 12:41	06/26/2014 00:48	06/26/2014 00:55
25	251046	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D	06/25/2014 13:02	06/26/2014 00:48	06/26/2014 00:55
26	251048	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D	06/25/2014 13:23	06/26/2014 00:48	06/26/2014 00:55
27	251050	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D	06/25/2014 13:44	06/26/2014 00:48	06/26/2014 00:55
28	251052	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D	06/25/2014 14:05	06/26/2014 00:48	06/26/2014 00:55
29	251054	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D	06/25/2014 14:26	06/26/2014 00:48	06/26/2014 00:55
30	251056	\\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D	06/25/2014 14:47	06/26/2014 00:48	06/26/2014 00:55

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.25	0.2723	8.9	2	0.5	0.5292	5.8	3	2.5	2.434	-2.7
	4	5	4.771	-4.6	5	25	23.51	-6.0	6	50	49.22	-1.6
Decachlorobiphenyl	1	0.25	0.3055	22.2	2	0.5	0.5662	13.2	3	2.5	2.591	3.6
	4	5	4.812	-3.8	5	25	20.87	-16.5	6	50	40.61	-18.8
Aroclor 1016 {1}	1	2.5	2.720	8.8	2	5	5.053	1.1	3	25	26.39	5.6
	4	50	51.85	3.7	5	250	229.0	-8.4	6	500	446.3	-10.7
Aroclor 1016 {2}	1	2.5	2.744	9.8	2	5	5.203	4.1	3	25	26.73	6.9
	4	50	51.32	2.6	5	250	226.6	-9.4	6	500	430.0	-14.0
Aroclor 1016 {3}	1	2.5	2.671	6.8	2	5	5.444	8.9	3	25	26.56	6.3
	4	50	49.37	-1.3	5	250	233.0	-6.8	6	500	430.6	-13.9
Aroclor 1016 {4}	1	2.5	2.738	9.5	2	5	5.109	2.2	3	25	25.96	3.9
	4	50	50.60	1.2	5	250	229.4	-8.3	6	500	457.5	-8.5
Aroclor 1016 {5}	1	2.5	2.932	17.3	2	5	5.022	0.4	3	25	25.83	3.3
	4	50	49.63	-0.7	5	250	225.9	-9.7	6	500	446.9	-10.6
Aroclor 1221 {1}	7	5	5.295	5.9	8	10	10.84	8.4	9	50	51.17	2.3
	10	100	98.36	-1.6	11	500	424.8	-15.0				

Initial Calibration - Detailed Report

Calibration ID: CAL13402
Method ID: MJ702
Instrument ID: GC32.i
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1221 {2}	7	5	5.256	5.1	8	10	10.37	3.7	9	50	51.42	2.8
	10	100	100.6	0.6	11	500	438.5	-12.3				
Aroclor 1221 {3}	7	5	6.077	21.5	8	10	11.58	15.8	9	50	48.19	-3.6
	10	100	89.74	-10.3	11	500	382.5	-23.5*				
Aroclor 1232 {1}	13	2.5	2.726	9.0	14	5	4.587	-8.3	15	25	25.50	2.0
	16	50	53.15	6.3	17	250	242.6	-2.9	18	500	469.4	-6.1
Aroclor 1232 {2}	13	2.5	2.571	2.8	14	5	5.271	5.4	15	25	26.83	7.3
	16	50	54.12	8.2	17	250	224.5	-10.2	18	500	432.1	-13.6
Aroclor 1232 {3}	13	2.5	2.747	9.9	14	5	5.079	1.6	15	25	26.77	7.1
	16	50	53.73	7.5	17	250	223.1	-10.8	18	500	423.7	-15.3
Aroclor 1232 {4}	13	2.5	2.934	17.3	14	5	5.483	9.7	15	25	24.63	-1.5
	16	50	50.36	0.7	17	250	221.2	-11.5	18	500	426.3	-14.7
Aroclor 1232 {5}	13	2.5	2.285	-8.6	14	5	4.988	-0.2	15	25	26.61	6.4
	16	50	54.76	9.5	17	250	245.0	-2.0	18	500	474.3	-5.1
Aroclor 1242 {1}	19	2.5	2.673	6.9	20	5	5.434	8.7	21	25	26.86	7.5
	22	50	52.05	4.1	23	250	222.2	-11.1	24	500	419.8	-16.0
Aroclor 1242 {2}	19	2.5	2.960	18.4	20	5	5.160	3.2	21	25	26.90	7.6
	22	50	50.73	1.5	23	250	219.0	-12.4	24	500	408.8	-18.2
Aroclor 1242 {3}	19	2.5	2.810	12.4	20	5	5.507	10.1	21	25	25.28	1.1
	22	50	49.39	-1.2	23	250	227.8	-8.9	24	500	432.1	-13.6
Aroclor 1242 {4}	19	2.5	2.637	5.5	20	5	5.305	6.1	21	25	26.52	6.1
	22	50	52.10	4.2	23	250	226.3	-9.5	24	500	438.1	-12.4
Aroclor 1242 {5}	19	2.5	3.086	23.4	20	5	6.004	20.1 ≈20	21	25	24.02	-3.9
	22	50	47.60	-4.8	23	250	210.6	-15.7	24	500	404.9	-19.0
Aroclor 1248 {1}	25	2.5	2.558	2.3	26	5	5.211	4.2	27	25	28.00	12.0
	28	50	48.00	-4.0	29	250	222.7	-10.9	30	500	481.8	-3.6
Aroclor 1248 {2}	25	2.5	2.313	-7.5	26	5	4.992	-0.2	27	25	27.33	9.3
	28	50	52.61	5.2	29	250	246.2	-1.5	30	500	473.1	-5.4
Aroclor 1248 {3}	25	2.5	2.670	6.8	26	5	5.059	1.2	27	25	27.29	9.1
	28	50	50.46	0.9	29	250	228.5	-8.6	30	500	452.9	-9.4
Aroclor 1248 {4}	25	2.5	2.794	11.7	26	5	4.915	-1.7	27	25	25.79	3.2
	28	50	49.77	-0.5	29	250	236.9	-5.2	30	500	462.5	-7.5
Aroclor 1248 {5}	25	2.5	2.500	0.0	26	5	5.054	1.1	27	25	26.35	5.4
	28	50	51.50	3.0	29	250	242.3	-3.1	30	500	468.0	-6.4
Aroclor 1254 {1}	7	2.5	2.489	-0.5	8	5	5.564	11.3	9	25	26.37	5.5
	10	50	50.35	0.7	11	250	230.8	-7.7	12	500	453.3	-9.3
Aroclor 1254 {2}	7	2.5	2.667	6.7	8	5	5.174	3.5	9	25	26.07	4.3
	10	50	49.68	-0.6	11	250	230.5	-7.8	12	500	470.0	-6.0
Aroclor 1254 {3}	7	2.5	2.763	10.5	8	5	5.501	10.0	9	25	25.89	3.6
	10	50	48.43	-3.1	11	250	220.8	-11.7	12	500	453.7	-9.3
Aroclor 1254 {4}	7	2.5	2.595	3.8	8	5	5.411	8.2	9	25	27.47	9.9
	10	50	51.03	2.1	11	250	220.3	-11.9	12	500	439.5	-12.1
Aroclor 1254 {5}	7	2.5	2.338	-6.5	8	5	4.979	-0.4	9	25	26.68	6.7
	10	50	51.85	3.7	11	250	247.9	-0.9	12	500	486.8	-2.6
Aroclor 1260 {1}	1	2.5	2.665	6.6	2	5	5.055	1.1	3	25	25.36	1.4
	4	50	50.58	1.2	5	250	237.7	-4.9	6	500	473.3	-5.3
Aroclor 1260 {2}	1	2.5	2.996	19.9	2	5	5.272	5.4	3	25	25.81	3.2
	4	50	49.14	-1.7	5	250	219.3	-12.3	6	500	427.3	-14.5

* Aroclor 1221 @ 500 µg/L avg 20 = -16.9 > -20

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1260 {3}	1	2.5	2.769	10.8	2	5	5.240	4.8	3	25	26.45	5.8
	4	50	50.60	1.2	5	250	225.4	-9.8	6	500	436.4	-12.7
Aroclor 1260 {4}	1	2.5	2.977	19.1	2	5	5.524	10.5	3	25	25.56	2.3
	4	50	47.64	-4.7	5	250	217.0	-13.2	6	500	430.5	-13.9
Aroclor 1260 {5}	1	2.5	3.078	23.1	2	5	5.355	7.1	3	25	25.71	2.8
	4	50	48.34	-3.3	5	250	215.0	-14.0	6	500	421.5	-15.7
Aroclor 1262 {1}	13	2.5	2.796	11.9	14	5	5.523	10.5	15	25	26.34	5.3
	16	50	51.90	3.8	17	250	214.8	-14.1	18	500	413.1	-17.4
Aroclor 1262 {2}	13	2.5	2.739	9.5	14	5	5.360	7.2	15	25	26.60	6.4
	16	50	53.15	6.3	17	250	219.9	-12.0	18	500	412.9	-17.4
Aroclor 1262 {3}	13	2.5	2.868	14.7	14	5	5.630	12.6	15	25	25.44	1.7
	16	50	49.98	0.0	17	250	219.0	-12.4	18	500	416.8	-16.6
Aroclor 1262 {4}	13	2.5	2.813	12.5	14	5	5.565	11.3	15	25	25.89	3.6
	16	50	52.00	4.0	17	250	218.2	-12.7	18	500	406.6	-18.7
Aroclor 1262 {5}	13	2.5	2.582	3.3	14	5	5.181	3.6	15	25	26.52	6.1
	16	50	54.36	8.7	17	250	231.1	-7.5	18	500	429.3	-14.1
Aroclor 1268 {1}	19	2.5	2.866	14.6	20	5	5.799	16.0	21	25	25.80	3.2
	22	50	48.59	-2.8	23	250	214.9	-14.0	24	500	415.2	-17.0
Aroclor 1268 {2}	19	2.5	2.851	14.1	20	5	5.727	14.5	21	25	25.84	3.4
	22	50	48.75	-2.5	23	250	216.8	-13.3	24	500	419.0	-16.2
Aroclor 1268 {3}	19	2.5	2.727	9.1	20	5	5.632	12.6	21	25	26.14	4.6
	22	50	49.35	-1.3	23	250	222.2	-11.1	24	500	430.8	-13.8
Aroclor 1268 {4}	19	2.5	2.874	14.9	20	5	5.729	14.6	21	25	24.74	-1.0
	22	50	47.28	-5.4	23	250	223.4	-10.6	24	500	438.0	-12.4

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	250999	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F105.D	06/25/2014 04:37	06/26/2014 00:46	06/26/2014 00:54
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3	251003	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F107.D	06/25/2014 05:19	06/26/2014 00:46	06/26/2014 00:54
4	251005	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F108.D	06/25/2014 05:40	06/26/2014 00:46	06/26/2014 00:54
5	251007	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F109.D	06/25/2014 06:01	06/26/2014 00:46	06/26/2014 00:54
6	251009	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F110.D	06/25/2014 06:22	06/26/2014 00:46	06/26/2014 00:54
7	251011	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F111.D	06/25/2014 06:43	06/26/2014 00:46	06/26/2014 00:54
8	251013	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D	06/25/2014 07:04	06/26/2014 00:46	06/26/2014 00:54
9	251015	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F113.D	06/25/2014 07:25	06/26/2014 00:46	06/26/2014 00:54
10	251017	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F114.D	06/25/2014 07:46	06/26/2014 00:46	06/26/2014 00:54
11	251019	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F115.D	06/25/2014 08:07	06/26/2014 00:47	06/26/2014 00:55
12	251021	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F116.D	06/25/2014 08:28	06/26/2014 00:47	06/26/2014 00:55
13	251023	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D	06/25/2014 08:49	06/26/2014 00:47	06/26/2014 00:55
14	251025	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D	06/25/2014 09:10	06/26/2014 00:47	06/26/2014 00:55
15	251027	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D	06/25/2014 09:31	06/26/2014 00:47	06/26/2014 00:55
16	251029	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D	06/25/2014 09:52	06/26/2014 00:47	06/26/2014 00:55
17	251031	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F121.D	06/25/2014 10:13	06/26/2014 00:47	06/26/2014 00:55
18	251033	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F122.D	06/25/2014 10:34	06/26/2014 00:47	06/26/2014 00:55
19	251035	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F123.D	06/25/2014 10:55	06/26/2014 00:47	06/26/2014 00:55
20	251037	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D	06/25/2014 11:16	06/26/2014 00:47	06/26/2014 00:55
21	251039	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F125.D	06/25/2014 11:37	06/26/2014 00:47	06/26/2014 00:55
22	251041	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F126.D	06/25/2014 11:58	06/26/2014 00:47	06/26/2014 00:55
23	251043	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F127.D	06/25/2014 12:19	06/26/2014 00:47	06/26/2014 00:55
24	251045	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F128.D	06/25/2014 12:41	06/26/2014 00:48	06/26/2014 00:55
25	251047	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D	06/25/2014 13:02	06/26/2014 00:48	06/26/2014 00:55
26	251049	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D	06/25/2014 13:23	06/26/2014 00:48	06/26/2014 00:55
27	251051	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D	06/25/2014 13:44	06/26/2014 00:48	06/26/2014 00:55
28	251053	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D	06/25/2014 14:05	06/26/2014 00:48	06/26/2014 00:55
29	251055	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D	06/25/2014 14:26	06/26/2014 00:48	06/26/2014 00:55
30	251057	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D	06/25/2014 14:47	06/26/2014 00:48	06/26/2014 00:55

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	1.4E+6	2	1.3E+6	3	1.2E+6	4	1.1E+6	5	1.2E+6	6	1.2E+6	1.2E+6	8.8
Decachlorobiphenyl	1	9.8E+5	2	8.8E+5	3	7.7E+5	4	7.1E+5	5	6.2E+5			7.9E+5	18.1
Aroclor 1016 {1}	1	2.2E+4	2	2.3E+4	3	2.3E+4	4	2.2E+4	5	2.0E+4	6	1.9E+4	2.1E+4	8.1
Aroclor 1016 {2}	1	4.0E+4	2	3.7E+4	3	3.3E+4	4	3.1E+4	5	2.8E+4	6	2.6E+4	3.2E+4	16.1
Aroclor 1016 {3}	1	3.4E+4	2	3.3E+4	3	3.2E+4	4	3.1E+4	5	2.9E+4	6	2.8E+4	3.1E+4	7.6
Aroclor 1016 {4}	1	3.0E+4	2	2.8E+4	3	2.6E+4	4	2.5E+4	5	2.3E+4	6	2.2E+4	2.6E+4	11.9
Aroclor 1016 {5}	1	2.8E+4	2	2.6E+4	3	2.5E+4	4	2.4E+4	5	2.2E+4	6	2.2E+4	2.4E+4	9.5
Aroclor 1221 {1}	7	9.5E+3	8	9.2E+3	9	8.8E+3	10	8.3E+3	11	7.5E+3	12	7.5E+3	8.5E+3	9.9
Aroclor 1221 {2}	7	8.4E+3	8	8.3E+3	9	8.4E+3	10	7.9E+3	11	7.2E+3	12	7.0E+3	7.9E+3	7.9
Aroclor 1221 {3}	7	3.3E+4	8	3.1E+4	9	2.9E+4	10	2.7E+4	11	2.6E+4	12	2.5E+4	2.9E+4	10.7
Aroclor 1232 {1}	13	2.7E+4	14	2.7E+4	15	2.7E+4	16	2.8E+4	17	2.4E+4	18	2.2E+4	2.6E+4	9.8
Aroclor 1232 {2}	13	1.7E+4	14	1.8E+4	15	1.6E+4	16	1.6E+4	17	1.3E+4	18	1.2E+4	1.5E+4	13.6
Aroclor 1232 {3}	13	1.1E+4	14	1.2E+4	15	1.1E+4	16	1.1E+4	17	9.6E+3	18	9.1E+3	1.1E+4	10.7
Aroclor 1232 {4}	13	2.1E+4	14	2.1E+4	15	1.9E+4	16	1.9E+4	17	1.8E+4	18	1.6E+4	1.9E+4	10.7
Aroclor 1232 {5}	13	2.6E+4	14	2.4E+4	15	2.3E+4	16	2.3E+4	17	2.1E+4	18	2.0E+4	2.3E+4	9.0
Aroclor 1242 {1}	19	1.7E+4	20	1.9E+4	21	1.8E+4	22	1.8E+4	23	1.6E+4	24	1.5E+4	1.7E+4	8.6
Aroclor 1242 {2}	19	3.1E+4	20	3.1E+4	21	2.7E+4	22	2.6E+4	23	2.2E+4	24	2.1E+4	2.6E+4	15.4

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1242 {3}	19	3.3E+4	20	3.6E+4	21	3.3E+4	22	3.1E+4	23	2.9E+4	24	2.9E+4	3.2E+4	8.6
Aroclor 1242 {4}	19	4.3E+4	20	4.2E+4	21	3.8E+4	22	3.8E+4	23	3.6E+4	24	3.5E+4	3.9E+4	8.2
Aroclor 1242 {5}	19	2.0E+4	20	2.4E+4	21	2.1E+4	22	2.0E+4	23	1.9E+4	24	1.9E+4	2.0E+4	8.9
Aroclor 1248 {1}	25	1.9E+4	26	1.8E+4	27	1.5E+4	28	1.5E+4	29	1.3E+4	30	1.3E+4	1.5E+4	15.9
Aroclor 1248 {2}	25	2.8E+4	26	2.7E+4	27	2.6E+4	28	2.5E+4	29	2.3E+4	30	2.3E+4	2.5E+4	8.3
Aroclor 1248 {3}	25	3.5E+4	26	3.3E+4	27	3.2E+4	28	2.9E+4	29	2.8E+4	30	2.7E+4	3.1E+4	9.5
Aroclor 1248 {4}	25	2.6E+4	26	2.4E+4	27	2.4E+4	28	2.3E+4	29	2.2E+4	30	2.2E+4	2.3E+4	6.3
Aroclor 1248 {5}	25	4.1E+4	26	3.6E+4	27	3.4E+4	28	3.2E+4	29	3.1E+4	30	3.1E+4	3.4E+4	11.0
Aroclor 1254 {1}	7	5.2E+4	8	4.8E+4	9	4.4E+4	10	4.1E+4	11	3.9E+4	12	3.9E+4	4.4E+4	12.0
Aroclor 1254 {2}	7	2.1E+4	8	1.9E+4	9	1.9E+4	10	1.8E+4	11	1.8E+4	12	1.7E+4	1.9E+4	7.8
Aroclor 1254 {3}	7	6.9E+4	8	6.6E+4	9	6.2E+4	10	5.8E+4	11	5.6E+4	12	5.7E+4	6.1E+4	8.9
Aroclor 1254 {4}	7	2.9E+4	8	2.3E+4	9	2.3E+4	10	2.2E+4	11	2.1E+4	12	2.1E+4	2.3E+4	13.6
Aroclor 1254 {5}	7	3.1E+4	8	2.7E+4	9	2.7E+4	10	2.6E+4	11	2.5E+4	12	2.5E+4	2.7E+4	8.3
Aroclor 1260 {1}	1	2.9E+4	2	2.8E+4	3	2.3E+4	4	2.2E+4	5	2.1E+4	6	2.0E+4	2.4E+4	15.9
Aroclor 1260 {2}	1	3.8E+4	2	3.4E+4	3	3.2E+4	4	3.1E+4	5	2.8E+4	6	2.7E+4	3.2E+4	12.5
Aroclor 1260 {3}	1	3.9E+4	2	3.6E+4	3	3.3E+4	4	3.1E+4	5	2.8E+4	6	2.8E+4	3.2E+4	13.5
Aroclor 1260 {4}	1	8.5E+4	2	7.9E+4	3	7.2E+4	4	6.7E+4	5	6.2E+4	6	6.1E+4	7.1E+4	13.3
Aroclor 1260 {5}	1	5.4E+4	2	5.2E+4	3	4.8E+4	4	4.5E+4	5	4.1E+4	6	4.0E+4	4.7E+4	12.7
Aroclor 1262 {1}	13	6.2E+4	14	5.9E+4	15	5.6E+4	16	5.5E+4	17	4.7E+4	18	4.6E+4	5.4E+4	11.8
Aroclor 1262 {2}	13	4.6E+4	14	4.5E+4	15	4.3E+4	16	4.2E+4	17	3.7E+4	18	3.5E+4	4.1E+4	10.9
Aroclor 1262 {3}	13	1.0E+5	14	9.9E+4	15	9.0E+4	16	8.9E+4	17	7.9E+4	18	7.6E+4	8.9E+4	11.9
Aroclor 1262 {4}	13	7.5E+4	14	6.8E+4	15	6.5E+4	16	6.4E+4	17	5.6E+4	18	5.2E+4	6.3E+4	13.0
Aroclor 1262 {5}	13	3.7E+4	14	3.8E+4	15	3.4E+4	16	3.4E+4	17	2.9E+4	18	2.7E+4	3.3E+4	12.6
Aroclor 1268 {1}	19	1.4E+5	20	1.4E+5	21	1.2E+5	22	1.2E+5	23	1.0E+5	24	1.0E+5	1.2E+5	14.2
Aroclor 1268 {2}	19	1.3E+5	20	1.2E+5	21	1.1E+5	22	1.0E+5	23	9.0E+4	24	8.8E+4	1.1E+5	16.1
Aroclor 1268 {3}	19	1.1E+5	20	1.1E+5	21	9.3E+4	22	9.0E+4	23	8.0E+4	24	7.8E+4	9.2E+4	13.0
Aroclor 1268 {4}	19	3.1E+5	20	3.0E+5	21	2.6E+5	22	2.5E+5	23	2.3E+5	24	2.3E+5	2.7E+5	12.4

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
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2	251001	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F106.D	06/25/2014 04:58	06/26/2014 00:46	06/26/2014 00:54
3	251003	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F107.D	06/25/2014 05:19	06/26/2014 00:46	06/26/2014 00:54
4	251005	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F108.D	06/25/2014 05:40	06/26/2014 00:46	06/26/2014 00:54
5	251007	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F109.D	06/25/2014 06:01	06/26/2014 00:46	06/26/2014 00:54
6	251009	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F110.D	06/25/2014 06:22	06/26/2014 00:46	06/26/2014 00:54
7	251011	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F111.D	06/25/2014 06:43	06/26/2014 00:46	06/26/2014 00:54
8	251013	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D	06/25/2014 07:04	06/26/2014 00:46	06/26/2014 00:54
9	251015	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F113.D	06/25/2014 07:25	06/26/2014 00:46	06/26/2014 00:54
10	251017	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F114.D	06/25/2014 07:46	06/26/2014 00:46	06/26/2014 00:54
11	251019	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F115.D	06/25/2014 08:07	06/26/2014 00:47	06/26/2014 00:55
12	251021	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F116.D	06/25/2014 08:28	06/26/2014 00:47	06/26/2014 00:55
13	251023	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D	06/25/2014 08:49	06/26/2014 00:47	06/26/2014 00:55
14	251025	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D	06/25/2014 09:10	06/26/2014 00:47	06/26/2014 00:55
15	251027	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D	06/25/2014 09:31	06/26/2014 00:47	06/26/2014 00:55
16	251029	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D	06/25/2014 09:52	06/26/2014 00:47	06/26/2014 00:55
17	251031	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F121.D	06/25/2014 10:13	06/26/2014 00:47	06/26/2014 00:55
18	251033	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F122.D	06/25/2014 10:34	06/26/2014 00:47	06/26/2014 00:55
19	251035	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F123.D	06/25/2014 10:55	06/26/2014 00:47	06/26/2014 00:55
20	251037	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D	06/25/2014 11:16	06/26/2014 00:47	06/26/2014 00:55
21	251039	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F125.D	06/25/2014 11:37	06/26/2014 00:47	06/26/2014 00:55
22	251041	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F126.D	06/25/2014 11:58	06/26/2014 00:47	06/26/2014 00:55
23	251043	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F127.D	06/25/2014 12:19	06/26/2014 00:47	06/26/2014 00:55
24	251045	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F128.D	06/25/2014 12:41	06/26/2014 00:48	06/26/2014 00:55
25	251047	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D	06/25/2014 13:02	06/26/2014 00:48	06/26/2014 00:55
26	251049	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D	06/25/2014 13:23	06/26/2014 00:48	06/26/2014 00:55
27	251051	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D	06/25/2014 13:44	06/26/2014 00:48	06/26/2014 00:55
28	251053	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D	06/25/2014 14:05	06/26/2014 00:48	06/26/2014 00:55
29	251055	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D	06/25/2014 14:26	06/26/2014 00:48	06/26/2014 00:55
30	251057	\\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D	06/25/2014 14:47	06/26/2014 00:48	06/26/2014 00:55

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.25	0.2905	16.2	2	0.5	0.5204	4.1	3	2.5	2.383	-4.7
	4	5	4.642	-7.2	5	25	23.93	-4.3	6	50	47.90	-4.2
Decachlorobiphenyl	1	0.25	0.3101	24.0	2	0.5	0.5557	11.1	3	2.5	2.429	-2.9
	4	5	4.492	-10.2	5	25	19.46	-22.2*				
Aroclor 1016 {1}	1	2.5	2.609	4.4	2	5	5.406	8.1	3	25	26.43	5.7
	4	50	50.75	1.5	5	250	231.0	-7.6	6	500	439.4	-12.1
Aroclor 1016 {2}	1	2.5	3.069	22.8	2	5	5.697	13.9	3	25	25.31	1.2
	4	50	47.50	-5.0	5	250	213.3	-14.7	6	500	408.6	-18.3
Aroclor 1016 {3}	1	2.5	2.711	8.4	2	5	5.322	6.4	3	25	25.82	3.3
	4	50	49.80	-0.4	5	250	232.5	-7.0	6	500	446.2	-10.8
Aroclor 1016 {4}	1	2.5	2.926	17.0	2	5	5.463	9.3	3	25	25.48	1.9
	4	50	48.36	-3.3	5	250	223.5	-10.6	6	500	428.3	-14.3
Aroclor 1016 {5}	1	2.5	2.866	14.6	2	5	5.278	5.6	3	25	25.37	1.5
	4	50	48.91	-2.2	5	250	229.4	-8.2	6	500	443.6	-11.3
Aroclor 1221 {1}	7	5	5.600	12.0	8	10	10.87	8.7	9	50	52.05	4.1
	10	100	97.61	-2.4	11	500	442.6	-11.5	12	1000	890.9	-10.9

* QB @ 25ppb corresponds to 50% surrogate recovery. Low bias of 22% not relevant at this surrogate concentration.

Initial Calibration - Detailed Report

Calibration ID: CAL13402
Method ID: MJ702
Instrument ID: GC32.i
Column Name: DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1221 {2}	7	5	5.320	6.4	8	10	10.62	6.2	9	50	53.30	6.6
	10	100	100.2	0.2	11	500	459.7	-8.1	12	1000	887.1	-11.3
Aroclor 1221 {3}	7	5	5.793	15.9	8	10	10.82	8.2	9	50	50.87	1.7
	10	100	95.65	-4.3	11	500	449.5	-10.1	12	1000	886.1	-11.4
Aroclor 1232 {1}	13	2.5	2.660	6.4	14	5	5.291	5.8	15	25	26.26	5.0
	16	50	53.48	7.0	17	250	230.4	-7.8	18	500	418.1	-16.4
Aroclor 1232 {2}	13	2.5	2.780	11.2	14	5	5.698	14.0	15	25	25.57	2.3
	16	50	52.66	5.3	17	250	219.5	-12.2	18	500	397.2	-20.6*
Aroclor 1232 {3}	13	2.5	2.543	1.7	14	5	5.554	11.1	15	25	26.57	6.3
	16	50	53.57	7.1	17	250	222.8	-10.9	18	500	423.4	-15.3
Aroclor 1232 {4}	13	2.5	2.768	10.7	14	5	5.548	11.0	15	25	25.14	0.6
	16	50	51.02	2.0	17	250	230.6	-7.8	18	500	417.3	-16.5
Aroclor 1232 {5}	13	2.5	2.827	13.1	14	5	5.262	5.2	15	25	25.26	1.1
	16	50	50.42	0.8	17	250	227.6	-9.0	18	500	443.6	-11.3
Aroclor 1242 {1}	19	2.5	2.482	-0.7	20	5	5.533	10.7	21	25	26.16	4.6
	22	50	52.66	5.3	23	250	229.2	-8.3	24	500	442.0	-11.6
Aroclor 1242 {2}	19	2.5	2.944	17.7	20	5	5.839	16.8	21	25	25.41	1.6
	22	50	49.05	-1.9	23	250	210.7	-15.7	24	500	407.4	-18.5
Aroclor 1242 {3}	19	2.5	2.613	4.5	20	5	5.622	12.4	21	25	25.76	3.0
	22	50	49.58	-0.8	23	250	225.5	-9.8	24	500	453.2	-9.4
Aroclor 1242 {4}	19	2.5	2.792	11.7	20	5	5.378	7.6	21	25	24.51	-1.9
	22	50	49.51	-1.0	23	250	232.1	-7.1	24	500	454.2	-9.2
Aroclor 1242 {5}	19	2.5	2.420	-3.2	20	5	5.829	16.6	21	25	25.29	1.1
	22	50	50.07	0.1	23	250	233.7	-6.5	24	500	459.2	-8.2
Aroclor 1248 {1}	25	2.5	3.089	23.5	26	5	5.687	13.7	27	25	24.81	-0.7
	28	50	47.37	-5.3	29	250	214.7	-14.1	30	500	414.1	-17.2
Aroclor 1248 {2}	25	2.5	2.792	11.7	26	5	5.372	7.4	27	25	25.17	0.7
	28	50	48.53	-2.9	29	250	231.1	-7.6	30	500	453.5	-9.3
Aroclor 1248 {3}	25	2.5	2.840	13.6	26	5	5.332	6.6	27	25	25.84	3.4
	28	50	48.25	-3.5	29	250	225.2	-9.9	30	500	449.0	-10.2
Aroclor 1248 {4}	25	2.5	2.750	10.0	26	5	5.195	3.9	27	25	25.32	1.3
	28	50	48.18	-3.6	29	250	235.9	-5.6	30	500	470.6	-5.9
Aroclor 1248 {5}	25	2.5	3.006	20.3	26	5	5.188	3.8	27	25	24.64	-1.4
	28	50	47.43	-5.1	29	250	227.7	-8.9	30	500	457.4	-8.5
Aroclor 1254 {1}	7	2.5	2.950	18.0	8	5	5.497	9.9	9	25	25.10	0.4
	10	50	47.15	-5.7	11	250	219.3	-12.3	12	500	448.2	-10.4
Aroclor 1254 {2}	7	2.5	2.836	13.4	8	5	5.068	1.4	9	25	25.76	3.0
	10	50	48.09	-3.8	11	250	234.0	-6.4	12	500	461.8	-7.6
Aroclor 1254 {3}	7	2.5	2.823	12.9	8	5	5.392	7.8	9	25	25.30	1.2
	10	50	47.27	-5.5	11	250	227.0	-9.2	12	500	463.6	-7.3
Aroclor 1254 {4}	7	2.5	3.142	25.7	8	5	4.987	-0.3	9	25	25.36	1.5
	10	50	47.31	-5.4	11	250	222.6	-11.0	12	500	447.2	-10.6
Aroclor 1254 {5}	7	2.5	2.888	15.5	8	5	5.078	1.6	9	25	25.08	0.3
	10	50	47.52	-5.0	11	250	234.4	-6.2	12	500	468.9	-6.2
Aroclor 1260 {1}	1	2.5	3.078	23.1	2	5	5.812	16.2	3	25	24.07	-3.7
	4	50	45.98	-8.0	5	250	218.5	-12.6	6	500	424.9	-15.0
Aroclor 1260 {2}	1	2.5	2.999	20.0	2	5	5.311	6.2	3	25	25.51	2.1
	4	50	48.79	-2.4	5	250	220.5	-11.8	6	500	429.7	-14.1

*Aroclor 1232 @ 500ppb average %D = -16.07 > -20

Initial Calibration - Detailed Report

Calibration ID:	CAL13402	**Instrument ID:**	GC32.i
Method ID:	MJ702	**Column Name:**	DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1260 {3}	1	2.5	2.998	19.9	2	5	5.523	10.5	3	25	25.30	1.2
	4	50	48.01	-4.0	5	250	218.9	-12.5	6	500	424.4	-15.1
Aroclor 1260 {4}	1	2.5	2.983	19.3	2	5	5.575	11.5	3	25	25.24	1.0
	4	50	47.11	-5.8	5	250	219.3	-12.3	6	500	431.4	-13.7
Aroclor 1260 {5}	1	2.5	2.905	16.2	2	5	5.574	11.5	3	25	25.84	3.4
	4	50	48.28	-3.4	5	250	219.5	-12.2	6	500	423.0	-15.4
Aroclor 1262 {1}	13	2.5	2.849	14.0	14	5	5.460	9.2	15	25	25.92	3.7
	16	50	50.63	1.3	17	250	219.0	-12.4	18	500	421.4	-15.7
Aroclor 1262 {2}	13	2.5	2.795	11.8	14	5	5.436	8.7	15	25	25.85	3.4
	16	50	51.17	2.3	17	250	223.3	-10.7	18	500	421.9	-15.6
Aroclor 1262 {3}	13	2.5	2.875	15.0	14	5	5.546	10.9	15	25	25.23	0.9
	16	50	49.92	-0.2	17	250	221.4	-11.4	18	500	423.8	-15.2
Aroclor 1262 {4}	13	2.5	2.952	18.1	14	5	5.351	7.0	15	25	25.73	2.9
	16	50	50.86	1.7	17	250	220.3	-11.9	18	500	410.8	-17.8
Aroclor 1262 {5}	13	2.5	2.770	10.8	14	5	5.698	14.0	15	25	25.68	2.7
	16	50	51.34	2.7	17	250	220.2	-11.9	18	500	409.0	-18.2
Aroclor 1268 {1}	19	2.5	2.970	18.8	20	5	5.689	13.8	21	25	25.21	0.8
	22	50	48.46	-3.1	23	250	214.3	-14.3	24	500	419.7	-16.1
Aroclor 1268 {2}	19	2.5	3.095	23.8	20	5	5.677	13.5	21	25	24.88	-0.5
	22	50	47.68	-4.6	23	250	212.1	-15.2	24	500	414.6	-17.1
Aroclor 1268 {3}	19	2.5	2.848	13.9	20	5	5.772	15.4	21	25	25.31	1.2
	22	50	48.96	-2.1	23	250	216.7	-13.3	24	500	424.0	-15.2
Aroclor 1268 {4}	19	2.5	2.897	15.9	20	5	5.702	14.0	21	25	24.82	-0.7
	22	50	47.71	-4.6	23	250	219.2	-12.3	24	500	438.4	-12.3

Second Source Calibration Verification Summary

CalibrationID: CAL13402 **Units:** ppb

Method ID: MJ702 **Column:** DB-35MS

DataFile Location: \\ALKLSWS002\INSTDATA\GC32\DATA\062414CAL.B\0624F1

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1016	251058	NA	20				100.00	91.8	-8.2
Aroclor 1016 {1}	251058	AverageRF	100	1.2E+4	1.2E+4	0.2	100.00	100.2	
Aroclor 1016 {2}	251058	AverageRF	100	1.1E+4	1.0E+4	-7.6	100.00	92.4	
Aroclor 1016 {3}	251058	AverageRF	100	3.1E+4	2.6E+4	-16.6	100.00	83.4	
Aroclor 1016 {4}	251058	AverageRF	100	2.1E+4	1.9E+4	-7.8	100.00	92.2	
Aroclor 1016 {5}	251058	AverageRF	100	1.7E+4	1.6E+4	-8.9	100.00	91.1	
Aroclor 1221	251060	NA	20				100.00	91.4	-8.6
Aroclor 1221 {1}	251060	AverageRF	100	8.0E+3	7.4E+3	-7.5	100.00	92.5	
Aroclor 1221 {2}	251060	AverageRF	100	5.1E+3	4.9E+3	-2.8	100.00	97.2	
Aroclor 1221 {3}	251060	AverageRF	100	2.0E+4	1.7E+4	-15.5	100.00	84.5	
Aroclor 1232	251062	NA	20				100.00	89.4	-10.6
Aroclor 1232 {1}	251062	AverageRF	100	5.2E+3	4.4E+3	-14.9	100.00	85.1	
Aroclor 1232 {2}	251062	AverageRF	100	1.6E+4	1.4E+4	-13.3	100.00	86.7	
Aroclor 1232 {3}	251062	AverageRF	100	1.5E+4	1.4E+4	-8.5	100.00	91.5	
Aroclor 1232 {4}	251062	AverageRF	100	5.9E+3	5.2E+3	-11.4	100.00	88.6	
Aroclor 1232 {5}	251062	AverageRF	100	9.4E+3	8.9E+3	-4.8	100.00	95.2	
Aroclor 1242	251064	NA	20				100.00	90.4	-9.6
Aroclor 1242 {1}	251064	AverageRF	100	1.1E+4	9.9E+3	-8.3	100.00	91.7	
Aroclor 1242 {2}	251064	AverageRF	100	9.4E+3	8.5E+3	-9.6	100.00	90.4	
Aroclor 1242 {3}	251064	AverageRF	100	2.4E+4	2.2E+4	-9.2	100.00	90.8	
Aroclor 1242 {4}	251064	AverageRF	100	1.6E+4	1.5E+4	-7.4	100.00	92.6	
Aroclor 1242 {5}	251064	AverageRF	100	1.1E+4	9.1E+3	-13.7	100.00	86.3	
Aroclor 1248	251066	NA	20				100.00	96.7	-3.3
Aroclor 1248 {1}	251066	AverageRF	100	1.3E+4	1.3E+4	-2.5	100.00	97.5	
Aroclor 1248 {2}	251066	AverageRF	100	9.2E+3	1.0E+4	7.9	100.00	107.9	
Aroclor 1248 {3}	251066	AverageRF	100	1.3E+4	1.2E+4	-7.5	100.00	92.5	
Aroclor 1248 {4}	251066	AverageRF	100	1.7E+4	1.6E+4	-7.0	100.00	93.0	
Aroclor 1248 {5}	251066	AverageRF	100	1.1E+4	1.1E+4	-7.2	100.00	92.8	
Aroclor 1254	251068	NA	20				100.00	90.5	-9.5
Aroclor 1254 {1}	251068	AverageRF	100	1.2E+4	1.1E+4	-8.6	100.00	91.4	
Aroclor 1254 {2}	251068	AverageRF	100	2.1E+4	1.9E+4	-10.0	100.00	90.0	
Aroclor 1254 {3}	251068	AverageRF	100	4.3E+4	3.6E+4	-15.5	100.00	84.5	
Aroclor 1254 {4}	251068	AverageRF	100	2.4E+4	2.2E+4	-10.5	100.00	89.5	
Aroclor 1254 {5}	251068	AverageRF	100	1.4E+4	1.4E+4	-2.7	100.00	97.3	
Aroclor 1260	251070	NA	20				100.00	106.6	6.6
Aroclor 1260 {1}	251070	AverageRF	100	1.3E+4	1.3E+4	-2.6	100.00	97.4	
Aroclor 1260 {2}	251070	AverageRF	100	2.2E+4	2.5E+4	13.9	100.00	113.9	
Aroclor 1260 {3}	251070	AverageRF	100	2.2E+4	2.5E+4	10.7	100.00	110.7	
Aroclor 1260 {4}	251070	AverageRF	100	4.8E+4	5.1E+4	6.3	100.00	106.3	
Aroclor 1260 {5}	251070	AverageRF	100	3.8E+4	4.0E+4	5.0	100.00	105.0	
Aroclor 1262	251072	NA	20				100.00	94.7	-5.3
Aroclor 1262 {1}	251072	AverageRF	100	3.7E+4	3.4E+4	-7.4	100.00	92.6	
Aroclor 1262 {2}	251072	AverageRF	100	3.3E+4	3.0E+4	-7.8	100.00	92.2	
Aroclor 1262 {3}	251072	AverageRF	100	6.1E+4	5.7E+4	-6.1	100.00	93.9	
Aroclor 1262 {4}	251072	AverageRF	100	4.8E+4	4.5E+4	-6.8	100.00	93.2	
Aroclor 1262 {5}	251072	AverageRF	100	2.2E+4	2.3E+4	1.7	100.00	101.7	
Aroclor 1268	251074	NA	20				100.00	90.3	-9.7

Second Source Calibration Verification Summary

CalibrationID: CAL13402

Method ID: MJ702

DataFile Location: \\ALKLSWS002\INSTDATA\GC32\DATA\062414CAL.B\0624F1

Units: ppb

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	251074	AverageRF	100	8.2E+4	7.6E+4	-7.2	100.00	92.8	
Aroclor 1268 {2}	251074	AverageRF	100	7.4E+4	7.6E+4	3.2	100.00	103.2	
Aroclor 1268 {3}	251074	AverageRF	100	6.6E+4	5.6E+4	-15.1	100.00	84.9	
Aroclor 1268 {4}	251074	AverageRF	100	1.9E+5	1.5E+5	-19.6	100.00	80.4	

Second Source Calibration Verification Summary

CalibrationID: CAL13402 **Units:** ppb

Method ID: MJ702 **Column:** DB-XLB

DataFile Location: \\ALKLSWS002\INSTDATA\GC32\DATA\062414CAL_R.B\062

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1016	251059	NA	20				100.00	94.7	-5.3
Aroclor 1016 {1}	251059	AverageRF	100	2.1E+4	2.1E+4	-0.4	100.00	99.6	
Aroclor 1016 {2}	251059	AverageRF	100	3.2E+4	3.0E+4	-6.5	100.00	93.5	
Aroclor 1016 {3}	251059	AverageRF	100	3.1E+4	3.0E+4	-5.5	100.00	94.5	
Aroclor 1016 {4}	251059	AverageRF	100	2.6E+4	2.3E+4	-8.8	100.00	91.2	
Aroclor 1016 {5}	251059	AverageRF	100	2.4E+4	2.3E+4	-5.3	100.00	94.7	
Aroclor 1221	251061	NA	20				100.00	100.9	0.9
Aroclor 1221 {1}	251061	AverageRF	100	8.5E+3	8.6E+3	1.6	100.00	101.6	
Aroclor 1221 {2}	251061	AverageRF	100	7.9E+3	8.1E+3	3.1	100.00	103.1	
Aroclor 1221 {3}	251061	AverageRF	100	2.9E+4	2.8E+4	-2.2	100.00	97.8	
Aroclor 1232	251063	NA	20				100.00	89.0	-11.0
Aroclor 1232 {1}	251063	AverageRF	100	2.6E+4	2.2E+4	-14.1	100.00	85.9	
Aroclor 1232 {2}	251063	AverageRF	100	1.5E+4	1.3E+4	-12.7	100.00	87.3	
Aroclor 1232 {3}	251063	AverageRF	100	1.1E+4	1.0E+4	-5.7	100.00	94.3	
Aroclor 1232 {4}	251063	AverageRF	100	1.9E+4	1.7E+4	-10.3	100.00	89.7	
Aroclor 1232 {5}	251063	AverageRF	100	2.3E+4	2.0E+4	-12.3	100.00	87.7	
Aroclor 1242	251065	NA	20				100.00	93.2	-6.8
Aroclor 1242 {1}	251065	AverageRF	100	1.7E+4	1.7E+4	-5.0	100.00	95.0	
Aroclor 1242 {2}	251065	AverageRF	100	2.6E+4	2.4E+4	-10.6	100.00	89.4	
Aroclor 1242 {3}	251065	AverageRF	100	3.2E+4	3.1E+4	-3.6	100.00	96.4	
Aroclor 1242 {4}	251065	AverageRF	100	3.9E+4	3.5E+4	-9.6	100.00	90.4	
Aroclor 1242 {5}	251065	AverageRF	100	2.0E+4	1.9E+4	-5.3	100.00	94.7	
Aroclor 1248	251067	NA	20				100.00	89.9	-10.1
Aroclor 1248 {1}	251067	AverageRF	100	1.5E+4	1.5E+4	-5.1	100.00	94.9	
Aroclor 1248 {2}	251067	AverageRF	100	2.5E+4	2.3E+4	-8.0	100.00	92.0	
Aroclor 1248 {3}	251067	AverageRF	100	3.1E+4	2.7E+4	-11.4	100.00	88.6	
Aroclor 1248 {4}	251067	AverageRF	100	2.3E+4	2.1E+4	-10.6	100.00	89.4	
Aroclor 1248 {5}	251067	AverageRF	100	3.4E+4	2.9E+4	-15.7	100.00	84.3	
Aroclor 1254	251069	NA	20				100.00	88.6	-11.4
Aroclor 1254 {1}	251069	AverageRF	100	4.4E+4	3.8E+4	-13.3	100.00	86.7	
Aroclor 1254 {2}	251069	AverageRF	100	1.9E+4	1.6E+4	-13.9	100.00	86.1	
Aroclor 1254 {3}	251069	AverageRF	100	6.1E+4	5.4E+4	-11.5	100.00	88.5	
Aroclor 1254 {4}	251069	AverageRF	100	2.3E+4	2.1E+4	-11.0	100.00	89.0	
Aroclor 1254 {5}	251069	AverageRF	100	2.7E+4	2.5E+4	-7.4	100.00	92.6	
Aroclor 1260	251071	NA	20				100.00	108.4	8.4
Aroclor 1260 {1}	251071	AverageRF	100	2.4E+4	2.2E+4	-5.4	100.00	94.6	
Aroclor 1260 {2}	251071	AverageRF	100	3.2E+4	3.6E+4	14.3	100.00	114.3	
Aroclor 1260 {3}	251071	AverageRF	100	3.2E+4	3.8E+4	16.0	100.00	116.0	
Aroclor 1260 {4}	251071	AverageRF	100	7.1E+4	8.2E+4	15.1	100.00	115.1	
Aroclor 1260 {5}	251071	AverageRF	100	4.7E+4	4.8E+4	2.0	100.00	102.0	
Aroclor 1262	251073	NA	20				100.00	94.2	-5.8
Aroclor 1262 {1}	251073	AverageRF	100	5.4E+4	5.2E+4	-4.3	100.00	95.7	
Aroclor 1262 {2}	251073	AverageRF	100	4.1E+4	3.8E+4	-7.9	100.00	92.1	
Aroclor 1262 {3}	251073	AverageRF	100	8.9E+4	8.5E+4	-4.9	100.00	95.1	
Aroclor 1262 {4}	251073	AverageRF	100	6.3E+4	5.8E+4	-7.8	100.00	92.2	
Aroclor 1262 {5}	251073	AverageRF	100	3.3E+4	3.2E+4	-3.9	100.00	96.1	
Aroclor 1268	251075	NA	20				100.00	89.8	-10.2

Second Source Calibration Verification Summary

CalibrationID: CAL13402 **Units:** ppb

Method ID: MJ702 **Column:** DB-XLB

DataFile Location: \\ALKLSWS002\INSTDATA\GC32\DATA\062414CAL_R.B\062

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	251075	AverageRF	100	1.2E+5	1.1E+5	-7.1	100.00	92.9	
Aroclor 1268 {2}	251075	AverageRF	100	1.1E+5	1.1E+5	1.9	100.00	101.9	
Aroclor 1268 {3}	251075	AverageRF	100	9.2E+4	7.7E+4	-16.0	100.00	84.0	
Aroclor 1268 {4}	251075	AverageRF	100	2.7E+5	2.1E+5	-19.6	100.00	80.4	

Report Date : 25-Jun-2014 21:37

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2014 04:37
End Cal Date : 25-JUN-2014 14:47
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Cal Date : 25-Jun-2014 21:30 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D
Level 2: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D
Level 3: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D
Level 4: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D
Level 5: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D
Level 6: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D

Compound	2.500 Level 1	5.000 Level 2	25.000 Level 3	50.000 Level 4	250.000 Level 5	500.000 Level 6	RRF	% RSD
2 Aroclor 1016(1)	13488	12531	13089	12856	11357	11067	12398	7.859
(2)	12374	11732	12053	11571	10217	9697	11274	9.489
(3)	32792	33420	32616	30310	28607	26438	30697	8.998
(4)	22487	20981	21325	20779	18839	18787	20533	7.099
(5)	20411	17485	17982	17277	15726	15558	17406	10.154
3 Aroclor 1221(1)	8429	8630	8144	7828	6761	+++++	7958	9.227
(2)	5350	5280	5234	5119	4463	+++++	5089	7.068
(3)	24610	23450	19513	18170	15490	+++++	20247	18.607
4 Aroclor 1232(1)	5618	4728	5256	5478	5001	4838	5153	6.920
(2)	16062	16467	16761	16909	14025	13497	15620	9.463
(3)	16272	15041	15855	15910	13211	12547	14806	10.537
(4)	6869	6419	5767	5896	5180	4992	5854	12.217
(5)	8562	9343	9970	10259	9177	8885	9366	6.878
5 Aroclor 1242(1)	11536	11727	11595	11234	9593	9060	10791	10.731
(2)	11106	9681	10095	9519	8216	7671	9382	13.378
(3)	27030	26485	24314	23752	21907	20779	24045	10.231
(4)	17335	17436	17431	17124	14878	14397	16433	8.542
(5)	12966	12614	10093	10001	8851	8507	10506	17.888
6 Aroclor 1248(1)	13736	13991	15036	12887	11958	12936	13424	7.949
(2)	8544	9219	10095	9716	9094	8737	9234	6.347
(3)	13598	12885	13899	12851	11638	11535	12735	7.678
(4)	19274	16953	17793	17168	16344	15952	17247	6.855
(5)	11455	11578	12075	11798	11101	10721	11455	4.246
7 Aroclor 1254(1)	12112	13541	12834	12253	11234	11030	12167	7.803
(2)	22630	21946	22116	21075	19557	19936	21210	5.871
(3)	47666	47448	44666	41779	38085	39136	43130	9.549
(4)	25164	26236	26632	24742	21366	21308	24242	9.704
(5)	13116	13966	14969	14544	13905	13654	14026	4.666

Report Date : 25-Jun-2014 21:37

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2014 04:37
End Cal Date : 25-JUN-2014 14:47
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Cal Date : 25-Jun-2014 21:30 tuser
Curve Type : Average

Compound	2.500 Level 1	5.000 Level 2	25.000 Level 3	50.000 Level 4	250.000 Level 5	500.000 Level 6	RRF	% RSD
8 Aroclor 1260(1)	14019	13297	13341	13307	12503	12451	13153	4.492
(2)	26090	22955	22472	21396	19096	18602	21768	12.645
(3)	24732	23398	23624	22595	20134	19486	22328	9.302
(4)	57682	53512	49528	46155	42047	41703	48438	13.181
(5)	47032	40913	39281	36934	32855	32207	38204	14.462
9 Aroclor 1262(1)	41408	40895	38998	38422	31805	30585	37019	12.598
(2)	36040	35271	35006	34972	28942	27166	32899	11.595
(3)	69728	68432	61833	60746	53235	50654	60771	12.729
(4)	53820	53224	49530	49740	41732	38894	47824	12.840
(5)	22874	22954	23495	24084	20480	19018	22151	8.874
10 Aroclor 1268(1)	94372	95480	84959	79993	70759	68353	82319	13.952
(2)	84102	84461	76221	71894	63953	61798	73738	13.152
(3)	71830	74176	68867	65006	58521	56740	65857	10.771
(4)	216888	216192	186713	178431	168629	165308	188693	12.108
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	723064	702722	646310	633482	624289	653597	663911	5.994
$ 11 Decachlorobiphenyl	652724	604850	553632	514075	445842	433886	534168	16.254

Report Date : 26-Jun-2014 00:29

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2014 04:37
End Cal Date : 25-JUN-2014 14:47
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Cal Date : 26-Jun-2014 00:28 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D
Level 2: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D
Level 3: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D
Level 4: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D
Level 5: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D
Level 6: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D

Compound	2.500 Level 1	5.000 Level 2	25.000 Level 3	50.000 Level 4	250.000 Level 5	500.000 Level 6	RRF	% RSD
2 Aroclor 1016(1)	22264	23063	22551	21649	19714	18748	21331	8.051
(2)	39599	36753	32655	30638	27518	26358	32254	16.060
(3)	33946	33317	32335	31178	29107	27937	31303	7.597
(4)	30019	28022	26143	24806	22933	21968	25648	11.904
(5)	27885	25674	24686	23794	22322	21580	24323	9.457
3 Aroclor 1221(1)	9473	9191	8805	8255	7487	7535	8458	9.926
(2)	8359	8345	8375	7870	7223	6970	7857	7.945
(3)	33165	30980	29122	27379	25734	25363	28624	10.706
4 Aroclor 1232(1)	27494	27338	27140	27634	23811	21602	25836	9.786
(2)	17080	17502	15711	16175	13482	12201	15358	13.608
(3)	10906	11908	11393	11487	9554	9079	10721	10.670
(4)	21157	21202	19212	19498	17625	15945	19106	10.712
(5)	25841	24051	23093	23046	20806	20272	22852	9.034
5 Aroclor 1242(1)	17298	19277	18230	18346	15968	15400	17420	8.579
(2)	31037	30784	26789	25861	22214	21478	26360	15.448
(3)	33133	35637	32658	31431	28588	28728	31696	8.590
(4)	43176	41593	37914	38288	35906	35128	38668	8.158
(5)	19817	23866	20705	20500	19137	18802	20471	8.895
6 Aroclor 1248(1)	19121	17605	15363	14664	13294	12818	15478	15.910
(2)	28358	27280	25563	24643	23469	23026	25390	8.308
(3)	34706	32583	31582	29487	27528	27436	30554	9.533
(4)	25784	24356	23741	22590	22126	22065	23444	6.259
(5)	41156	35510	33730	32467	31171	31309	34224	11.000
7 Aroclor 1254(1)	51831	48285	44097	41419	38521	39373	43921	11.950
(2)	21416	19140	19455	18161	17676	17440	18881	7.809
(3)	69226	66115	62038	57959	55662	56841	61307	8.915
(4)	29040	23044	23440	21861	20569	20664	23103	13.588
(5)	31048	27295	26961	25539	25199	25203	26874	8.318

Report Date : 26-Jun-2014 00:29

ALS Environmental-Kelso

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2014 04:37
End Cal Date : 25-JUN-2014 14:47
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Cal Date : 26-Jun-2014 00:28 tuser
Curve Type : Average

Compound	2.500 Level 1	5.000 Level 2	25.000 Level 3	50.000 Level 4	250.000 Level 5	500.000 Level 6	RRF	% RSD
8 Aroclor 1260(1)	29177	27544	22814	21790	20707	20136	23695	15.889
(2)	38183	33807	32479	31057	28075	27351	31825	12.525
(3)	38893	35826	32817	31139	28393	27527	32432	13.472
(4)	84619	79083	71618	66827	62227	61196	70928	13.251
(5)	54249	52049	48262	45085	40984	39501	46688	12.677
9 Aroclor 1262(1)	61569	59001	56016	54706	47332	45537	54027	11.792
(2)	46100	44828	42636	42191	36827	34789	41228	10.871
(3)	102491	98865	89939	88996	78939	75552	89130	11.897
(4)	74604	67619	65017	64269	55680	51909	63183	13.014
(5)	37078	38138	34372	34361	29475	27379	33467	12.640
10 Aroclor 1268(1)	141607	135623	120189	115533	102203	100068	119204	14.242
(2)	131441	120522	105637	101243	90074	88034	106158	16.081
(3)	105152	106547	93418	90375	79995	78263	92292	13.016
(4)	309074	304172	264804	254494	233857	233848	266708	12.447
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1409504	1262450	1156300	1126181	1161064	1162052	1212925	8.811
$ 11 Decachlorobiphenyl	982004	879802	769006	711151	616188	+++++	791630	18.063

Front	TCMX	1016	1221	1232	1242	1248	1254	1260	1262	1268	2,4'/4,4'-DDx
	3.915	4.292	4.145	4.145	4.288	5.004	**6.361**	**7.795**	8.235	9.921	6.290
		4.815	**4.231**	4.295	4.814	5.114	6.805	8.235	8.795	10.048	6.723
		5.015	4.295	**4.599**	5.014	5.384	6.961	8.795	9.259	10.551	7.040
		5.112		4.819	5.107	**5.784**	7.305	9.258	10.055	**11.878**	7.503
		5.595		5.115	**5.248**	5.984	7.925	10.055	**11.202**		7.670
											8.166

Rear	TCMX	1016	1221	1232	1242	1248	1254	1260	1262	1268	2,4'/4,4'-DDx
	4.645	4.958	**4.804**	4.962	4.957	5.334	**7.254**	**8.451**	9.958	11.797	7.489
		5.331	4.874	5.335	5.327	5.950	7.304	9.958	10.425	**11.964**	8.119
		6.031	4.961	**5.558**	5.944	6.400	7.634	10.428	11.118	12.467	8.293
		6.398		5.952	5.987	**6.874**	8.644	11.121	11.795	13.871	8.876
		6.611		5.995	**6.181**	7.380	9.431	11.778	**13.155**		9.099
											9.723

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F103.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

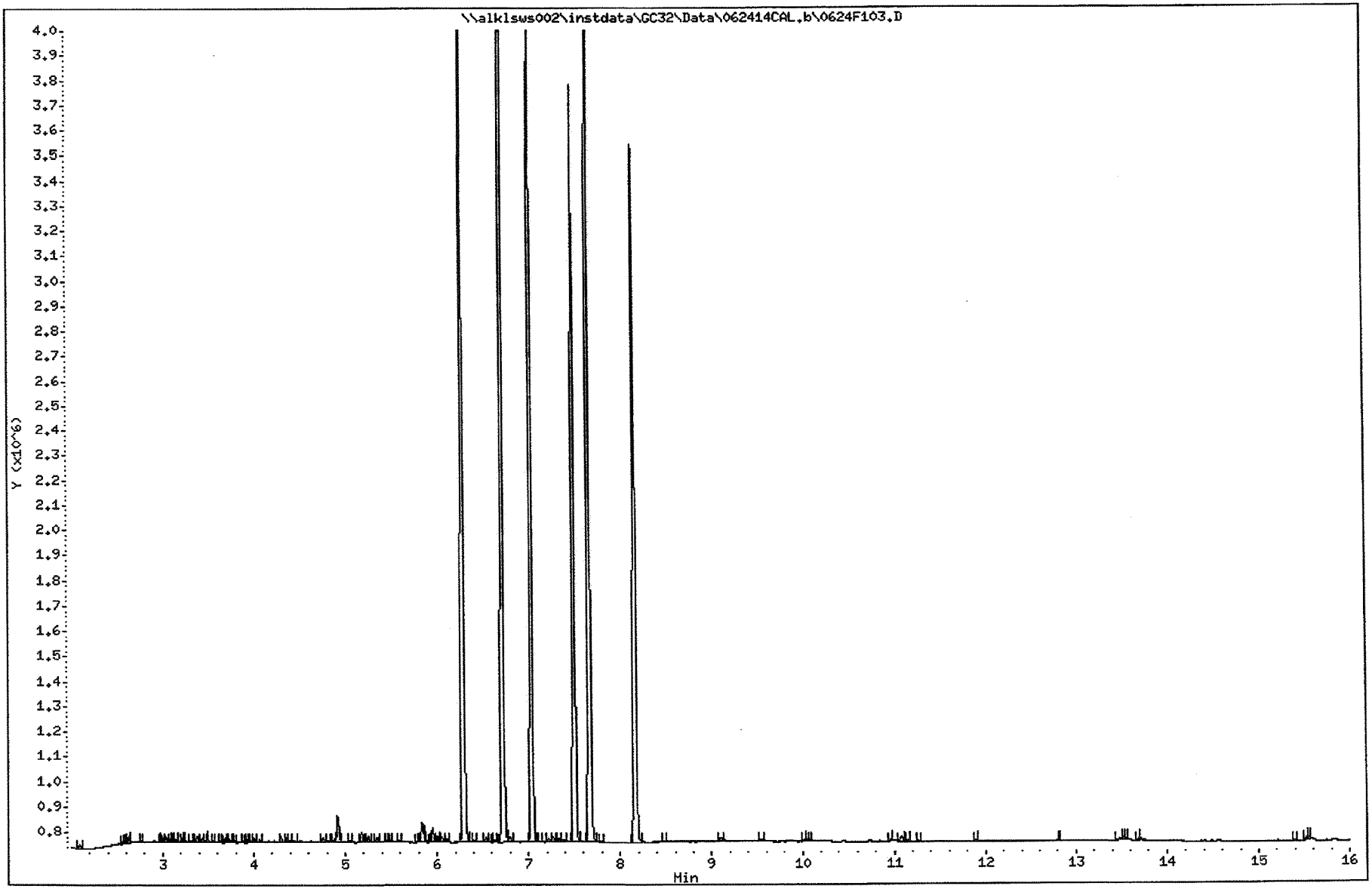
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F103.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F103.D
Inj Date : 25-JUN-2014 03:55
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H @ 10X
Misc Info :
Cal Date : 26-JUN-2014 00:41
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

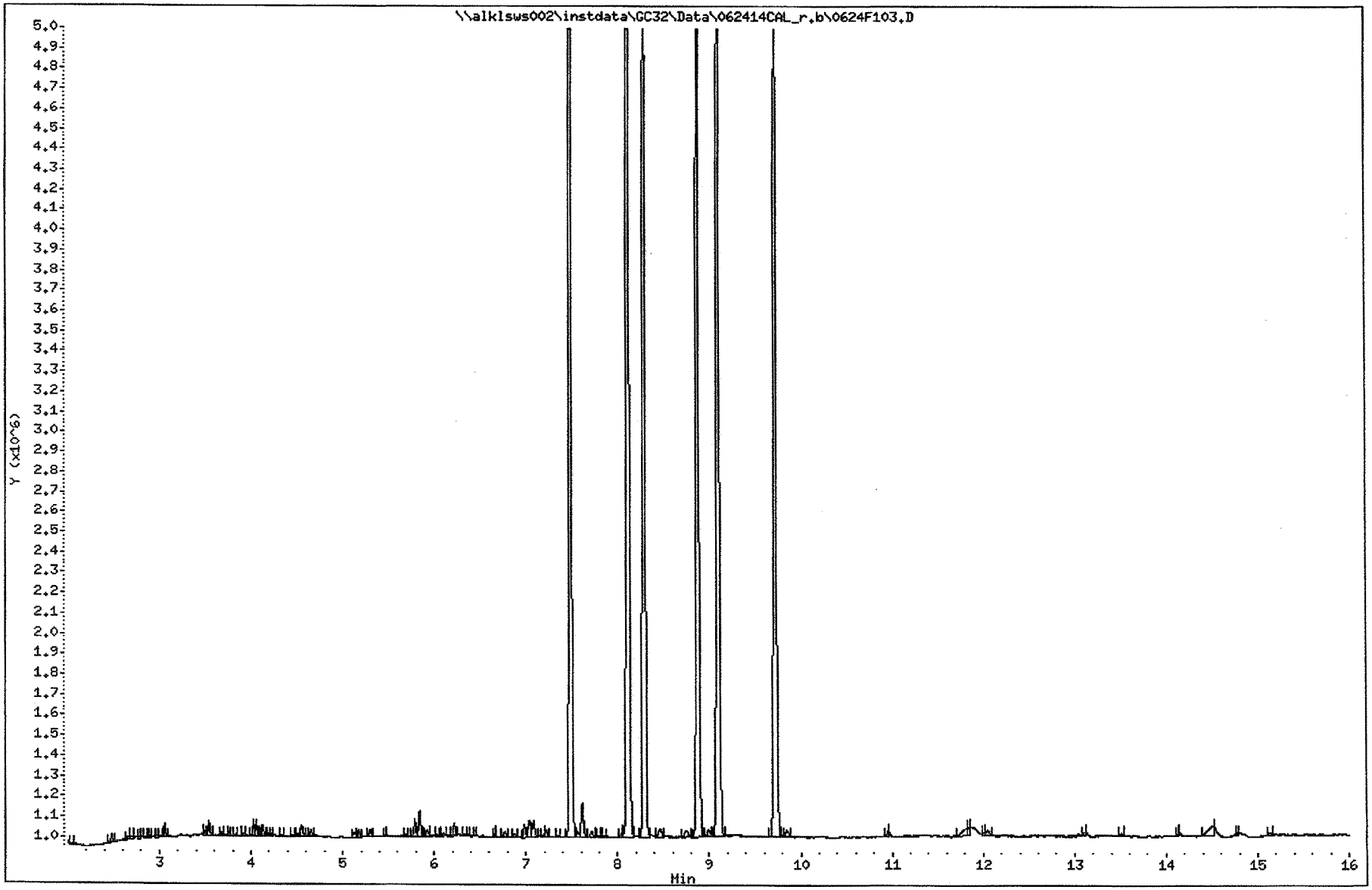
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F103.D
Date : 25-JUN-2014 03:55
Client ID:
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H @ 10X

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F103.D
Date : 25-JUN-2014 03:55
Client ID:
Sample Info: 2,4'/4,4'-DDx MARKER PCB6-27H @ 10X

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F104.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F104.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F104.D
Inj Date : 25-JUN-2014 04:16
Sample Info: IB
Misc Info :
Cal Date : 26-JUN-2014 00:41
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

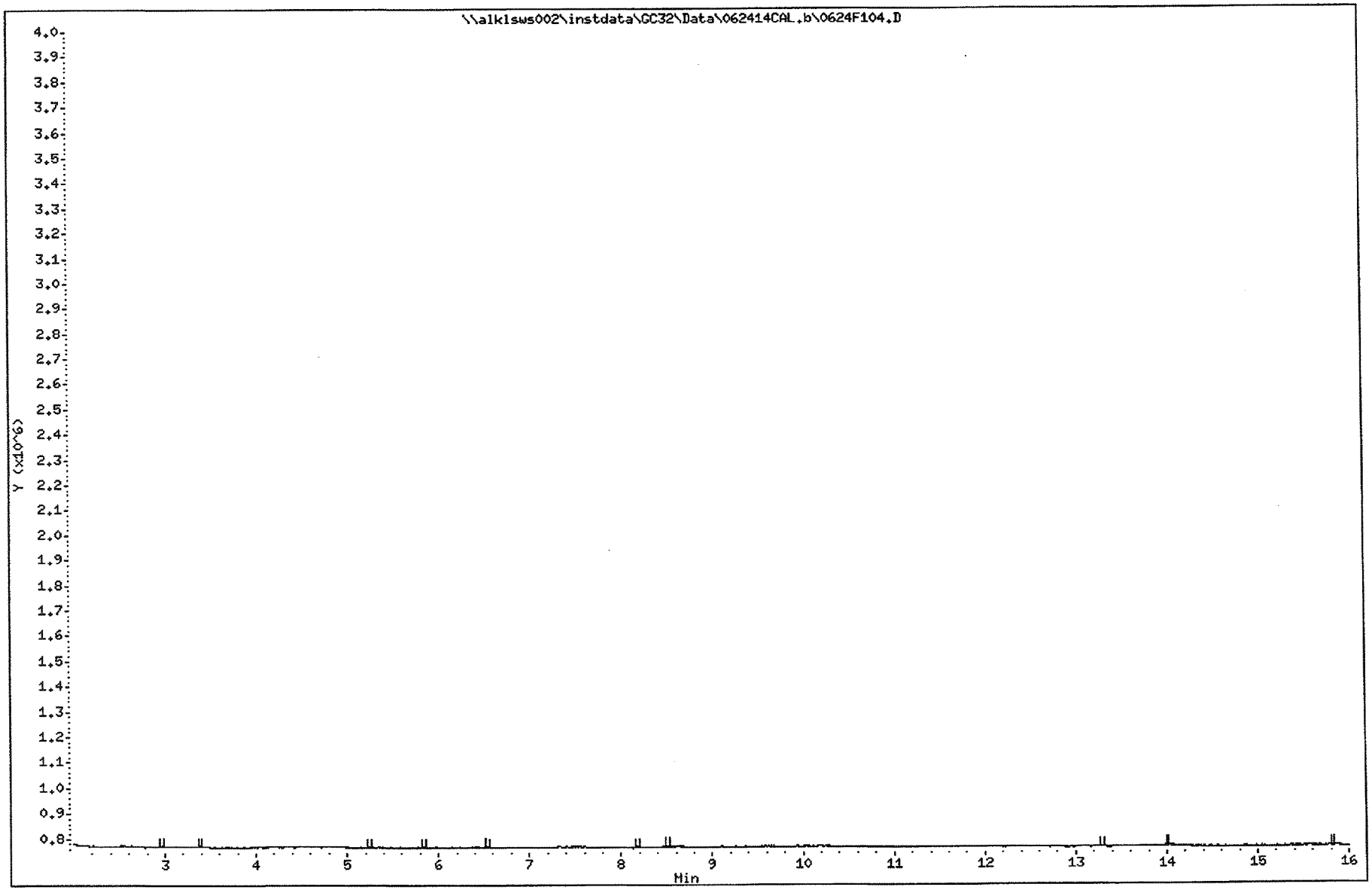
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	0.000	4.651	0	11324	0.000	0.00934		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F104.D
Date : 25-JUN-2014 04:16
Client ID:
Sample Info: IB

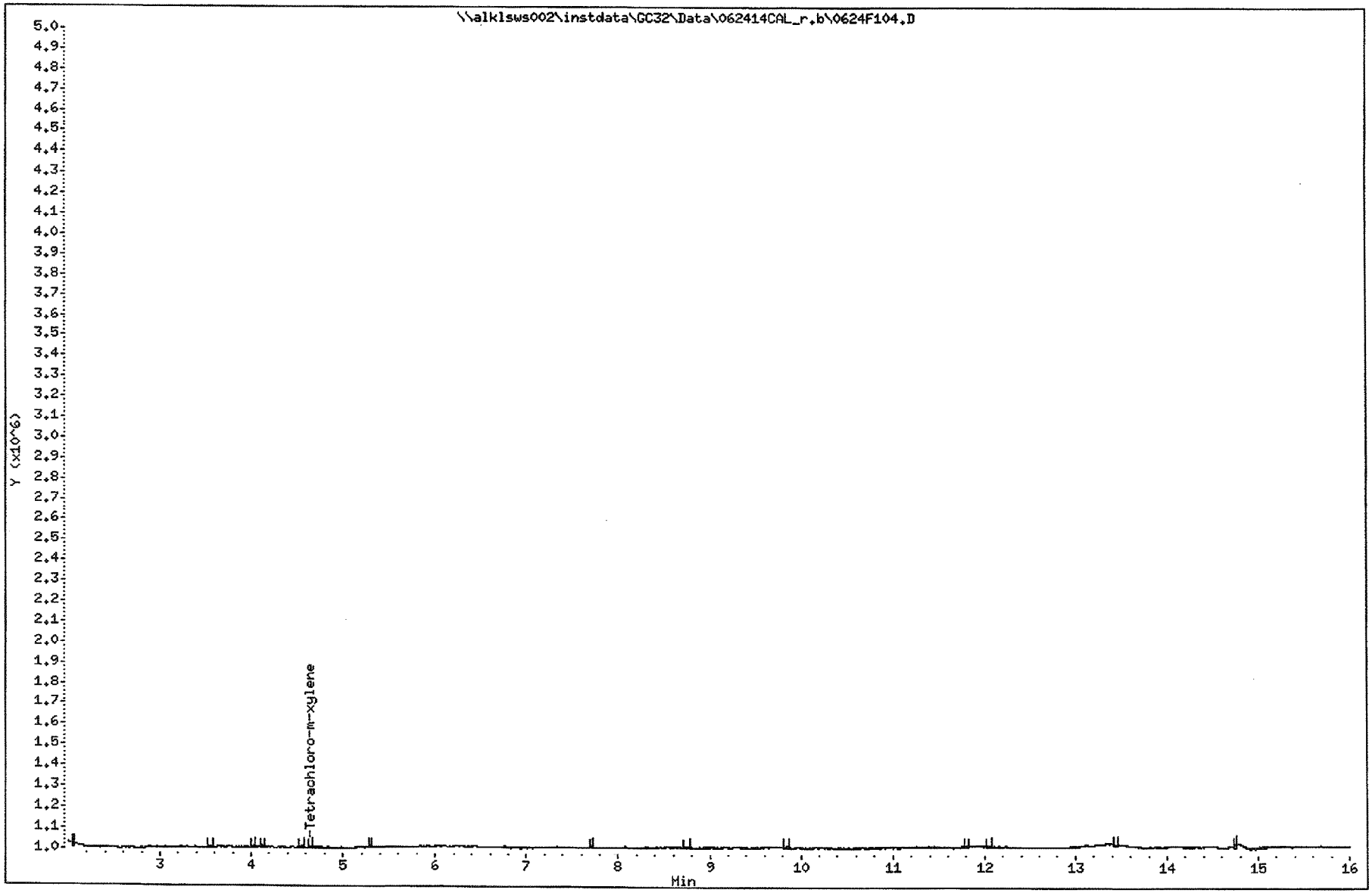
Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F104.D
Date : 25-JUN-2014 04:16
Client ID:
Sample Info: IB

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D
Report Date: 26-Jun-2014 00:46

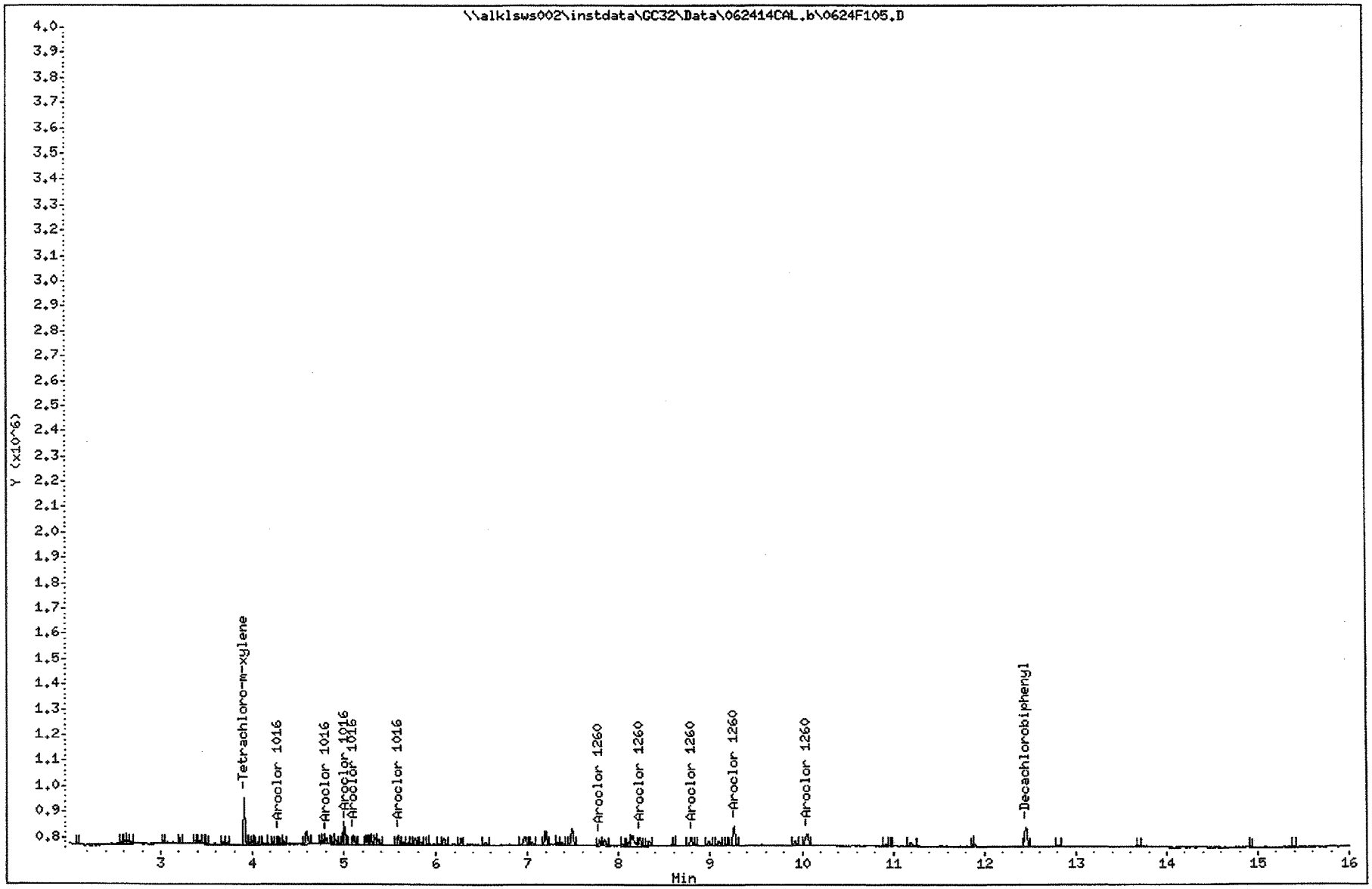
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F105.D
Inj Date : 25-JUN-2014 04:37
Sample Info: 1660 @ 0.25-2.5ppb PCB6-35M
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.912	4.642	180766	352376	0.272	0.291		100.00
Aroclor 1016	4.285	4.952	33720	55661	2.72	2.61	80.00- 120.00	100.00
	4.809	5.325	30936	98998	2.74	3.07	73.40- 110.09	91.74
	5.012	6.028	81981	84865	2.67	2.71	194.50- 291.75	243.12
	5.105	6.395	56217	75047	2.74	2.93	133.37- 200.06	166.72
	5.592	6.605	51027	69713	2.93	2.87	121.06- 181.59	151.33
			Average of Peak Amounts =		2.76	2.84		
Aroclor 1260	7.789	8.452	35048	72943	2.66	3.08	80.00- 120.00	100.00
	8.229	9.955	65225	95458	3.00	3.00	148.88- 223.32	186.10
	8.792	10.425	61830	97232	2.77	3.00	141.13- 211.70	176.42
	9.255	11.122	144205	211548	2.98	2.98	329.16- 493.74	411.45
	10.055	11.772	117581	135623	3.08	2.90	268.39- 402.58	335.49
			Average of Peak Amounts =		2.90	2.99		
Decachlorobiphenyl	12.452	14.445	163181	245501	0.305	0.310		100.00

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F105.D
Date : 25-JUN-2014 04:37
Client ID:
Instrument: GC32.i
Sample Info: 1660 @ 0.25-2.5ppb PCB6-35M
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



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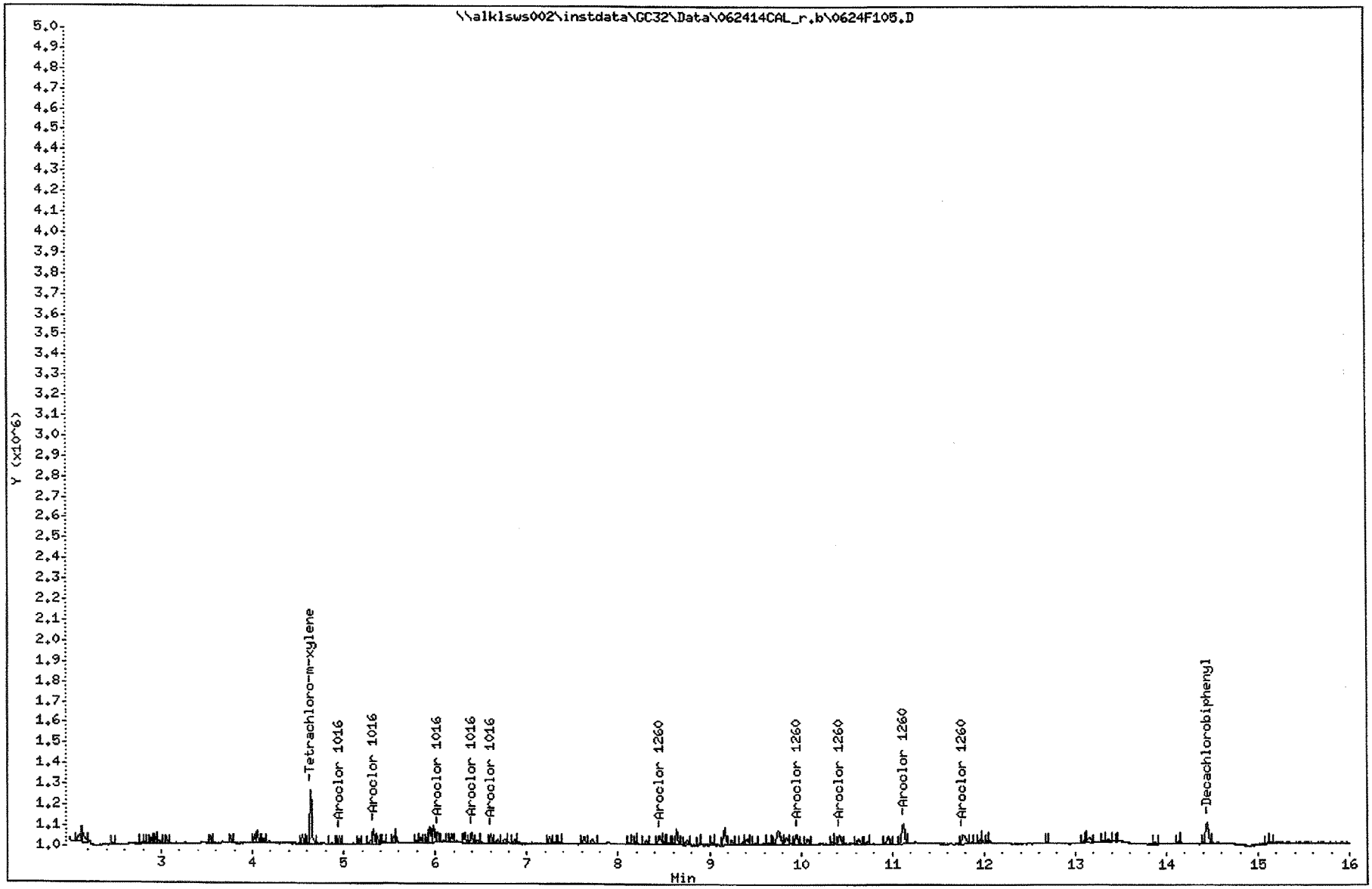
Date : 25-JUN-2014 04:37
Client ID:
Instrument: GC32.i
Sample Info: 1660 @ 0.25-2.5ppb PCB6-35M
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

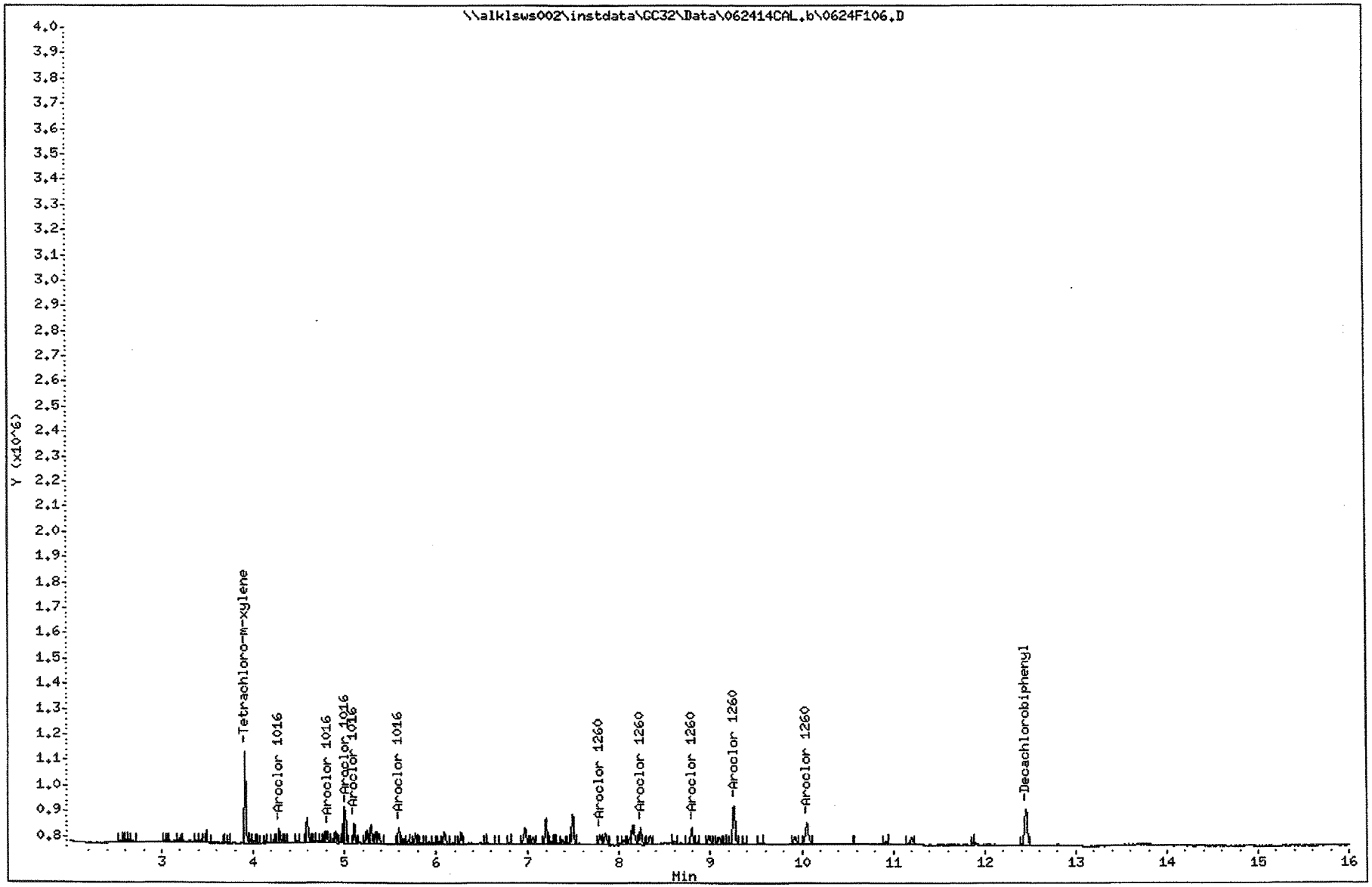
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F106.D
Inj Date : 25-JUN-2014 04:58
Sample Info: 1660 @ 0.50-5.0ppb PCB6-36A
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

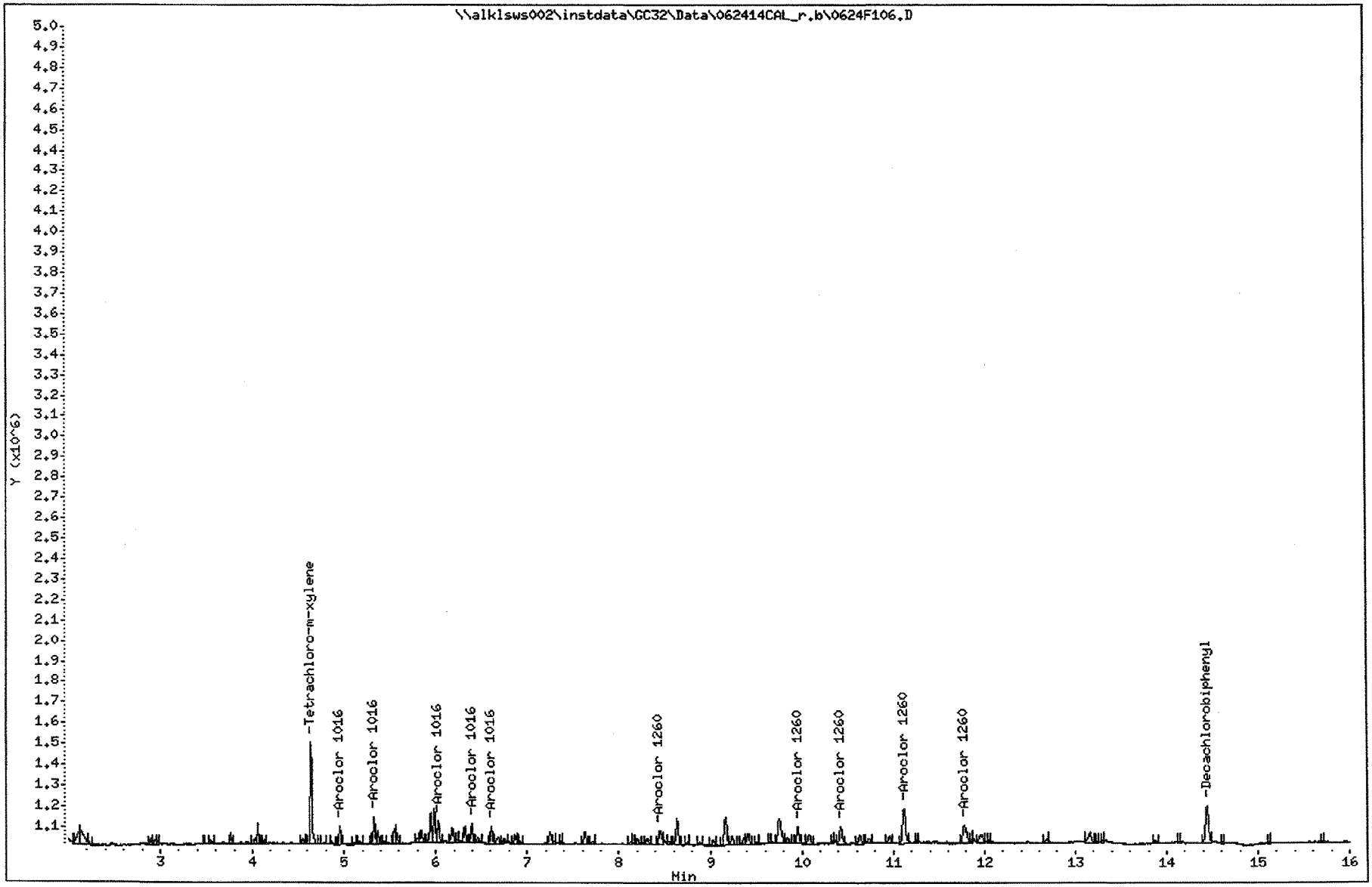
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.912	4.642	351361	631225	0.529	0.520		100.00
Aroclor 1016	4.289	4.955	62653	115313	5.05	5.41	80.00- 120.00	100.00
	4.812	5.328	58660	183764	5.20	5.70	74.90- 112.35	93.63
	5.012	6.028	167102	166583	5.44	5.32	213.37- 320.05	266.71
	5.109	6.395	104905	140109	5.11	5.46	133.95- 200.93	167.44
	5.595	6.608	87423	128369	5.02	5.28	111.63- 167.44	139.54
			Average of Peak Amounts =		5.16	5.43		
Aroclor 1260	7.789	8.448	66487	137721	5.05	5.81	80.00- 120.00	100.00
	8.232	9.955	114773	169033	5.27	5.31	138.10- 207.15	172.62
	8.792	10.425	116990	179128	5.24	5.52	140.77- 211.15	175.96
	9.255	11.118	267561	395414	5.52	5.57	321.94- 482.91	402.43
	10.055	11.778	204563	260245	5.35	5.57	246.14- 369.21	307.67
			Average of Peak Amounts =		5.29	5.56		
Decachlorobiphenyl	12.452	14.445	302425	439901	0.566	0.556		100.00

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F106.D
Date : 25-JUN-2014 04:58
Client ID:
Sample Info: 1660 @ 0.50-5.0ppb PCB6-36A

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F106.D
Date : 25-JUN-2014 04:58
Client ID:
Instrument: GC32.i
Sample Info: 1660 @ 0.50-5.0ppb PCB6-36A
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

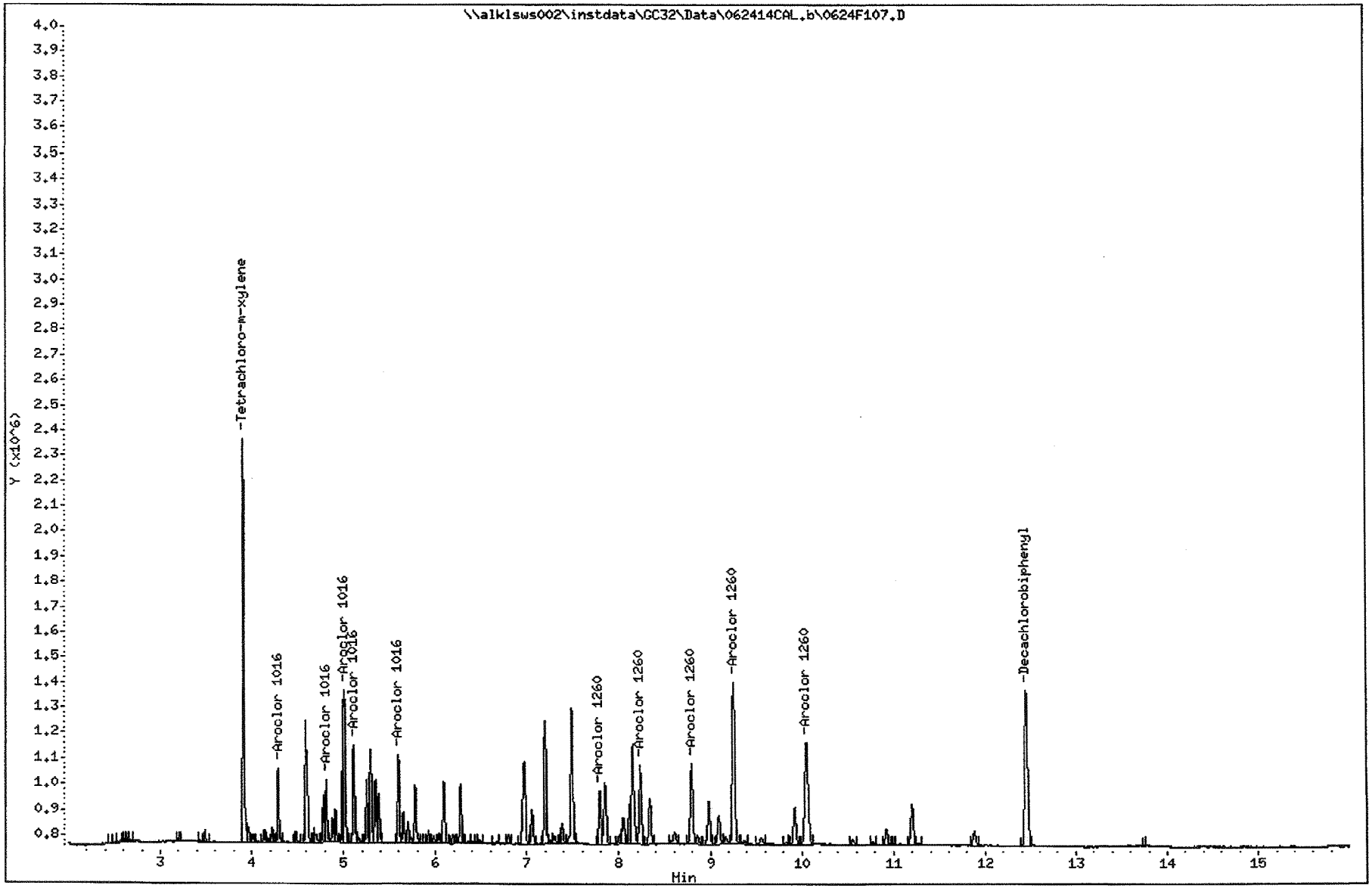
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F107.D
Inj Date : 25-JUN-2014 05:19
Sample Info: 1660 @ 2.5-25ppb PCB6-35L
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

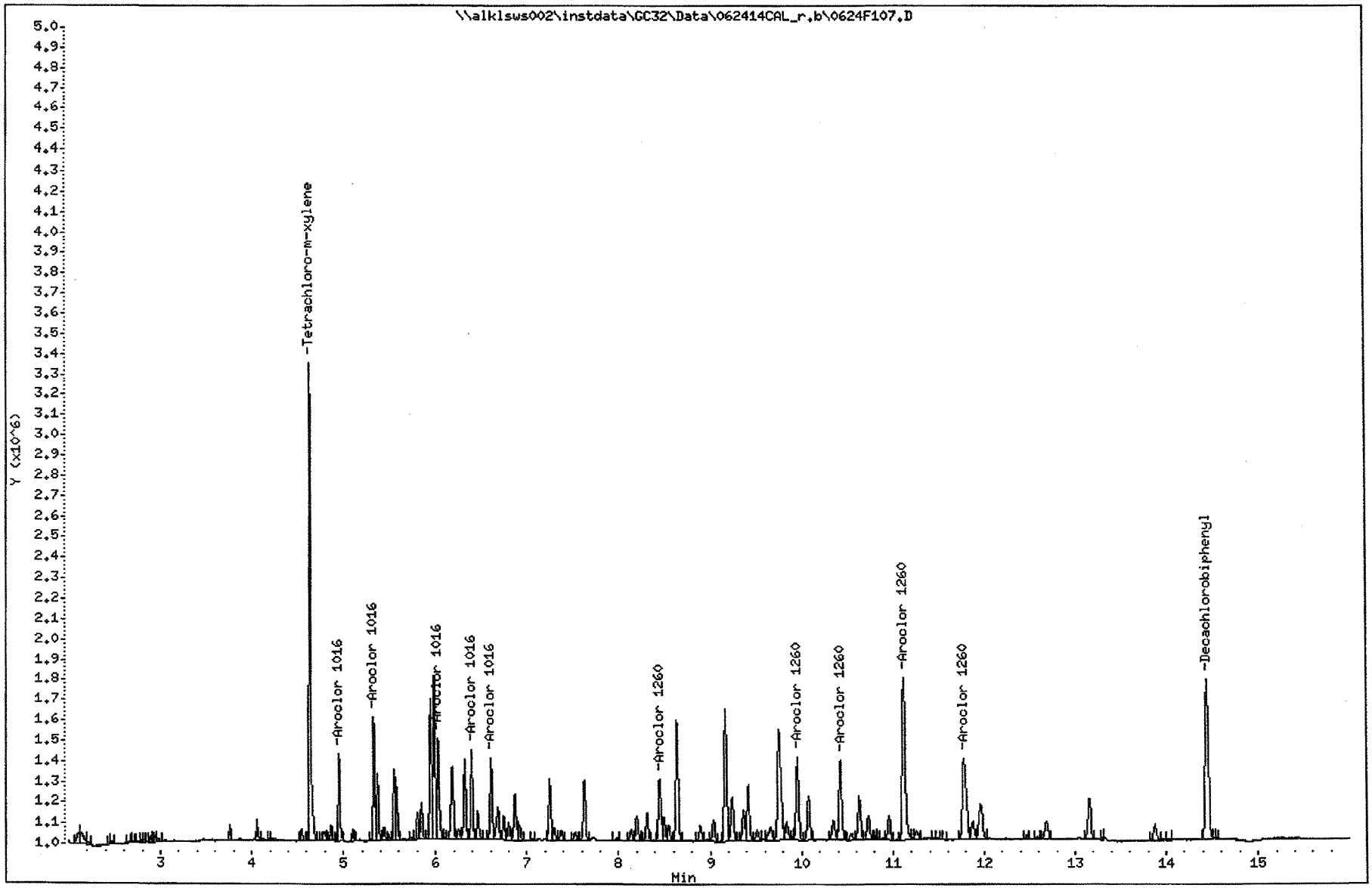
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.644	1615776	2890749	2.43	2.38		100.00
Aroclor 1016	4.291	4.957	327233	563768	26.4	26.4	80.00- 120.00	100.00
	4.814	5.330	301337	816385	26.7	25.3	73.67- 110.50	92.09
	5.014	6.030	815410	808377	26.6	25.8	199.35- 299.02	249.18
	5.111	6.397	533125	653581	26.0	25.5	130.34- 195.50	162.92
	5.597	6.610	449546	617155	25.8	25.4	109.90- 164.85	137.38
			Average of Peak Amounts =		26.3	25.7		
Aroclor 1260	7.791	8.450	333524	570339	25.4	24.1	80.00- 120.00	100.00
	8.234	9.957	561800	811981	25.8	25.5	134.75- 202.13	168.44
	8.794	10.430	590595	820420	26.5	25.3	141.66- 212.49	177.08
	9.257	11.120	1238211	1790449	25.6	25.2	297.00- 445.50	371.25
	10.054	11.777	982035	1206559	25.7	25.8	235.55- 353.33	294.44
			Average of Peak Amounts =		25.8	25.2		
Decachlorobiphenyl	12.454	14.444	1384080	1922515	2.59	2.43		100.00

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F107.D
Date : 25-JUN-2014 05:19
Client ID:
Sample Info: 1660 @ 2.5-25ppb PCB6-35L

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F107.D
Date : 25-JUN-2014 05:19
Client ID:
Instrument: GC32.i
Sample Info: 1660 @ 2.5-25ppb PCB6-35L
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D
Report Date: 26-Jun-2014 00:46

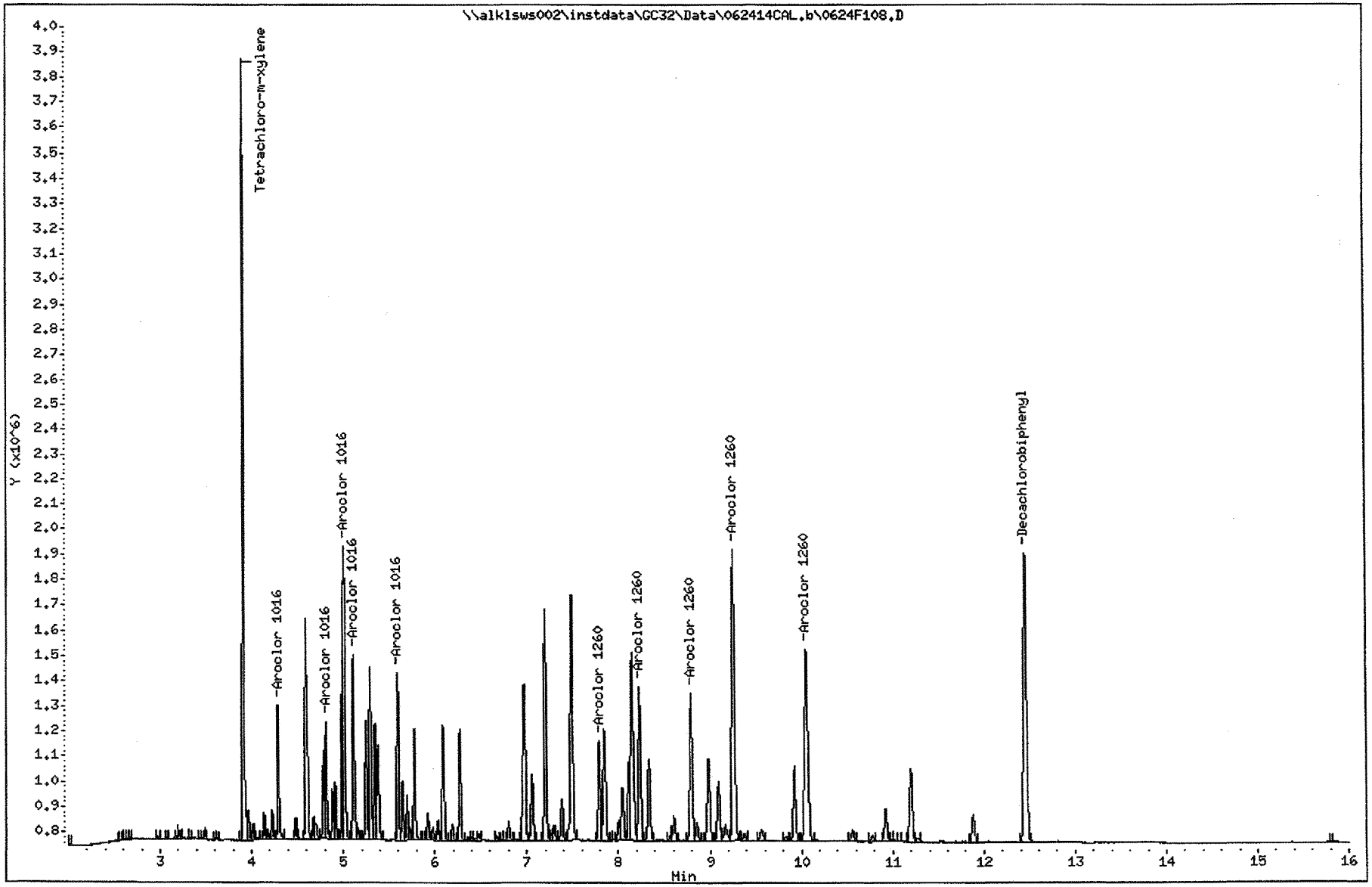
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F108.D
Inj Date : 25-JUN-2014 05:40
Sample Info: 1660 @ 5.0-50ppb PCB6-42K
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

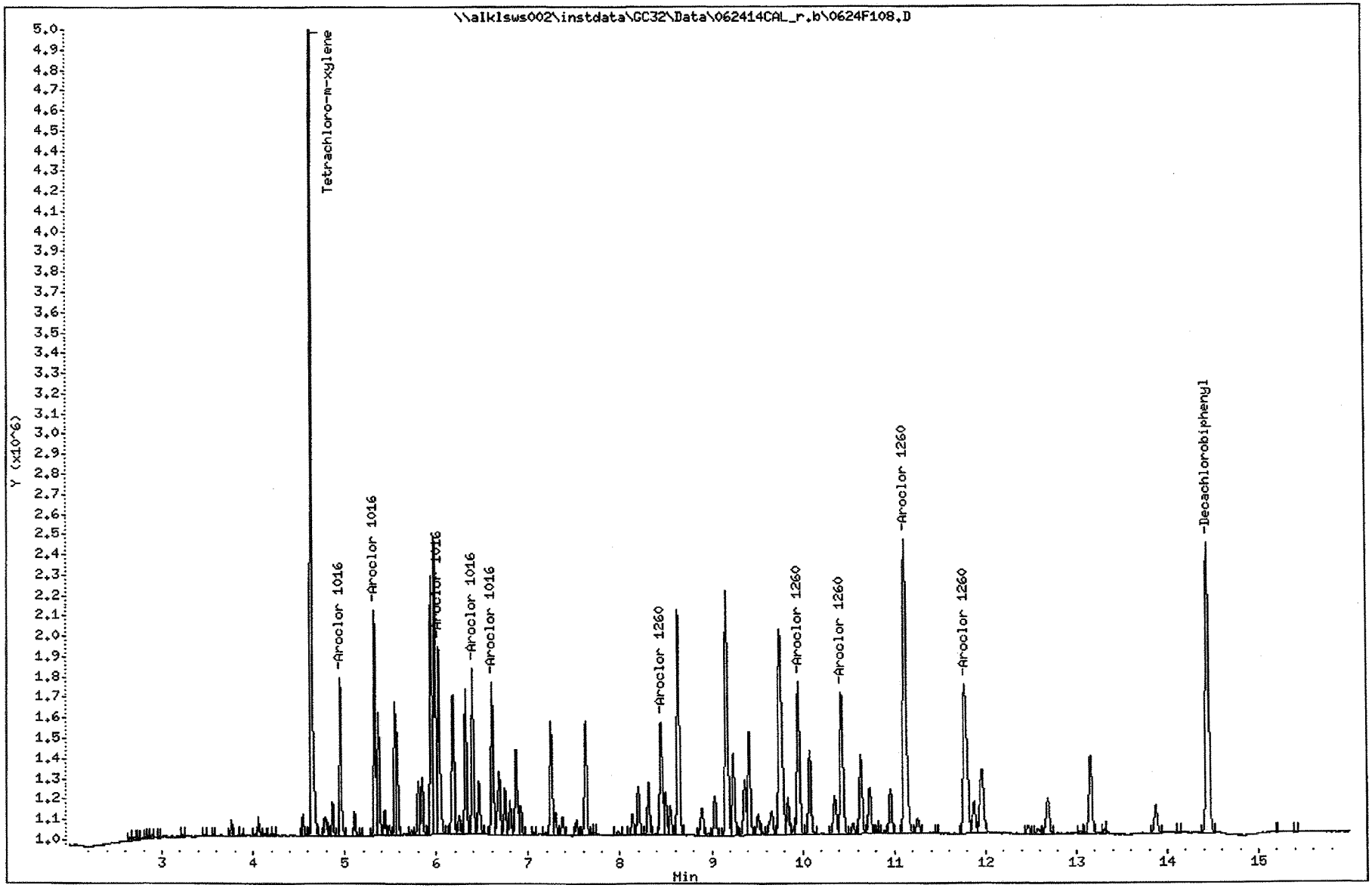
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.915	4.645	3167411	5630906	4.77	4.64		100.00
Aroclor 1016	4.292	4.958	642803	1082470	51.8	50.7	80.00- 120.00	100.00
	4.815	5.331	578548	1531894	51.3	47.5	72.00- 108.00	90.00
	5.015	6.031	1515504	1558924	49.4	49.8	188.61- 282.92	235.76
	5.112	6.398	1038974	1240301	50.6	48.4	129.31- 193.96	161.63
	5.595	6.611	863855	1189683	49.6	48.9	107.51- 161.27	134.39
			Average of Peak Amounts =		50.5	49.1		
Aroclor 1260	7.795	8.451	665340	1089487	50.6	46.0	80.00- 120.00	100.00
	8.235	9.958	1069782	1552869	49.1	48.8	128.63- 192.94	160.79
	8.795	10.428	1129754	1556931	50.6	48.0	135.84- 203.76	169.80
	9.258	11.121	2307731	3341341	47.6	47.1	277.48- 416.22	346.85
	10.055	11.778	1846722	2254253	48.3	48.3	222.05- 333.07	277.56
			Average of Peak Amounts =		49.2	47.6		
Decachlorobiphenyl	12.455	14.445	2570375	3555757	4.81	4.49		100.00

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F108.D
Date : 25-JUN-2014 05:40
Client ID:
Instrument: GC32.i
Sample Info: 1660 @ 5.0-50ppb PCB6-42K
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F108.D
Date : 25-JUN-2014 05:40
Client ID:
Sample Info: 1660 @ 5.0-50ppb PCB6-42K

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

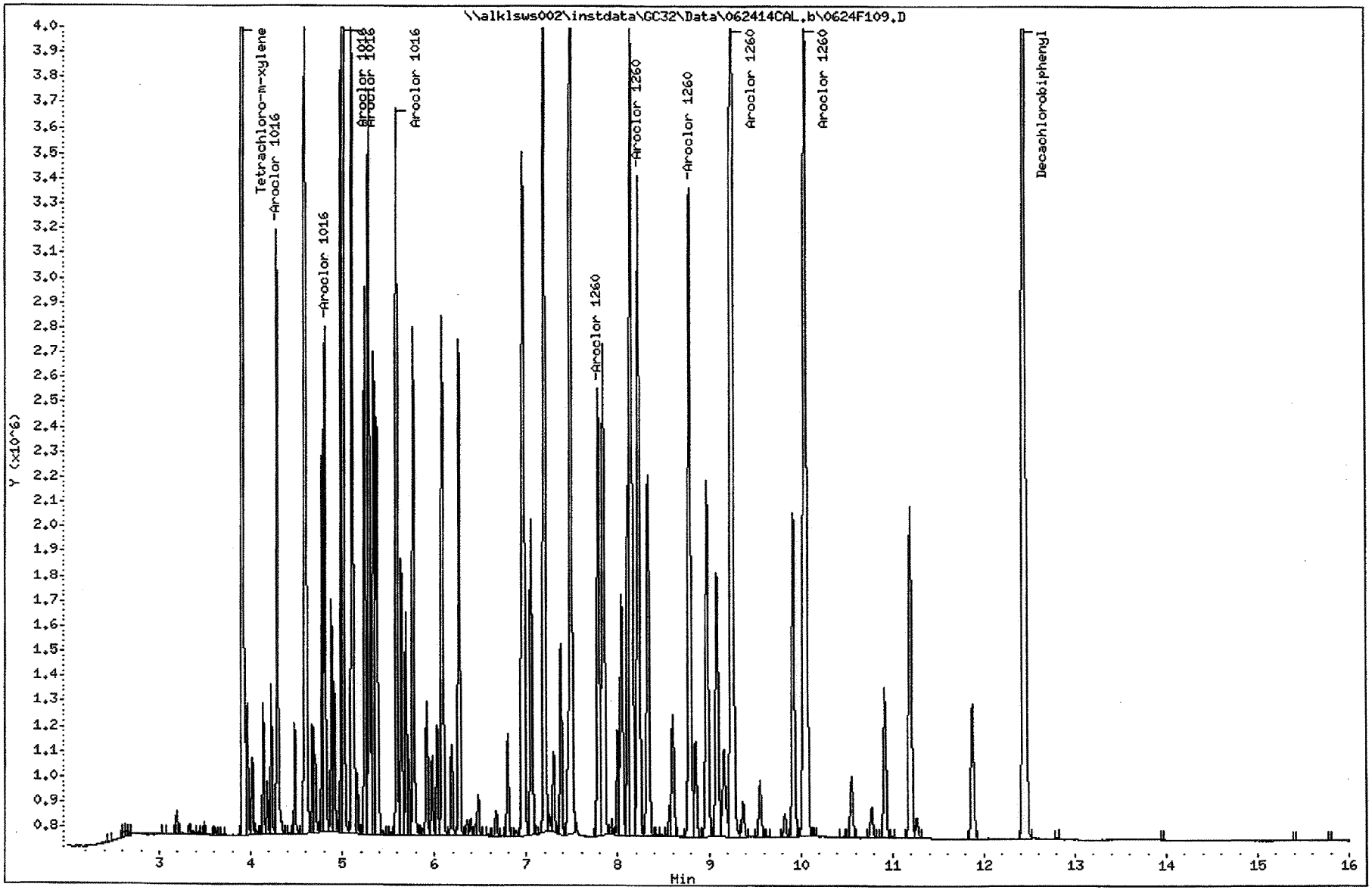
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F109.D
Inj Date : 25-JUN-2014 06:01
Sample Info: 1660 @ 25-250ppb PCB6-35K
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.911	4.641	15607218	29026597	23.5	23.9		100.00
Aroclor 1016	4.288	4.954	2839373	4928548	229	231	80.00- 120.00	100.00
	4.811	5.328	2554171	6879602	227	213	71.96- 107.95	89.96
	5.011	6.028	7151715	7276762	233	232	201.50- 302.25	251.88
	5.108	6.394	4709747	5733148	229	224	132.70- 199.05	165.87
	5.595	6.608	3931473	5580513	226	229	110.77- 166.16	138.46
			Average of Peak Amounts =		229	226		
Aroclor 1260	7.788	8.444	3125829	5176794	238	218	80.00- 120.00	100.00
	8.231	9.954	4774091	7018744	219	221	122.18- 183.28	152.73
	8.791	10.421	5033388	7098279	225	219	128.82- 193.23	161.03
	9.255	11.114	10511650	15556682	217	219	269.03- 403.54	336.28
	10.055	11.774	8213675	10245933	215	219	210.21- 315.32	262.77
			Average of Peak Amounts =		223	219		
Decachlorobiphenyl	12.448	14.438	11146056	15404692	20.9	19.5		100.00

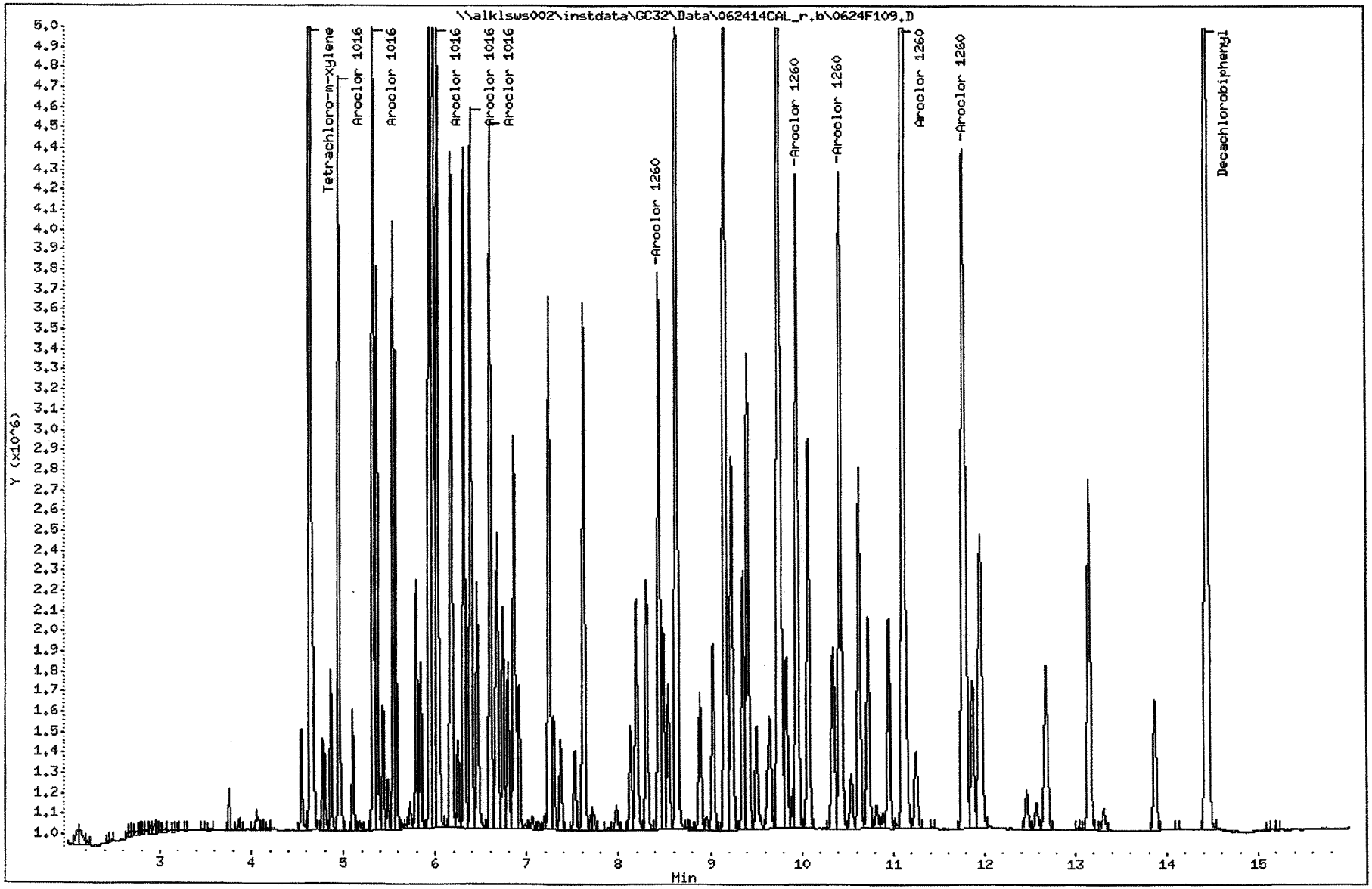
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F109.D
Date : 25-JUN-2014 06:01
Client ID:
Sample Info: 1660 @ 25-250ppb PCB6-35K

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F109.D
Date : 25-JUN-2014 06:01
Client ID:
Sample Info: 1660 @ 25-250ppb PCB6-35K

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



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Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F110.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F110.D
Inj Date : 25-JUN-2014 06:22
Sample Info: 1660 @ 50-500ppb PCB6-35N
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

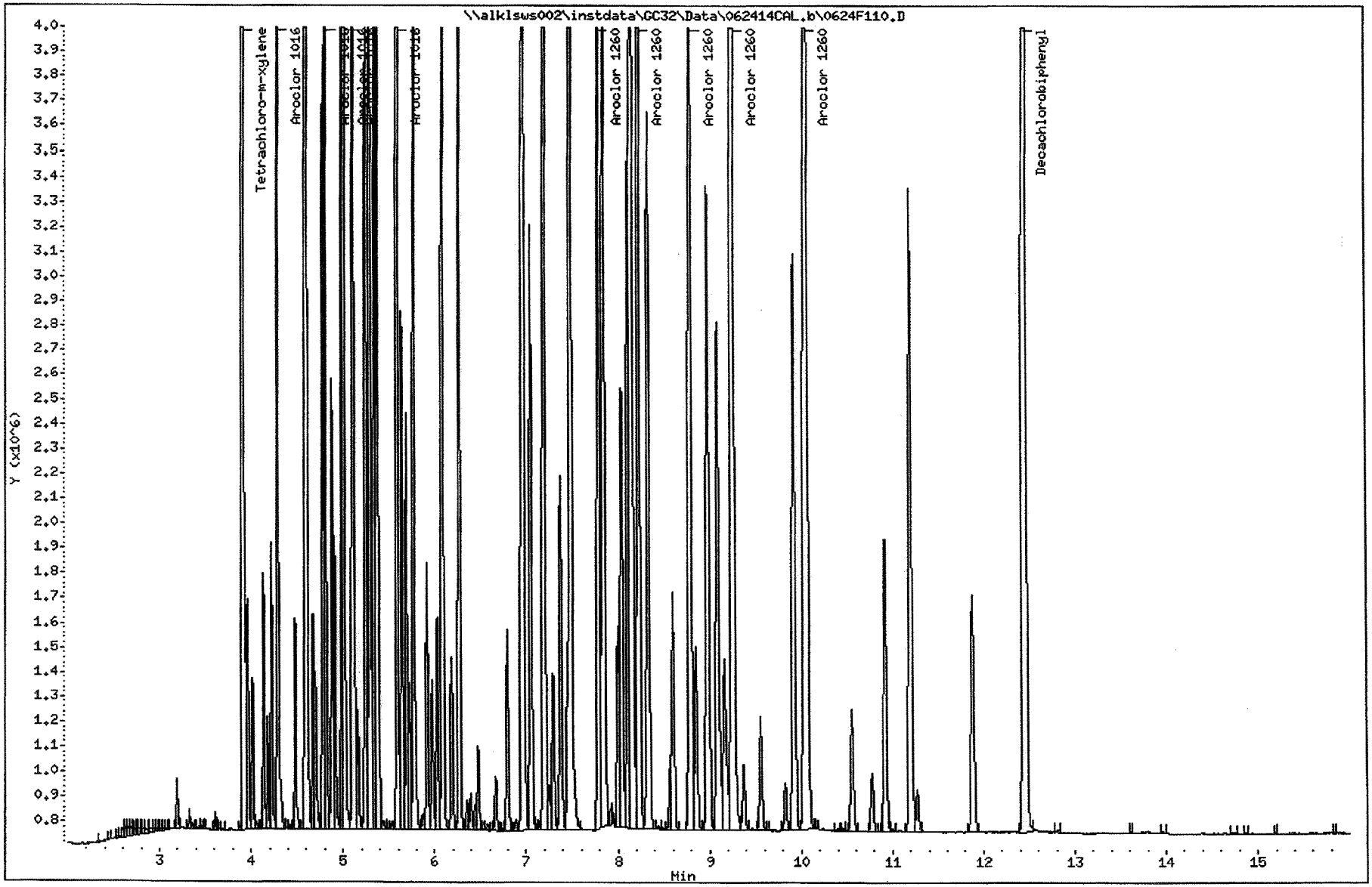
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.914	4.643	32679826	58102597	49.2	47.9		100.00
Aroclor 1016	4.287	4.953	5533582	9373781	446	439	80.00- 120.00	100.00
	4.810	5.327	4848268	13178993	430	409	70.09- 105.14	87.62
	5.014	6.030	13219227	13968413	431	446	191.11- 286.67	238.89
	5.107	6.397	9393408	10984102	457	428	135.80- 203.70	169.75
	5.594	6.610	7779073	10789759	447	444	112.46- 168.70	140.58
			Average of Peak Amounts =		442	433		
Aroclor 1260	7.790	8.450	6225264	10067886	473	425	80.00- 120.00	100.00
	8.230	9.957	9300774	13675450	427	430	119.52- 179.28	149.40
	8.793	10.427	9742953	13763587	436	424	125.21- 187.81	156.51
	9.257	11.120	20851397	30597961	430	431	267.96- 401.94	334.95
	10.054	11.777	16103317	19750427	422	423	206.94- 310.41	258.68
			Average of Peak Amounts =		438	427		
Decachlorobiphenyl	12.454	14.447	21694279	29263789	40.6	37.0		100.00

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F110.D
Date : 25-JUN-2014 06:22
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-35N

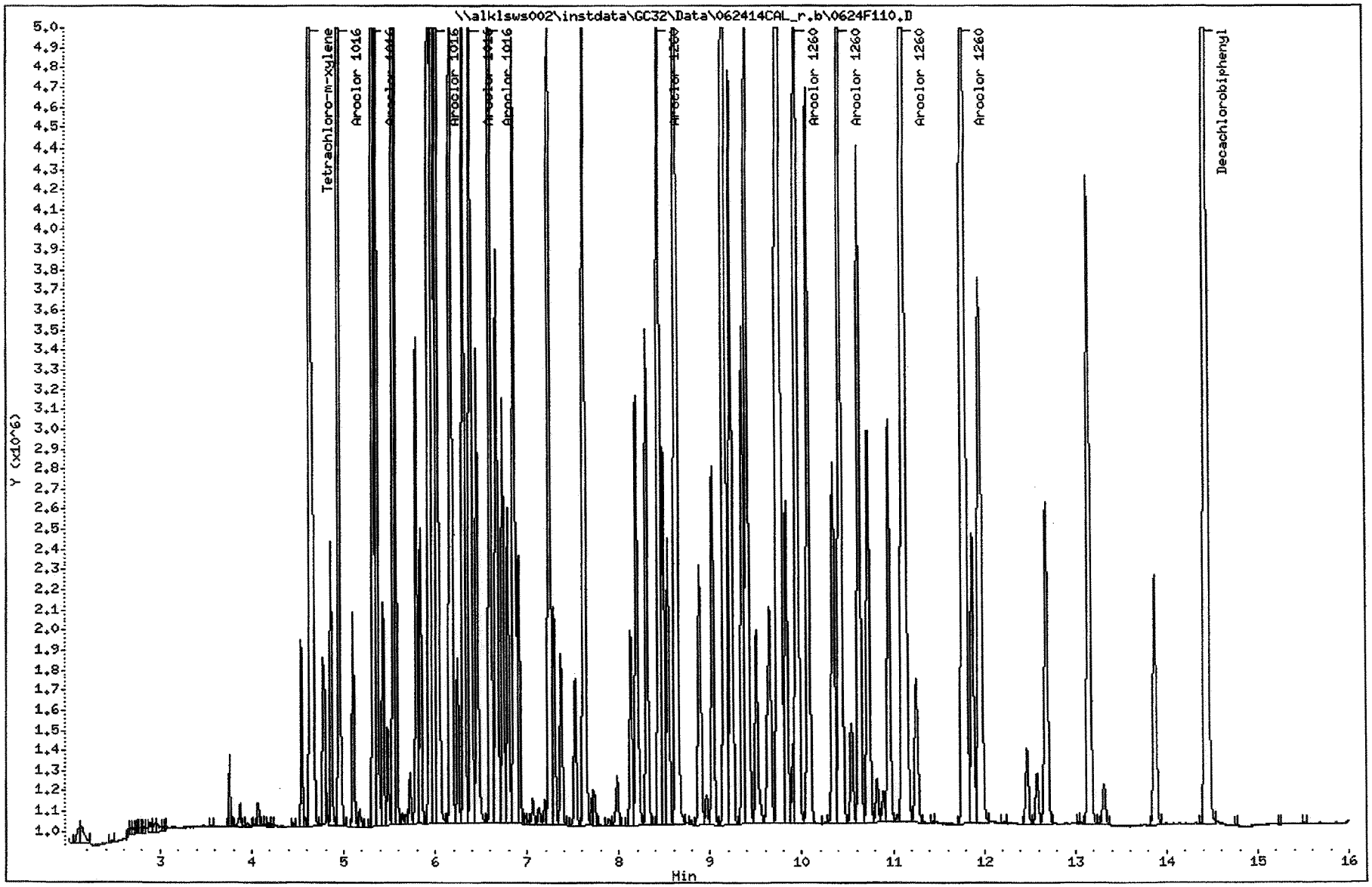
Instrument: GC32.i

Operator: JHSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F110.D
Date : 25-JUN-2014 06:22
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-35N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F111.D
Inj Date : 25-JUN-2014 06:43
Sample Info: 2154 @ 5.0-2.5ppb PCB6-43C
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

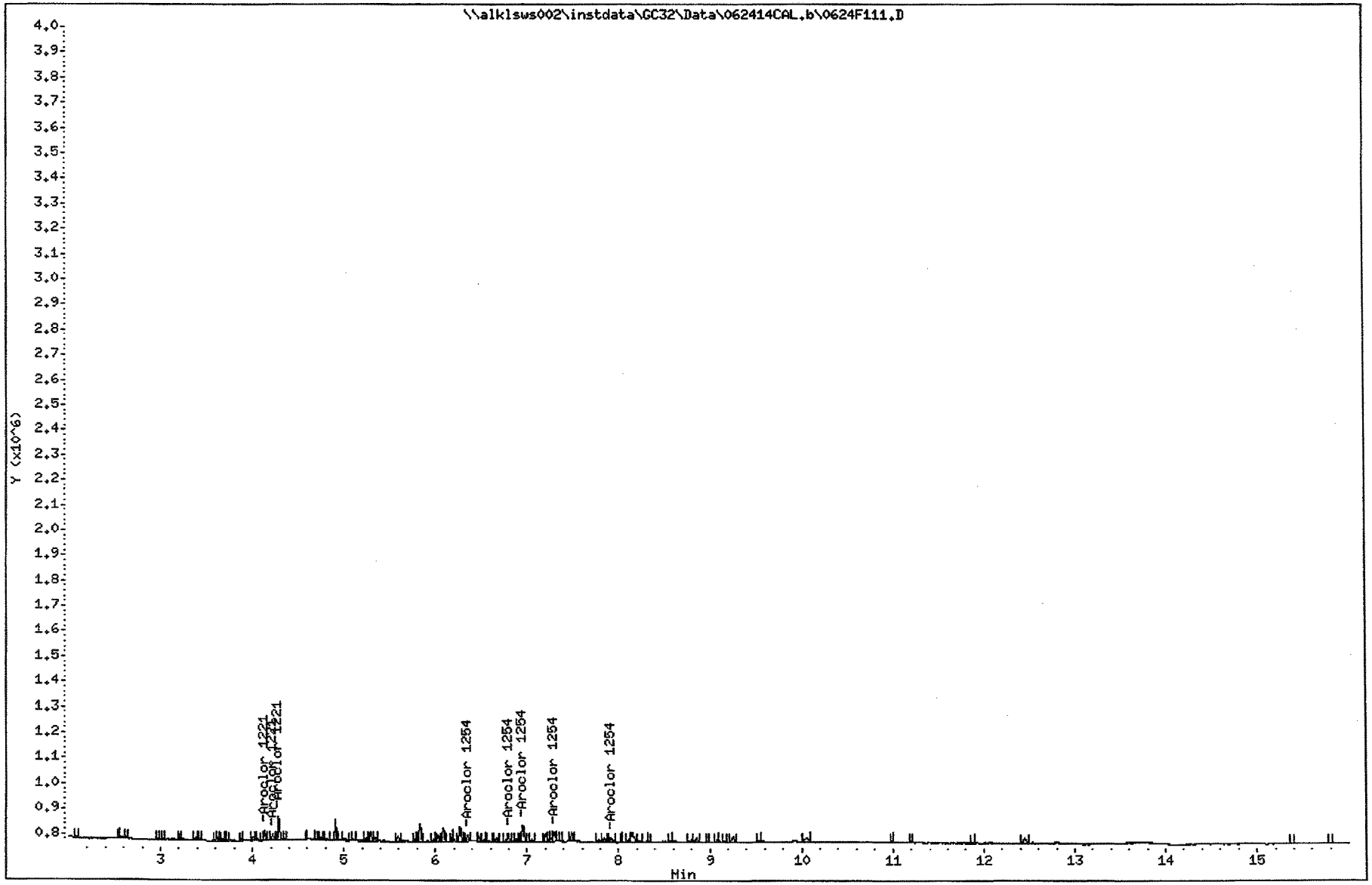
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.134	4.794	42143	47367	5.30	5.60	80.00- 120.00	100.00
	4.224	4.864	26748	41795	5.26	5.32	50.78- 76.16	63.47
	4.287	4.954	123050	165826	6.08	5.79	233.59- 350.38	291.98
			Average of Peak Amounts =		5.55	5.57		
Aroclor 1254	6.354	7.247	30281	129578	2.49	2.95	80.00- 120.00	100.00(M)
	6.797	7.297	56575	53540	2.67	2.84	149.47- 224.20	186.83(M)
	6.954	7.627	119164	173064	2.76	2.82	314.82- 472.23	393.53(M)
	7.297	8.637	62911	72599	2.60	3.14	166.21- 249.31	207.76(M)
	7.917	9.430	32791	77619	2.34	2.89	86.63- 129.95	108.29(M)
			Average of Peak Amounts =		2.57	2.93		

QC Flag Legend

M - Compound response manually integrated.

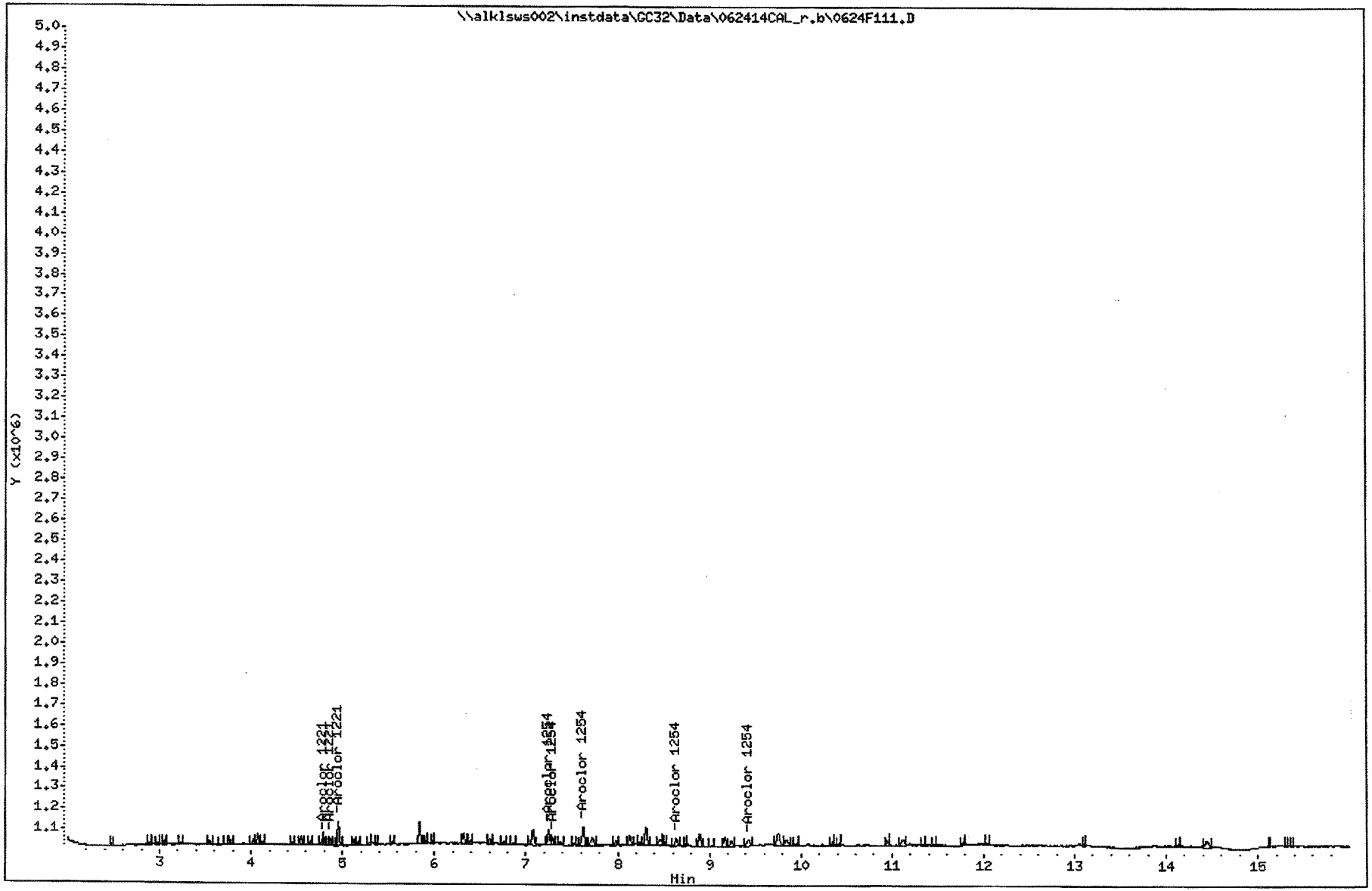
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
Date : 25-JUN-2014 06:43
Client ID:
Sample Info: 2154 @ 5.0-2.5ppb PCB6-43C

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

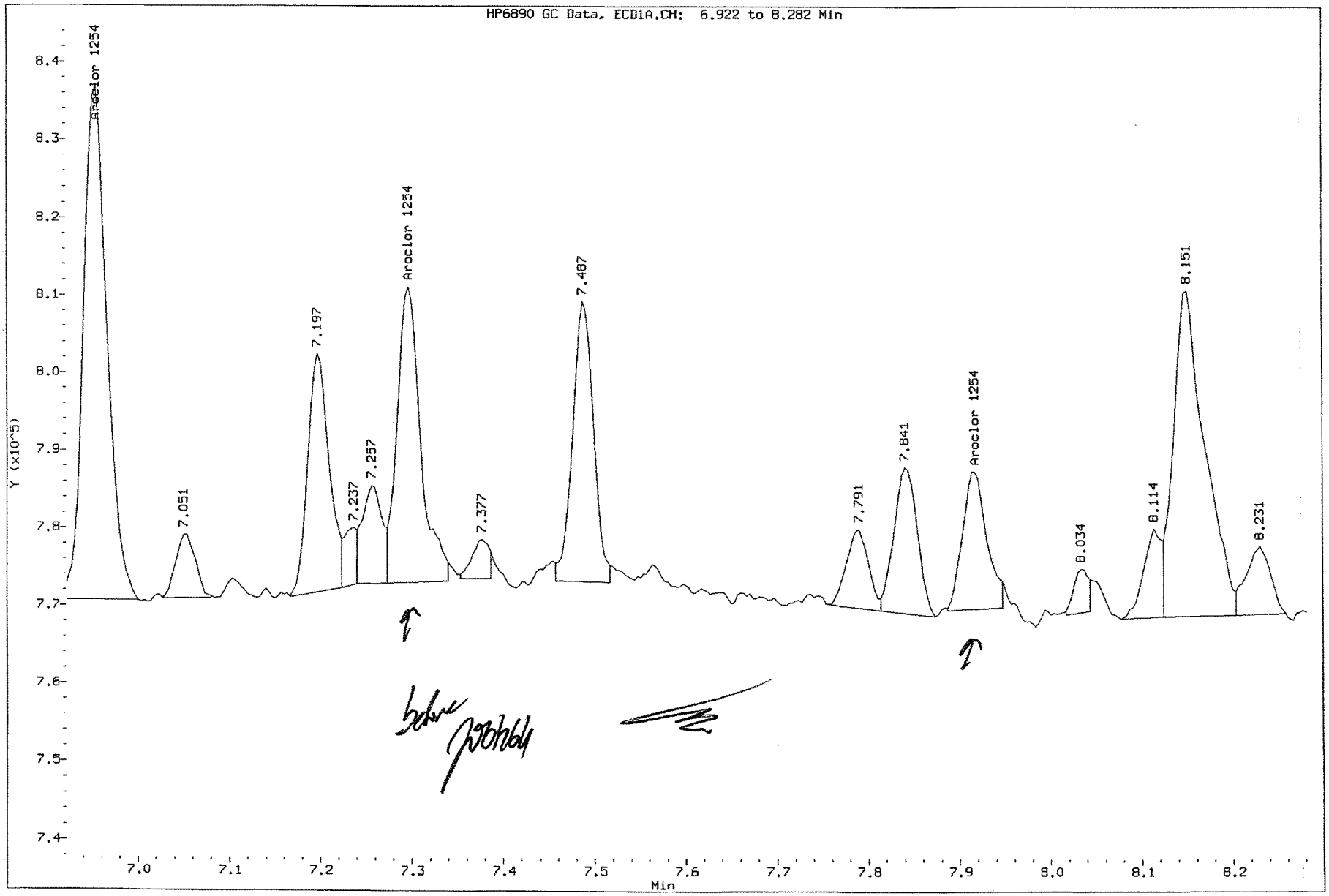


Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F111.D
Date : 25-JUN-2014 06:43
Client ID:
Sample Info: 2154 @ 5.0-2.5ppb PCB6-43C

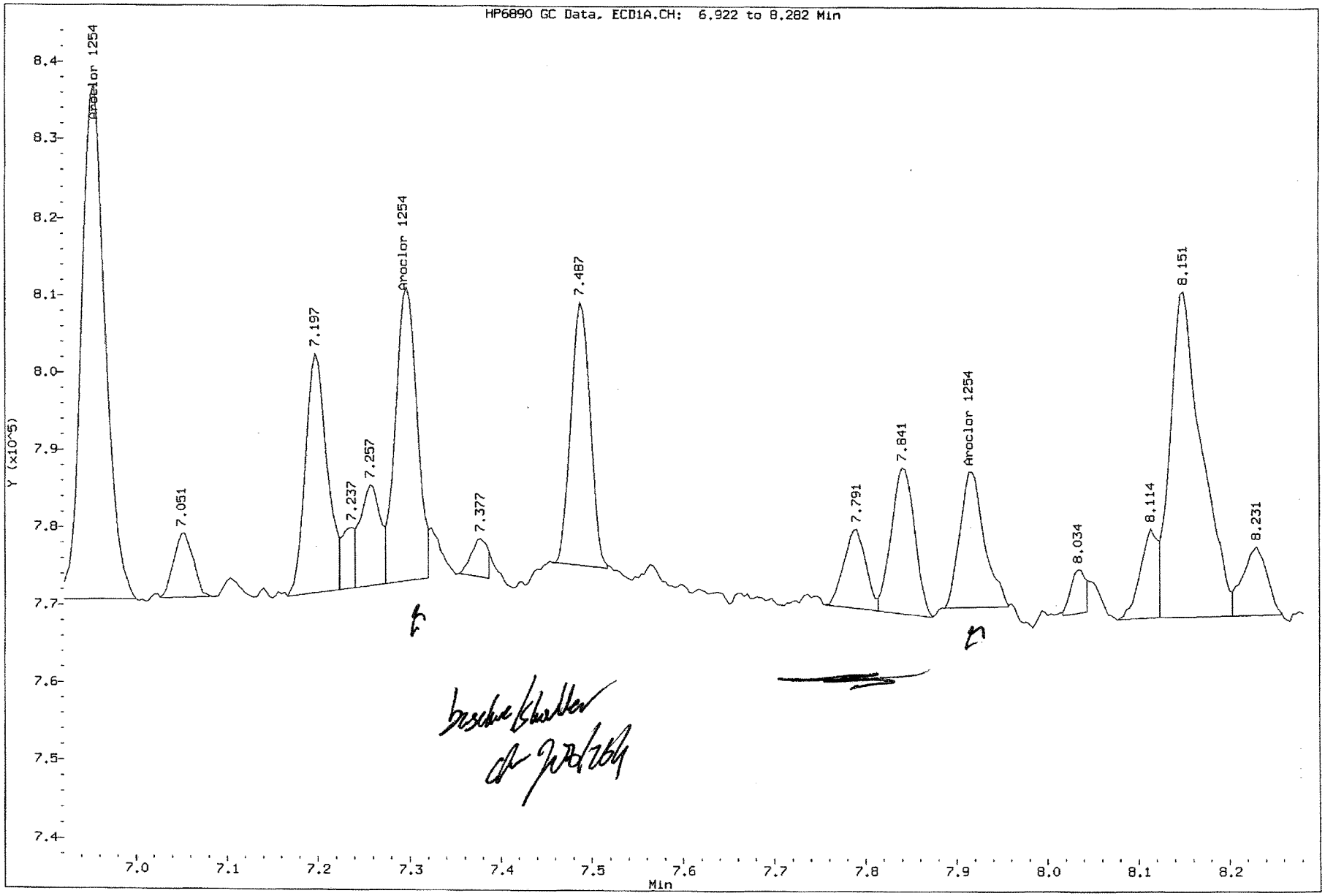
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
Injection Date: 25-JUN-2014 06:43
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F111.D
Injection Date: 25-JUN-2014 06:43
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D
Inj Date : 25-JUN-2014 07:04
Sample Info: 2154 @ 10-5.0ppb PCB6-43B
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

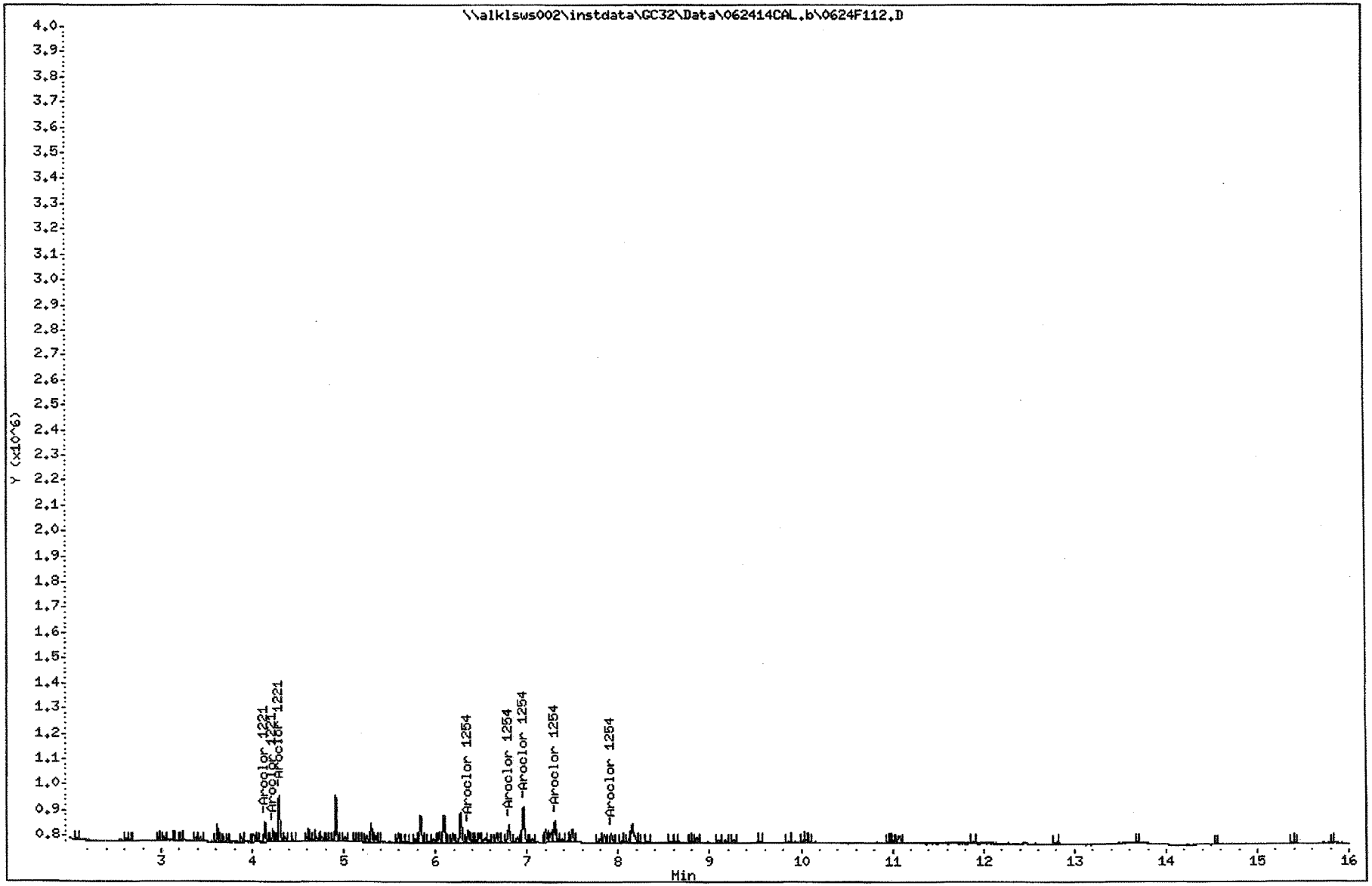
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.139	4.801	86302	91912	10.8	10.9	80.00- 120.00	100.00
	4.229	4.872	52796	83451	10.4	10.6	48.94- 73.41	61.18
	4.292	4.958	234503	309802	11.6	10.8	217.38- 326.07	271.72
			Average of Peak Amounts =		10.9	10.8		
Aroclor 1254	6.359	7.252	67705	241423	5.56	5.50	80.00- 120.00	100.00(M)
	6.802	7.302	109731	95698	5.17	5.07	129.66- 194.49	162.07(M)
	6.958	7.632	237240	330576	5.50	5.39	280.32- 420.48	350.40(M)
	7.302	8.638	131182	115222	5.41	4.99	155.00- 232.51	193.76(M)
	7.919	9.428	69829	136477	4.98	5.08	82.51- 123.76	103.14(M)
			Average of Peak Amounts =		5.32	5.21		

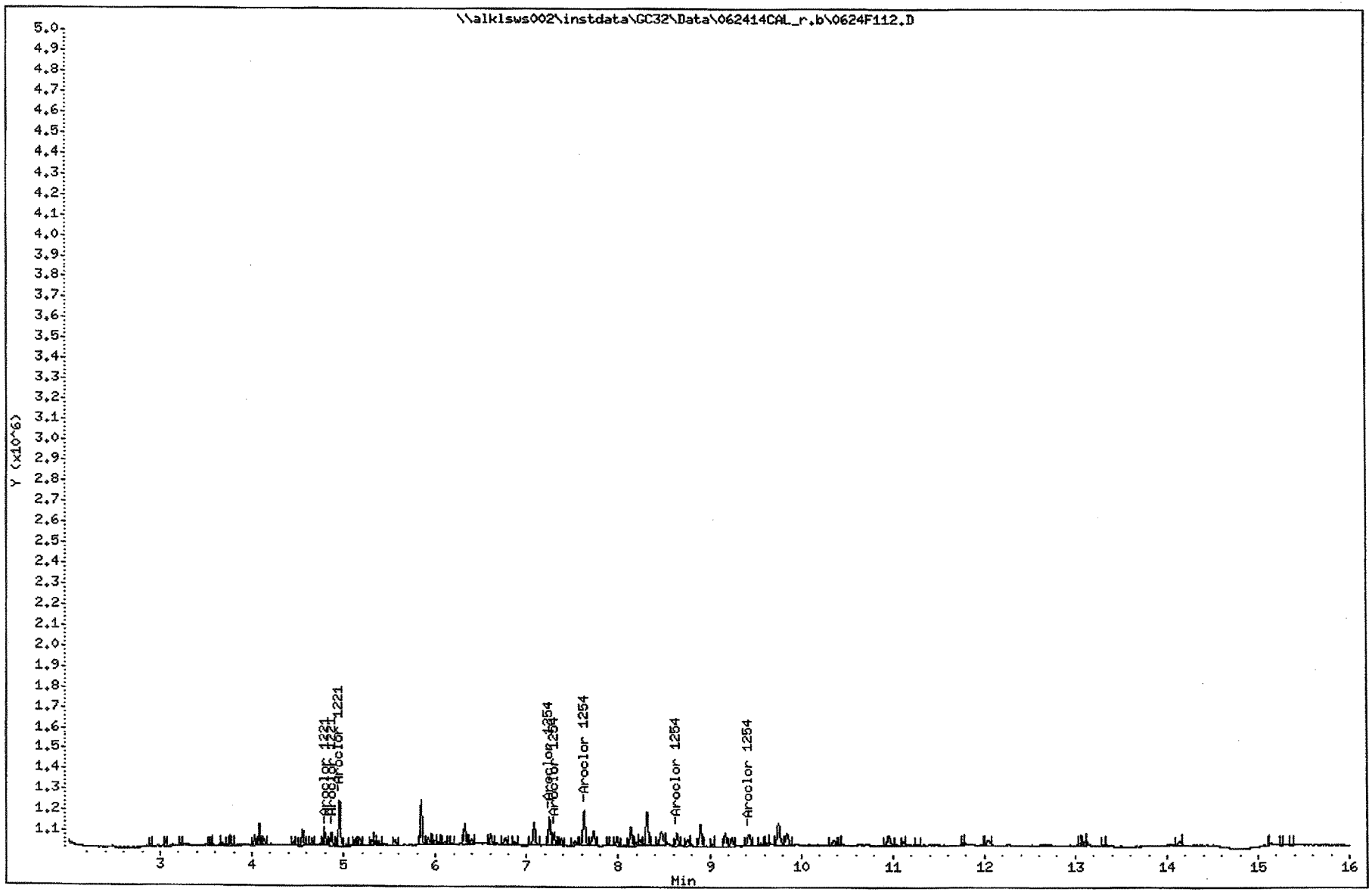
QC Flag Legend

M - Compound response manually integrated.

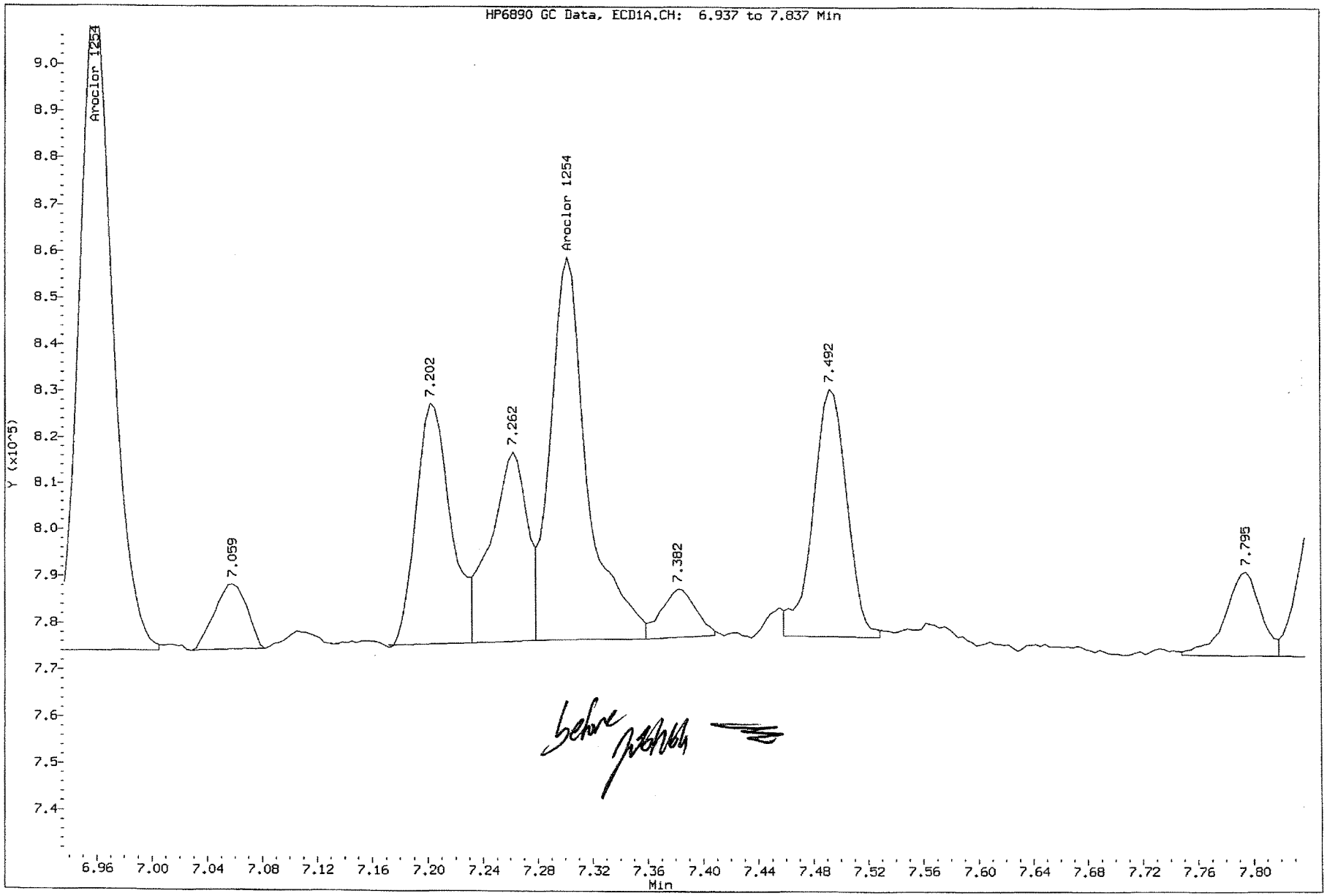
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
Date : 25-JUN-2014 07:04
Client ID:
Instrument: GC32.i
Sample Info: 2154 @ 10-5.0ppb PCB6-43B
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



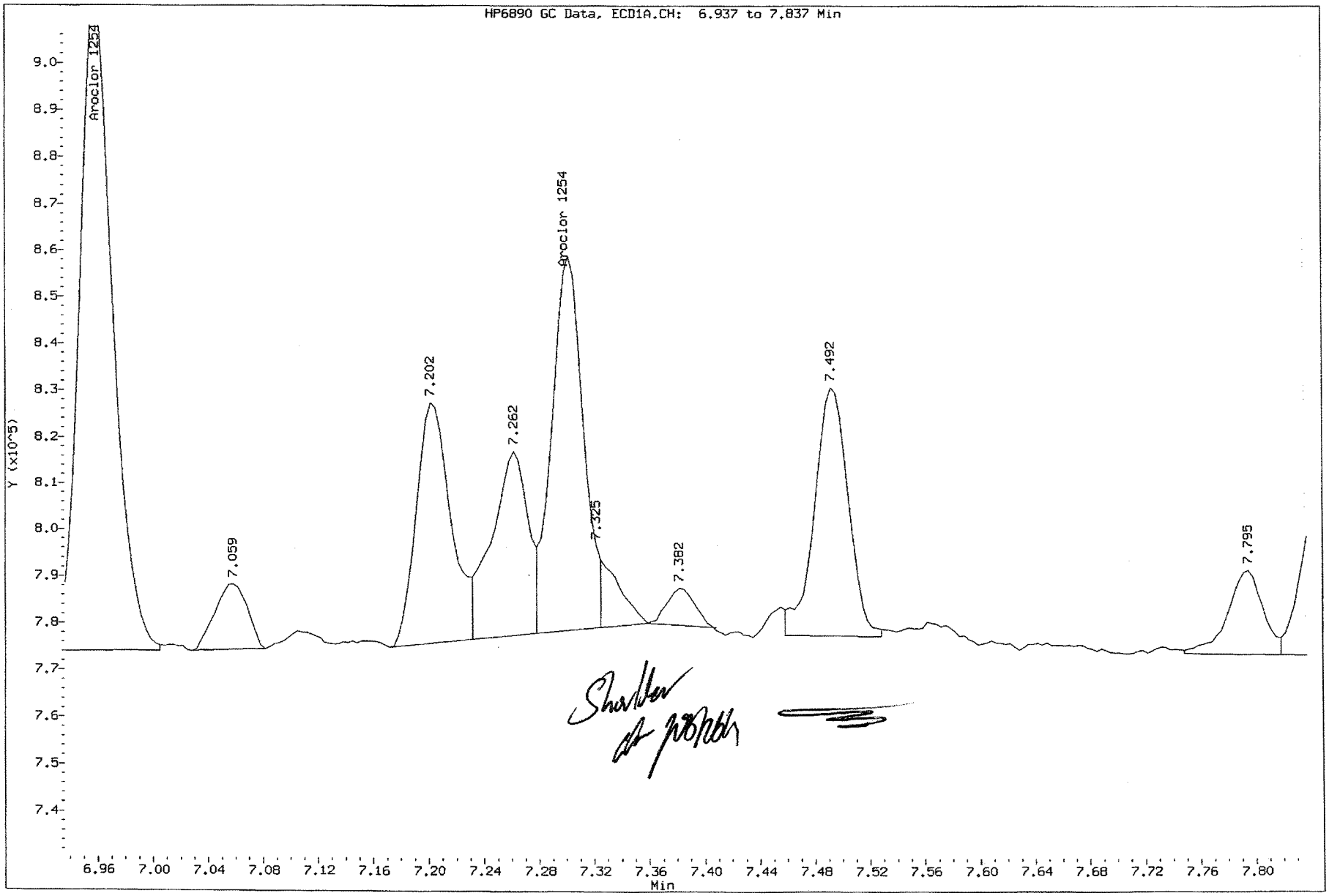
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D
Date : 25-JUN-2014 07:04
Client ID:
Instrument: GC32.i
Sample Info: 2154 @ 10-5.0ppb PCB6-43B
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



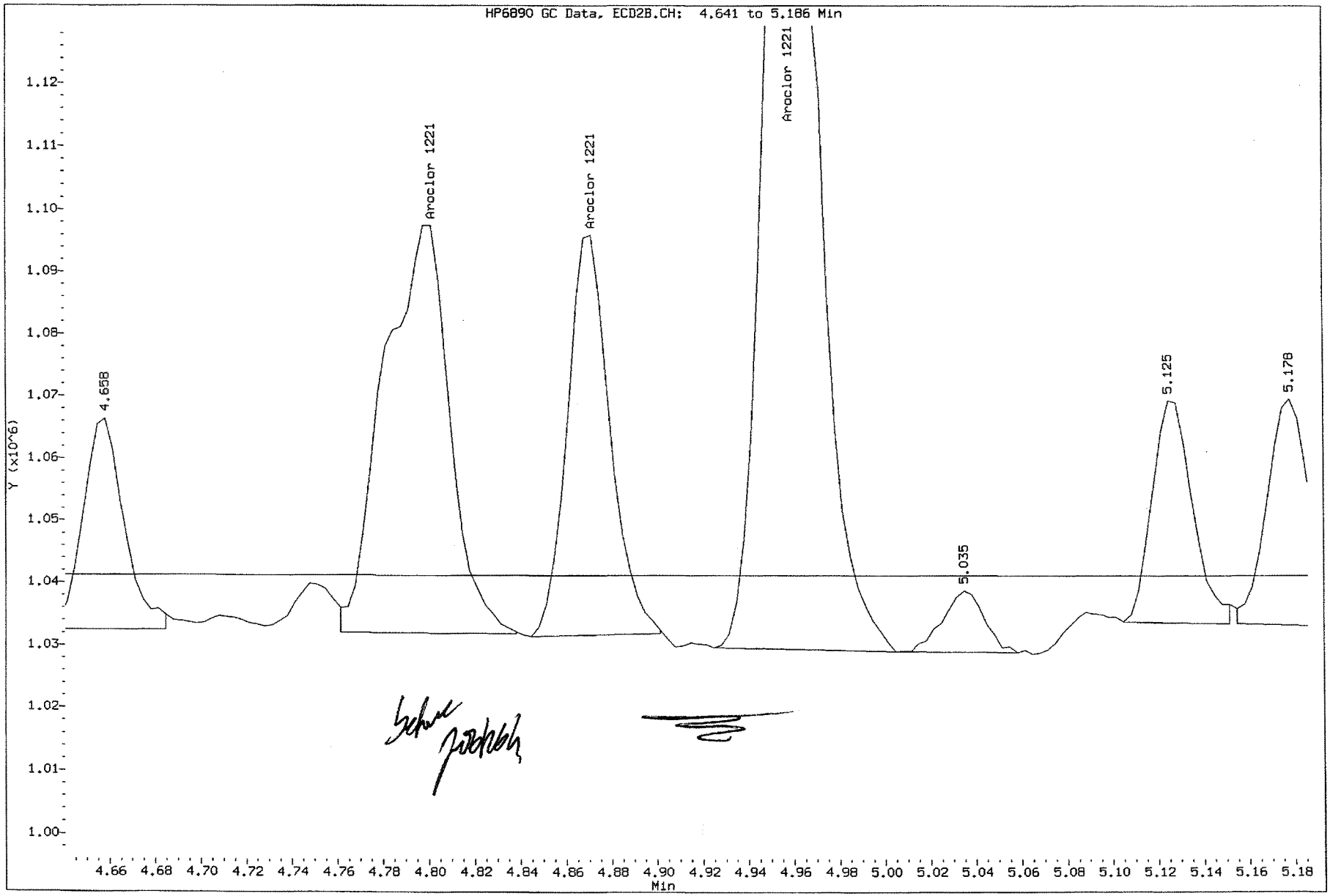
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
Injection Date: 25-JUN-2014 07:04
Instrument: GC32.i
Client Sample ID:



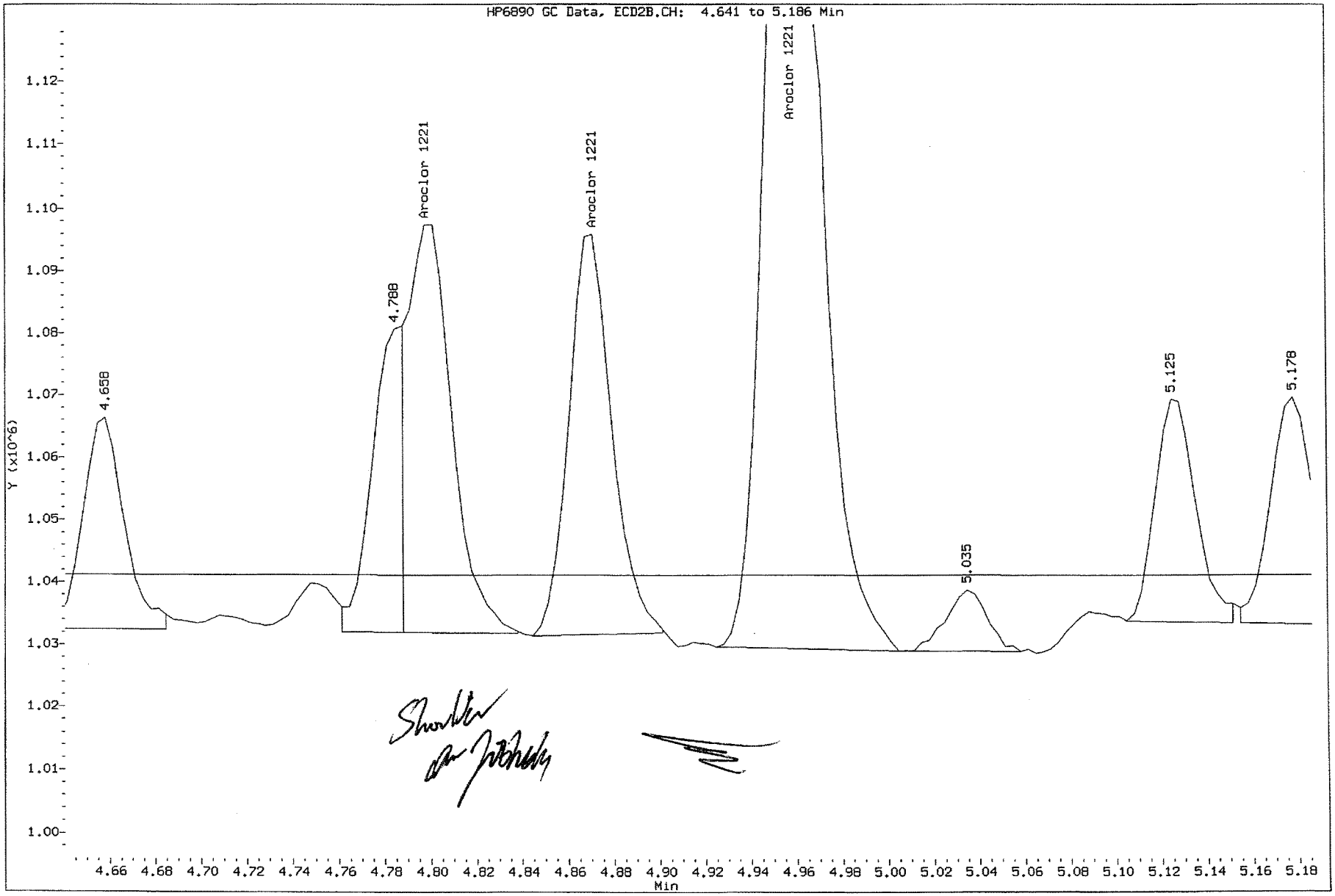
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F112.D
Injection Date: 25-JUN-2014 07:04
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D
Injection Date: 25-JUN-2014 07:04
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F112.D
Injection Date: 25-JUN-2014 07:04
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D
Report Date: 26-Jun-2014 00:46

ALS Environmental-Kelso

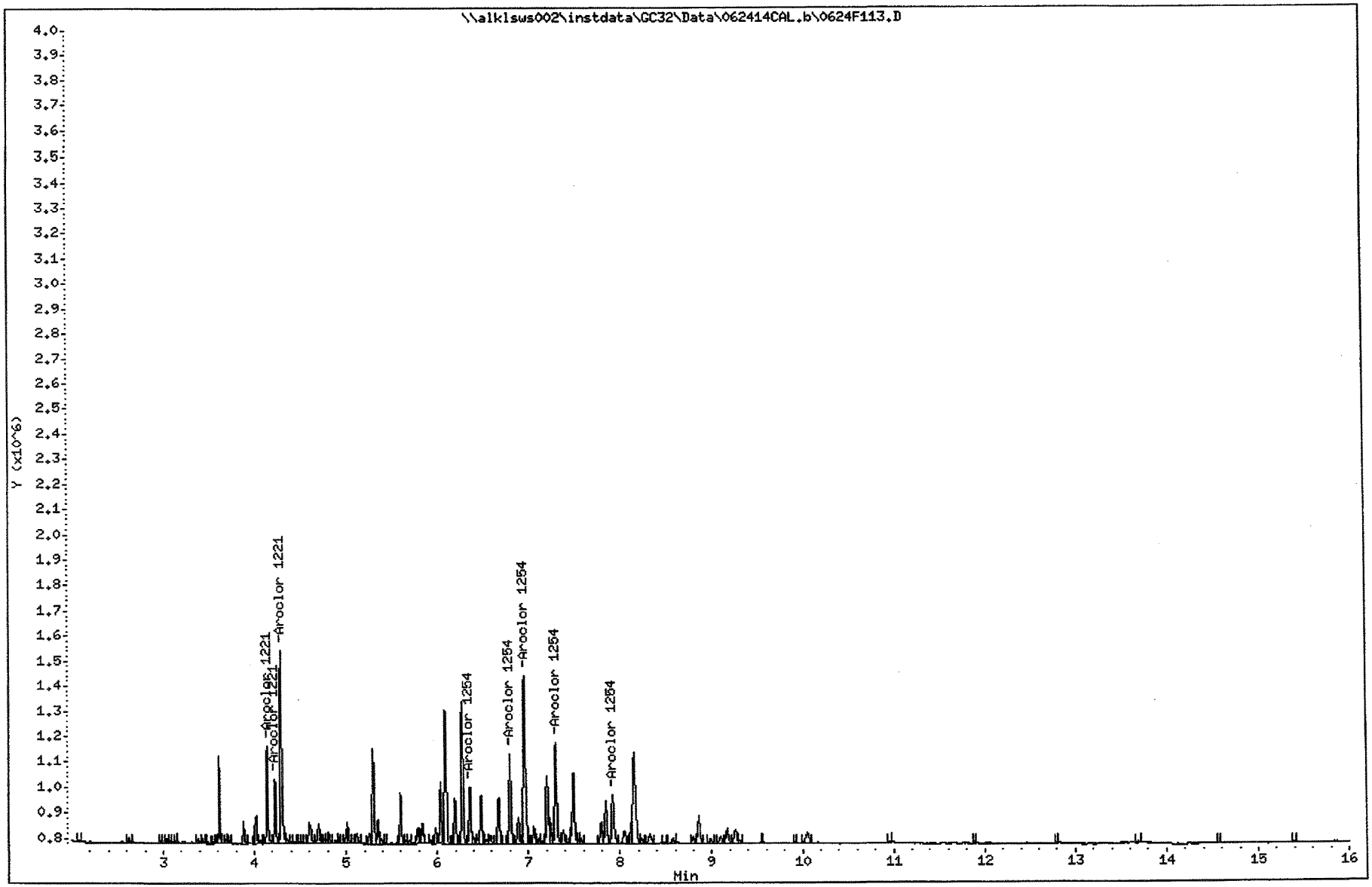
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F113.D
Inj Date : 25-JUN-2014 07:25
Sample Info: 2154 @ 50-25ppb PCB6-43A
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.142	4.802	407201	440230	51.2	52.1	80.00- 120.00	100.00
	4.229	4.872	261677	418743	51.4	53.3	51.41- 77.11	64.26
	4.292	4.958	975645	1456118	48.2	50.9	191.68- 287.52	239.60
			Average of Peak Amounts =		50.3	52.1		
Aroclor 1254	6.359	7.255	320854	1102426	26.4	25.1	80.00- 120.00	100.00
	6.802	7.302	552906	486383	26.1	25.8	137.86- 206.79	172.32
	6.959	7.632	1116650	1550958	25.9	25.3	278.42- 417.63	348.02
	7.302	8.642	665810	586003	27.5	25.4	166.01- 249.01	207.51
	7.919	9.432	374218	674035	26.7	25.1	93.31- 139.96	116.63
			Average of Peak Amounts =		26.5	25.3		

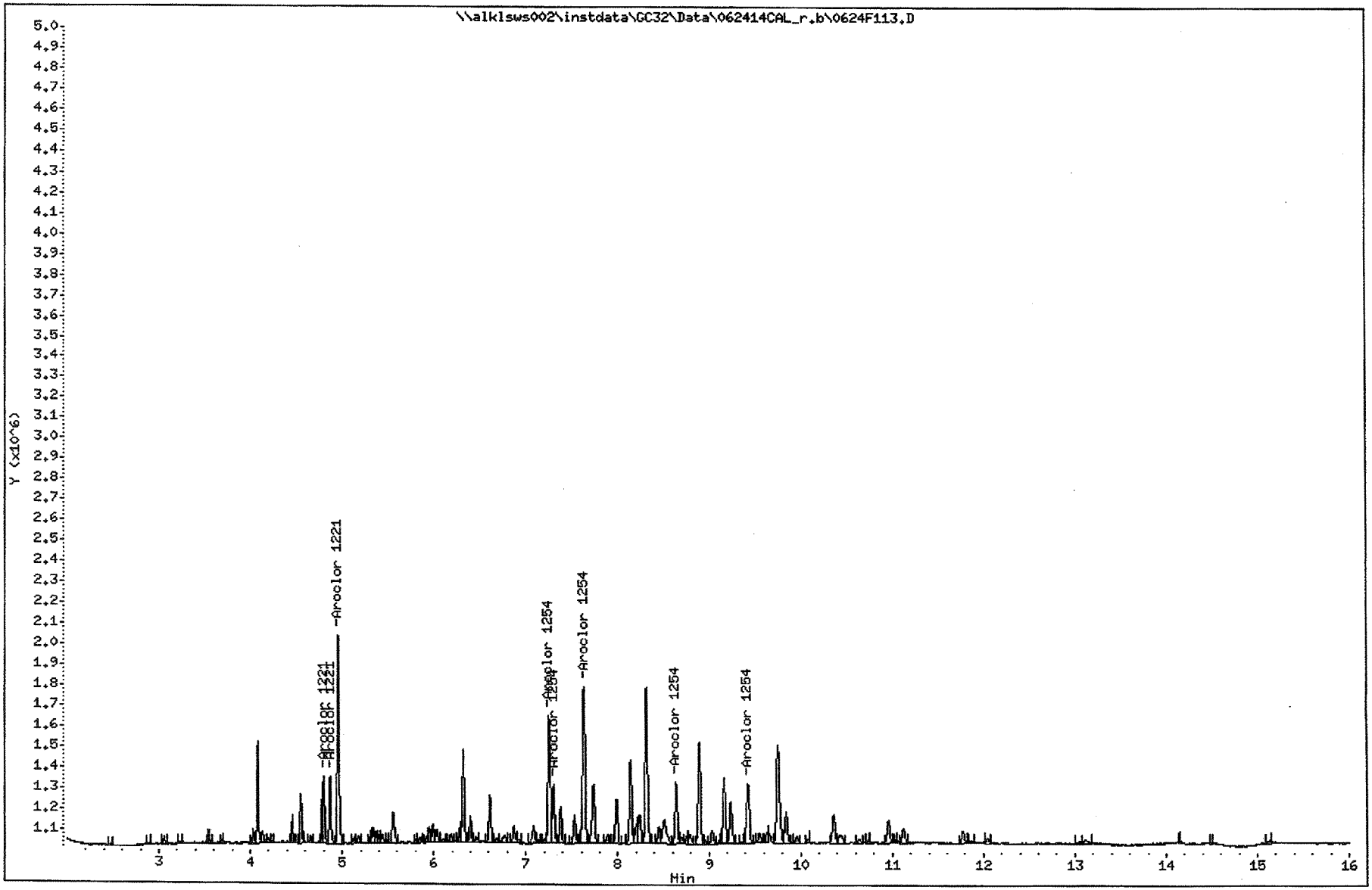
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F113.D
Date : 25-JUN-2014 07:25
Client ID:
Sample Info: 2154 @ 50-25ppb PCB6-43A

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F113.D
Date : 25-JUN-2014 07:25
Client ID:
Sample Info: 2154 @ 50-25ppb PCB6-43A

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

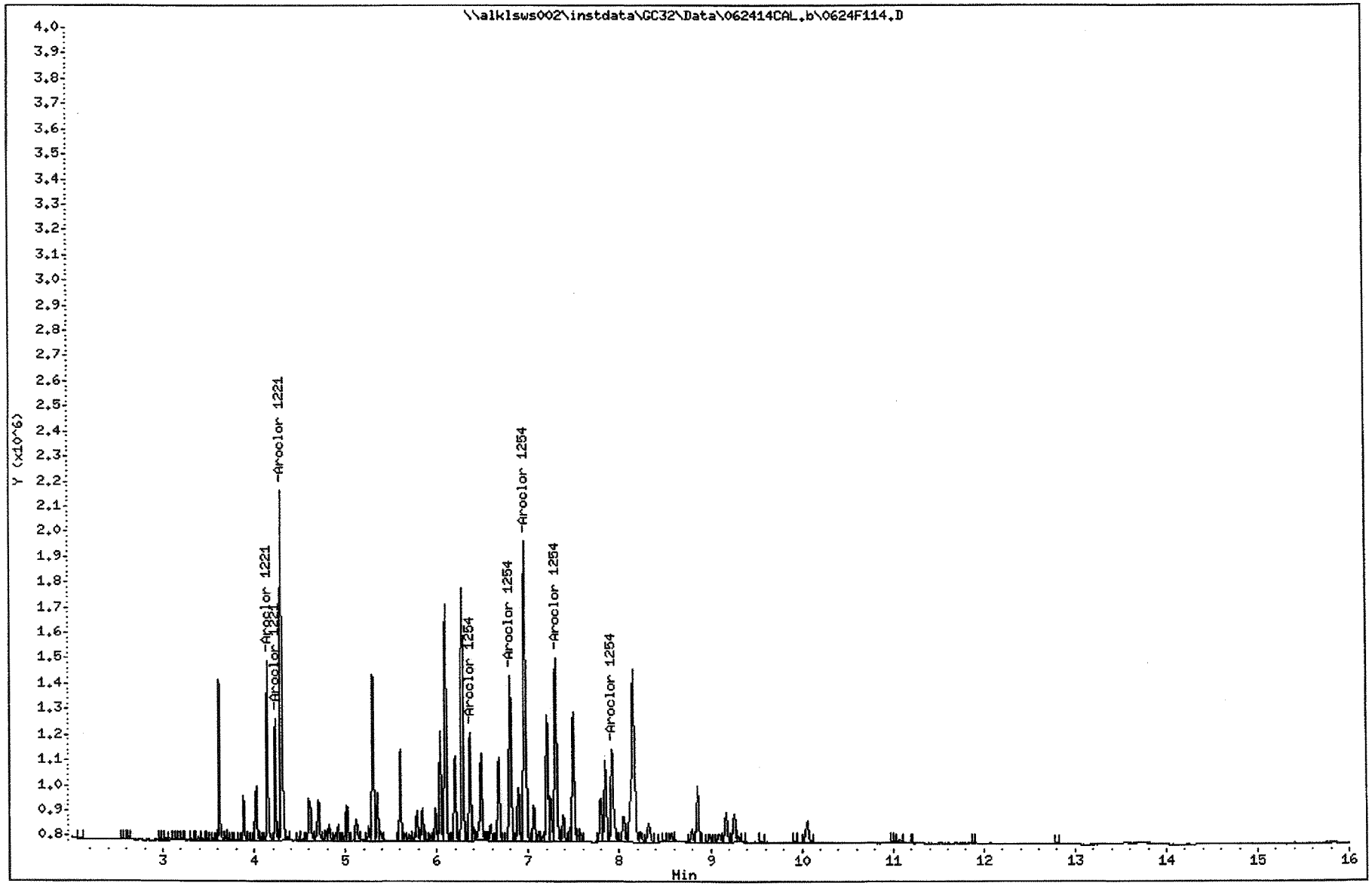
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F114.D
Inj Date : 25-JUN-2014 07:46
Sample Info: 2154 @ 100-50ppb PCB6-420
Misc Info :
Cal Date : 26-JUN-2014 00:46
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.145	4.804	782831	825538	98.4	97.6	80.00- 120.00	100.00
	4.231	4.874	511906	786994	101	100	52.31- 78.47	65.39
	4.295	4.961	1817042	2737887	89.7	95.7	185.69- 278.53	232.11
			Average of Peak Amounts =		96.4	97.8		
Aroclor 1254	6.361	7.254	612651	2070961	50.4	47.2	80.00- 120.00	100.00
	6.805	7.304	1053728	908053	49.7	48.1	137.60- 206.39	171.99
	6.961	7.634	2088929	2897964	48.4	47.3	272.77- 409.16	340.97
	7.305	8.644	1237091	1093047	51.0	47.3	161.54- 242.31	201.92
	7.925	9.431	727211	1276940	51.8	47.5	94.96- 142.44	118.70
			Average of Peak Amounts =		50.3	47.5		

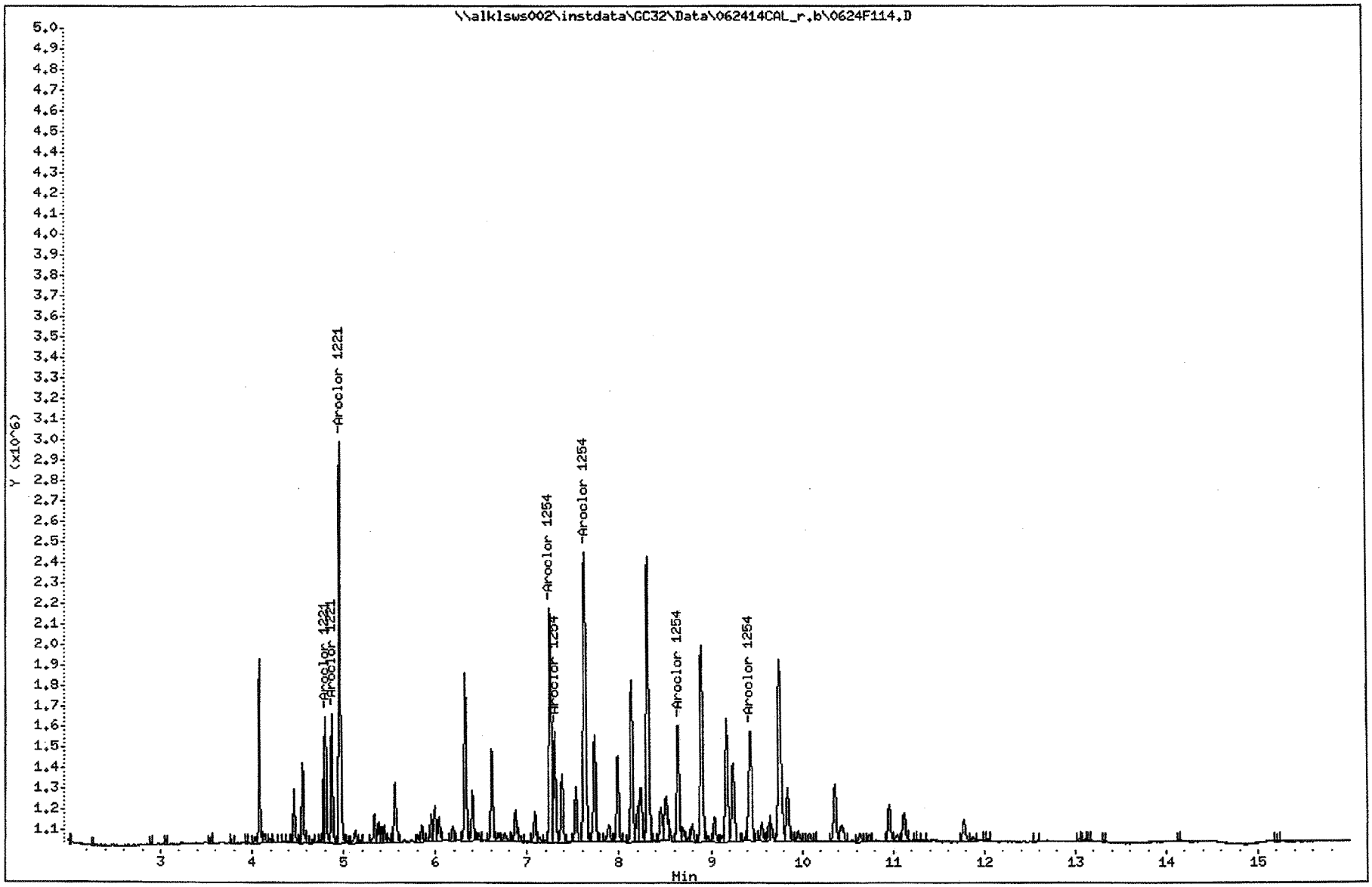
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F114.D
Date : 25-JUN-2014 07:46
Client ID:
Sample Info: 2154 @ 100-50ppb PCB6-420

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F114.D
Date : 25-JUN-2014 07:46
Client ID:
Sample Info: 2154 @ 100-50ppb PCB6-420

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

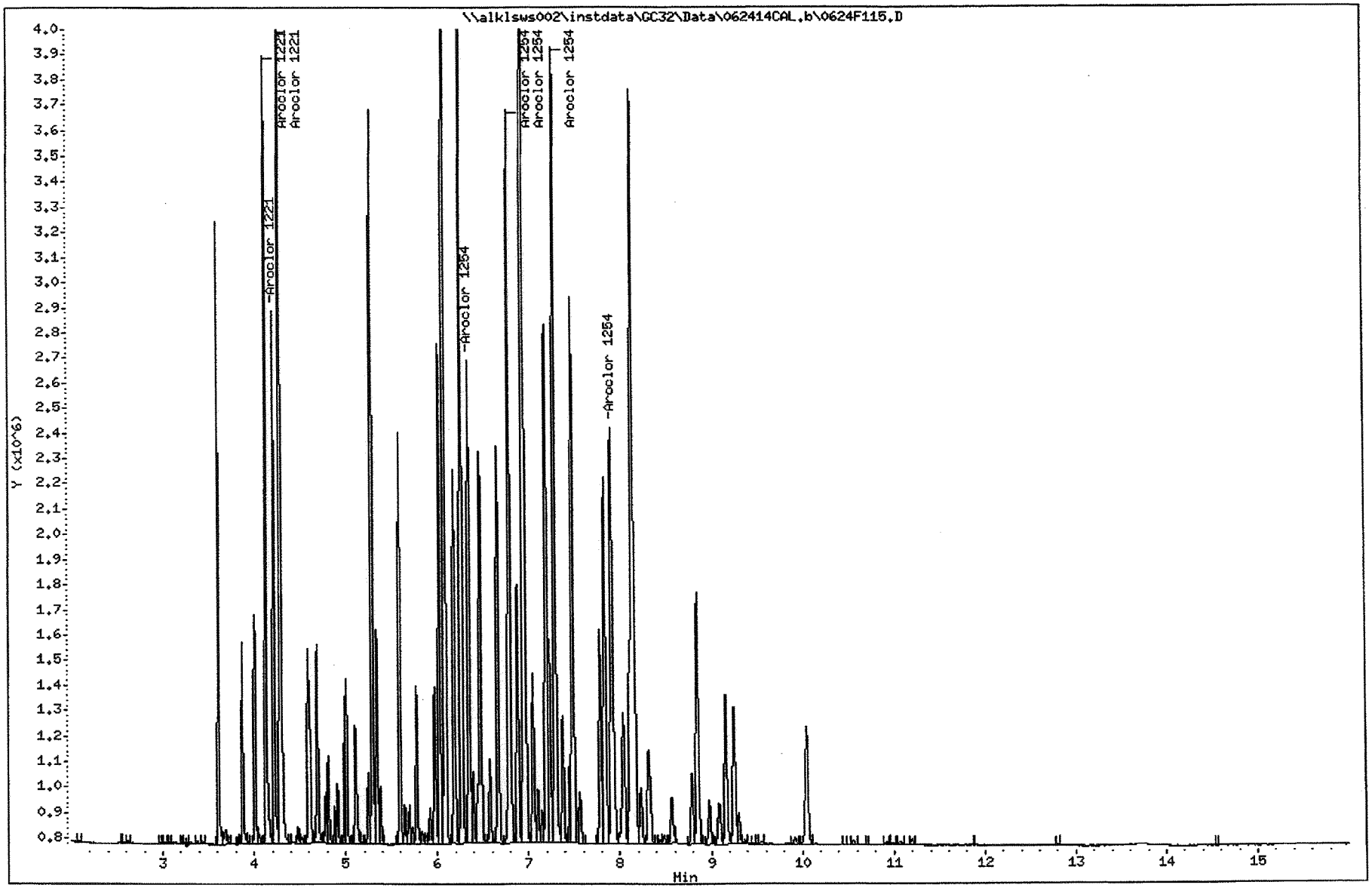
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F115.D
Inj Date : 25-JUN-2014 08:07
Sample Info: 2154 @ 500-250ppb PCB6-42N
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.138	4.794	3380660	3743690	425	443	80.00- 120.00	100.00
	4.224	4.864	2231659	3611450	439	460	52.81- 79.22	66.01
	4.288	4.954	7745248	12866918	383	450	183.28- 274.93	229.10
			Average of Peak Amounts =		416	451		
Aroclor 1254	6.354	7.244	2808420	9630260	231	219	80.00- 120.00	100.00
	6.798	7.294	4889231	4418919	231	234	139.27- 208.91	174.09
	6.951	7.624	9521240	13915578	221	227	271.22- 406.83	339.02
	7.298	8.634	5341617	5142325	220	223	152.16- 228.24	190.20
	7.914	9.424	3476280	6299755	248	234	99.02- 148.54	123.78
			Average of Peak Amounts =		230	227		

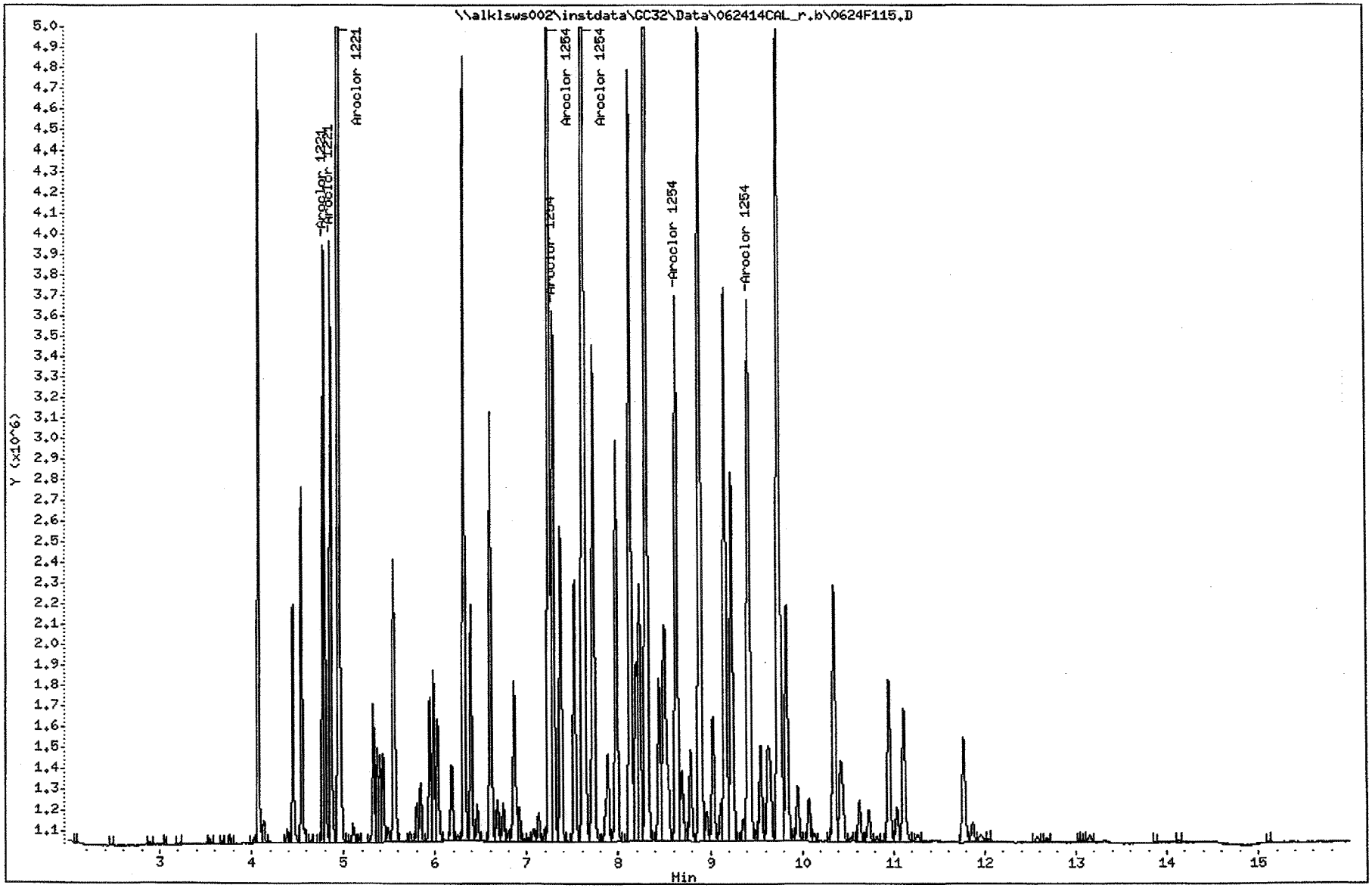
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F115.D
Date : 25-JUN-2014 08:07
Client ID:
Sample Info: 2154 @ 500-250ppb PCB6-42N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F115.D
Date : 25-JUN-2014 08:07
Client ID:
Sample Info: 2154 @ 500-250ppb PCB6-42N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

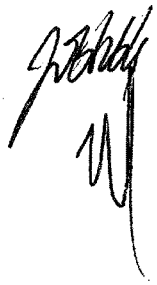
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F116.D
Inj Date : 25-JUN-2014 08:28
Sample Info: 2154 @ 1000-500ppb PCB6-42M
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

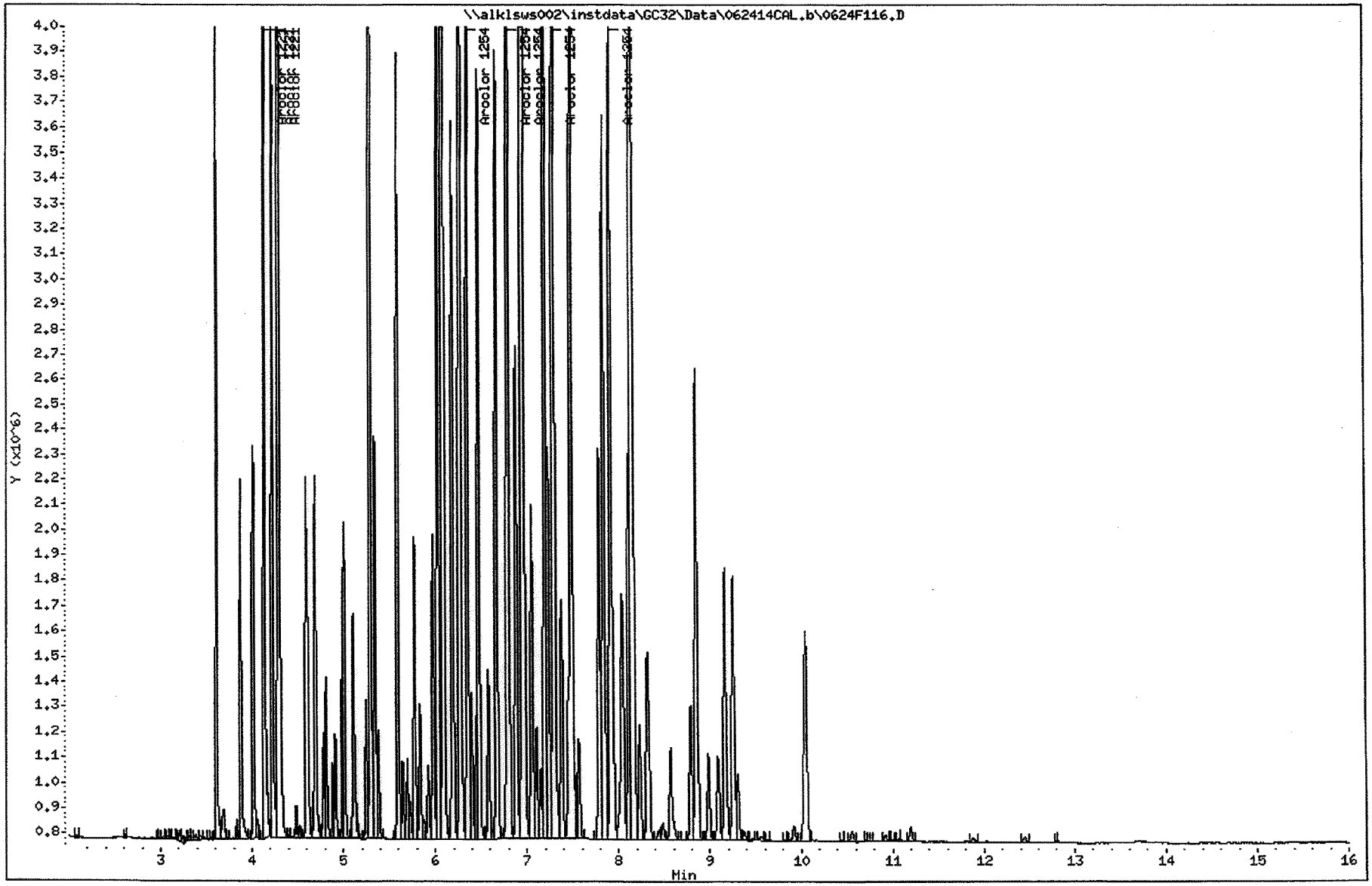
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.139	4.799	6279431	7534862	789	891	80.00- 120.00	100.00(A)
	4.226	4.869	4076521	6969580	801	887	51.93- 77.90	64.92(A)
	4.289	4.955	14578040	25363092	720	886	185.72- 278.59	232.16(A)
			Average of Peak Amounts =		770	888		
Aroclor 1254	6.356	7.249	5515040	19686660	453	448	80.00- 120.00	100.00
	6.799	7.299	9968018	8719998	470	462	144.59- 216.89	180.74
	6.956	7.625	19567787	28420449	454	464	283.85- 425.77	354.81
	7.299	8.635	10653864	10331828	439	447	154.54- 231.81	193.18
	7.916	9.425	6827068	12601340	487	469	99.03- 148.55	123.79
			Average of Peak Amounts =		461	458		

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

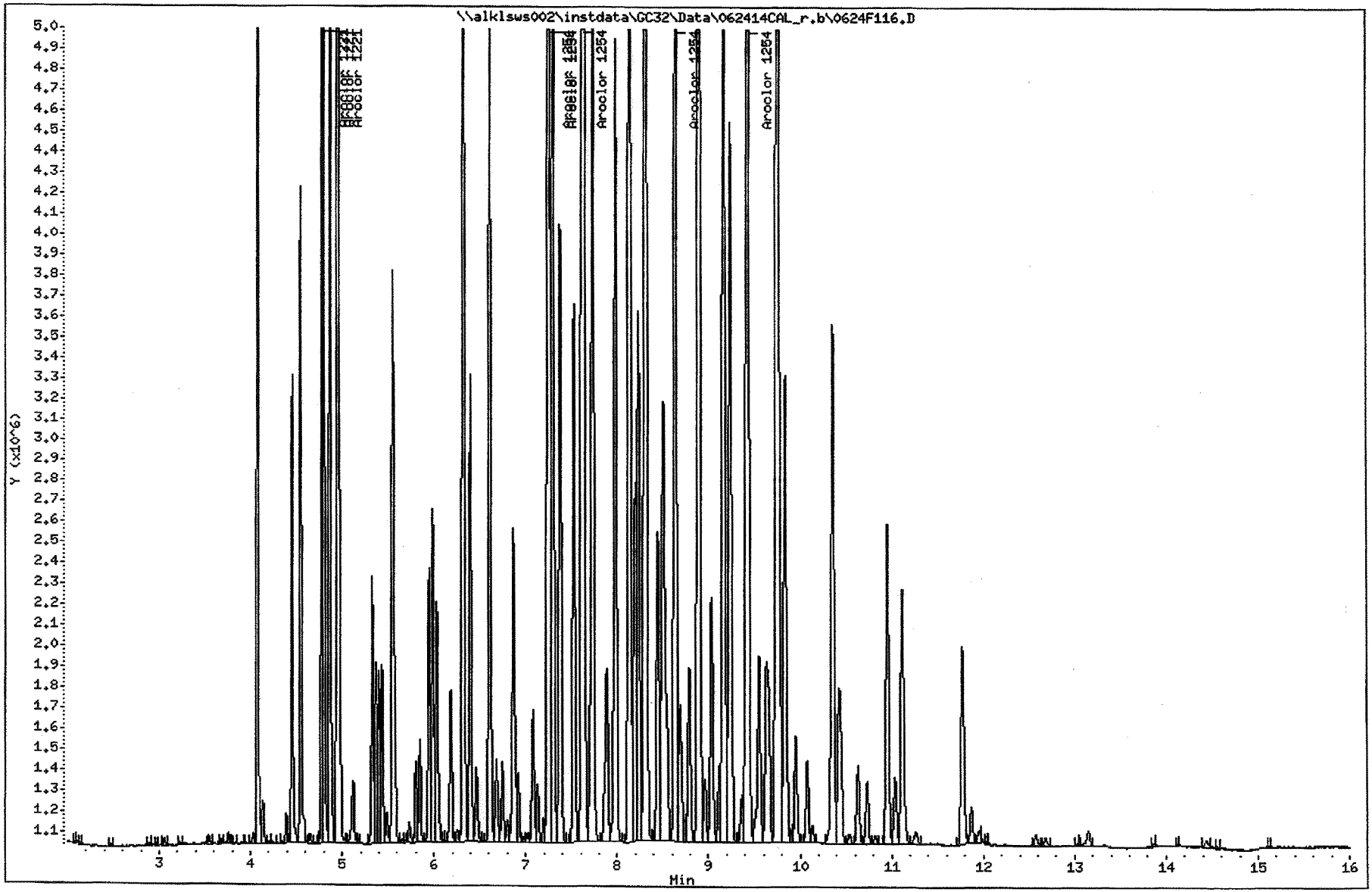


Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F116.D
Date : 25-JUN-2014 08:28
Client ID:
Instrument: GC32.i
Sample Info: 2154 @ 1000-500ppb PCB6-42M
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F116.D
Date : 25-JUN-2014 08:28
Client ID:
Sample Info: 2154 @ 1000-500ppb PCB6-42M

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Inj Date : 25-JUN-2014 08:49
Sample Info: 3262 @ 2.5ppb PCB6-35G
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

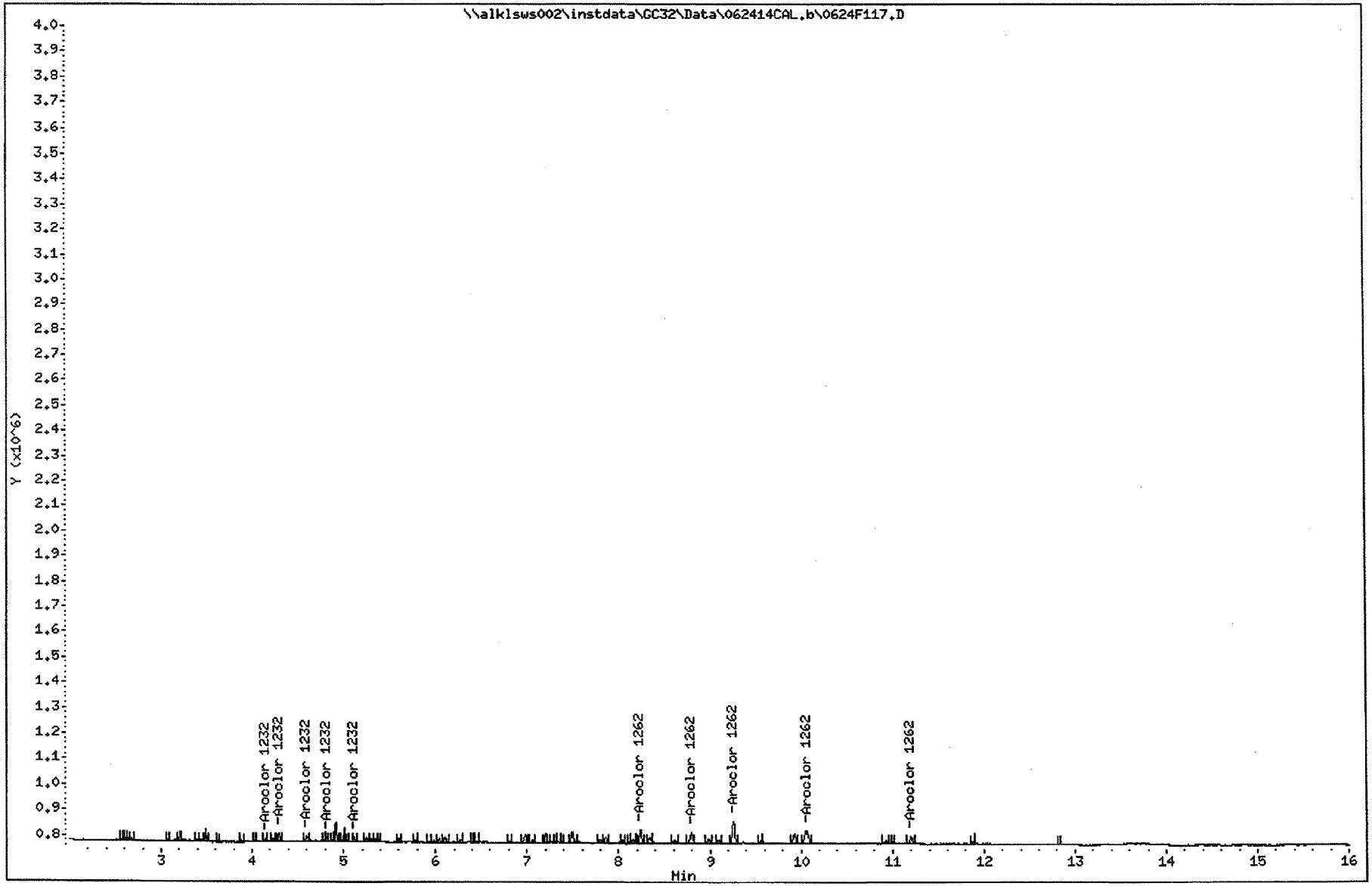
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.142	4.961	14046	68734	2.73	2.66	80.00- 120.00	100.00(M)
	4.295	5.335	40154	42699	2.57	2.78	228.70- 343.05	285.87(M)
	4.598	5.558	40679	27265	2.75	2.54	231.69- 347.54	289.61(M)
	4.818	5.951	17173	52892	2.93	2.77	97.81- 146.72	122.26(M)
	5.118	5.995	21406	64603	2.29	2.83	121.92- 182.88	152.40(M)
			Average of Peak Amounts =		2.65	2.72		
Aroclor 1262	8.235	9.961	103521	153923	2.80	2.85	80.00- 120.00	100.00
	8.798	10.431	90100	115249	2.74	2.80	69.63- 104.44	87.04
	9.262	11.121	174320	256227	2.87	2.87	134.71- 202.07	168.39
	10.058	11.801	134550	186510	2.81	2.95	103.98- 155.97	129.97
	11.205	13.158	57185	92696	2.58	2.77	44.19- 66.29	55.24
			Average of Peak Amounts =		2.76	2.85		

QC Flag Legend

M - Compound response manually integrated.

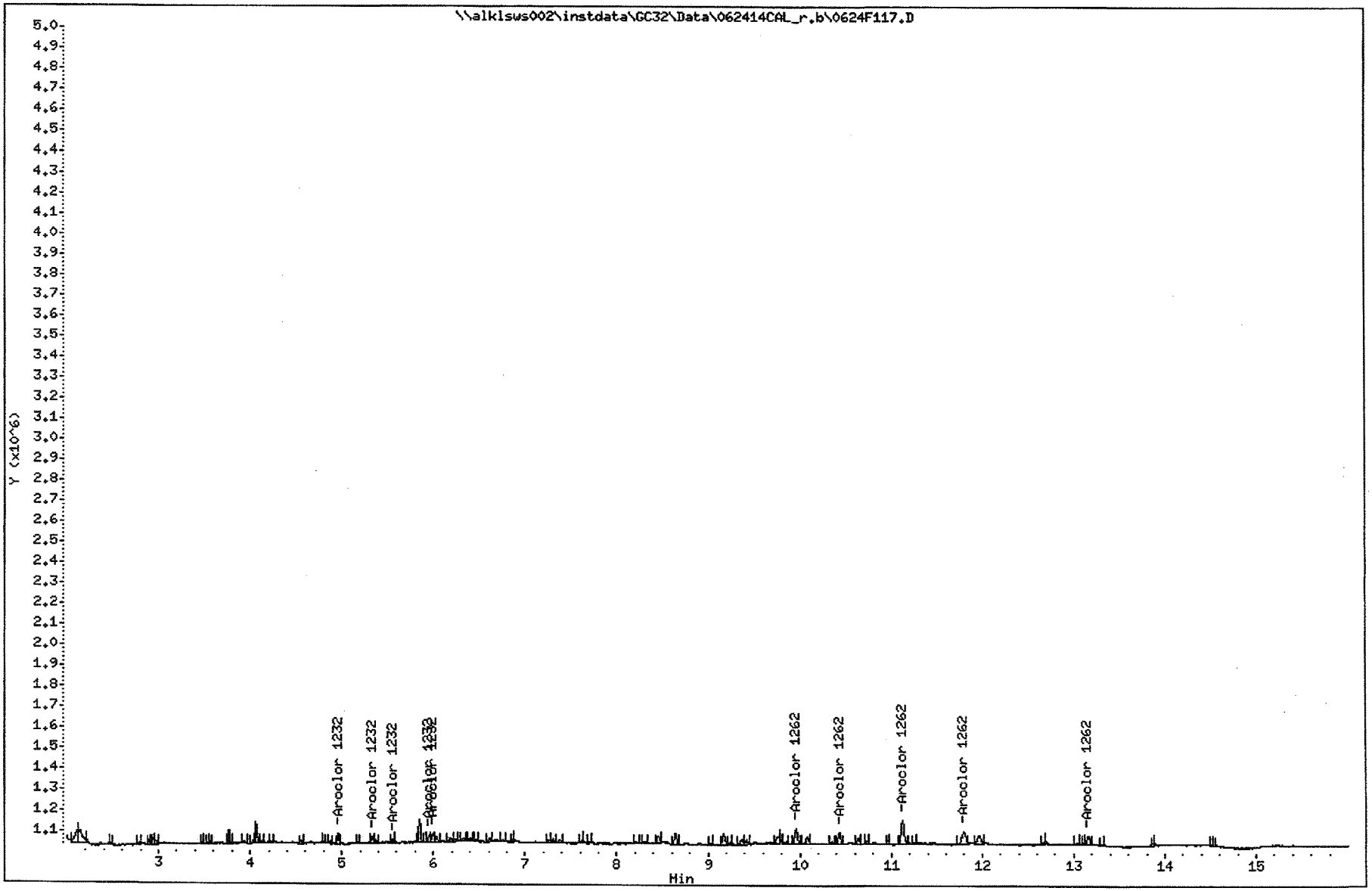
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
Date : 25-JUN-2014 08:49
Client ID:
Instrument: GC32.i
Sample Info: 3262 @ 2.5ppb PCB6-35G
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



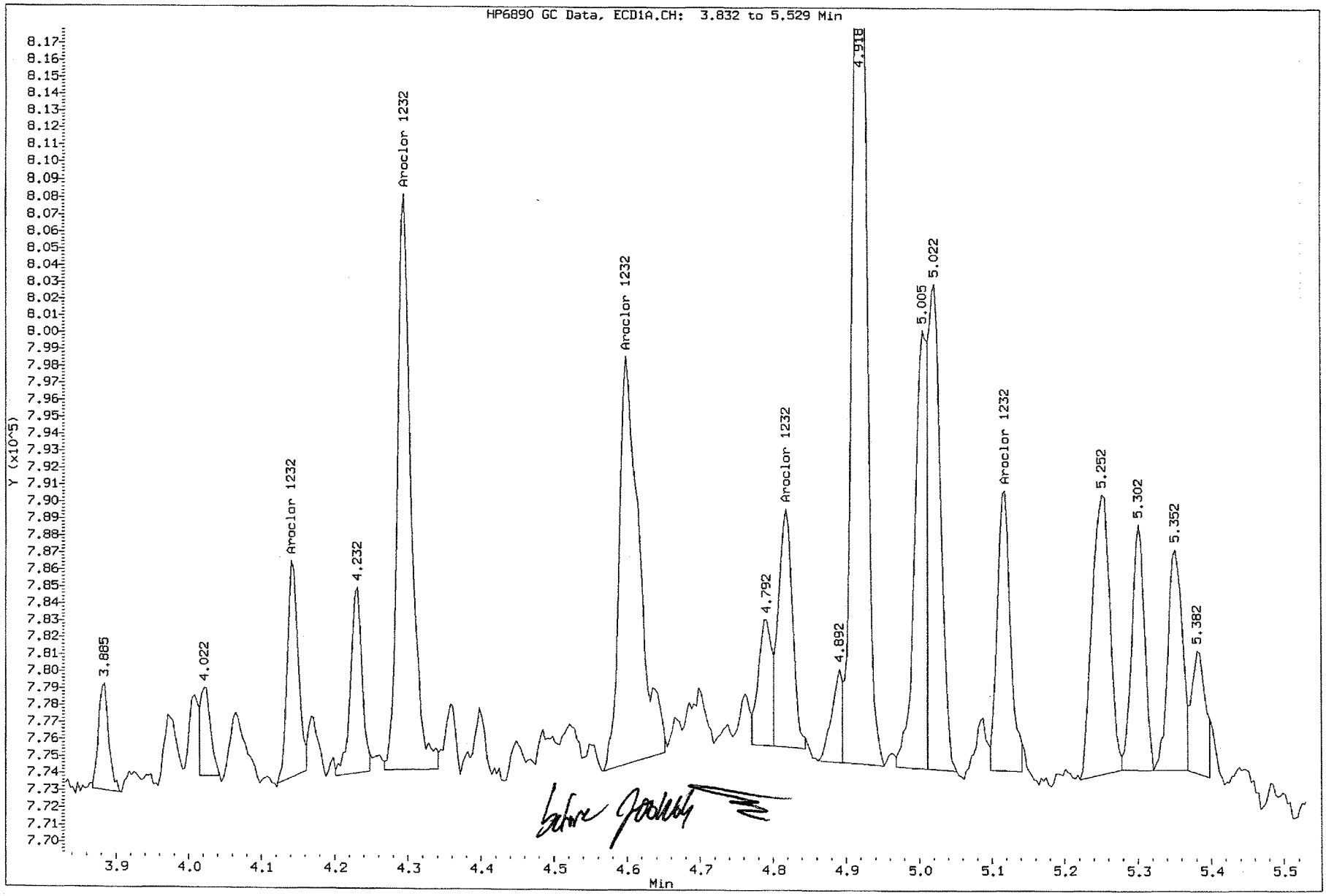
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Date : 25-JUN-2014 08:49
Client ID:
Sample Info: 3262 @ 2.5ppb PCB6-35C

Instrument: GC32.i

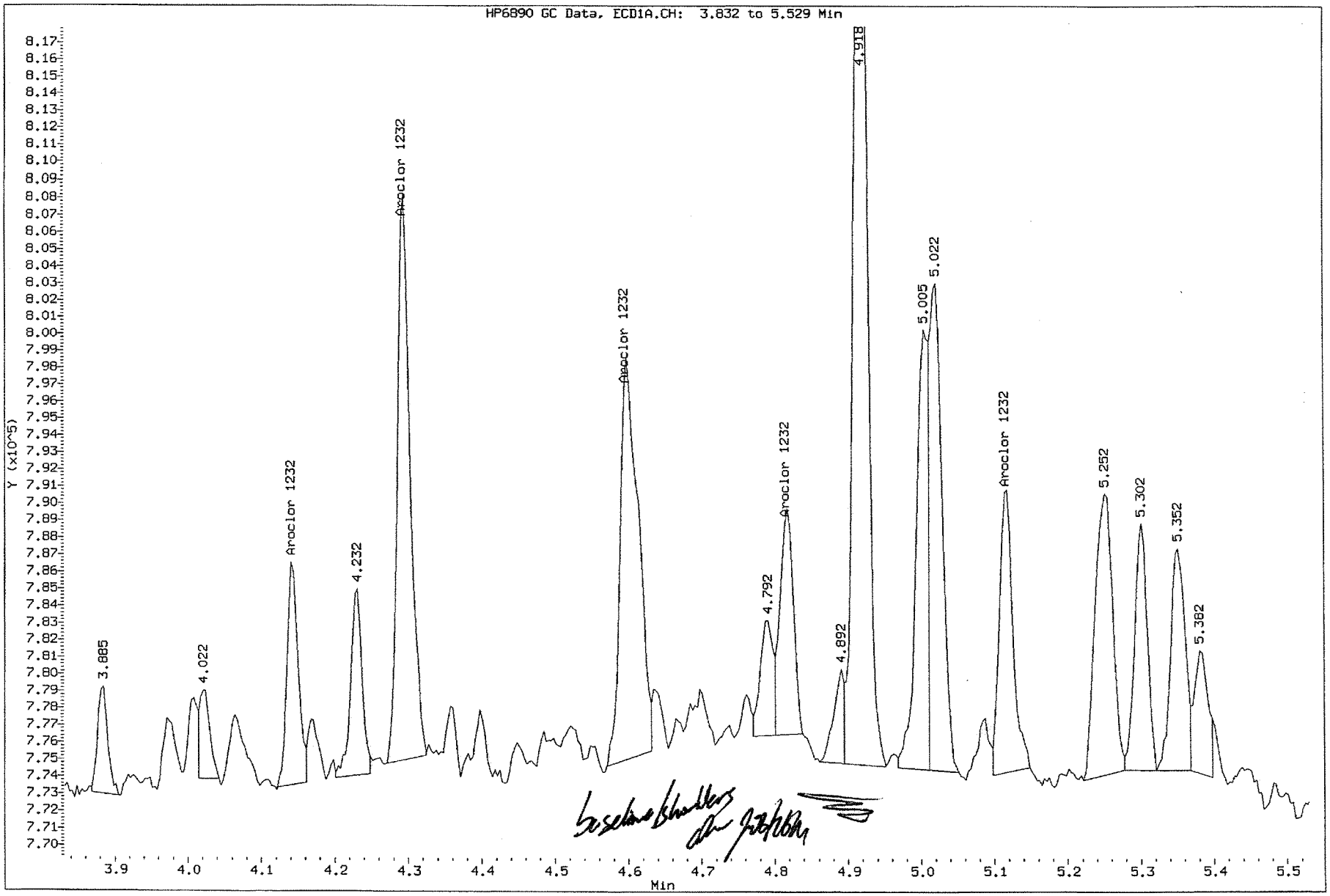
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



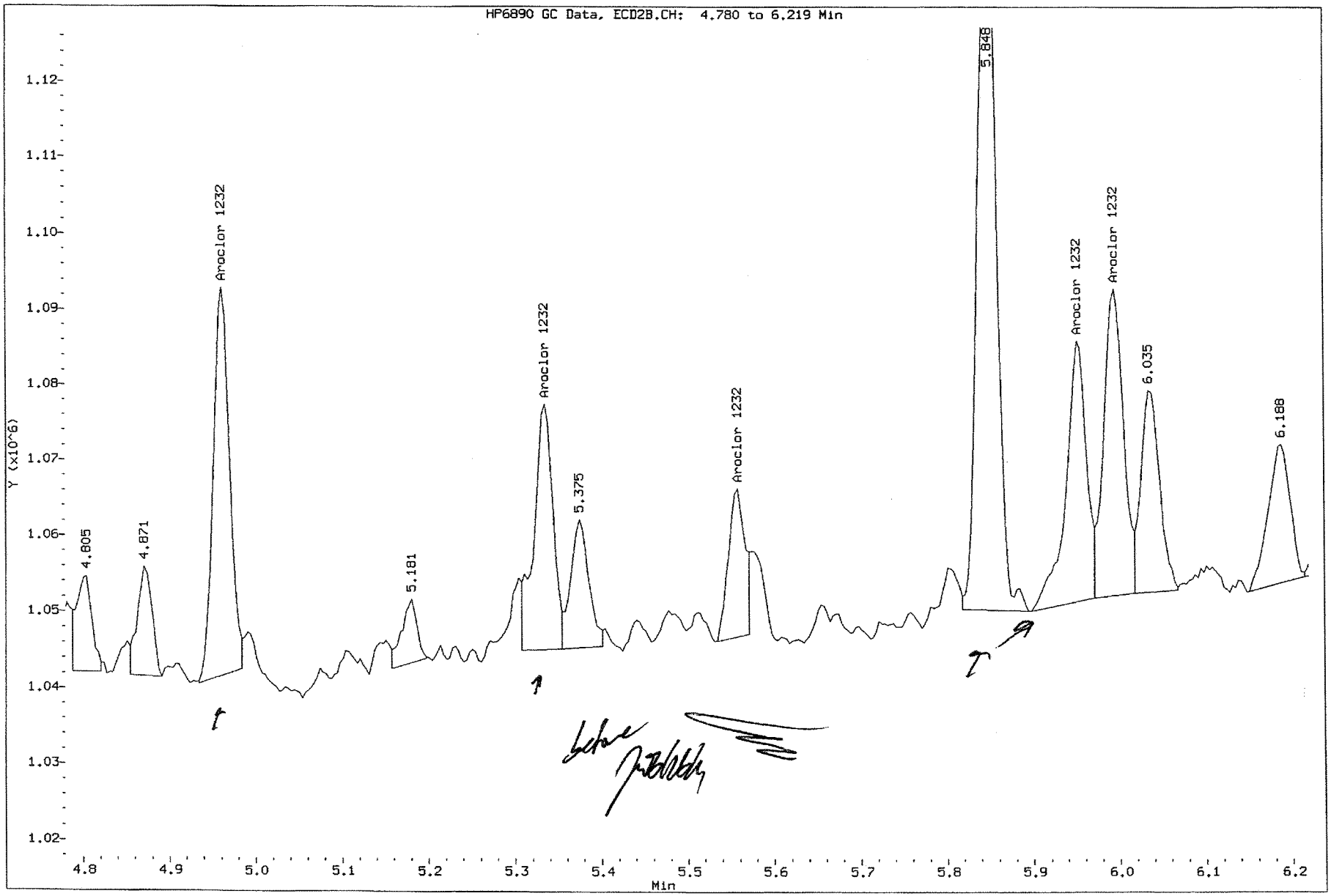
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.1
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.i
Client Sample ID:

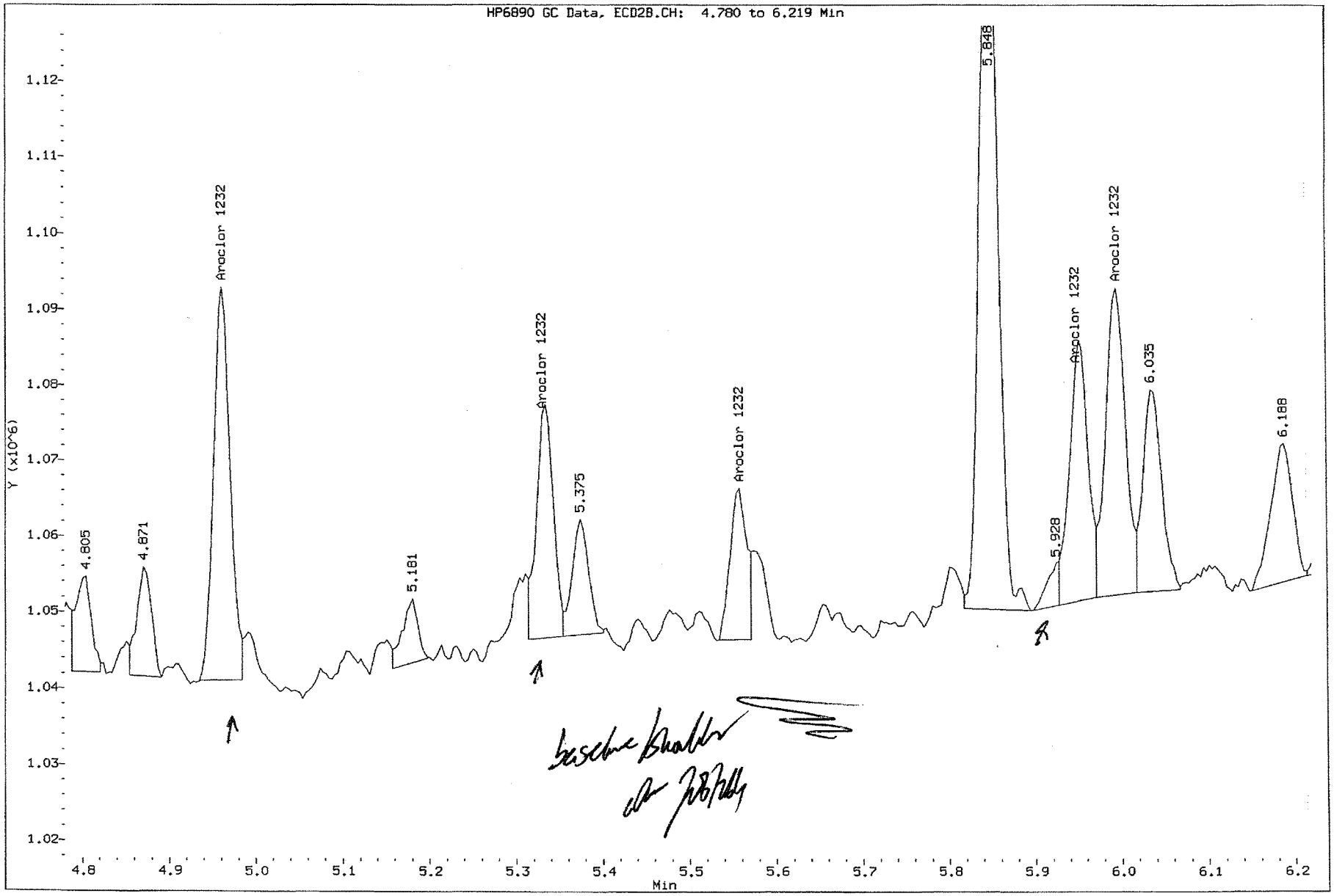


Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.i
Client Sample ID:



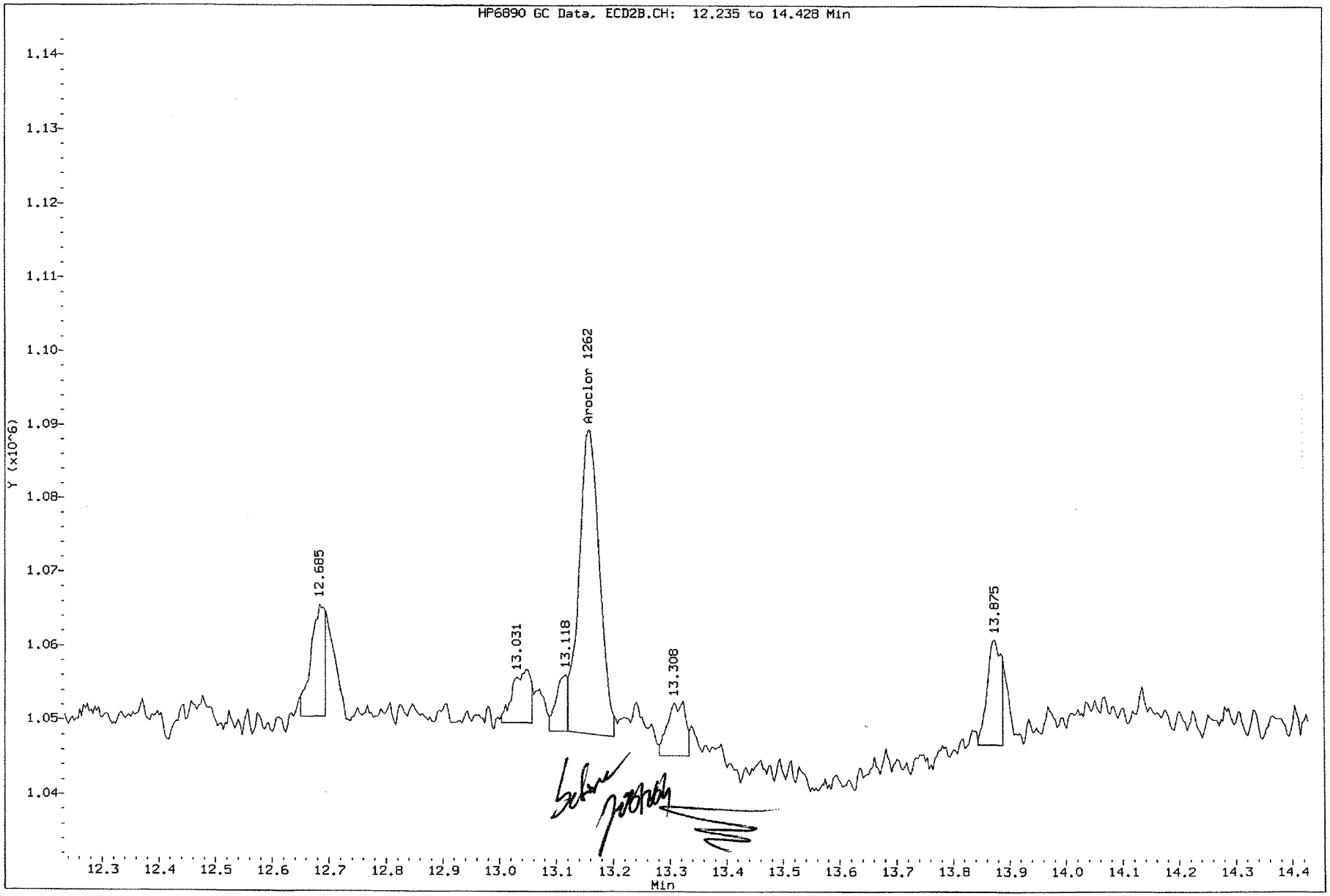
1890

Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.i
Client Sample ID:

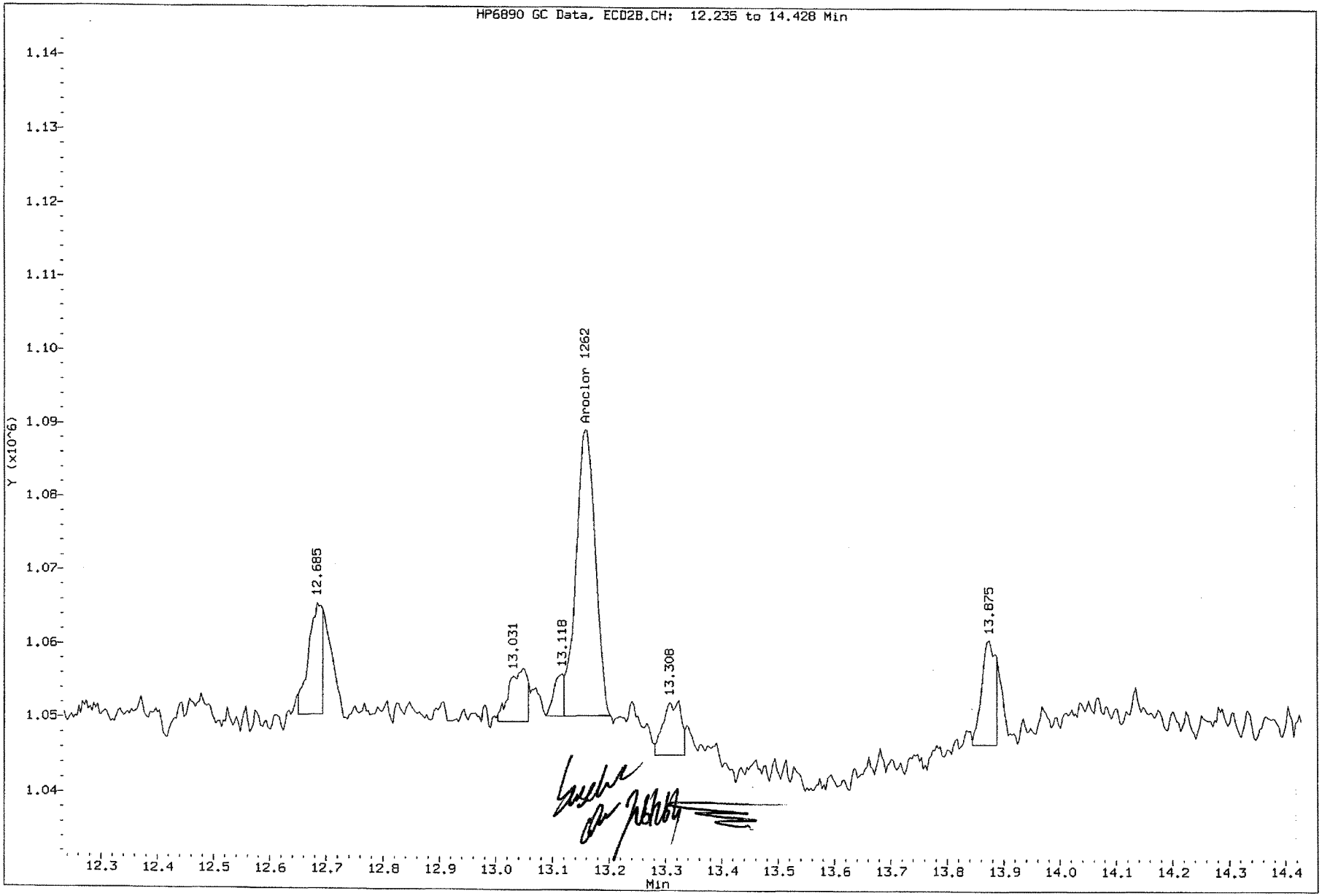


1891

Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F117.D
Injection Date: 25-JUN-2014 08:49
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D
Inj Date : 25-JUN-2014 09:10
Sample Info: 3262 @ 5.0ppb PCB6-35J
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

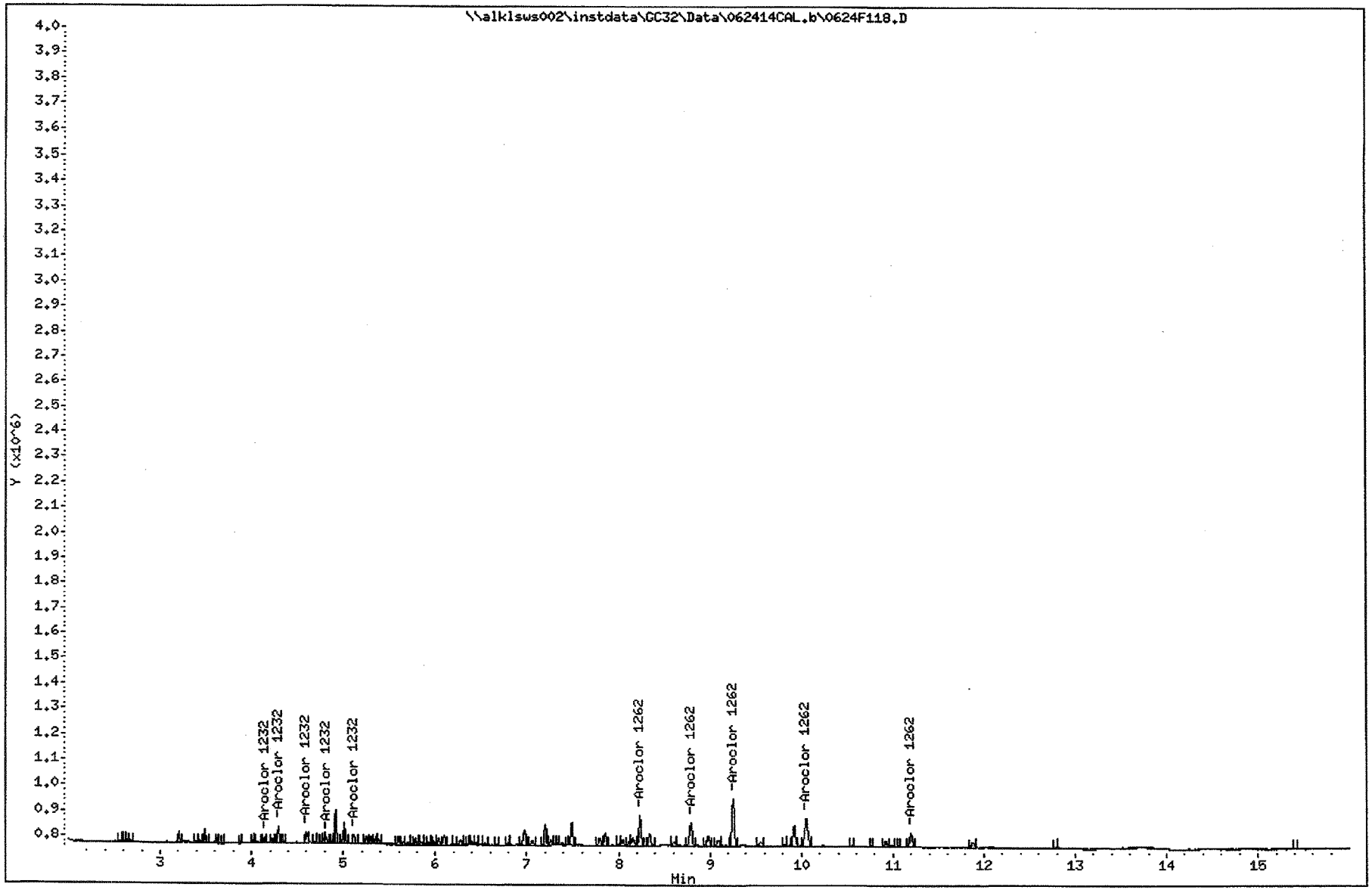
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.140	4.960	23640	136689	4.59	5.29	80.00- 120.00	100.00(M)
	4.293	5.333	82334	87508	5.27	5.70	278.63- 417.94	348.28(M)
	4.597	5.553	75207	59542	5.08	5.55	254.51- 381.76	318.13(M)
	4.817	5.950	32097	106008	5.48	5.55	108.62- 162.93	135.77(M)
	5.114	5.993	46717	120256	4.99	5.26	158.09- 237.14	197.62(M)
			Average of Peak Amounts =		5.08	5.47		
Aroclor 1262	8.234	9.957	204473	295006	5.52	5.46	80.00- 120.00	100.00
	8.793	10.427	176354	224138	5.36	5.44	69.00- 103.50	86.25
	9.257	11.117	342158	494326	5.63	5.55	133.87- 200.80	167.34
	10.054	11.800	266122	338095	5.56	5.35	104.12- 156.18	130.15
	11.197	13.157	114769	190688	5.18	5.70	44.90- 67.36	56.13
			Average of Peak Amounts =		5.45	5.50		

QC Flag Legend

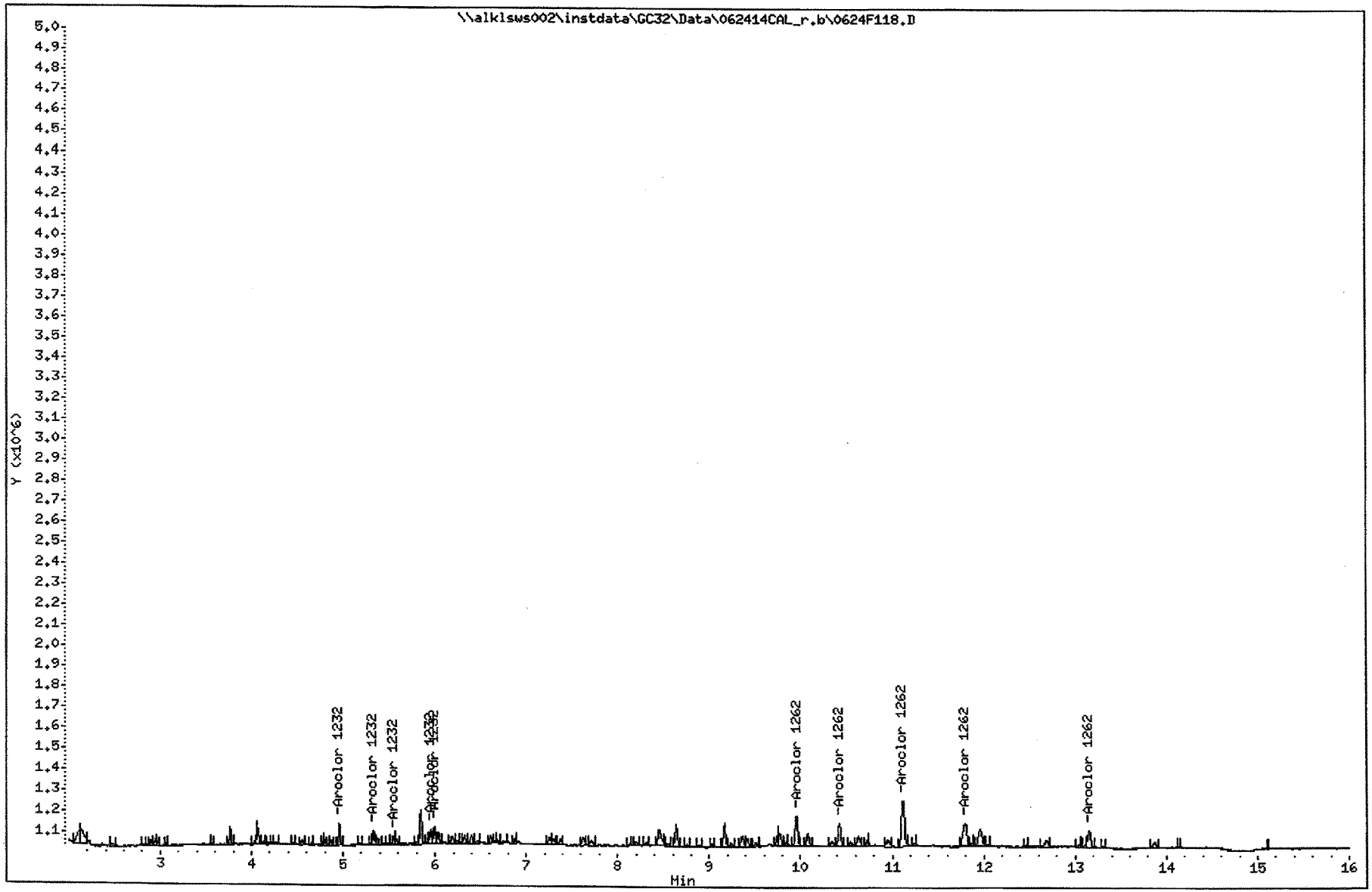
M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
Date : 25-JUN-2014 09:10
Client ID:
Instrument: GC32.i
Sample Info: 3262 @ 5.0ppb PCB6-35J
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

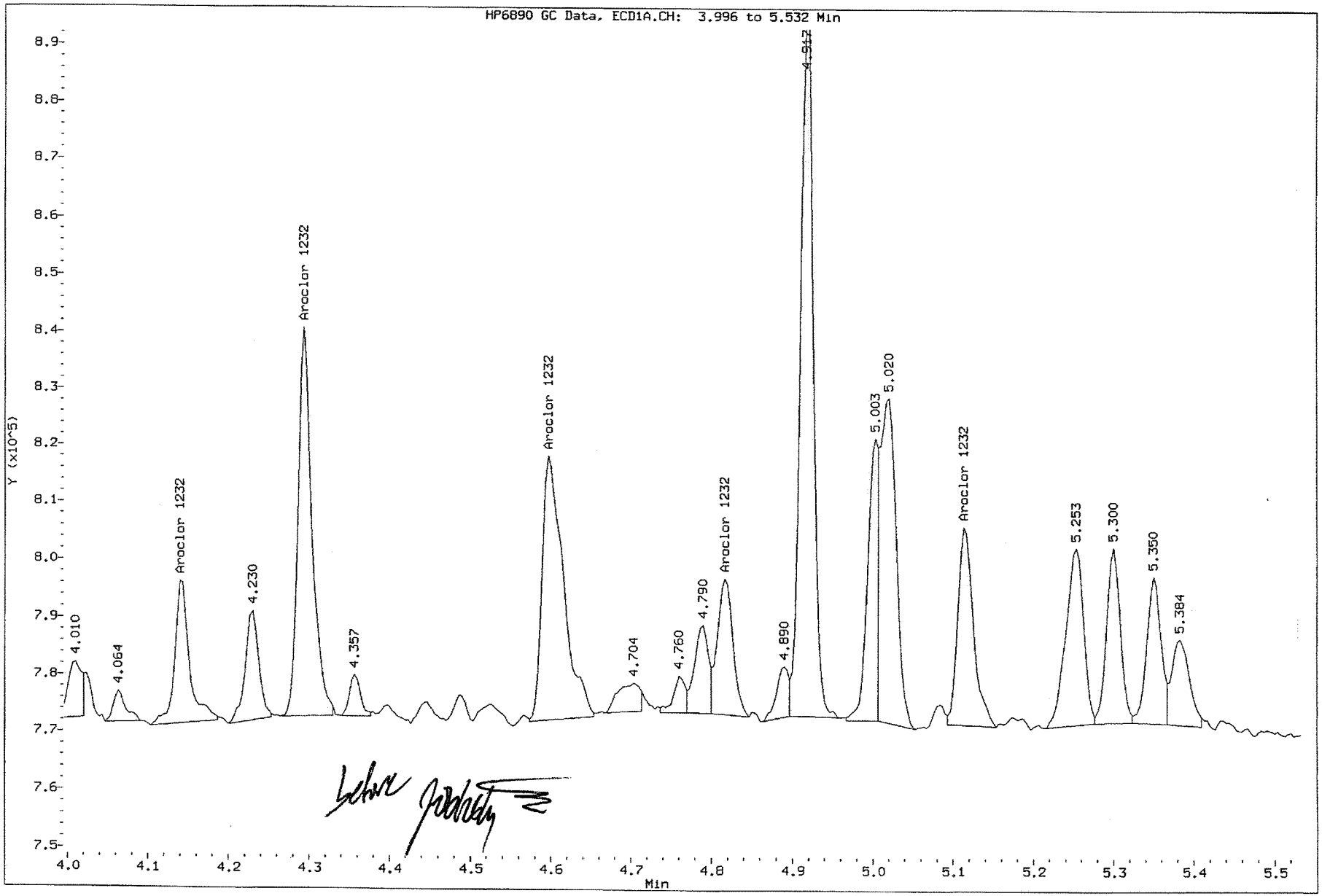


Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D
Date : 25-JUN-2014 09:10
Client ID:
Sample Info: 3262 @ 5.0ppb PCB6-35J

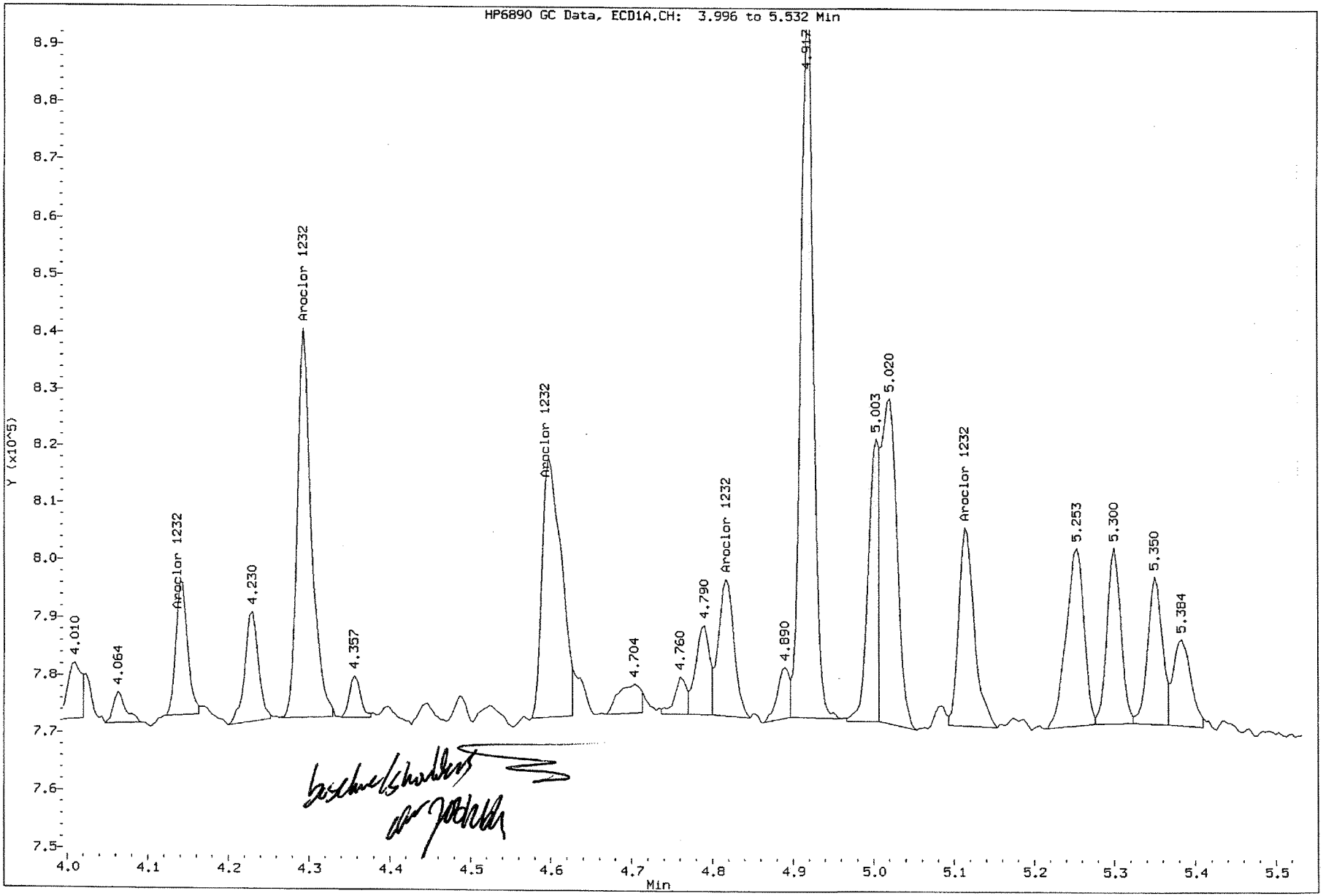
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



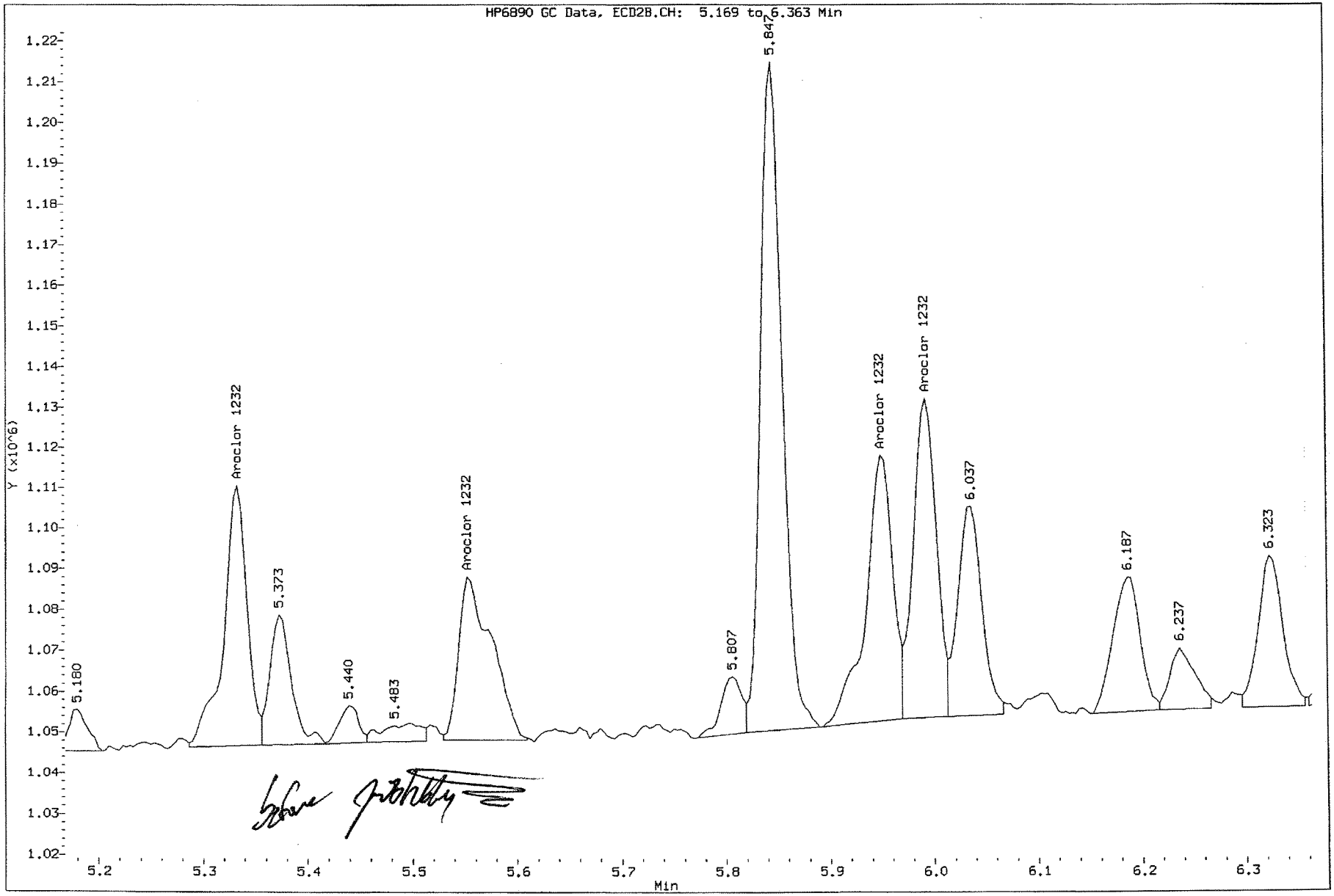
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
Injection Date: 25-JUN-2014 09:10
Instrument: GC32.i
Client Sample ID:



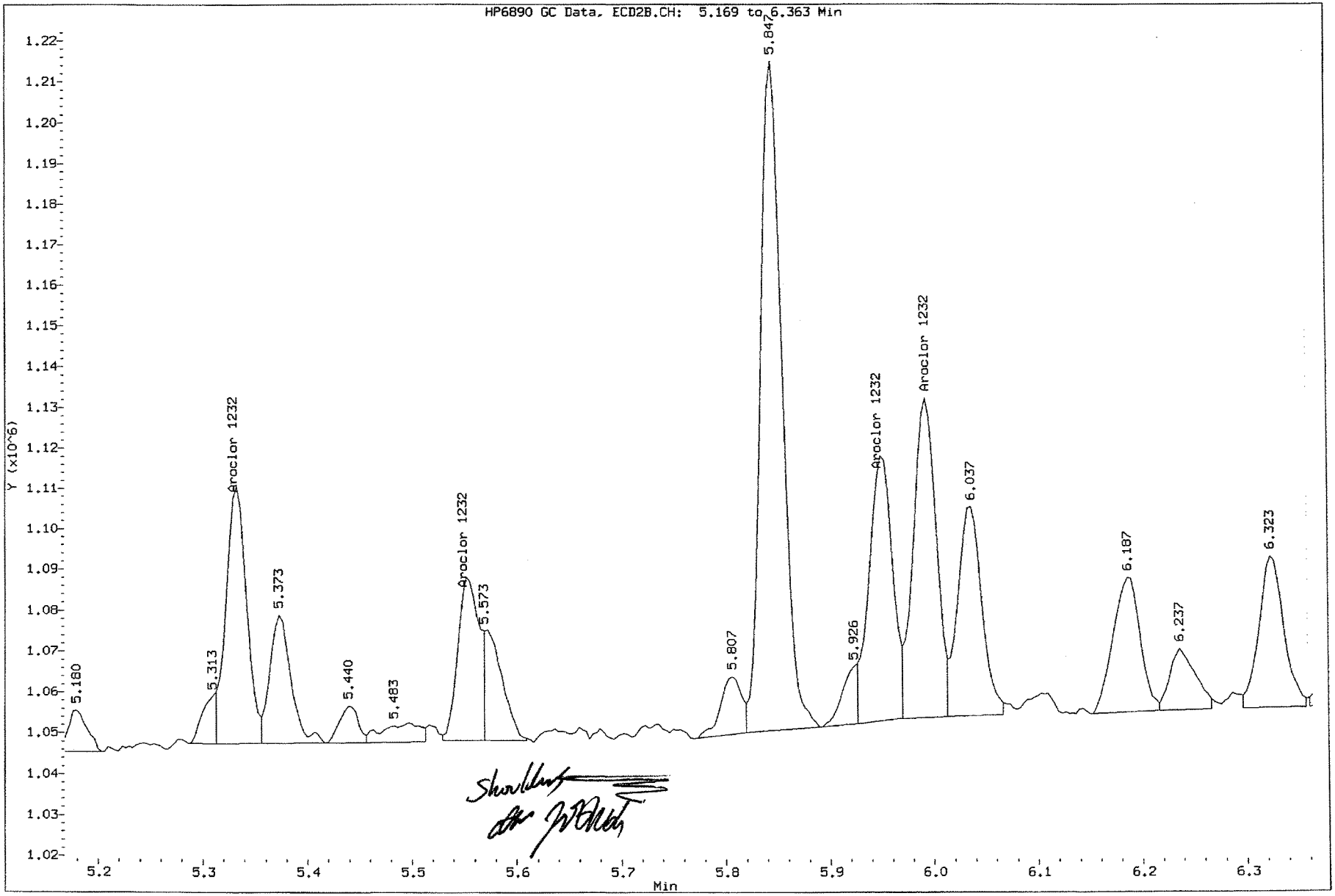
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F118.D
Injection Date: 25-JUN-2014 09:10
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D
Injection Date: 25-JUN-2014 09:10
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F118.D
Injection Date: 25-JUN-2014 09:10
Instrument: GC32.1
Client Sample ID:



1900

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D
Inj Date : 25-JUN-2014 09:31
Sample Info: 3262 @ 25ppb PCB6-35F
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

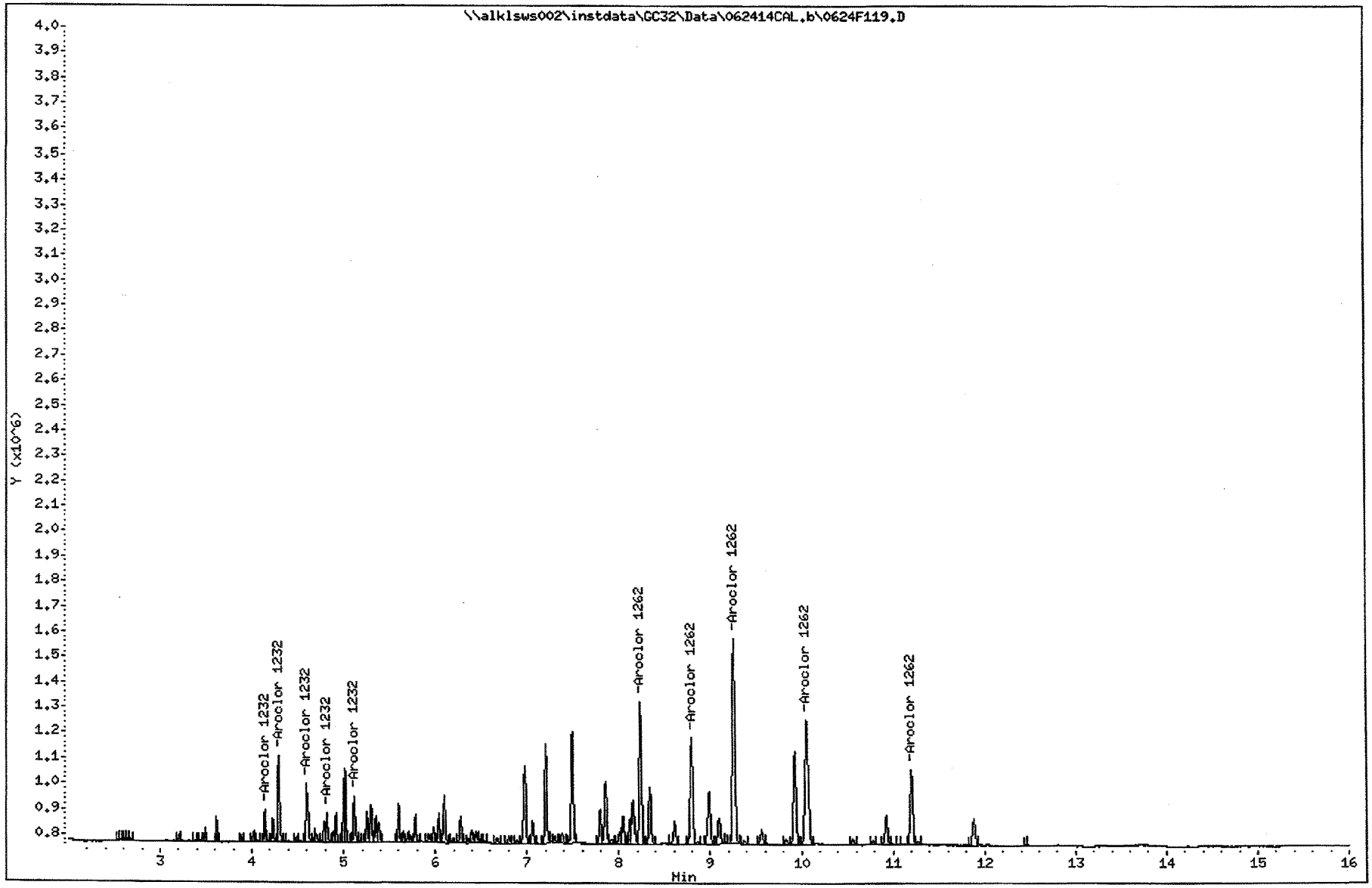
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.142	4.962	131400	678506	25.5	26.3	80.00- 120.00	100.00(M)
	4.292	5.335	419030	392774	26.8	25.6	255.12- 382.68	318.90(M)
	4.599	5.555	396375	284835	26.8	26.6	241.32- 361.99	301.66(M)
	4.819	5.952	144172	480308	24.6	25.1	87.78- 131.66	109.72(M)
	5.115	5.992	249248	577329	26.6	25.3	151.75- 227.62	189.69(M)
			Average of Peak Amounts =		26.1	25.8		
Aroclor 1262	8.235	9.958	974951	1400388	26.3	25.9	80.00- 120.00	100.00
	8.795	10.428	875141	1065905	26.6	25.9	71.81- 107.72	89.76
	9.259	11.125	1545820	2248470	25.4	25.2	126.84- 190.26	158.55
	10.055	11.802	1238258	1625420	25.9	25.7	101.61- 152.41	127.01
	11.202	13.158	587375	859291	26.5	25.7	48.20- 72.30	60.25
			Average of Peak Amounts =		26.1	25.7		

QC Flag Legend

M - Compound response manually integrated.

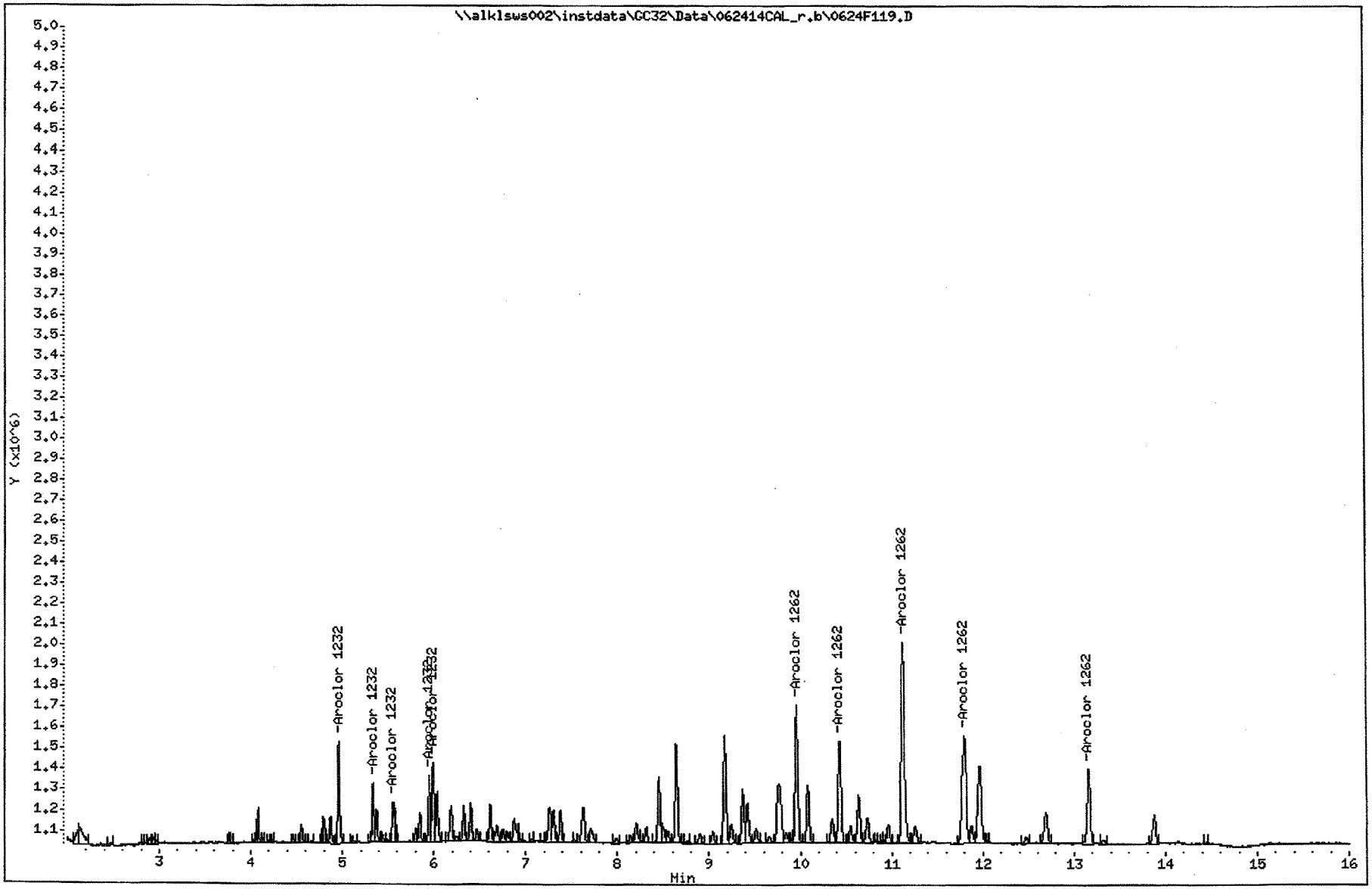
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D
Date : 25-JUN-2014 09:31
Client ID:
Sample Info: 3262 @ 25ppb PCB6-35F

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

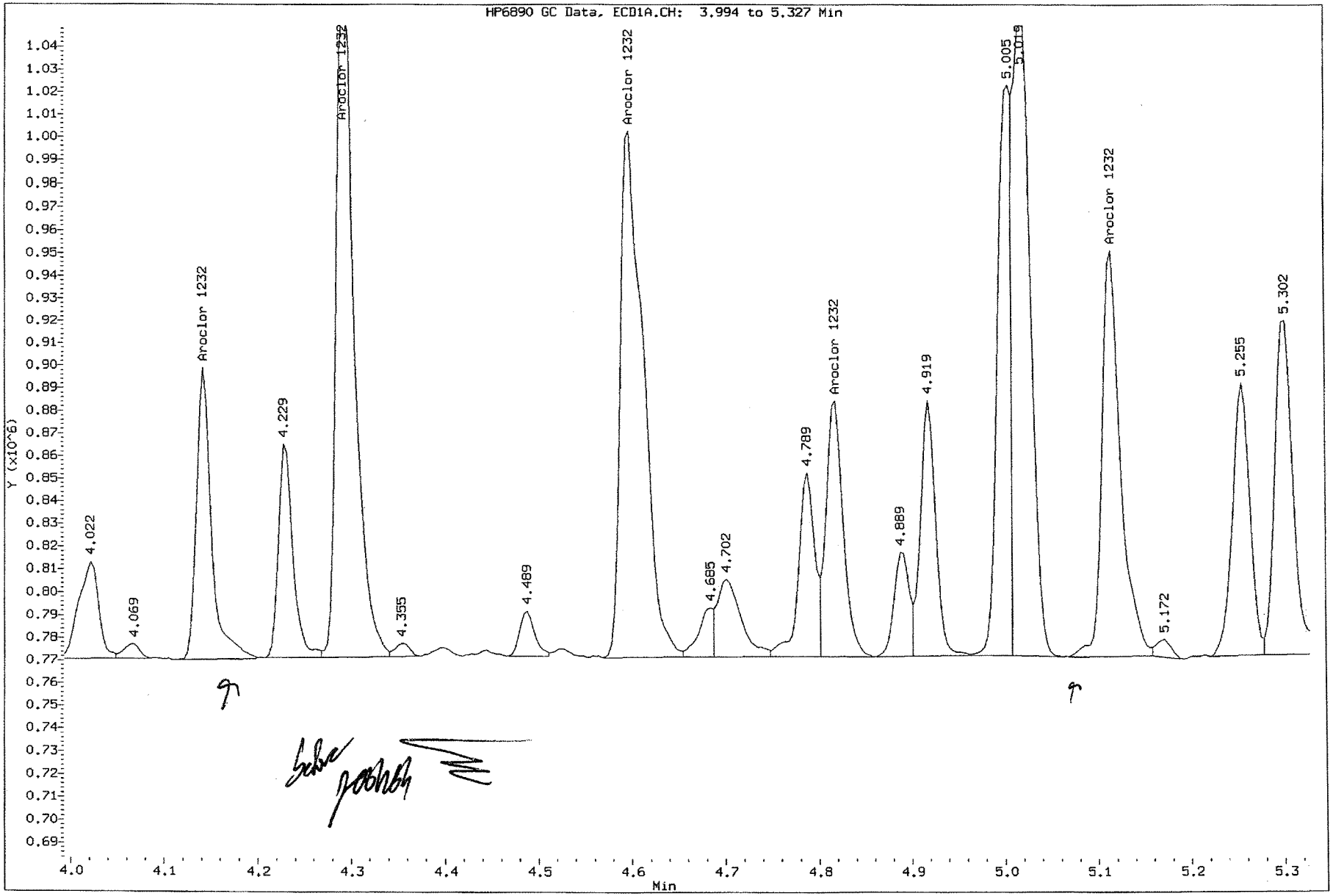


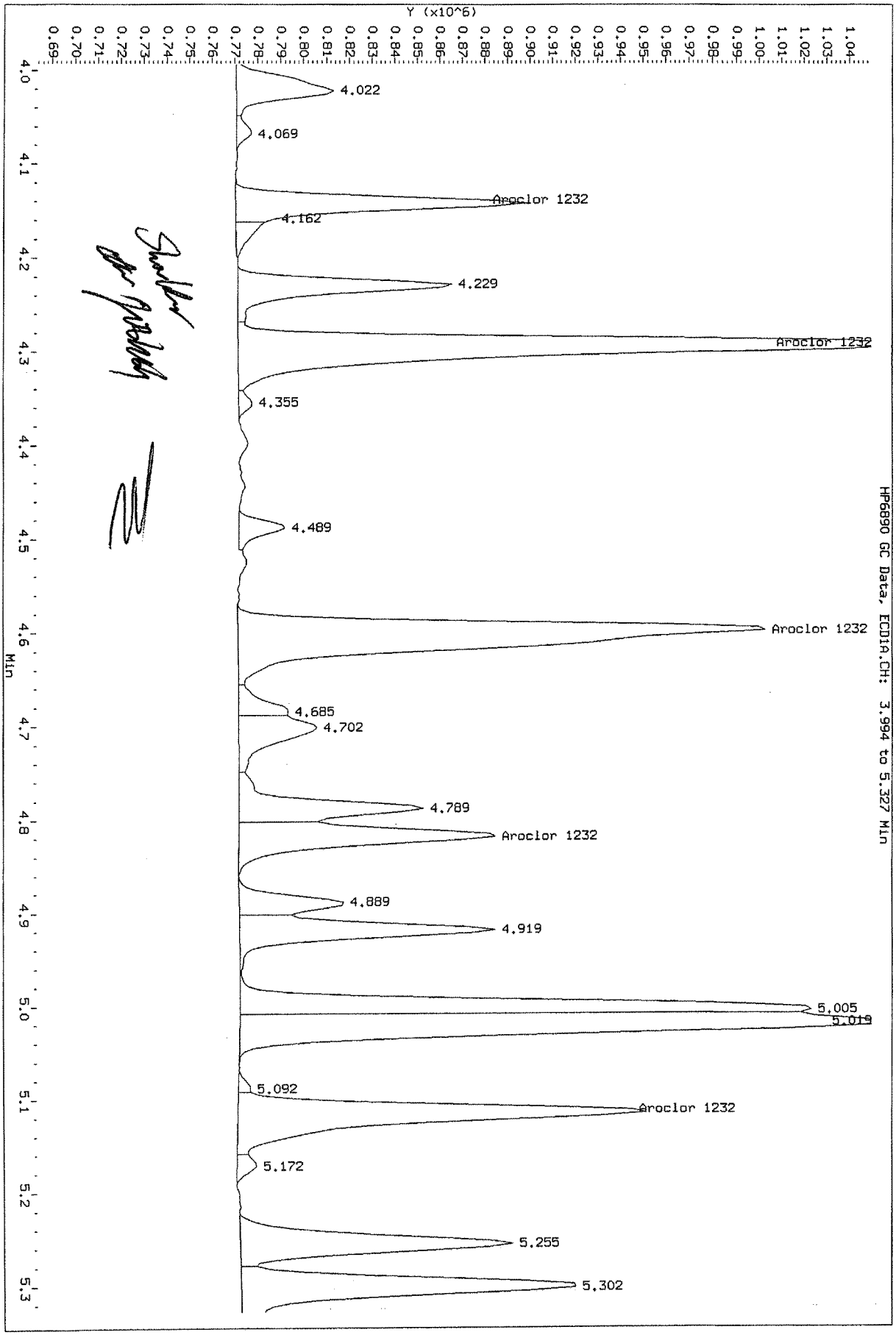
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D
Date : 25-JUN-2014 09:31
Client ID:
Sample Info: 3262 @ 25ppb PCB6-35F

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32

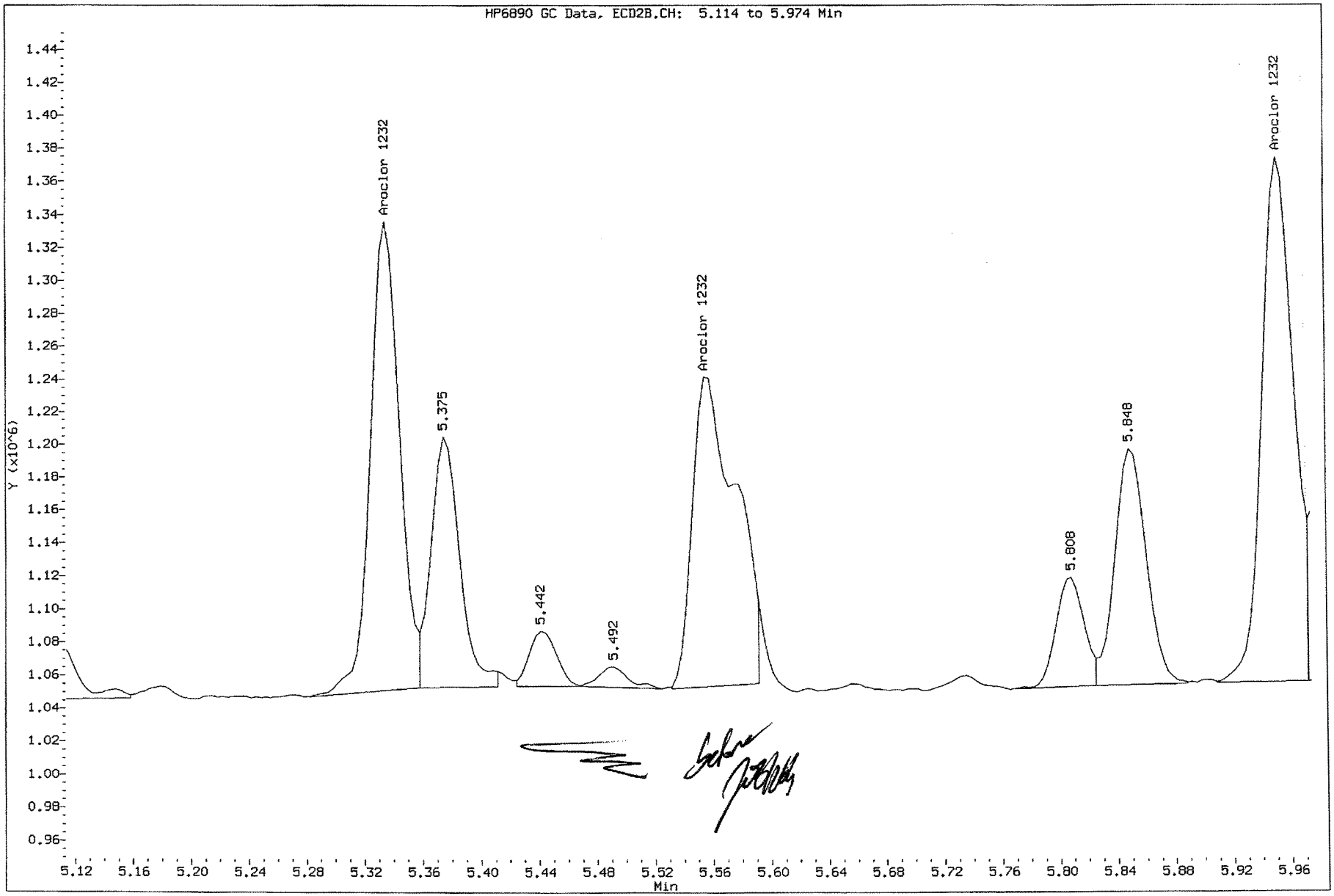


Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F119.D
Injection Date: 25-JUN-2014 09:31
Instrument: GC32.i
Client Sample ID:



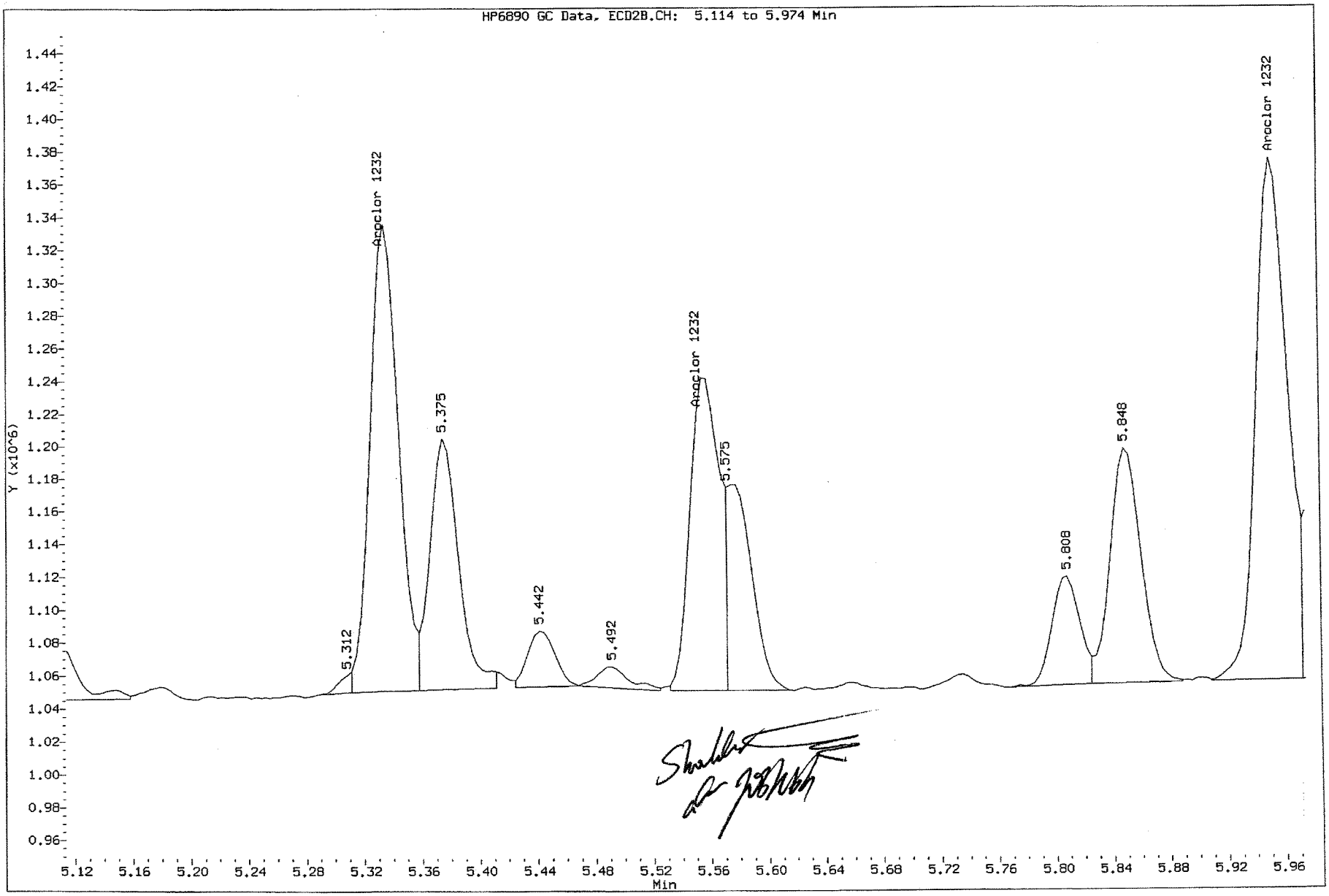

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624f119.D
Injection Date: 25-JUN-2014 09:31
Instrument: GC32.1
Client Sample ID:
HP6890 GC Data, ECD1A.CH: 3.994 to 5.327 Min
Y (x10^6)
Min
4.022
4.069
Aroclor 1232
4.162
4.229
Aroclor 1232
4.355
4.489
Aroclor 1232
4.685
4.702
4.789
Aroclor 1232
4.889
4.919
5.005
5.019
5.092
Aroclor 1232
5.172
5.255
5.302

Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D
Injection Date: 25-JUN-2014 09:31
Instrument: GC32.i
Client Sample ID:



1906

Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F119.D
Injection Date: 25-JUN-2014 09:31
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D
Report Date: 26-Jun-2014 00:47

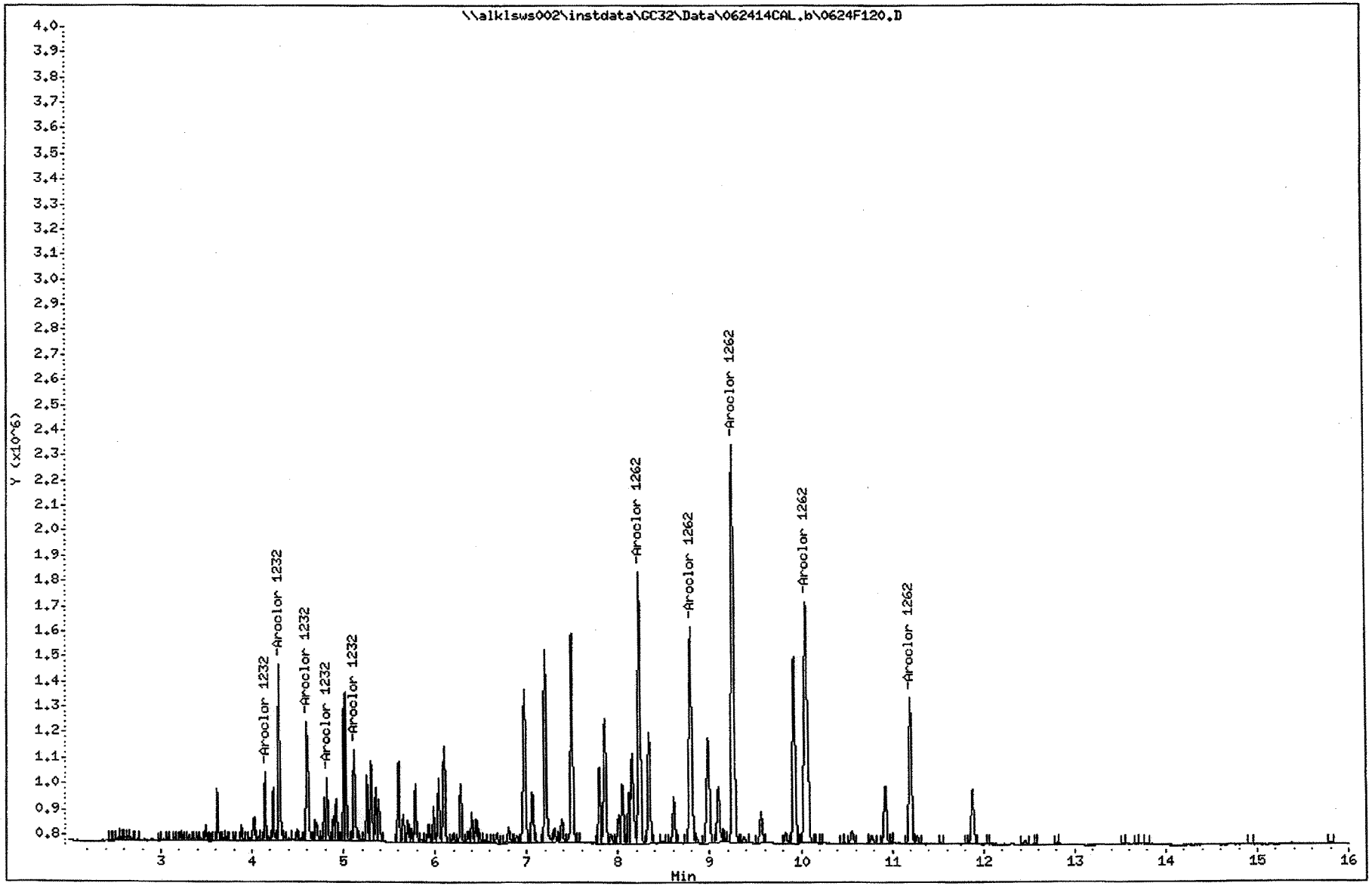
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D
Inj Date : 25-JUN-2014 09:52
Sample Info: 3262 @ 50ppb PCB6-35I
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

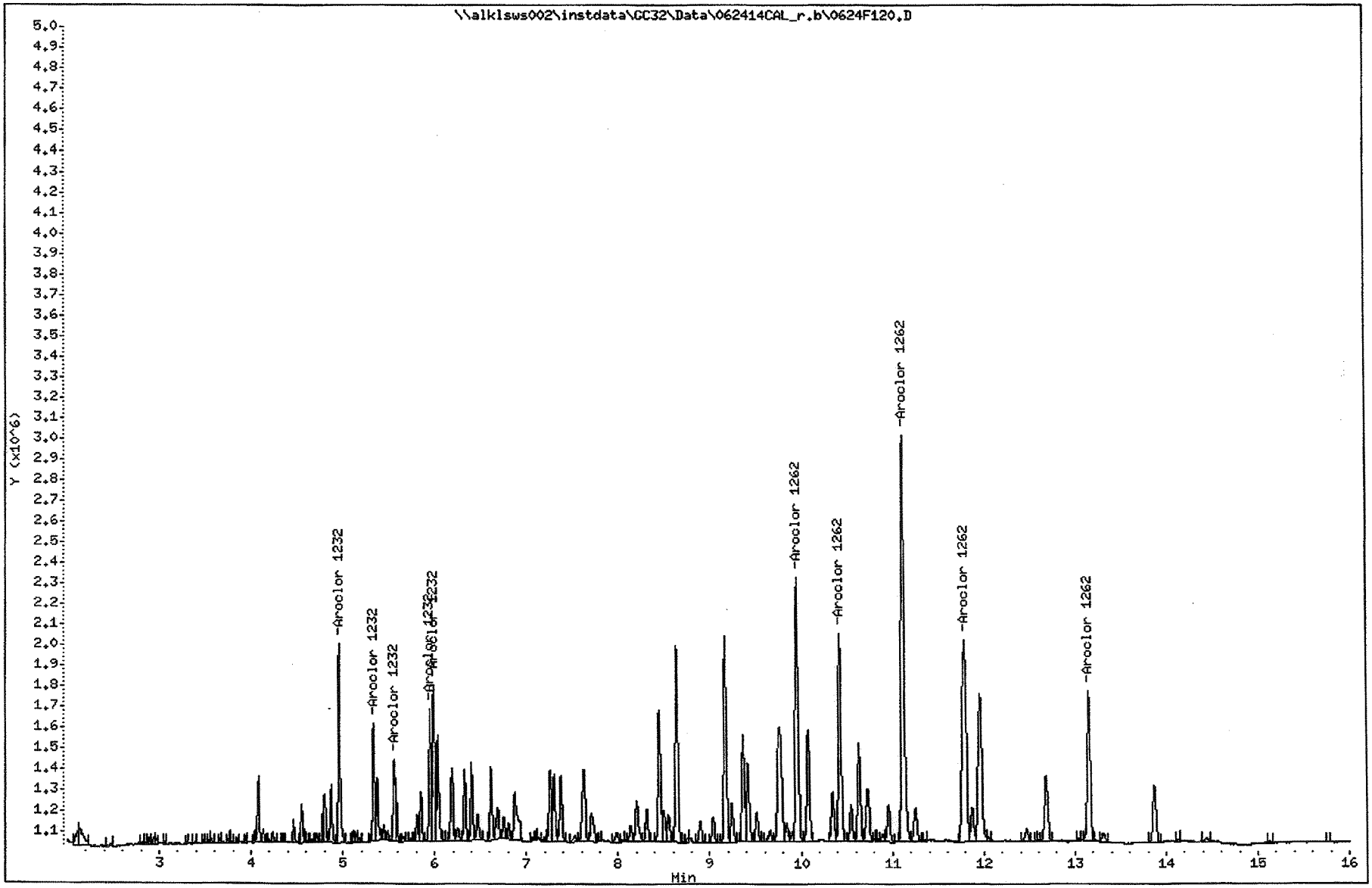
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.145	4.962	273886	1381700	53.1	53.5	80.00- 120.00	100.00
	4.295	5.335	845427	808766	54.1	52.7	246.94- 370.41	308.68
	4.599	5.558	795506	574354	53.7	53.6	232.36- 348.54	290.45
	4.819	5.952	294823	974877	50.4	51.0	86.12- 129.17	107.64
	5.115	5.995	512935	1152286	54.8	50.4	149.82- 224.74	187.28
			Average of Peak Amounts =		53.2	52.2		
Aroclor 1262	8.235	9.958	1921113	2735299	51.9	50.6	80.00- 120.00	100.00
	8.795	10.425	1748601	2109567	53.2	51.2	72.82- 109.22	91.02
	9.259	11.118	3037315	4449804	50.0	49.9	126.48- 189.72	158.10
	10.055	11.795	2487016	3213474	52.0	50.9	103.57- 155.35	129.46
	11.202	13.155	1204208	1718054	54.4	51.3	50.15- 75.22	62.68
			Average of Peak Amounts =		52.3	50.8		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F120.D
Date : 25-JUN-2014 09:52
Client ID:
Instrument: GC32.i
Sample Info: 3262 @ 50ppb PCB6-35I
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

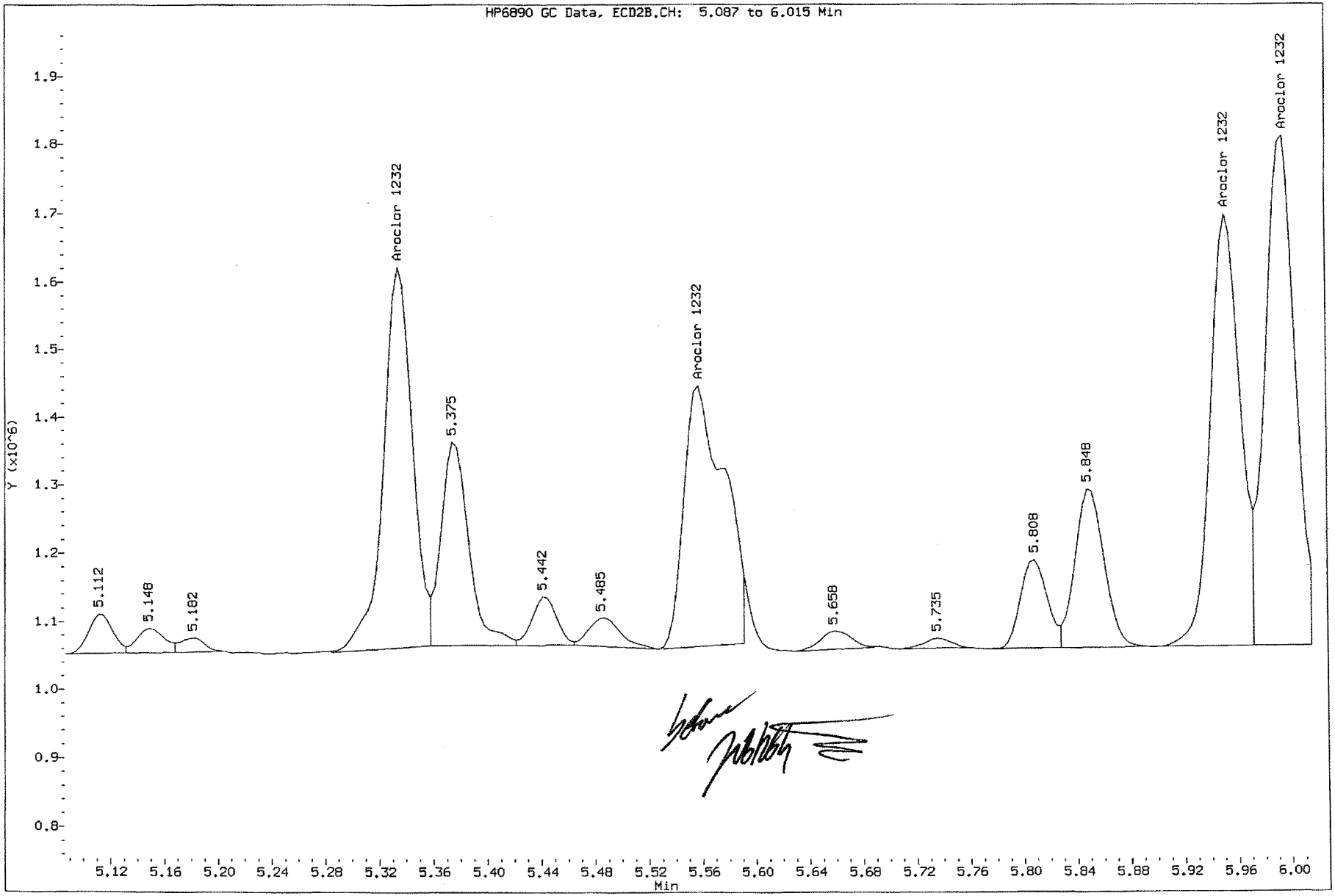


Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D
Date : 25-JUN-2014 09:52
Client ID:
Sample Info: 3262 @ 50ppb PCB6-35I

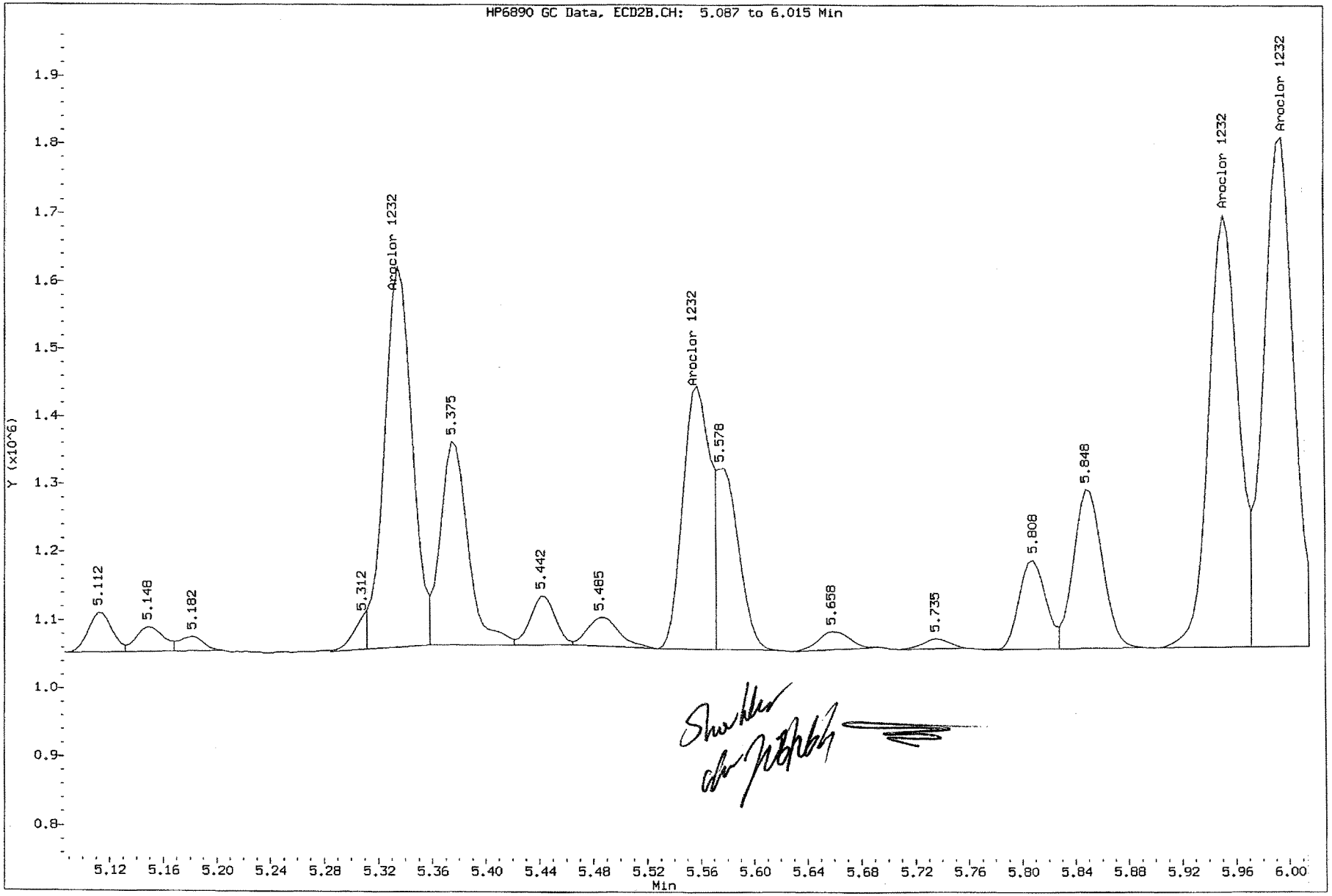
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D
Injection Date: 25-JUN-2014 09:52
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F120.D
Injection Date: 25-JUN-2014 09:52
Instrument: GC32.i
Client Sample ID:



1912

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

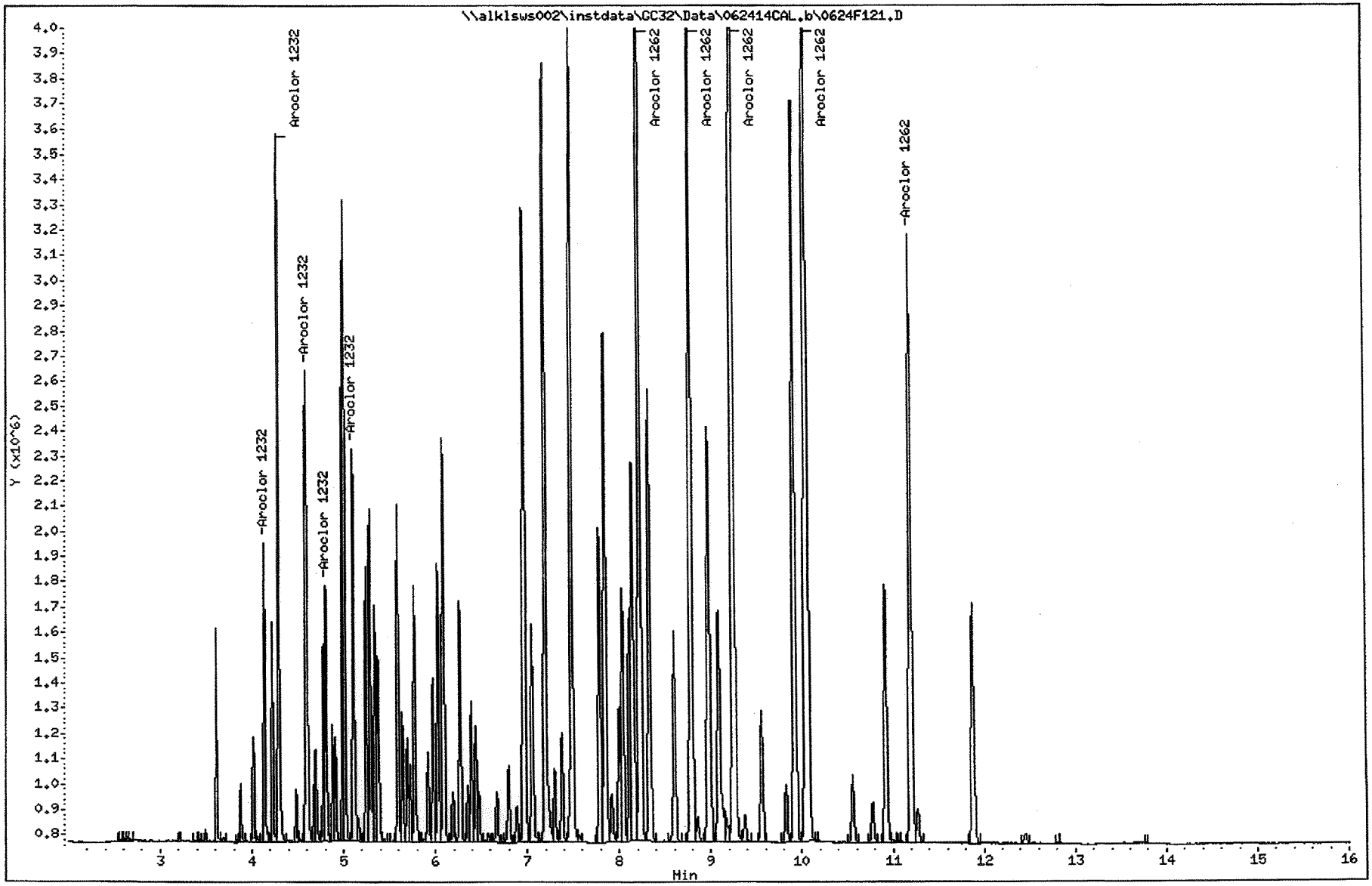
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F121.D
Inj Date : 25-JUN-2014 10:13
Sample Info: 3262 @ 250ppb PCB6-35E
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.137	4.956	1250356	5952686	243	230	80.00- 120.00	100.00
	4.290	5.326	3506252	3370570	224	219	224.34- 336.50	280.42
	4.590	5.550	3302818	2388420	223	223	211.32- 316.98	264.15
	4.810	5.946	1295084	4406180	221	231	82.86- 124.29	103.58
	5.110	5.986	2294324	5201508	245	228	146.79- 220.19	183.49
			Average of Peak Amounts =		231	226		
Aroclor 1262	8.233	9.956	7951256	11832973	215	219	80.00- 120.00	100.00
	8.793	10.426	7235408	9206701	220	223	72.80- 109.20	91.00
	9.257	11.120	13308792	19734627	219	221	133.90- 200.86	167.38
	10.057	11.800	10433092	13920104	218	220	104.97- 157.46	131.21
	11.200	13.160	5120044	7368854	231	220	51.51- 77.27	64.39
			Average of Peak Amounts =		221	221		

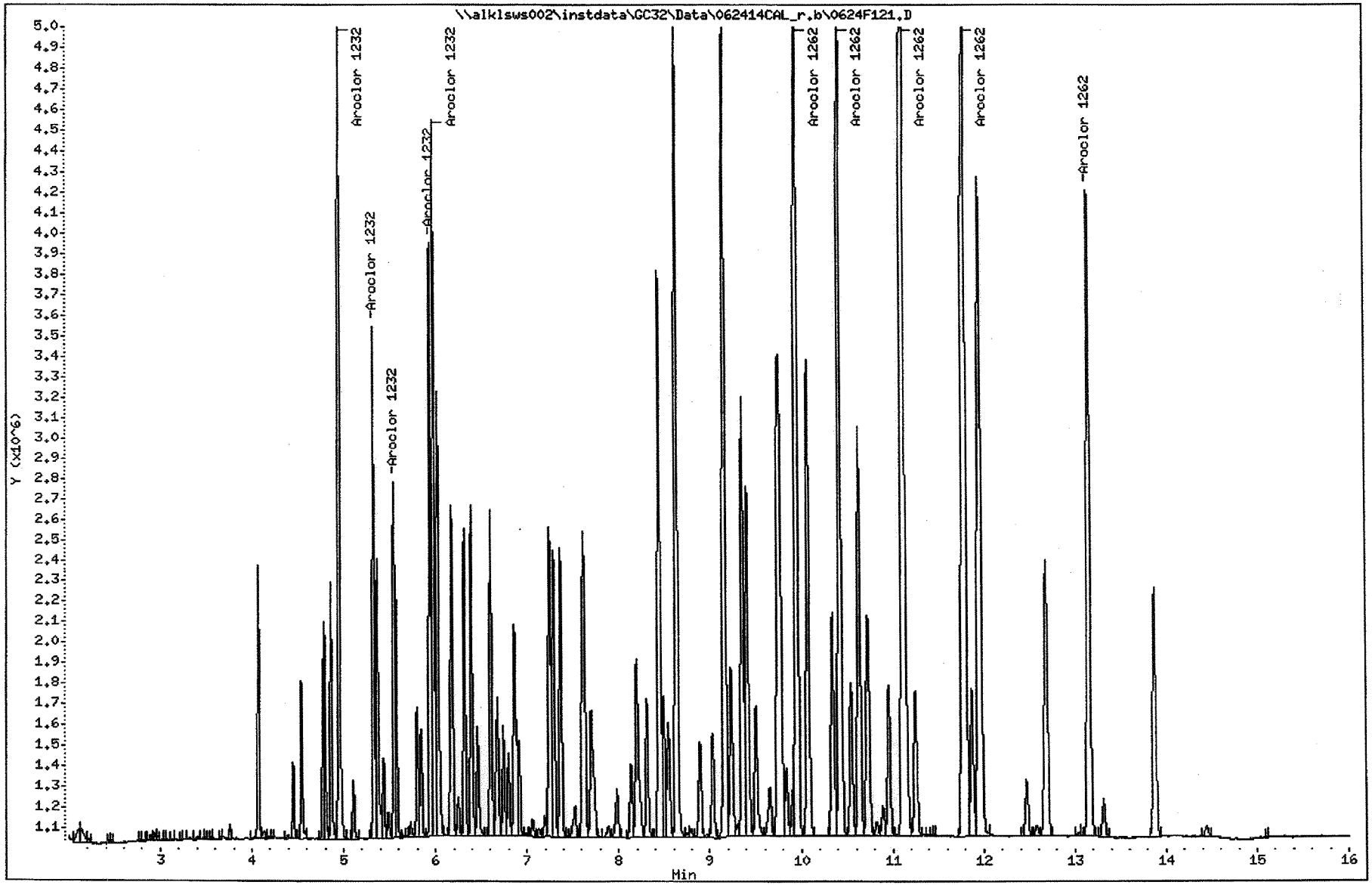
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F121.D
Date : 25-JUN-2014 10:13
Client ID:
Sample Info: 3262 @ 250ppb PCB6-35E

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F121.D
Date : 25-JUN-2014 10:13
Client ID:
Sample Info: 3262 @ 250ppb PCB6-35E

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

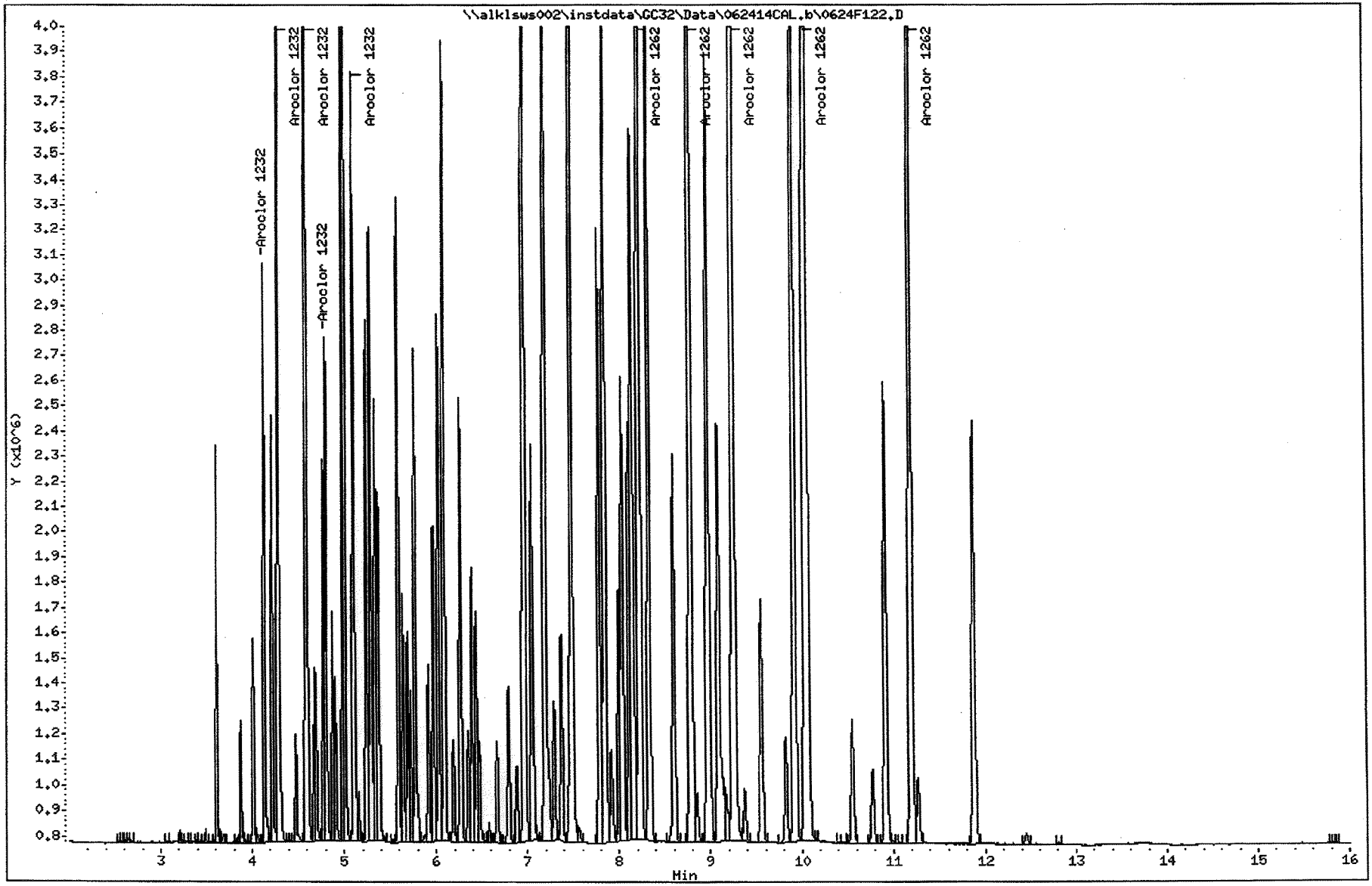
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F122.D
Inj Date : 25-JUN-2014 10:34
Sample Info: 3262 @ 500ppb PCB6-35H
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.135	4.952	2418781	10801201	469	418	80.00- 120.00	100.00
	4.285	5.325	6748702	6100292	432	397	223.21- 334.82	279.01
	4.589	5.545	6273547	4539378	424	423	207.49- 311.24	259.37
	4.809	5.942	2495792	7972698	426	417	82.55- 123.82	103.18
	5.105	5.985	4442506	10136093	474	444	146.93- 220.40	183.67
			Average of Peak Amounts =		445	420		
Aroclor 1262	8.229	9.955	15292710	22768671	413	421	80.00- 120.00	100.00
	8.789	10.425	13582858	17394385	413	422	71.06- 106.58	88.82
	9.255	11.118	25326927	37776063	417	424	132.49- 198.74	165.61
	10.055	11.795	19447199	25954383	407	411	101.73- 152.60	127.17
	11.195	13.158	9508764	13689533	429	409	49.74- 74.61	62.18
			Average of Peak Amounts =		416	417		

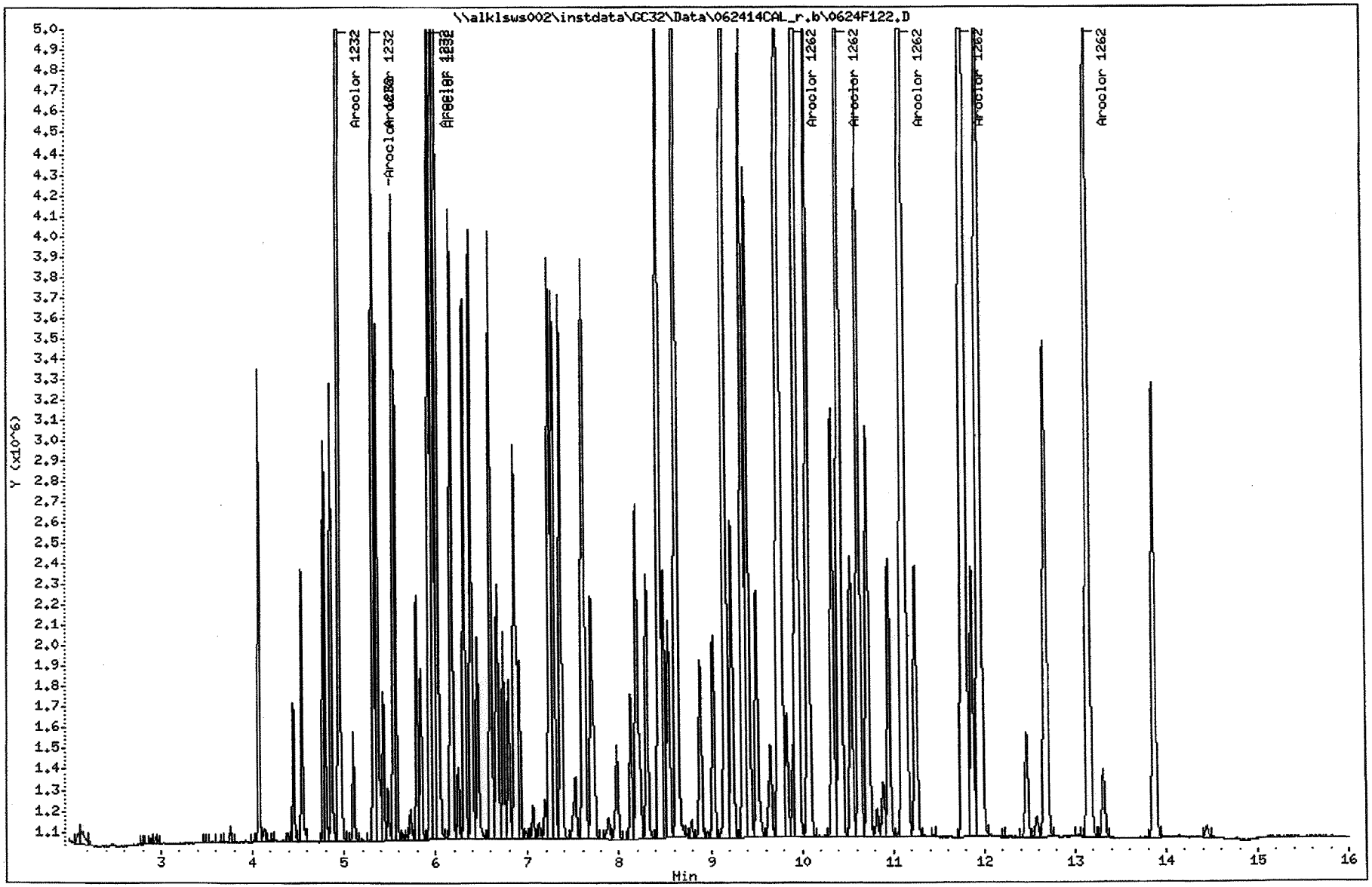
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F122.D
Date : 25-JUN-2014 10:34
Client ID:
Sample Info: 3262 @ 500ppb PCB6-35H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F122.D
Date : 25-JUN-2014 10:34
Client ID:
Sample Info: 3262 @ 500ppb PCB6-35H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F123.D
Inj Date : 25-JUN-2014 10:55
Sample Info: 4268 @ 2.5ppb PCB6-34M
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

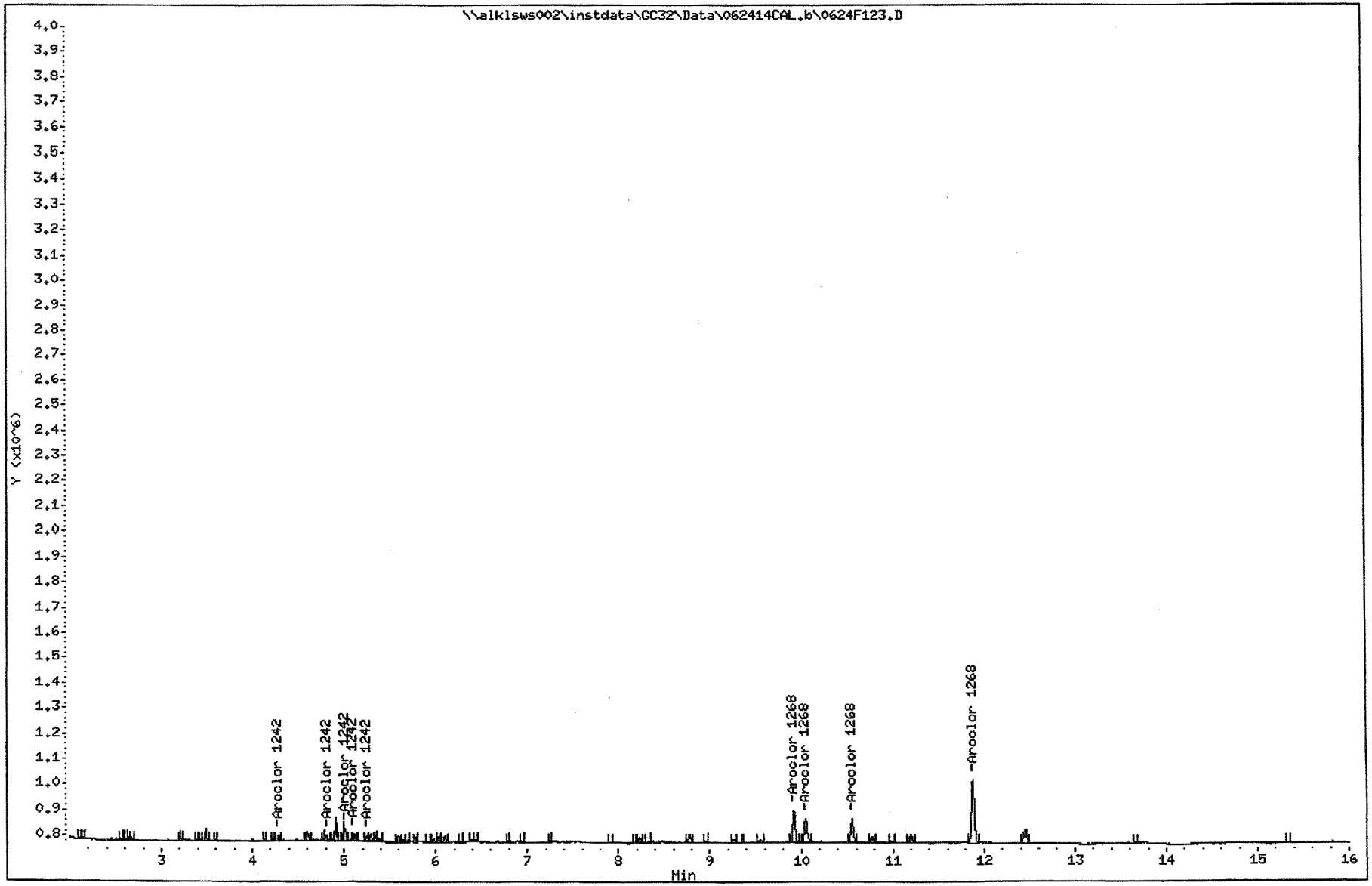
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.289	4.958	28840	43244	2.67	2.48	80.00- 120.00	100.00(M)
	4.812	5.328	27766	77593	2.96	2.94	77.02- 115.53	96.28(M)
	5.015	5.948	67576	82833	2.81	2.61	187.45- 281.18	234.31(M)
	5.109	5.988	43337	107941	2.64	2.79	120.21- 180.32	150.27(M)
	5.249	6.185	32416	49543	3.09	2.42	89.92- 134.88	112.40(M)
			Average of Peak Amounts =		2.83	2.65		
Aroclor 1268	9.922	11.802	235930	354017	2.87	2.97	80.00- 120.00	100.00
	10.052	11.968	210254	328602	2.85	3.10	71.29- 106.94	89.12
	10.559	12.468	179574	262881	2.73	2.85	60.89- 91.34	76.11
	11.882	13.875	542220	772684	2.87	2.90	183.86- 275.79	229.82
			Average of Peak Amounts =		2.83	2.96		

QC Flag Legend

M - Compound response manually integrated.

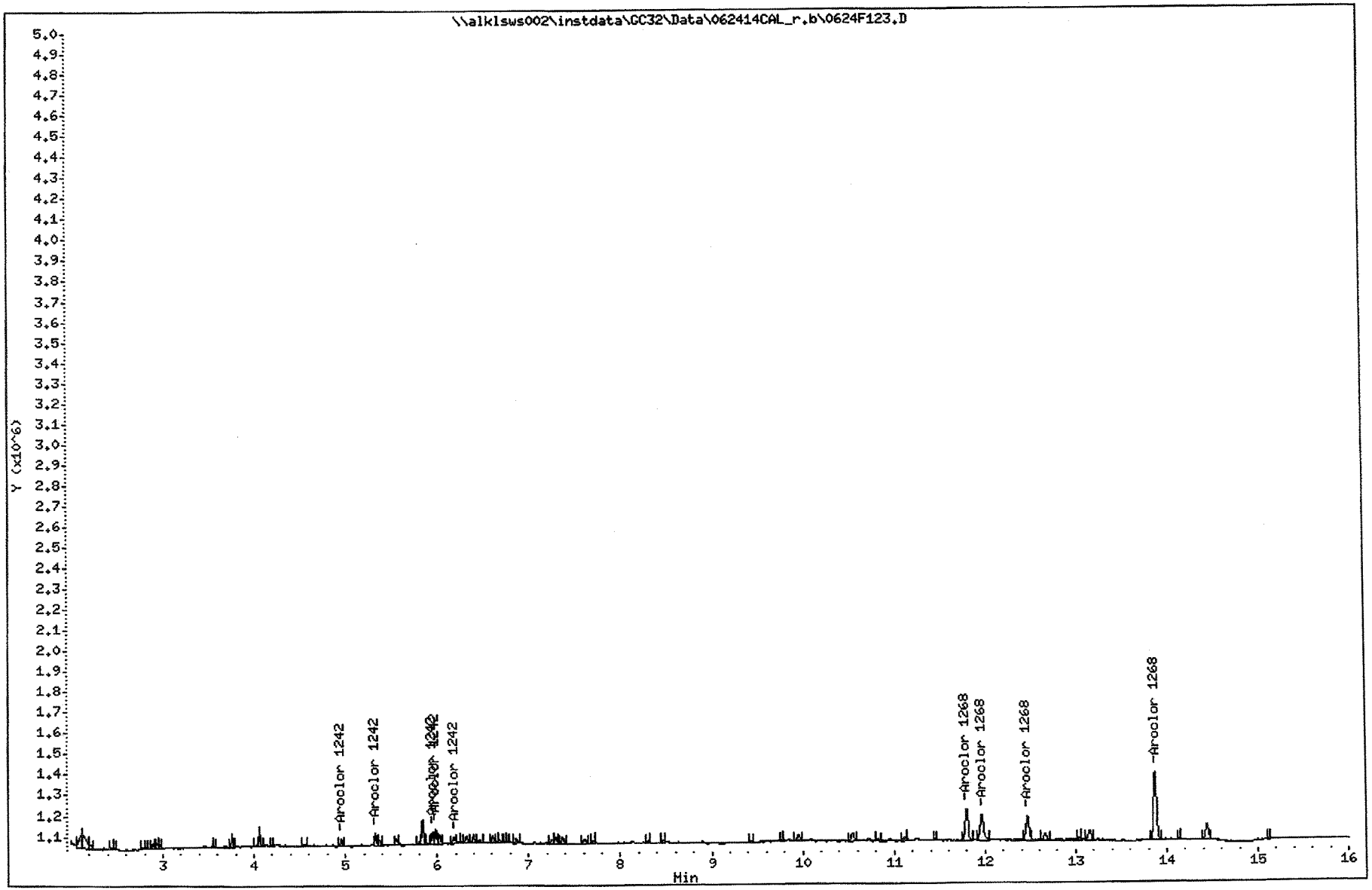
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
Date : 25-JUN-2014 10:55
Client ID:
Instrument: GC32.i
Sample Info: 4268 @ 2.5ppb PCB6-34M
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



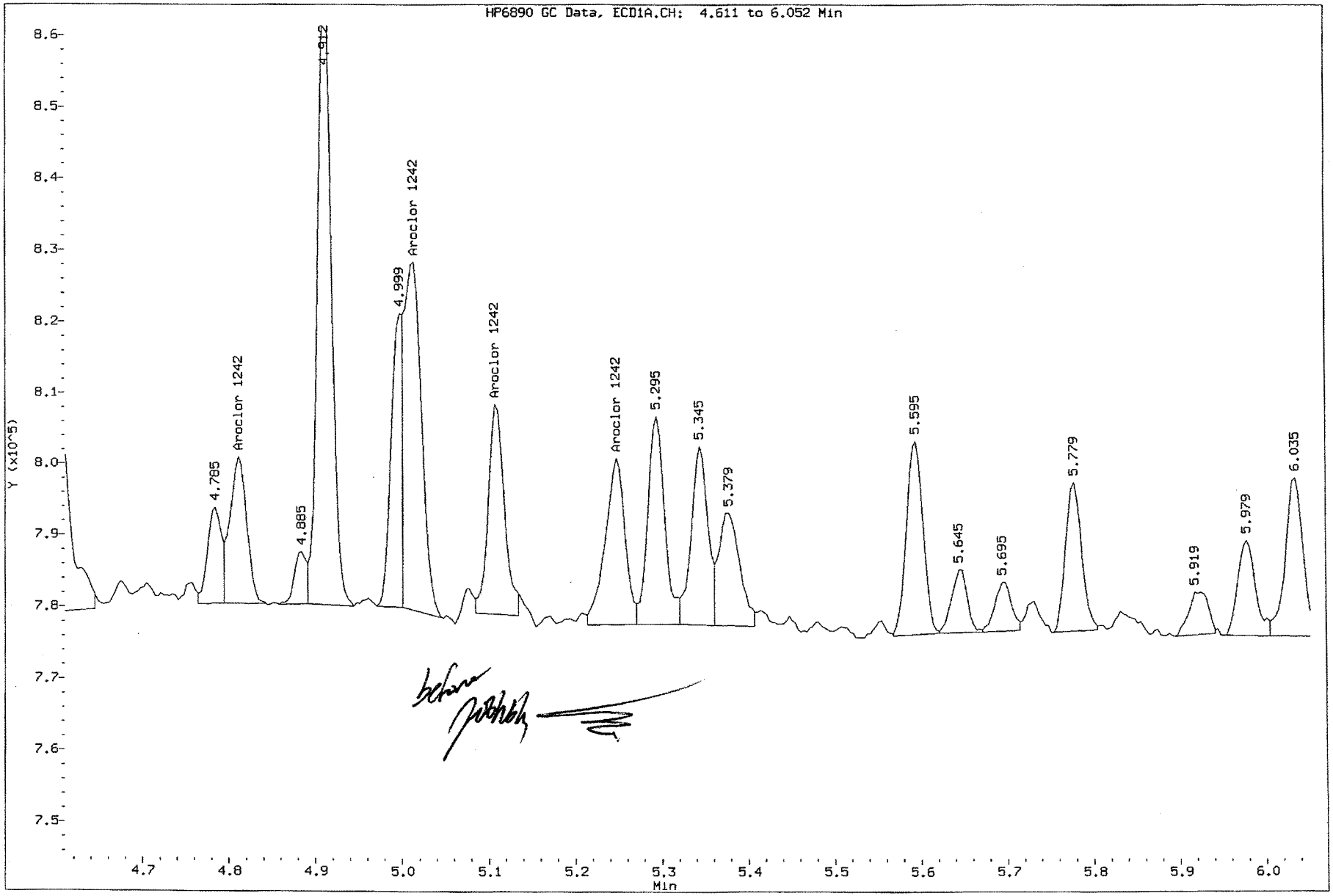
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F123.D
Date : 25-JUN-2014 10:55
Client ID:
Sample Info: 4268 @ 2.5ppb PCB6-34M

Instrument: GC32.i
Operator: JMSmith
Column diameter: 0.32

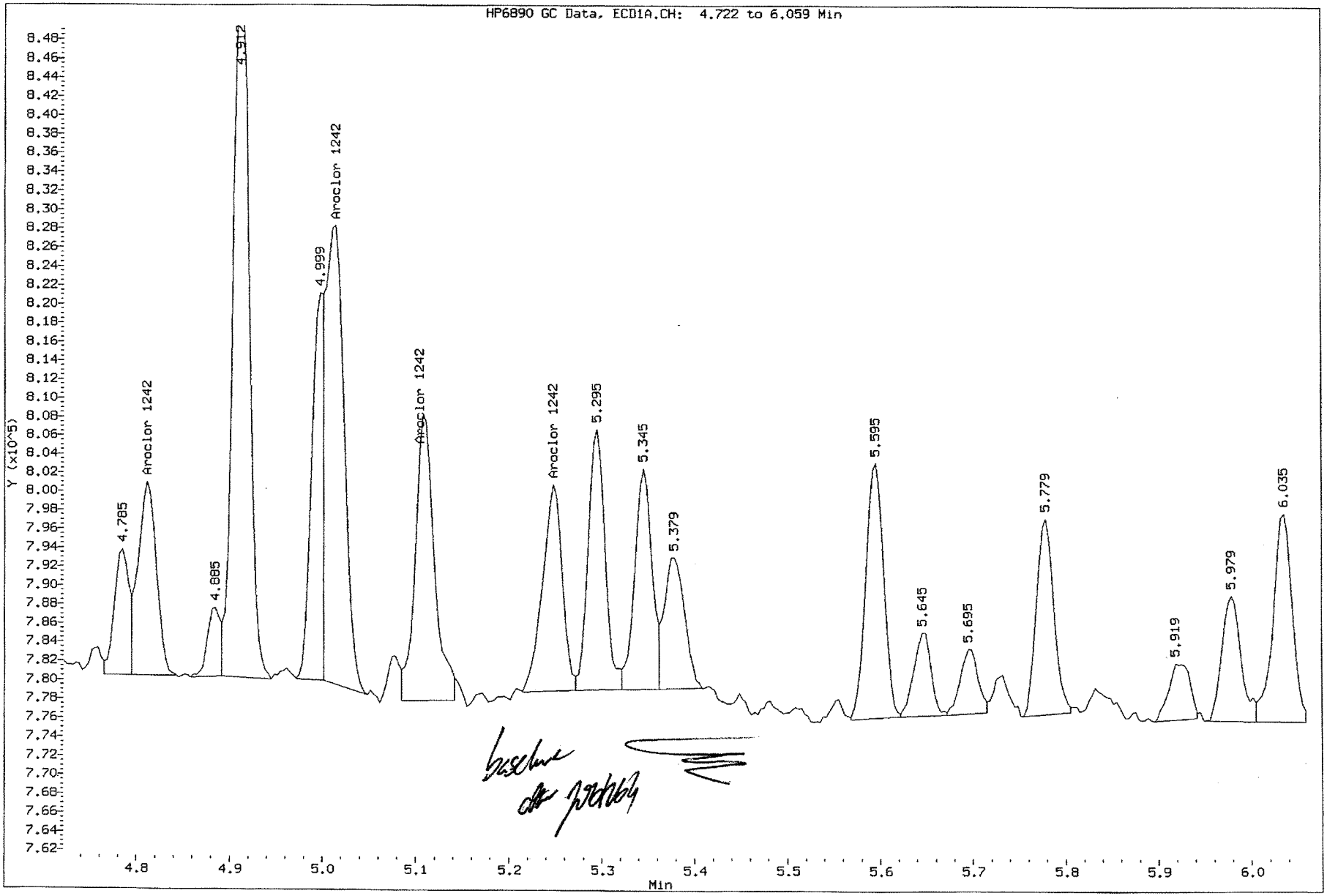
Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
Injection Date: 25-JUN-2014 10:55
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F123.D
Injection Date: 25-JUN-2014 10:55
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D
Inj Date : 25-JUN-2014 11:16
Sample Info: 4268 @ 5.0ppb PCB6-34J
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

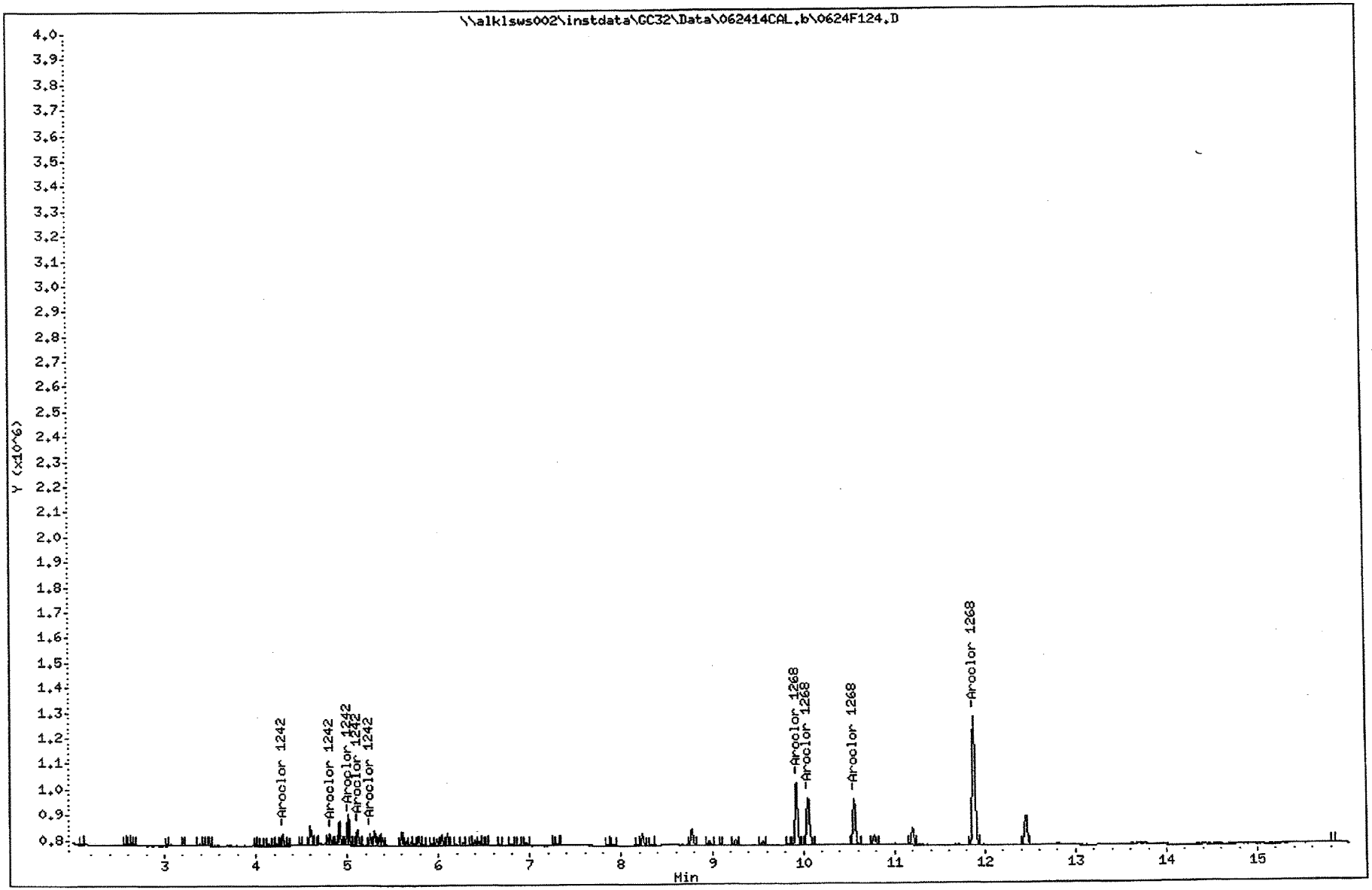
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.291	4.961	58633	96386	5.43	5.53	80.00- 120.00	100.00
	4.818	5.331	48405	153922	5.16	5.84	66.04- 99.07	82.56
	5.018	5.951	132423	178187	5.51	5.62	180.68- 271.02	225.85
	5.114	5.991	87180	207963	5.31	5.38	118.95- 178.43	148.69
	5.254	6.187	63072	119332	6.00	5.83	86.06- 129.08	107.57
			Average of Peak Amounts =		5.48	5.64		
Aroclor 1268	9.924	11.804	477398	678116	5.80	5.69	80.00- 120.00	100.00
	10.054	11.971	422307	602609	5.73	5.68	70.77- 106.15	88.46
	10.561	12.471	370879	532735	5.63	5.77	62.15- 93.23	77.69
	11.881	13.877	1080958	1520858	5.73	5.70	181.14- 271.71	226.43
			Average of Peak Amounts =		5.72	5.71		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F124.D
Date : 25-JUN-2014 11:16
Client ID:
Sample Info: 4268 @ 5.0ppb PCB6-34J

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

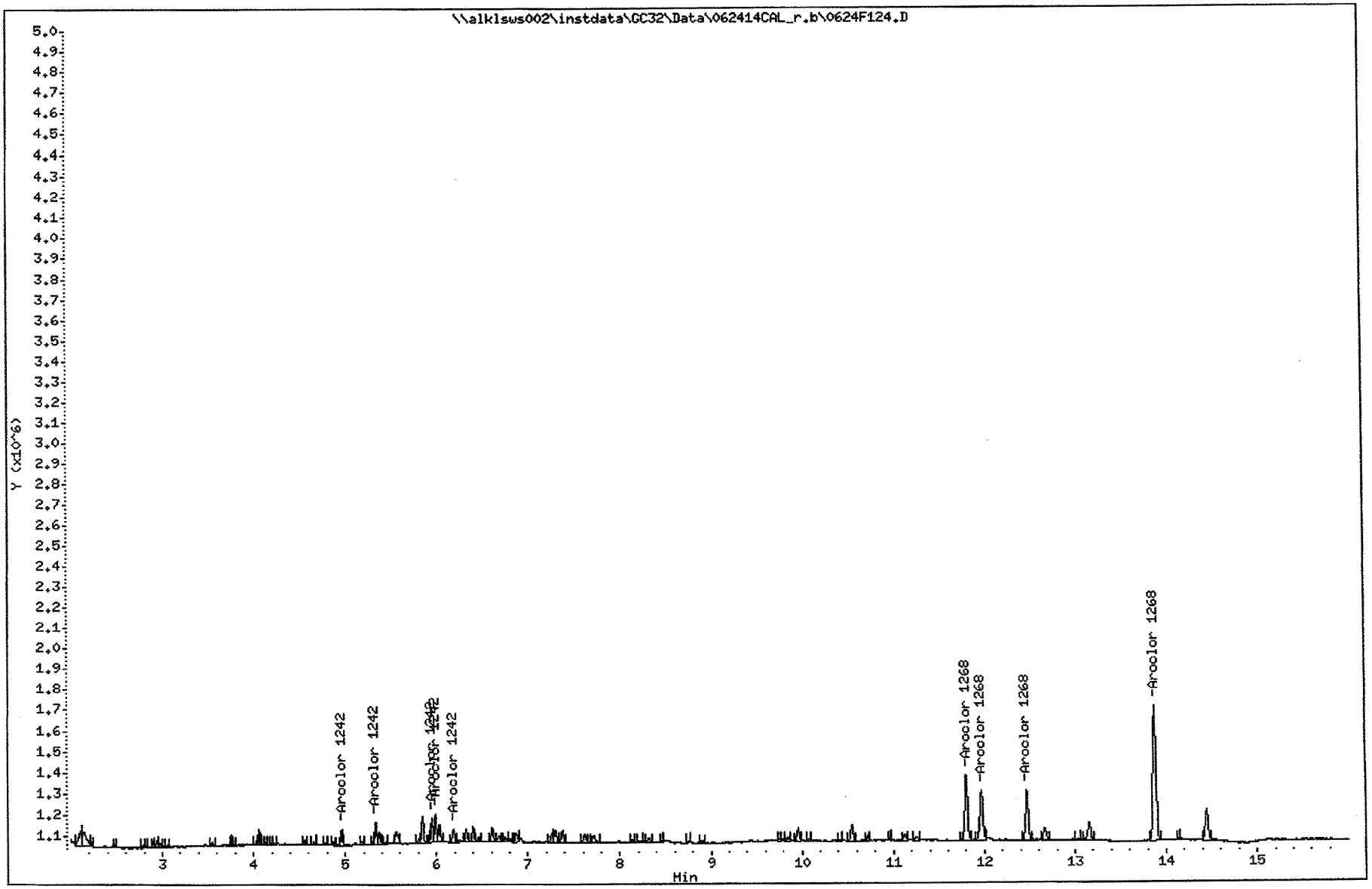
Column phase: DB-35MS



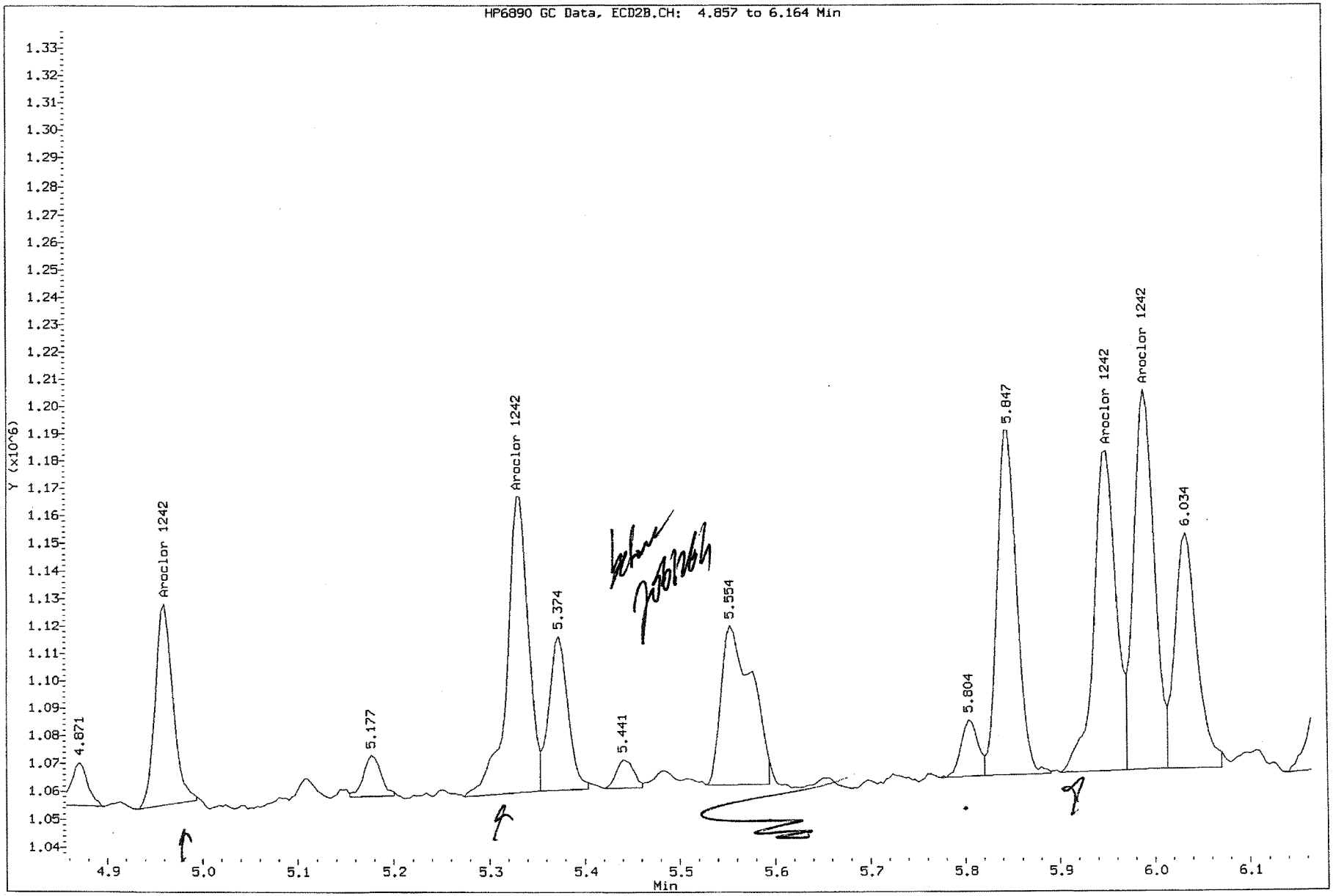
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D
Date : 25-JUN-2014 11:16
Client ID:
Sample Info: 4268 @ 5.0ppb PCB6-34J

Instrument: GC32.i
Operator: JMSmith
Column diameter: 0.32

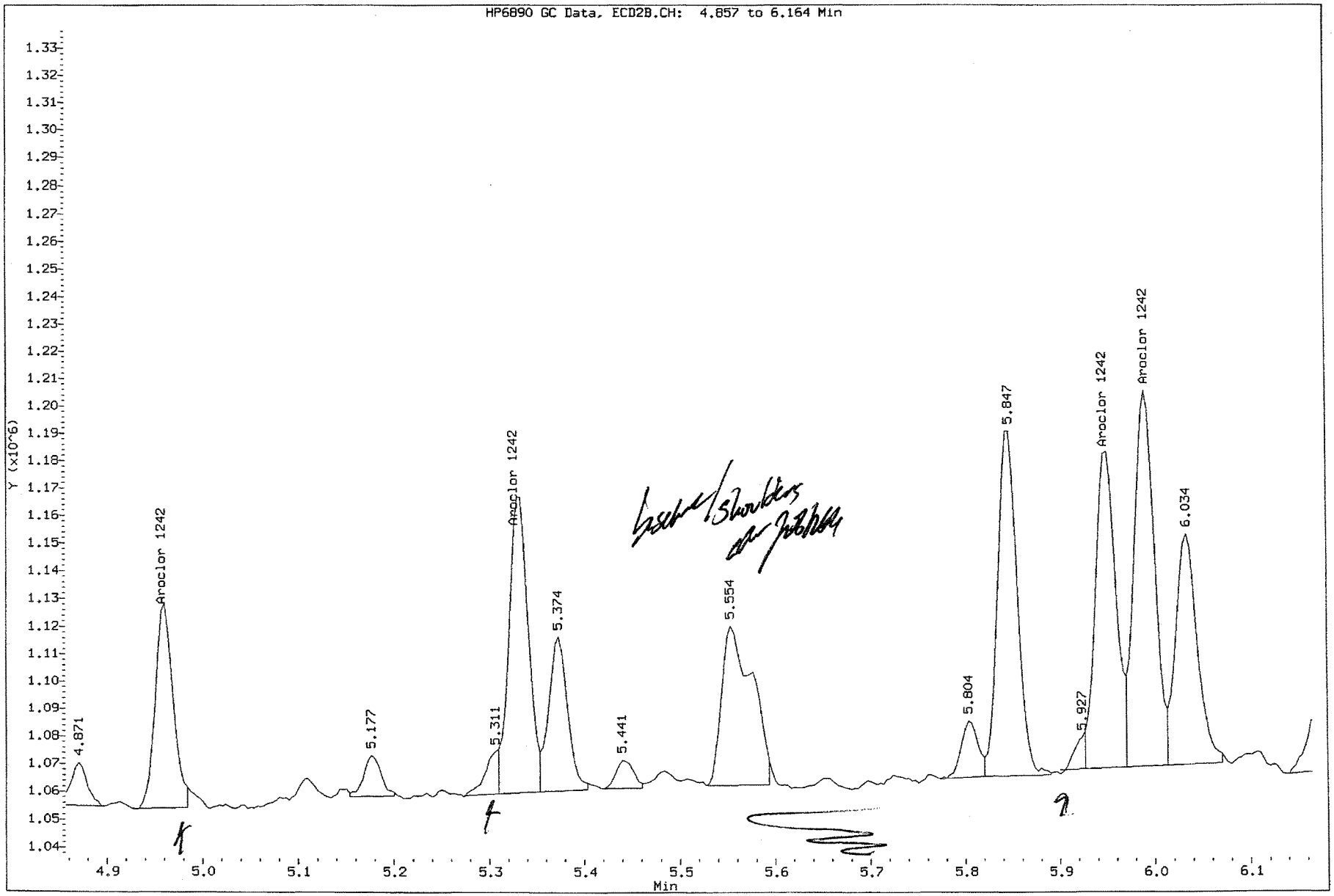
Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D
Injection Date: 25-JUN-2014 11:16
Instrument: GC32.1
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F124.D
Injection Date: 25-JUN-2014 11:16
Instrument: GC32,i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

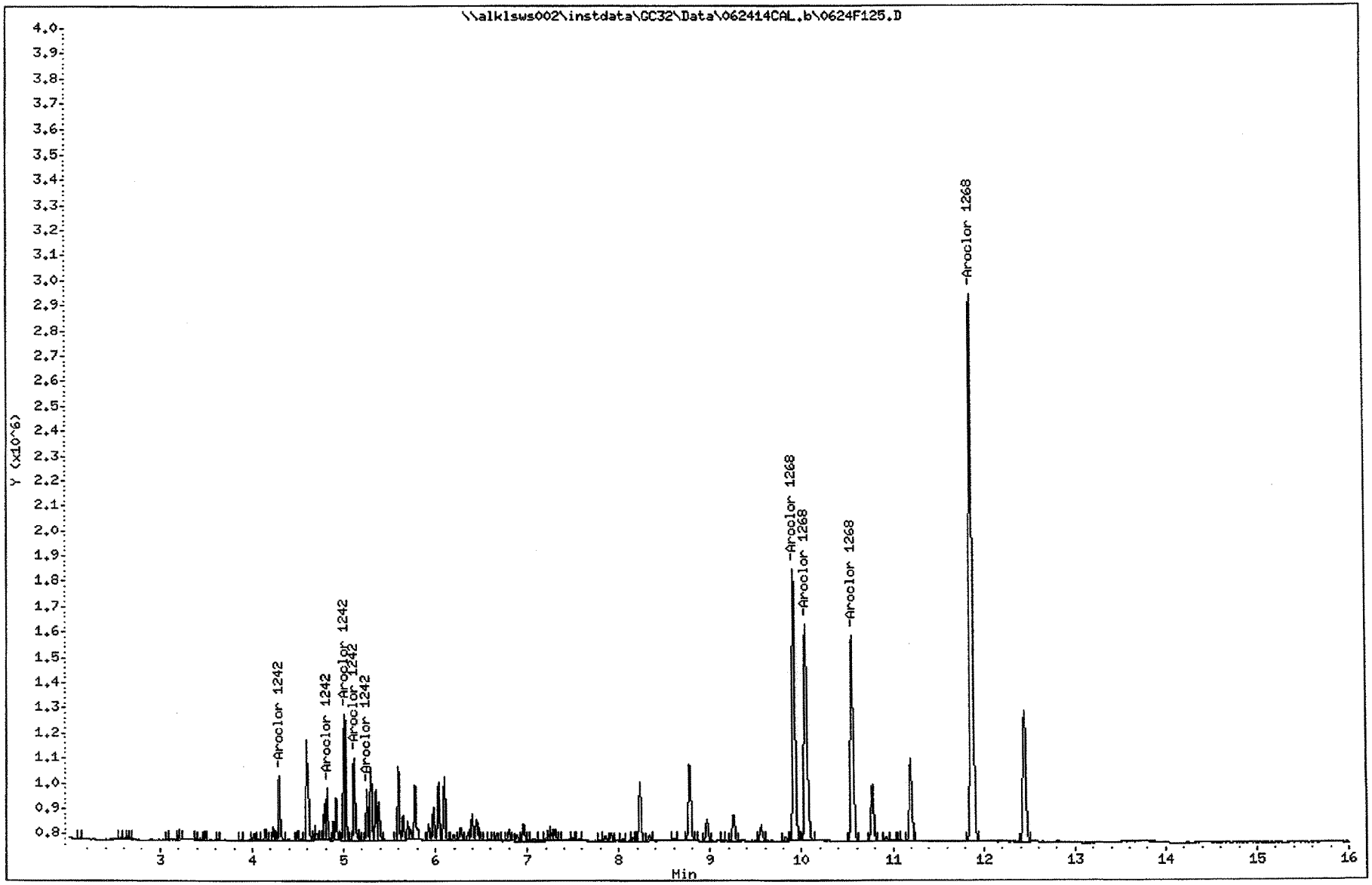
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F125.D
Inj Date : 25-JUN-2014 11:37
Sample Info: 4268 @ 25ppb PCB6-34L
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.293	4.959	289865	455741	26.9	26.2	80.00- 120.00	100.00
	4.816	5.333	252374	669713	26.9	25.4	69.65- 104.48	87.07
	5.020	5.949	607843	816440	25.3	25.8	167.76- 251.64	209.70
	5.113	5.989	435767	947856	26.5	24.5	120.27- 180.40	150.33
	5.253	6.186	252333	517632	24.0	25.3	69.64- 104.46	87.05
			Average of Peak Amounts =		25.9	25.4		
Aroclor 1268	9.920	11.799	2123983	3004720	25.8	25.2	80.00- 120.00	100.00
	10.050	11.966	1905528	2640937	25.8	24.9	71.77- 107.66	89.71
	10.553	12.466	1721675	2335457	26.1	25.3	64.85- 97.27	81.06
	11.880	13.873	4667815	6620107	24.7	24.8	175.81- 263.72	219.77
			Average of Peak Amounts =		25.6	25.1		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F125.D
Date : 25-JUN-2014 11:37
Client ID:
Sample Info: 4268 @ 25ppb PCB6-34L

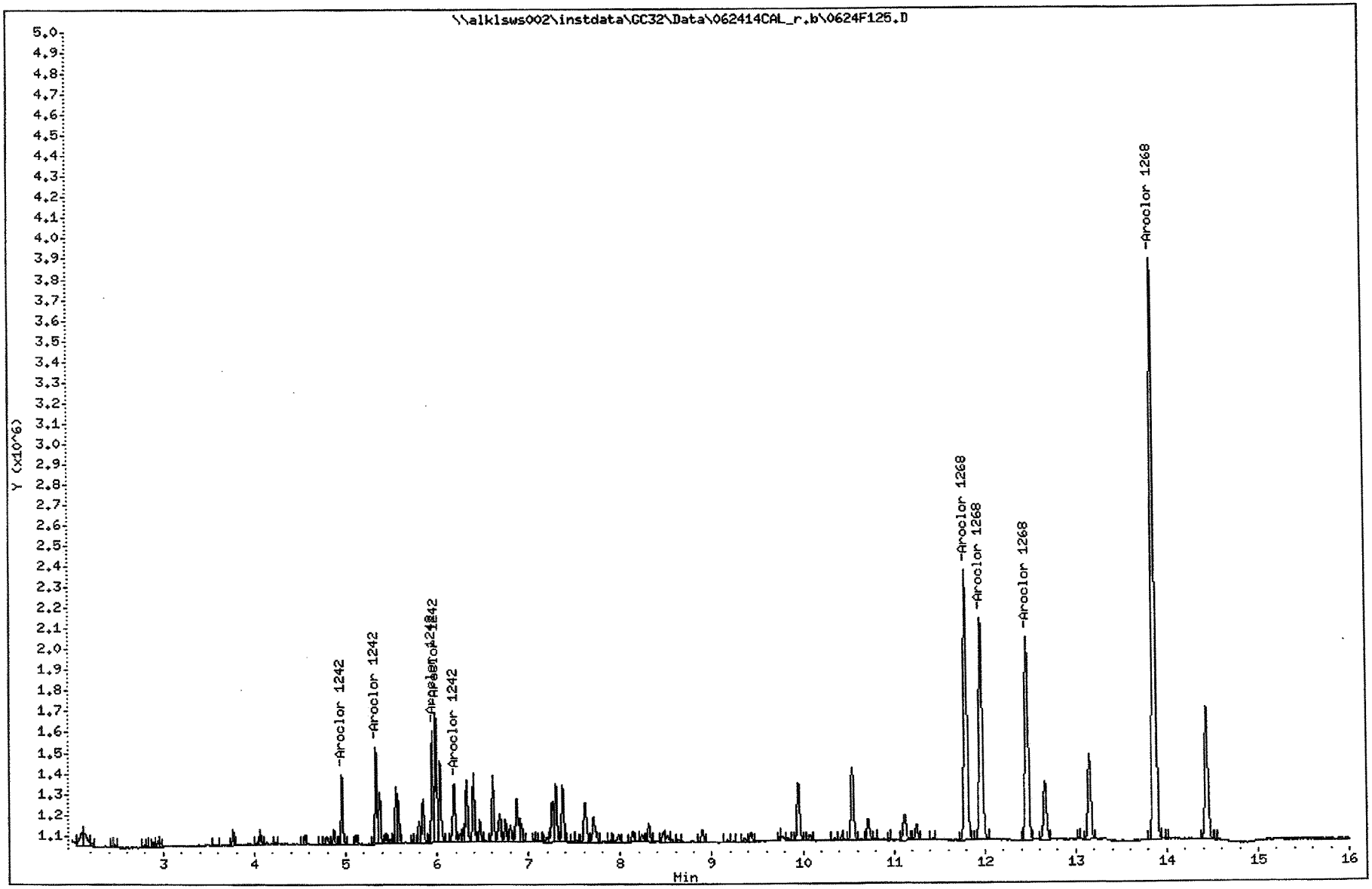
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F125.D
Date : 25-JUN-2014 11:37
Client ID:
Sample Info: 4268 @ 25ppb PCB6-34L

Instrument: GC32.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

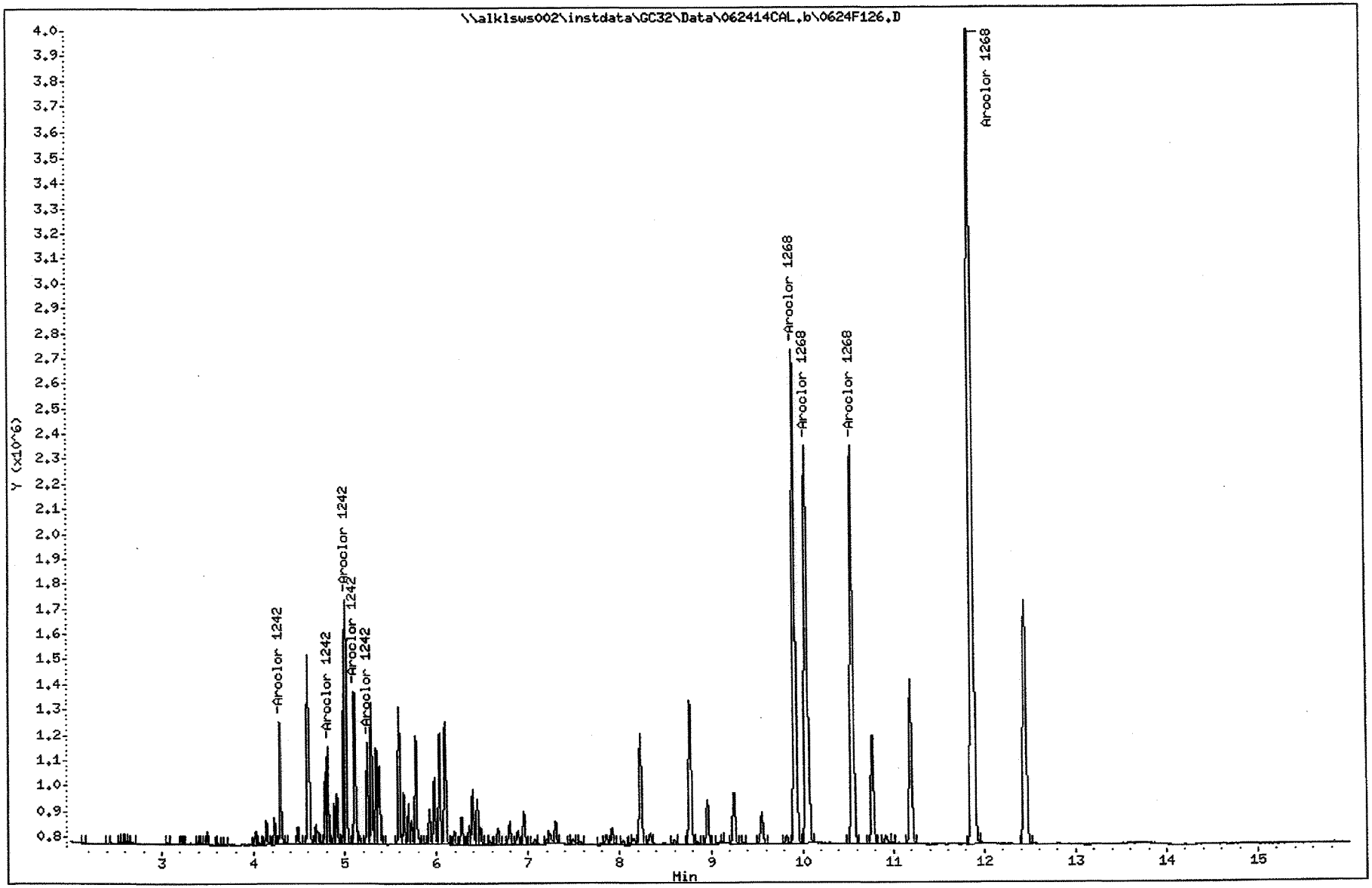
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F126.D
Inj Date : 25-JUN-2014 11:58
Sample Info: 4268 @ 50ppb PCB6-34I
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.288	4.957	561699	917280	52.1	52.7	80.00- 120.00	100.00
	4.814	5.327	475955	1293037	50.7	49.1	67.79- 101.68	84.73
	5.014	5.944	1187623	1571557	49.4	49.6	169.15- 253.72	211.43
	5.107	5.987	856189	1914390	52.1	49.5	121.94- 182.91	152.43
	5.248	6.181	500047	1024994	47.6	50.1	71.22- 106.83	89.02
			Average of Peak Amounts =		50.4	50.2		
Aroclor 1268	9.921	11.797	3999637	5776641	48.6	48.5	80.00- 120.00	100.00
	10.048	11.964	3594708	5062143	48.7	47.7	71.90- 107.85	89.88
	10.551	12.467	3250300	4518726	49.4	49.0	65.01- 97.52	81.26
	11.878	13.871	8921566	12724717	47.3	47.7	178.45- 267.67	223.06
			Average of Peak Amounts =		48.5	48.2		

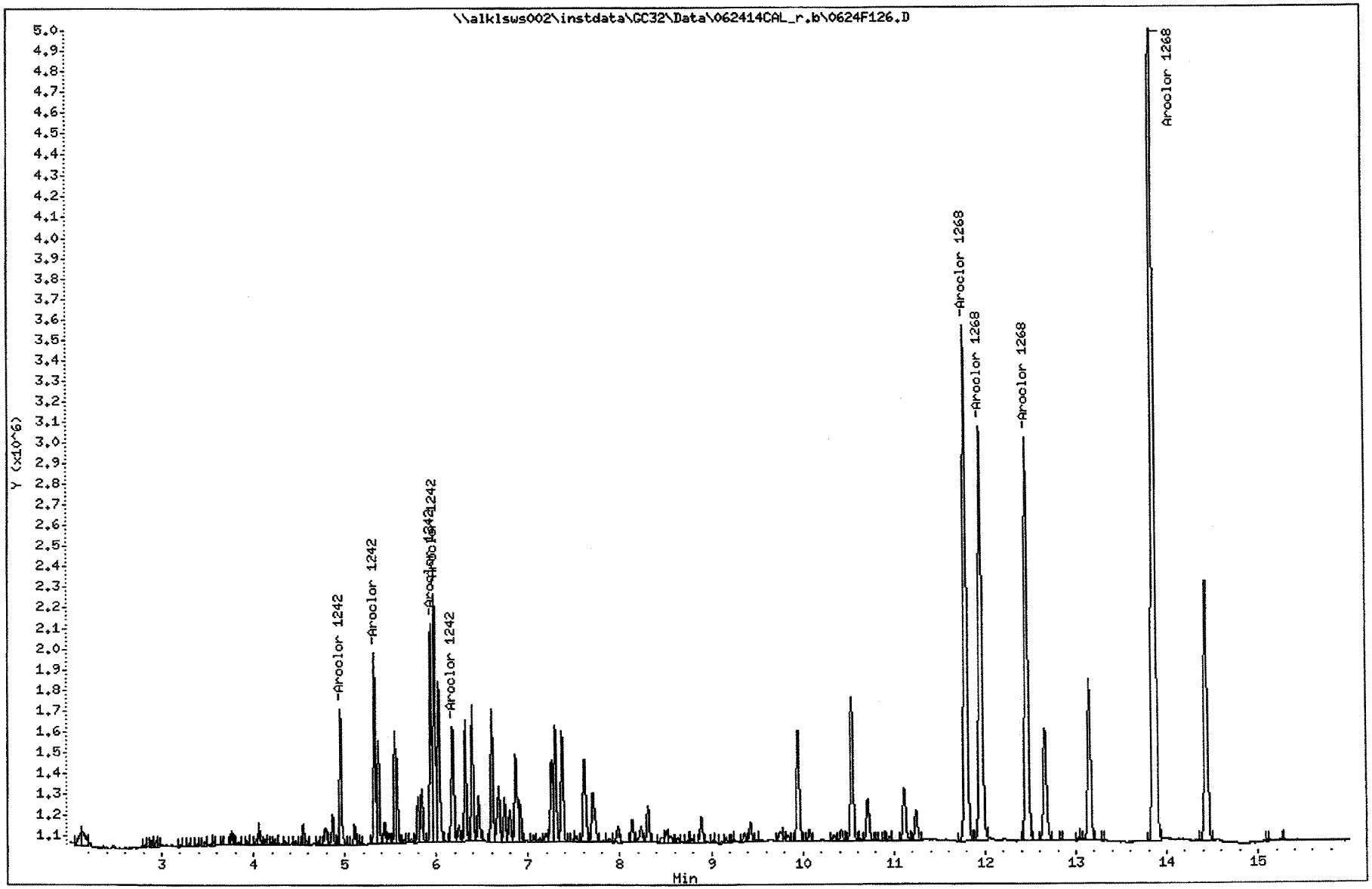
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F126.D
Date : 25-JUN-2014 11:58
Client ID:
Sample Info: 4268 @ 50ppb PCB6-34I

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F126.D
Date : 25-JUN-2014 11:58
Client ID:
Sample Info: 4268 @ 50ppb PCB6-34I

Instrument: GC32.i
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D
Report Date: 26-Jun-2014 00:47

ALS Environmental-Kelso

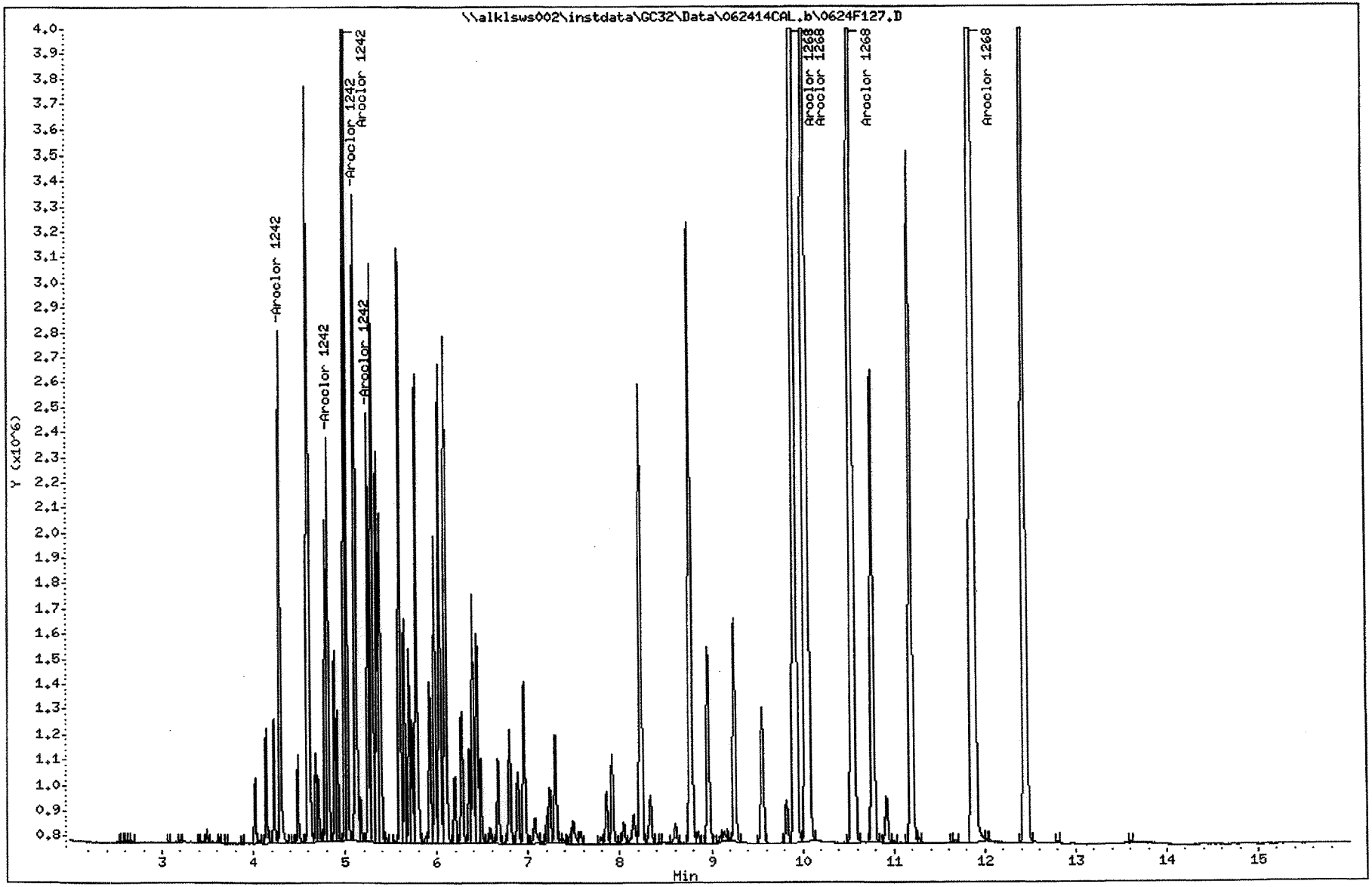
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F127.D
Inj Date : 25-JUN-2014 12:19
Sample Info: 4268 @ 250ppb PCB6-34K
Misc Info :
Cal Date : 26-JUN-2014 00:47
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.295	4.961	2398126	3991928	222	229	80.00- 120.00	100.00
	4.818	5.331	2054101	5553427	219	211	68.52- 102.79	85.65
	5.018	5.948	5476842	7146881	228	225	182.70- 274.06	228.38
	5.115	5.991	3719549	8976558	226	232	124.08- 186.12	155.10
	5.255	6.184	2212778	4784183	211	234	73.82- 110.73	92.27
			Average of Peak Amounts =		221	226		
Aroclor 1268	9.925	11.798	17689650	25550836	215	214	80.00- 120.00	100.00
	10.048	11.964	15988200	22518505	217	212	72.31- 108.46	90.38
	10.555	12.468	14630320	19998813	222	217	66.16- 99.25	82.71
	11.881	13.874	42157233	58464183	223	219	190.65- 285.98	238.32
			Average of Peak Amounts =		219	216		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F127.D
Date : 25-JUN-2014 12:19
Client ID:
Sample Info: 4268 @ 250ppb PCB6-34K

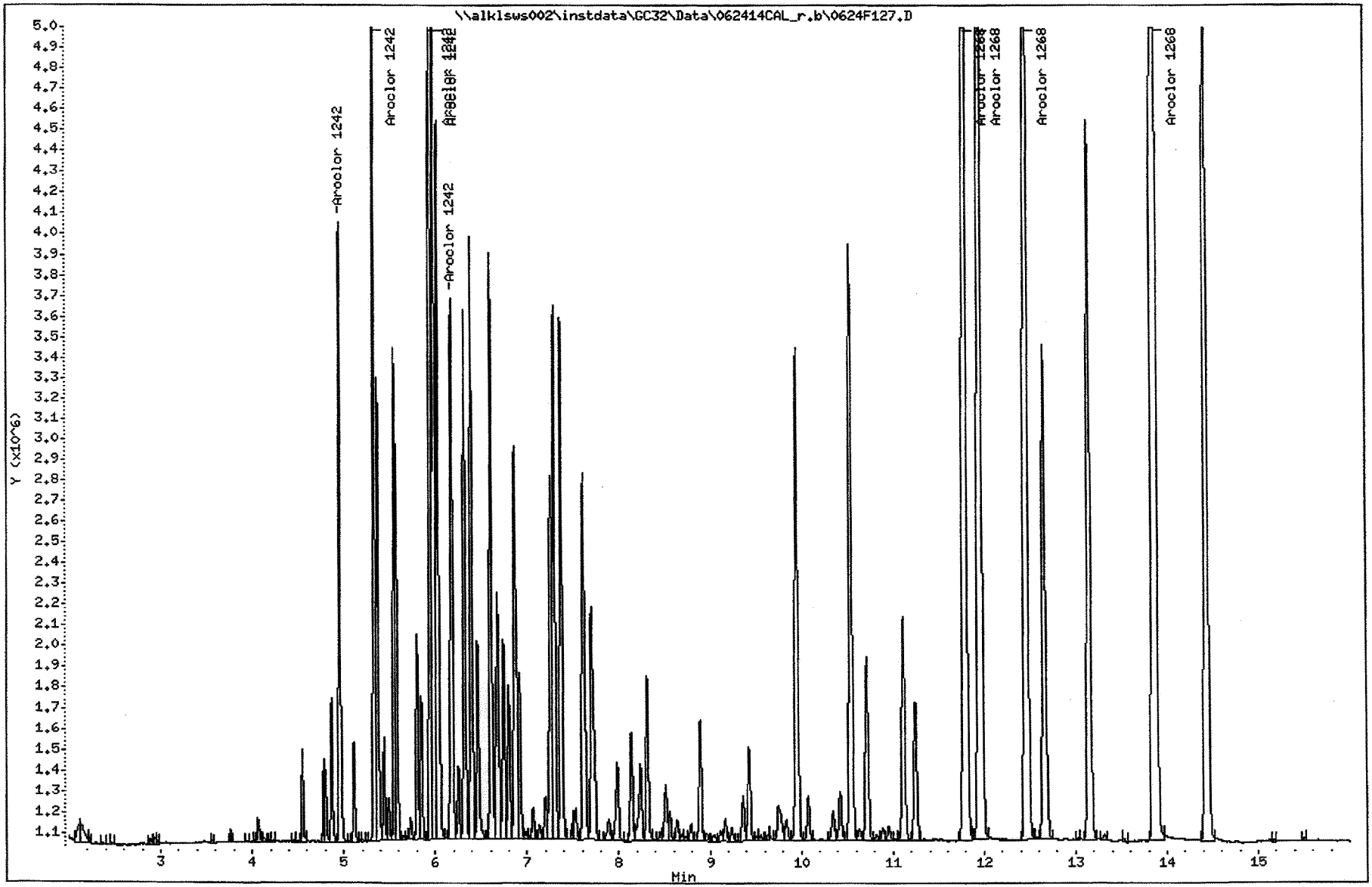
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F127.D
Date : 25-JUN-2014 12:19
Client ID:
Sample Info: 4268 @ 250ppb PCB6-34K

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

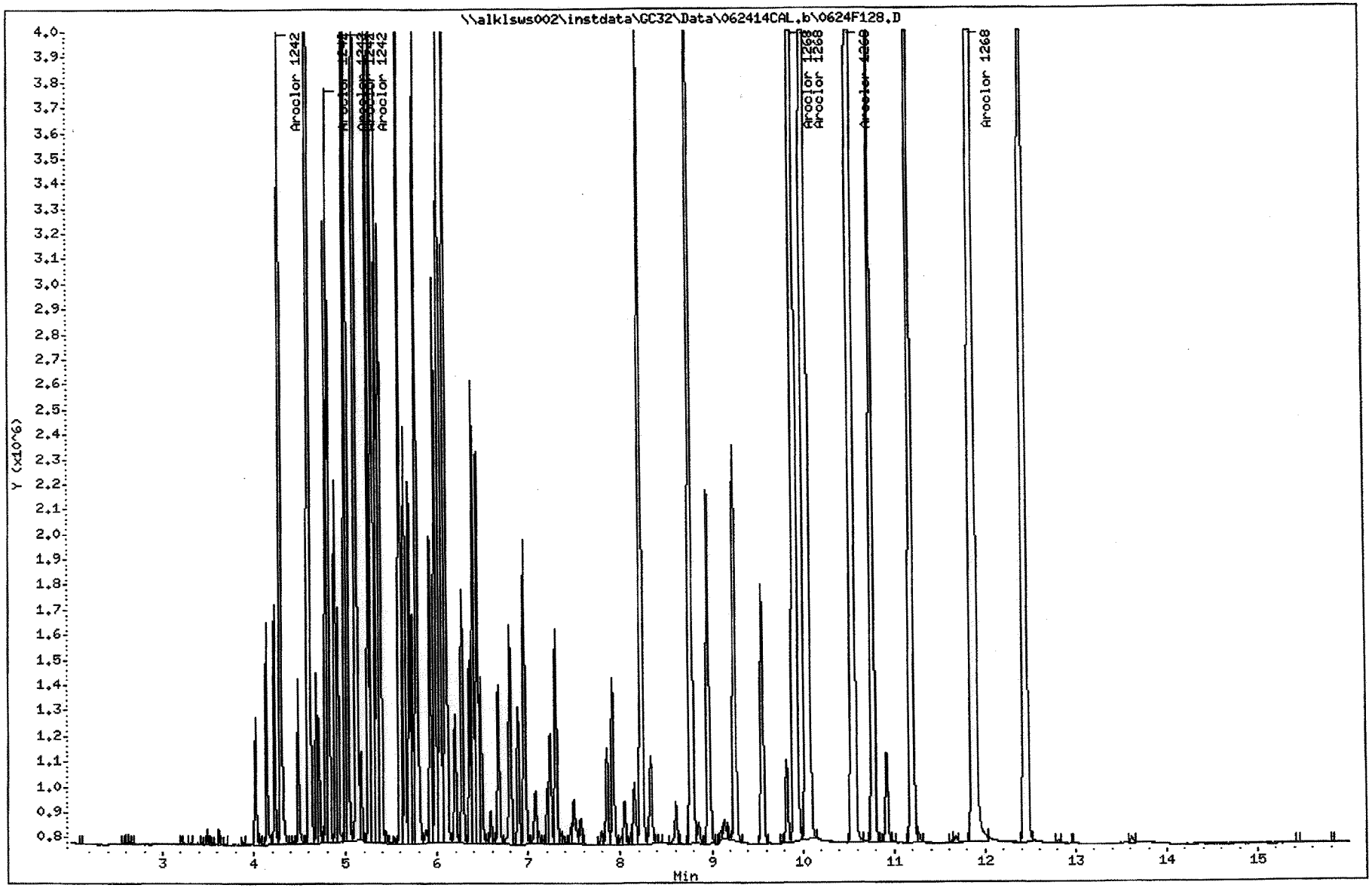
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F128.D
Inj Date : 25-JUN-2014 12:41
Sample Info: 4268 @ 500ppb PCB6-34H
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.295	4.961	4530065	7700039	420	442	80.00- 120.00	100.00
	4.818	5.334	3835625	10739096	409	407	67.74- 101.60	84.67
	5.021	5.951	10389391	14364153	432	453	183.47- 275.21	229.34
	5.115	5.994	7198692	17563987	438	454	127.13- 190.69	158.91
	5.258	6.188	4253569	9400787	405	459	75.12- 112.68	93.90
			Average of Peak Amounts =		421	443		
Aroclor 1268	9.925	11.801	34176276	50034039	415	420	80.00- 120.00	100.00
	10.055	11.968	30899144	44016920	419	415	72.33- 108.49	90.41
	10.558	12.468	28369783	39131438	431	424	66.41- 99.61	83.01
	11.881	13.874	82654192	116924142	438	438	193.48- 290.22	241.85
			Average of Peak Amounts =		426	424		

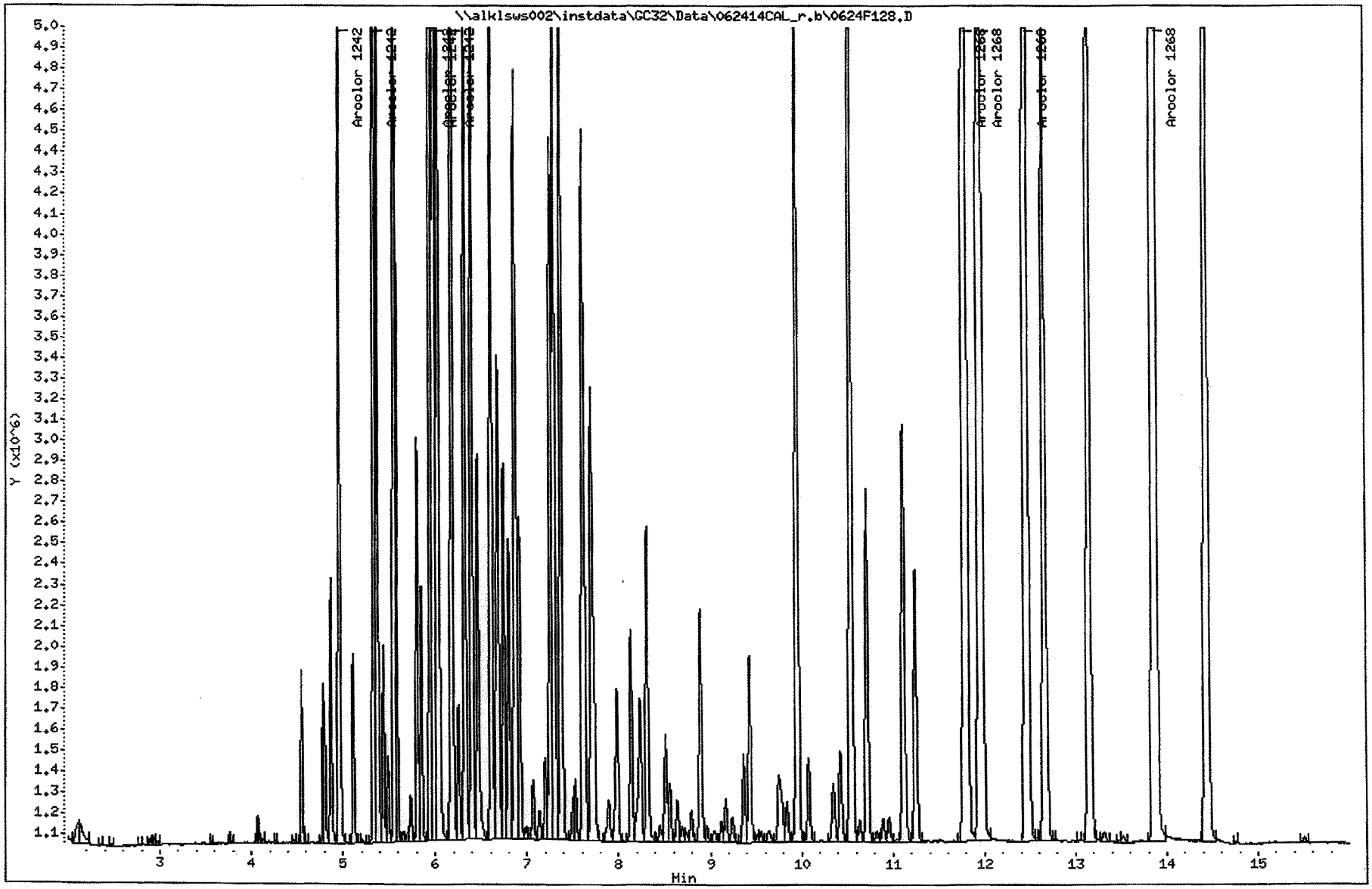
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F128.D
Date : 25-JUN-2014 12:41
Client ID:
Sample Info: 4268 @ 500ppb PCB6-34H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F128.D
Date : 25-JUN-2014 12:41
Client ID:
Sample Info: 4268 @ 500ppb PCB6-34H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

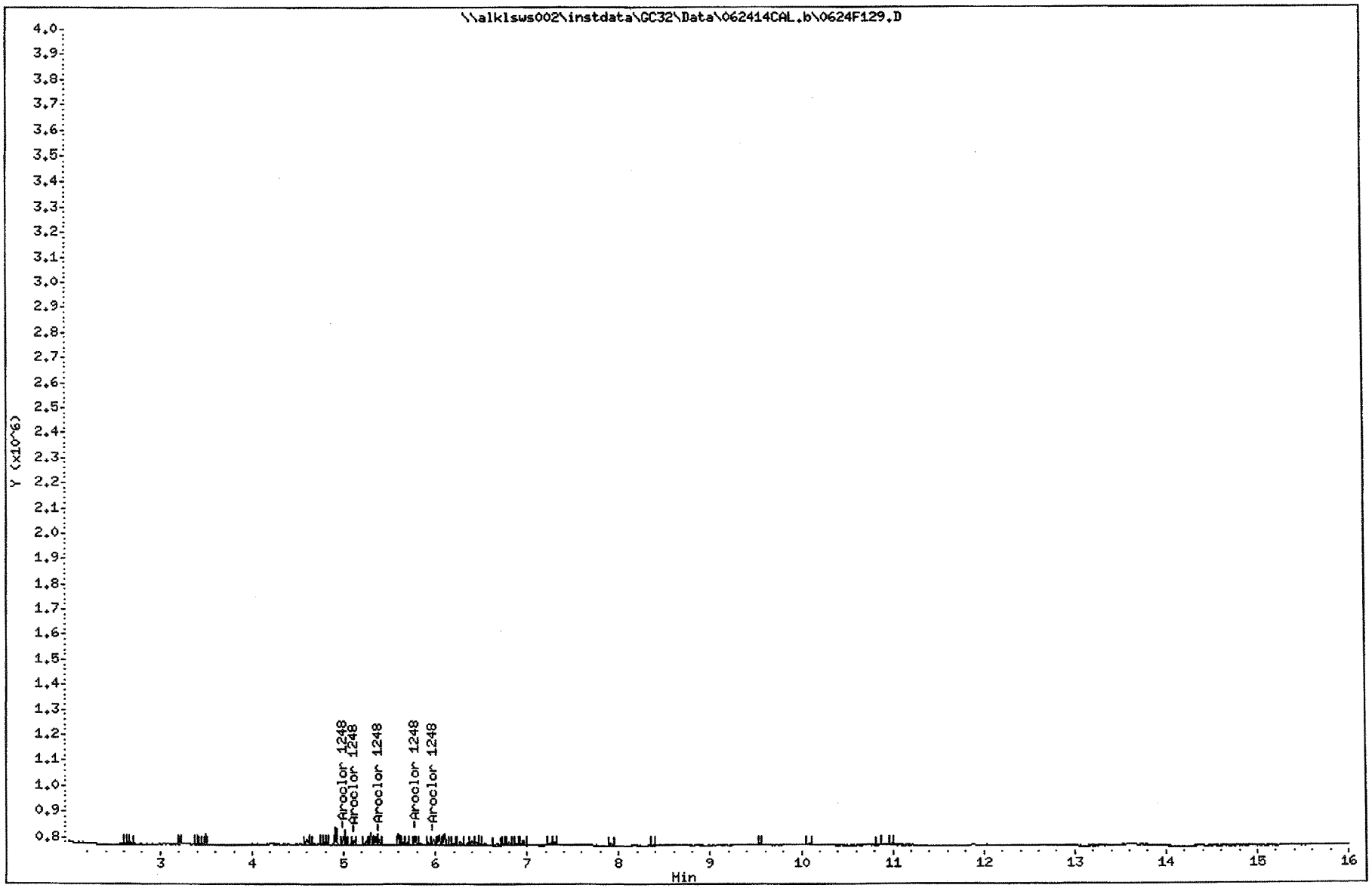
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D
Inj Date : 25-JUN-2014 13:02
Sample Info: 48 @ 2.5ppb PCB6-35A
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

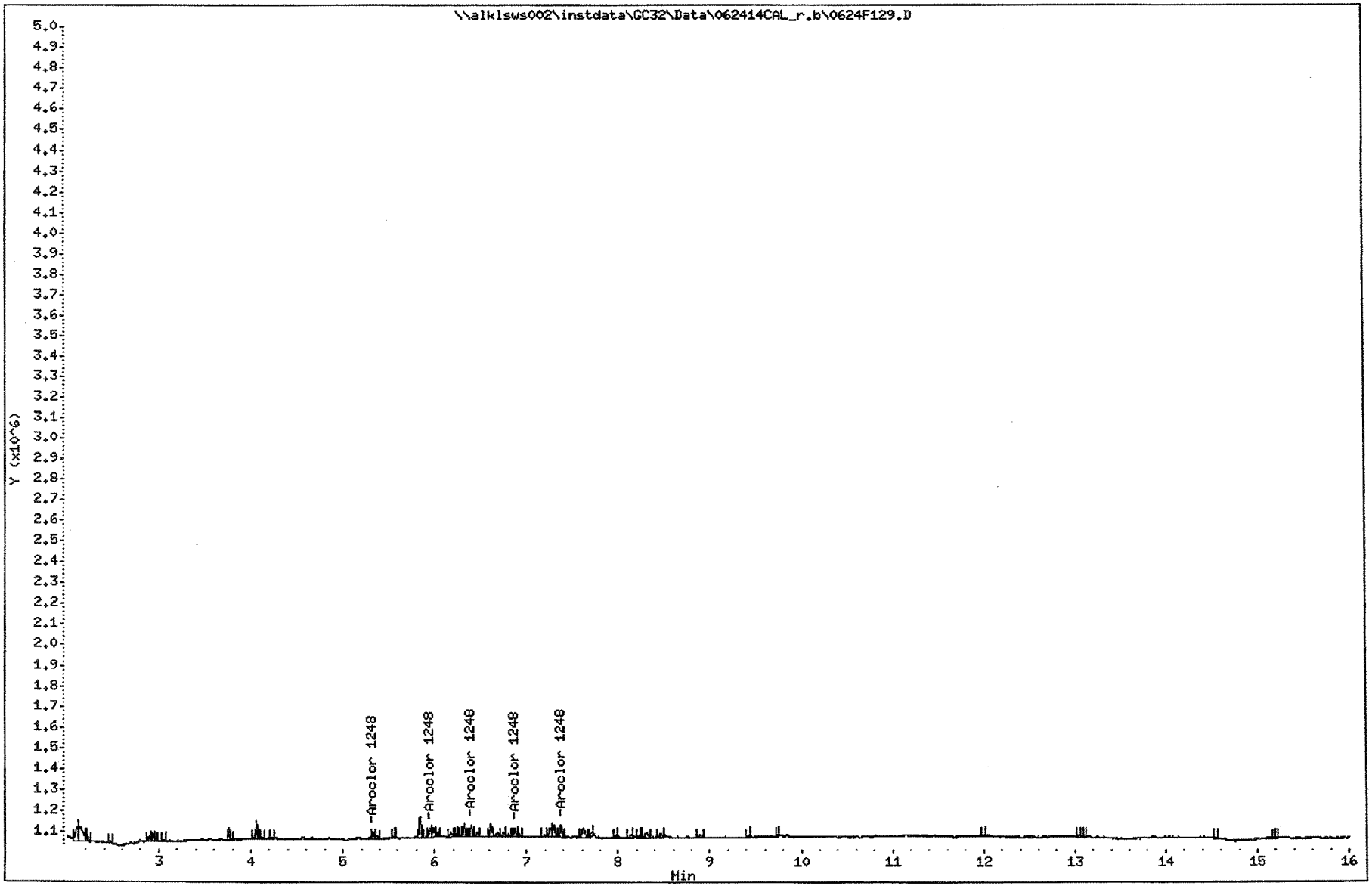
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.000	5.333	34341	47803	2.56	3.09	80.00- 120.00	100.00
	5.113	5.949	21360	70896	2.31	2.79	49.76- 74.64	62.20
	5.383	6.399	33995	86764	2.67	2.84	79.19- 118.79	98.99
	5.783	6.873	48184	64461	2.79	2.75	112.25- 168.37	140.31
	5.983	7.379	28638	102890	2.50	3.01	66.71- 100.07	83.39
			Average of Peak Amounts =		2.57	2.90		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F129.D
Date : 25-JUN-2014 13:02
Client ID:
Sample Info: 48 @ 2.5ppb PCB6-35A

Instrument: GC32.i
Operator: JHSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F129.D
Date : 25-JUN-2014 13:02
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 2.5ppb PCB6-35A
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



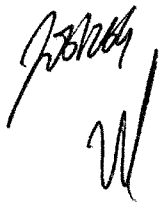
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

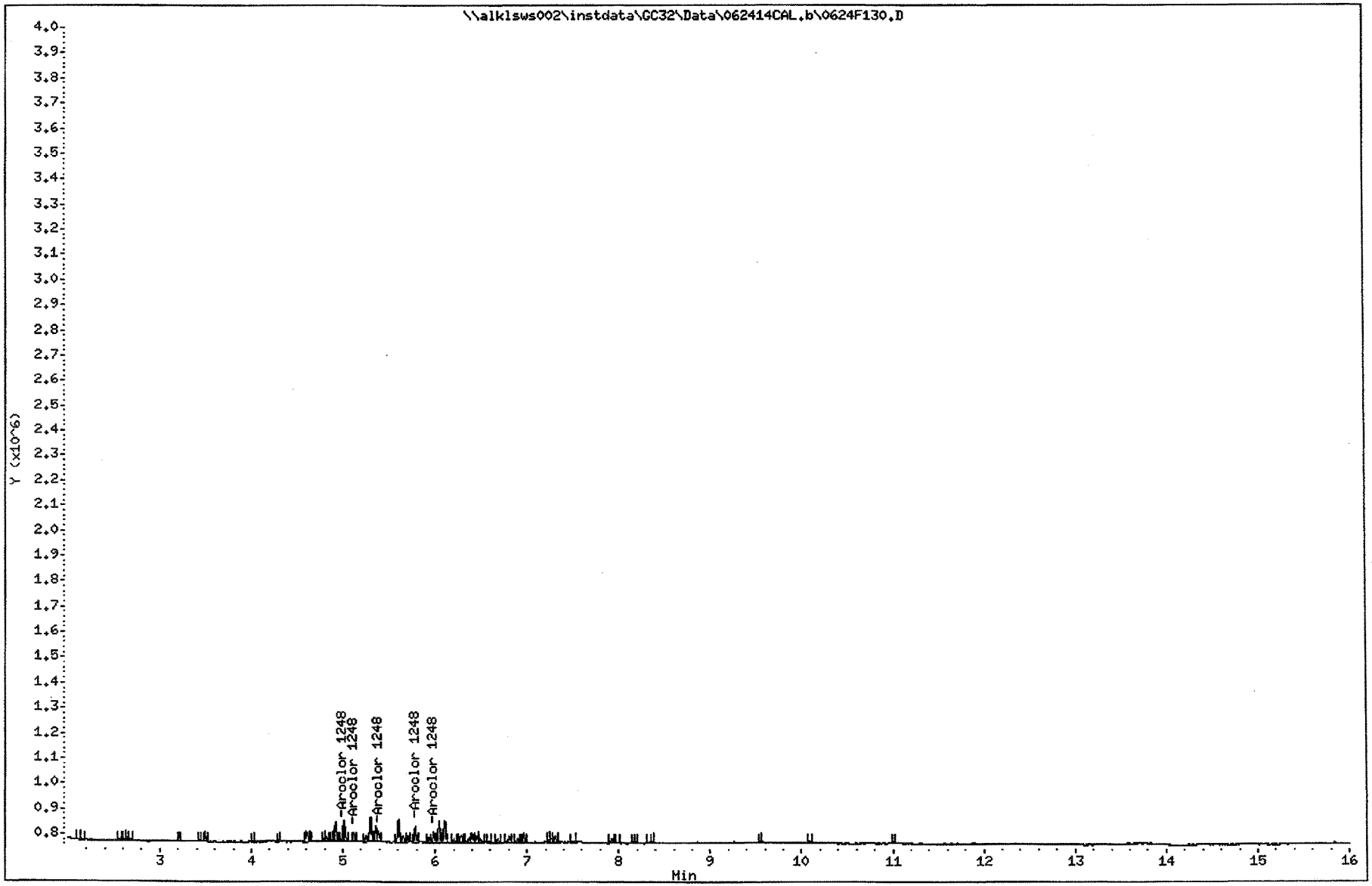
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D
Inj Date : 25-JUN-2014 13:23
Sample Info: 48 @ 5.0ppb PCB6-35D
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

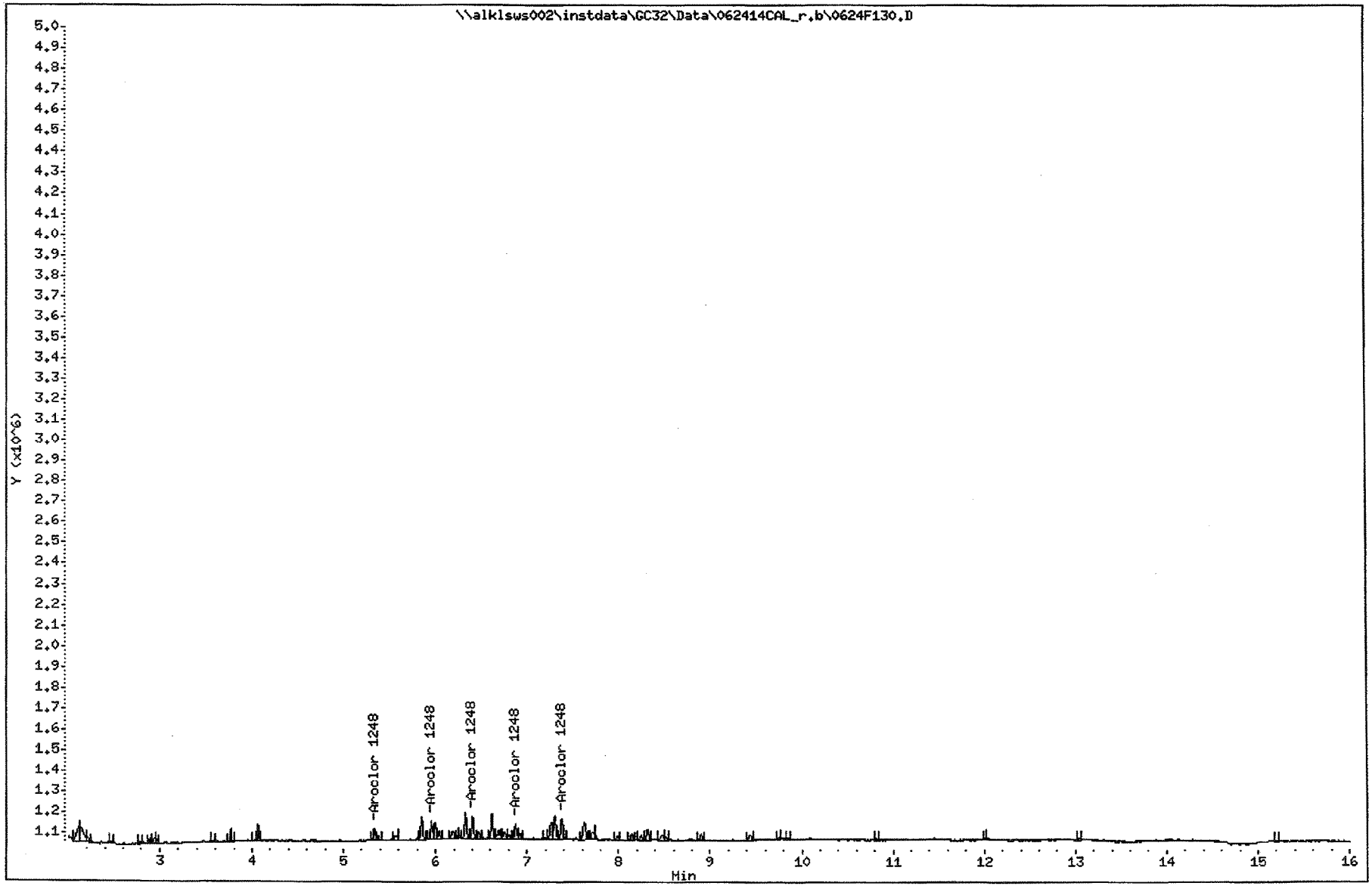
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.006	5.336	69956	88027	5.21	5.69	80.00- 120.00	100.00
	5.120	5.953	46093	136401	4.99	5.37	52.71- 79.07	65.89
	5.386	6.403	64426	162915	5.06	5.33	73.68- 110.51	92.10
	5.786	6.876	84764	121779	4.91	5.19	96.93- 145.40	121.17
	5.986	7.383	57892	177549	5.05	5.19	66.20- 99.31	82.75
			Average of Peak Amounts =		5.04	5.35		



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F130.D
Date : 25-JUN-2014 13:23
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 5.0ppb PCB6-35D
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F130.D
Date : 25-JUN-2014 13:23
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 5.0ppb PCB6-35D
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

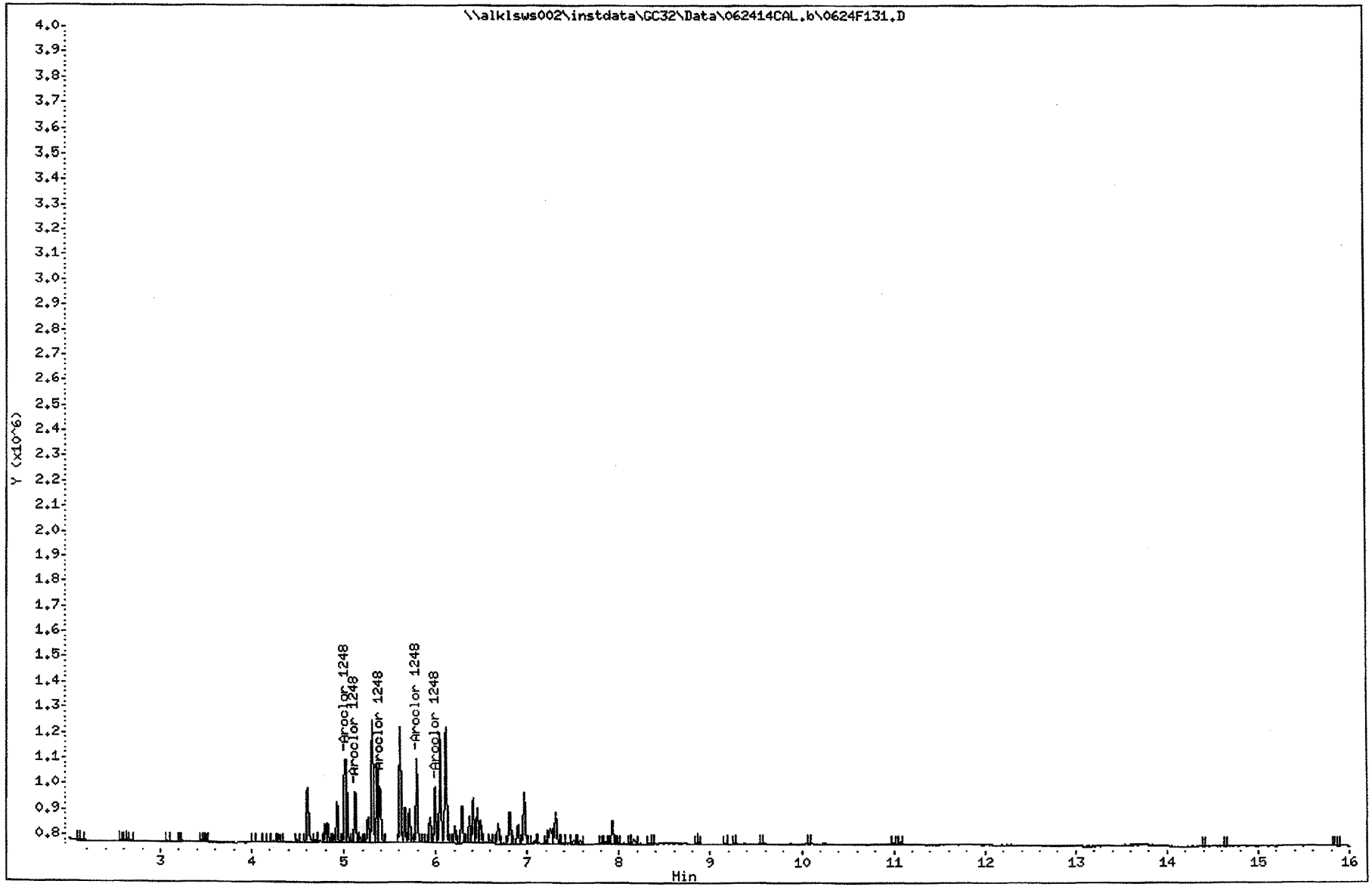
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D
Inj Date : 25-JUN-2014 13:44
Sample Info: 48 @ 25ppb PCB6-340
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

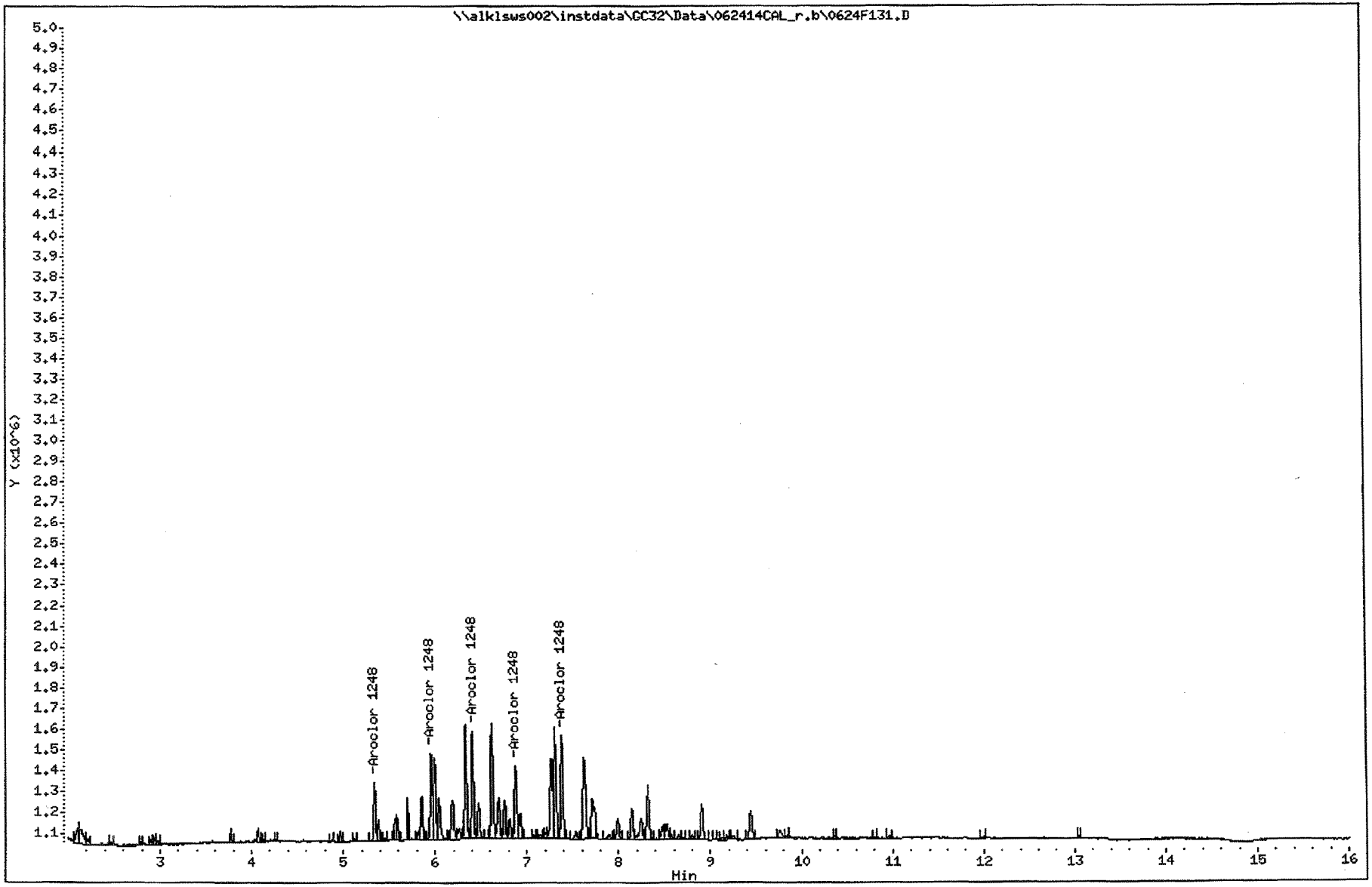
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.012	5.342	375894	384078	28.0	24.8	80.00- 120.00	100.00
	5.122	5.958	252384	639063	27.3	25.2	53.71- 80.57	67.14
	5.392	6.408	347487	789547	27.3	25.8	73.95- 110.93	92.44
	5.792	6.878	444818	593536	25.8	25.3	94.67- 142.00	118.34
	5.992	7.385	301884	843243	26.4	24.6	64.25- 96.37	80.31
			Average of Peak Amounts =		27.0	25.1		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F131.D
Date : 25-JUN-2014 13:44
Client ID:
Sample Info: 48 @ 25ppb PCB6-340

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F131.D
Date : 25-JUN-2014 13:44
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 25ppb PCB6-340
Operator: JHSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D
Report Date: 26-Jun-2014 00:48

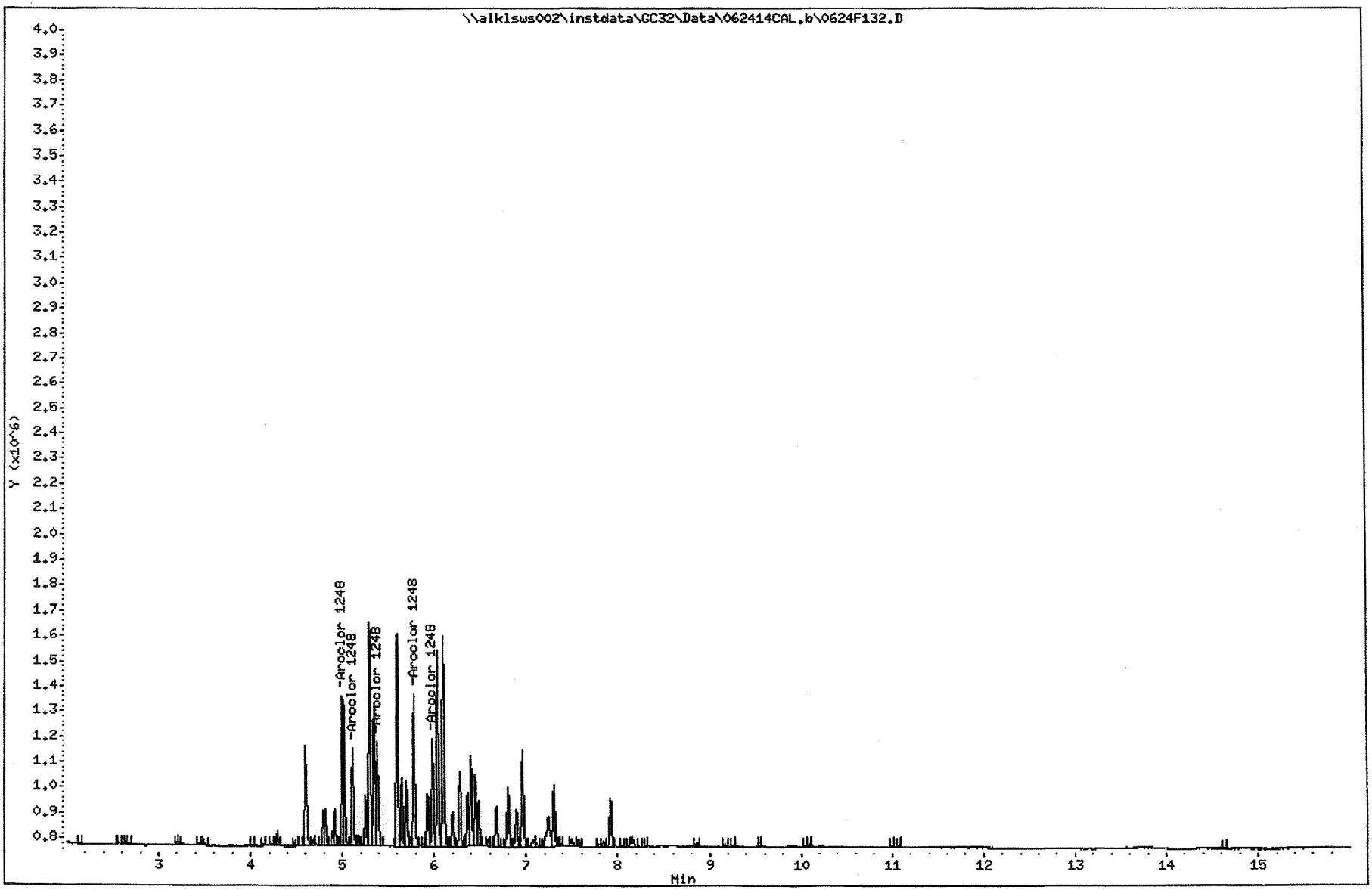
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D
Inj Date : 25-JUN-2014 14:05
Sample Info: 48 @ 50ppb PCB6-35C
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

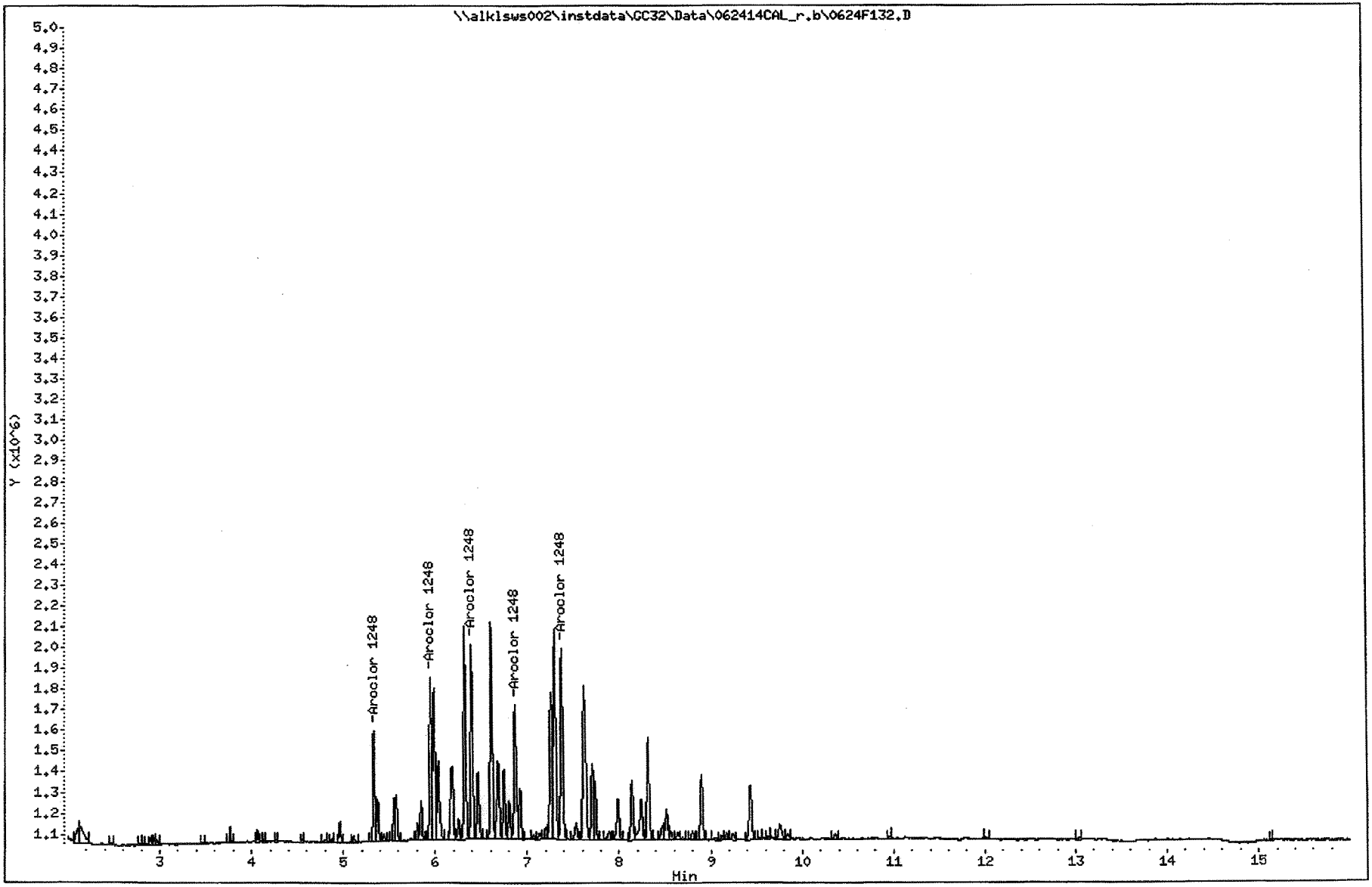
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.004	5.334	644367	733212	48.0	47.4	80.00- 120.00	100.00
	5.114	5.950	485810	1232158	52.6	48.5	60.31- 90.47	75.39
	5.384	6.400	642558	1474369	50.5	48.3	79.78- 119.66	99.72
	5.784	6.874	858417	1129486	49.8	48.2	106.57- 159.86	133.22
	5.984	7.380	589920	1623341	51.5	47.4	73.24- 109.86	91.55
			Average of Peak Amounts =		50.5	48.0		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F132.D
Date : 25-JUN-2014 14:05
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 50ppb PCB6-35C
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F132.D
Date : 25-JUN-2014 14:05
Client ID:
Instrument: GC32.i
Sample Info: 48 @ 50ppb PCB6-35C
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

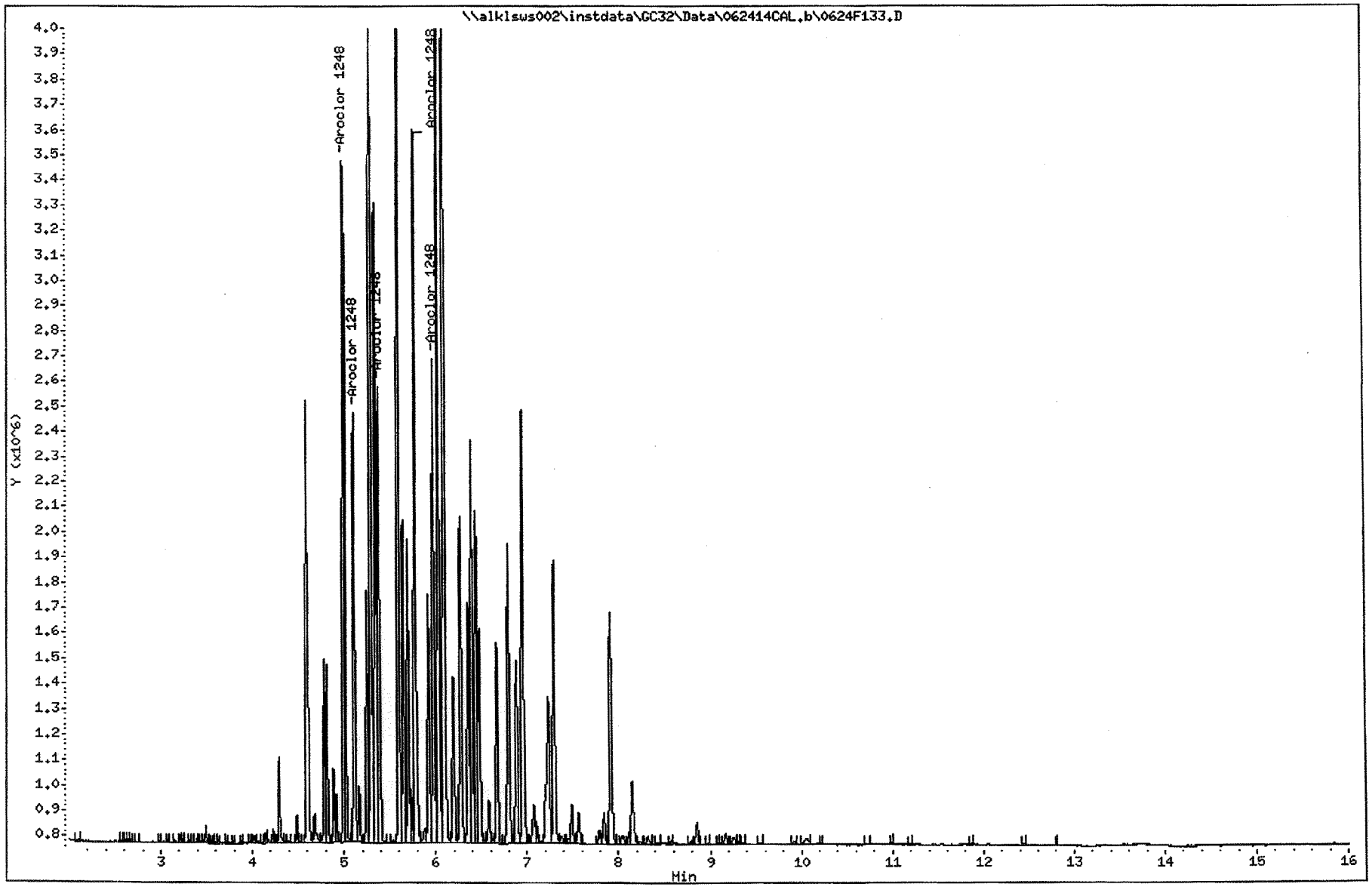
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D
Inj Date : 25-JUN-2014 14:26
Sample Info: 48 @ 250ppb PCB6-34N
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.001	5.331	2989427	3323615	223	215	80.00- 120.00	100.00
	5.111	5.948	2273519	5867186	246	231	60.84- 91.26	76.05
	5.381	6.398	2909525	6882035	228	225	77.86- 116.79	97.33
	5.778	6.868	4086081	5531504	237	236	109.35- 164.02	136.68
	5.981	7.374	2775230	7792794	242	228	74.27- 111.40	92.83
			Average of Peak Amounts =		235	227		

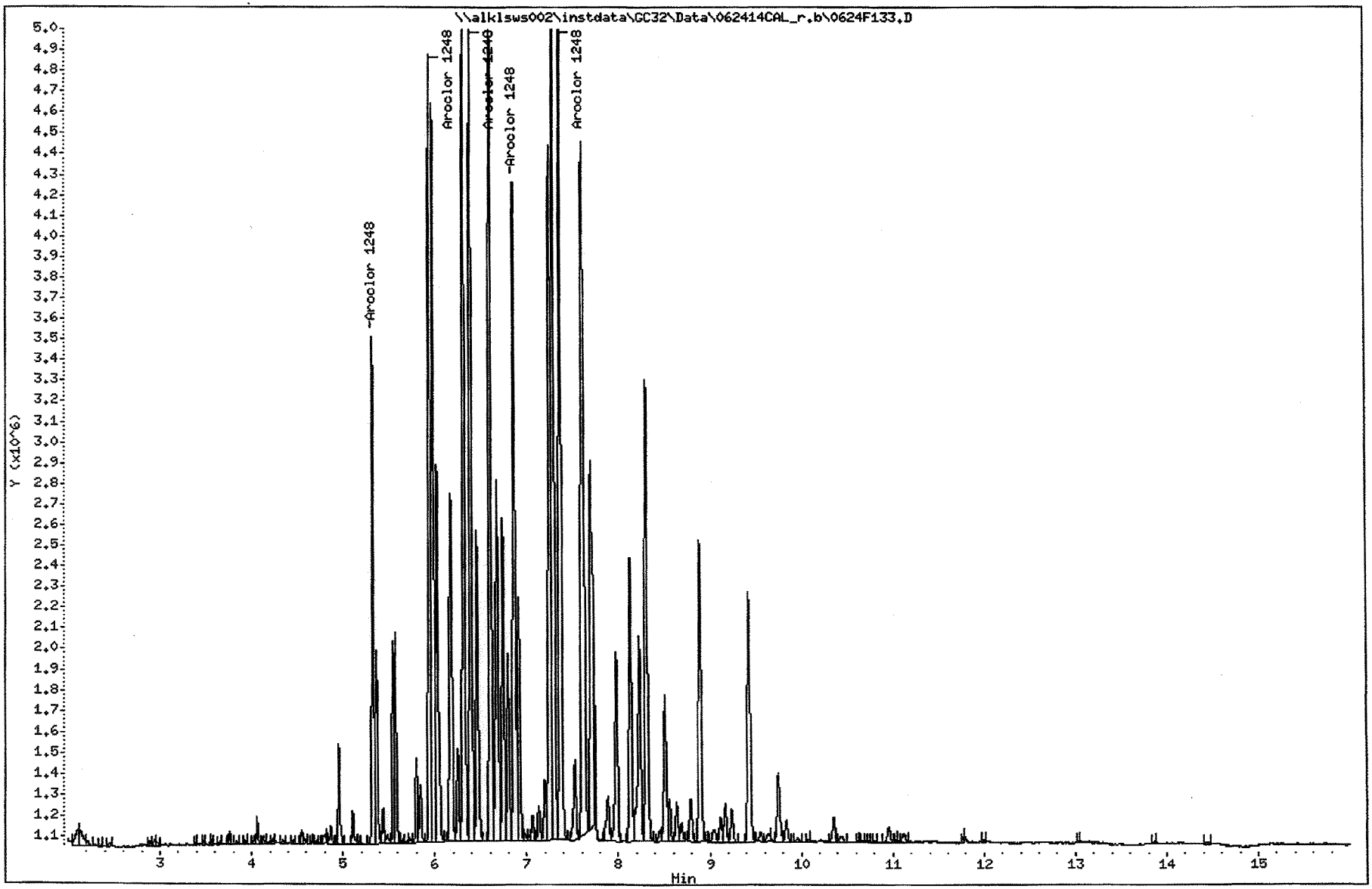
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F133.D
Date : 25-JUN-2014 14:26
Client ID:
Sample Info: 48 @ 250ppb PCB6-34N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F133.D
Date : 25-JUN-2014 14:26
Client ID:
Sample Info: 48 @ 250ppb PCB6-34N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D
Inj Date : 25-JUN-2014 14:47
Sample Info: 48 @ 500ppb PCB6-35B
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

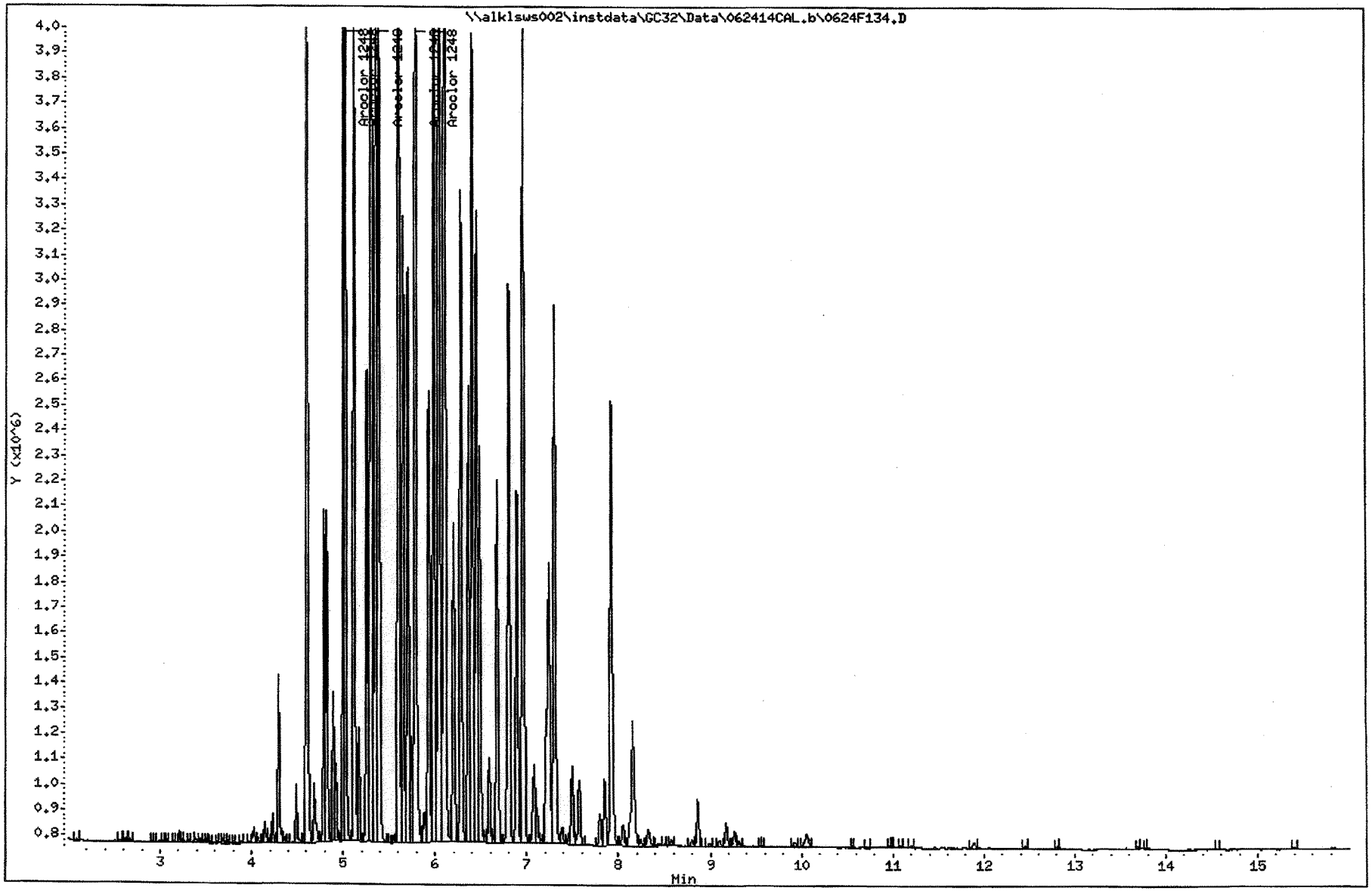
Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.008	5.337	6468173	6408942	482	414	80.00- 120.00	100.00
	5.118	5.954	4368476	11513135	473	453	54.03- 81.05	67.54
	5.388	6.404	5767584	13718207	453	449	71.33- 107.00	89.17
	5.788	6.877	7976159	11032707	462	471	98.65- 147.98	123.31
	5.988	7.381	5360330	15654374	468	457	66.30- 99.45	82.87
			Average of Peak Amounts =		468	449		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F134.D
Date : 25-JUN-2014 14:47
Client ID:
Sample Info: 48 @ 500ppb PCB6-35B

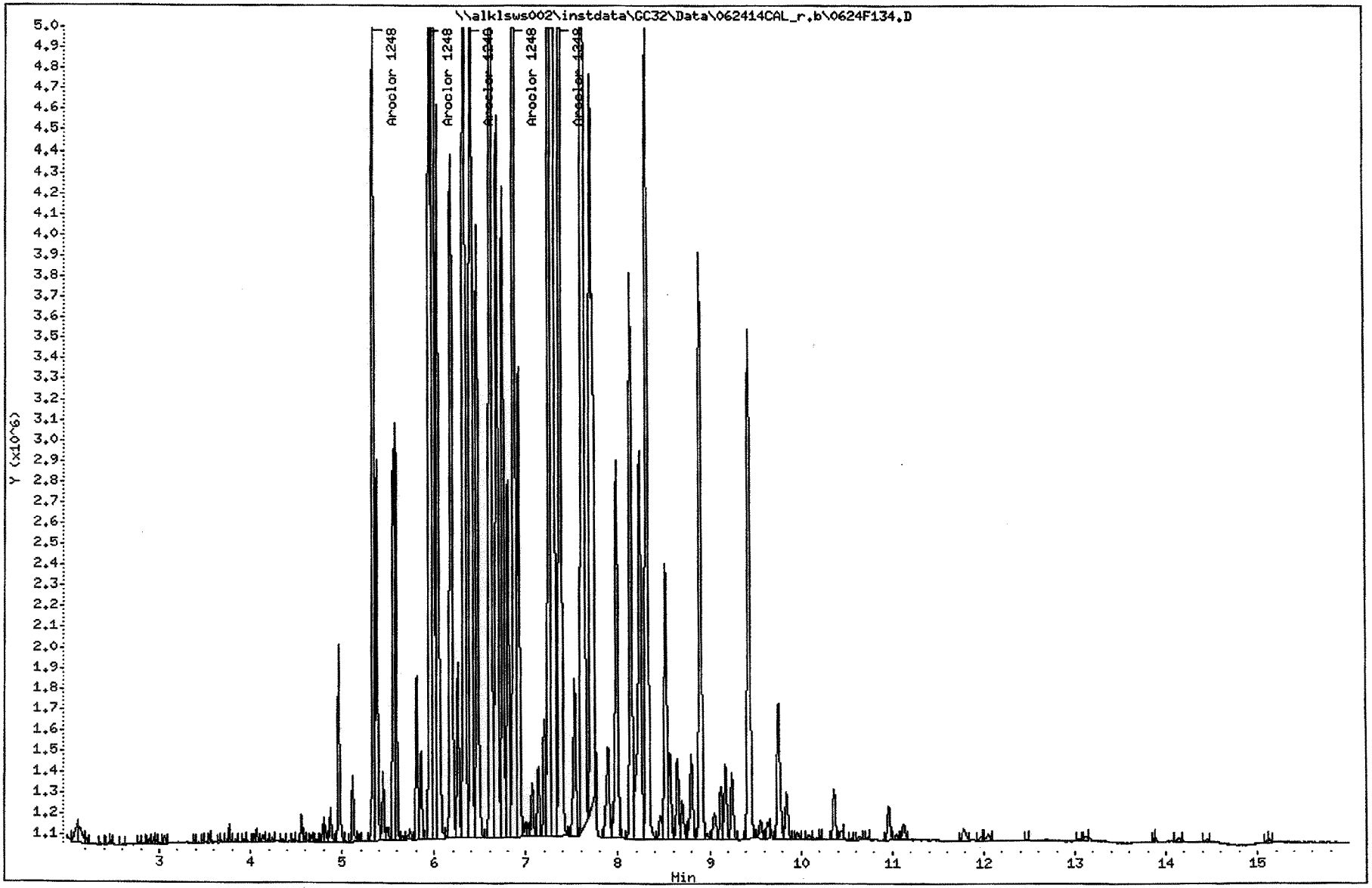
Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F134.D
Date : 25-JUN-2014 14:47
Client ID:
Sample Info: 48 @ 500ppb PCB6-35B

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F135.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

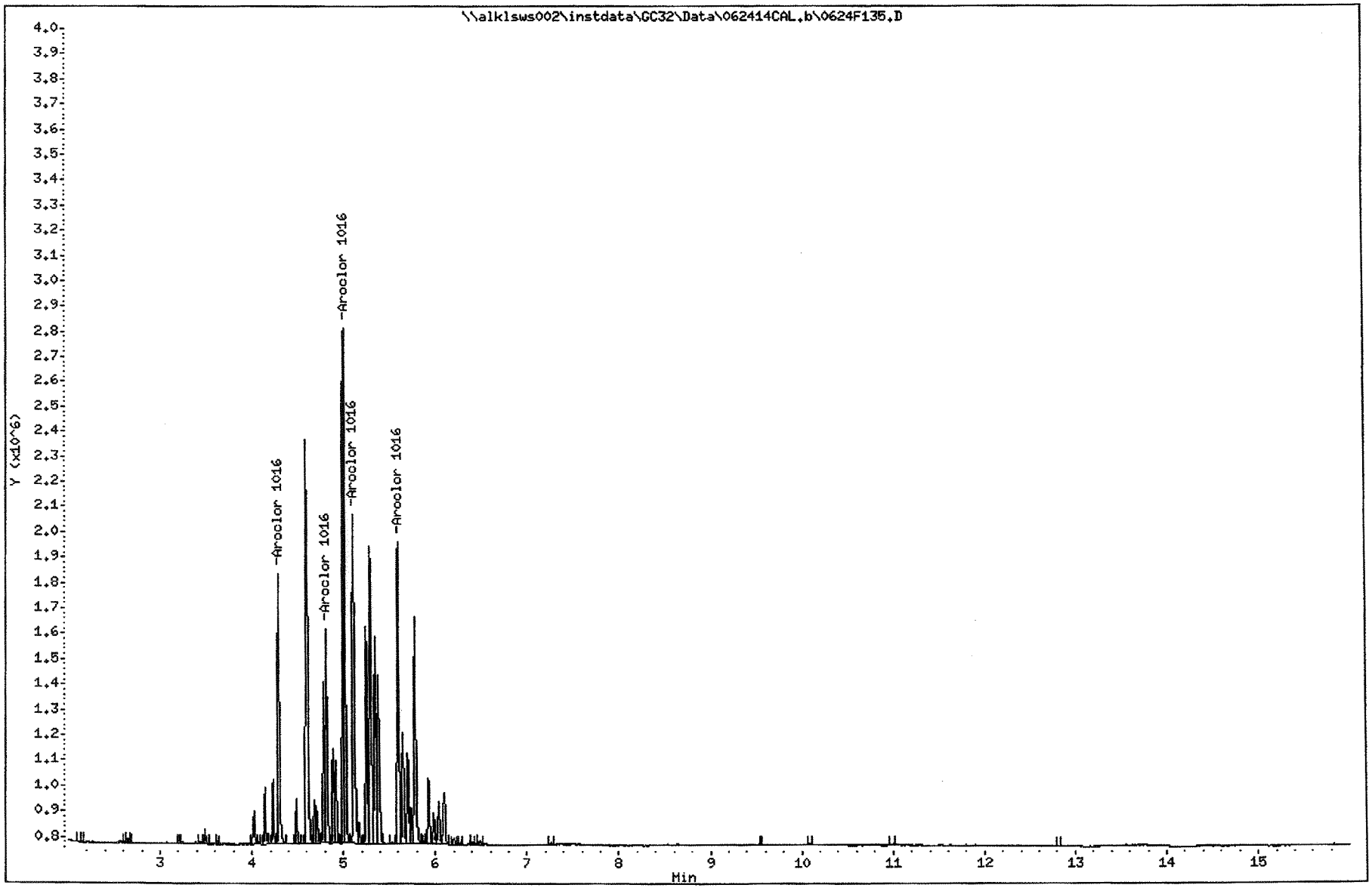
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F135.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F135.D
Inj Date : 25-JUN-2014 15:08
Sample Info: 1016 ICV @ 100ppb PCB6-37D
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	4.294	4.960	1242508	2124634	100	99.6	80.00- 120.00	100.00
	4.817	5.334	1041513	3015178	92.4	93.5	70.09- 105.14	83.82
	5.021	6.037	2558754	2956933	83.4	94.5	191.11- 286.67	205.93
	5.114	6.400	1892229	2340327	92.2	91.2	135.80- 203.70	152.29
	5.601	6.614	1585687	2303103	91.1	94.7	112.46- 168.70	127.62
			Average of Peak Amounts =		91.8	94.7		

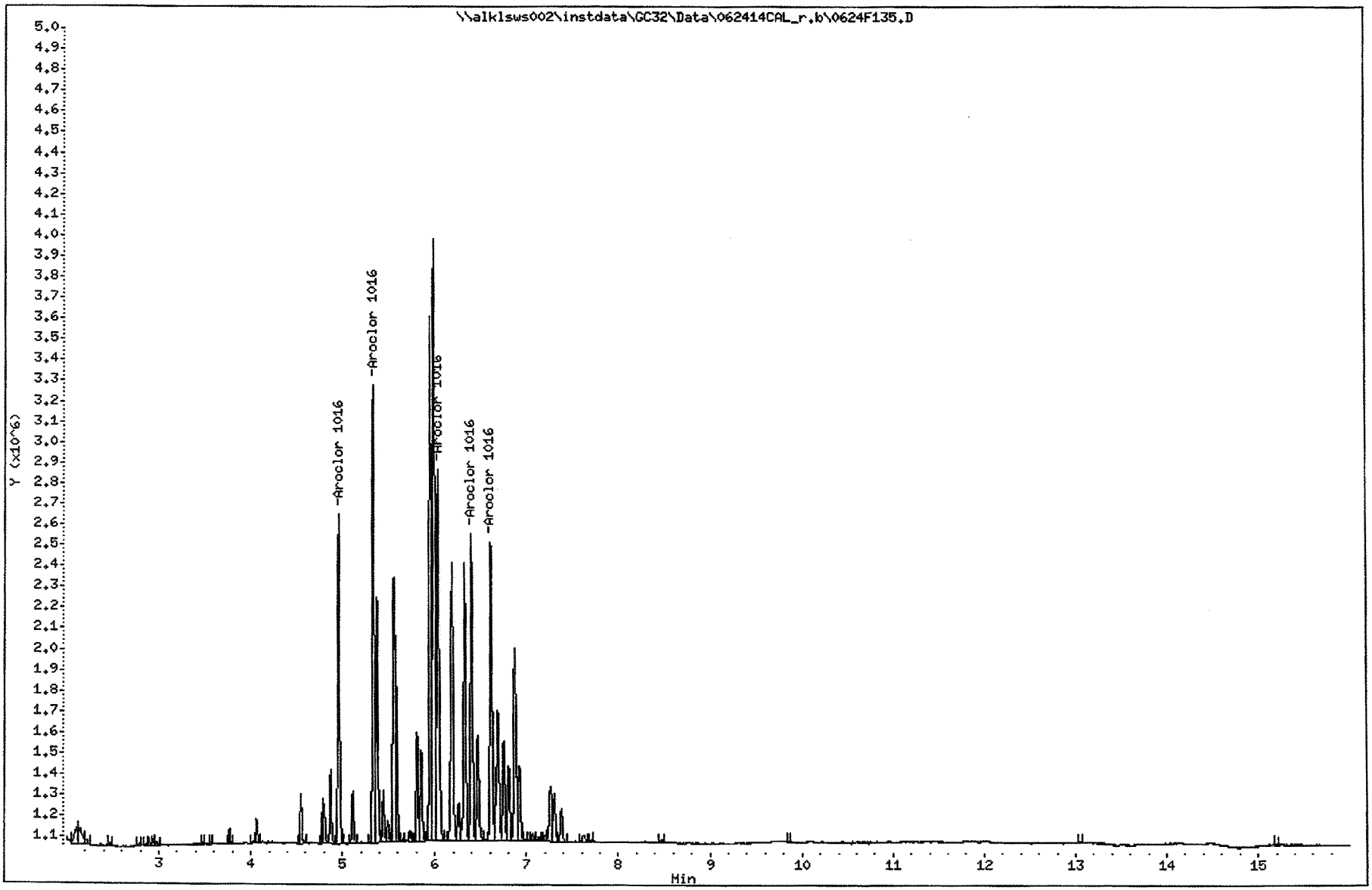
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F135.D
Date : 25-JUN-2014 15:08
Client ID:
Sample Info: 1016 ICV @ 100ppb PCB6-37D

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F135.D
Date : 25-JUN-2014 15:08
Client ID:
Sample Info: 1016 ICV @ 100ppb PCB6-37D

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F136.D
Report Date: 26-Jun-2014 00:48

ALS Environmental-Kelso

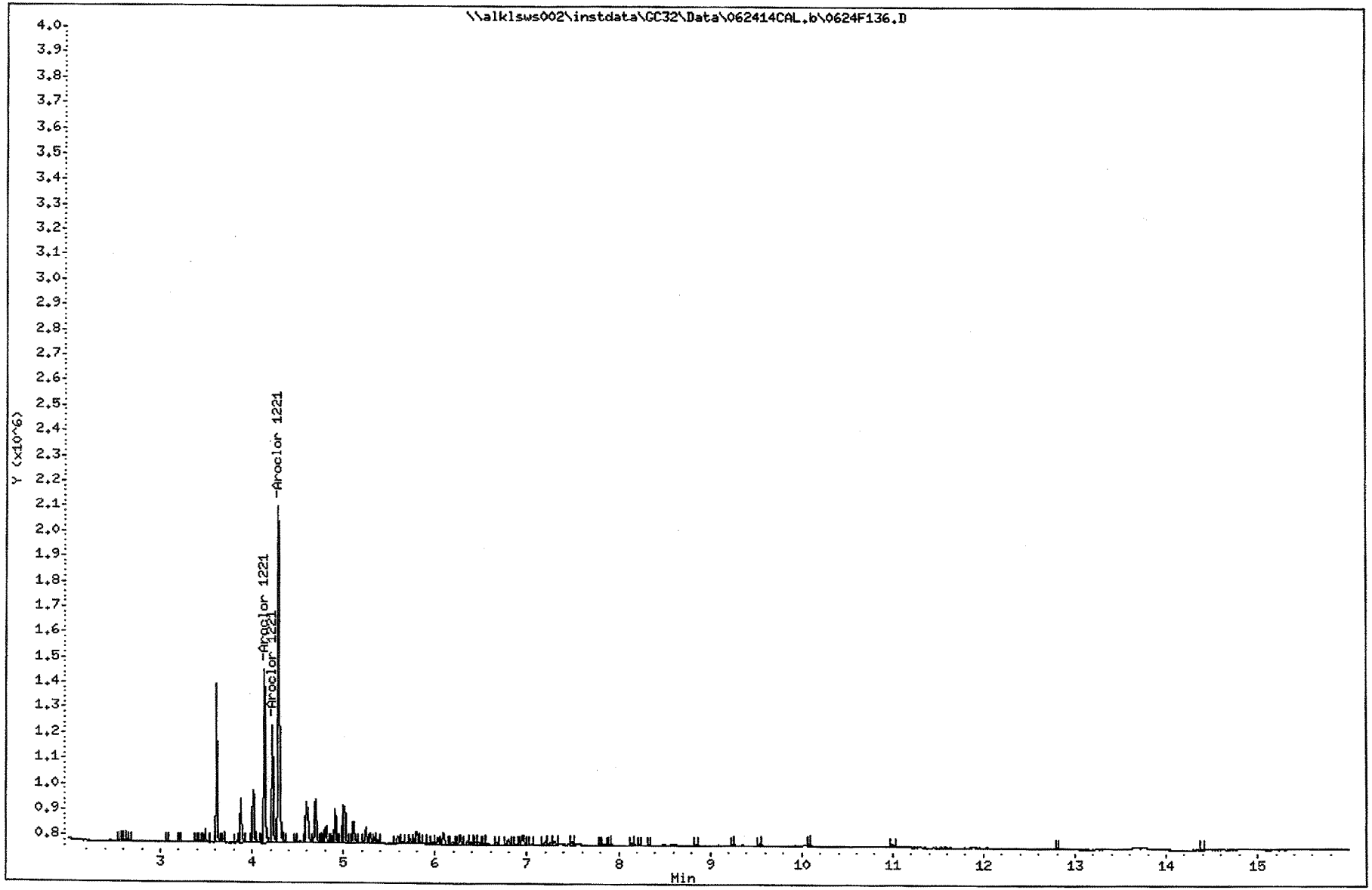
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F136.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F136.D
Inj Date : 25-JUN-2014 15:29
Sample Info: 1221 ICV @ 100ppb PCB6-37C
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

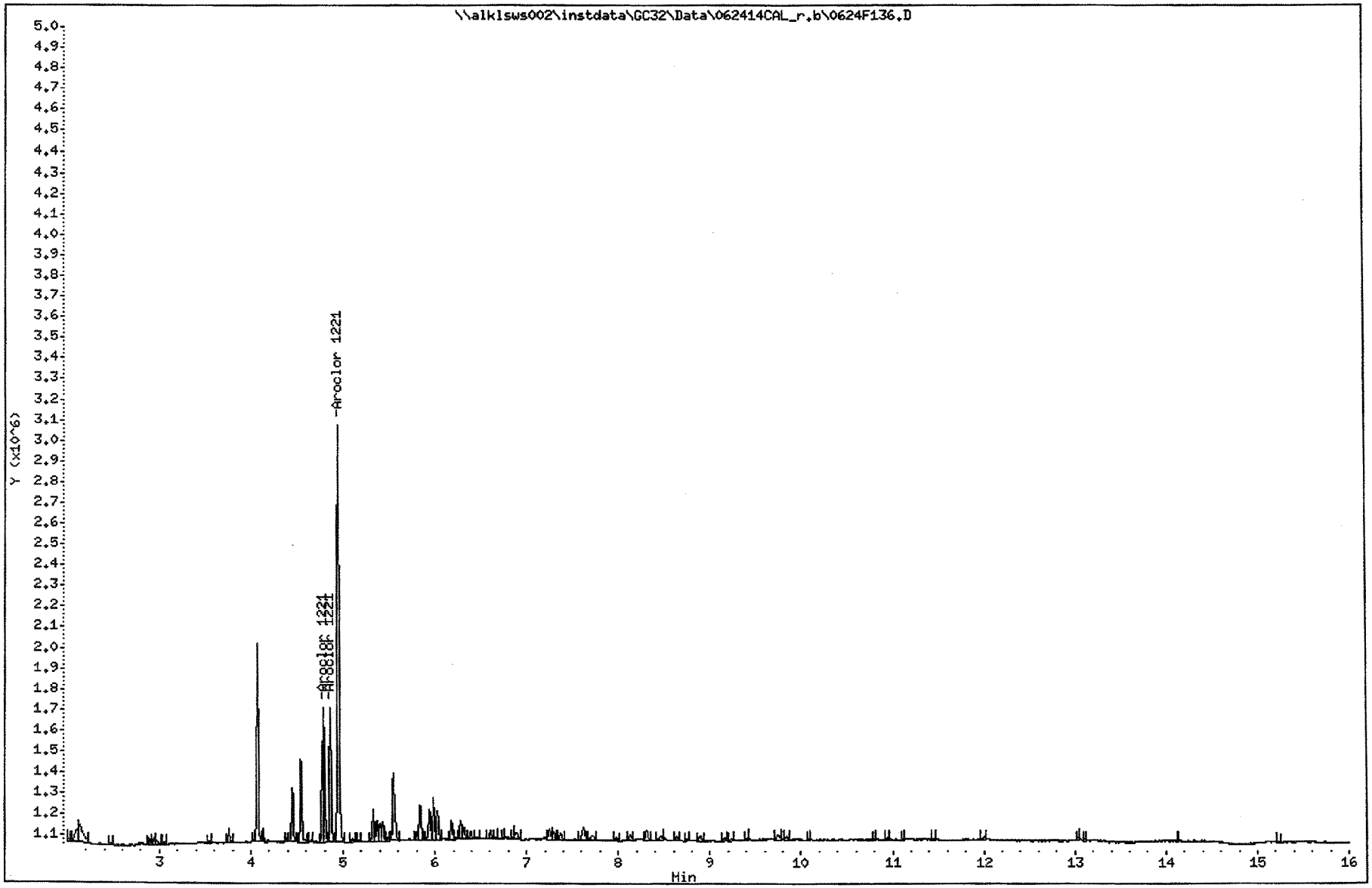
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	4.137	4.793	736079	859478	92.5	102	80.00- 120.00	100.00
	4.224	4.863	494483	810012	97.2	103	51.93- 77.90	67.18
	4.287	4.953	1710092	2800794	84.5	97.8	185.72- 278.59	232.32
			Average of Peak Amounts =		91.4	101		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F136.D
Date : 25-JUN-2014 15:29
Client ID:
Sample Info: 1221 ICV @ 100ppb PCB6-37C

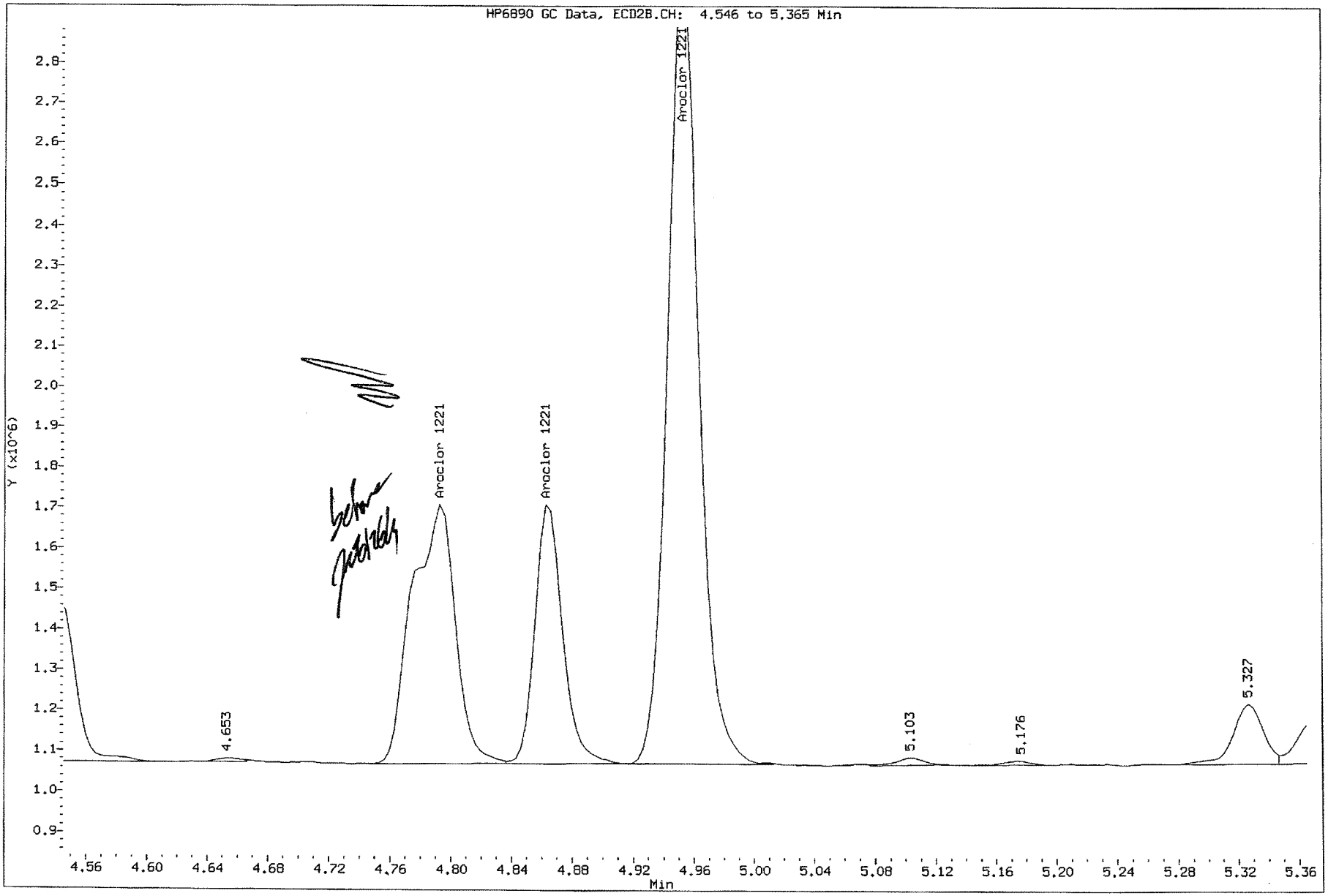
Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



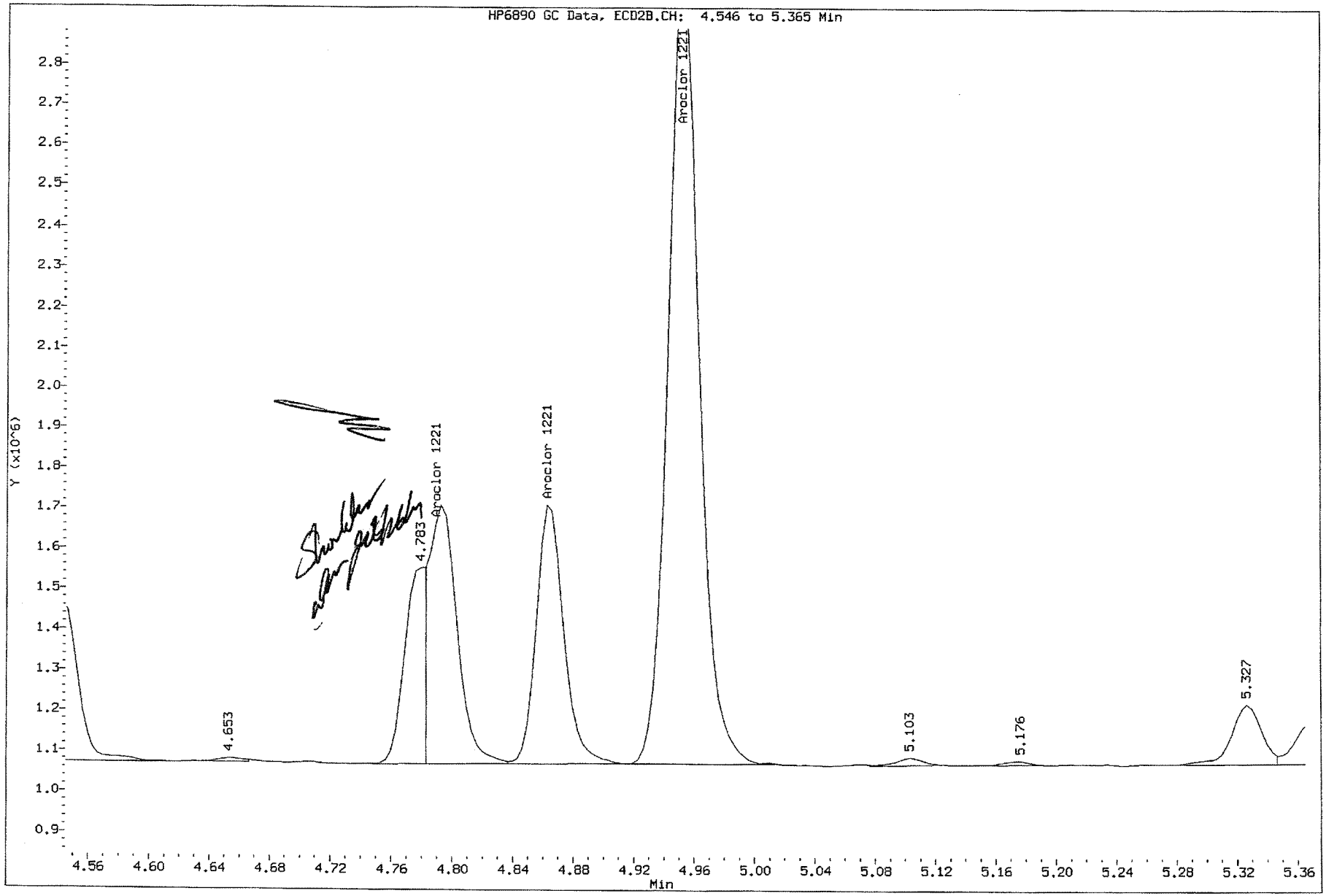
Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F136.D
Date : 25-JUN-2014 15:29
Client ID:
Instrument: GC32.i
Sample Info: 1221 ICV @ 100ppb PCB6-37C
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F136.D
Injection Date: 25-JUN-2014 15:29
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F136.D
Injection Date: 25-JUN-2014 15:29
Instrument: GC32.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F137.D
Report Date: 26-Jun-2014 00:48

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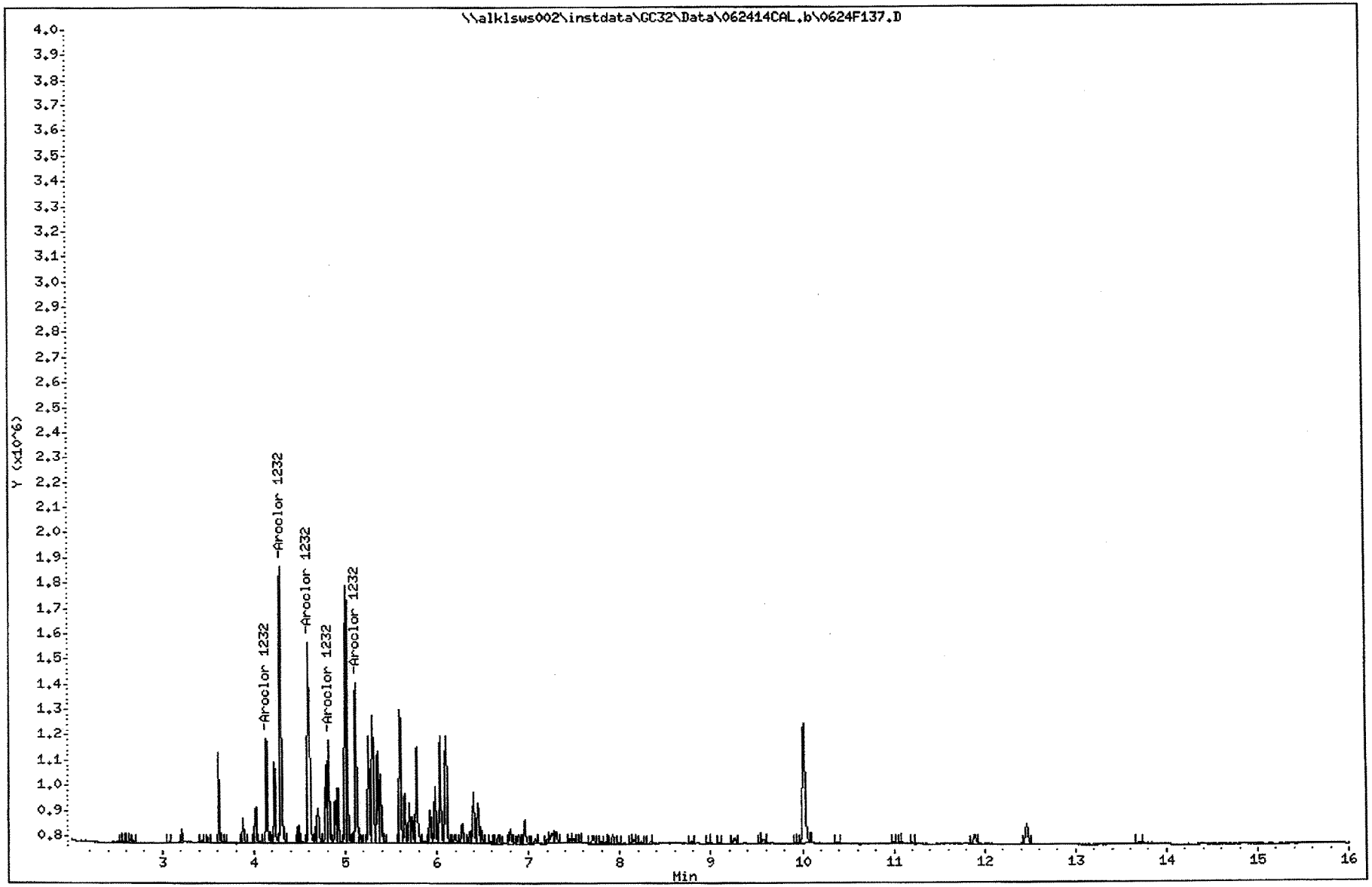
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F137.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F137.D
Inj Date : 25-JUN-2014 15:51
Sample Info: 1232 ICV @ 100ppb PCB6-37E
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

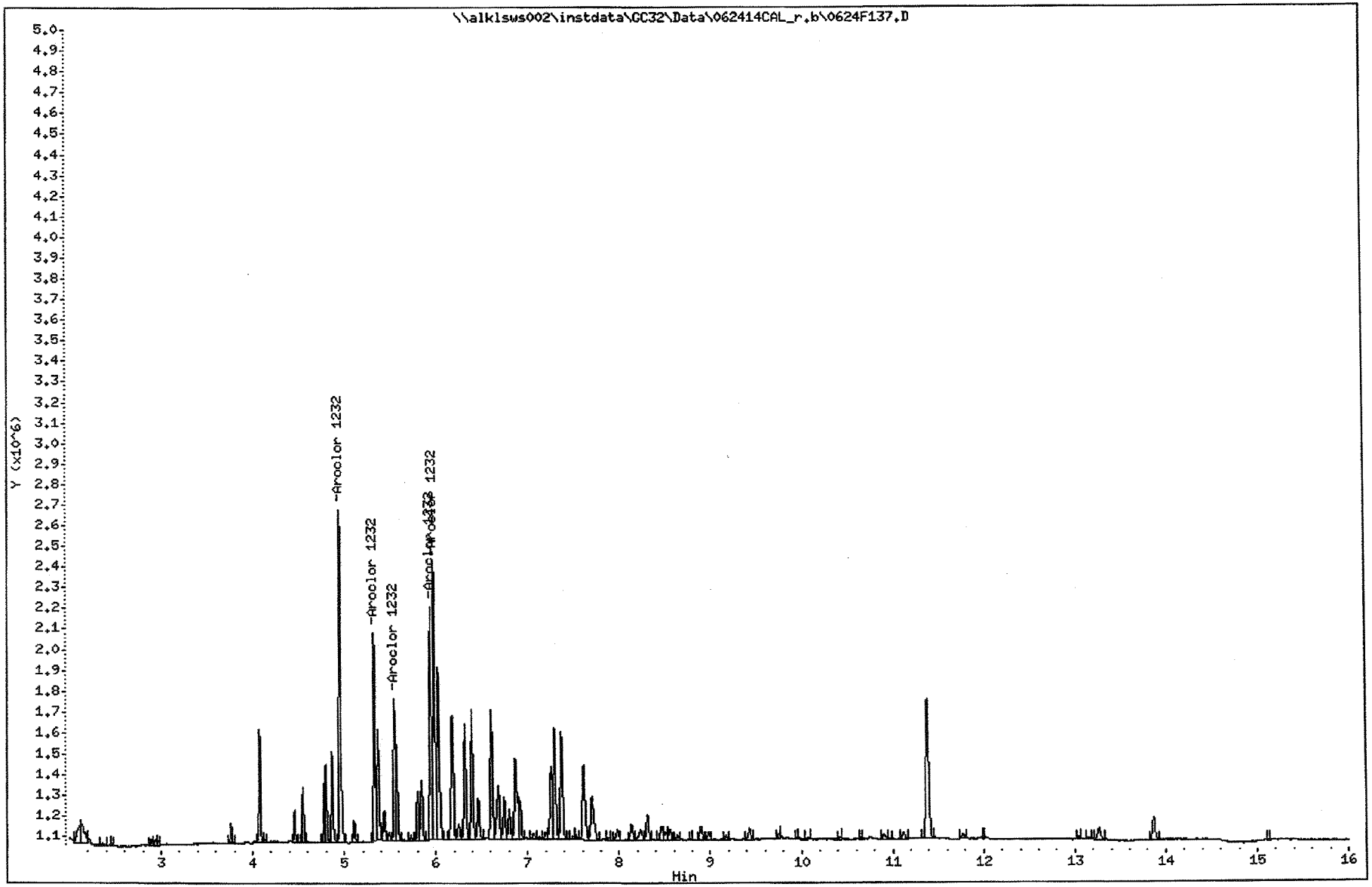
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.140	4.959	438667	2218141	85.1	85.9	80.00- 120.00	100.00
	4.293	5.333	1353509	1341409	86.7	87.3	223.21- 334.82	308.55
	4.596	5.553	1354653	1010733	91.5	94.3	207.49- 311.24	308.81
	4.816	5.949	518954	1714796	88.6	89.7	82.55- 123.82	118.30
	5.113	5.989	892096	2005165	95.2	87.7	146.93- 220.40	203.37
			Average of Peak Amounts =		89.4	89.0		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F137.D
Date : 25-JUN-2014 15:51
Client ID:
Instrument: GC32.i
Sample Info: 1232 ICV @ 100ppb PCB6-37E
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F137.D
Date : 25-JUN-2014 15:51
Client ID:
Sample Info: 1232 ICV @ 100ppb PCB6-37E

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F138.D
Report Date: 26-Jun-2014 00:48

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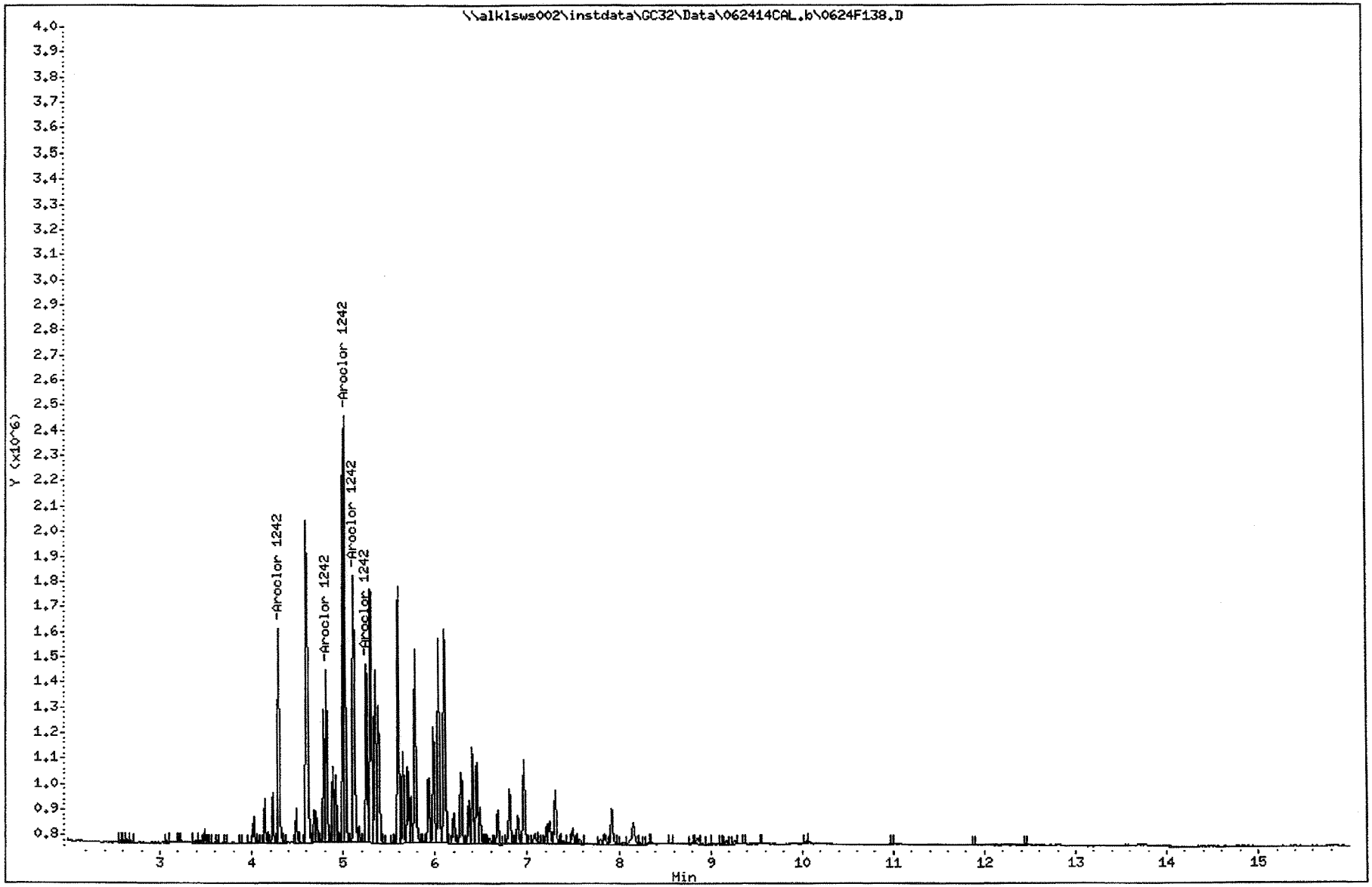
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F138.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F138.D
Inj Date : 25-JUN-2014 16:12
Sample Info: 1242 ICV @ 100ppb PCB6-37F
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

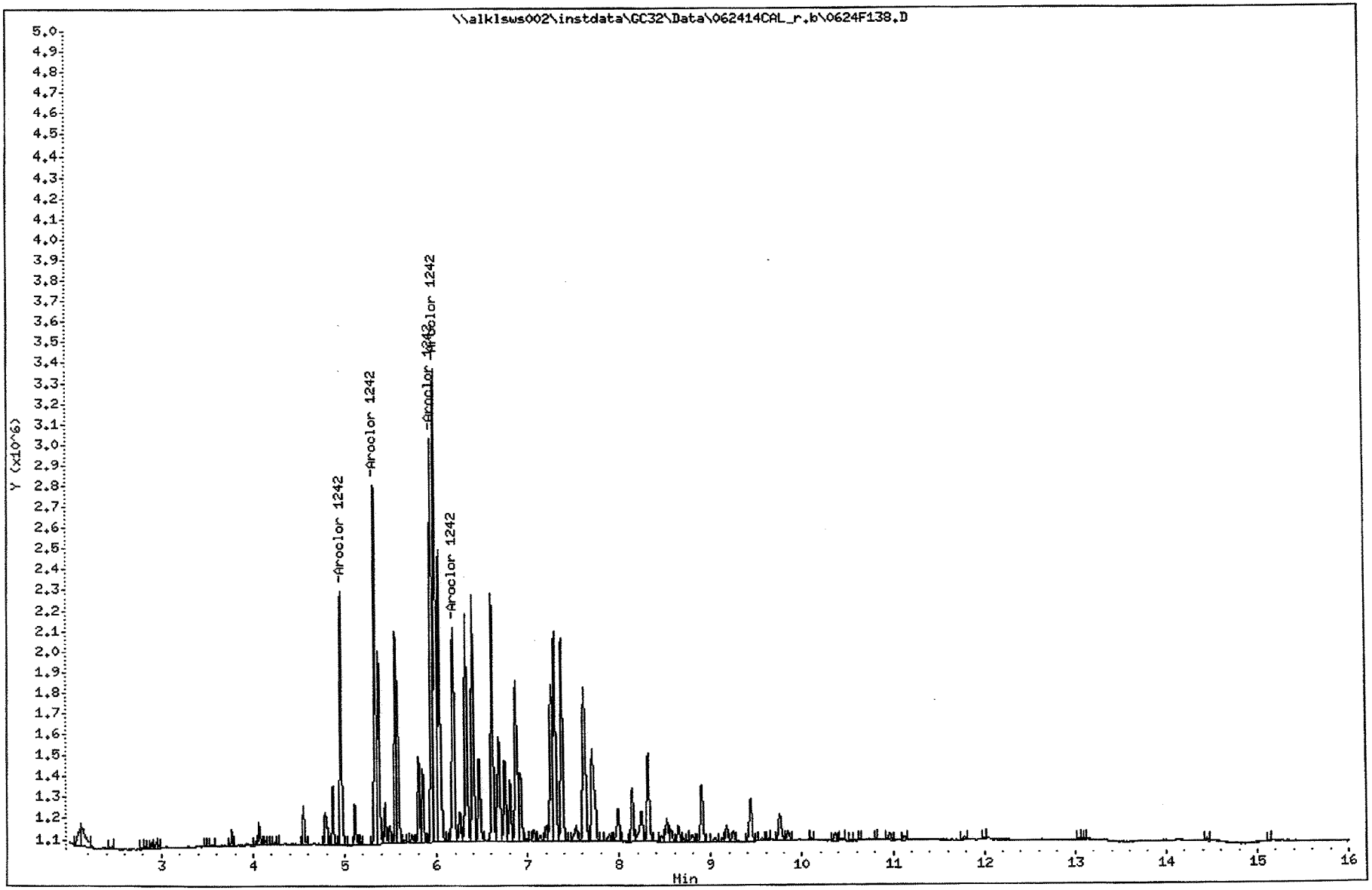
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	4.294	4.963	989088	1654073	91.7	95.0	80.00- 120.00	100.00
	4.820	5.333	848191	2357002	90.4	89.4	67.74- 101.60	85.75
	5.020	5.953	2184262	3055614	90.8	96.4	183.47- 275.21	220.84
	5.117	5.993	1521405	3497217	92.6	90.4	127.13- 190.69	153.82
	5.257	6.190	907072	1937991	86.3	94.7	75.12- 112.68	91.71
			Average of Peak Amounts =		90.4	93.2		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F138.D
Date : 25-JUN-2014 16:12
Client ID:
Instrument: GC32.i
Sample Info: 1242 ICV @ 100ppb PCB6-37F
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F138.D
Date : 25-JUN-2014 16:12
Client ID:
Sample Info: 1242 ICV @ 100ppb PCB6-37F

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F139.D
Report Date: 26-Jun-2014 00:48

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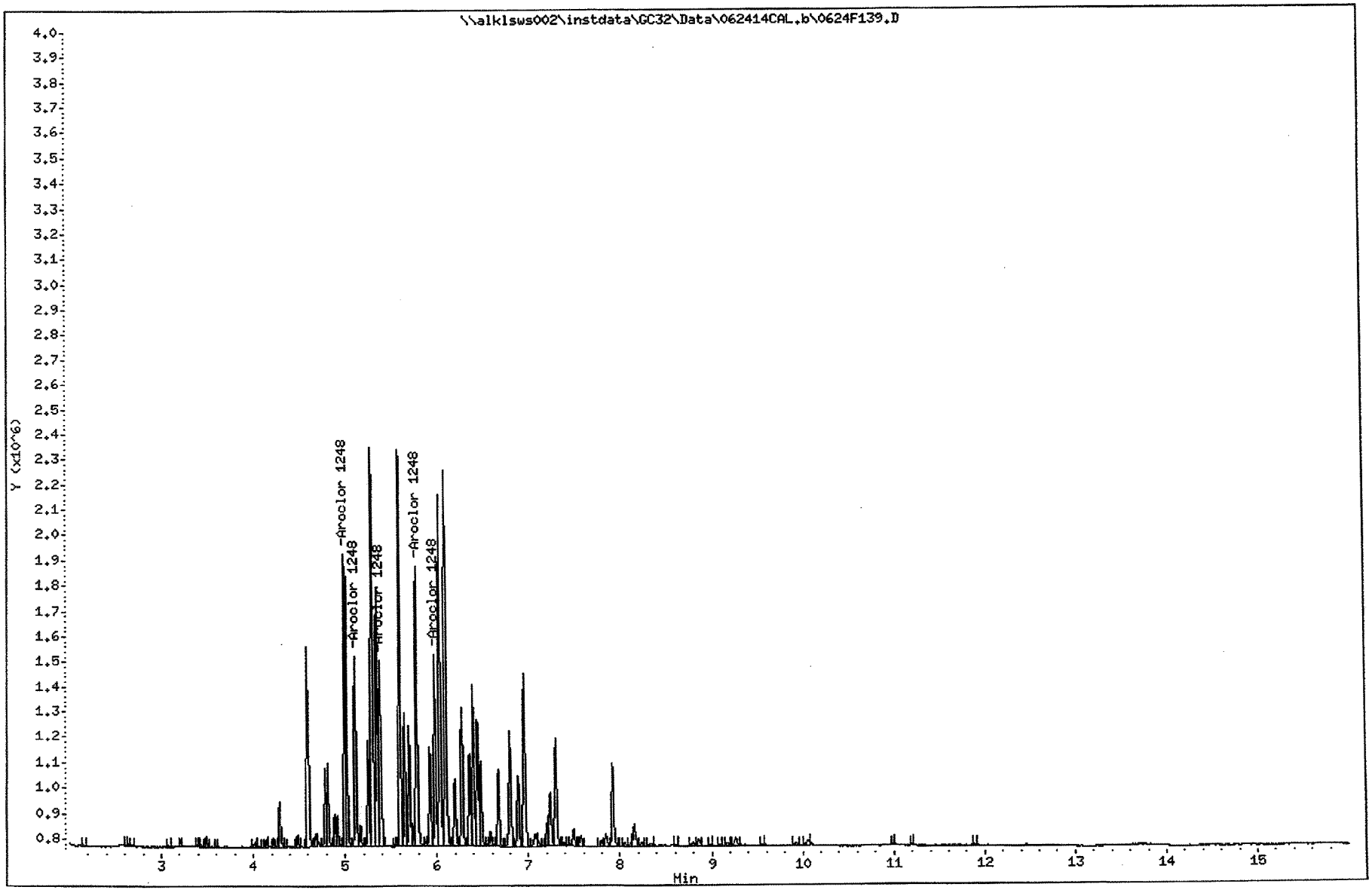
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F139.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F139.D
Inj Date : 25-JUN-2014 16:33
Sample Info: 1248 ICV @ 100ppb PCB6-37G
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	5.001	5.334	1309230	1468754	97.5	94.9	80.00- 120.00	100.00
	5.115	5.951	996254	2336097	108	92.0	54.03- 81.05	76.09
	5.385	6.401	1178403	2708486	92.5	88.6	71.33- 107.00	90.01
	5.781	6.874	1604159	2096756	93.0	89.4	98.65- 147.98	122.53
	5.981	7.378	1062783	2884942	92.8	84.3	66.30- 99.45	81.18
			Average of Peak Amounts =		96.8	89.8		

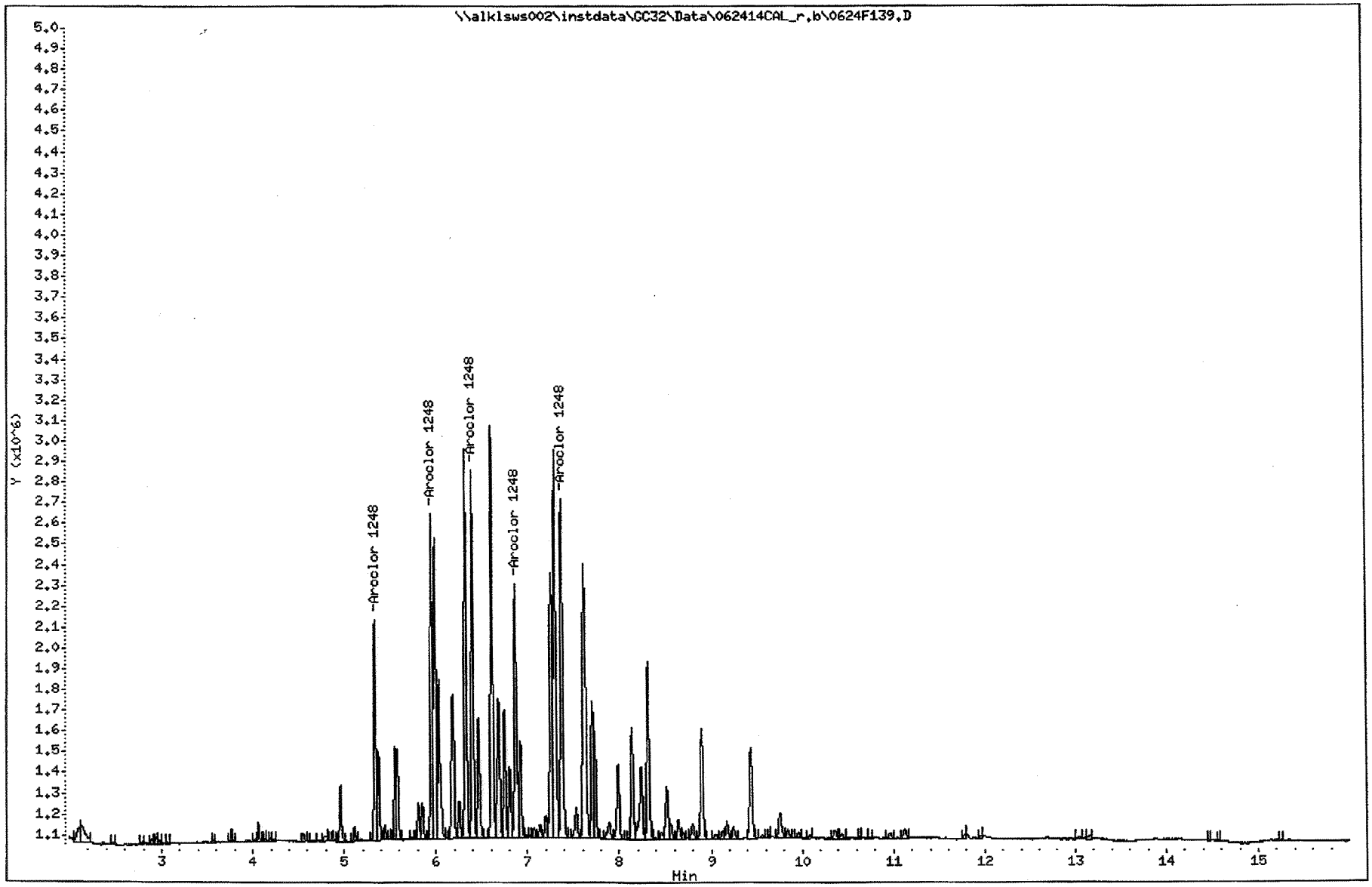
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F139.D
Date : 25-JUN-2014 16:33
Client ID:
Sample Info: 1248 ICV @ 100ppb PCB6-37G

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F139.D
Date : 25-JUN-2014 16:33
Client ID:
Sample Info: 1248 ICV @ 100ppb PCB6-37G

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F140.D
Report Date: 26-Jun-2014 00:48

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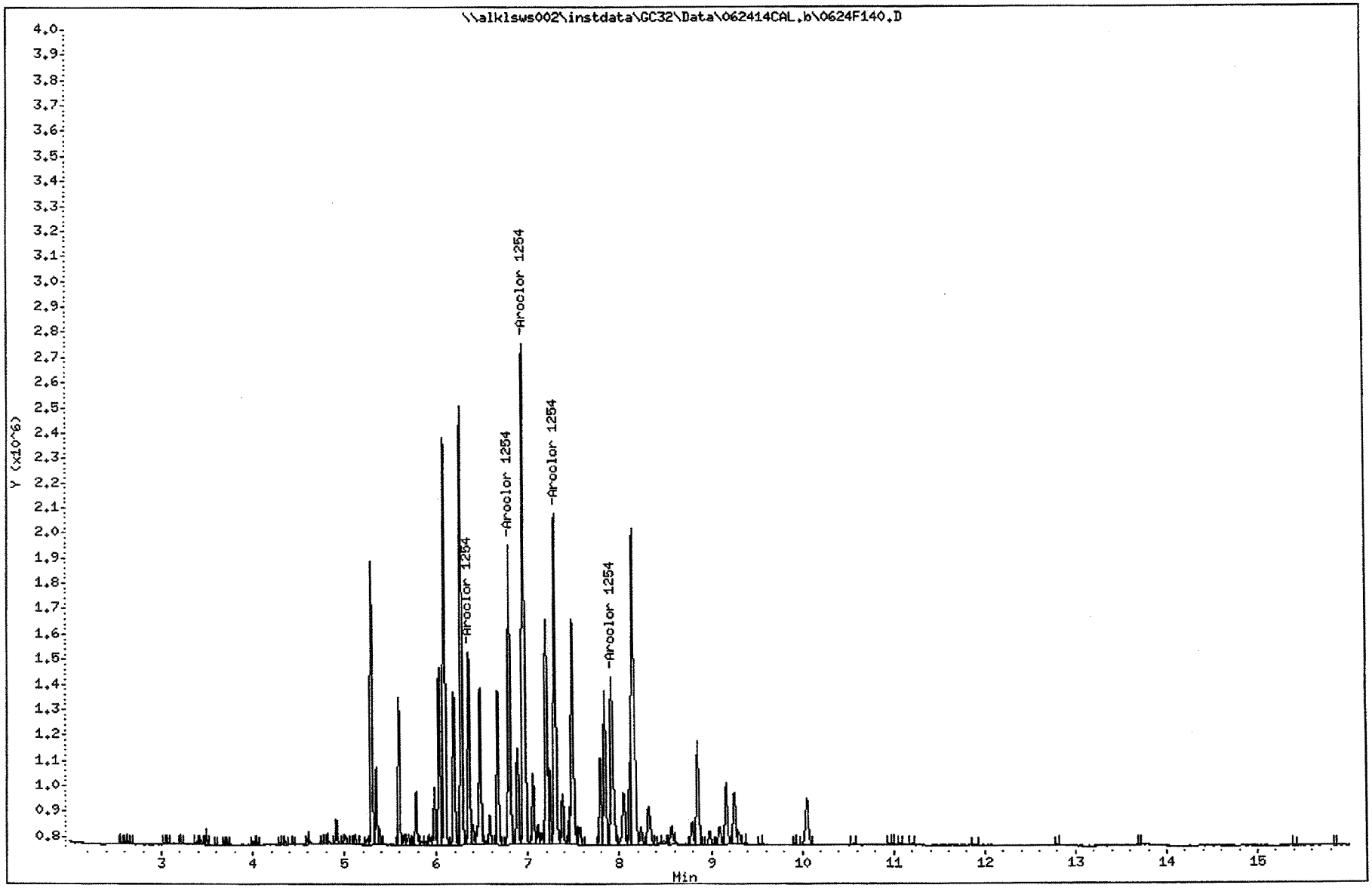
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F140.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F140.D
Inj Date : 25-JUN-2014 16:54
Sample Info: 1254 ICV @ 100ppb PCB6-37H
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	6.357	7.251	1112420	3807546	91.4	86.7	80.00- 120.00	100.00
	6.801	7.297	1908160	1626595	90.0	86.1	144.59- 216.89	171.53
	6.958	7.627	3645182	5424001	84.5	88.5	283.85- 425.77	327.68
	7.301	8.637	2168963	2055421	89.5	89.0	154.54- 231.81	194.98
	7.918	9.427	1364711	2488370	97.3	92.6	99.03- 148.55	122.68
			Average of Peak Amounts =		90.5	88.6		

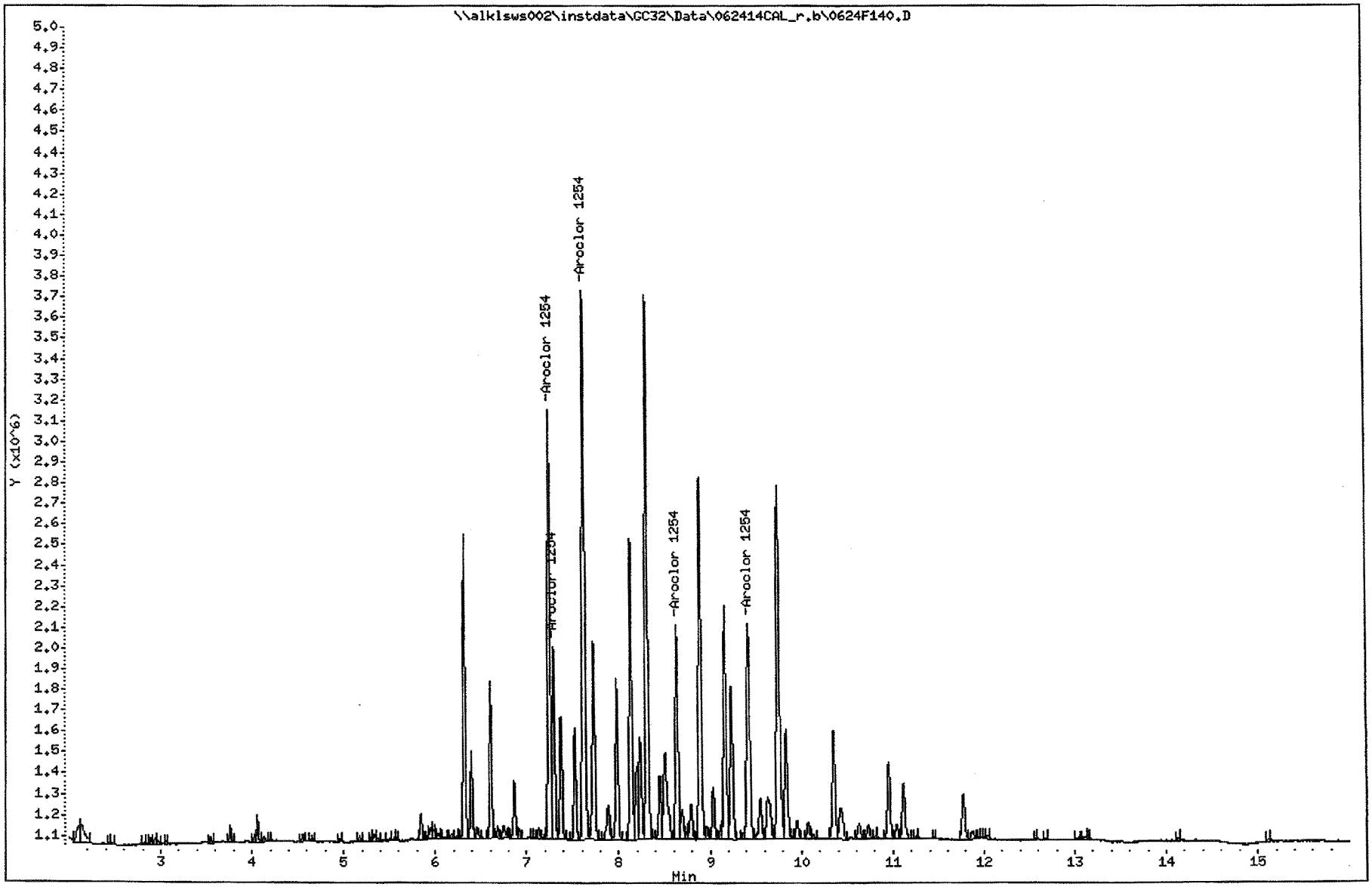
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F140.D
Date : 25-JUN-2014 16:54
Client ID:
Sample Info: 1254 ICV @ 100ppb PCB6-37H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F140.D
Date : 25-JUN-2014 16:54
Client ID:
Sample Info: 1254 ICV @ 100ppb PCB6-37H

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F141.D
Report Date: 26-Jun-2014 00:48

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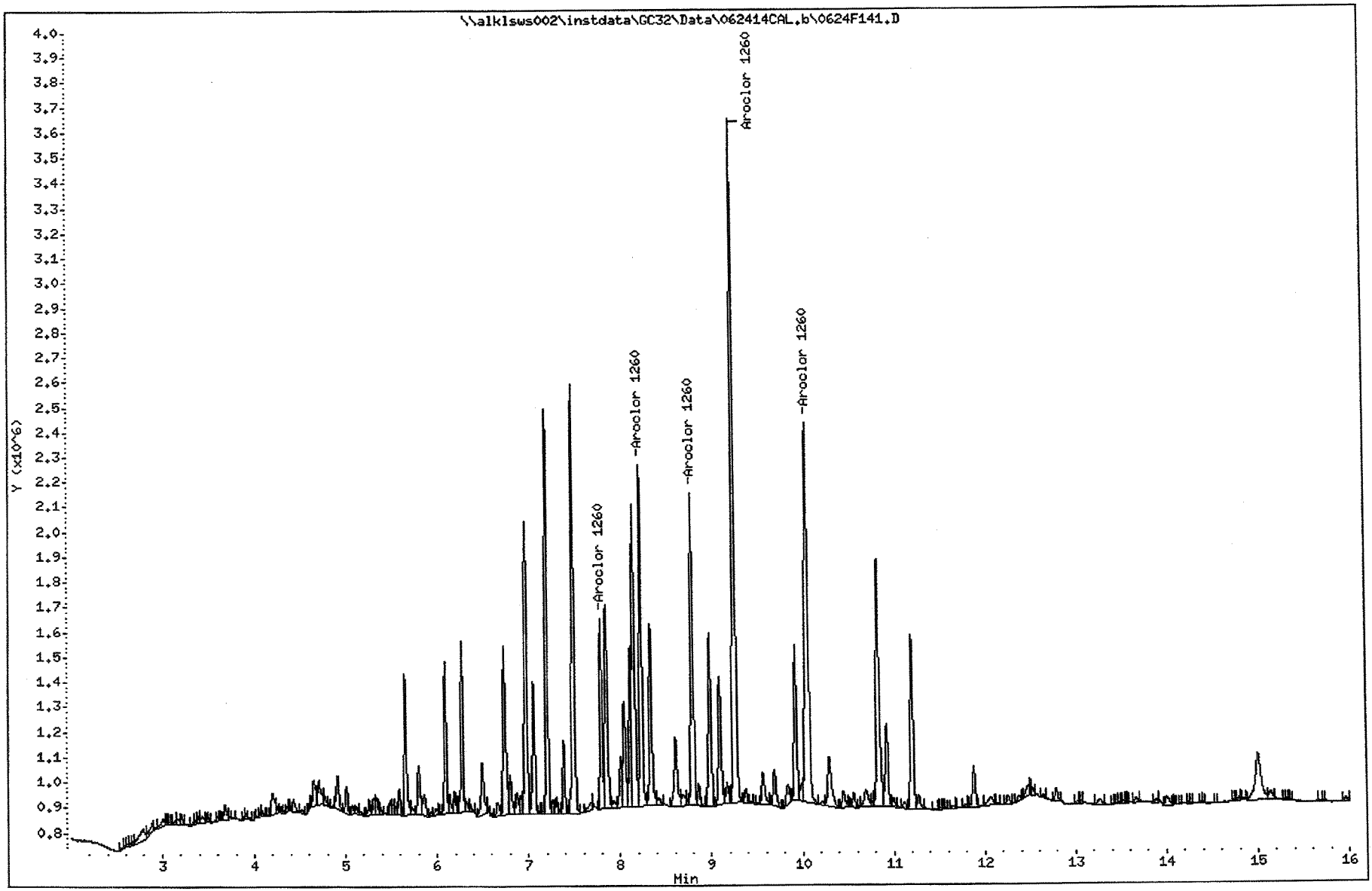
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F141.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F141.D
Inj Date : 25-JUN-2014 17:15
Sample Info: 1260 ICV @ 100ppb PCB6-37I
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	7.799	8.456	1280468	2240524	97.4	94.6	80.00- 120.00	100.00
	8.236	9.962	2480212	3637001	114	114	119.52- 179.28	193.70
	8.799	10.432	2471036	3761725	111	116	125.21- 187.81	192.98
	9.263	11.126	5148131	8160992	106	115	267.96- 401.94	402.05
	10.059	11.782	4009908	4762173	105	102	206.94- 310.41	313.16
			Average of Peak Amounts =		107	108		

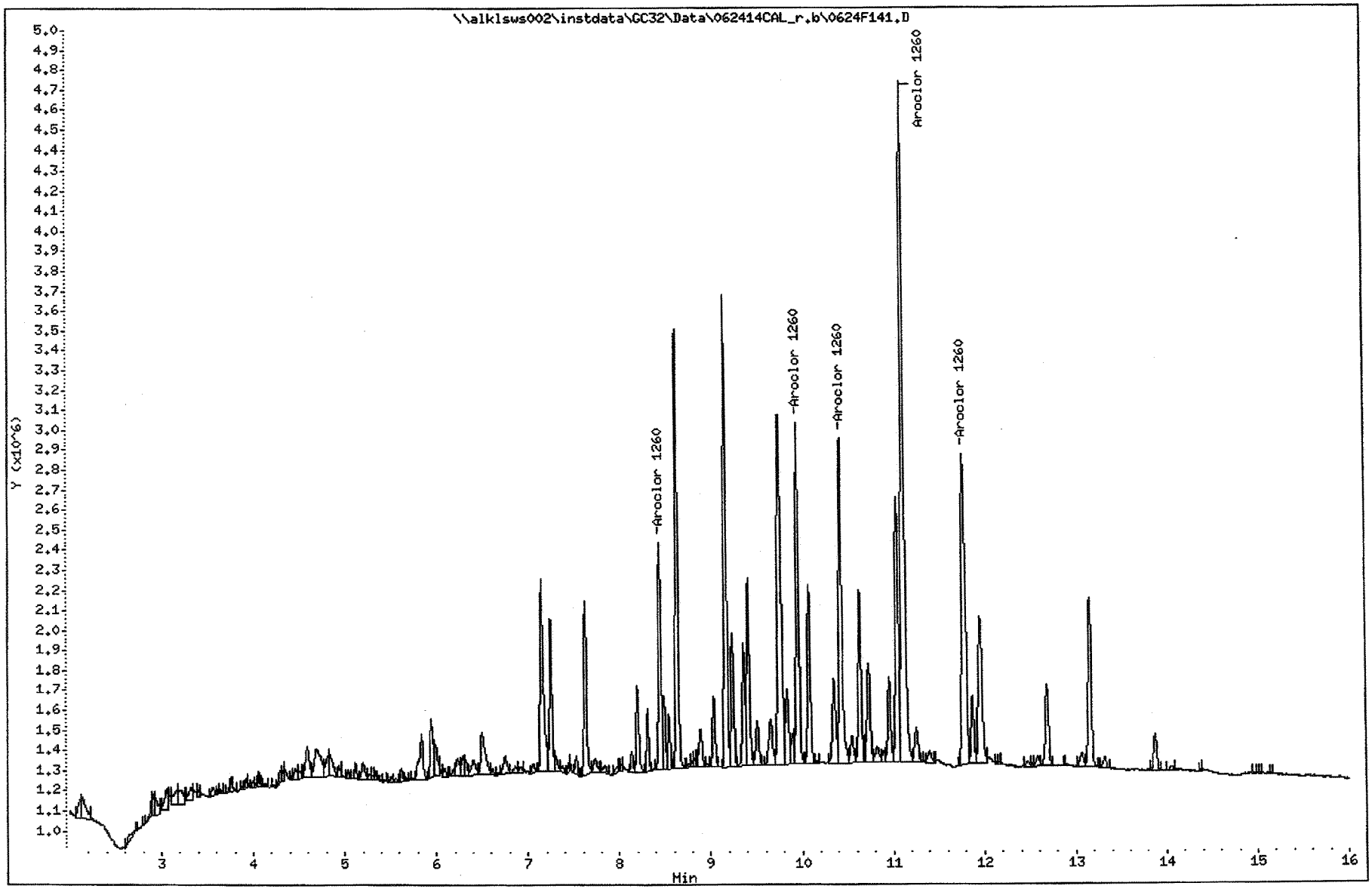
Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F141.D
Date : 25-JUN-2014 17:15
Client ID:
Sample Info: 1260 ICV @ 100ppb PCB6-37I

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F141.D
Date : 25-JUN-2014 17:15
Client ID:
Sample Info: 1260 ICV @ 100ppb PCB6-37I

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F142.D
Report Date: 26-Jun-2014 00:49

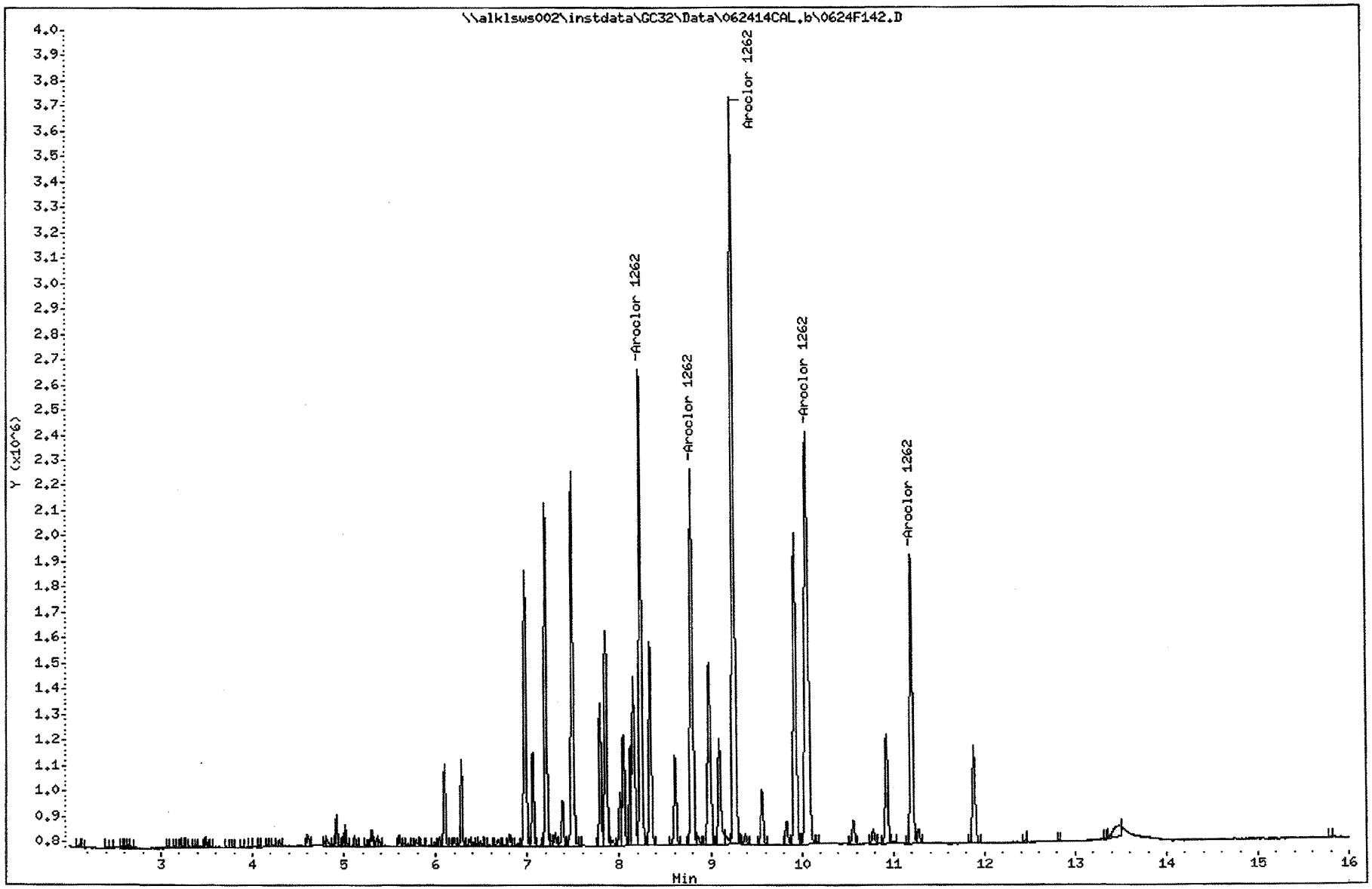
ALS Environmental-Kelso

Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F142.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F142.D
Inj Date : 25-JUN-2014 17:36
Sample Info: 1262 ICV @ 100ppb PCB6-37J
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

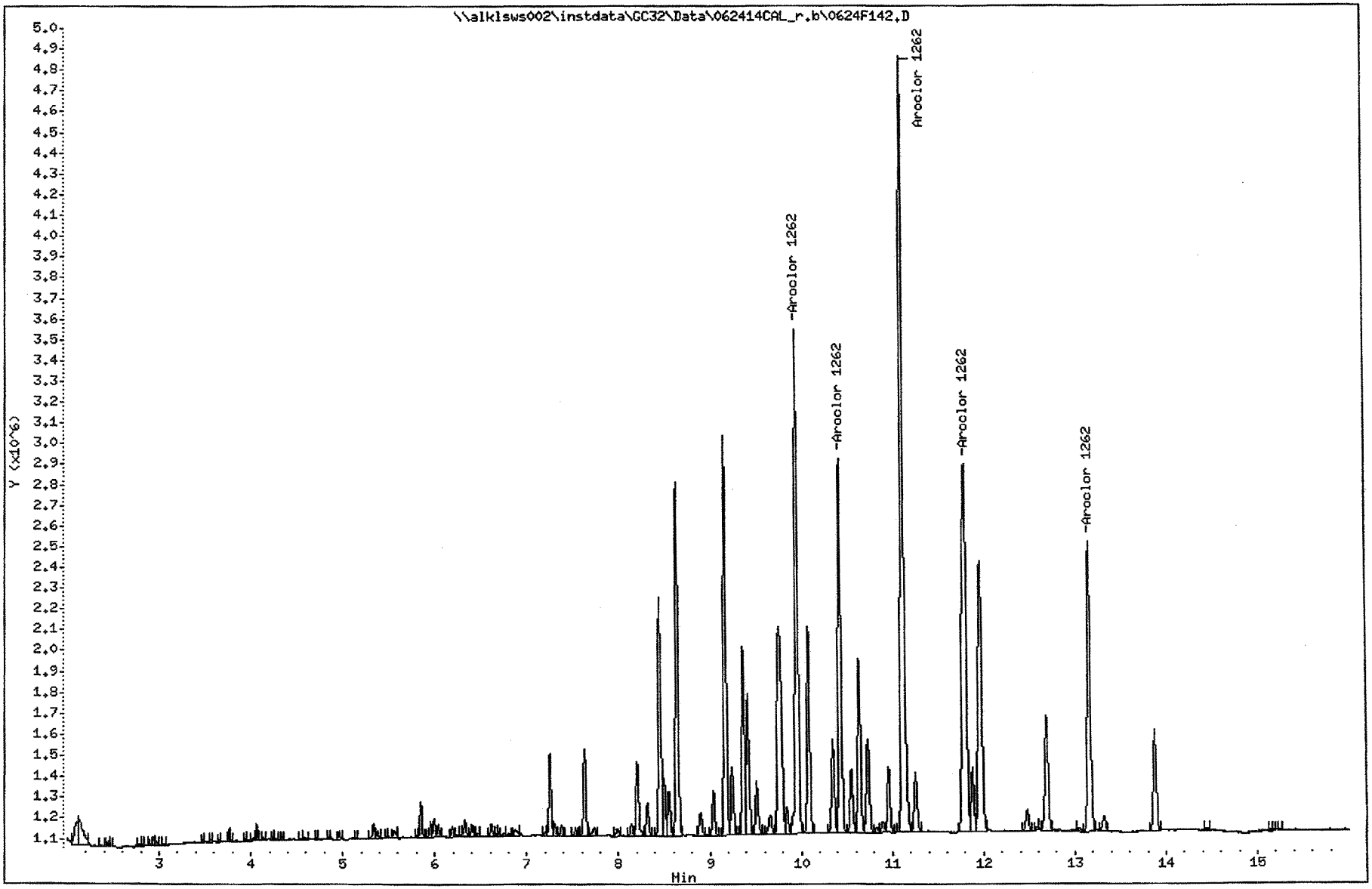
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	8.238	9.961	3428830	5172455	92.6	95.7	80.00- 120.00	100.00
	8.798	10.431	3032627	3796394	92.2	92.1	71.06- 106.58	88.44
	9.261	11.124	5705089	8472587	93.9	95.1	132.49- 198.74	166.39
	10.061	11.804	4459445	5827408	93.2	92.2	101.73- 152.60	130.06
	11.205	13.164	2253319	3215281	102	96.1	49.74- 74.61	65.72
			Average of Peak Amounts =		94.8	94.2		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F142.D
Date : 25-JUN-2014 17:36
Client ID:
Instrument: GC32.i
Sample Info: 1262 ICV @ 100ppb PCB6-37J
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F142.D
Date : 25-JUN-2014 17:36
Client ID:
Sample Info: 1262 ICV @ 100ppb PCB6-37J

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F143.D
Report Date: 26-Jun-2014 00:49

ALS Environmental-Kelso

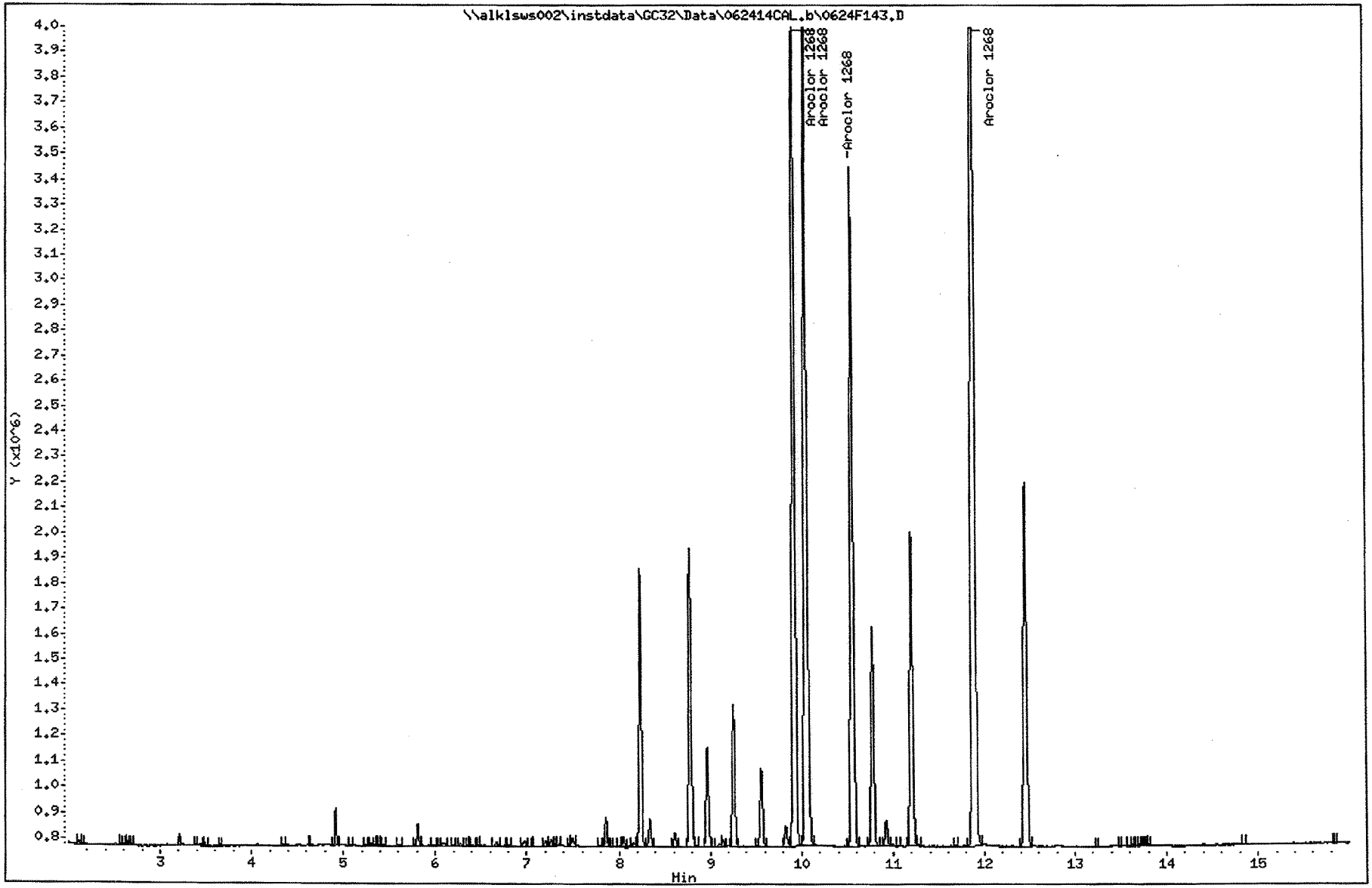
Sample #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F143.D
Sample #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F143.D
Inj Date : 25-JUN-2014 17:58
Sample Info: 1268 ICV @ 100ppb PCB6-37K
Misc Info :
Cal Date : 26-JUN-2014 00:48
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\062414CAL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\062414CAL_r.b\062414ul_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	9.927	11.803	7640041	11072452	92.8	92.9	80.00- 120.00	100.00
	10.057	11.973	7607041	10819458	103	102	72.33- 108.49	99.57
	10.560	12.473	5593930	7748628	84.9	84.0	66.41- 99.61	73.22
	11.884	13.880	15165093	21442752	80.4	80.4	193.48- 290.22	198.49
			Average of Peak Amounts =		90.3	89.8		

Data File: \\alklsws002\instdata\GC32\Data\062414CAL.b\0624F143.D
Date : 25-JUN-2014 17:58
Client ID:
Sample Info: 1268 ICV @ 100ppb PCB6-37K

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

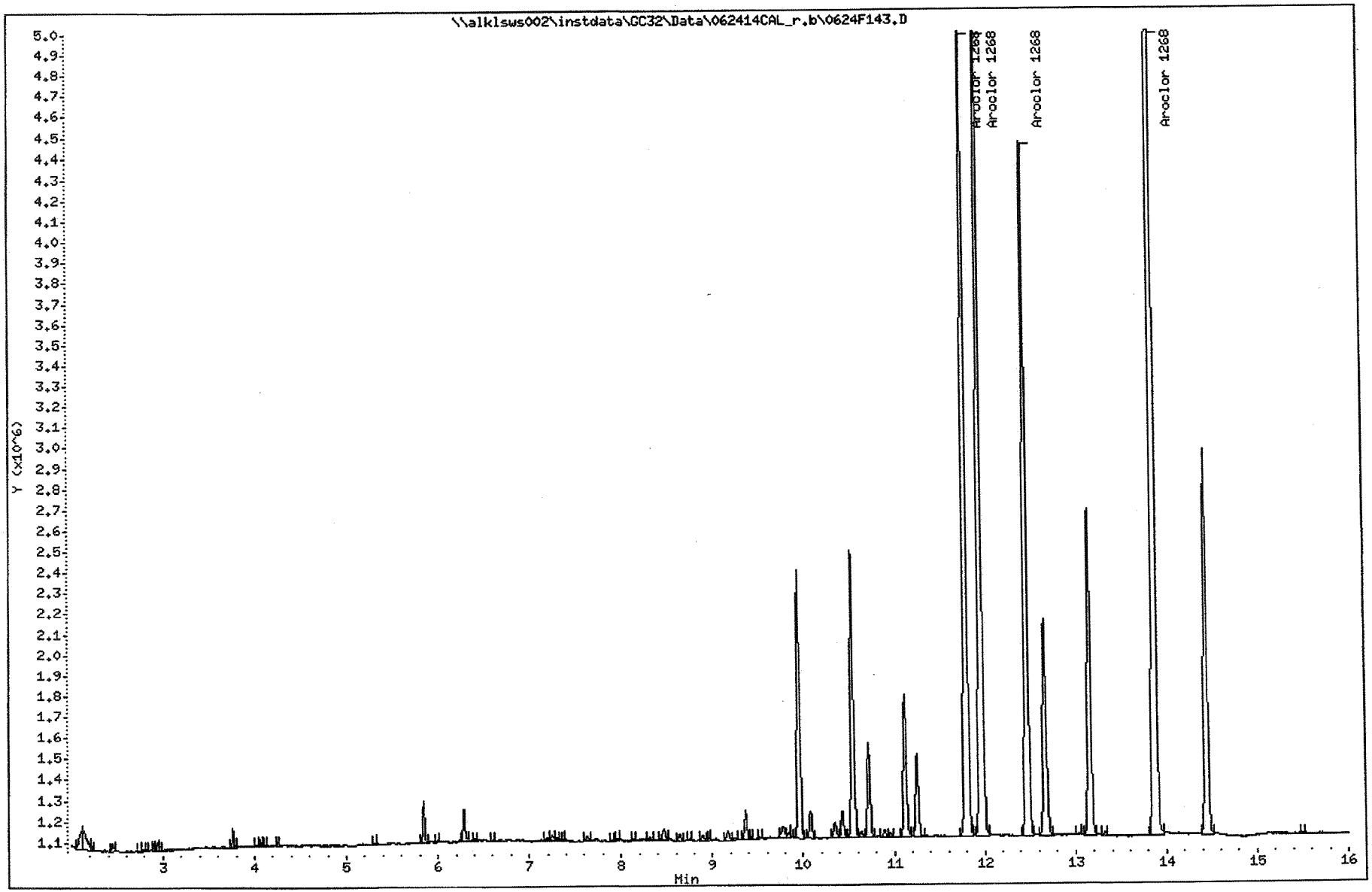


Data File: \\alklsws002\instdata\GC32\Data\062414CAL_r.b\0624F143.D
Date : 25-JUN-2014 17:58
Client ID:
Sample Info: 1268 ICV @ 100ppb PCB6-37K

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



Sequence Name: C:\GC32\SEQUENCE\100314ULL.S
Comment: Ultra Low Level PCB Aroclors by EPA 8082A
Operator: JMSmith
Data Path: C:\GC32\DATA\100314ULL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

KQ1411532/
CCV 1402
Run #114625

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	90	1003F001	PCB_ULL	HEXANE
2	IB	90	1003F002	PCB_ULL	HEXANE
3	CCV	96	1003F003	PCB_ULL	1660 @ 5.0-50ppb PCB6-55N
4	IB	86	1003F004	PCB_ULL	IB
5	LCS	1	1003F005	PCB_ULL	KQ1411532-05LCS
6	DLCS	2	1003F006	PCB_ULL	KQ1411532-06DLCS
7	MB	3	1003F007	PCB_ULL	KQ1411532-07MB
8	SMPL	4	1003F008	PCB_ULL	K1409921-012
9	SMPL	5	1003F009	PCB_ULL	K1409921-013
10	SMPL	6	1003F010	PCB_ULL	K1409921-014
11	SMPL	7	1003F011	PCB_ULL	K1409921-015
12	SMPL	8	1003F012	PCB_ULL	K1409921-016
13	SMPL	9	1003F013	PCB_ULL	K1409921-017
14	SMPL	10	1003F014	PCB_ULL	K1409921-018
15	CCV	96	1003F015	PCB_ULL	1660 @ 5.0-50ppb PCB6-55N
16	IB	86	1003F016	PCB_ULL	IB
17					

OK, OK

OK, OK

Last Modified: Sat Oct 04 03:08:42 2014

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F003.I	**Date Acquired:**	10/04/2014 04:11
Lab ID:	KWG1413521-1	**Date Quantitated:**	10/06/2014 13:59
RunType:	CCV	**Batch ID:**	KWG1413521
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00	**Date Acquired:**	10/04/2014 04:11
Lab ID:	KWG1413521-1	**Date Quantitated:**	10/06/2014 13:58
RunType:	CCV	**Batch ID:**	KWG1413521
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F003.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F003.D			**Vial:**	96
Acqu Date:	10/04/2014 04:11	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413521	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:		**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.92	4.64	2287876	5045863	3.45	4.16			NA
				%Recovery =	NA	NA	Limits =	37-121	
Decachlorobiphenyl	12.45	14.43	2647340	4237871	4.96	5.35			NA
				%Recovery =	NA	NA	Limits =	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	43.50	49.20			
Aroclor 1016 {1}	4.29	4.95	505690	1003463	40.79	47.04			
Aroclor 1016 {2}	4.81	5.33	489684	1452859	43.44	45.05			
Aroclor 1016 {3}	5.02	6.03	1331195	1575034	43.37	50.32			
Aroclor 1016 {4}	5.11	6.39	903464	1305069	44.00	50.88			
Aroclor 1016 {5}	5.60	6.61	799512	1282651	45.93	52.73			
Aroclor 1260			0	0	48.03	55.50			
Aroclor 1260 {1}	7.79	8.45	620862	1431158	47.20	60.40			
Aroclor 1260 {2}	8.23	9.95	1036052	1761045	47.59	55.34			
Aroclor 1260 {3}	8.79	10.42	1098775	1774738	49.21	54.72			
Aroclor 1260 {4}	9.26	11.11	2333113	3753454	48.17	52.92			
Aroclor 1260 {5}	10.06	11.77	1833545	2527361	47.99	54.13			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F003.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

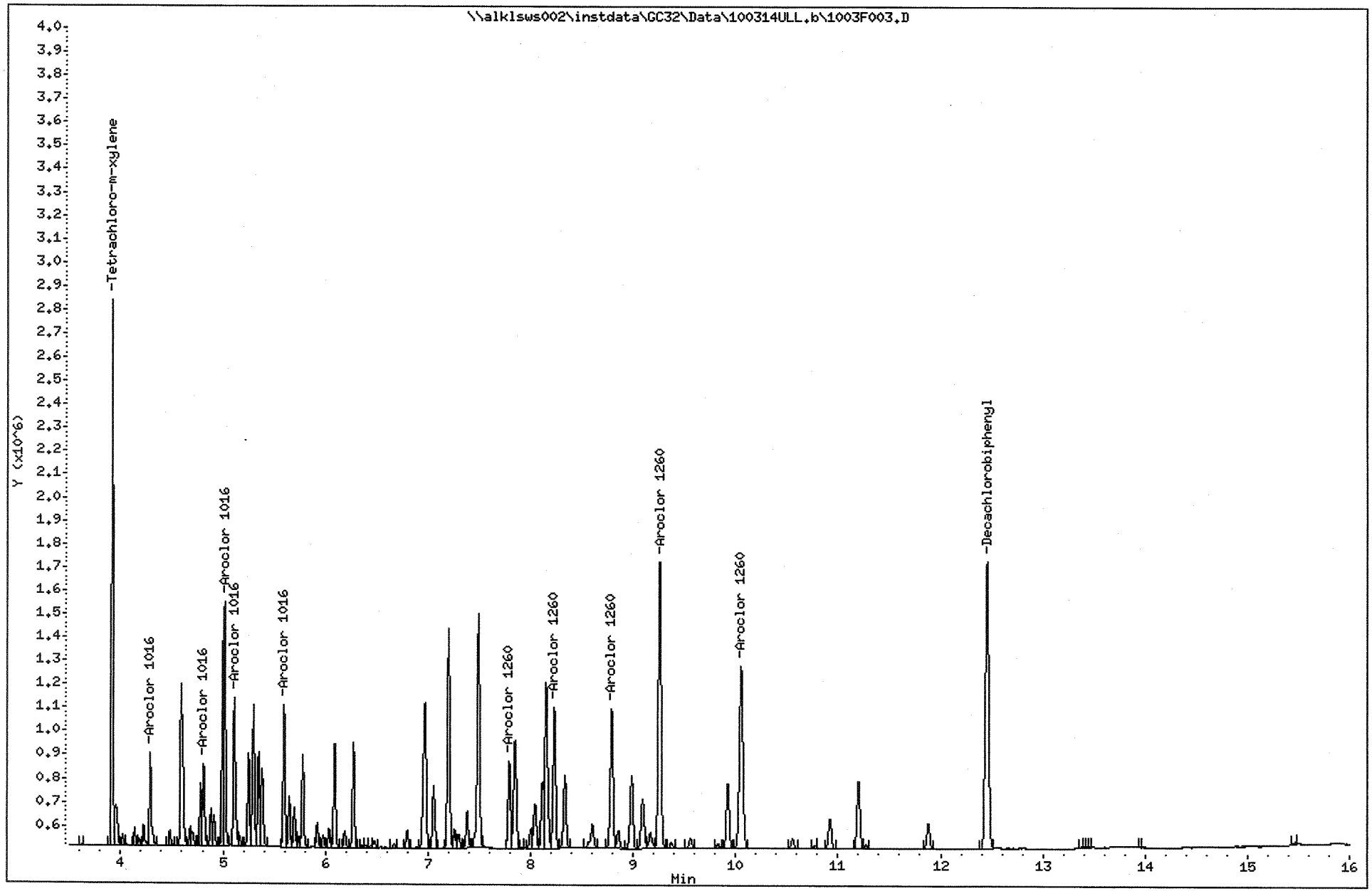
Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F003.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F003.D
Inj Date : 04-OCT-2014 04:11
Sample Info: 1660 @ 5.0-50ppb PCB6-55N
Misc Info :
Cal Date : 06-OCT-2014 00:16
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.916	4.643	2287876	5045863	3.45	4.16		100.00
Aroclor 1016	4.289	4.953	505690	1003463	40.8	47.0	80.00- 120.00	100.00
	4.812	5.326	489684	1452859	43.4	45.0	72.36- 108.53	96.83
	5.016	6.026	1331195	1575034	43.4	50.3	208.80- 313.19	263.24
	5.112	6.393	903464	1305069	44.0	50.9	143.05- 214.58	178.66
	5.596	6.606	799512	1282651	45.9	52.7	125.59- 188.39	158.10
			Average of Peak Amounts =		43.5	49.2		
Aroclor 1260	7.792	8.446	620862	1431158	47.2	60.4	80.00- 120.00	100.00
	8.232	9.950	1036052	1761045	47.6	55.3	134.02- 201.03	166.87
	8.792	10.420	1098775	1774738	49.2	54.7	140.40- 210.60	176.98
	9.259	11.113	2333113	3753454	48.2	52.9	299.92- 449.88	375.79
	10.056	11.770	1833545	2527361	48.0	54.1	236.01- 354.01	295.32
			Average of Peak Amounts =		48.0	55.5		
Decachlorobiphenyl	12.452	14.433	2647340	4237871	4.96	5.35		100.00

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F003.D
Date : 04-OCT-2014 04:11
Client ID:
Sample Info: 1660 @ 5.0-50ppb PCB6-55N

Instrument: GC32.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



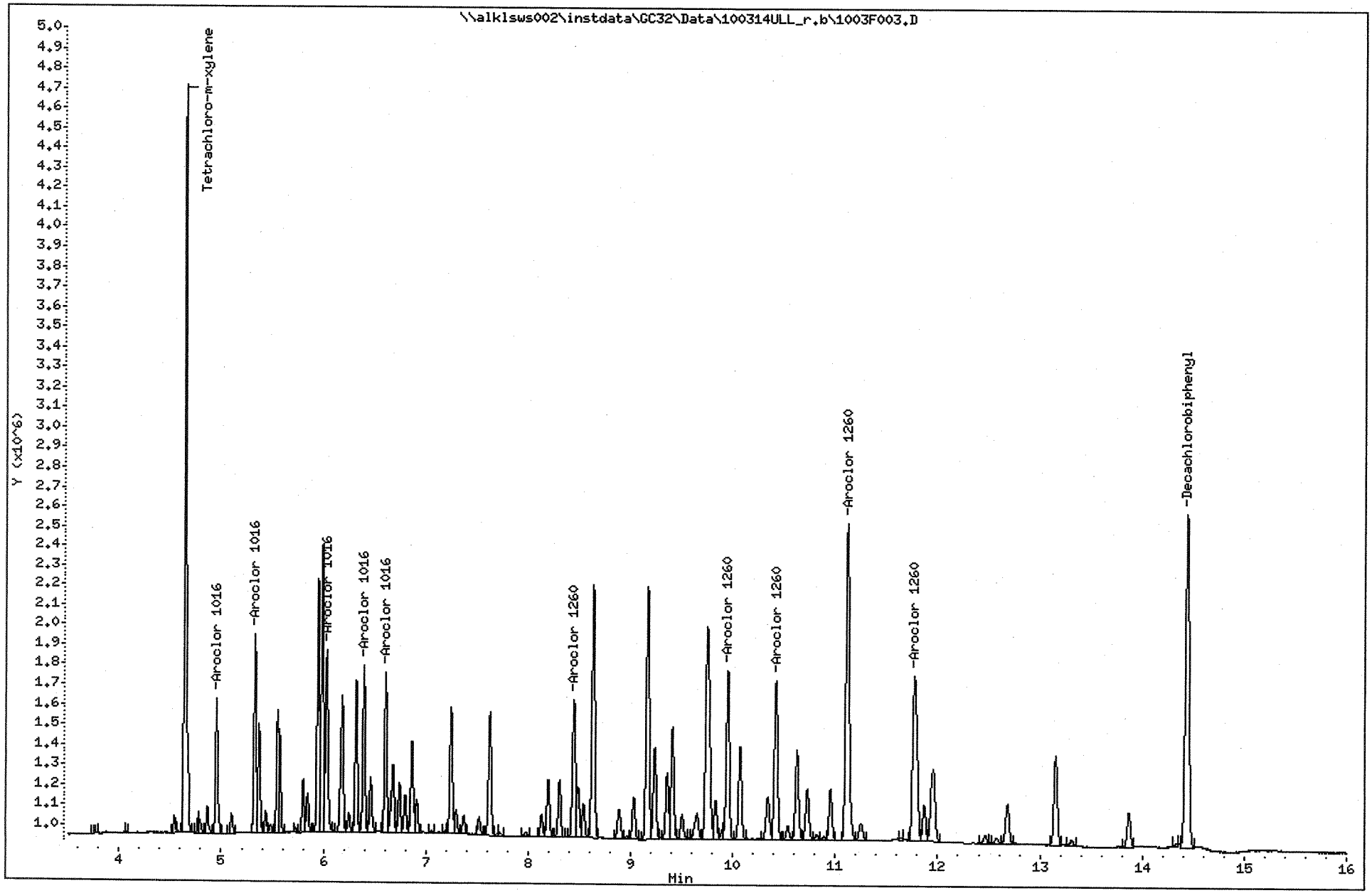
1993

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F003.D
Date : 04-OCT-2014 04:11
Client ID:
Sample Info: 1660 @ 5.0-50ppb PCB6-55N

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



1994

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F004.I	**Date Acquired:**	10/04/2014 04:32
Lab ID:	KWG1413521-2	**Date Quantitated:**	10/06/2014 13:59
RunType:	IB	**Batch ID:**	KWG1413521
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F00
Lab ID: KWG1413521-2
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/04/2014 04:32
Date Quantitated: 10/06/2014 13:59
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F004.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F004.D			**Vial:**	86
Acqu Date:	10/04/2014 04:32	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413521	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:		**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	37-121	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F004.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F004.D			**Vial:**	86
Acqu Date:	10/04/2014 04:32	**Quant Date:**	10/06/2014 13:59	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {1}			0	0	0.0000	0.0000			
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F004.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F004.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F004.D
Inj Date : 04-OCT-2014 04:32
Sample Info: IB
Misc Info :
Cal Date : 06-OCT-2014 00:16
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

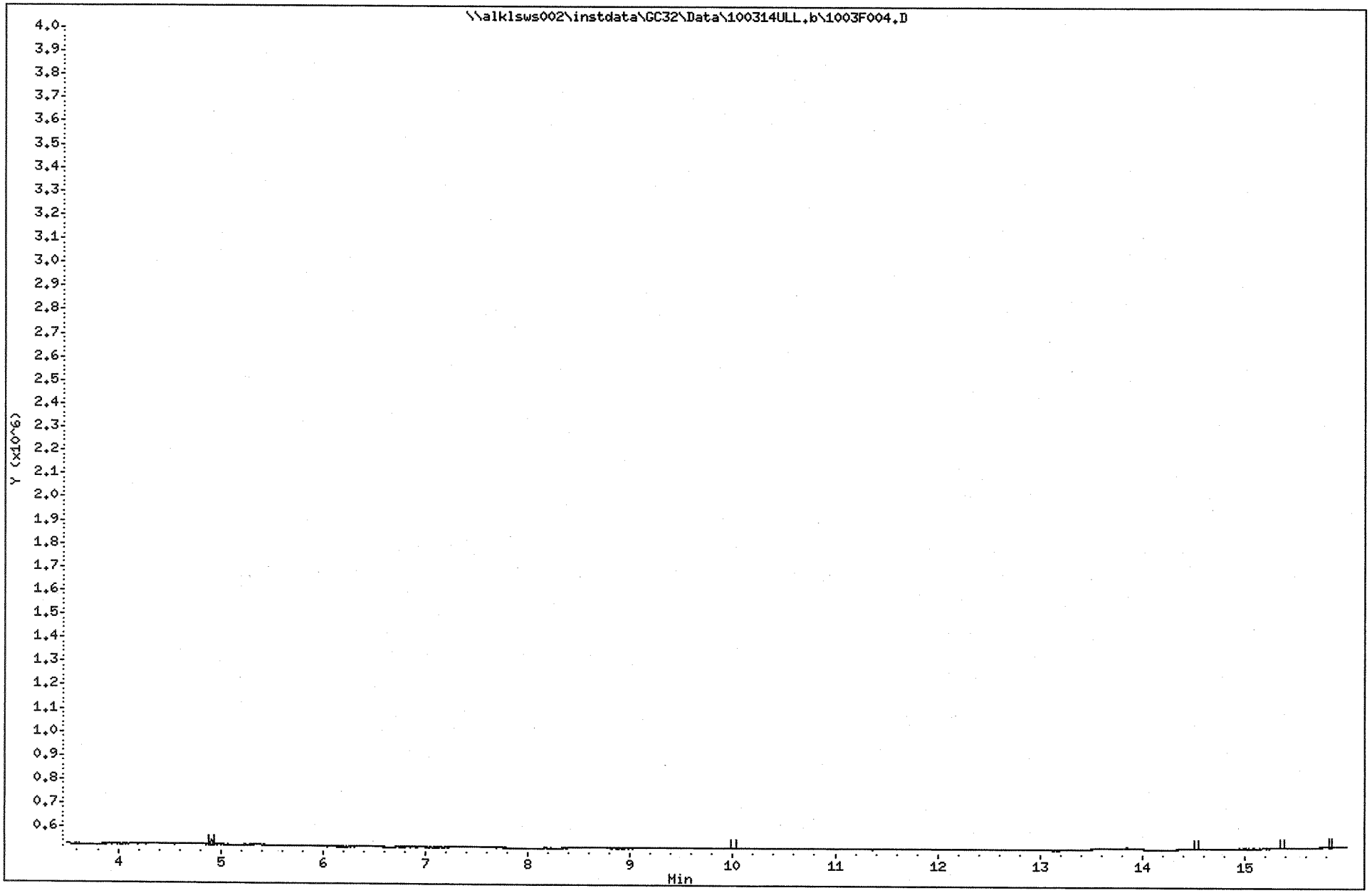
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F004.D
Date : 04-OCT-2014 04:32
Client ID:
Sample Info: IB

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

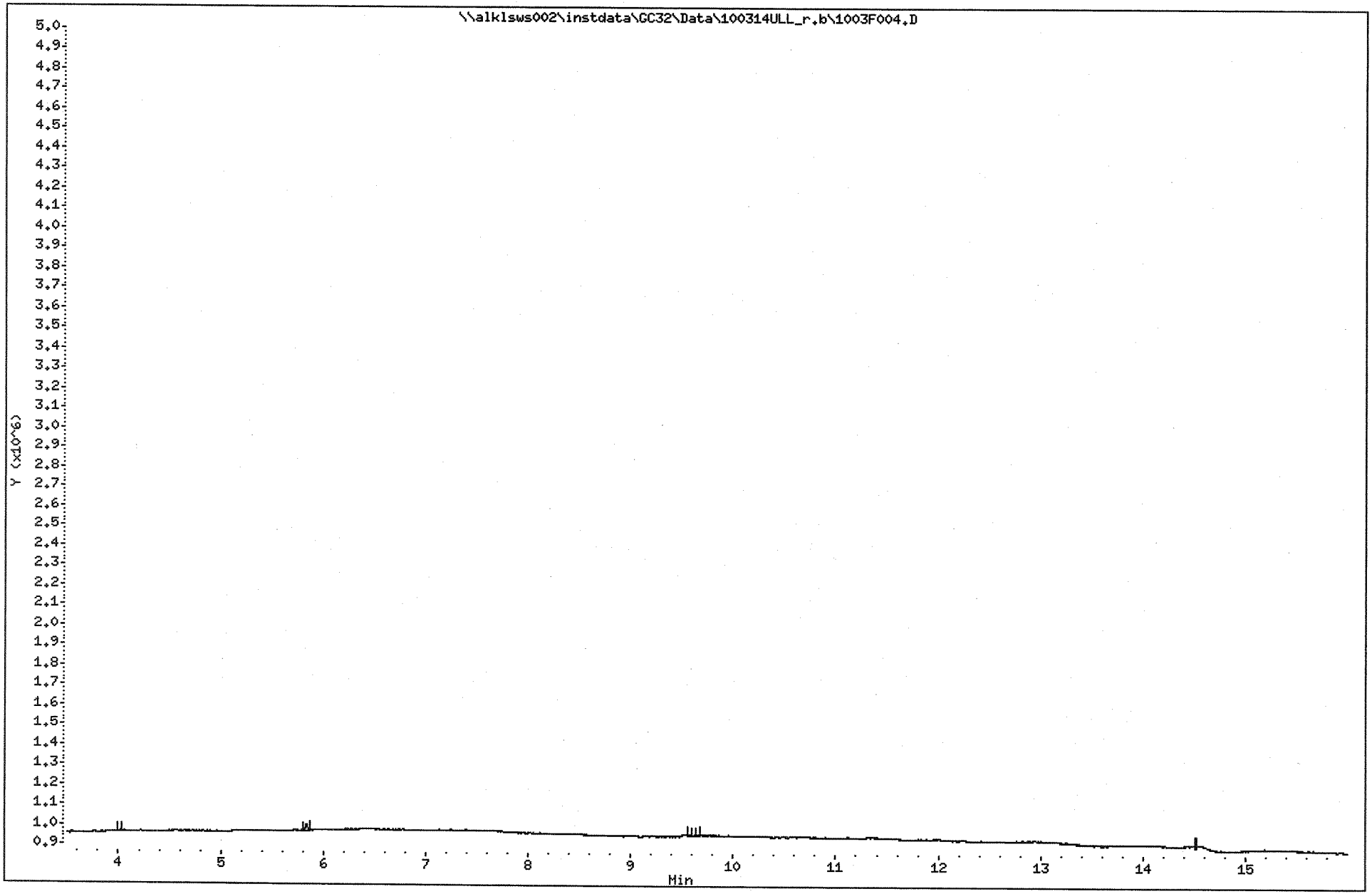


2000

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F004.D
Date : 04-OCT-2014 04:32
Client ID:
Sample Info: IB

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



2001

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F015.I
Lab ID: KWG1413521-3
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/04/2014 08:24
Date Quantitated: 10/06/2014 14:00
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: KWG1413521-3
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/04/2014 08:24
Date Quantitated: 10/06/2014 14:00
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F015.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F015.D			**Vial:**	96
Acqu Date:	10/04/2014 08:24	**Quant Date:**	10/06/2014 14:00	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413521	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:		**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.91	4.64	2510420	5359924	3.78	4.42			NA
				%Recovery =	NA	NA	**Limits =**	37-121	
Decachlorobiphenyl	12.45	14.43	2833160	4481515	5.30	5.66			NA
				%Recovery =	NA	NA	**Limits =**	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	46.91	52.40			
Aroclor 1016 {1}	4.29	4.95	554293	1070416	44.71	50.18			
Aroclor 1016 {2}	4.81	5.33	501328	1563284	44.47	48.47			
Aroclor 1016 {3}	5.01	6.03	1446675	1645474	47.13	52.57			
Aroclor 1016 {4}	5.11	6.39	991172	1397918	48.27	54.50			
Aroclor 1016 {5}	5.59	6.60	870188	1369416	49.99	56.30			
Aroclor 1260			0	0	51.35	59.46			
Aroclor 1260 {1}	7.79	8.44	664813	1562606	50.54	65.95			
Aroclor 1260 {2}	8.23	9.95	1113750	1876563	51.16	58.96			
Aroclor 1260 {3}	8.79	10.42	1166755	1881770	52.26	58.02			
Aroclor 1260 {4}	9.25	11.11	2492389	3990033	51.46	56.26			
Aroclor 1260 {5}	10.05	11.77	1961252	2713212	51.34	58.11			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F015.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F015.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F015.D
Inj Date : 04-OCT-2014 08:24
Sample Info: 1660 @ 5.0-50ppb PCB6-55N
Misc Info :
Cal Date : 06-OCT-2014 00:17
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

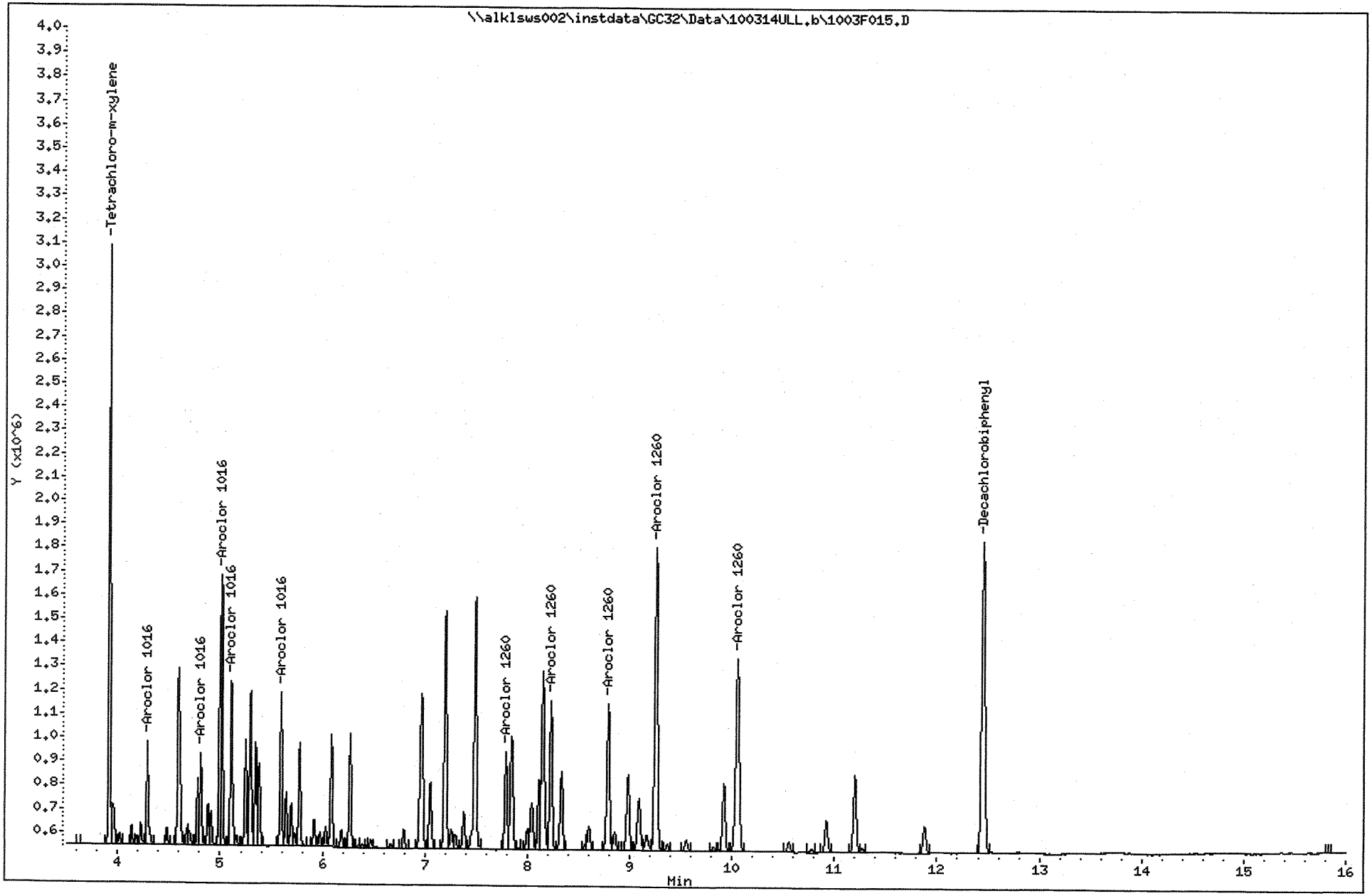
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.913	4.640	2510420	5359924	3.78	4.42		100.00
Aroclor 1016	4.290	4.954	554293	1070416	44.7	50.2	80.00- 120.00	100.00
	4.810	5.327	501328	1563284	44.5	48.5	72.36- 108.53	90.44
	5.013	6.027	1446675	1645474	47.1	52.6	208.80- 313.19	260.99
	5.106	6.390	991172	1397918	48.3	54.5	143.05- 214.58	178.82
	5.593	6.604	870188	1369416	50.0	56.3	125.59- 188.39	156.99
			Average of Peak Amounts =		46.9	52.4		
Aroclor 1260	7.790	8.444	664813	1562606	50.5	65.9	80.00- 120.00	100.00
	8.230	9.947	1113750	1876563	51.2	59.0	134.02- 201.03	167.53
	8.790	10.420	1166755	1881770	52.3	58.0	140.40- 210.60	175.50
	9.253	11.114	2492389	3990033	51.5	56.3	299.92- 449.88	374.90
	10.053	11.770	1961252	2713212	51.3	58.1	236.01- 354.01	295.01
			Average of Peak Amounts =		51.4	59.5		
Decachlorobiphenyl	12.446	14.434	2833160	4481515	5.30	5.66		100.00

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F015.D
Date : 04-OCT-2014 08:24
Client ID:
Sample Info: 1660 @ 5.0-50ppb PCB6-55N

Instrument: GC32.i

Operator: JMSmith
Column diameter: 0.32

Column phase: DB-35MS

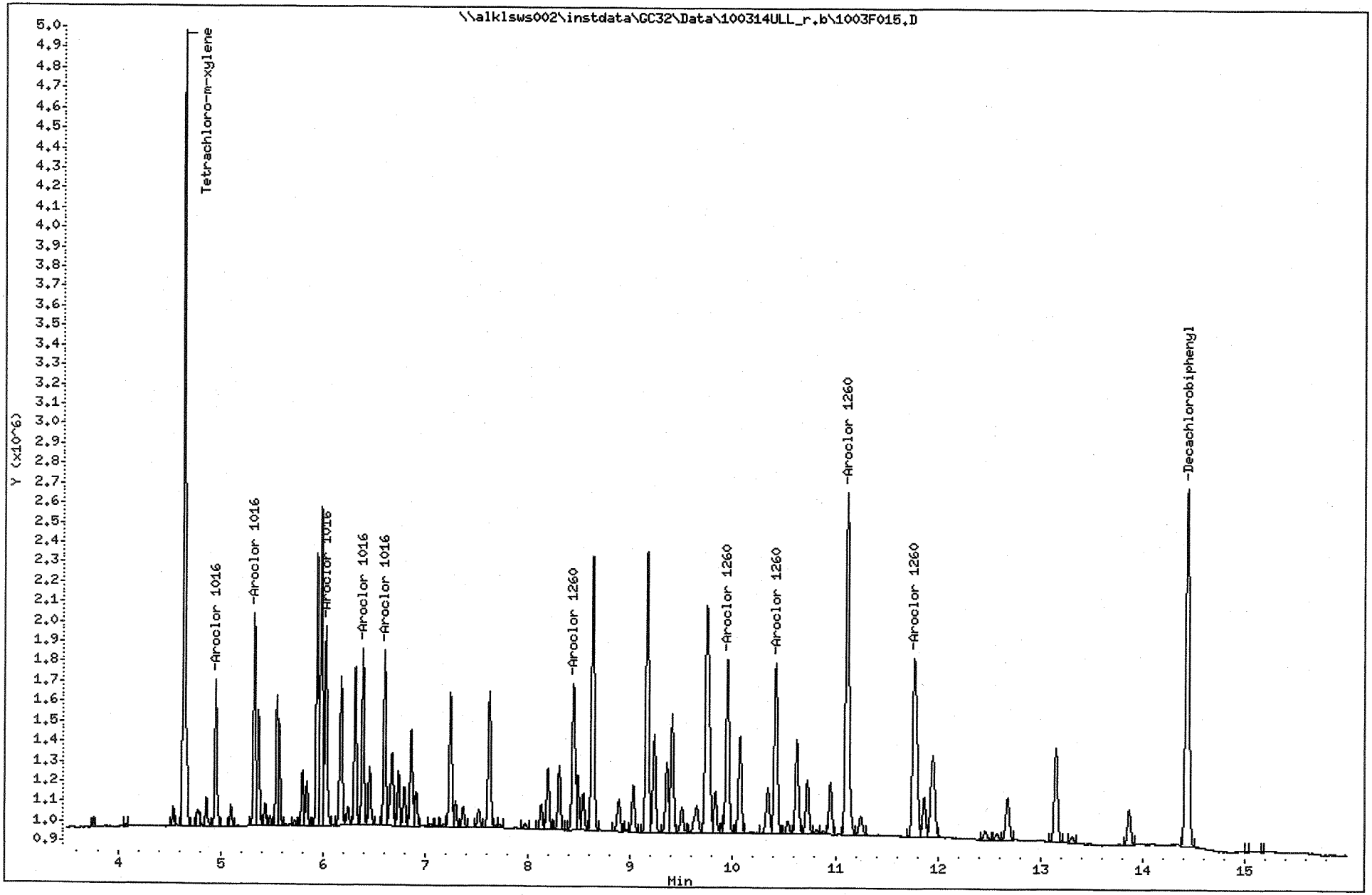


2006

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F015.D
Date : 04-OCT-2014 08:24
Client ID:
Sample Info: 1660 @ 5.0-50ppb PCB6-55N

Instrument: GC32.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



2007

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\1003F016.I
Lab ID: KWG1413521-4
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/04/2014 08:45
Date Quantitated: 10/06/2014 14:00
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL_R.B\1003F01
Lab ID: KWG1413521-4
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/04/2014 08:45
Date Quantitated: 10/06/2014 14:00
Batch ID: KWG1413521
Analysis Method: 8082A
MethodJoinID: MJ702

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F016.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F016.D			**Vial:**	86
Acqu Date:	10/04/2014 08:45	**Quant Date:**	10/06/2014 14:00	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB ULL	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413521	**Prep Lot:**	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	\\ALKLSWS002\INSTDATA\GC32\DATA\100314ULL.B\062414UL_F.M	**Calibration ID:**	CAL13402
Title:			
MB Ref:		**Method ID:**	MJ702
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	37-121	
Decachlorobiphenyl	0.00	14.43	0	20056		0.0250			NA
			%Recovery =		NA	NA	**Limits =**	39-140	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC32\DATA\100314ULL.B\1003F016.D			**Instrument:**	GC32.i
Data File #2:	\\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F016.D			**Vial:**	86
Acqu Date:	10/04/2014 08:45	**Quant Date:**	10/06/2014 14:00	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413521-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {1}			0	0	0.0000	0.0000			
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F016.D
Report Date: 06-Oct-2014 13:53

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F016.D
Sample #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F016.D
Inj Date : 04-OCT-2014 08:45
Sample Info: IB
Misc Info :
Cal Date : 06-OCT-2014 00:17
Operator : JMSmith
Inst ID : GC32.i
Dil Factor : 1.000000

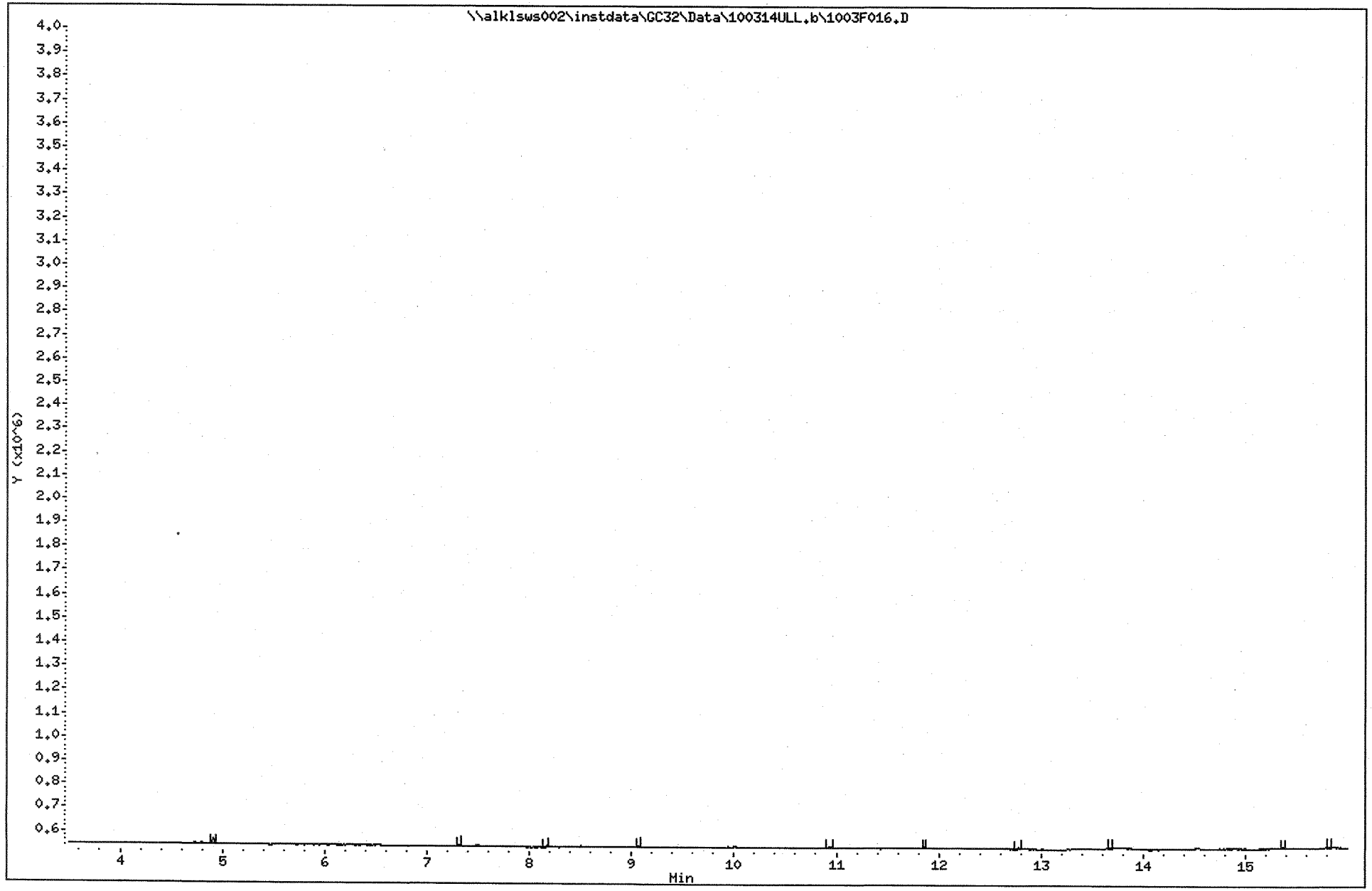
Method #1 : \\alklsws002\instdata\GC32\Data\100314ULL.b\062414ul_f.m
Method #2 : \\alklsws002\instdata\GC32\Data\100314ULL_r.b\062414ul_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Decachlorobiphenyl	0.000	14.425	0	20056	0.000	0.0253		

Data File: \\alklsws002\instdata\GC32\Data\100314ULL.b\1003F016.D
Date : 04-OCT-2014 08:45
Client ID:
Sample Info: IB

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

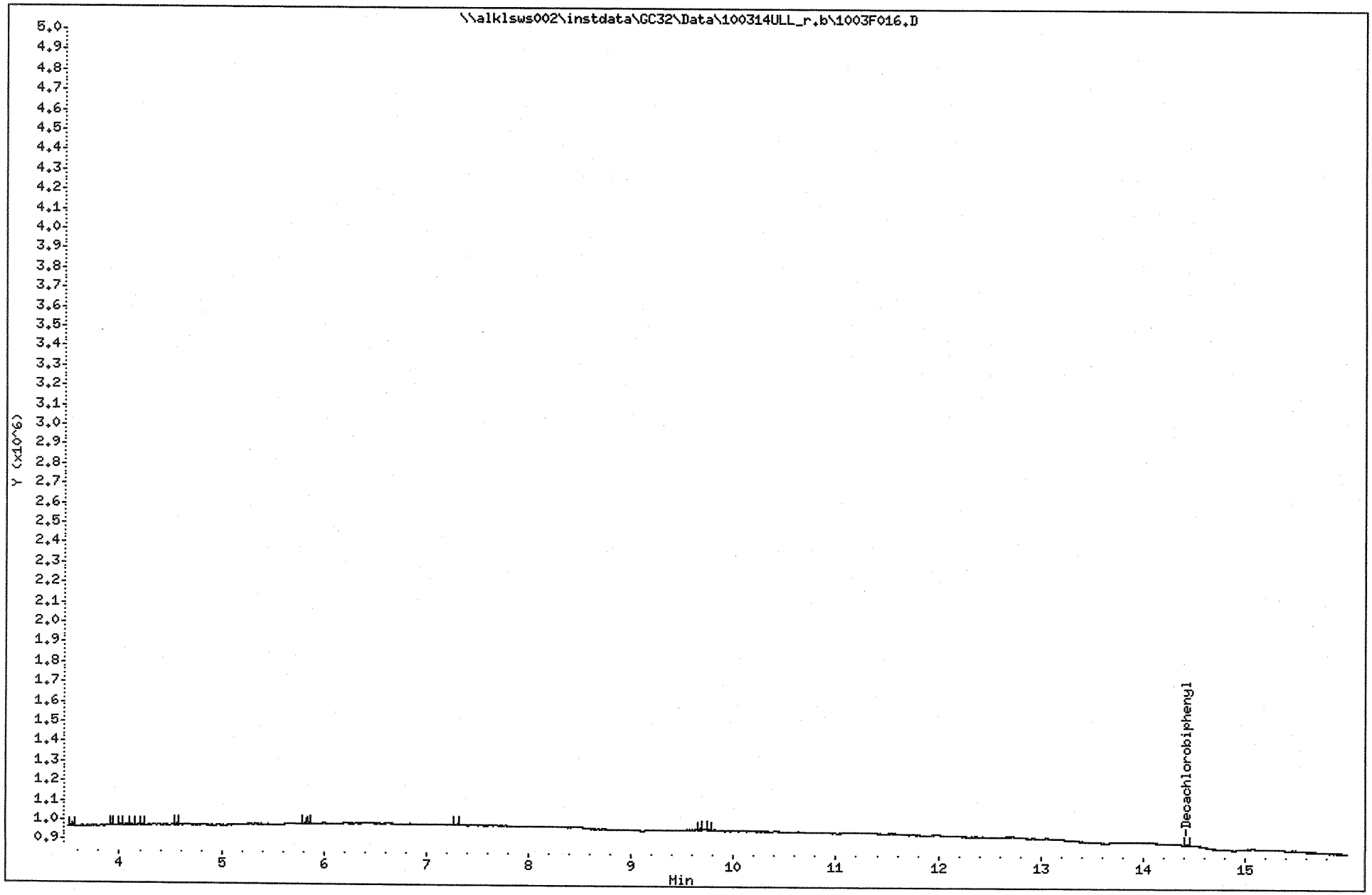


2013

Data File: \\alklsws002\instdata\GC32\Data\100314ULL_r.b\1003F016.D
Date : 04-OCT-2014 08:45
Client ID:
Sample Info: IB

Instrument: GC32.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



2014

uence Name: C:\GC27\SEQUENCE\100614A.S
Comment: PCB Aroclors by EPA 8082A
Operator: JMSmith
Data Path: C:\GC27\DATA\100614A\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

KWG1413671
CAL13590
Run #414871

	Line	Type	Vial	DataFile	Method	Sample Name
	1	IB	90	1006F101	PCB_REG	HEXANE
	2	IB	90	1006F102	PCB_REG	HEXANE
OK, OK	3	CCV	96	1006F103	PCB_REG	1660 @ 50-500ppb PCB6-53H
	4	IB	86	1006F104	PCB_REG	IB
	5	LCS	1	1006F105	PCB_REG	KQ1411834-09LCS
	6	MB	2	1006F106	PCB_REG	KQ1411834-10MB
	7	SMPL	3	1006F107	PCB_REG	K1410262-001
	8	MS	4	1006F108	PCB_REG	K1410262-001MS
	9	DMS	5	1006F109	PCB_REG	K1410262-001DMS
OK, OK	10	CCV	97	1006F110	PCB_REG	1660 @ 50-500ppb PCB6-53H
	11	IB	86	1006F111	PCB_REG	IB
	12	LCS	6	1006F112	PCB_REG	KQ1411615-06LCS
	13	MB	7	1006F113	PCB_REG	KQ1411615-07MB
	14	SMPL	8	1006F114	PCB_REG	K1409921-004
	15	MS	9	1006F115	PCB_REG	K1409921-004MS
	16	DMS	10	1006F116	PCB_REG	K1409921-004DMS
	17	SMPL	11	1006F117	PCB_REG	K1409921-005
	18	SMPL	12	1006F118	PCB_REG	K1409921-006
	19	SMPL	13	1006F119	PCB_REG	K1409921-007
	20	SMPL	14	1006F120	PCB_REG	K1409921-009
	21	SMPL	15	1006F121	PCB_REG	K1409921-010
	22	SMPL	16	1006F122	PCB_REG	K1409921-011
OK, OK	23	CCV	97	1006F123	PCB_REG	1660 @ 50-500ppb PCB6-53H
	24	IB	86	1006F124	PCB_REG	IB
	25	SMPL	17	1006F125	PCB_REG	K1409921-008 ~68?
	26	IB	90	1006F126	BAKE_20	CARRYOVER BAKE
OK, OK	27	CCV	97	1006F127	PCB_REG	1660 @ 50-500ppb PCB6-53H
	28	IB	86	1006F128	PCB_REG	IB
	29					

Last Modified: Tue Oct 07 01:34:04 2014

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F110.D
Lab ID: KWG1413671-3
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 05:17
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F110.I	**Date Acquired:**	10/07/2014 05:17
Lab ID:	KWG1413671-3	**Date Quantitated:**	10/08/2014 15:44
RunType:	CCV	**Batch ID:**	KWG1413671
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F110.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F110.D			**Vial:**	97
Acqu Date:	10/07/2014 05:17	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ696
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97	4.47	20317564	10261426	51.83	52.35			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	12.57	13.99	8536845	5156082	45.78	44.56			NA
				%Recovery =	NA	NA	Limits =	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	496.72	490.61			
Aroclor 1016 {1}	4.35	4.76	3656004	1976075	530.10	520.25			
Aroclor 1016 {2}	4.87	5.12	2717245	2420636	526.99	510.30			
Aroclor 1016 {3}	5.08	5.78	7416990	2579245	447.29	480.36			
Aroclor 1016 {4}	5.36	6.13	3584600	1754103	492.51	471.96			
Aroclor 1016 {5}	5.67	6.33	3581486	1682098	486.70	470.17			
Aroclor 1260			0	0	454.46	431.94			
Aroclor 1260 {1}	7.29	8.10	5270810	1515933	456.11	451.19			
Aroclor 1260 {2}	8.34	9.57	4228723	2457880	455.09	421.18			
Aroclor 1260 {3}	8.90	10.03	4227266	2316171	461.27	429.32			
Aroclor 1260 {4}	9.37	10.72	9648696	5651795	447.01	420.70			
Aroclor 1260 {5}	10.17	11.36	7476224	3656630	452.81	437.34			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F110.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F110.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F110.D
Inj Date : 07-OCT-2014 05:17
Sample Info: 1660 @ 50-500ppb PCB6-53H
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

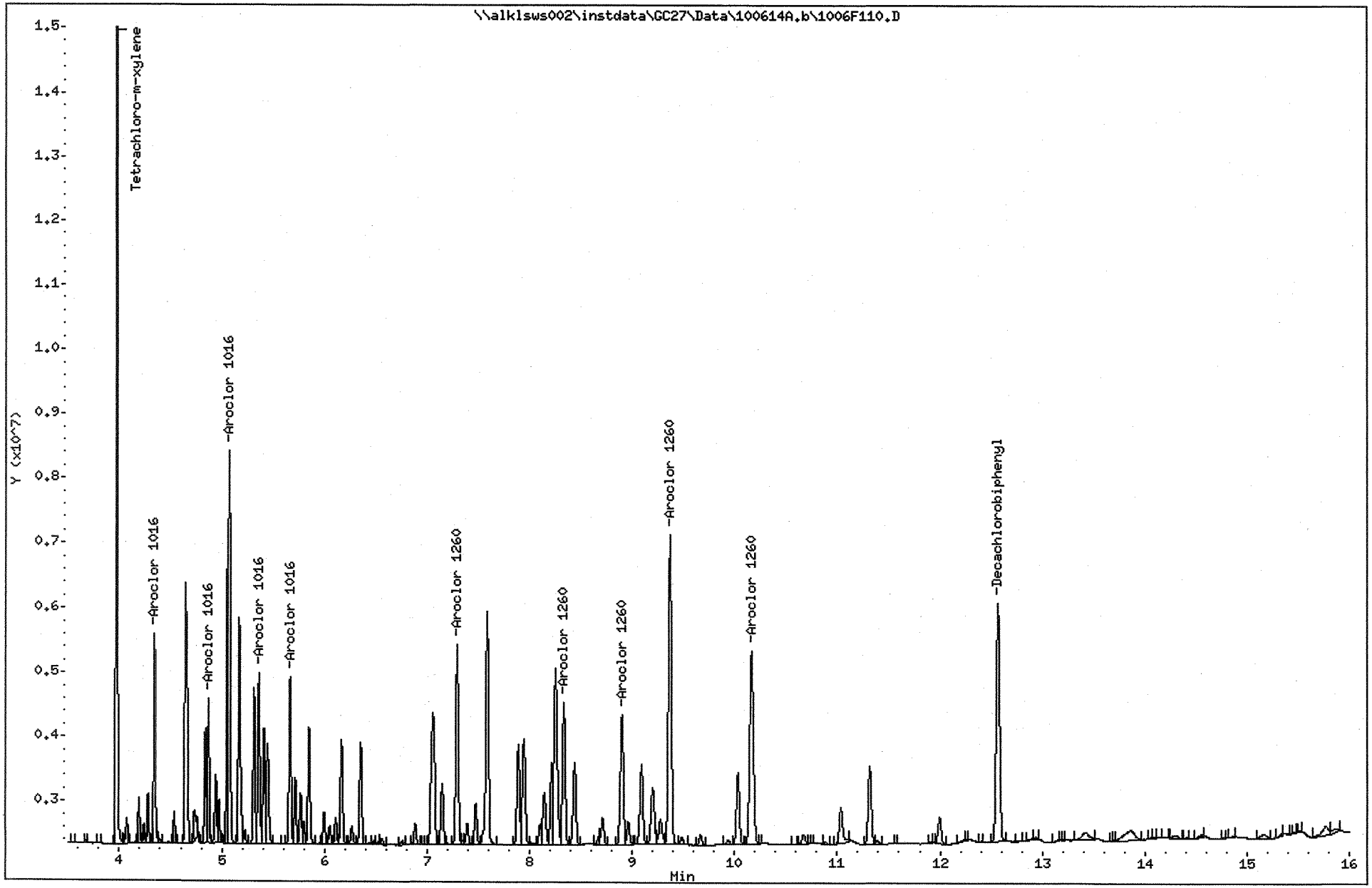
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.471	20317564	10261426	51.8	52.4		100.00
Aroclor 1016	4.345	4.761	3656004	1976075	530	520	80.00- 120.00	100.00
	4.872	5.115	2717245	2420636	527	510	60.53- 90.80	74.32
	5.075	5.778	7416990	2579245	447	480	185.80- 278.70	202.87
	5.359	6.125	3584600	1754103	493	472	83.80- 125.69	98.05
	5.665	6.328	3581486	1682098	487	470	83.92- 125.88	97.96
			Average of Peak Amounts =		497	490		
Aroclor 1260	7.292	8.101	5270810	1515933	456	451	80.00- 120.00	100.00
	8.335	9.571	4228723	2457880	455	421	63.80- 95.69	80.23
	8.899	10.031	4227266	2316171	461	429	64.05- 96.07	80.20
	9.369	10.718	9648696	5651795	447	421	145.21- 217.81	183.06
	10.165	11.361	7476224	3656630	453	437	112.20- 168.30	141.84
			Average of Peak Amounts =		454	432		
Decachlorobiphenyl	12.565	13.988	8536845	5156082	45.8	44.6		100.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F110.D
Date : 07-OCT-2014 05:17
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

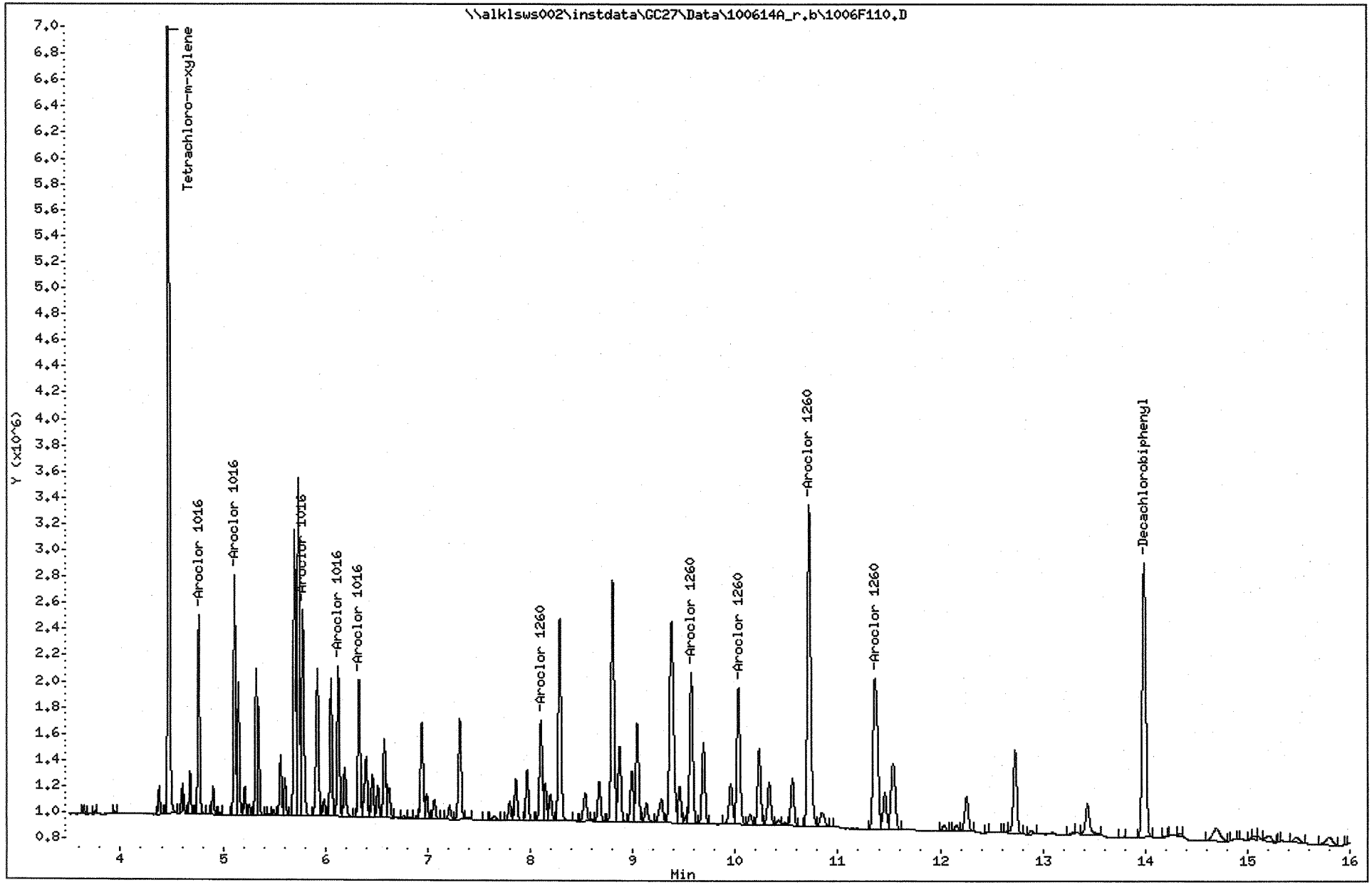


2020

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F110.D
Date : 07-OCT-2014 05:17
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i
Operator: JMSmith
Column diameter: 0.32

Column phase: DB-XLB



2021

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F111.D
Lab ID: KWG1413671-4
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 05:41
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F111.I	**Date Acquired:**	10/07/2014 05:41
Lab ID:	KWG1413671-4	**Date Quantitated:**	10/08/2014 15:44
RunType:	IB	**Batch ID:**	KWG1413671
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F111.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F111.D			**Vial:**	86
Acqu Date:	10/07/2014 05:41	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	30-125	
Decachlorobiphenyl	12.56	13.98	54515	9576	0.2920	0.0830			NA
			%Recovery =		NA	NA	Limits =	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F111.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F111.D			**Vial:**	86
Acqu Date:	10/07/2014 05:41	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0	0	0.0000	0.0000			
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclors, Total			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F111.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

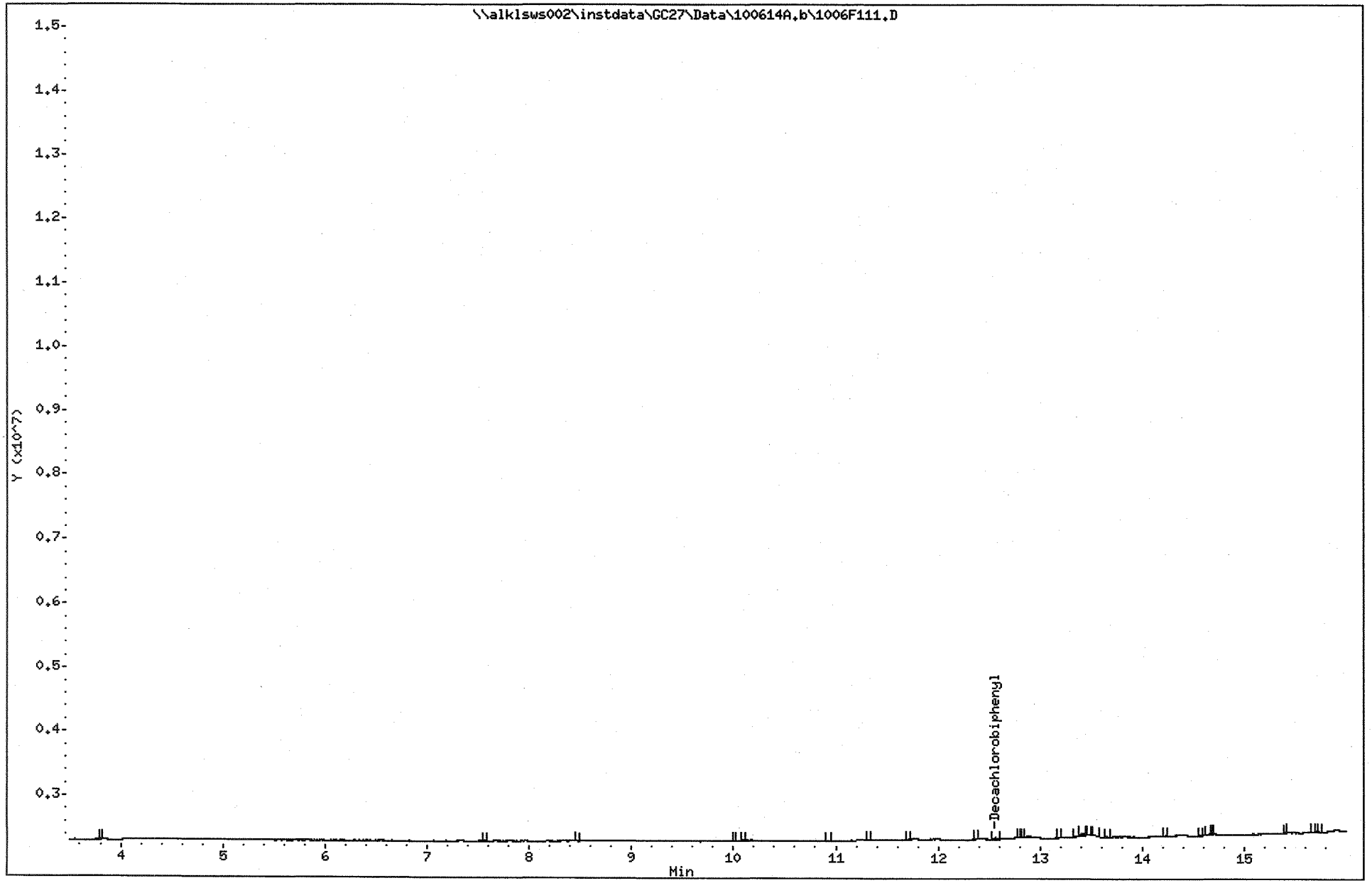
Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F111.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F111.D
Inj Date : 07-OCT-2014 05:41
Sample Info: IB
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Decachlorobiphenyl	12.560	13.983	54515	9576	0.292	0.0827		100.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F111.D
Date : 07-OCT-2014 05:41
Client ID:
Sample Info: IB

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32

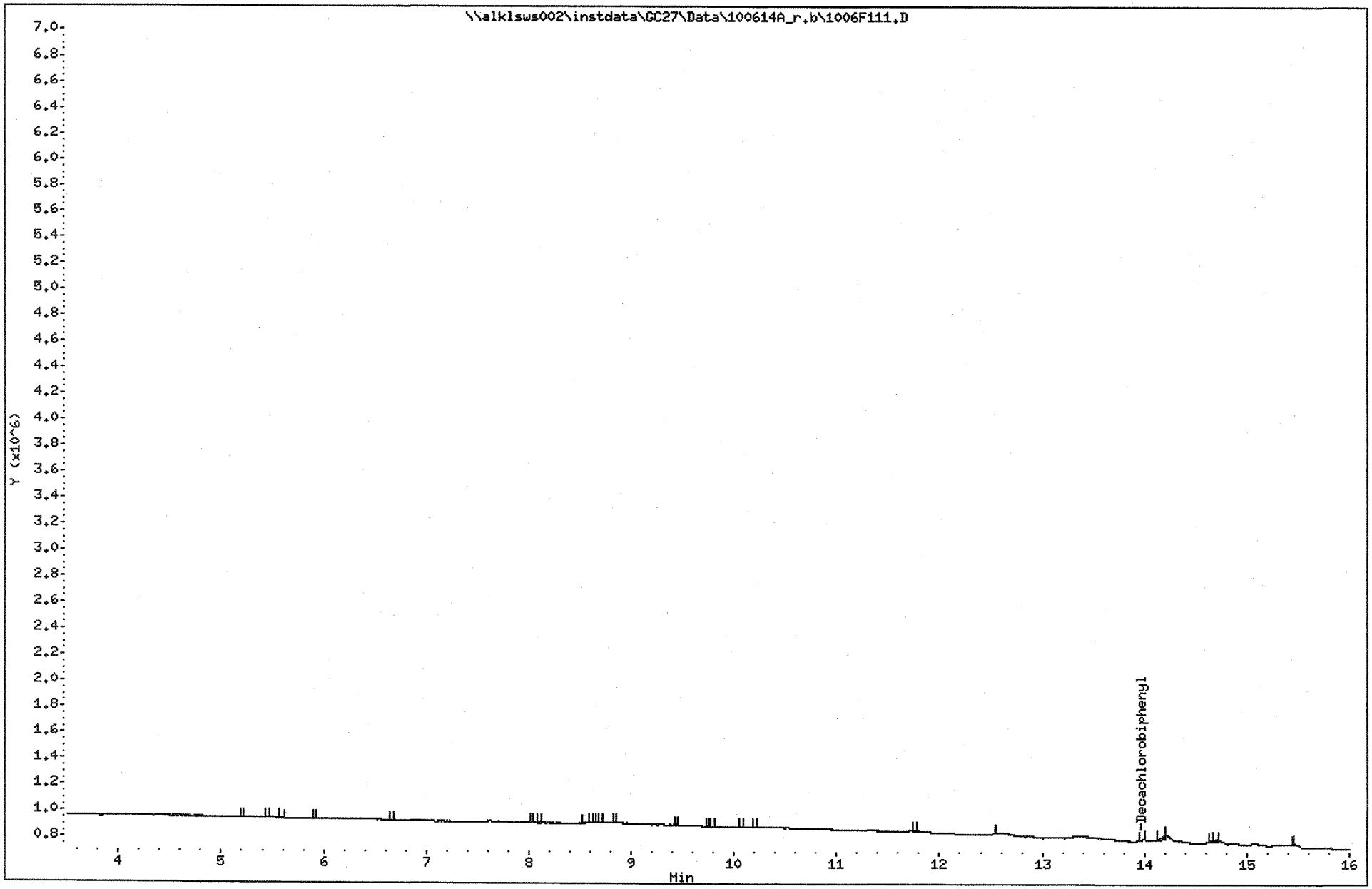


2027

Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F111.D
Date : 07-OCT-2014 05:41
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F123.D
Lab ID: KWG1413671-5
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 10:32
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 10/8/14

Secondary Review:

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F123.D
Lab ID: KWG1413671-5
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 10:32
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F123.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F123.D			**Vial:**	97
Acqu Date:	10/07/2014 10:32	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-5				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ696
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97	4.47	20029983	9969044	51.09	50.86			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	12.56	13.99	8744804	5319458	46.90	45.97			NA
				%Recovery =	NA	NA	Limits =	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	529.23	501.93			
Aroclor 1016 {1}	4.35	4.76	3664876	1950206	531.39	513.44			
Aroclor 1016 {2}	4.87	5.12	2804069	2453734	543.83	517.28			
Aroclor 1016 {3}	5.08	5.78	8597172	2633992	518.46	490.56			
Aroclor 1016 {4}	5.36	6.13	3853164	1836506	529.41	494.13			
Aroclor 1016 {5}	5.66	6.33	3849046	1768310	523.06	494.26			
Aroclor 1260			0	0	474.06	438.67			
Aroclor 1260 {1}	7.29	8.10	5622475	1547259	486.54	460.51			
Aroclor 1260 {2}	8.33	9.57	4432716	2508246	477.04	429.81			
Aroclor 1260 {3}	8.90	10.03	4395651	2364394	479.64	438.26			
Aroclor 1260 {4}	9.37	10.72	9942435	5728475	460.62	426.40			
Aroclor 1260 {5}	10.17	11.36	7701989	3665340	466.48	438.38			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F123.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

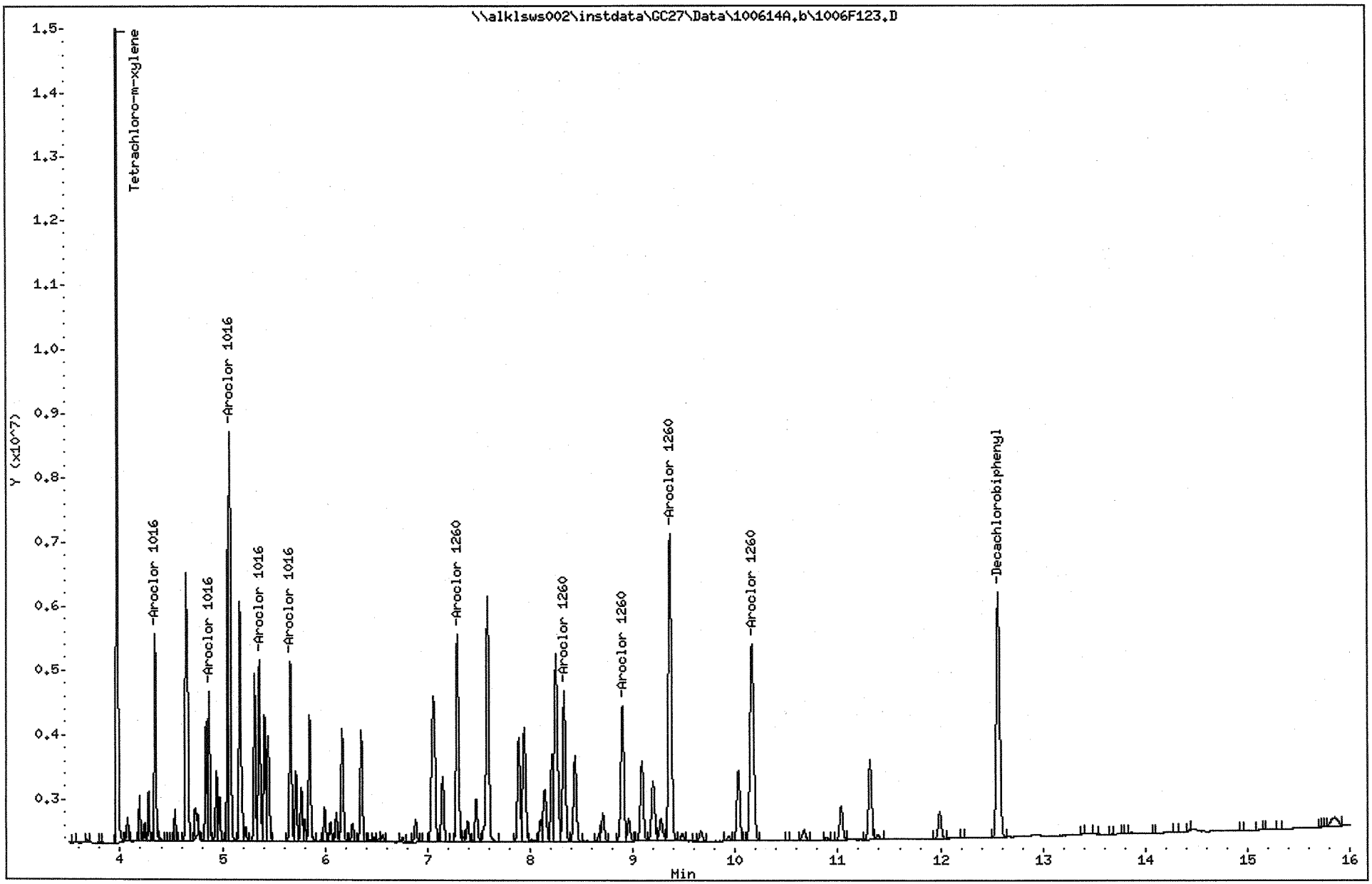
Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F123.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F123.D
Inj Date : 07-OCT-2014 10:32
Sample Info: 1660 @ 50-500ppb PCB6-53H
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.471	20029983	9969044	51.1	50.9		100.00
Aroclor 1016	4.345	4.761	3664876	1950206	531	513	80.00- 120.00	100.00
	4.872	5.115	2804069	2453734	544	517	60.53- 90.80	76.51
	5.075	5.778	8597172	2633992	518	491	185.80- 278.70	234.58
	5.358	6.125	3853164	1836506	529	494	83.80- 125.69	105.14
	5.662	6.328	3849046	1768310	523	494	83.92- 125.88	105.03
			Average of Peak Amounts =		529	502		
Aroclor 1260	7.288	8.101	5622475	1547259	487	461	80.00- 120.00	100.00
	8.332	9.571	4432716	2508246	477	430	63.80- 95.69	78.84
	8.898	10.031	4395651	2364394	480	438	64.05- 96.07	78.18
	9.365	10.715	9942435	5728475	461	426	145.21- 217.81	176.83
	10.165	11.358	7701989	3665340	466	438	112.20- 168.30	136.99
			Average of Peak Amounts =		474	439		
Decachlorobiphenyl	12.562	13.985	8744804	5319458	46.9	46.0		100.00

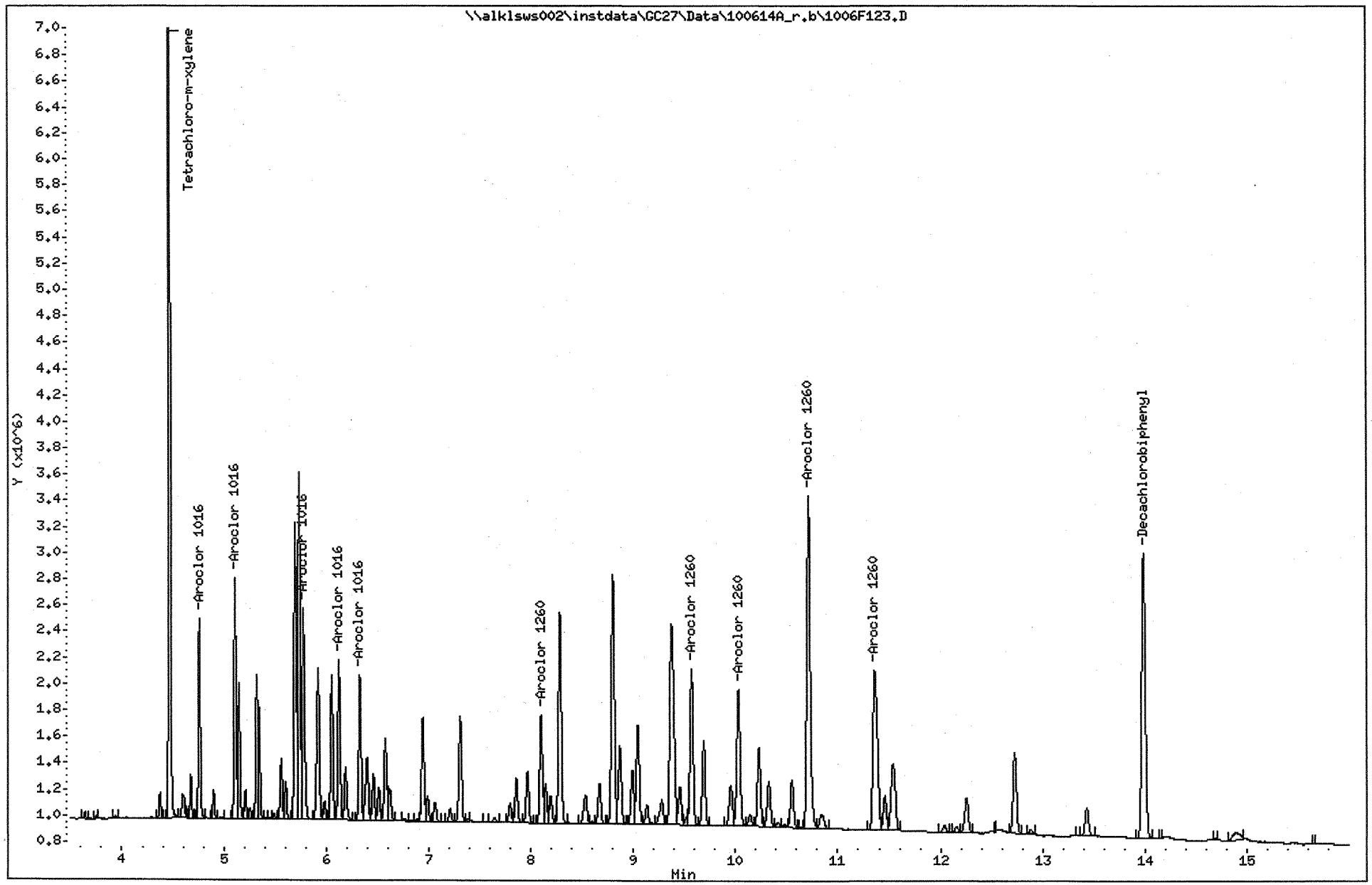
Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F123.D
Date : 07-OCT-2014 10:32
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F123.D
Date : 07-OCT-2014 10:32
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F124.D
Lab ID: KWG1413671-6
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 10:57
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F124.I
Lab ID: KWG1413671-6
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 10:57
Date Quantitated: 10/08/2014 15:44
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F124.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F124.D			**Vial:**	86
Acqu Date:	10/07/2014 10:57	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-6				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIMEI
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	30-125	
Decachlorobiphenyl	12.56	13.98	65596	26880	0.3520	0.2320			NA
			%Recovery =		NA	NA	**Limits =**	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F124.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F124.D			**Vial:**	86
Acqu Date:	10/07/2014 10:57	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-6				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0	0	0.0000	0.0000			
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclors, Total			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F124.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F124.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F124.D
Inj Date : 07-OCT-2014 10:57
Sample Info: IB
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

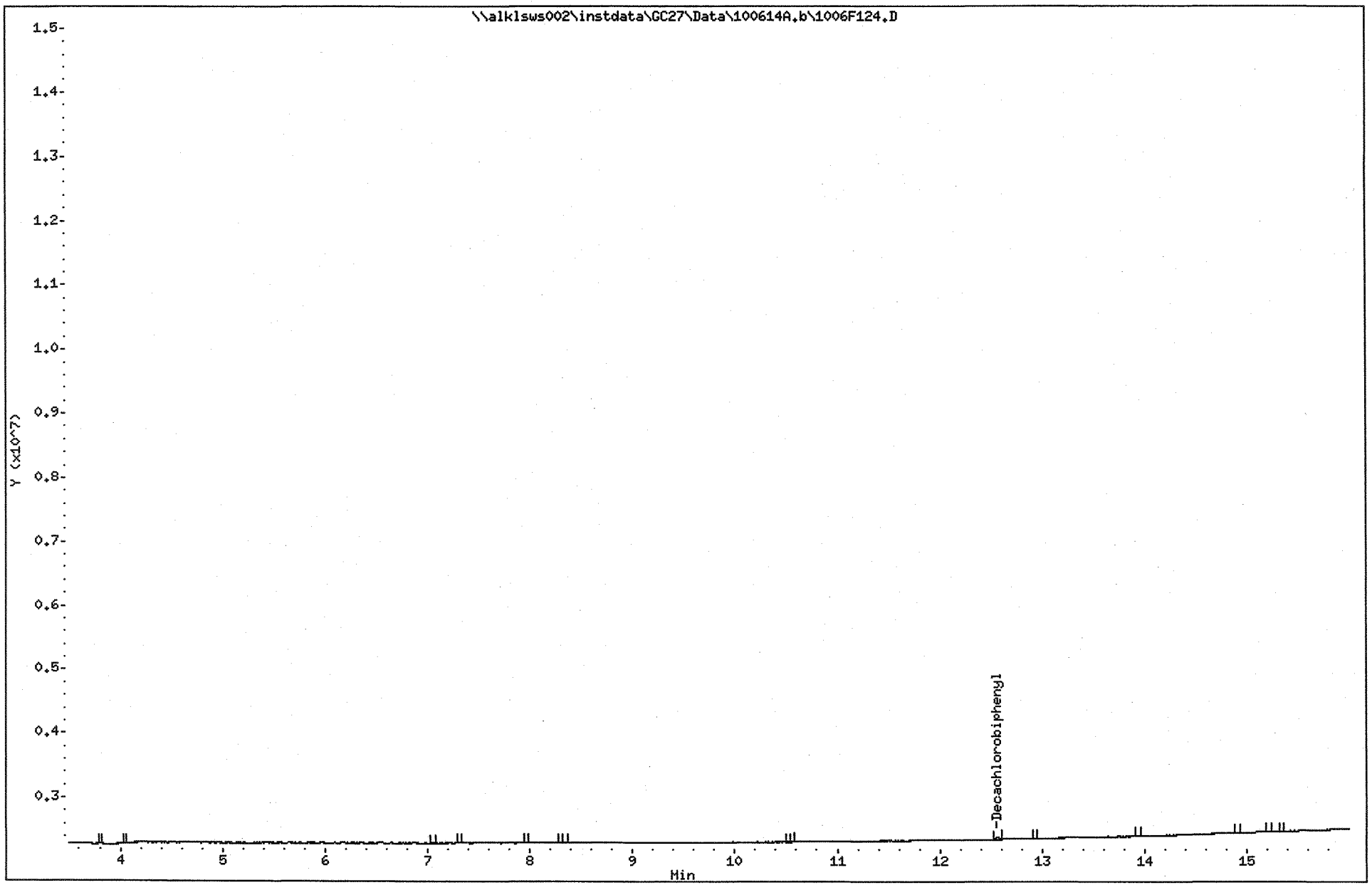
Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Decachlorobiphenyl	12.564	13.983	65596	26880	0.352	0.232		100.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F124.D
Date : 07-OCT-2014 10:57
Client ID:
Sample Info: IB

Instrument: GC27.i

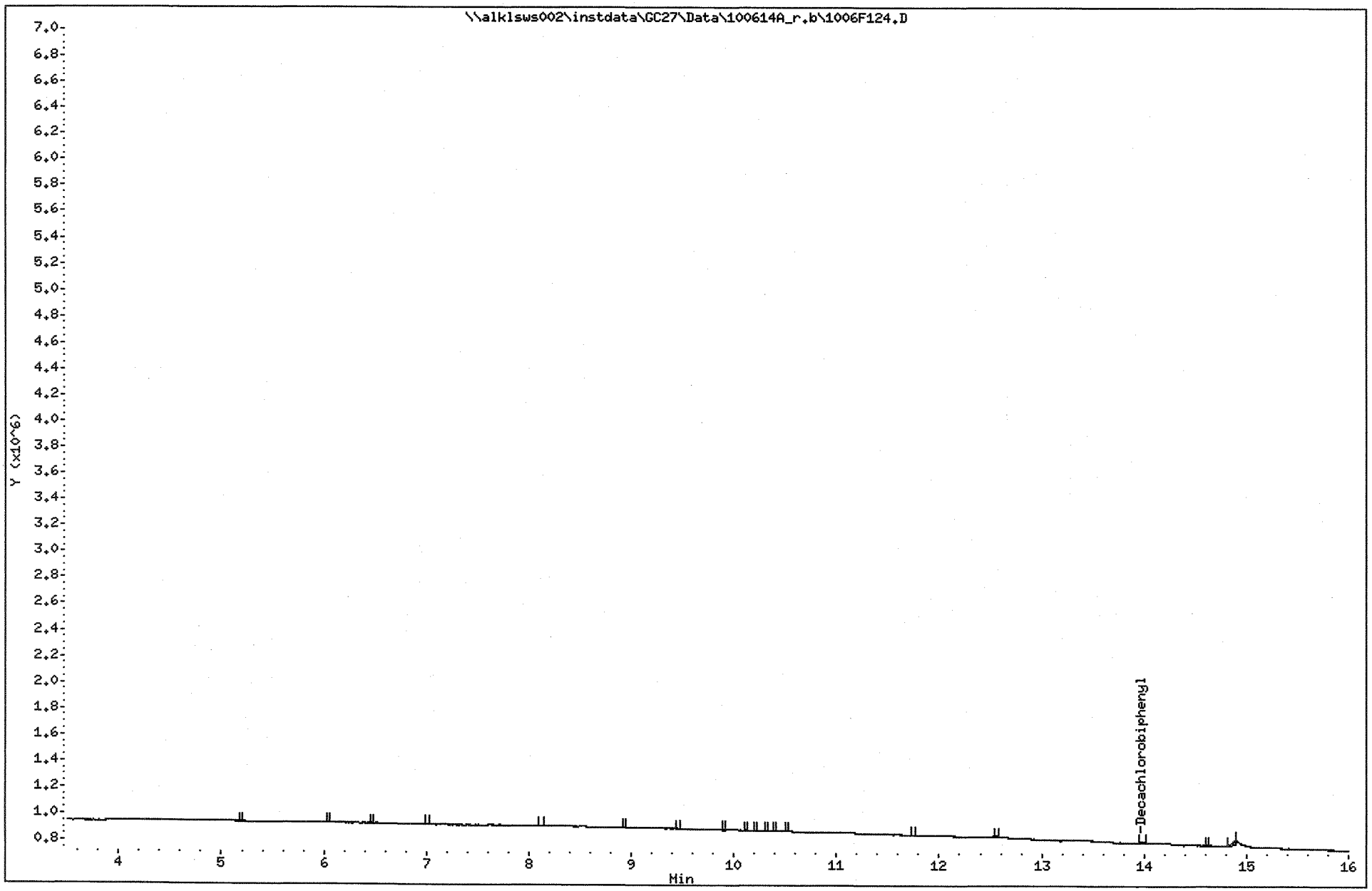
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F124.D
Date : 07-OCT-2014 10:57
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F127.D
Lab ID: KWG1413671-7
RunType: CCV
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 12:08
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F127.I	**Date Acquired:**	10/07/2014 12:08
Lab ID:	KWG1413671-7	**Date Quantitated:**	10/08/2014 15:44
RunType:	CCV	**Batch ID:**	KWG1413671
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F127.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F127.D			**Vial:**	97
Acqu Date:	10/07/2014 12:08	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-7				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ696
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.97	4.47	19190489	9798406	48.95	49.99			NA
			%Recovery =		NA	NA	**Limits =**	10-135	
Decachlorobiphenyl	12.56	13.99	8860311	5458044	47.51	47.17			NA
			%Recovery =		NA	NA	**Limits =**	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	499.25	502.83			
Aroclor 1016 {1}	4.35	4.76	3475361	1937558	503.91	510.11			
Aroclor 1016 {2}	4.87	5.12	2629549	2414585	509.98	509.03			
Aroclor 1016 {3}	5.08	5.78	8071444	2669304	486.76	497.13			
Aroclor 1016 {4}	5.36	6.13	3640256	1863818	500.15	501.48			
Aroclor 1016 {5}	5.66	6.33	3645737	1775890	495.43	496.38			
Aroclor 1260			0	0	472.92	462.52			
Aroclor 1260 {1}	7.29	8.10	5515215	1611814	477.26	479.73			
Aroclor 1260 {2}	8.33	9.57	4398101	2663755	473.32	456.45			
Aroclor 1260 {3}	8.90	10.03	4415418	2502000	481.80	463.76			
Aroclor 1260 {4}	9.37	10.72	10010505	6056759	463.77	450.84			
Aroclor 1260 {5}	10.16	11.36	7734894	3861430	468.47	461.83			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F127.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

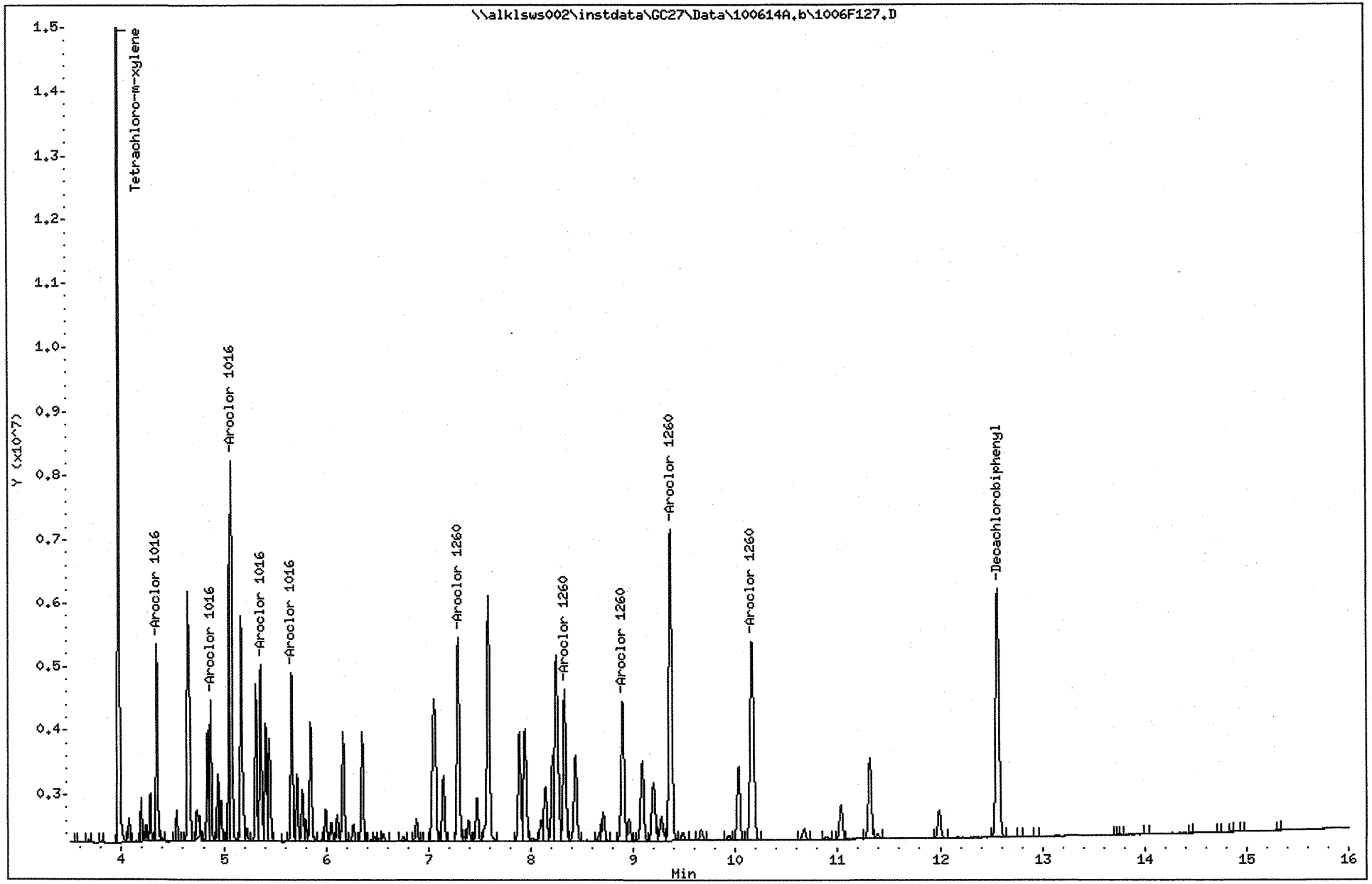
Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F127.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F127.D
Inj Date : 07-OCT-2014 12:08
Sample Info: 1660 @ 50-500ppb PCB6-53H
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.972	4.472	19190489	9798406	49.0	50.0		100.00
Aroclor 1016	4.346	4.762	3475361	1937558	504	510	80.00- 120.00	100.00
	4.872	5.115	2629549	2414585	510	509	60.53- 90.80	75.66
	5.076	5.778	8071444	2669304	487	497	185.80- 278.70	232.25
	5.359	6.125	3640256	1863818	500	501	83.80- 125.69	104.74
	5.662	6.332	3645737	1775890	495	496	83.92- 125.88	104.90
			Average of Peak Amounts =		499	503		
Aroclor 1260	7.289	8.102	5515215	1611814	477	480	80.00- 120.00	100.00
	8.332	9.572	4398101	2663755	473	456	63.80- 95.69	79.74
	8.896	10.028	4415418	2502000	482	464	64.05- 96.07	80.06
	9.366	10.715	10010505	6056759	464	451	145.21- 217.81	181.51
	10.162	11.362	7734894	3861430	468	462	112.20- 168.30	140.25
			Average of Peak Amounts =		473	463		
Decachlorobiphenyl	12.559	13.985	8860311	5458044	47.5	47.2		100.00

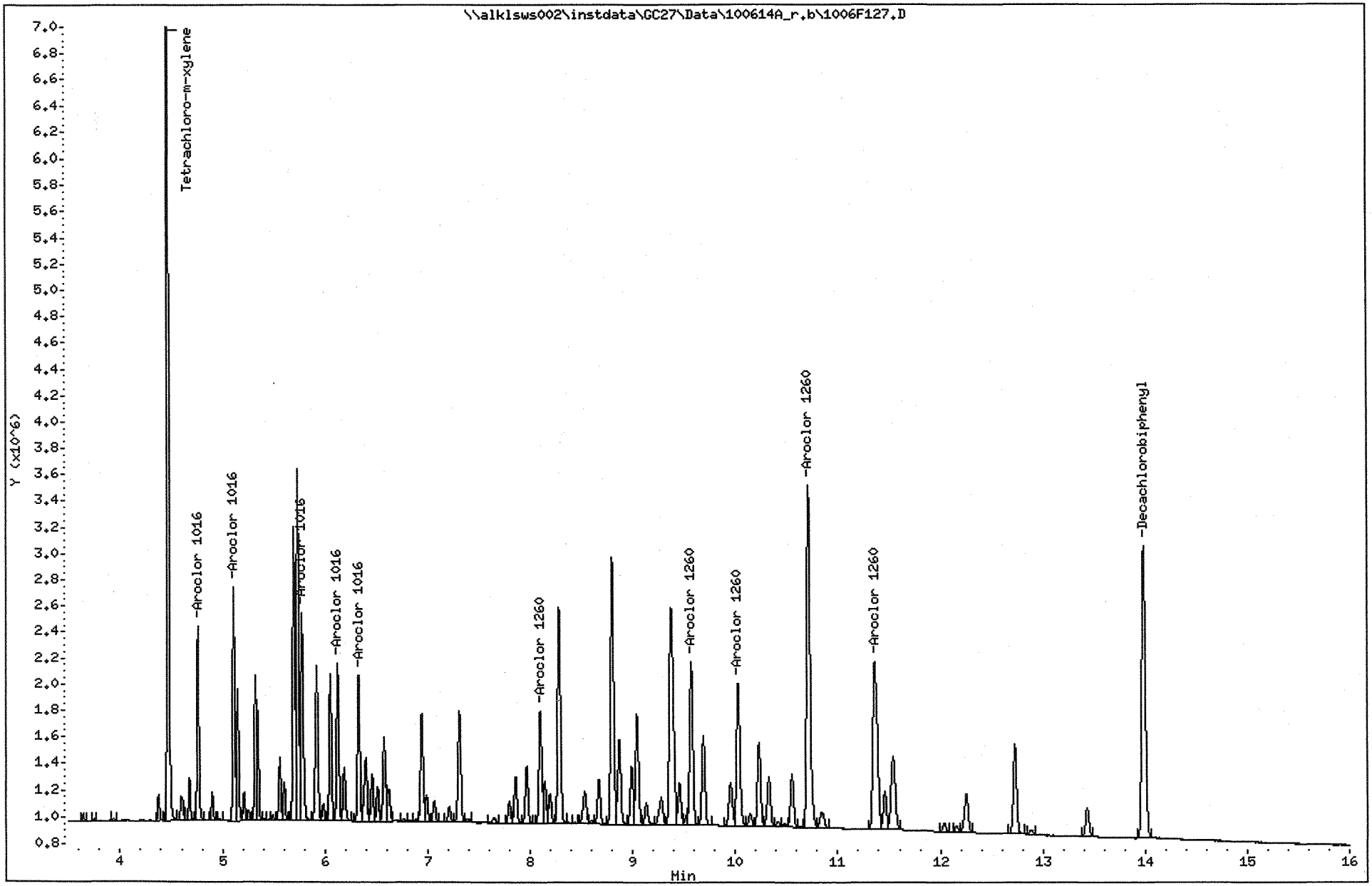
Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F127.D
Date : 07-OCT-2014 12:08
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F127.D
Date : 07-OCT-2014 12:08
Client ID:
Sample Info: 1660 @ 50-500ppb PCB6-53H

Instrument: GC27.i
Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\1006F128.D
Lab ID: KWG1413671-8
RunType: IB
Matrix: MARINE SEDIMENT

Date Acquired: 10/07/2014 12:33
Date Quantitated: 10/08/2014 15:45
Batch ID: KWG1413671
Analysis Method: 8082A
MethodJoinID: MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A_R.B\1006F128.I	**Date Acquired:**	10/07/2014 12:33
Lab ID:	KWG1413671-8	**Date Quantitated:**	10/08/2014 15:44
RunType:	IB	**Batch ID:**	KWG1413671
Matrix:	MARINE SEDIMENT	**Analysis Method:**	8082A
		MethodJoinID:	MJ696

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\100614A.B\1006F128.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F128.D			**Vial:**	86
Acqu Date:	10/07/2014 12:33	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-8				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	MARINE SEDIME
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413671	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\100614A.B\100214_F.M	**Calibration ID:**	CAL13590
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	30-125	
Decachlorobiphenyl	12.57	13.98	75735	36885	0.4060	0.3190			NA
			%Recovery =		NA	NA	Limits =	43-148	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\100614A.B\1006F128.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\100614A_r.b\1006F128.D			**Vial:**	86
Acqu Date:	10/07/2014 12:33	**Quant Date:**	10/08/2014 15:45	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1413671-8				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {1}			0	0	0.0000	0.0000			
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclors, Total			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
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B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F128.D
Report Date: 08-Oct-2014 15:45

ALS Environmental

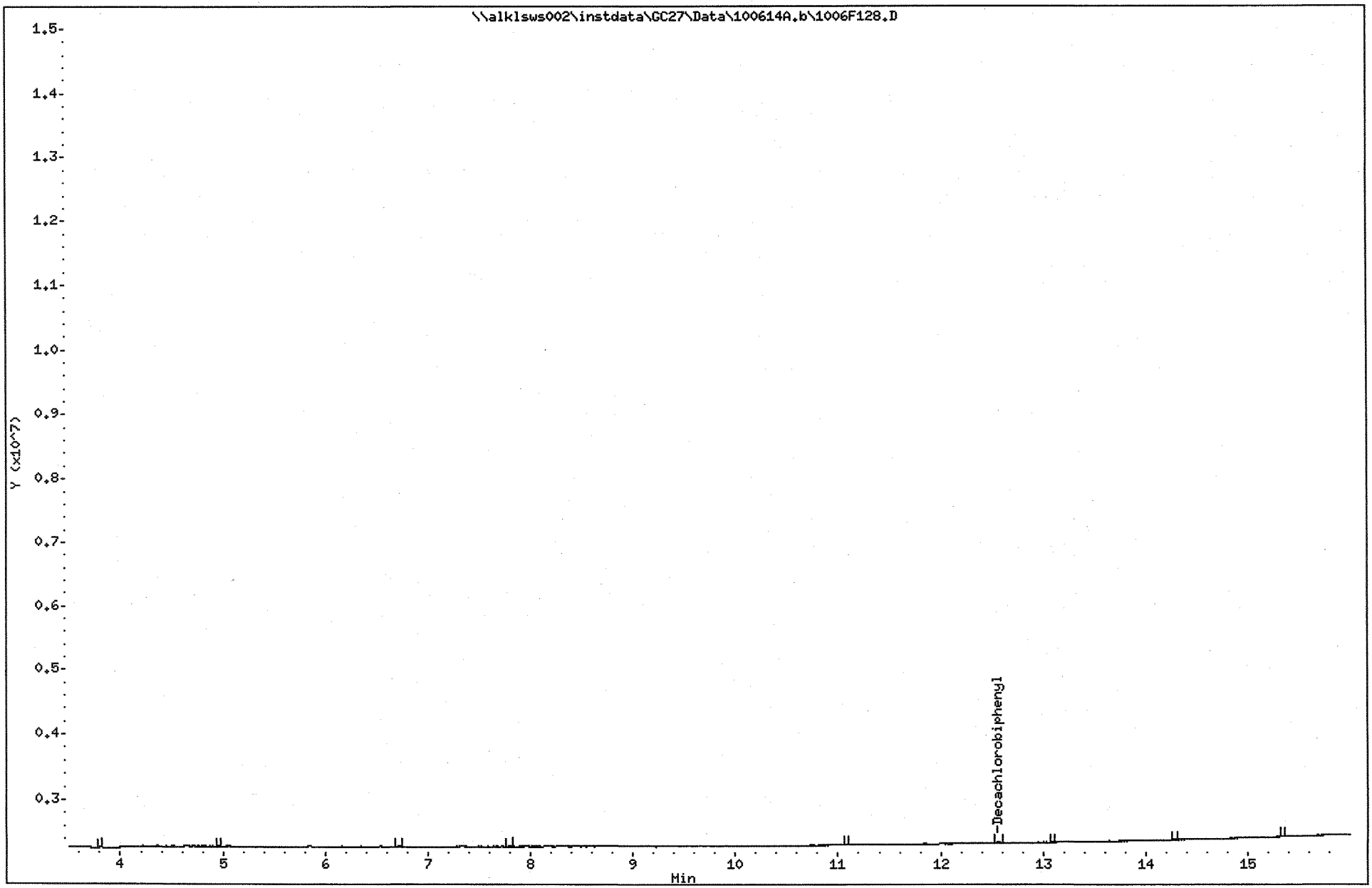
Sample #1 : \\alklsws002\instdata\GC27\Data\100614A.b\1006F128.D
Sample #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F128.D
Inj Date : 07-OCT-2014 12:33
Sample Info: IB
Misc Info :
Cal Date : 07-OCT-2014 15:54
Operator : JMSmith
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\100614A.b\100214_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\100614A_r.b\100214_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Decachlorobiphenyl	12.565	13.984	75735	36885	0.406	0.319		100.00

Data File: \\alklsws002\instdata\GC27\Data\100614A.b\1006F128.D
Date : 07-OCT-2014 12:33
Client ID:
Sample Info: IB

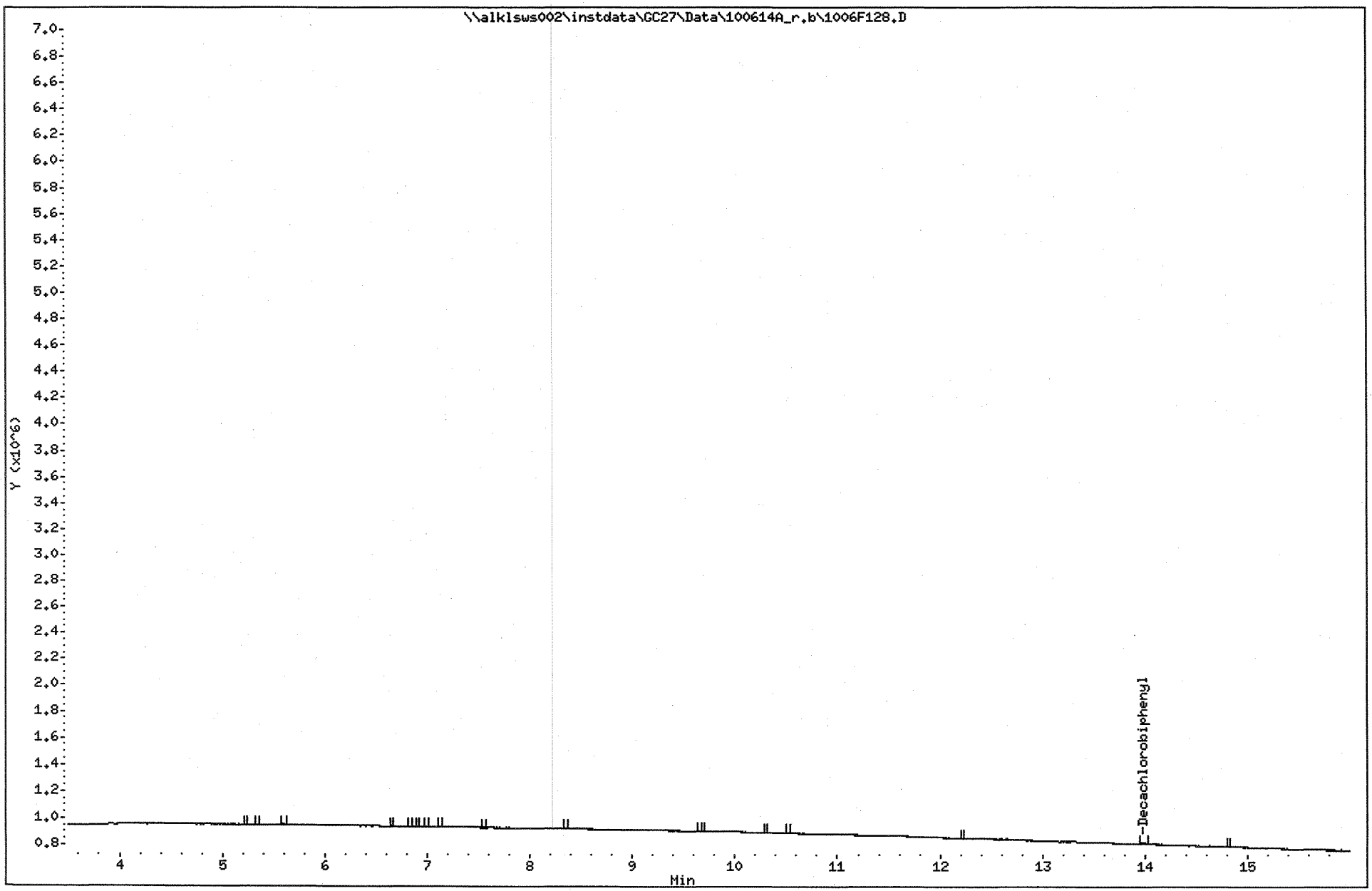
Instrument: GC27.i
Operator: JMSmith
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\100614A_r.b\1006F128.D
Date : 07-OCT-2014 12:33
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: JMSmith
Column phase: DB-XLB
Column diameter: 0.32



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Exception Report

Data File: J:\MS24\DATA\091914\0919F018.D
Lab ID: K1409921-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 16:21
Date Quantitated: 09/22/2014 13:32
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV OK
	Vinyl Chloride	-25.3	NA	20	L

Primary Review: kaynelson

Secondary Review: CH 9/24/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F018.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 16:21	**Quant Date:**	09/22/2014 13:32	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-004			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376452	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	399046	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	155456	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	147905	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	101462	50.94	102	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	373563	48.45	97	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	136575	49.42	99	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.18	U	
1	Vinyl Chloride				62	0		0.18	U	
1	1,1-Dichloroethene				96	0		0.25	U	
1	Acetone	1.96	0.01	0.00	43	18522	37.95	28		
1	Carbon Disulfide	2.00		0.00	76	648	0.1300	0.096	J	
1	Methylene Chloride	2.24	0.01	0.00	84	6114	2.90	2.1	J	
1	trans-1,2-Dichloroethene				96	0		0.12	U	
1	cis-1,2-Dichloroethene				96	0		0.12	U	
1	2-Butanone (MEK)	3.18	0.01	0.00	72	706	2.94	2.2	J	
1	Carbon Tetrachloride				117	0		0.094	U	
1	Benzene	3.74		0.00	78	4396	0.6100	0.45	J	
1	Trichloroethene (TCE)				95	0		0.15	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		1.8	U	
1	Toluene	5.32		0.00	92	4270	0.9400	0.69	J	
2	Tetrachloroethene (PCE)				164	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F018.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 16:21	**Quant Date:**	09/22/2014 13:32	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-004			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		0.93	U	
2	Dibromochloromethane				129	0		0.18	U	
2	Ethylbenzene				106	0		0.094	U	
2	m,p-Xylenes				106	0		0.10	U	
2	o-Xylene				106	0		0.081	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.14	U	
3	1,2,4-Trichlorobenzene				180	0		0.13	U	

Prep Amount:	6.77 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F018.D Vial: 17
Acq On : 19 Sep 2014 4:21 pm Operator: KR
Sample : K09921-004 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:30:57 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

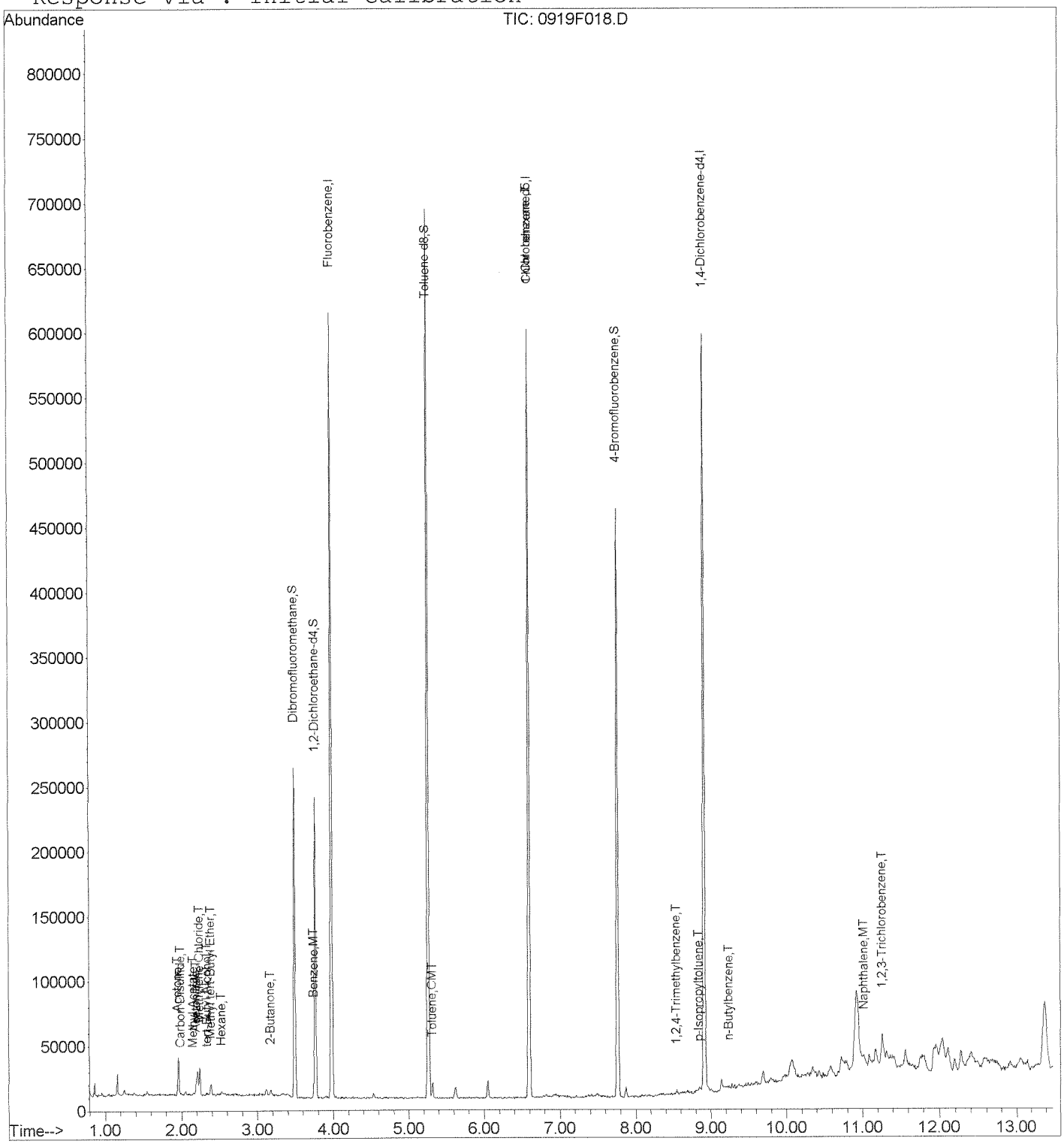
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	399046	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	155456	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	147905	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	101462	50.94	PPB		0.00
Spiked Amount 50.000			Recovery =	101.88%			
44) 1,2-Dichloroethane-d4	3.76	65	97329	48.78	PPB		0.00
Spiked Amount 50.000			Recovery =	97.56%			
59) Toluene-d8	5.26	98	373563	48.45	PPB		0.00
Spiked Amount 50.000			Recovery =	96.90%			
80) 4-Bromofluorobenzene	7.76	95	136575	49.42	PPB		0.00
Spiked Amount 50.000			Recovery =	98.84%			
Target Compounds							Qvalue
13) Acetone	1.96	43	18522	37.95	PPB		93
15) Carbon Disulfide	2.00	76	648	0.13	PPB		79
17) Methyl Acetate	2.16	43	851	0.69	PPB	#	53
18) Acetonitrile	2.19	40	5952	63.26	PPB	#	60
19) Methylene Chloride	2.24	84	6114	2.90	PPB		92
20) tert-Butyl Alcohol	2.33	59	586	2.81	PPB		52
22) Methyl tert-Butyl Ether	2.39	73	5882	1.11	PPB		99
24) Hexane	2.53	57	869	0.38	PPB		94
32) 2-Butanone	3.18	72	706	2.94	PPB		91
45) Benzene	3.74	78	4396	0.61	PPB	#	43
60) Toluene	5.32	92	4270	0.94	PPB		97
70) 1-Chlorohexane	6.59	91	832	0.35	PPB	#	1
91) 1,2,4-Trimethylbenzene	8.55	105	1518	0.22	PPB		83
93) p-Isopropyltoluene	8.85	119	1305	0.18	PPB		84
96) n-Butylbenzene	9.25	91	628	0.10	PPB		74
102) Naphthalene	11.03	128	2654	0.41	PPB		92
103) 1,2,3-Trichlorobenzene	11.26	180	618	0.23	PPB	#	34

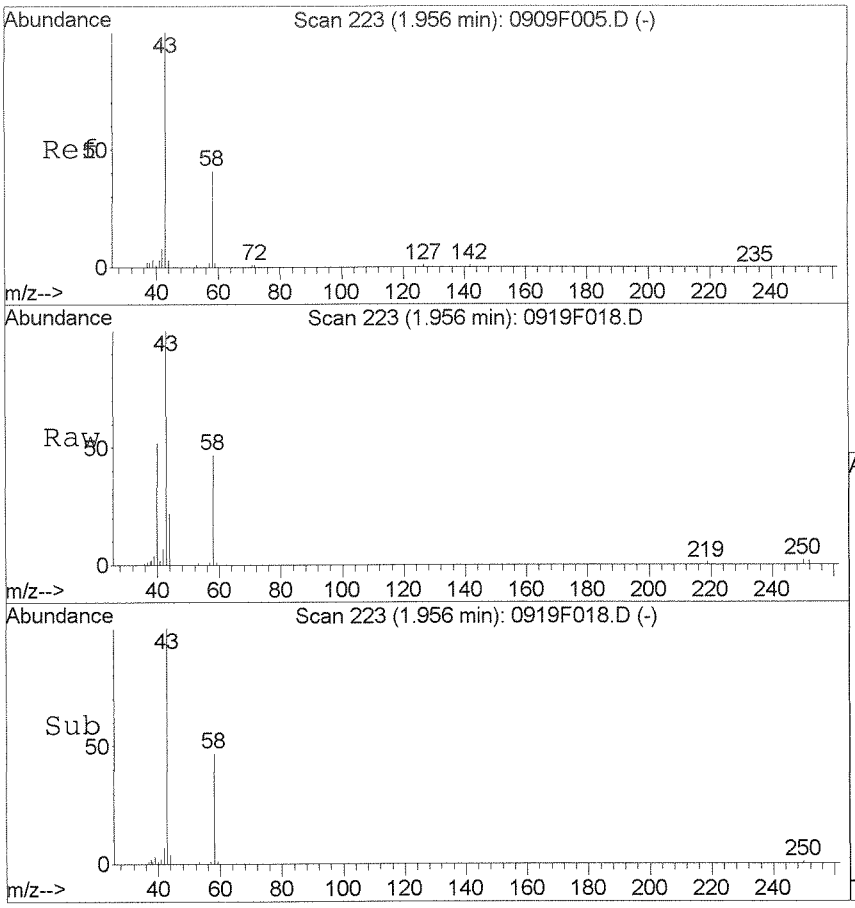
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F018.D Vial: 17
Acq On : 19 Sep 2014 4:21 pm Operator: KR
Sample : K09921-004 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:32 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

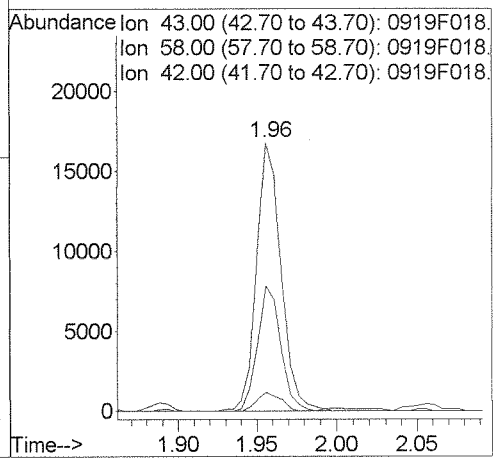


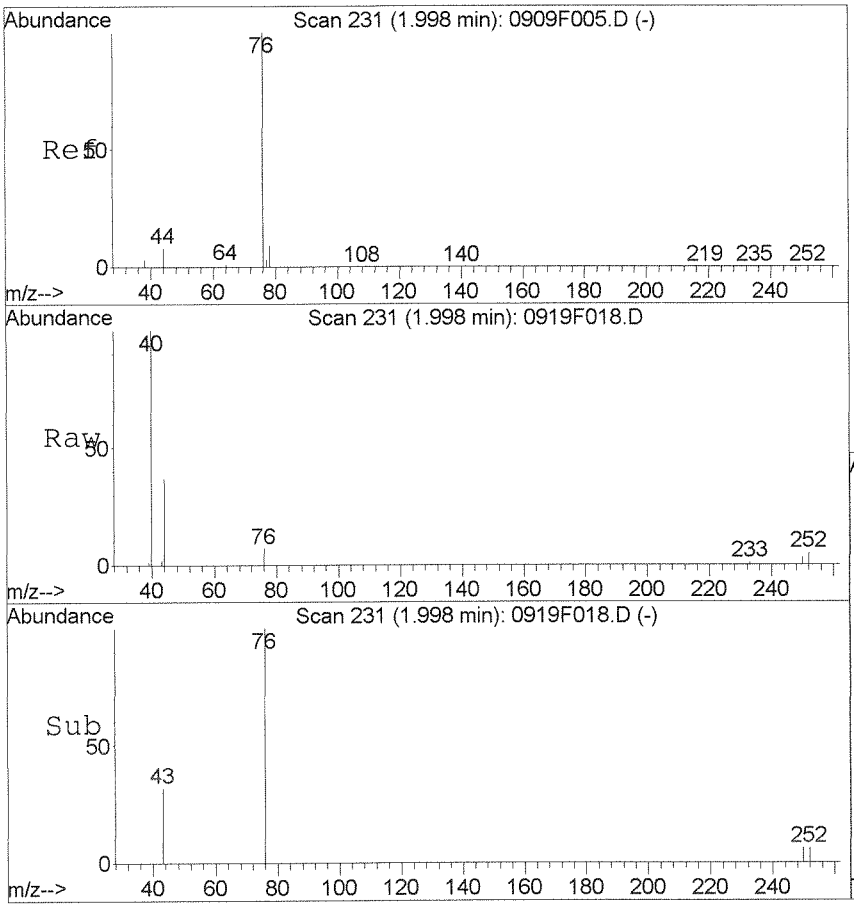


#13
Acetone
Concen: 37.95 PPB
RT: 1.96 min Scan# 223
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 43 Resp: 18522

Ion	Ratio	Lower	Upper
43	100		
58	46.5	11.3	71.3
42	7.0	0.0	37.7

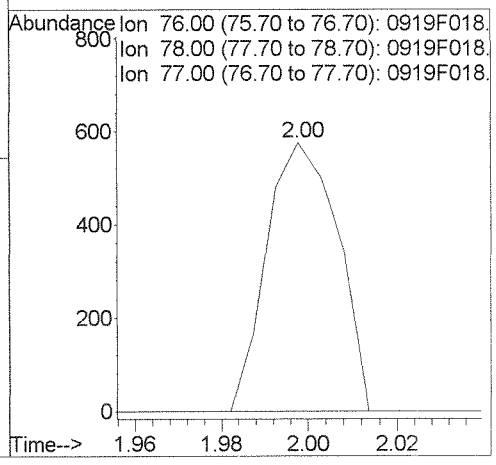


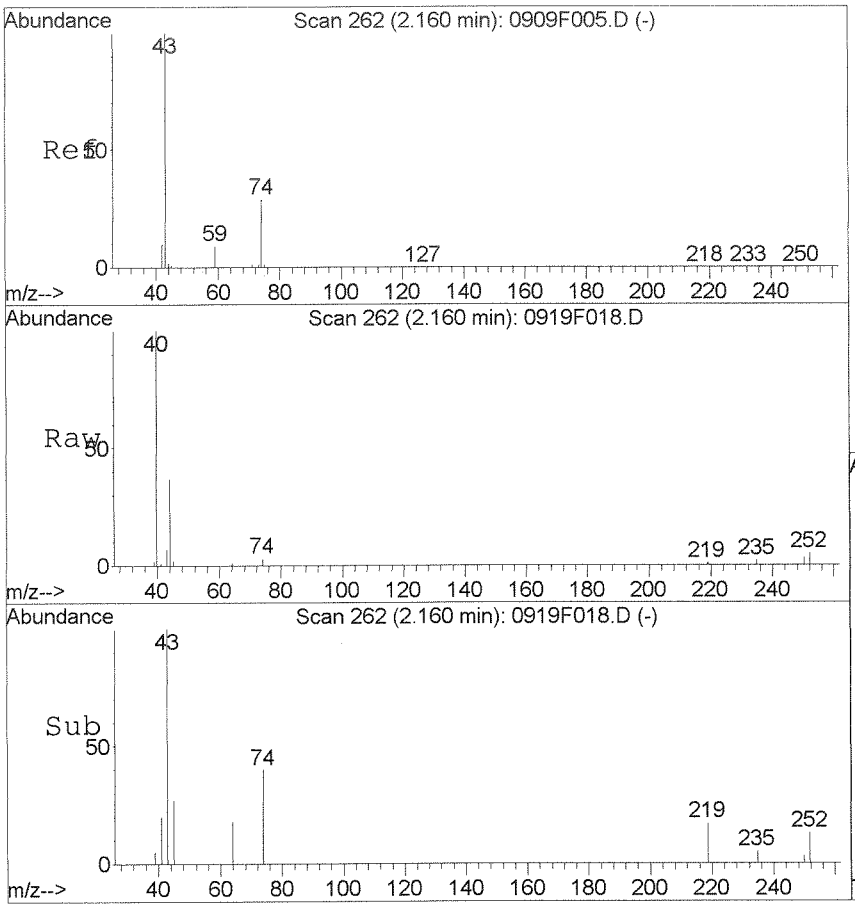


#15
Carbon Disulfide
Concen: 0.13 PPB
RT: 2.00 min Scan# 231
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 76 Resp: 648

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	39.0
77	0.0	0.0	32.6

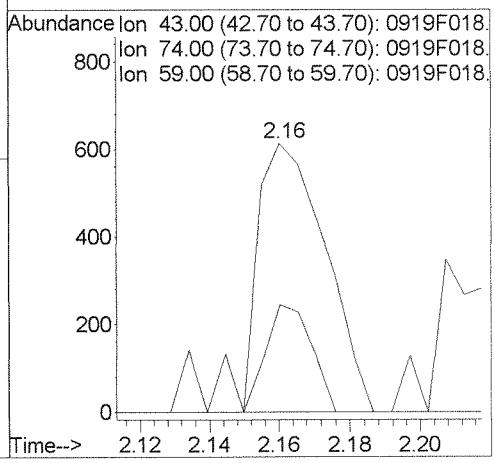


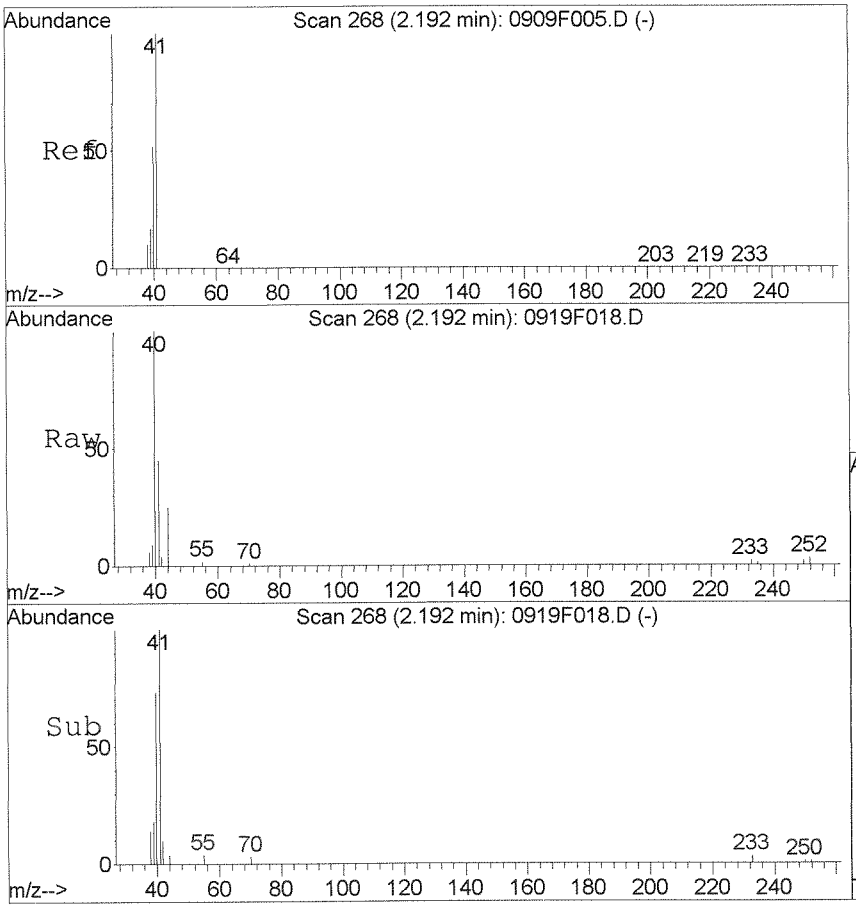


#17
Methyl Acetate
Concen: 0.69 PPB
RT: 2.16 min Scan# 262
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 43 Resp: 851

Ion	Ratio	Lower	Upper
43	100		
74	0.0	20.4	37.8#
59	0.0	6.2	11.4#

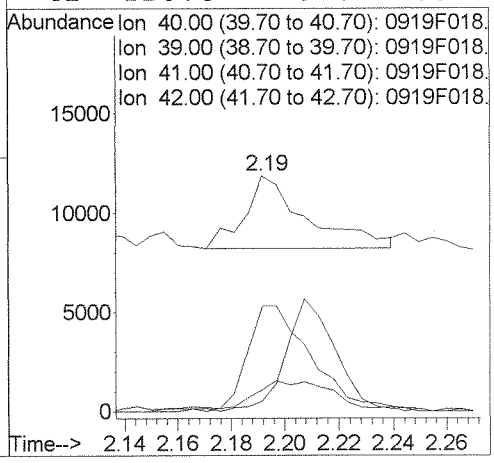


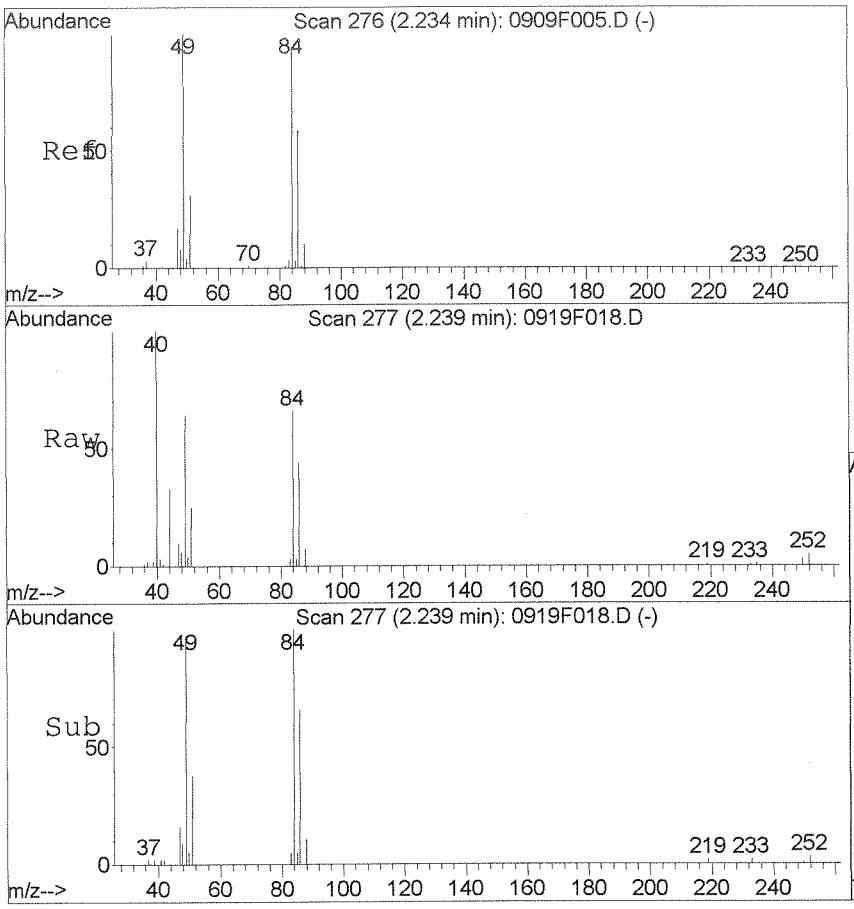


#18
Acetonitrile
Concen: 63.26 PPB
RT: 2.19 min Scan# 268
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 40 Resp: 5952

Ion	Ratio	Lower	Upper
40	100		
39	51.9	6.9	66.9
41	148.4	170.6	230.6#
42	120.8	0.0	35.5#

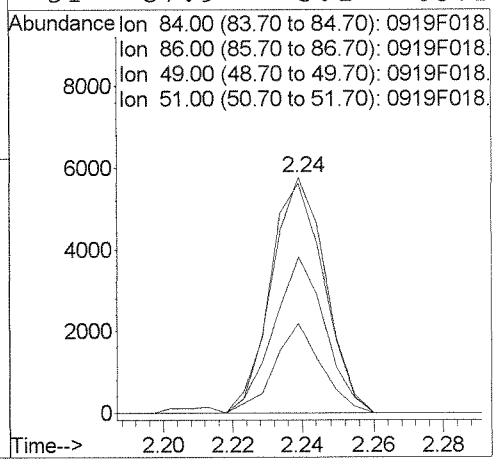


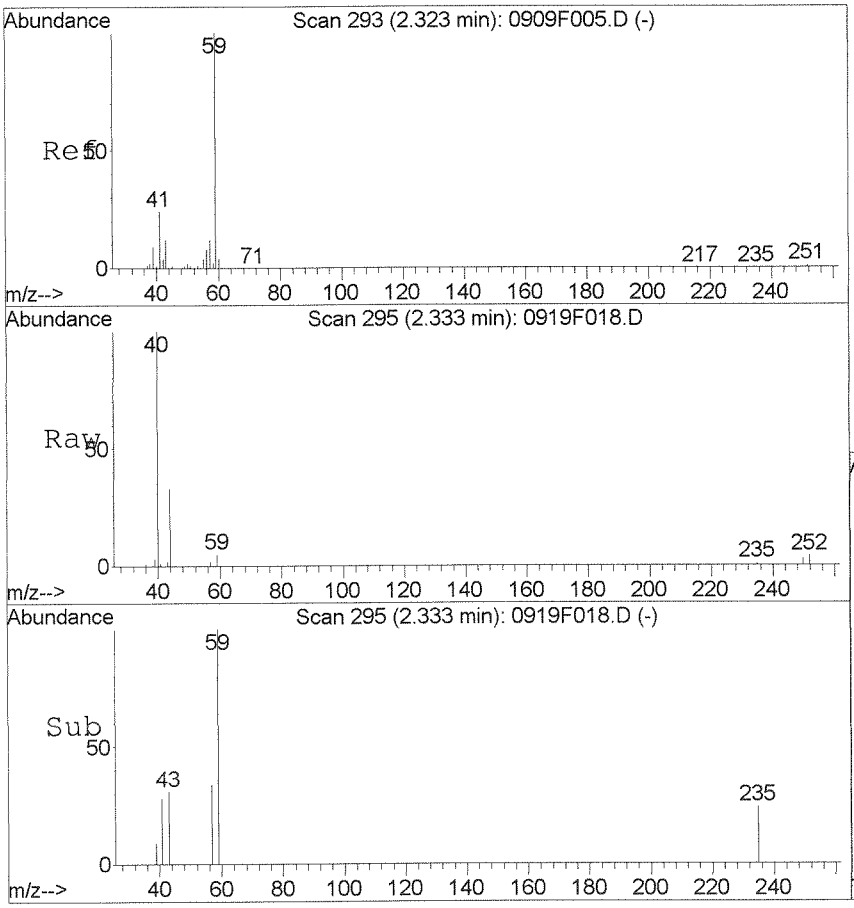


#19
Methylene Chloride
Concen: 2.90 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 84 Resp: 6114

Ion	Ratio	Lower	Upper
84	100		
86	66.2	32.9	92.9
49	97.5	76.9	136.9
51	37.9	3.1	63.1

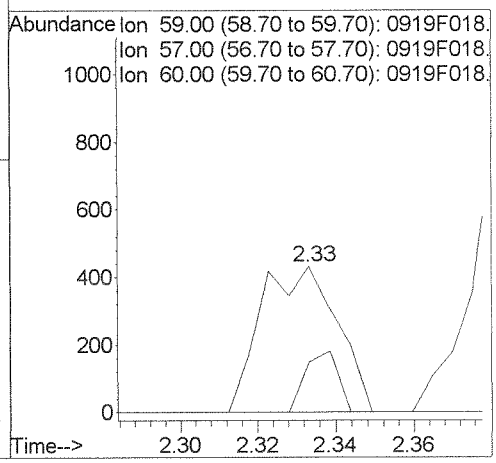


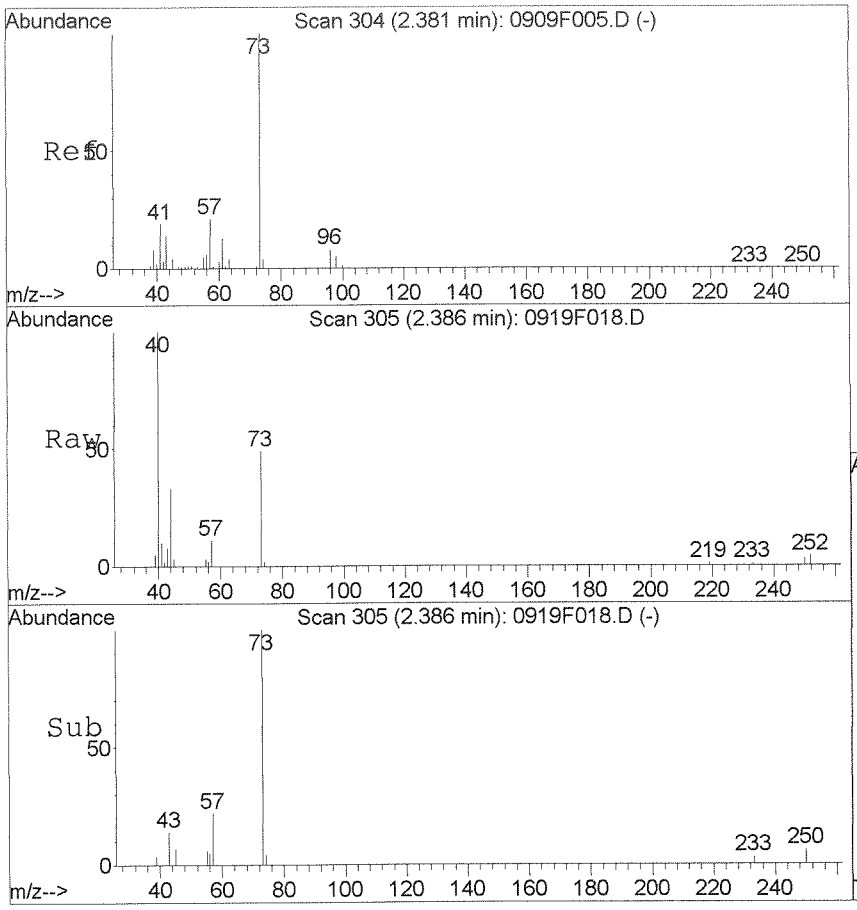


#20
tert-Butyl Alcohol
Concen: 2.81 PPB
RT: 2.33 min Scan# 295
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 59 Resp: 586

Ion	Ratio	Lower	Upper
59	100		
57	34.5	0.0	41.5
60	0.0	0.0	33.6

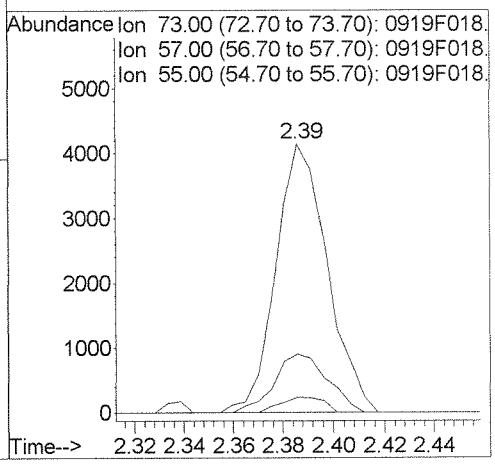


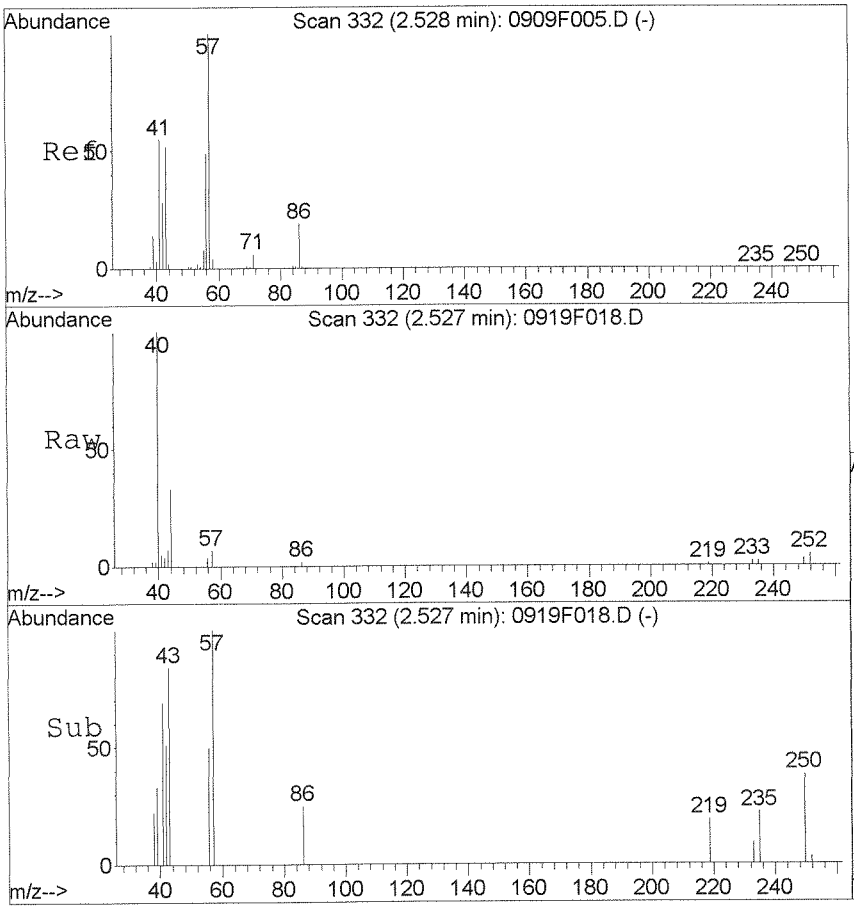


#22
Methyl tert-Butyl Ether
Concen: 1.11 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 73 Resp: 5882

Ion	Ratio	Lower	Upper
73	100		
57	21.8	0.0	51.5
55	5.8	0.0	35.6

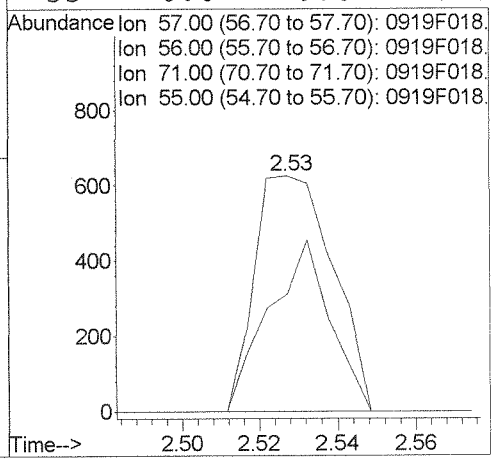


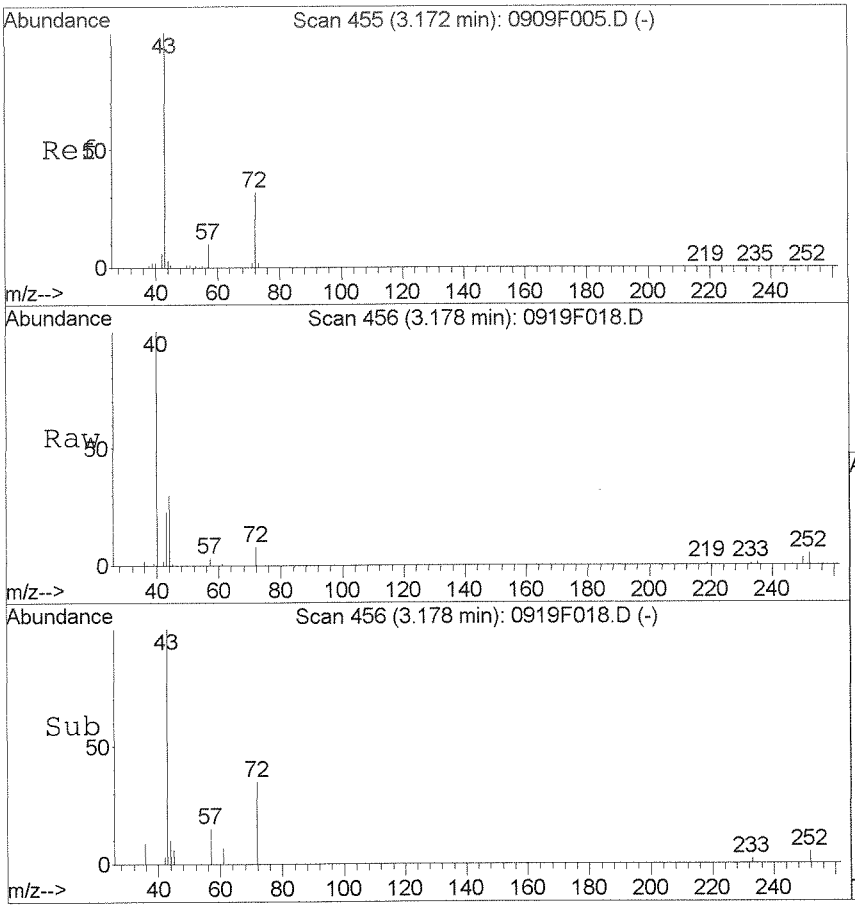


#24
Hexane
Concen: 0.38 PPB
RT: 2.53 min Scan# 332
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 57 Resp: 869

Ion	Ratio	Lower	Upper
57	100		
56	49.9	18.8	78.8
71	0.0	0.0	35.9
55	0.0	0.0	20.6

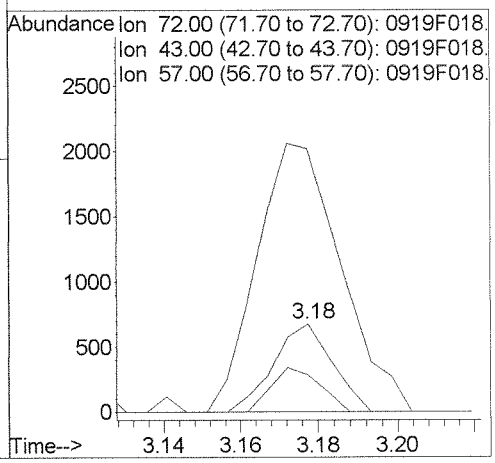


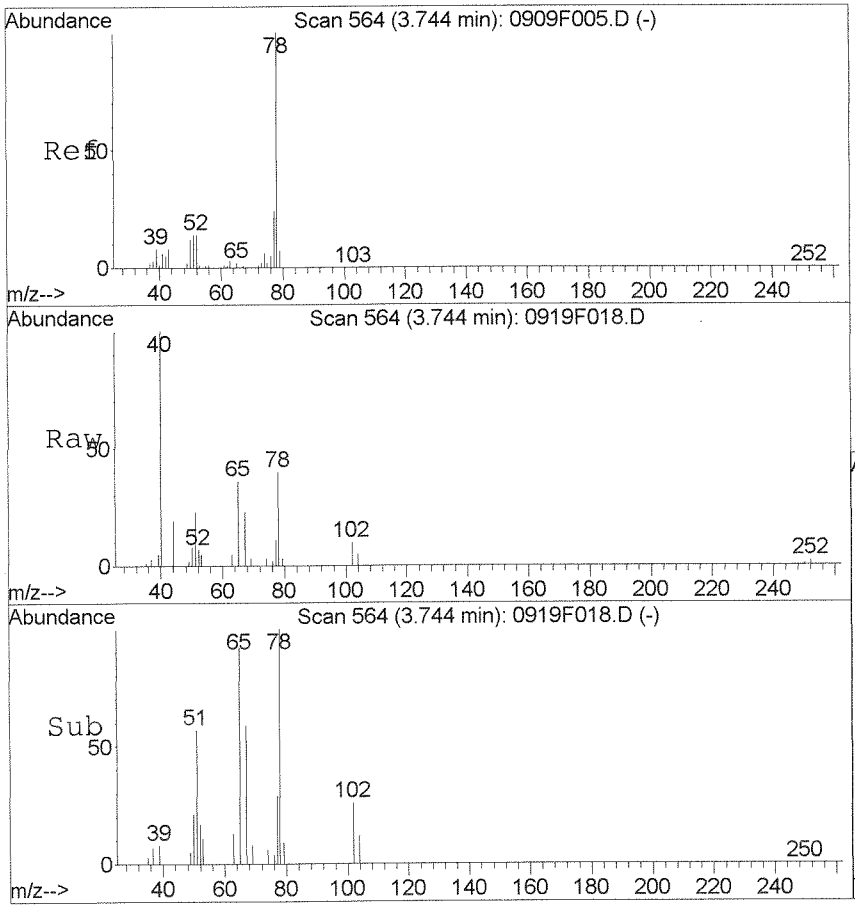


#32
2-Butanone
Concen: 2.94 PPB
RT: 3.18 min Scan# 456
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 72 Resp: 706

Ion	Ratio	Lower	Upper
72	100		
43	299.1	284.6	344.6
57	42.2	0.2	60.2

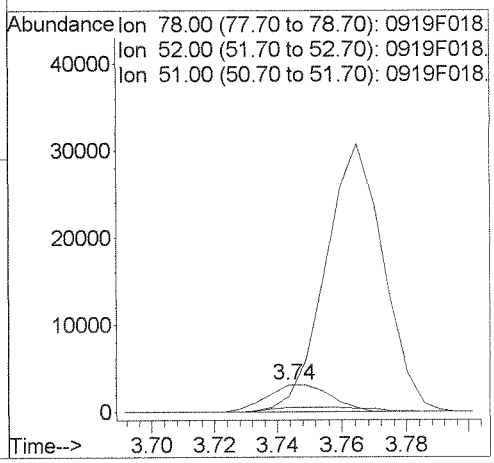


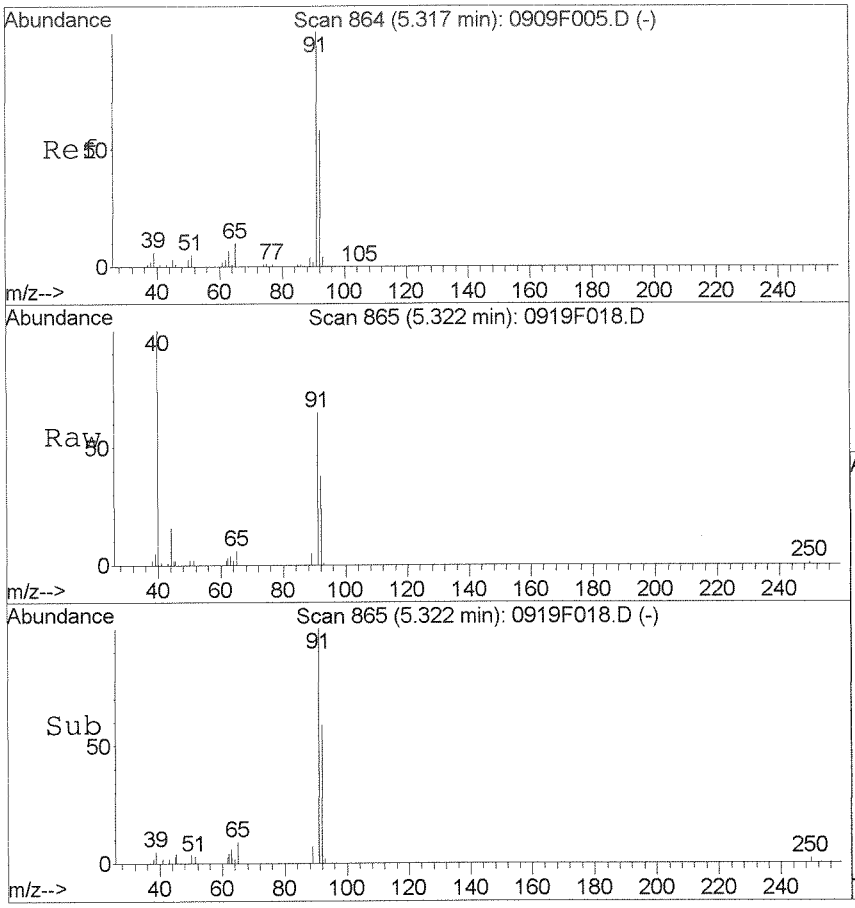


#45
Benzene
Concen: 0.61 PPB
RT: 3.74 min Scan# 564
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 78 Resp: 4396

Ion	Ratio	Lower	Upper
78	100		
52	17.4	0.0	44.3
51	57.5	0.0	44.1#

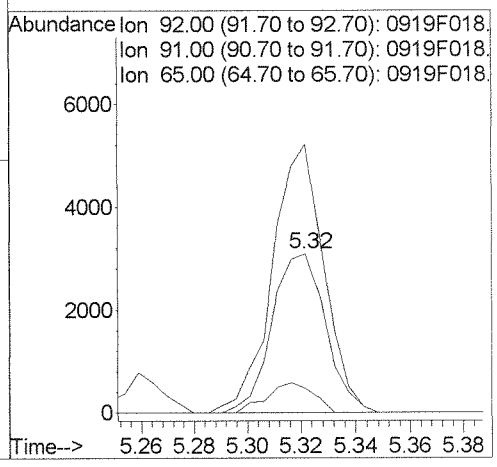


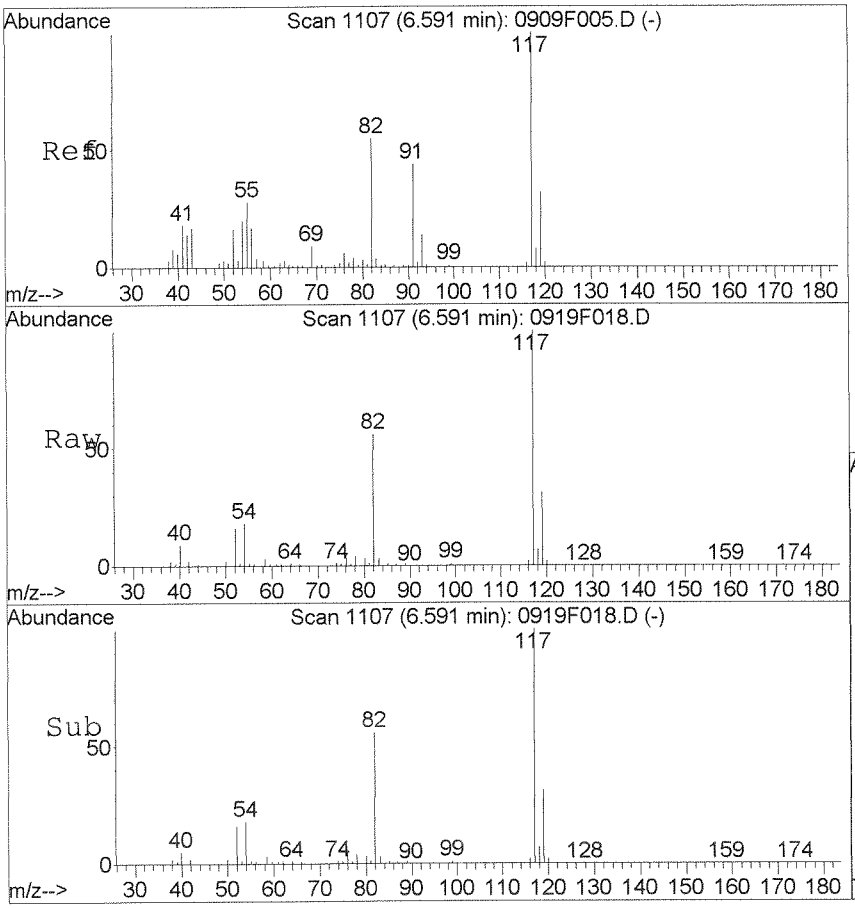


#60
Toluene
Concen: 0.94 PPB
RT: 5.32 min Scan# 865
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 92 Resp: 4270

Ion	Ratio	Lower	Upper
92	100		
91	168.9	143.3	203.3
65	15.2	0.0	47.5

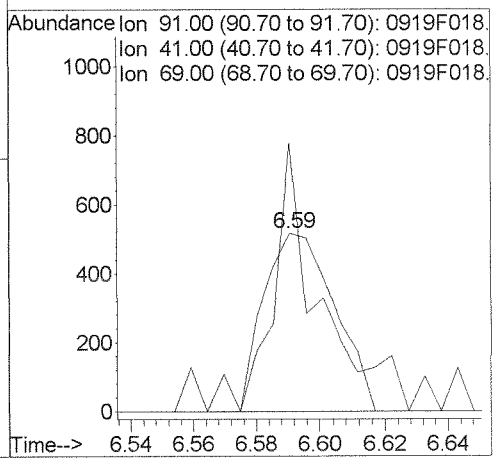


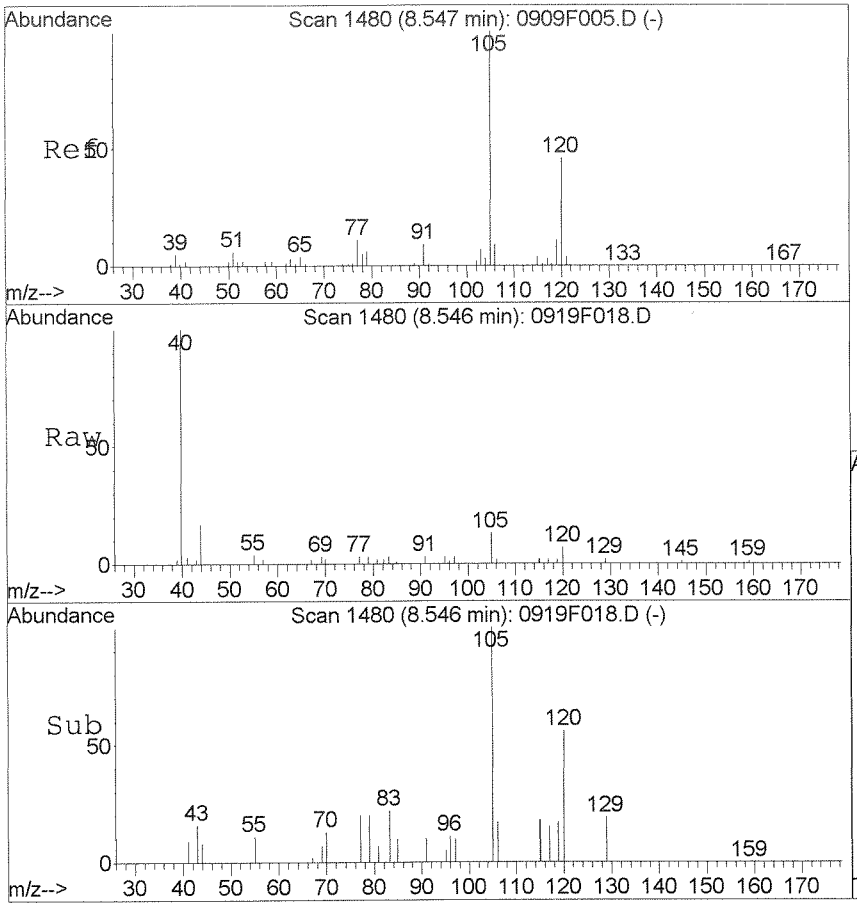


#70
1-Chlorohexane
Concen: 0.35 PPB
RT: 6.59 min Scan# 1107
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 91 Resp: 832

Ion	Ratio	Lower	Upper
91	100		
41	150.5	11.2	71.2#
69	0.0	0.0	49.8

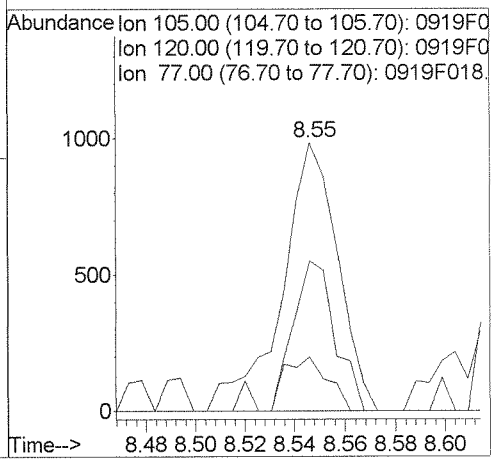


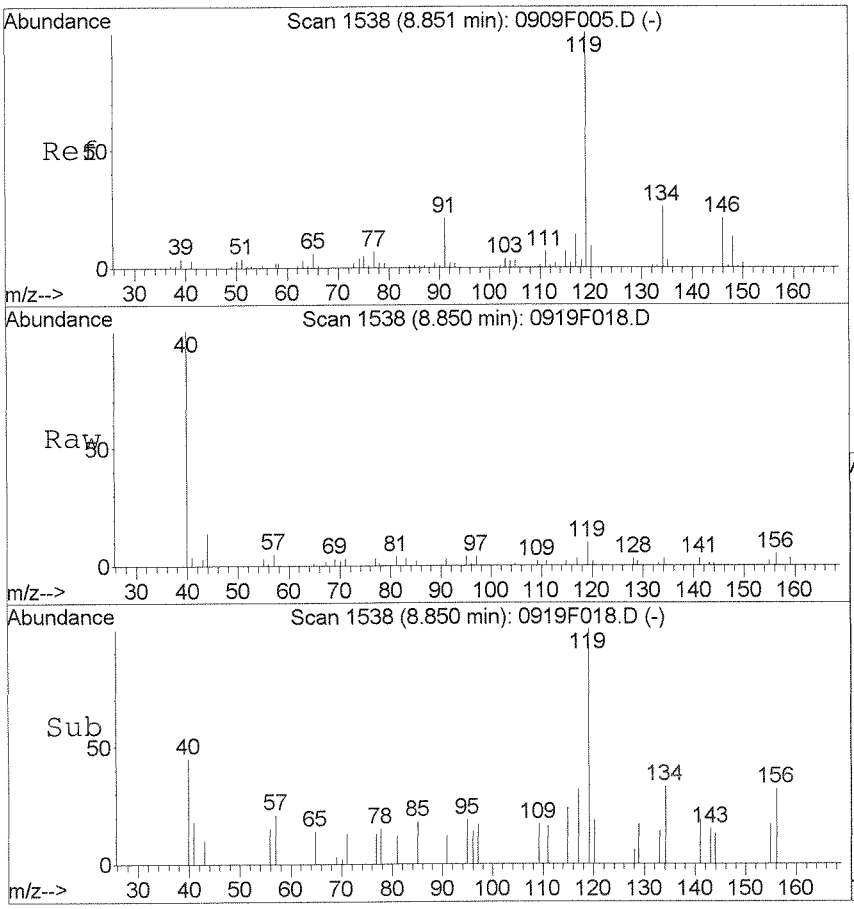


#91
1,2,4-Trimethylbenzene
Concen: 0.22 PPB
RT: 8.55 min Scan# 1480
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion:105 Resp: 1518

Ion	Ratio	Lower	Upper
105	100		
120	56.1	15.9	75.9
77	20.2	0.0	41.2

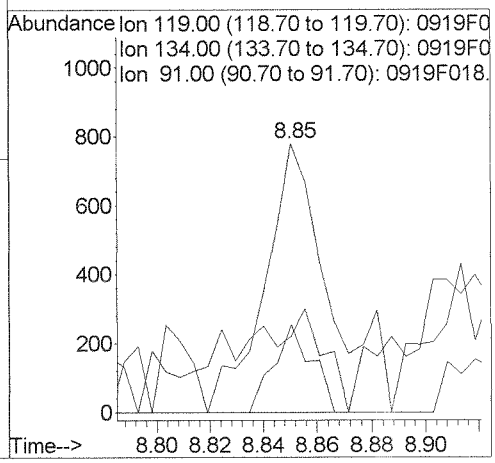


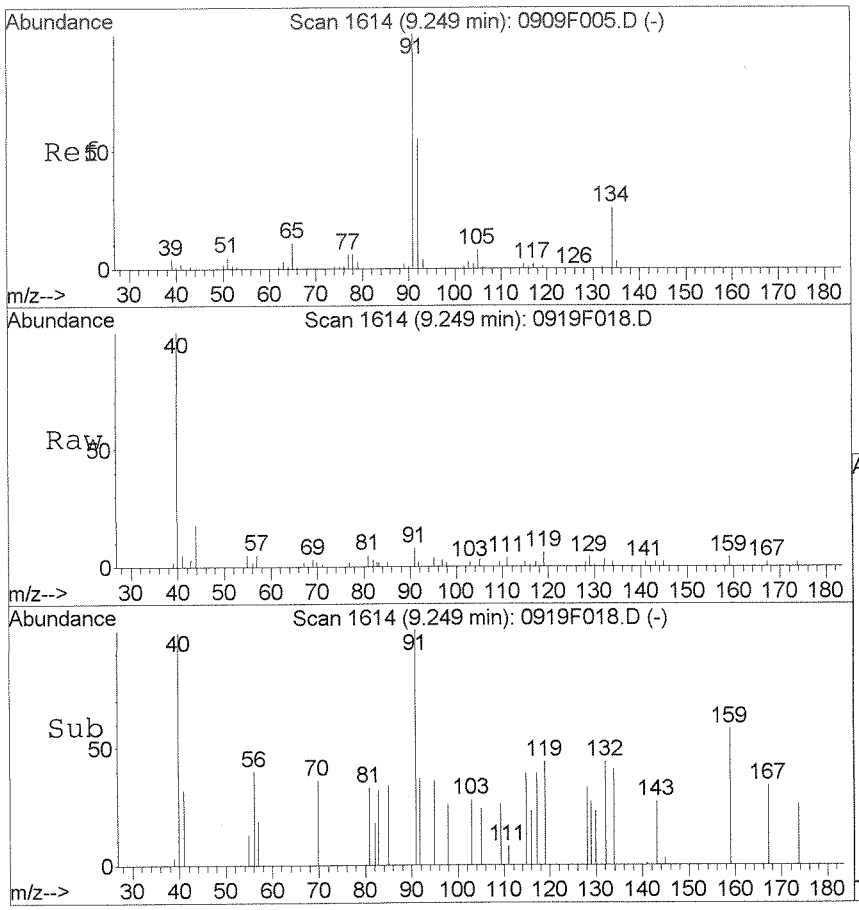


#93
p-Isopropyltoluene
Concen: 0.18 PPB
RT: 8.85 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion:119 Resp: 1305

Ion	Ratio	Lower	Upper
119	100		
134	32.7	0.0	56.2
91	11.4	0.0	50.8

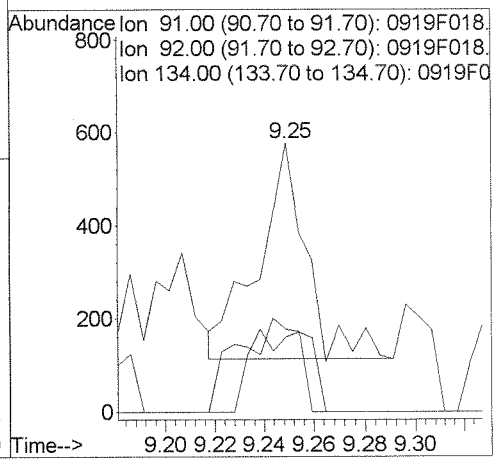


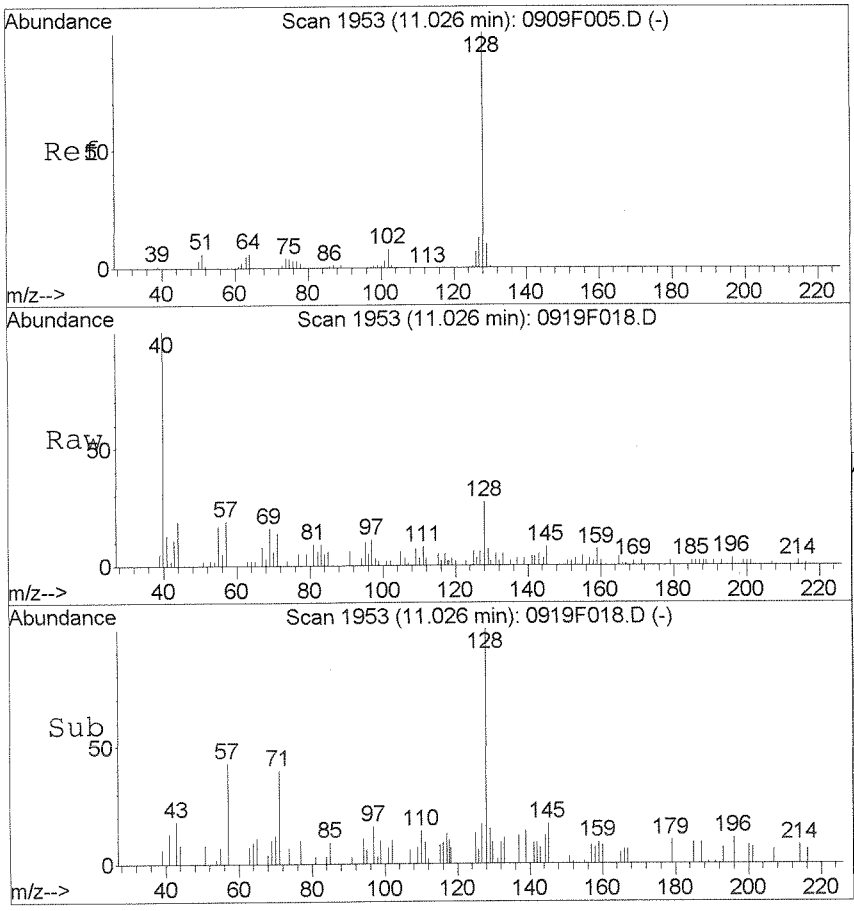


#96
n-Butylbenzene
Concen: 0.10 PPB
RT: 9.25 min Scan# 1614
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion: 91 Resp: 628

Ion	Ratio	Lower	Upper
91	100		
92	34.7	24.7	84.7
134	38.1	0.0	56.1

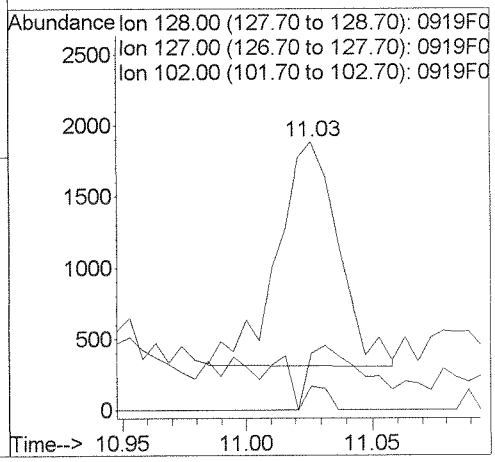


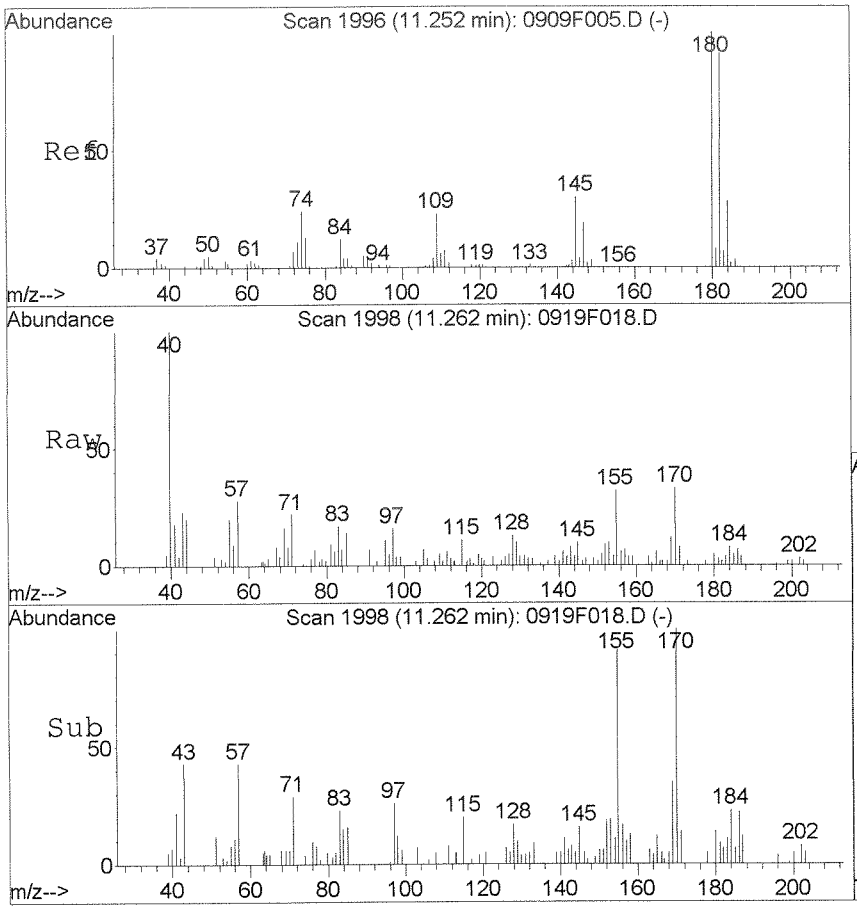


#102
Naphthalene
Concen: 0.41 PPB
RT: 11.03 min Scan# 1953
Delta R.T. -0.00 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion:128 Resp: 2654

Ion	Ratio	Lower	Upper
128	100		
127	16.2	0.0	43.1
102	10.7	0.0	37.8

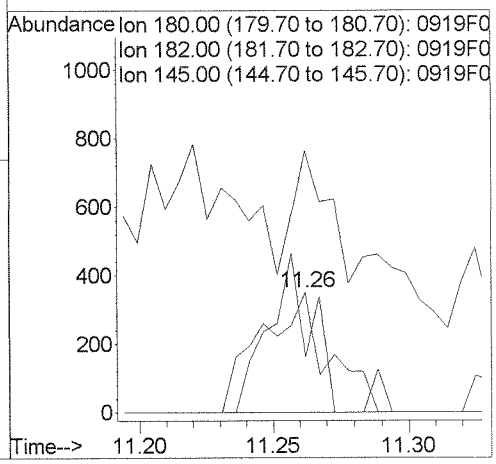




#103
1,2,3-Trichlorobenzene
Concen: 0.23 PPB
RT: 11.26 min Scan# 1998
Delta R.T. 0.01 min
Lab File: 0919F018.D
Acq: 19 Sep 2014 4:21 pm

Tgt Ion:180 Resp: 618

Ion	Ratio	Lower	Upper
180	100		
182	46.4	61.5	121.5#
145	97.2	0.0	59.9#



Exception Report

Data File: J:\MS24\DATA\091914\0919F019.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 16:42
Date Quantitated: 09/22/2014 13:33
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV01L
	Vinyl Chloride	-25.3	NA	20	1

Primary Review: [signature] 9/22/14

Secondary Review: [signature] 9/22/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F019.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 16:42	**Quant Date:**	09/22/2014 13:33	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-005			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376453	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	399285	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	144093	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	115025	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	103944	52.15	104	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	366955	47.57	95	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	116566	45.51	91	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0**d**		0.18	U	
1	Vinyl Chloride				62	0		0.18	U	
1	1,1-Dichloroethene				96	0		0.25	U	
1	Acetone	1.96	0.01	0.00	43	46081	95.35	94		
1	Carbon Disulfide	2.00		0.00	76	65470	12.97	13		
1	Methylene Chloride	2.24	0.01	0.00	84	4841	2.30	2.3	J	
1	trans-1,2-Dichloroethene				96	0		0.12	U	
1	cis-1,2-Dichloroethene				96	0		0.12	U	
1	2-Butanone (MEK)	3.17		0.00	72	5016	20.87	21		
1	Carbon Tetrachloride				117	0		0.094	U	
1	Benzene	3.75	0.01	0.00	78	848	0.1200	0.12	J	
1	Trichloroethene (TCE)				95	0		0.15	U	
1	4-Methyl-2-pentanone (MIBK)				58	0**d**		1.8	U	
1	Toluene	5.32		0.00	92	38907	8.51	8.4		
2	Tetrachloroethene (PCE)				164	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F019.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 16:42	**Quant Date:**	09/22/2014 13:33	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-005			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		0.93	U	
2	Dibromochloromethane				129	0		0.18	U	
2	Ethylbenzene	6.70		0.00	106	3330	1.40	1.4	J	
2	m,p-Xylenes				106	0		0.10	U	
2	o-Xylene				106	0		0.081	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.14	U	
3	1,2,4-Trichlorobenzene				180	0		0.13	U	

Prep Amount: 5.05 g **Dilution:** 1.0
Prep Final Vol: 5.0 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F019.D Vial: 18
Acq On : 19 Sep 2014 4:42 pm Operator: KR
Sample : K09921-005 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:32:29 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

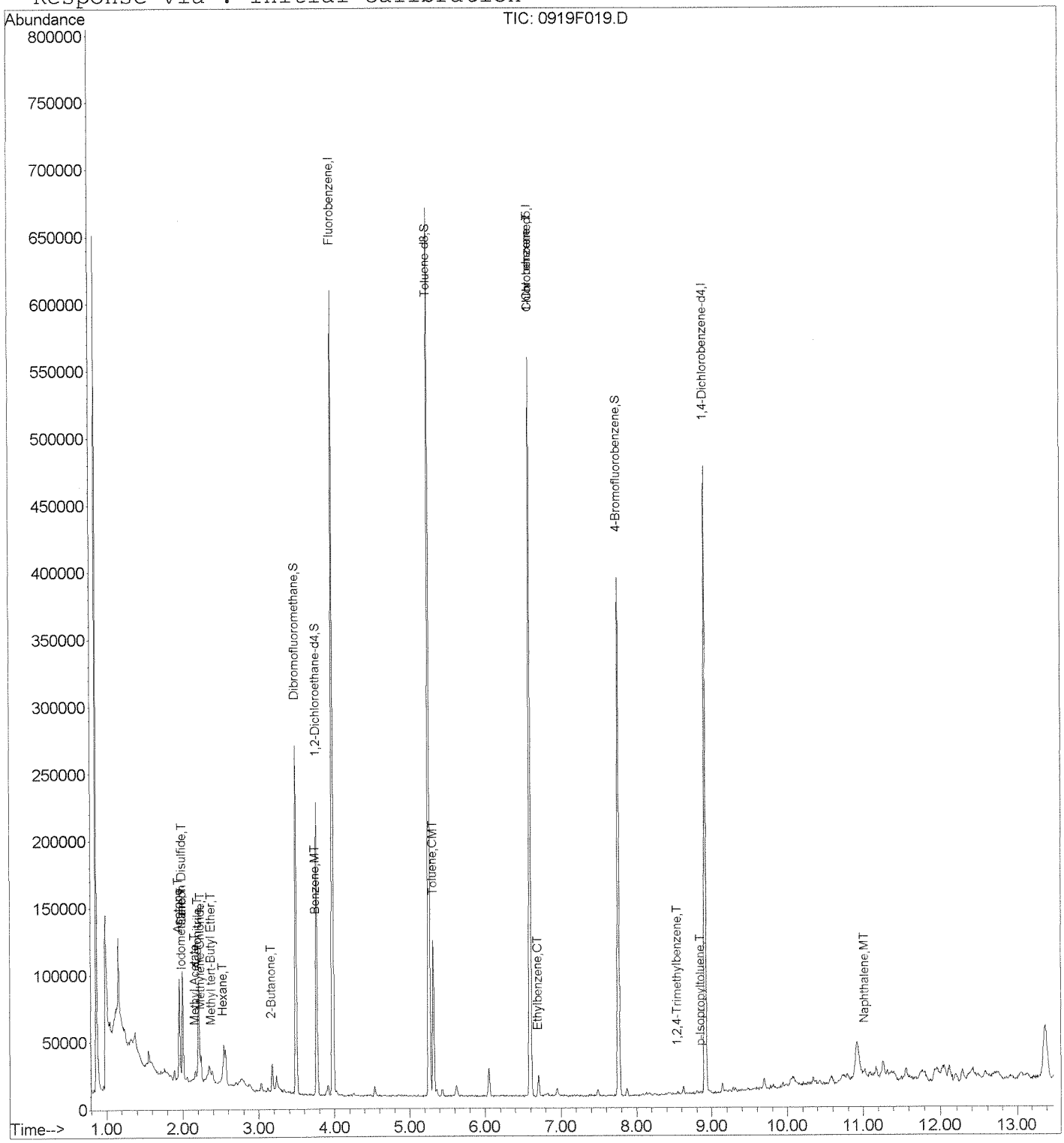
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	399285	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	144093	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	115025	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	103944	52.15	PPB		0.00
Spiked Amount 50.000			Recovery =	104.30%			
44) 1,2-Dichloroethane-d4	3.76	65	95505	47.84	PPB		0.00
Spiked Amount 50.000			Recovery =	95.68%			
59) Toluene-d8	5.26	98	366955	47.57	PPB		0.00
Spiked Amount 50.000			Recovery =	95.14%			
80) 4-Bromofluorobenzene	7.76	95	116566	45.51	PPB		0.00
Spiked Amount 50.000			Recovery =	91.02%			
Target Compounds							Qvalue
13) Acetone	1.96	43	46081	95.35	PPB		100
14) Iodomethane	1.99	142	606	0.39	PPB		81
15) Carbon Disulfide	2.00	76	65470	12.97	PPB		100
17) Methyl Acetate	2.17	43	4194	3.41	PPB	#	77
18) Acetonitrile	2.20	40	6127	65.08	PPB	#	20
19) Methylene Chloride	2.24	84	4841	2.30	PPB		96
22) Methyl tert-Butyl Ether	2.39	73	5026	0.94	PPB		97
24) Hexane	2.53	57	1918	0.83	PPB		83
32) 2-Butanone	3.17	72	5016	20.87	PPB		99
45) Benzene	3.75	78	848	0.12	PPB	#	1
60) Toluene	5.32	92	38907	8.51	PPB		95
70) 1-Chlorohexane	6.59	91	514	0.23	PPB	#	36
72) Ethylbenzene	6.70	106	3330	1.40	PPB	#	81
91) 1,2,4-Trimethylbenzene	8.55	105	1051	0.19	PPB		81
93) p-Isopropyltoluene	8.85	119	672	0.12	PPB	#	43
102) Naphthalene	11.02	128	1498	0.29	PPB		61

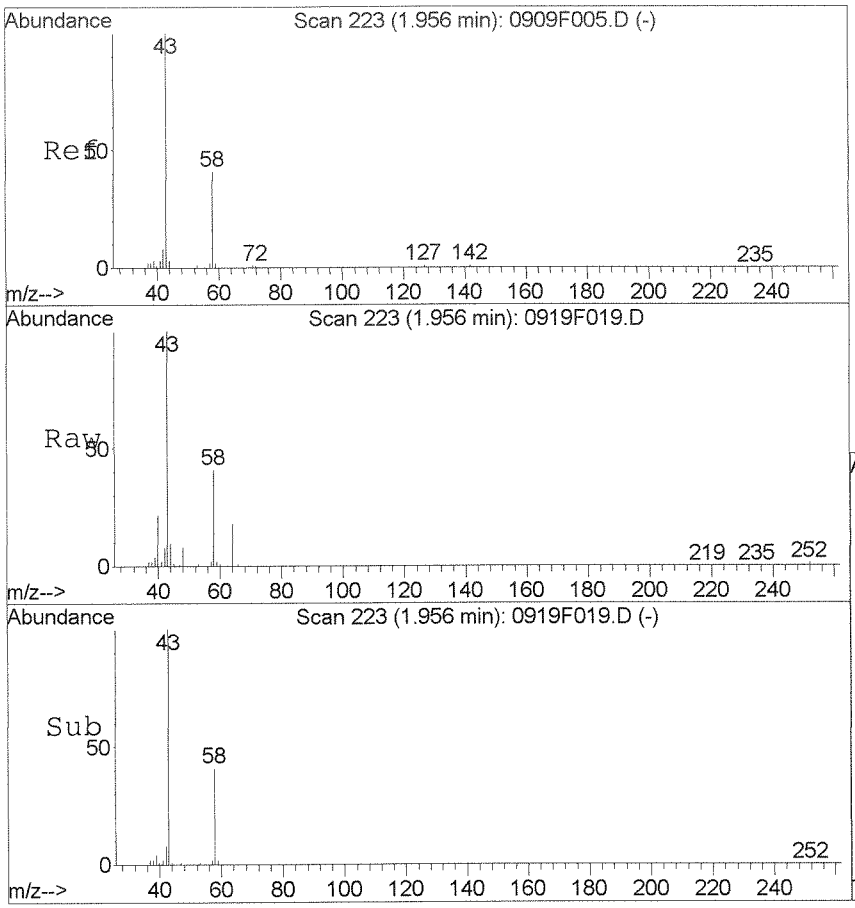
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F019.D Vial: 18
Acq On : 19 Sep 2014 4:42 pm Operator: KR
Sample : K09921-005 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:33 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

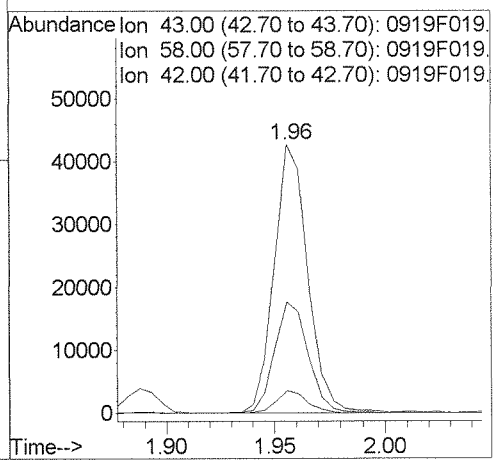


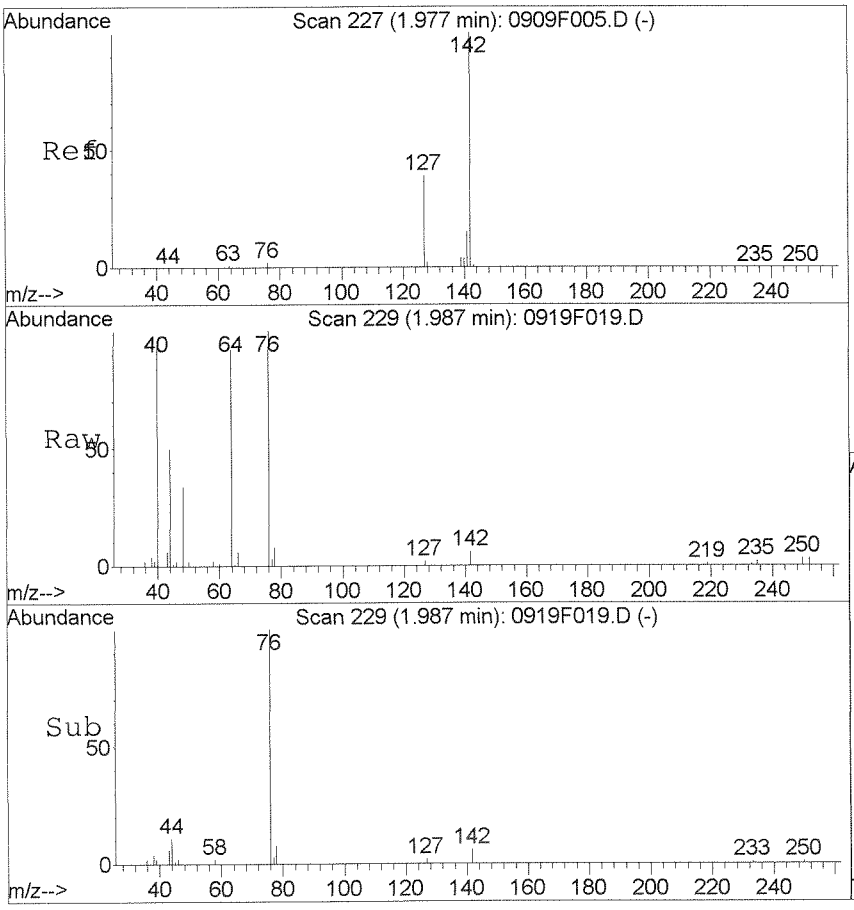


#13
Acetone
Concen: 95.35 PPB
RT: 1.96 min Scan# 223
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 43 Resp: 46081

Ion	Ratio	Lower	Upper
43	100		
58	41.3	11.3	71.3
42	8.4	0.0	37.7

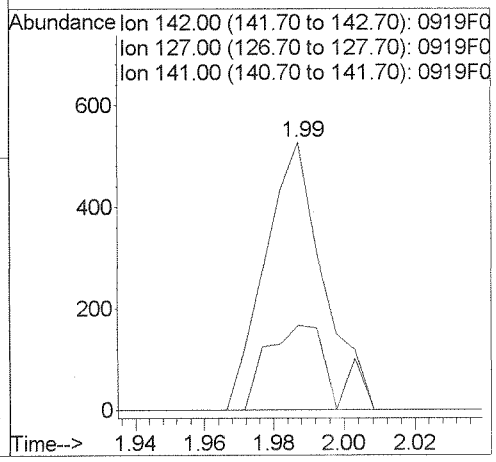


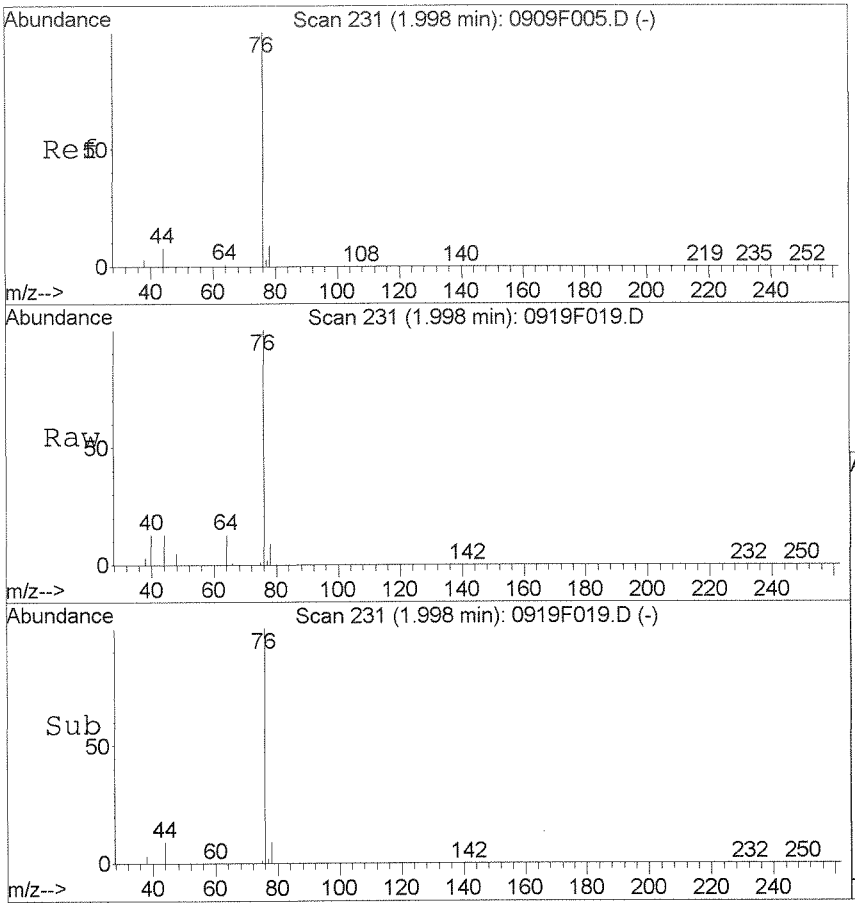


#14
Iodomethane
Concen: 0.39 PPB
RT: 1.99 min Scan# 229
Delta R.T. 0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion:142 Resp: 606

Ion	Ratio	Lower	Upper
142	100		
127	31.7	9.4	69.4
141	0.0	0.0	44.9

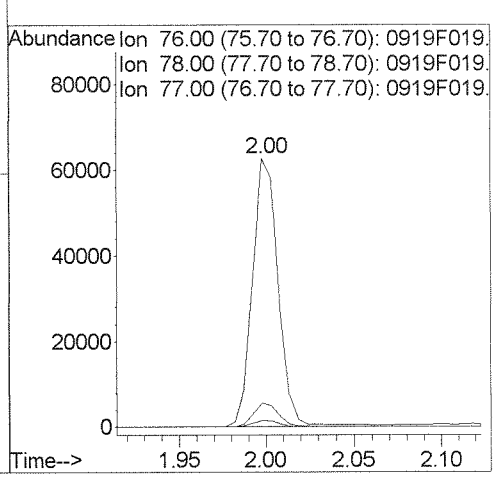


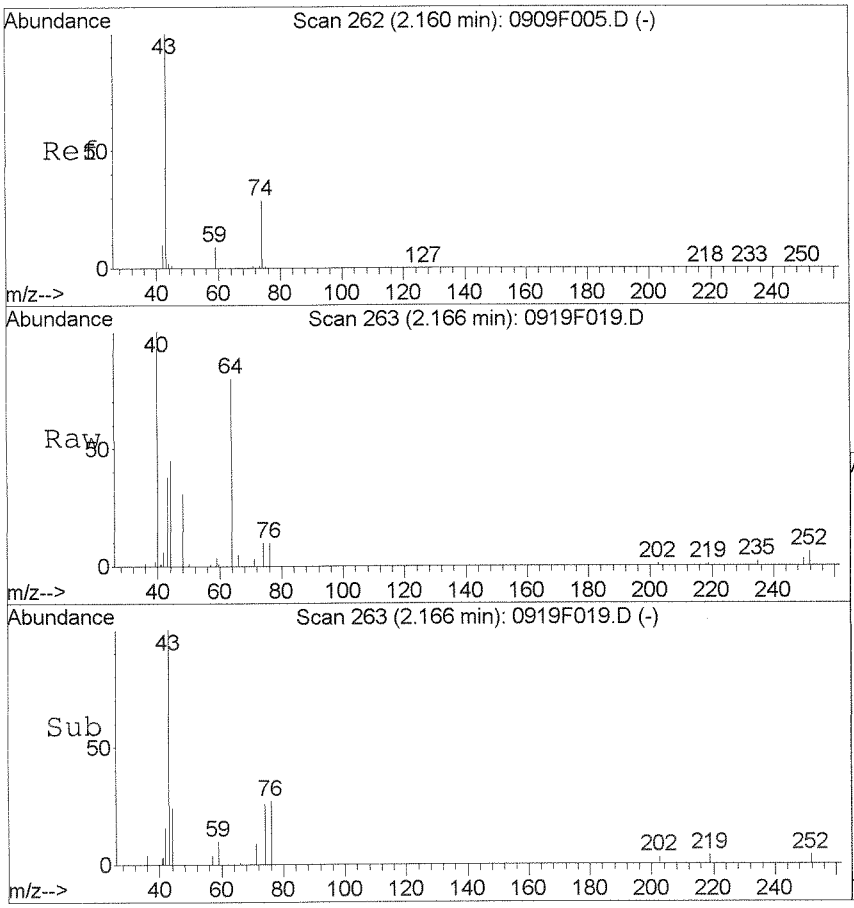


#15
Carbon Disulfide
Concen: 12.97 PPB
RT: 2.00 min Scan# 231
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 76 Resp: 65470

Ion	Ratio	Lower	Upper
76	100		
78	8.9	0.0	39.0
77	2.5	0.0	32.6

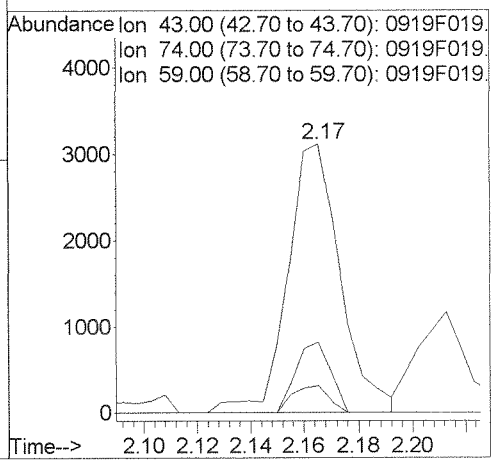


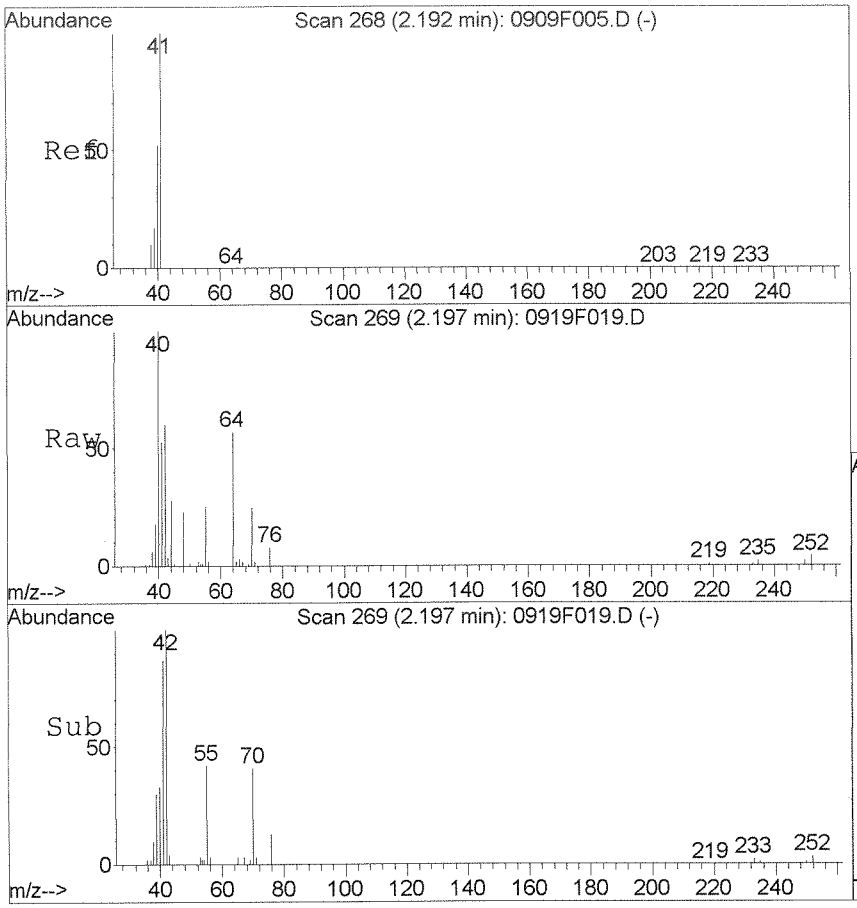


#17
Methyl Acetate
Concen: 3.41 PPB
RT: 2.17 min Scan# 263
Delta R.T. 0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 43 Resp: 4194

Ion	Ratio	Lower	Upper
43	100		
74	17.3	20.4	37.8#
59	0.0	6.2	11.4#

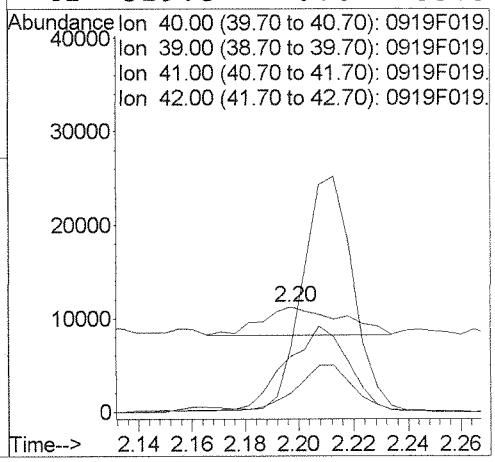


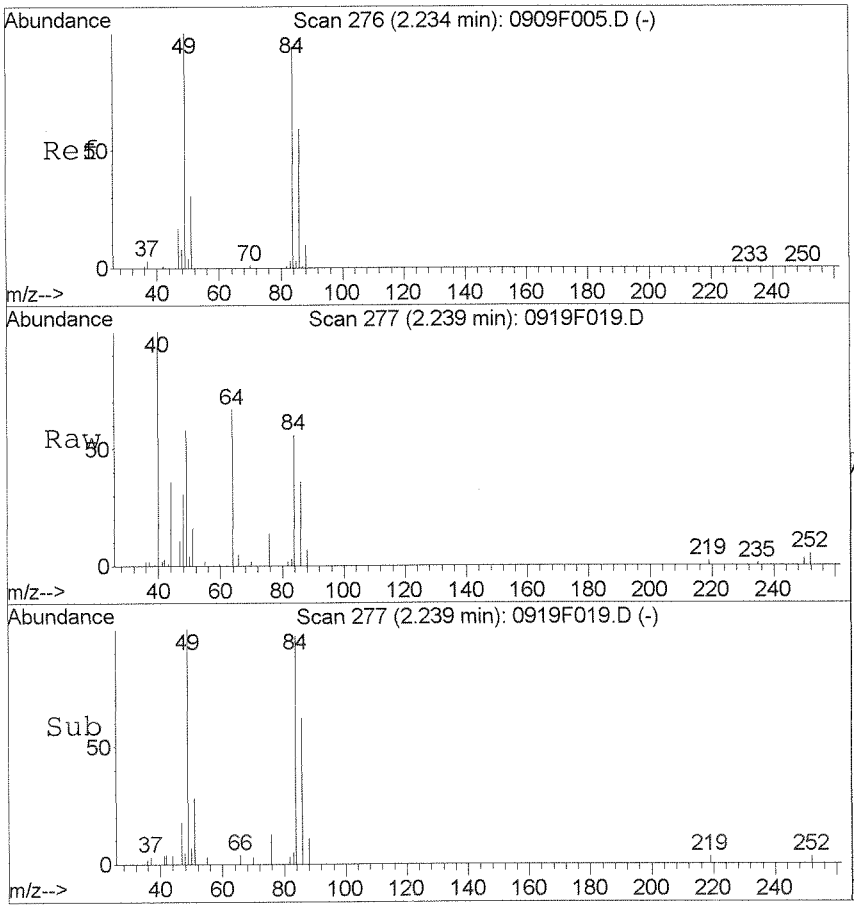


#18
Acetonitrile
Concen: 65.08 PPB
RT: 2.20 min Scan# 269
Delta R.T. 0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 40 Resp: 6127

Ion	Ratio	Lower	Upper
40	100		
39	115.2	6.9	66.9#
41	245.6	170.6	230.6#
42	529.3	0.0	35.5#

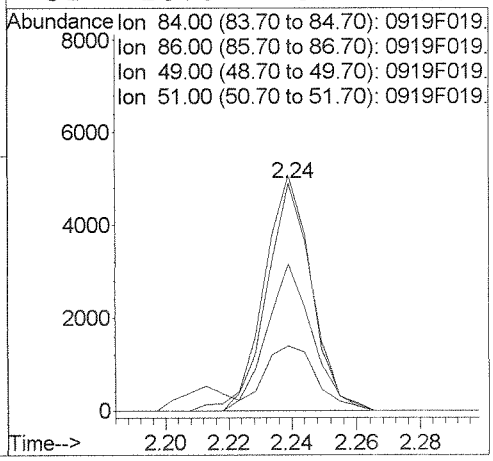


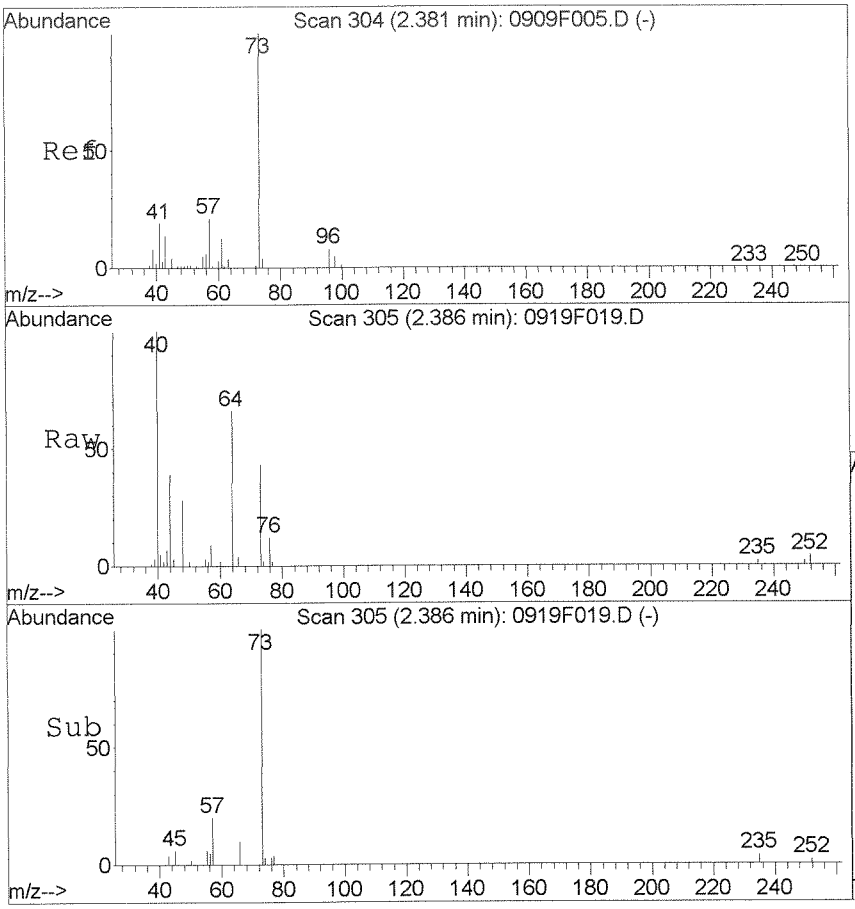


#19
Methylene Chloride
Concen: 2.30 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 84 Resp: 4841

Ion	Ratio	Lower	Upper
84	100		
86	64.6	32.9	92.9
49	103.6	76.9	136.9
51	28.6	3.1	63.1

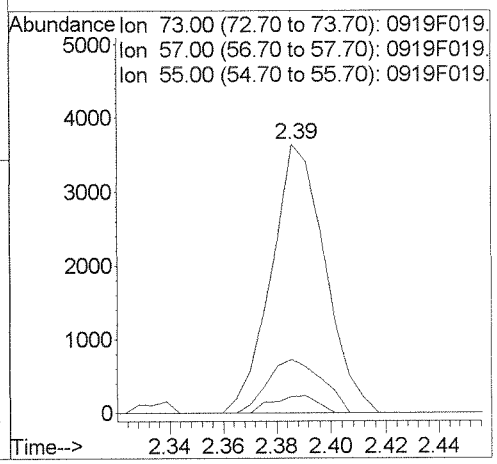


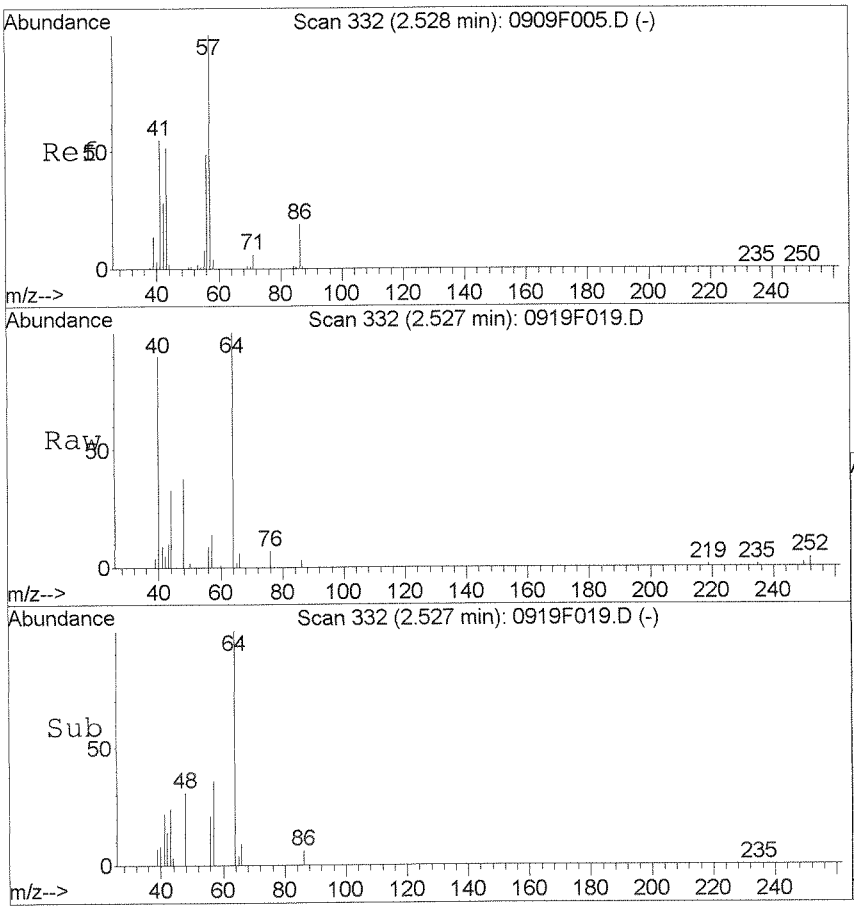


#22
Methyl tert-Butyl Ether
Concen: 0.94 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 73 Resp: 5026

Ion	Ratio	Lower	Upper
73	100		
57	20.1	0.0	51.5
55	6.3	0.0	35.6

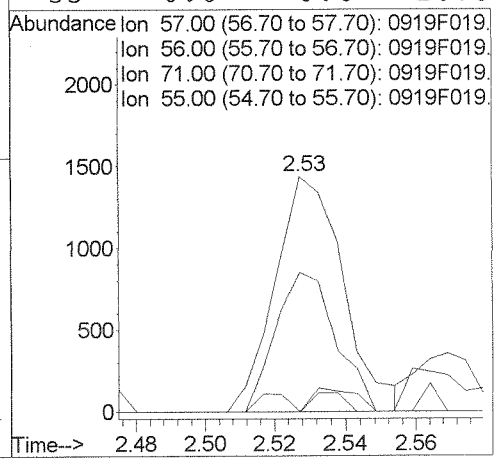


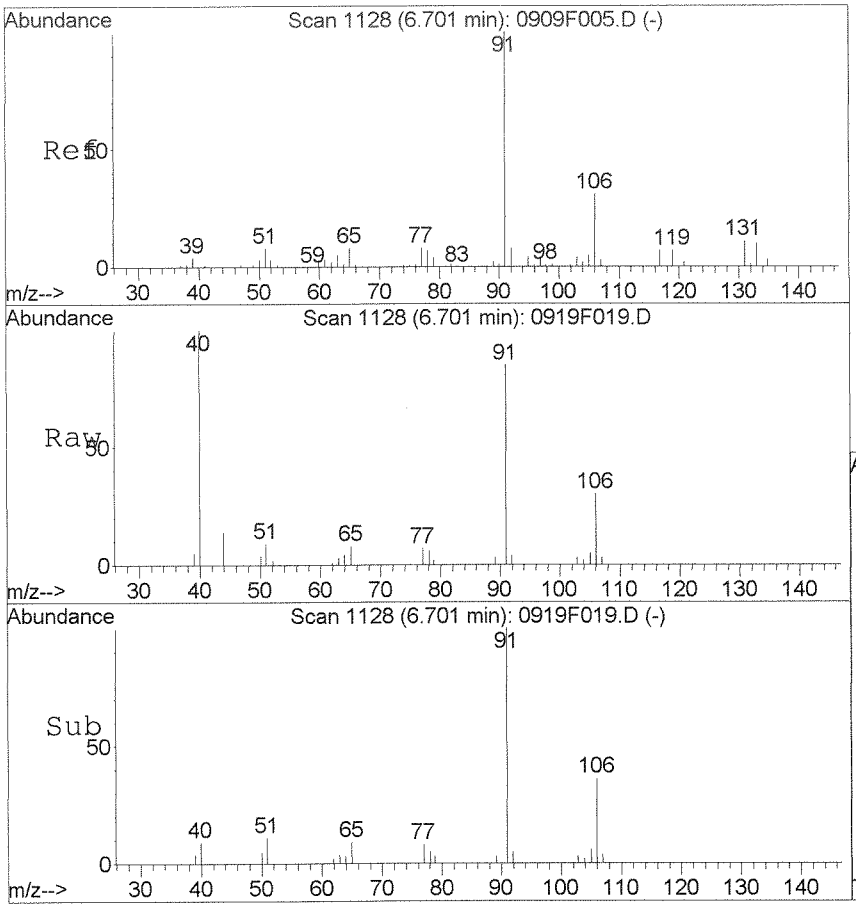


#24
Hexane
Concen: 0.83 PPB
RT: 2.53 min Scan# 332
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion: 57 Resp: 1918

Ion	Ratio	Lower	Upper
57	100		
56	59.3	18.8	78.8
71	0.0	0.0	35.9
55	0.0	0.0	20.6

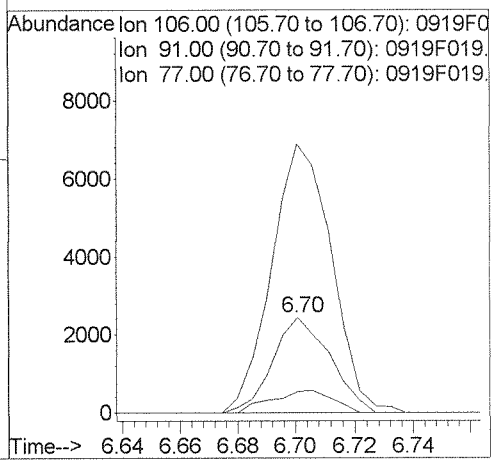


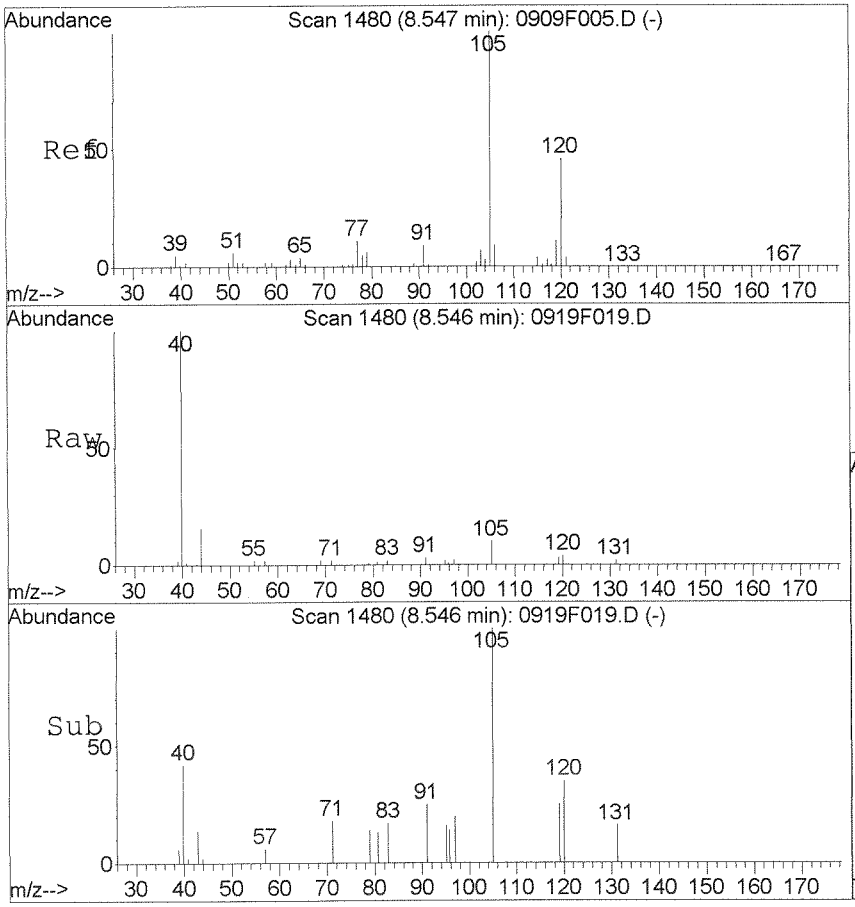


#72
Ethylbenzene
Concen: 1.40 PPB
RT: 6.70 min Scan# 1128
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion:106 Resp: 3330

Ion	Ratio	Lower	Upper
106	100		
91	281.2	291.9	351.9#
77	22.3	0.0	57.1

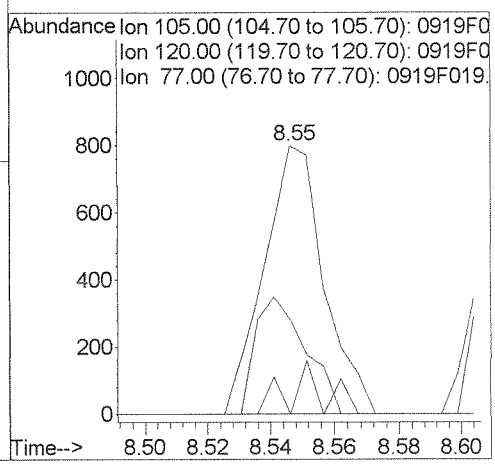


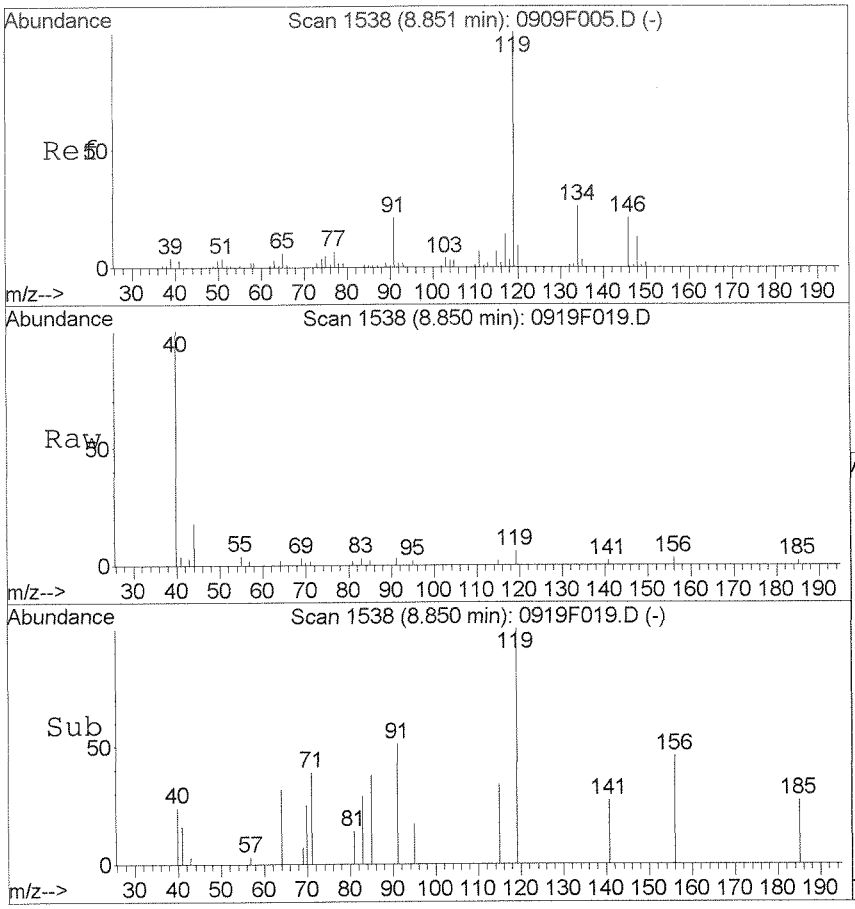


#91
1,2,4-Trimethylbenzene
Concen: 0.19 PPB
RT: 8.55 min Scan# 1480
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion:105 Resp: 1051

Ion	Ratio	Lower	Upper
105	100		
120	35.1	15.9	75.9
77	0.0	0.0	41.2

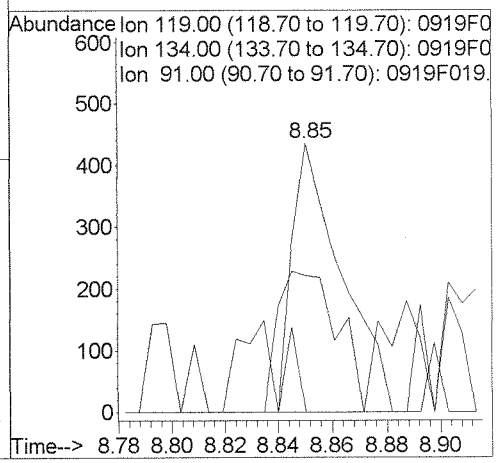


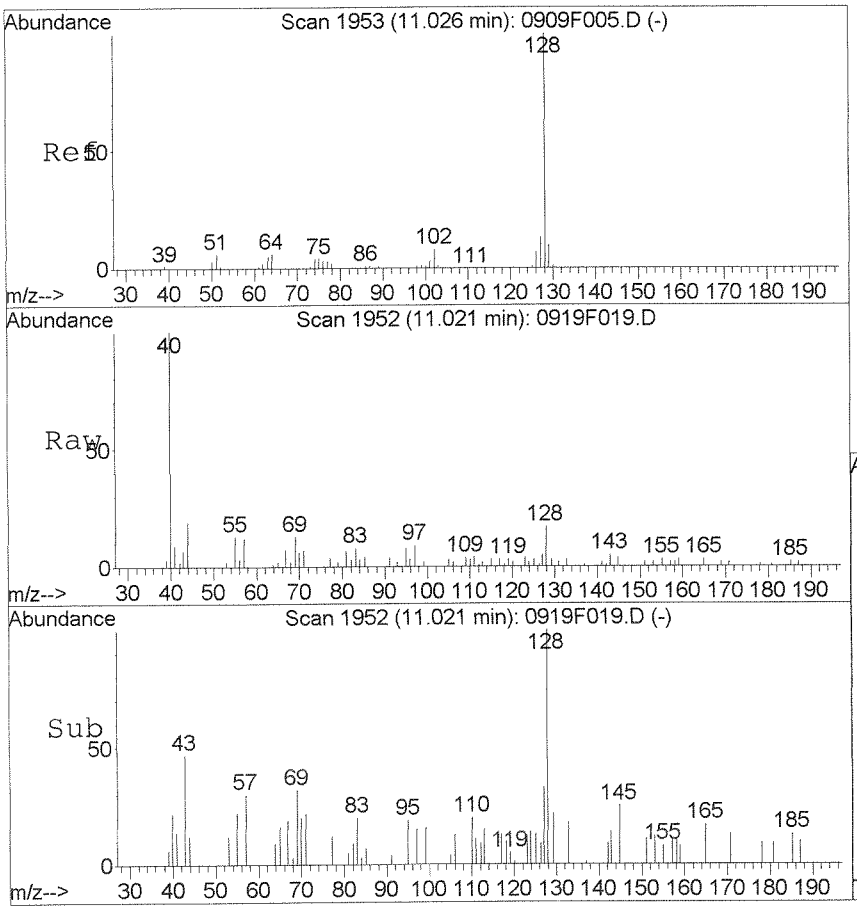


#93
p-Isopropyltoluene
Concen: 0.12 PPB
RT: 8.85 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion:119 Resp: 672

Ion	Ratio	Lower	Upper
119	100		
134	0.0	0.0	56.2
91	50.8	0.0	50.8#

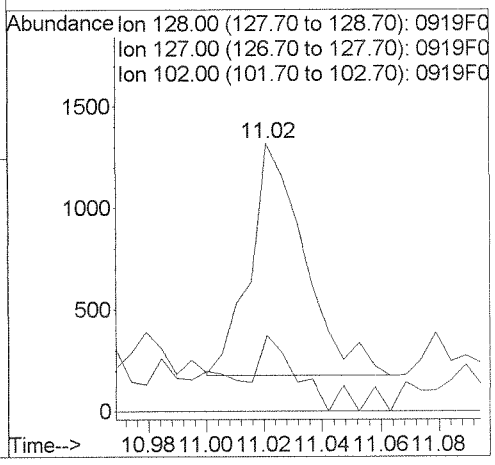




#102
Naphthalene
Concen: 0.29 PPB
RT: 11.02 min Scan# 1952
Delta R.T. -0.01 min
Lab File: 0919F019.D
Acq: 19 Sep 2014 4:42 pm

Tgt Ion:128 Resp: 1498

Ion	Ratio	Lower	Upper
128	100		
127	32.7	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F020.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 17:02
Date Quantitated: 09/22/2014 13:42
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV ok
	Vinyl Chloride	-25.3	NA	20	↓

Primary Review: kr 9/24/14

Secondary Review: [illegible] 9/24/14

Printed: 09/22/2014 14:30:19
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F020.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:02	**Quant Date:**	09/22/2014 13:42	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-006			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376454	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	349464	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	129983	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	109641	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	88690	50.84	102	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	321709	47.65	95	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	107698	46.61	93	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.21	U	
1	Vinyl Chloride				62	0		0.21	U	
1	1,1-Dichloroethene				96	0		0.28	U	
1	Acetone	1.95		0.00	43	36219	85.48	95		
1	Carbon Disulfide	1.99	-0.01	0.00	76	3087	0.7000	0.78	J	
1	Methylene Chloride	2.23		0.00	84	4818	2.61	2.9	J	
1	trans-1,2-Dichloroethene				96	0		0.14	U	
1	cis-1,2-Dichloroethene				96	0		0.14	U	
1	2-Butanone (MEK)	3.17		0.00	72	1465	6.96	7.8	J	
1	Carbon Tetrachloride				117	0		0.11	U	
1	Benzene	3.74		0.00	78	1678	0.2700	0.30	J	
1	Trichloroethene (TCE)				95	0		0.17	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.1	U	
1	Toluene	5.32		0.00	92	1606	0.4000	0.45	J	
2	Tetrachloroethene (PCE)				164	0		0.18	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F020.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:02	**Quant Date:**	09/22/2014 13:42	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-006			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		1.1	U	
2	Dibromochloromethane				129	0		0.21	U	
2	Ethylbenzene				106	0		0.11	U	
2	m,p-Xylenes				106	0		0.12	U	
2	o-Xylene				106	0		0.091	U	
2	Styrene				103	0		0.16	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.15	U	

Prep Amount: 4.49 g **Dilution:** 1.0
Prep Final Vol: 5.0 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
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D: Result from dilution
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NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F020.D Vial: 19
Acq On : 19 Sep 2014 5:02 pm Operator: KR
Sample : K09921-006 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:34:14 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

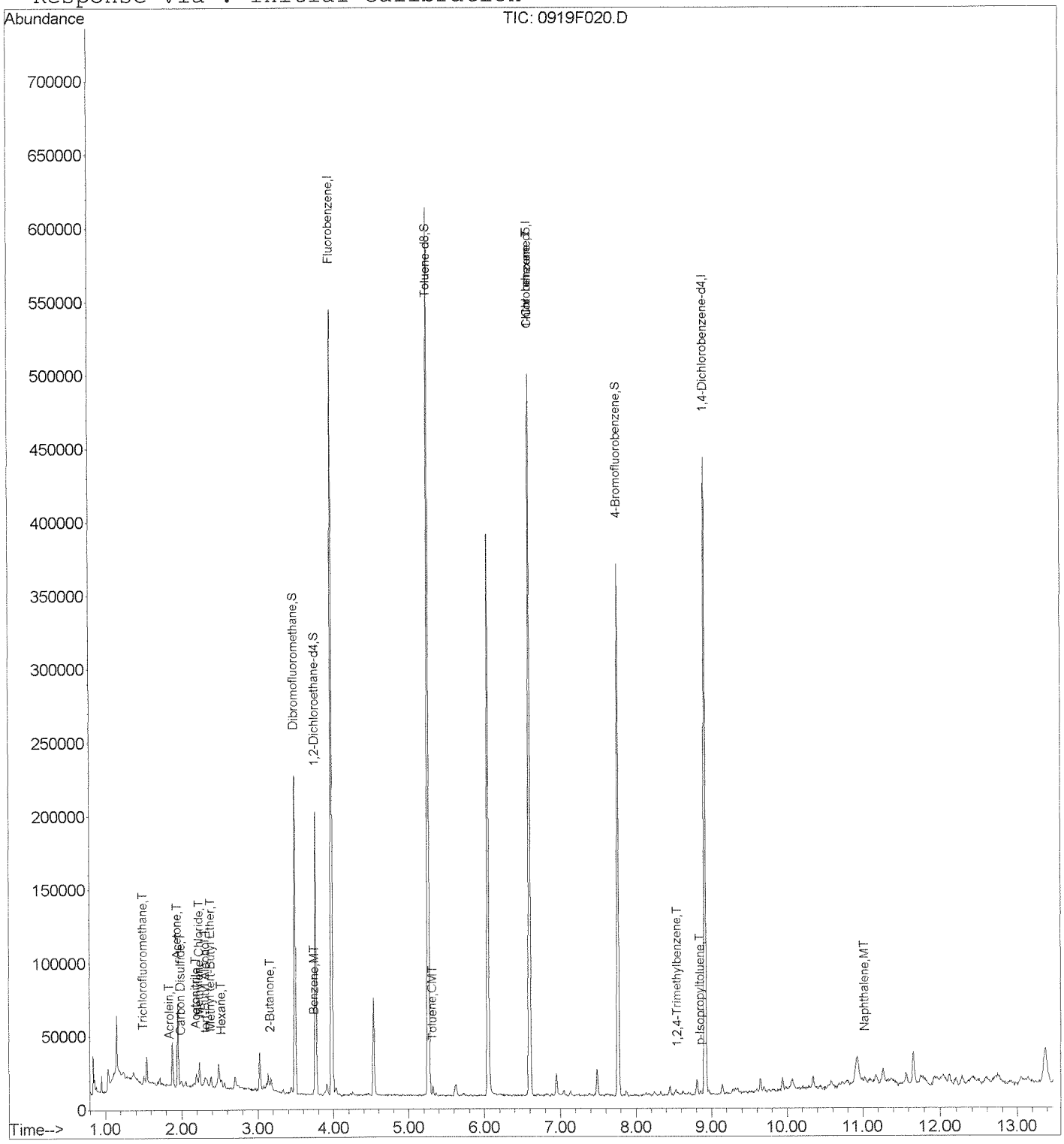
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	349464	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	129983	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	109641	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	88690	50.84	PPB		0.00
Spiked Amount 50.000			Recovery =	101.68%			
44) 1,2-Dichloroethane-d4	3.76	65	84434	48.32	PPB		0.00
Spiked Amount 50.000			Recovery =	96.64%			
59) Toluene-d8	5.26	98	321709	47.65	PPB		0.00
Spiked Amount 50.000			Recovery =	95.30%			
80) 4-Bromofluorobenzene	7.76	95	107698	46.61	PPB		0.00
Spiked Amount 50.000			Recovery =	93.22%			
Target Compounds							Qvalue
8) Trichlorofluoromethane	1.50	101	2173	1.01	PPB		91
10) Acrolein	1.84	56	646	2.39	PPB		92
13) Acetone	1.95	43	36219	85.48	PPB		96
15) Carbon Disulfide	1.99	76	3087	0.70	PPB		89
18) Acetonitrile	2.19	40	4197	50.93	PPB	#	52
19) Methylene Chloride	2.23	84	4818	2.61	PPB		85
20) tert-Butyl Alcohol	2.32	59	880	4.81	PPB		75
22) Methyl tert-Butyl Ether	2.38	73	4276	0.92	PPB		96
24) Hexane	2.53	57	1570	0.78	PPB		92
32) 2-Butanone	3.17	72	1465	6.96	PPB		87
45) Benzene	3.74	78	1678	0.27	PPB	#	34
60) Toluene	5.32	92	1606	0.40	PPB		94
70) 1-Chlorohexane	6.60	91	513	0.26	PPB		56
91) 1,2,4-Trimethylbenzene	8.55	105	838	0.16	PPB		93
93) p-Isopropyltoluene	8.85	119	1063	0.20	PPB		89
102) Naphthalene	11.02	128	1740	0.36	PPB		89

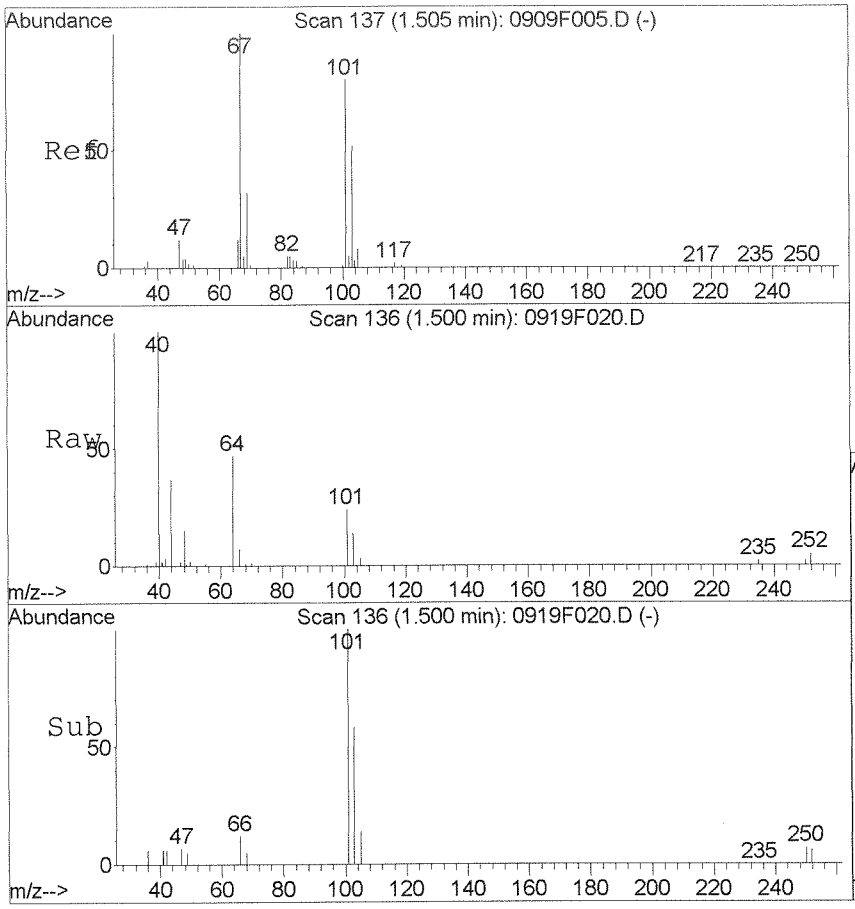
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F020.D Vial: 19
Acq On : 19 Sep 2014 5:02 pm Operator: KR
Sample : K09921-006 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 13:42 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

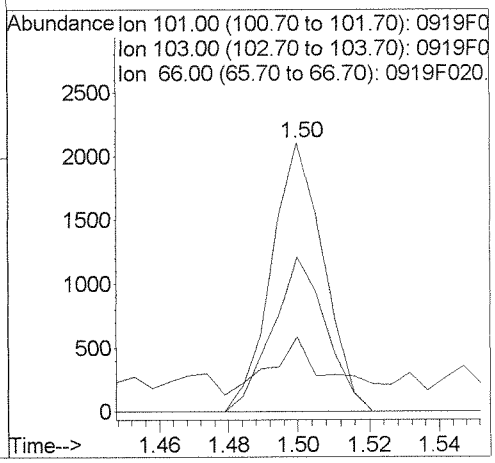


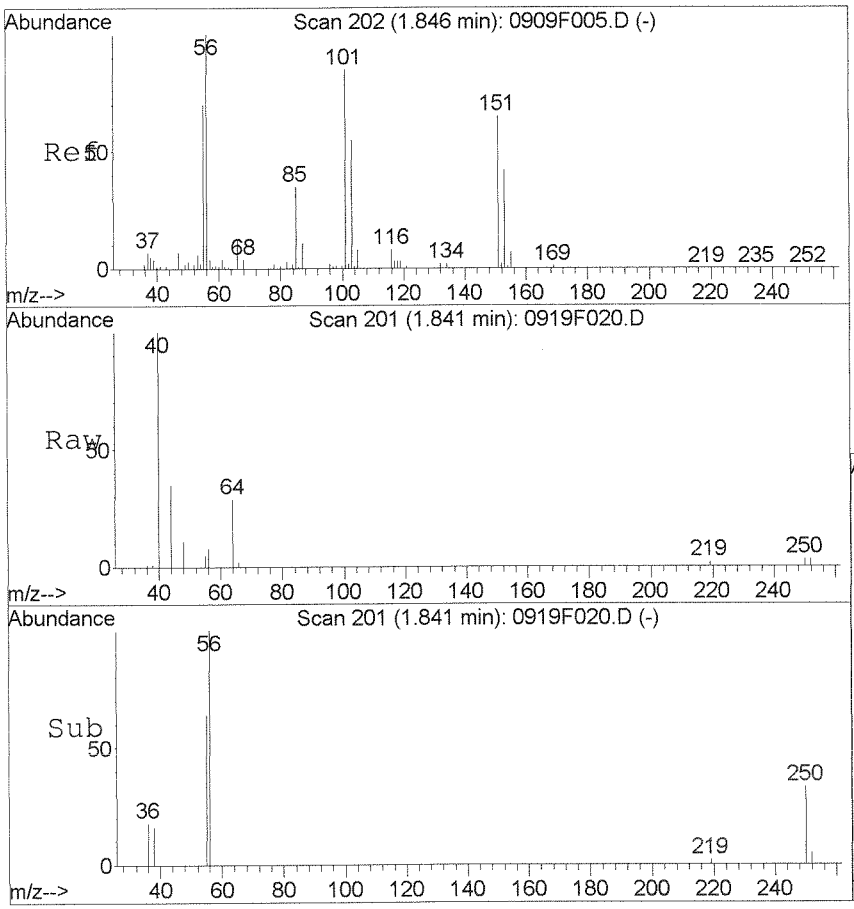


#8
Trichlorofluoromethane
Concen: 1.01 PPB
RT: 1.50 min Scan# 136
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion:101 Resp: 2173

Ion	Ratio	Lower	Upper
101	100		
103	57.6	34.7	94.7
66	17.9	0.0	45.0

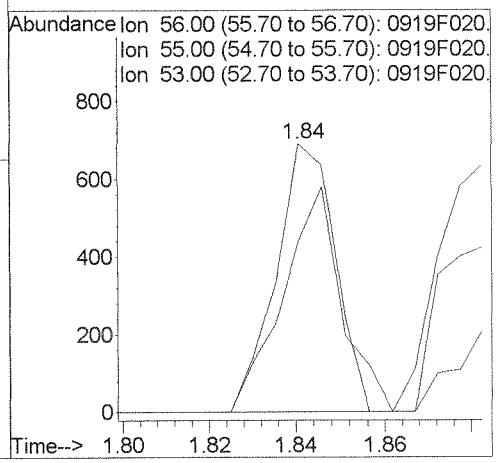


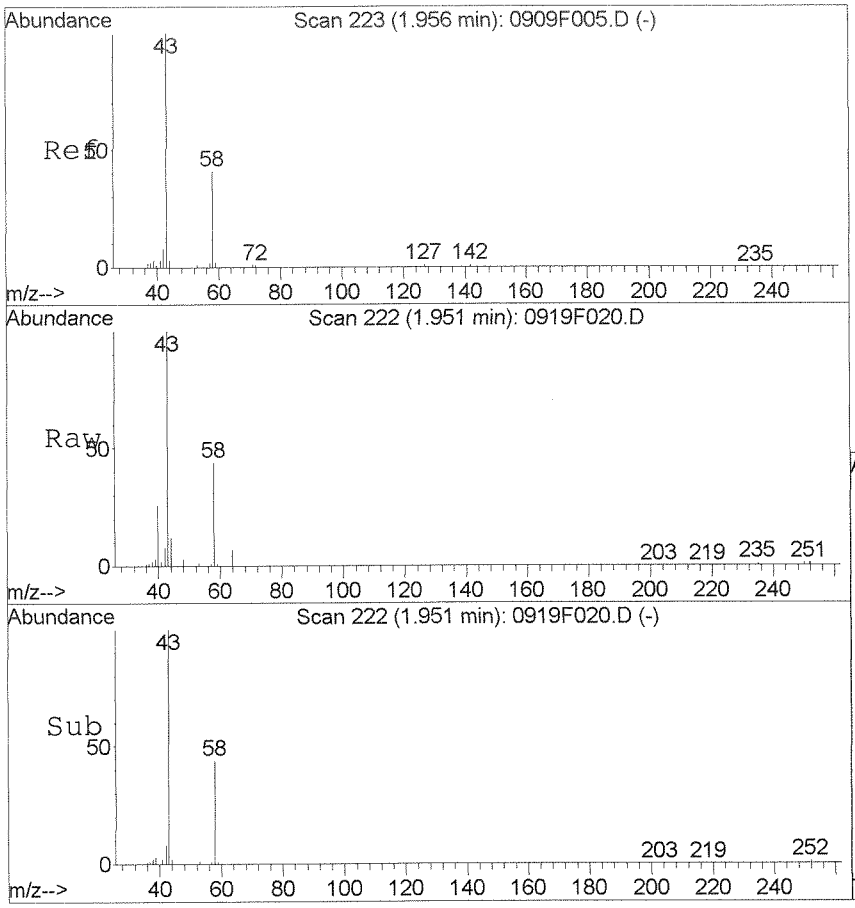


#10
Acrolein
Concen: 2.39 PPB
RT: 1.84 min Scan# 201
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 56 Resp: 646

Ion	Ratio	Lower	Upper
56	100		
55	63.8	39.9	99.9
53	0.0	0.0	36.3

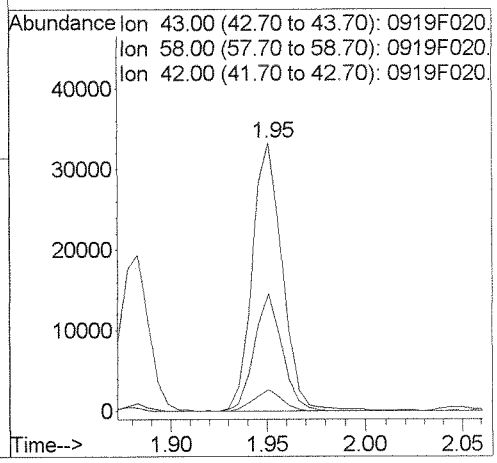


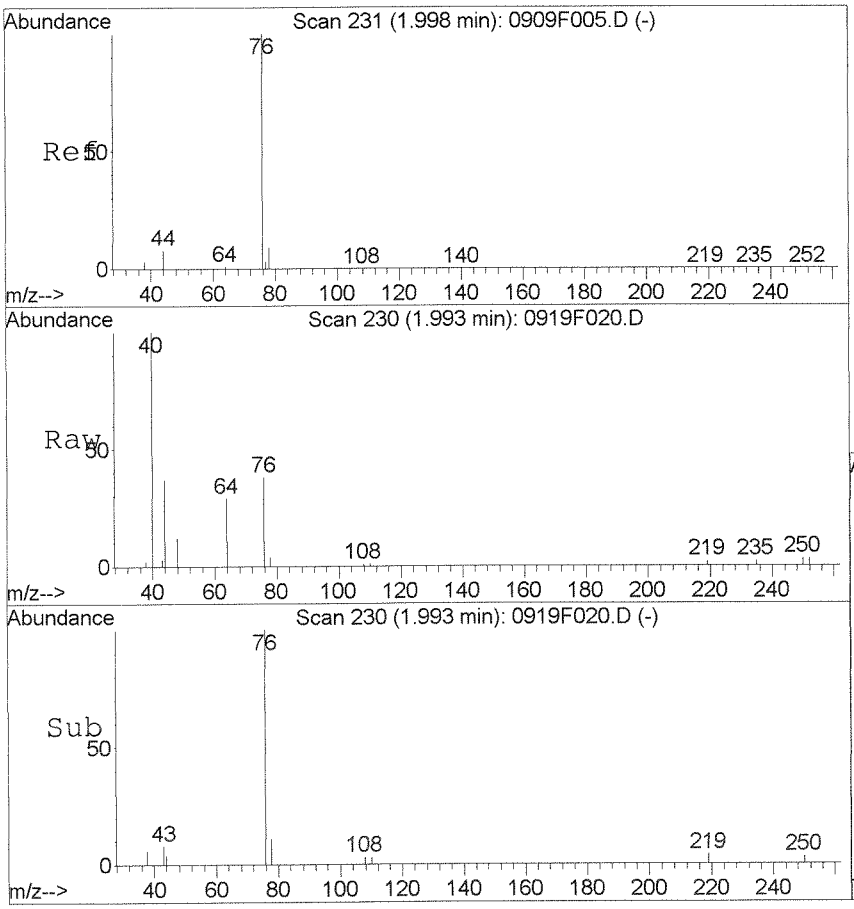


#13
Acetone
Concen: 85.48 PPB
RT: 1.95 min Scan# 222
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 43 Resp: 36219

Ion	Ratio	Lower	Upper
43	100		
58	43.8	11.3	71.3
42	8.1	0.0	37.7

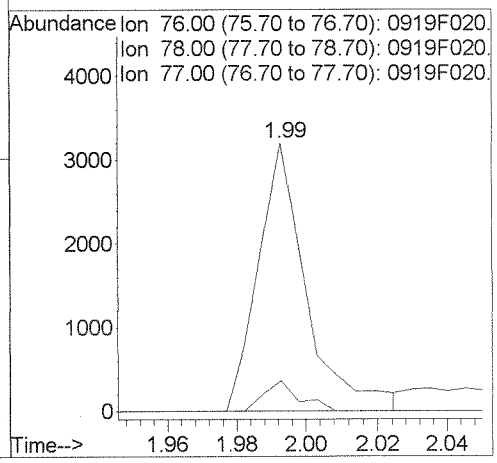


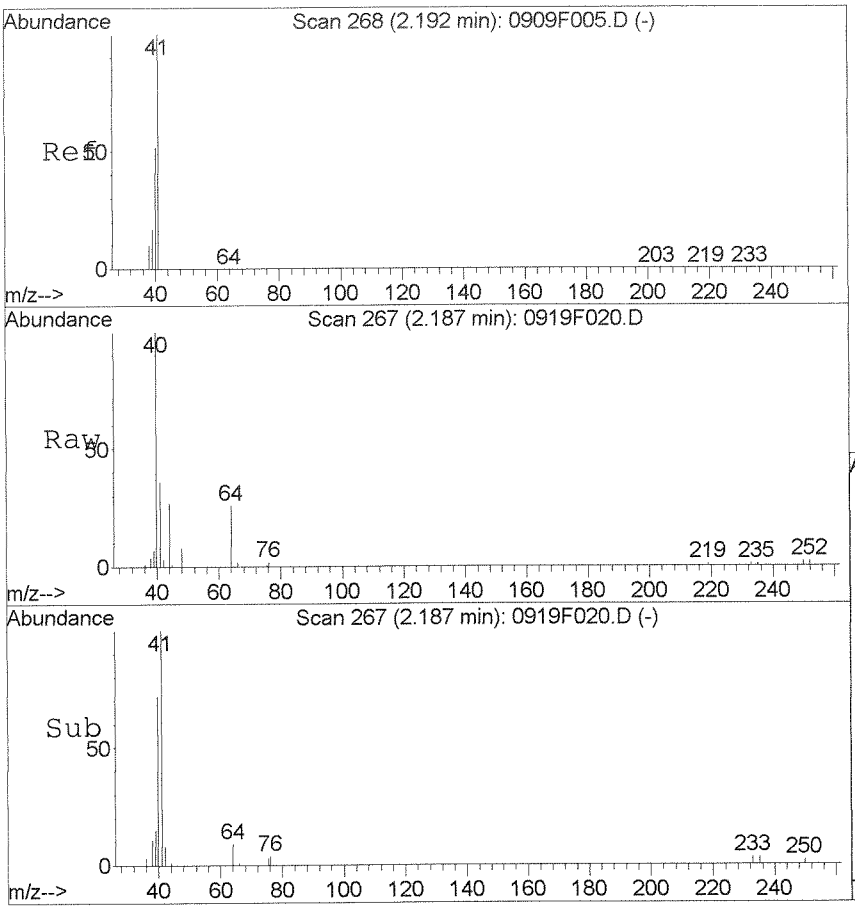


#15
Carbon Disulfide
Concen: 0.70 PPB
RT: 1.99 min Scan# 230
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 76 Resp: 3087

Ion	Ratio	Lower	Upper
76	100		
78	11.4	0.0	39.0
77	11.4	0.0	32.6

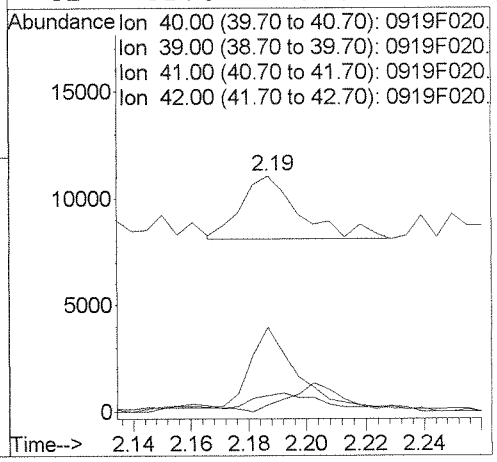


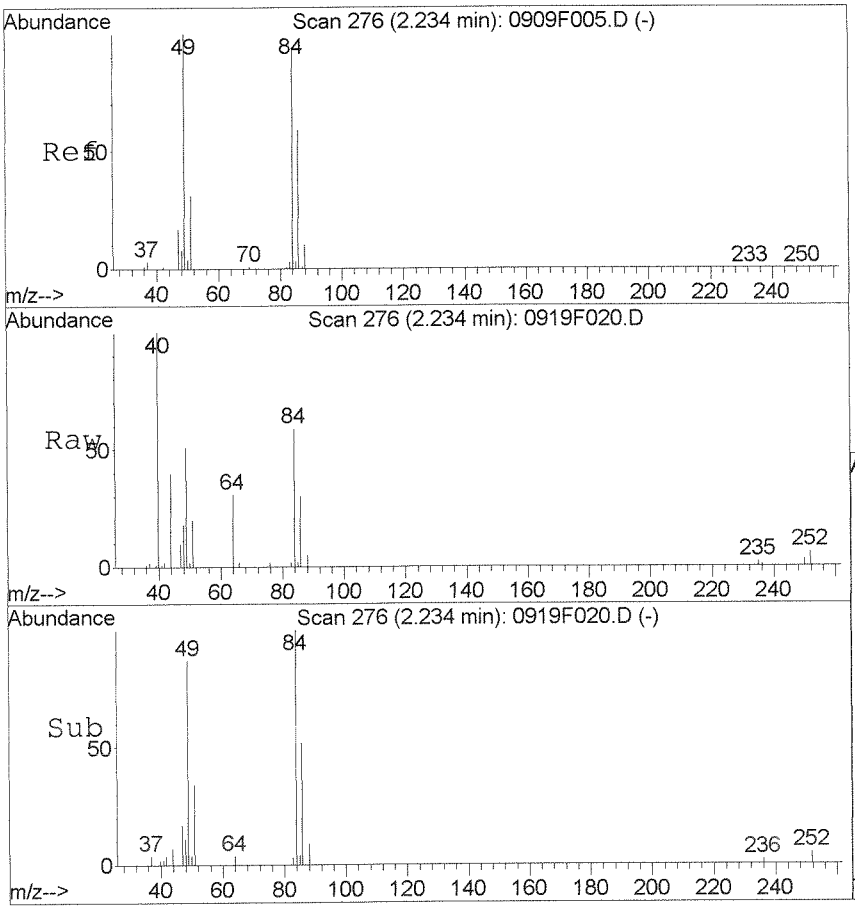


#18
Acetonitrile
Concen: 50.93 PPB
RT: 2.19 min Scan# 267
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 40 Resp: 4197

Ion	Ratio	Lower	Upper
40	100		
39	29.0	6.9	66.9
41	121.1	170.6	230.6#
42	41.6	0.0	35.5#

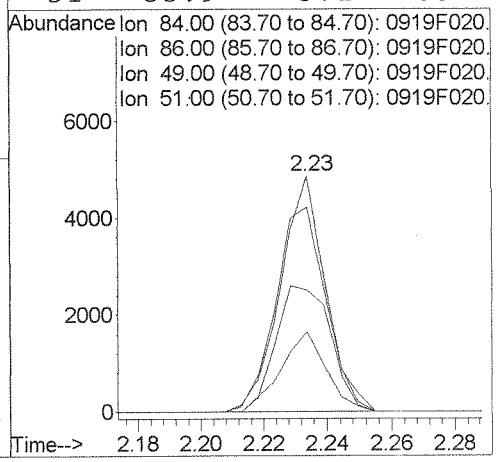


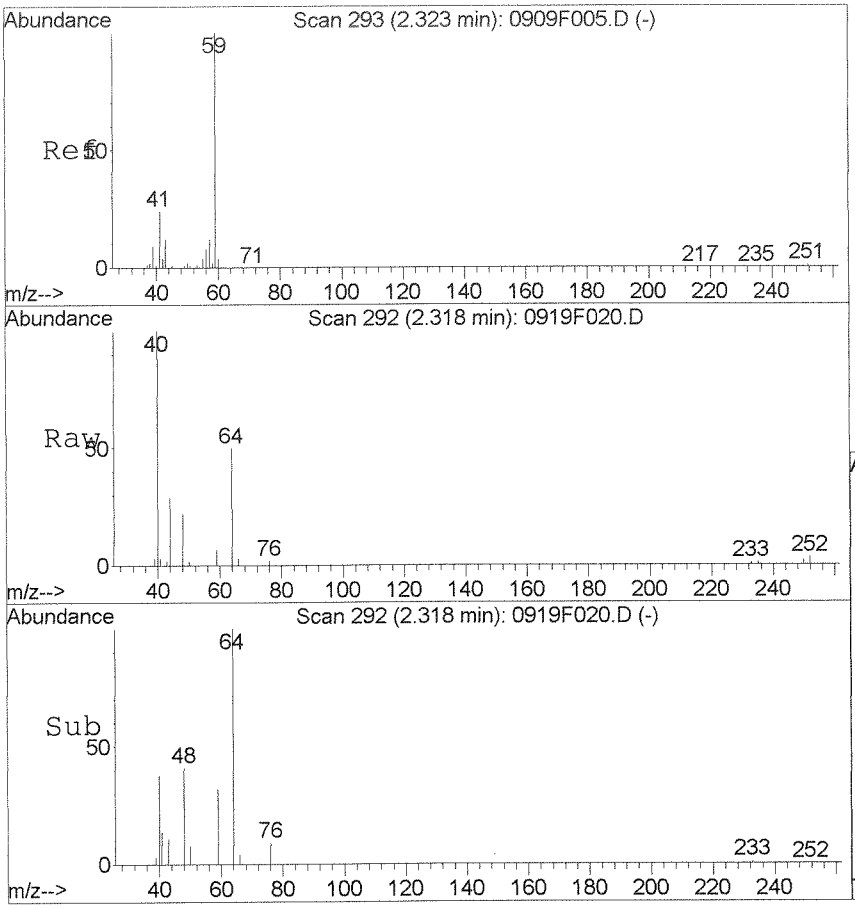


#19
Methylene Chloride
Concen: 2.61 PPB
RT: 2.23 min Scan# 276
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 84 Resp: 4818

Ion	Ratio	Lower	Upper
84	100		
86	51.6	32.9	92.9
49	86.8	76.9	136.9
51	33.9	3.1	63.1

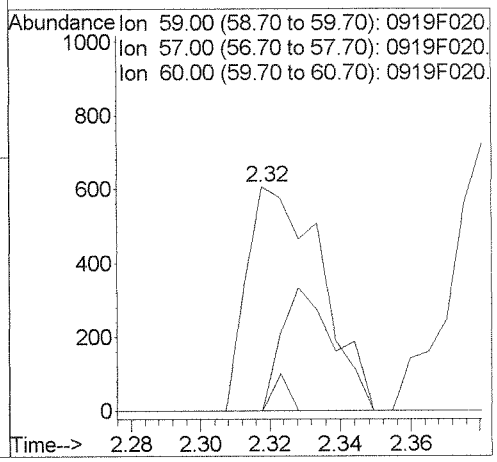


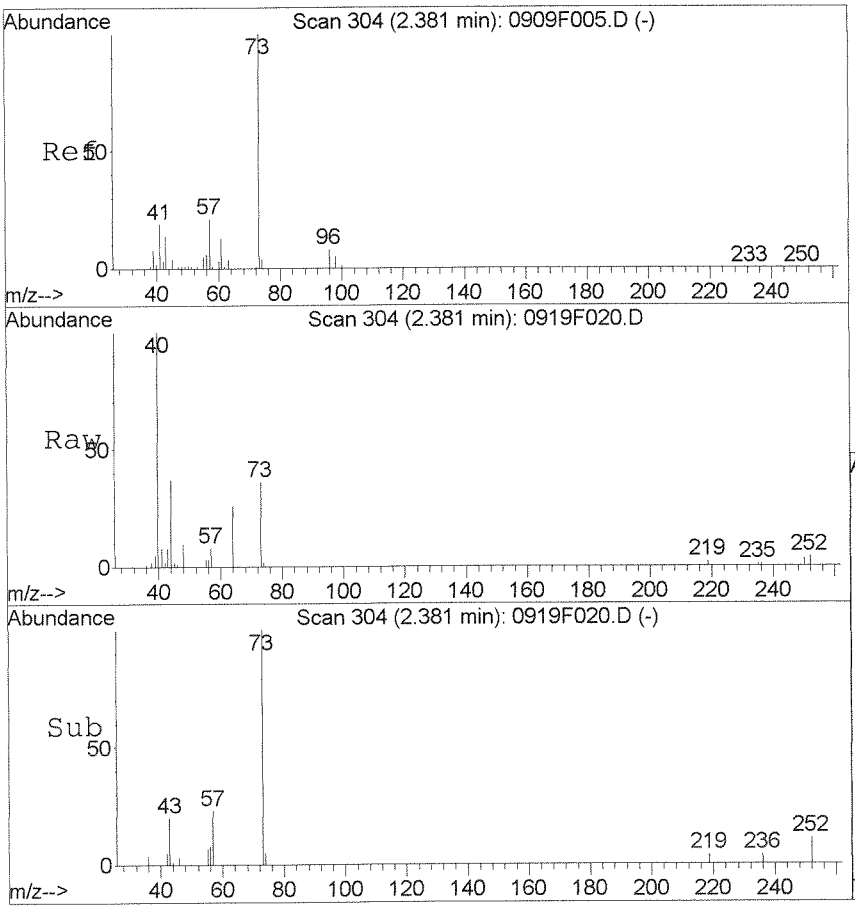


#20
tert-Butyl Alcohol
Concen: 4.81 PPB
RT: 2.32 min Scan# 292
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 59 Resp: 880

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	41.5
60	0.0	0.0	33.6

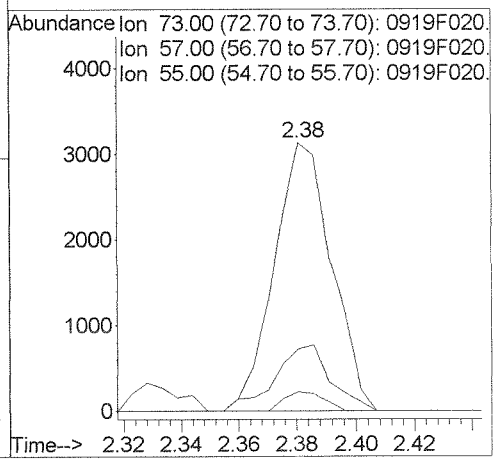


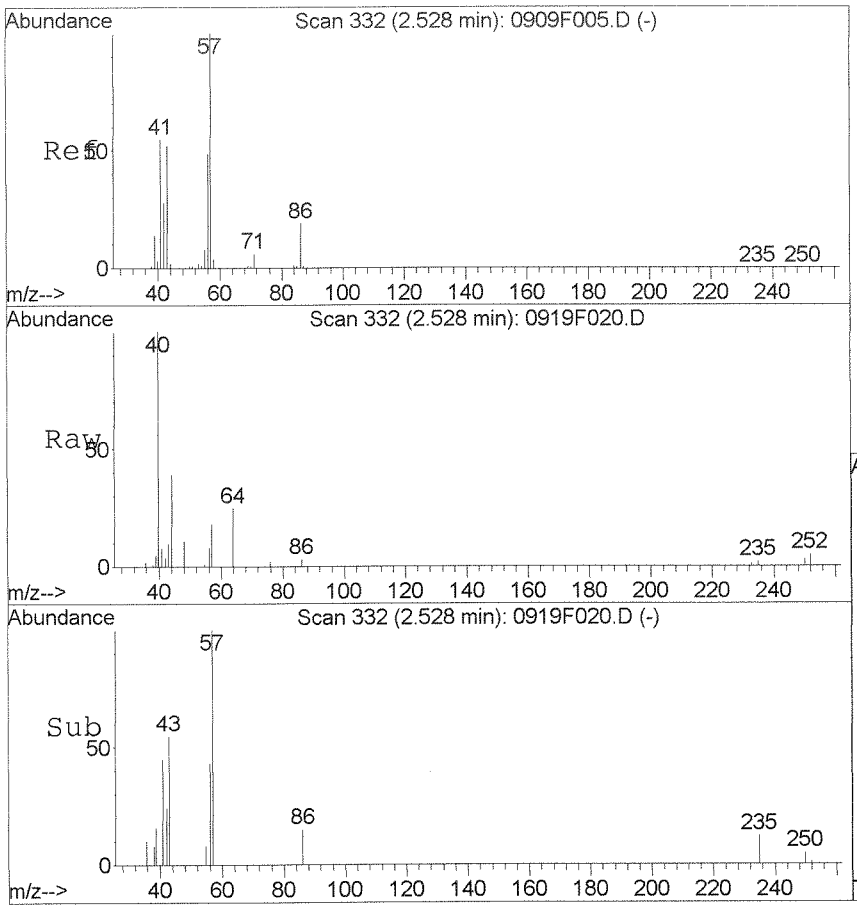


#22
Methyl tert-Butyl Ether
Concen: 0.92 PPB
RT: 2.38 min Scan# 304
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 73 Resp: 4276

Ion	Ratio	Lower	Upper
73	100		
57	23.2	0.0	51.5
55	7.3	0.0	35.6

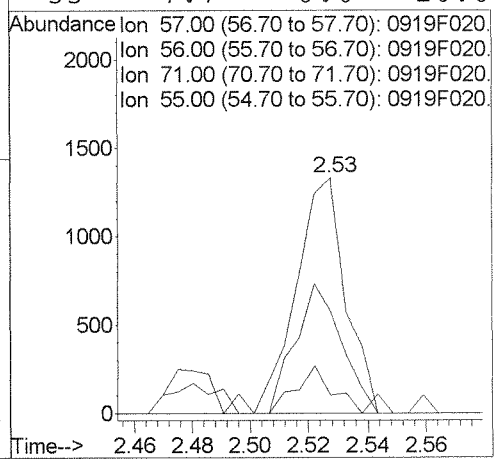


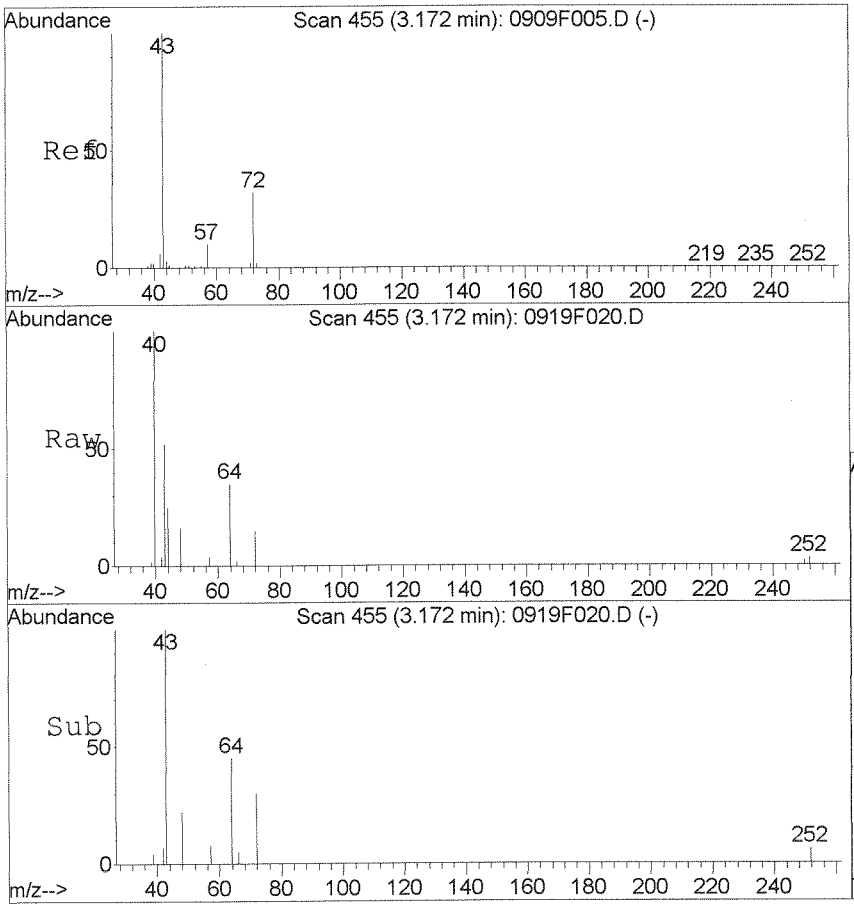


#24
Hexane
Concen: 0.78 PPB
RT: 2.53 min Scan# 332
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 57 Resp: 1570

Ion	Ratio	Lower	Upper
57	100		
56	43.4	18.8	78.8
71	0.0	0.0	35.9
55	7.7	0.0	20.6

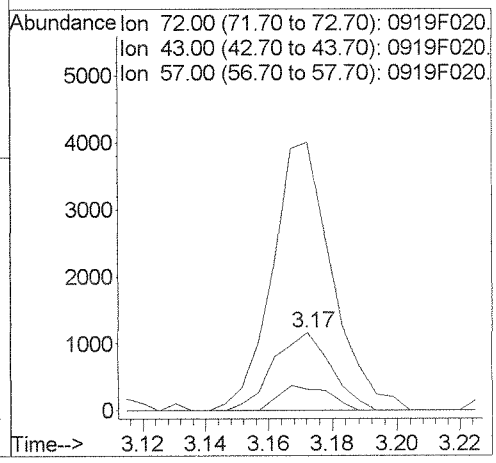


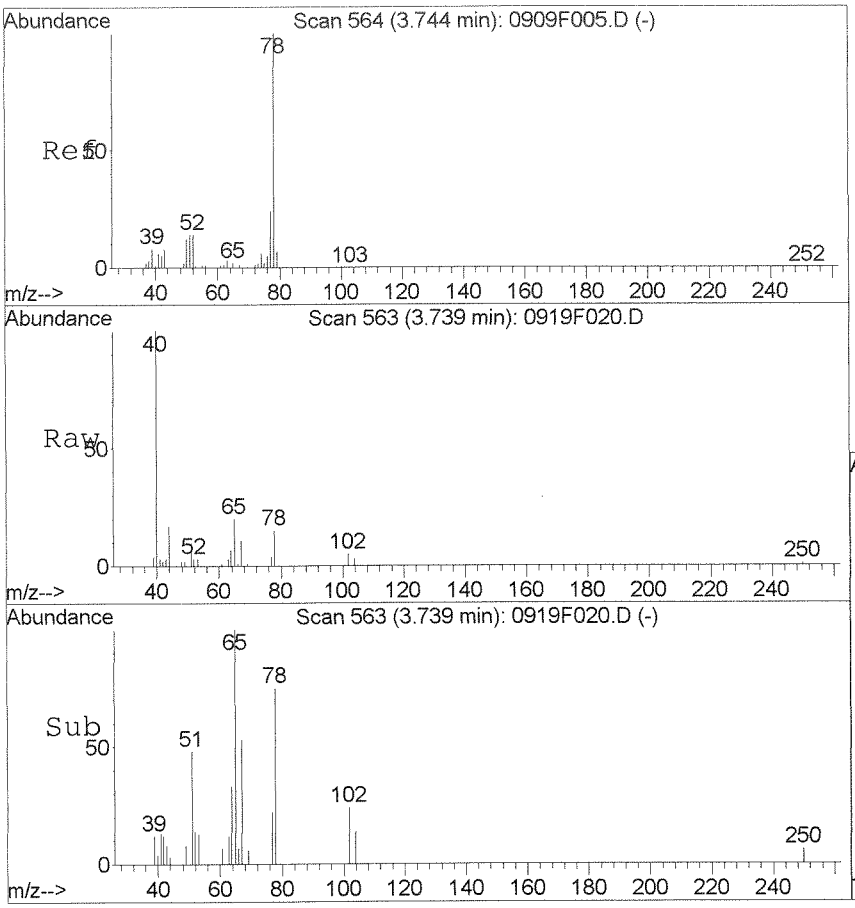


#32
2-Butanone
Concen: 6.96 PPB
RT: 3.17 min Scan# 455
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 72 Resp: 1465

Ion	Ratio	Lower	Upper
72	100		
43	343.3	284.6	344.6
57	27.0	0.2	60.2

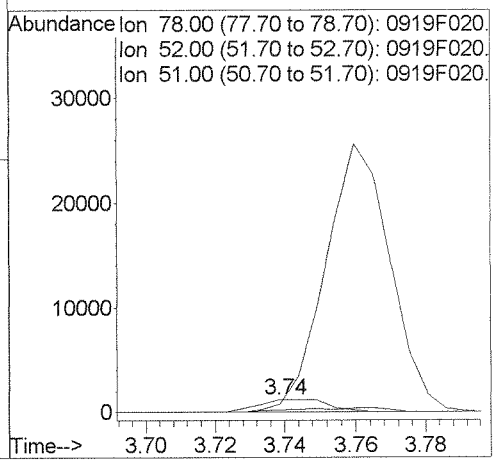


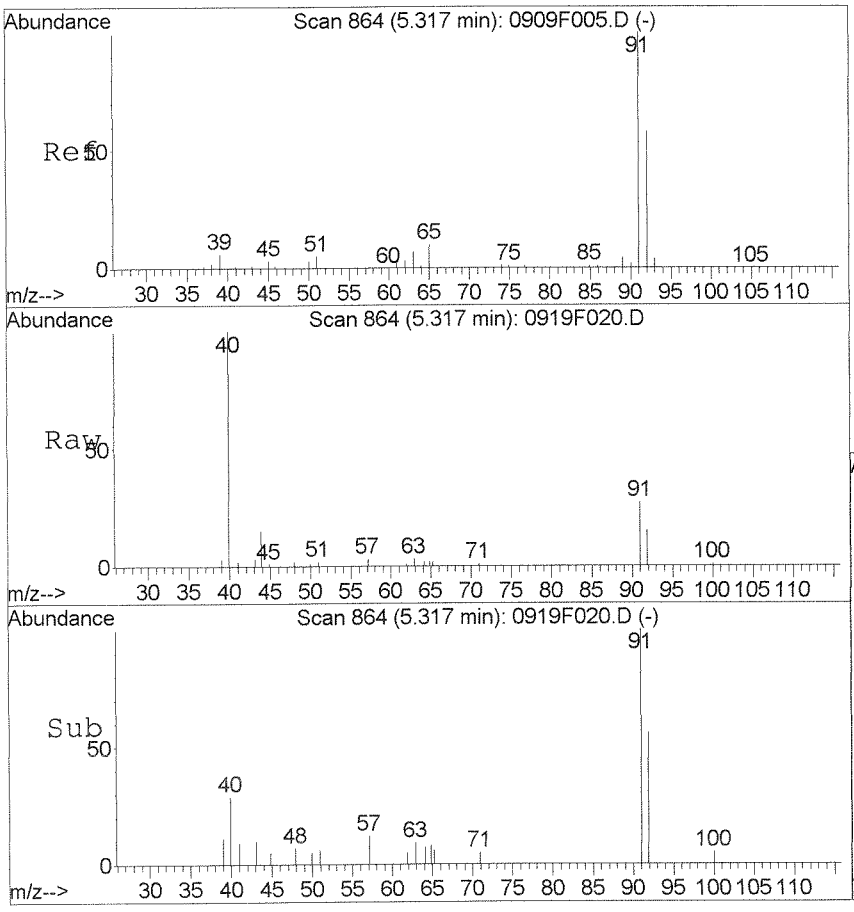


#45
Benzene
Concen: 0.27 PPB
RT: 3.74 min Scan# 563
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 78 Resp: 1678

Ion	Ratio	Lower	Upper
78	100		
52	18.2	0.0	44.3
51	64.4	0.0	44.1#

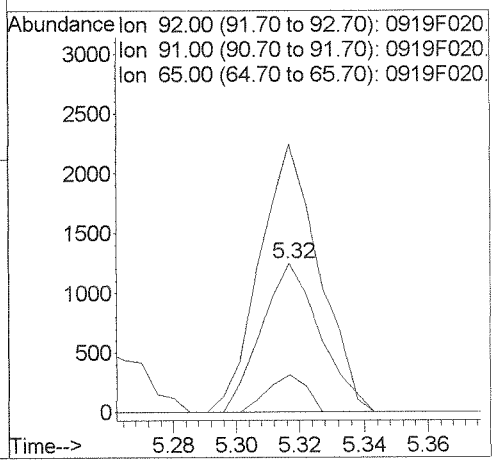


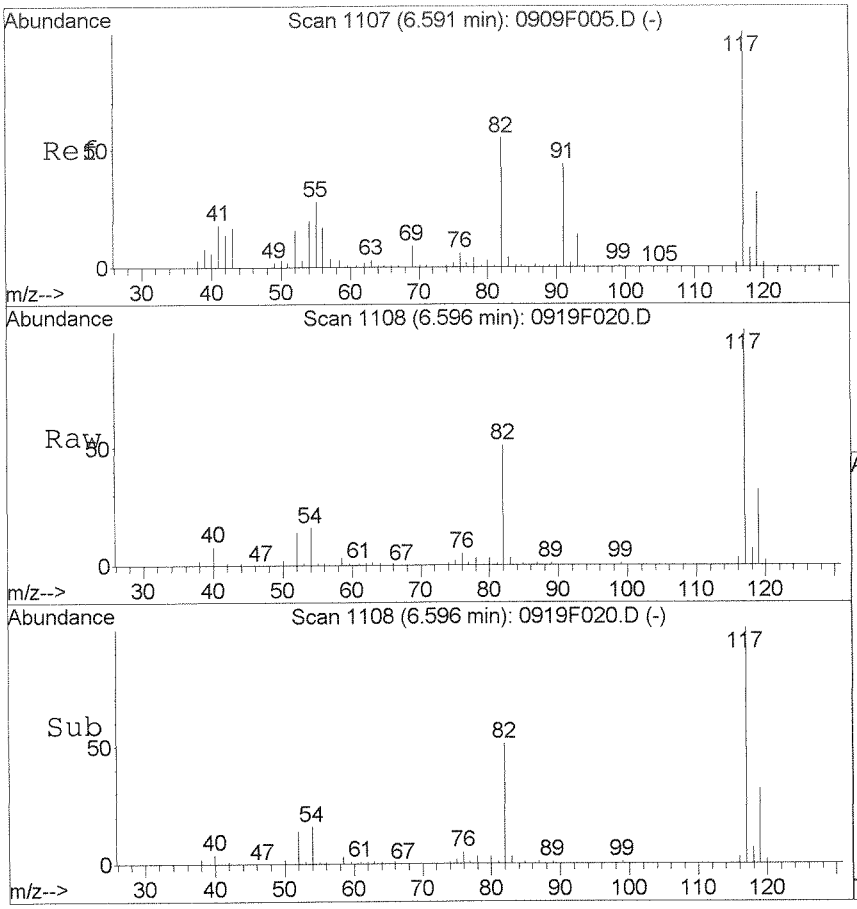


#60
Toluene
Concen: 0.40 PPB
RT: 5.32 min Scan# 864
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 92 Resp: 1606

Ion	Ratio	Lower	Upper
92	100		
91	180.0	143.3	203.3
65	25.2	0.0	47.5

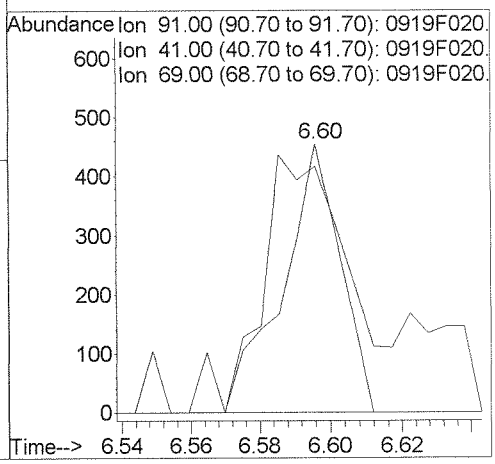


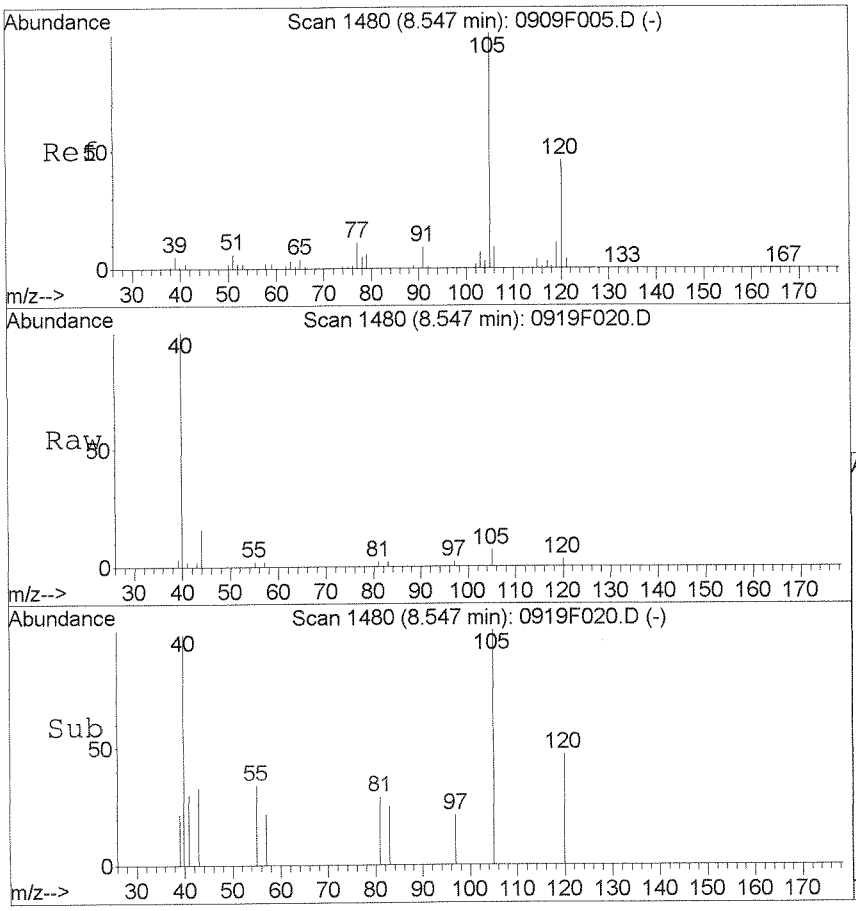


#70
1-Chlorohexane
Concen: 0.26 PPB
RT: 6.60 min Scan# 1108
Delta R.T. 0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion: 91 Resp: 513

Ion	Ratio	Lower	Upper
91	100		
41	69.2	11.2	71.2
69	0.0	0.0	49.8

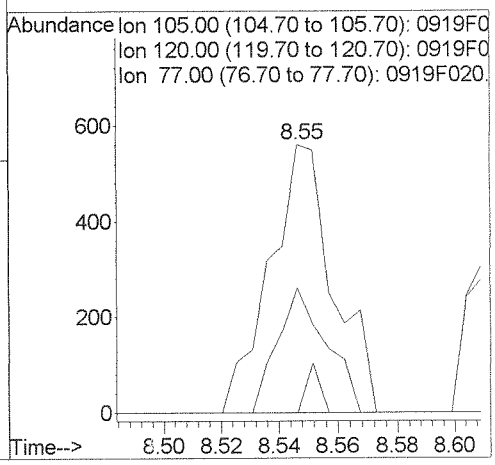


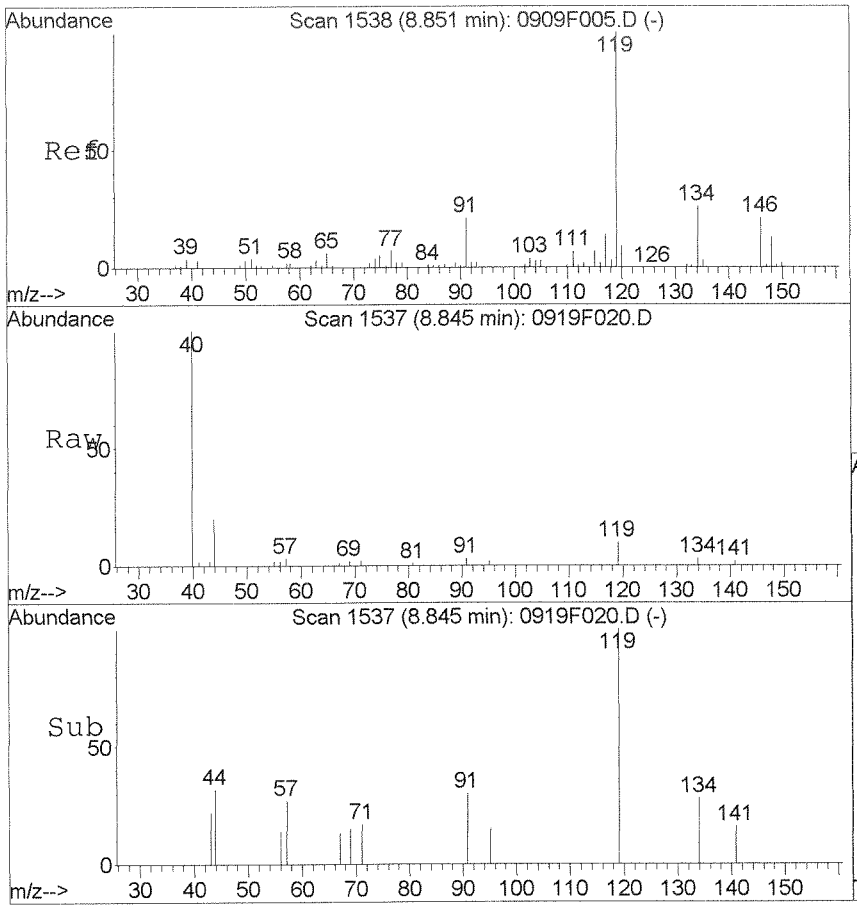


#91
1,2,4-Trimethylbenzene
Concen: 0.16 PPB
RT: 8.55 min Scan# 1480
Delta R.T. 0.00 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion:105 Resp: 838

Ion	Ratio	Lower	Upper
105	100		
120	46.6	15.9	75.9
77	0.0	0.0	41.2

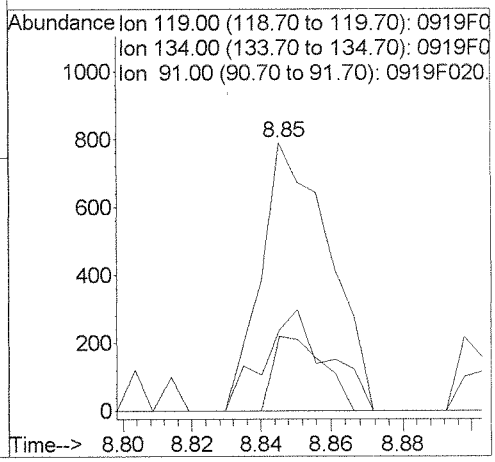


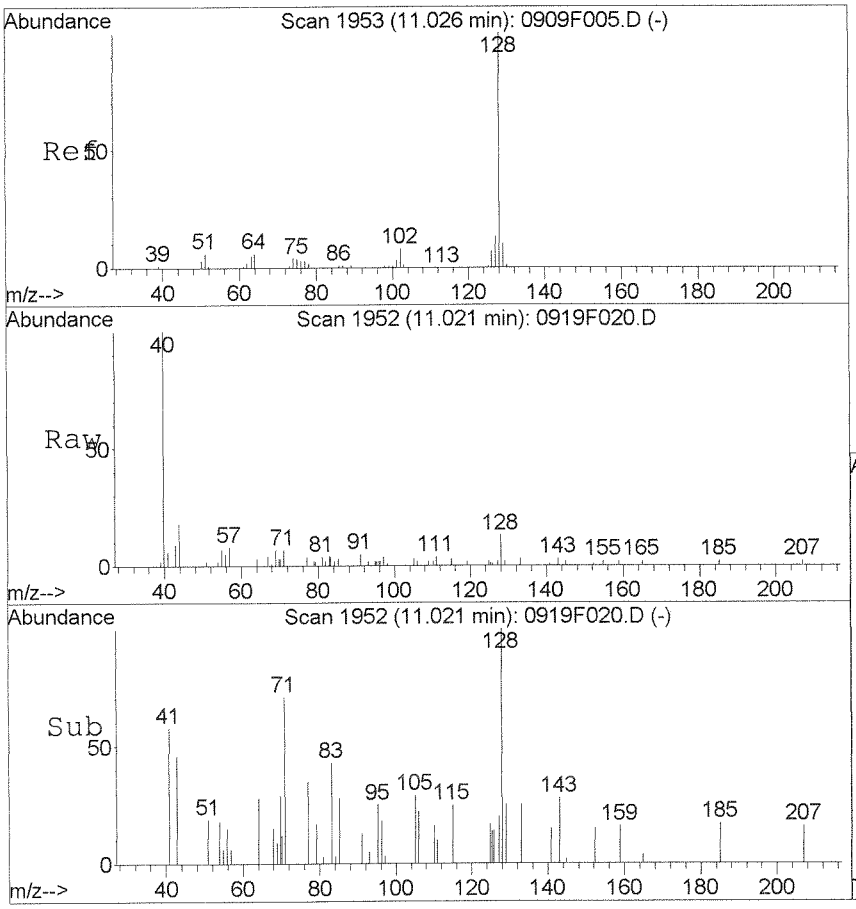


#93
p-Isopropyltoluene
Concen: 0.20 PPB
RT: 8.85 min Scan# 1537
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion:119 Resp: 1063

Ion	Ratio	Lower	Upper
119	100		
134	27.8	0.0	56.2
91	30.1	0.0	50.8

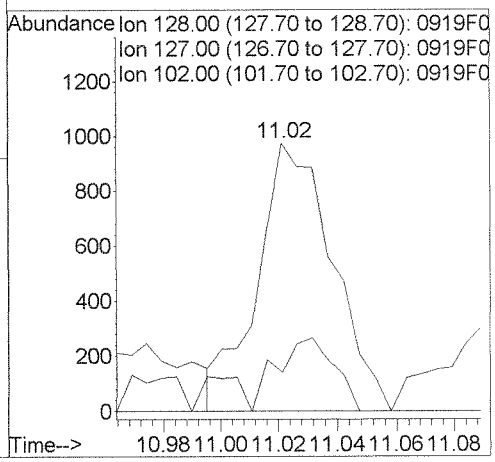




#102
Naphthalene
Concen: 0.36 PPB
RT: 11.02 min Scan# 1952
Delta R.T. -0.01 min
Lab File: 0919F020.D
Acq: 19 Sep 2014 5:02 pm

Tgt Ion:128 Resp: 1740

Ion	Ratio	Lower	Upper
128	100		
127	14.6	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F021.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 17:23
Date Quantitated: 09/22/2014 14:08
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV OK
	Vinyl Chloride	-25.3	NA	20	1

Primary Review: KL 9/24/14

Secondary Review: [signature] 9/24/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F021.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:23	**Quant Date:**	09/22/2014 14:08	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376455	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	410559	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	146009	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	115068	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	103801	50.65	101	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	372647	46.98	94	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	115826	44.63	89	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.20	U	
1	Vinyl Chloride				62	0		0.20	U	
1	1,1-Dichloroethene				96	0		0.27	U	
1	Acetone	1.95		0.00	43	26413	52.74	56		
1	Carbon Disulfide	1.99	-0.01	0.00	76	6865	1.32	1.4	J	
1	Methylene Chloride	2.23		0.00	84	4728	2.18	2.3	J	
1	trans-1,2-Dichloroethene				96	0		0.13	U	
1	cis-1,2-Dichloroethene				96	0		0.13	U	
1	2-Butanone (MEK)	3.17		0.00	72	1669	6.75	7.2	J	
1	Carbon Tetrachloride				117	0		0.11	U	
1	Benzene	3.74		0.00	78	5308	0.7200	0.77	J	
1	Trichloroethene (TCE)				95	0		0.16	U	
1	4-Methyl-2-pentanone (MIBK)				58	0**d**		2.0	U	
1	Toluene	5.32		0.00	92	47398	10.09	11		
2	Tetrachloroethene (PCE)				164	0		0.18	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F021.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:23	**Quant Date:**	09/22/2014 14:08	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		0.99	U	
2	Dibromochloromethane				129	0		0.20	U	
2	Ethylbenzene	6.70		0.00	106	1887	0.7800	0.83	J	
2	m,p-Xylenes	6.81	-0.01	0.00	106	615	0.2100	0.22	J	
2	o-Xylene				106	0		0.087	U	
2	Styrene				103	0		0.15	U	
2	Bromoform				173	0		0.15	U	
3	1,2,4-Trichlorobenzene				180	0		0.14	U	

Prep Amount:	4.70 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F021.D Vial: 20
Acq On : 19 Sep 2014 5:23 pm Operator: KR
Sample : K09921-007 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:05:01 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

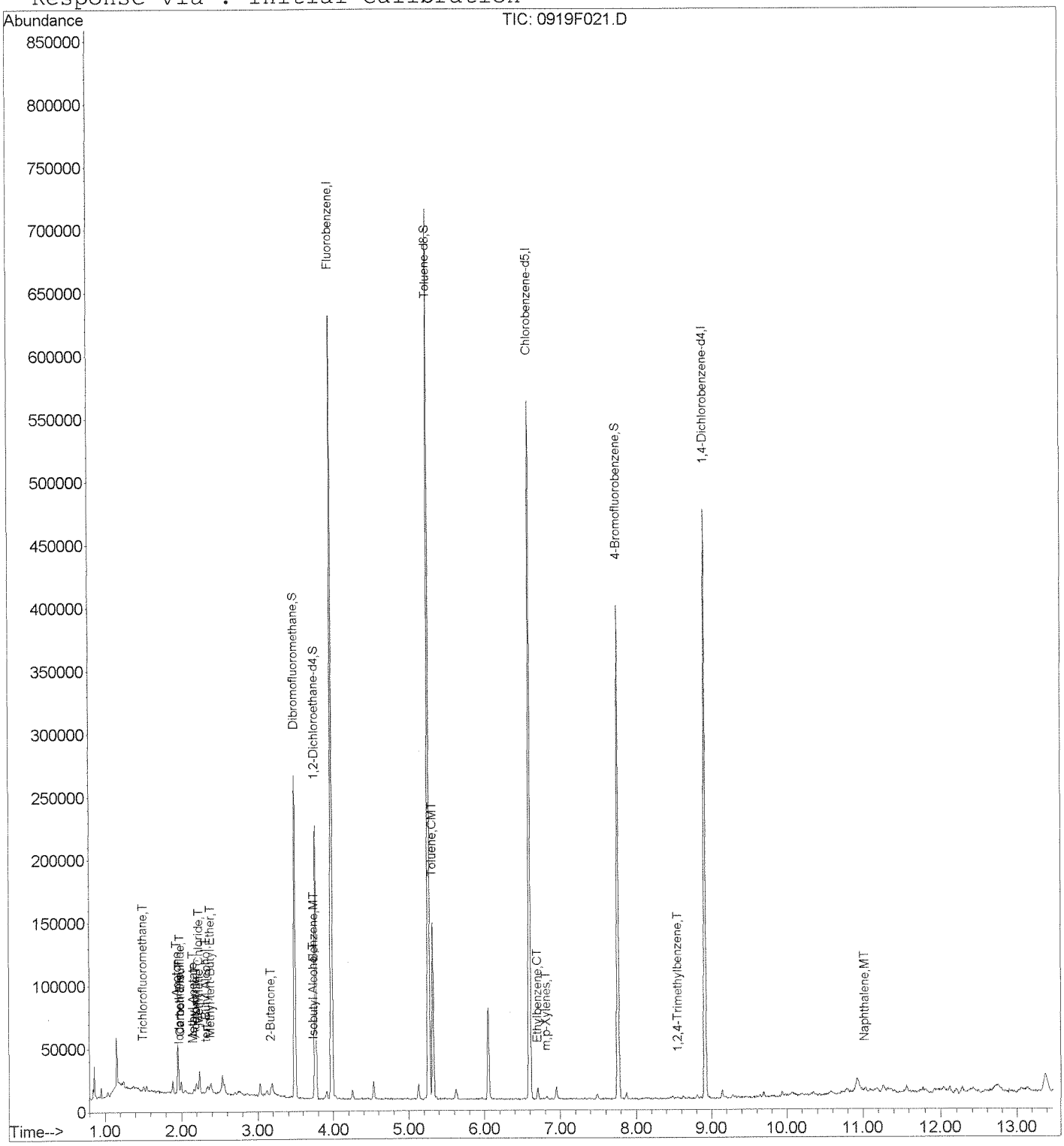
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	410559	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	146009	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	115068	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	103801	50.65	PPB		0.00
Spiked Amount 50.000			Recovery =	101.30%			
44) 1,2-Dichloroethane-d4	3.76	65	96947	47.23	PPB		0.00
Spiked Amount 50.000			Recovery =	94.46%			
59) Toluene-d8	5.26	98	372647	46.98	PPB		0.00
Spiked Amount 50.000			Recovery =	93.96%			
80) 4-Bromofluorobenzene	7.76	95	115826	44.63	PPB		0.00
Spiked Amount 50.000			Recovery =	89.26%			
Target Compounds							Qvalue
8) Trichlorofluoromethane	1.50	101	1908	0.76	PPB		87
13) Acetone	1.95	43	26413	52.74	PPB		99
14) Iodomethane	1.98	142	549	0.34	PPB		88
15) Carbon Disulfide	1.99	76	6865	1.32	PPB		97
17) Methyl Acetate	2.16	43	2390	1.89	PPB	#	53
18) Acetonitrile	2.19	40	3330	34.40	PPB	#	69
19) Methylene Chloride	2.23	84	4728	2.18	PPB		98
20) tert-Butyl Alcohol	2.33	59	793	3.69	PPB		91
22) Methyl tert-Butyl Ether	2.39	73	4540	0.83	PPB		90
32) 2-Butanone	3.17	72	1669	6.75	PPB	#	76
43) Isobutyl Alcohol	3.73	43	666	8.24	PPB		83
45) Benzene	3.74	78	5308	0.72	PPB	#	15
60) Toluene	5.32	92	47398	10.09	PPB		98
72) Ethylbenzene	6.70	106	1887	0.78	PPB		86
74) m,p-Xylenes	6.81	106	615	0.21	PPB		81
91) 1,2,4-Trimethylbenzene	8.55	105	807	0.15	PPB		91
102) Naphthalene	11.03	128	2174	0.43	PPB		96

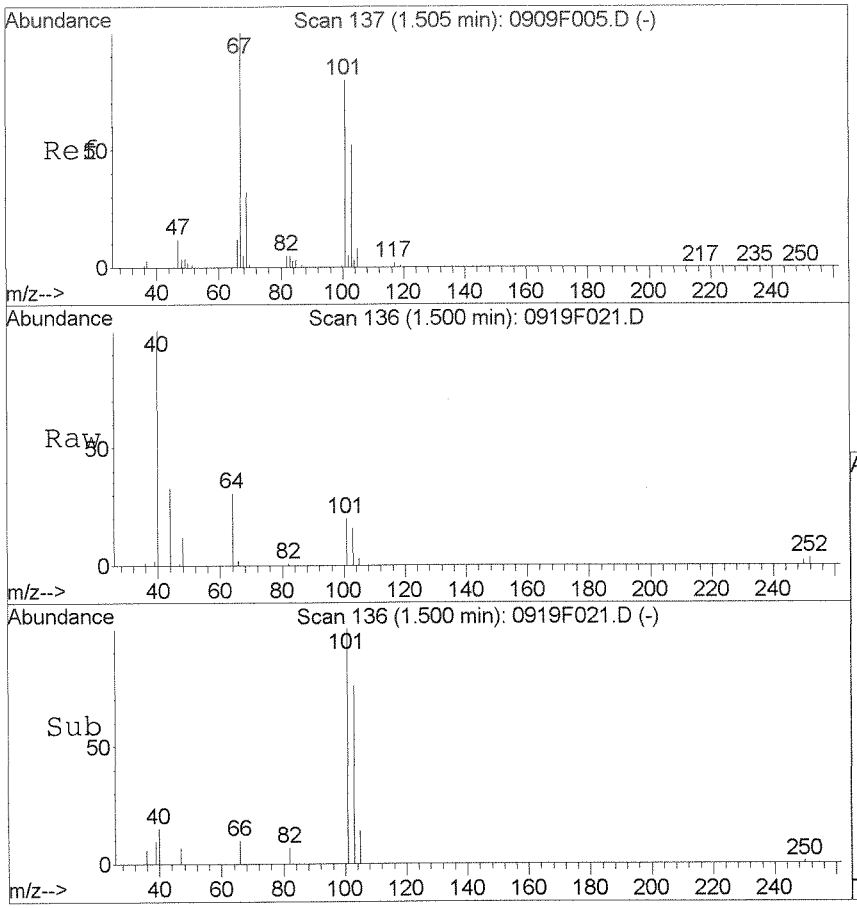
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F021.D Vial: 20
Acq On : 19 Sep 2014 5:23 pm Operator: KR
Sample : K09921-007 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:08 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

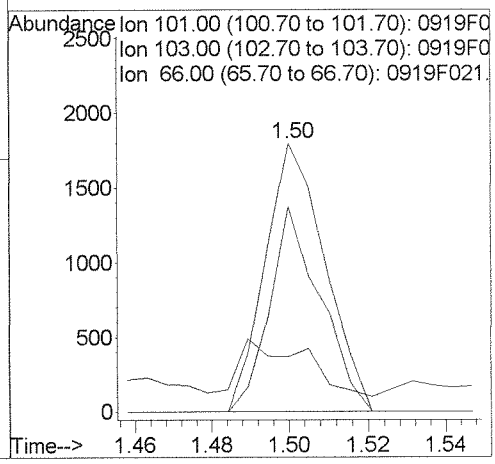


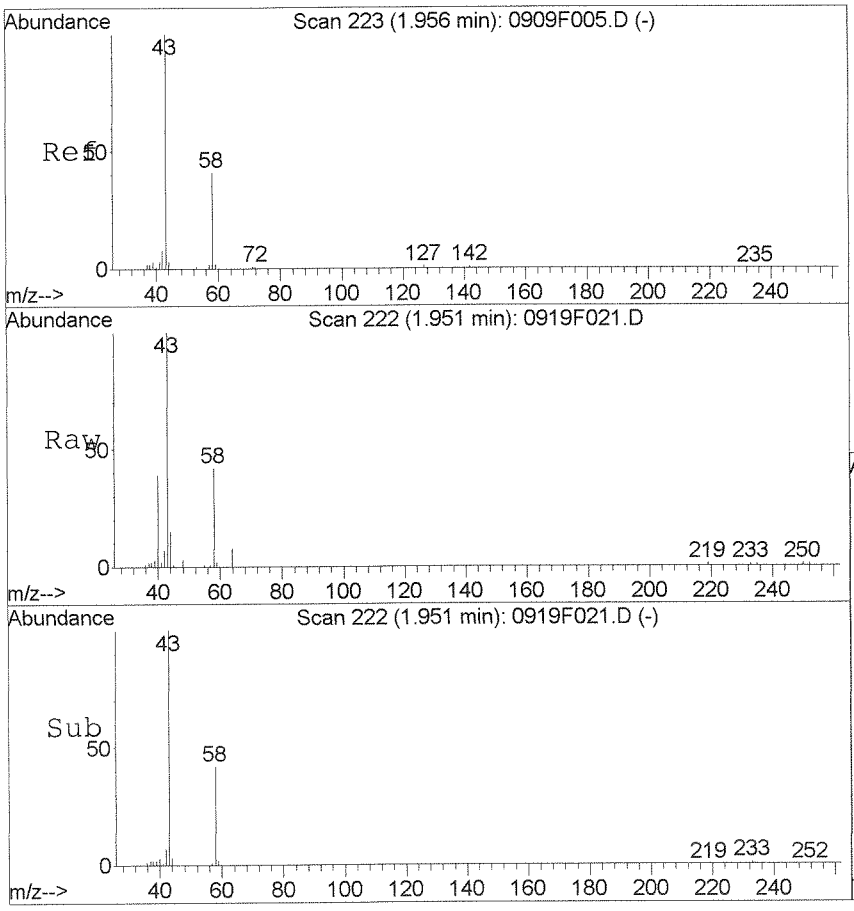


#8
Trichlorofluoromethane
Concen: 0.76 PPB
RT: 1.50 min Scan# 136
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:101 Resp: 1908

Ion	Ratio	Lower	Upper
101	100		
103	76.4	34.7	94.7
66	13.5	0.0	45.0

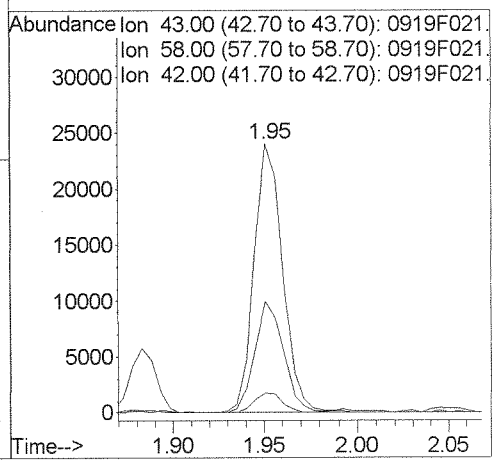


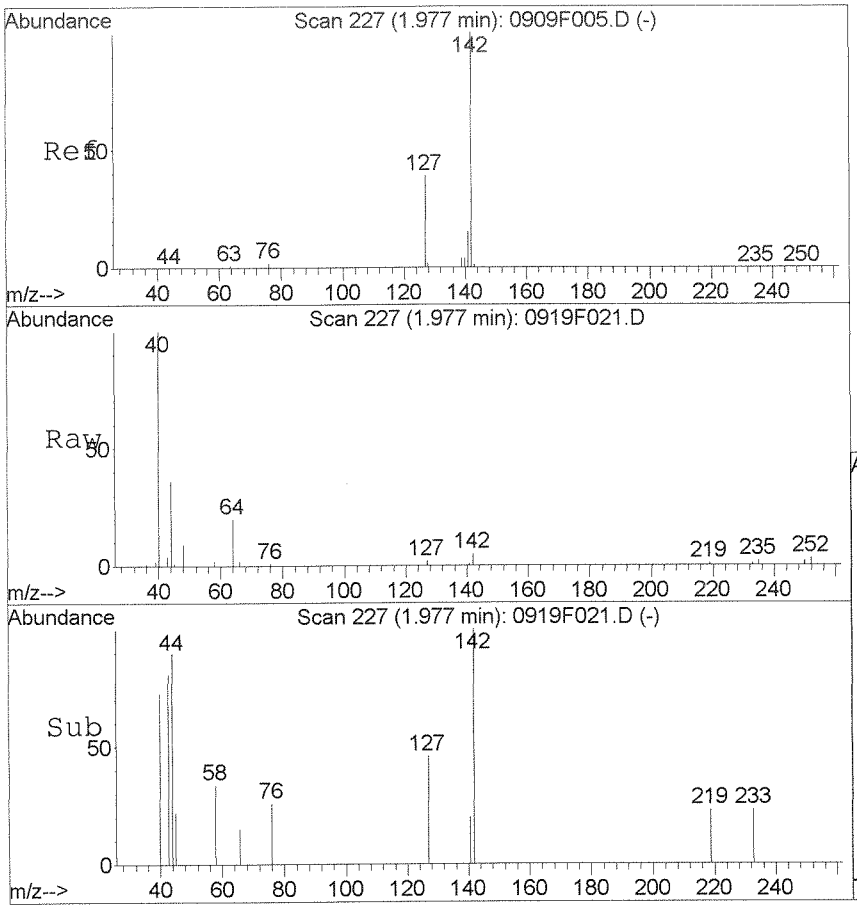


#13
Acetone
Concen: 52.74 PPB
RT: 1.95 min Scan# 222
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 43 Resp: 26413

Ion	Ratio	Lower	Upper
43	100		
58	41.6	11.3	71.3
42	7.2	0.0	37.7

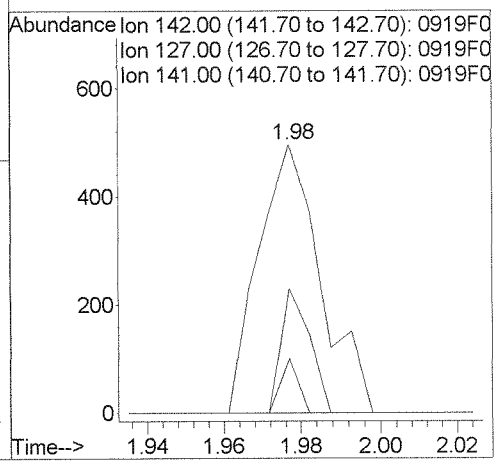


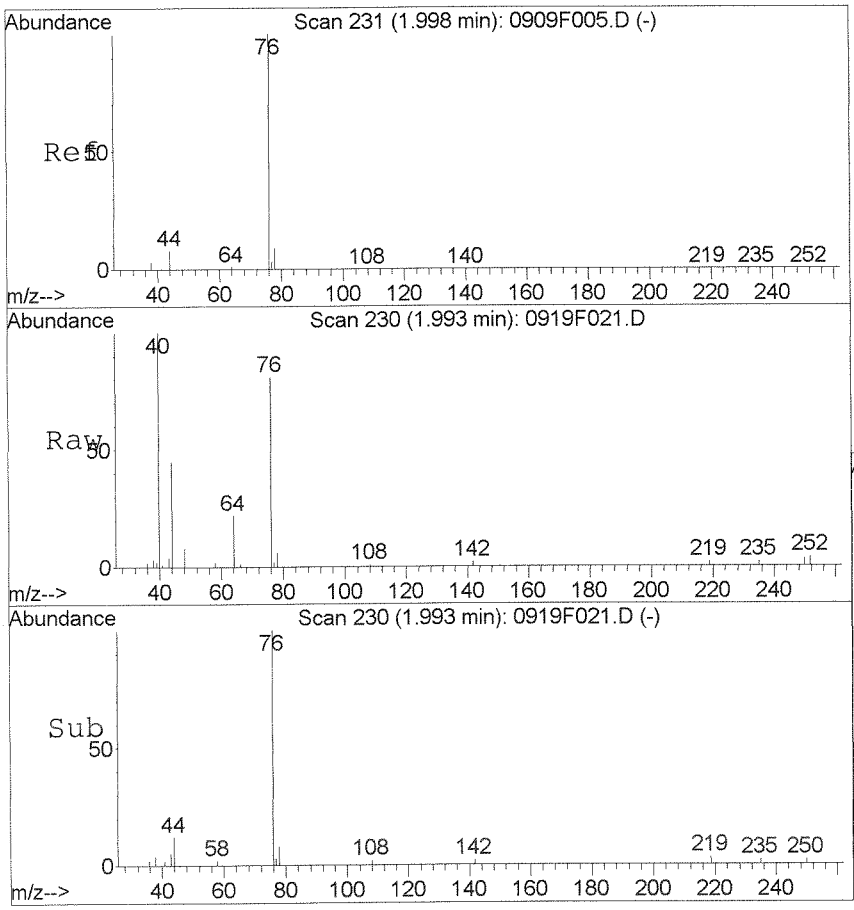


#14
Iodomethane
Concen: 0.34 PPB
RT: 1.98 min Scan# 227
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:142 Resp: 549

Ion	Ratio	Lower	Upper
142	100		
127	46.4	9.4	69.4
141	20.4	0.0	44.9

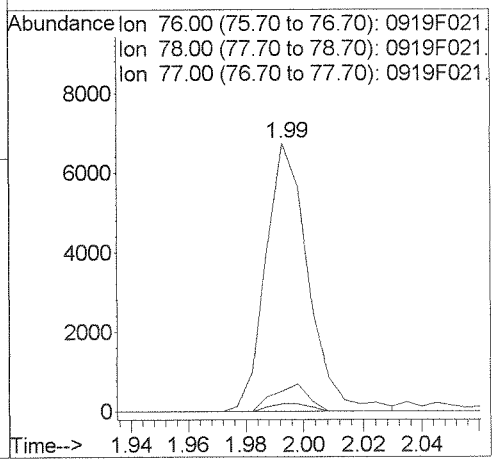


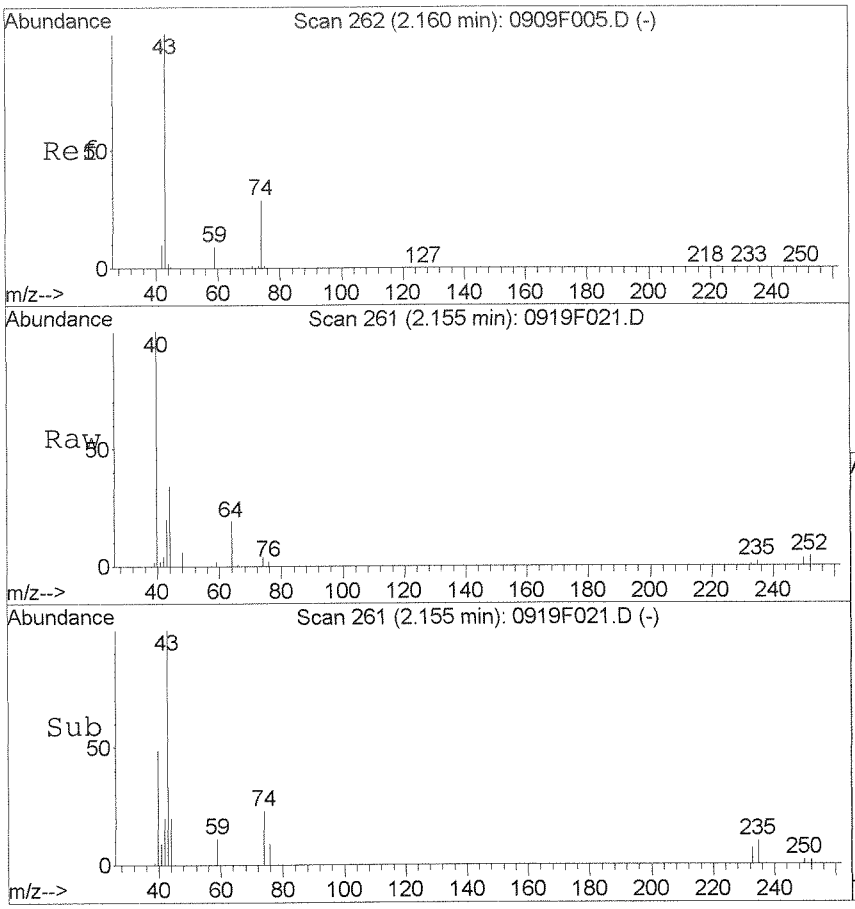


#15
Carbon Disulfide
Concen: 1.32 PPB
RT: 1.99 min Scan# 230
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 76 Resp: 6865

Ion	Ratio	Lower	Upper
76	100		
78	7.7	0.0	39.0
77	3.0	0.0	32.6



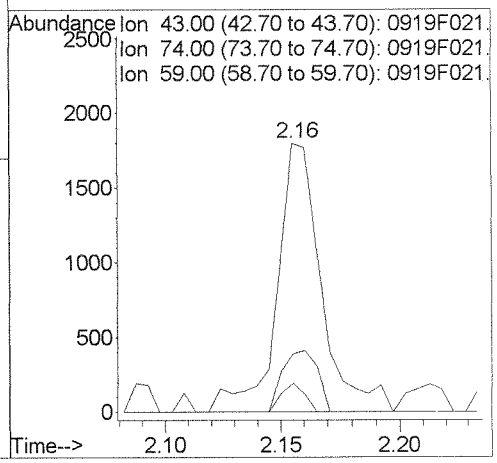


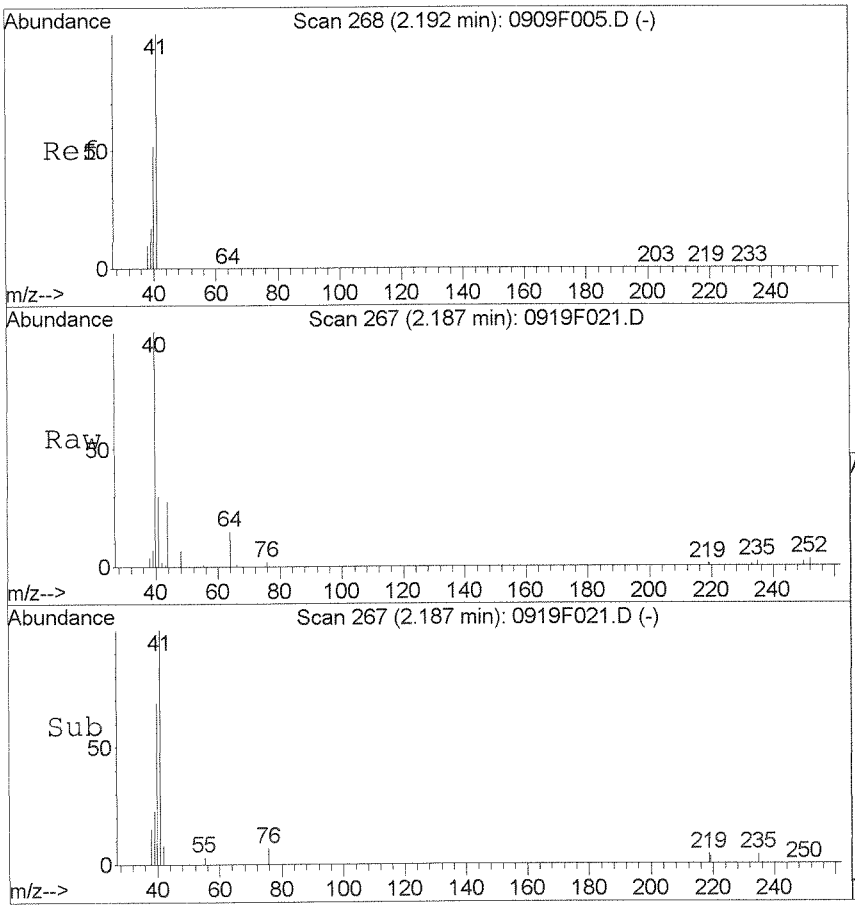
#17
Methyl Acetate
Concen: 1.89 PPB
RT: 2.16 min Scan# 261
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

NR

Tgt Ion: 43 Resp: 2390

Ion	Ratio	Lower	Upper
43	100		
74	0.0	20.4	37.8#
59	0.0	6.2	11.4#

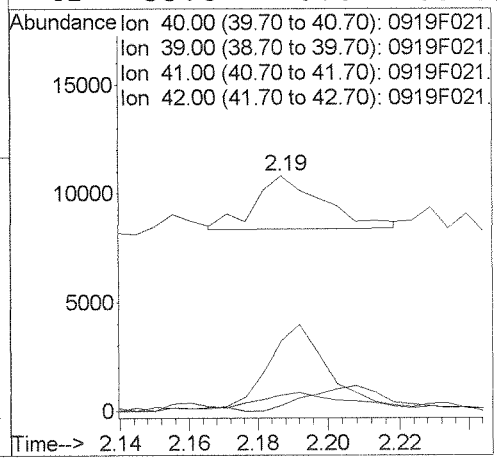


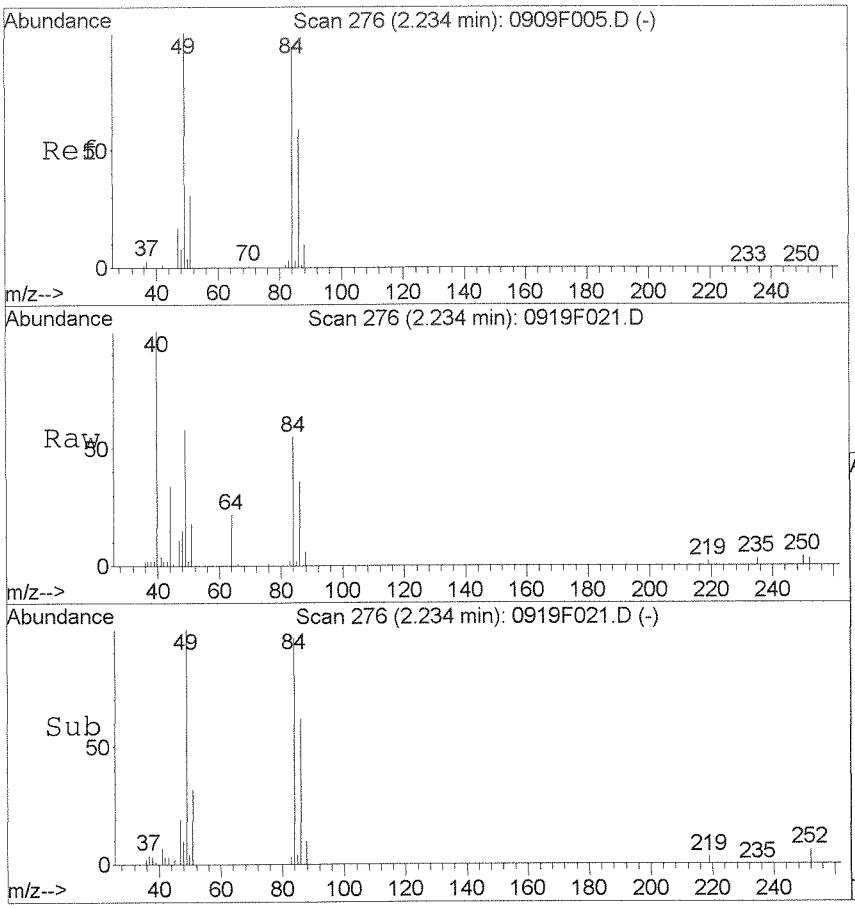


#18
Acetonitrile
Concen: 34.40 PPB
RT: 2.19 min Scan# 267
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 40 Resp: 3330

Ion	Ratio	Lower	Upper
40	100		
39	36.8	6.9	66.9
41	150.2	170.6	230.6#
42	55.8	0.0	35.5#

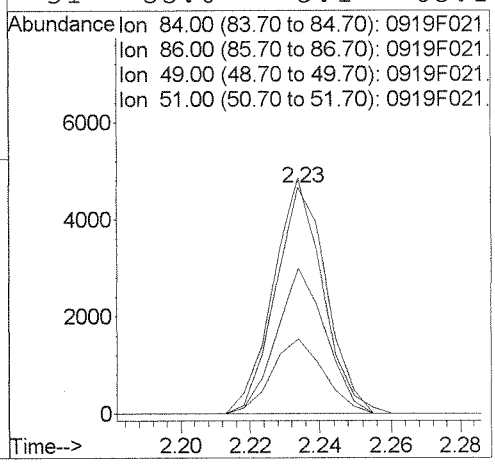


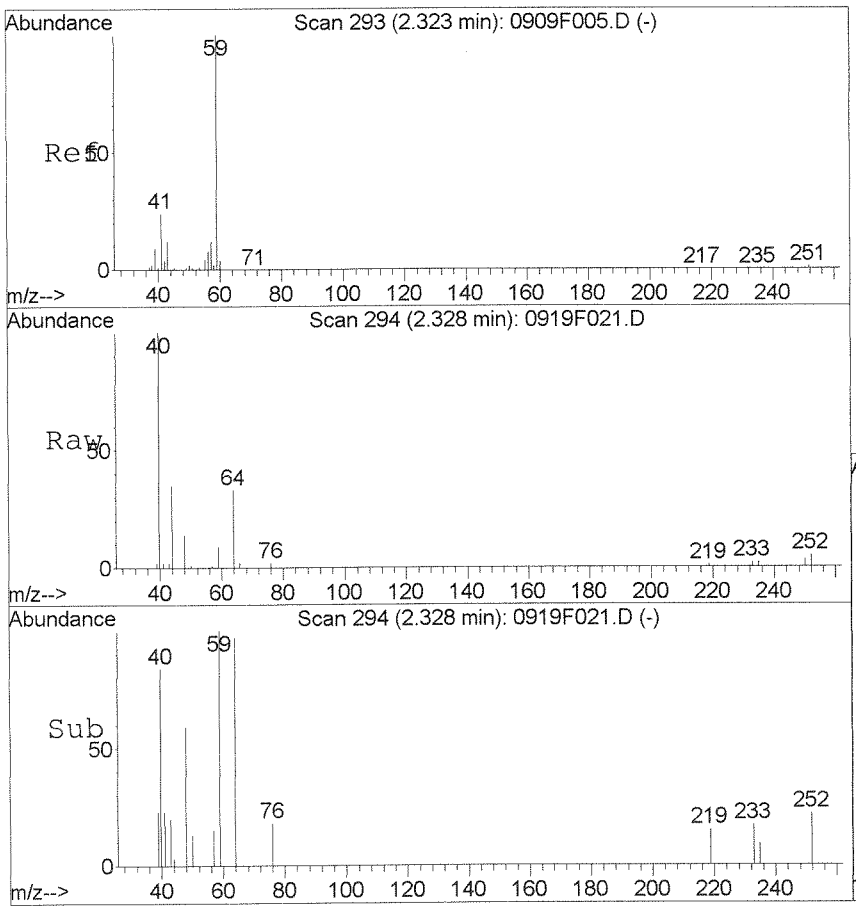


#19
Methylene Chloride
Concen: 2.18 PPB
RT: 2.23 min Scan# 276
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 84 Resp: 4728

Ion	Ratio	Lower	Upper
84	100		
86	64.4	32.9	92.9
49	104.3	76.9	136.9
51	33.0	3.1	63.1

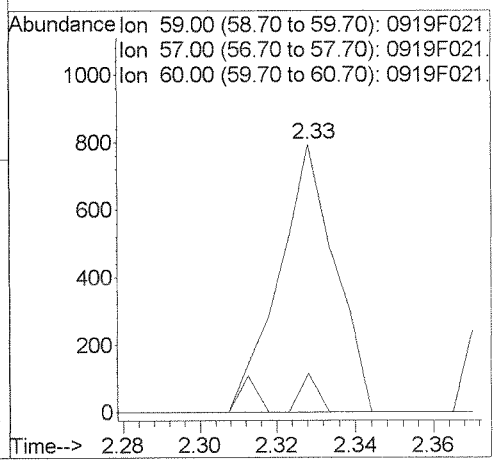


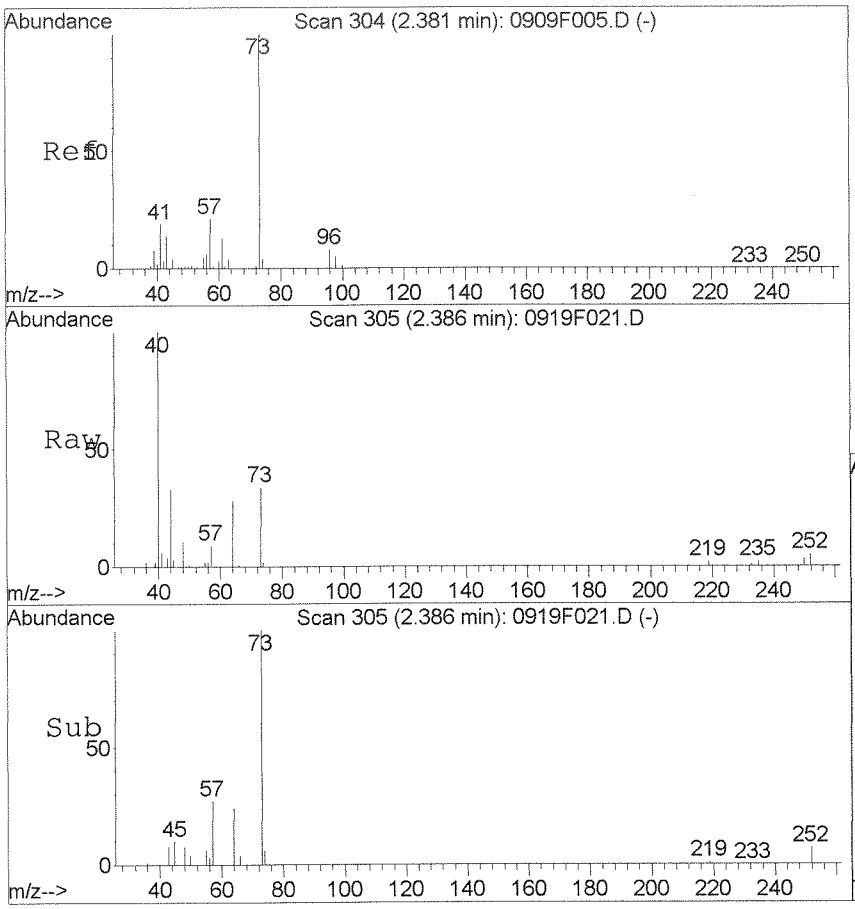


#20
tert-Butyl Alcohol
Concen: 3.69 PPB
RT: 2.33 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 59 Resp: 793

Ion	Ratio	Lower	Upper
59	100		
57	14.6	0.0	41.5
60	0.0	0.0	33.6

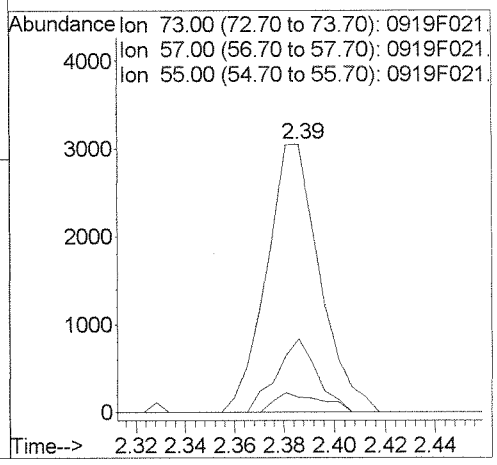


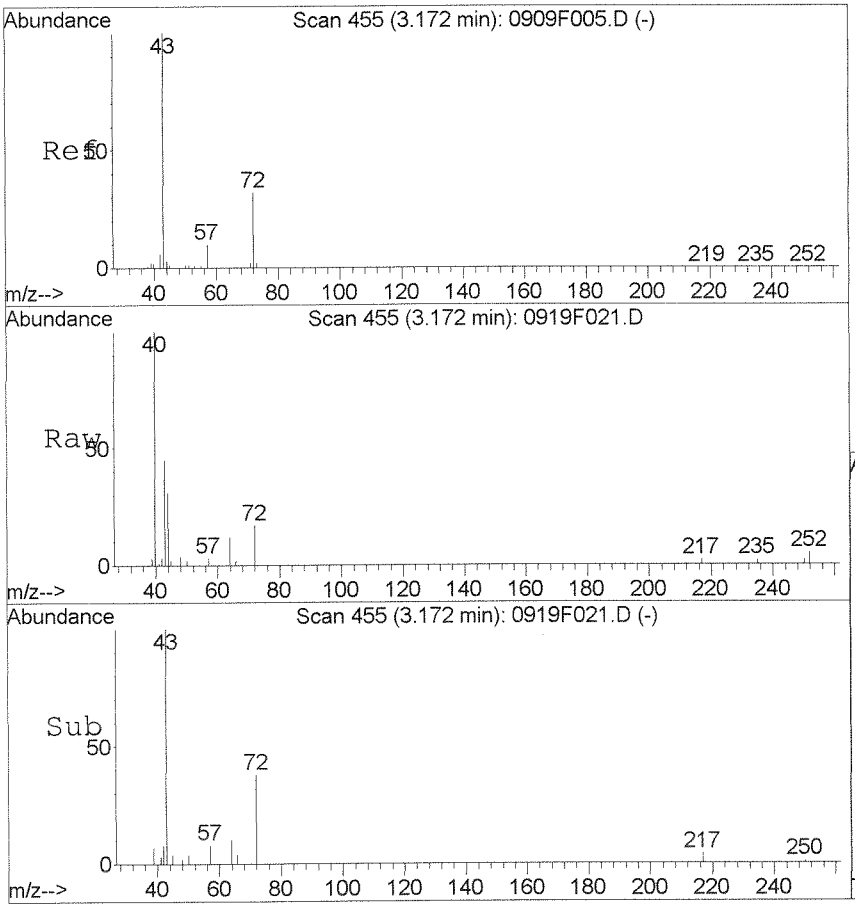


#22
Methyl tert-Butyl Ether
Concen: 0.83 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 73 Resp: 4540

Ion	Ratio	Lower	Upper
73	100		
57	27.4	0.0	51.5
55	5.5	0.0	35.6

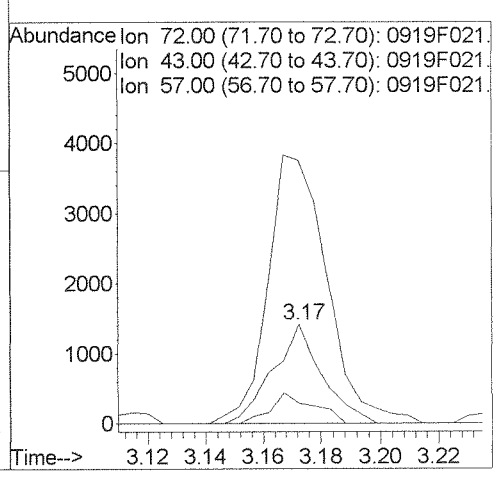


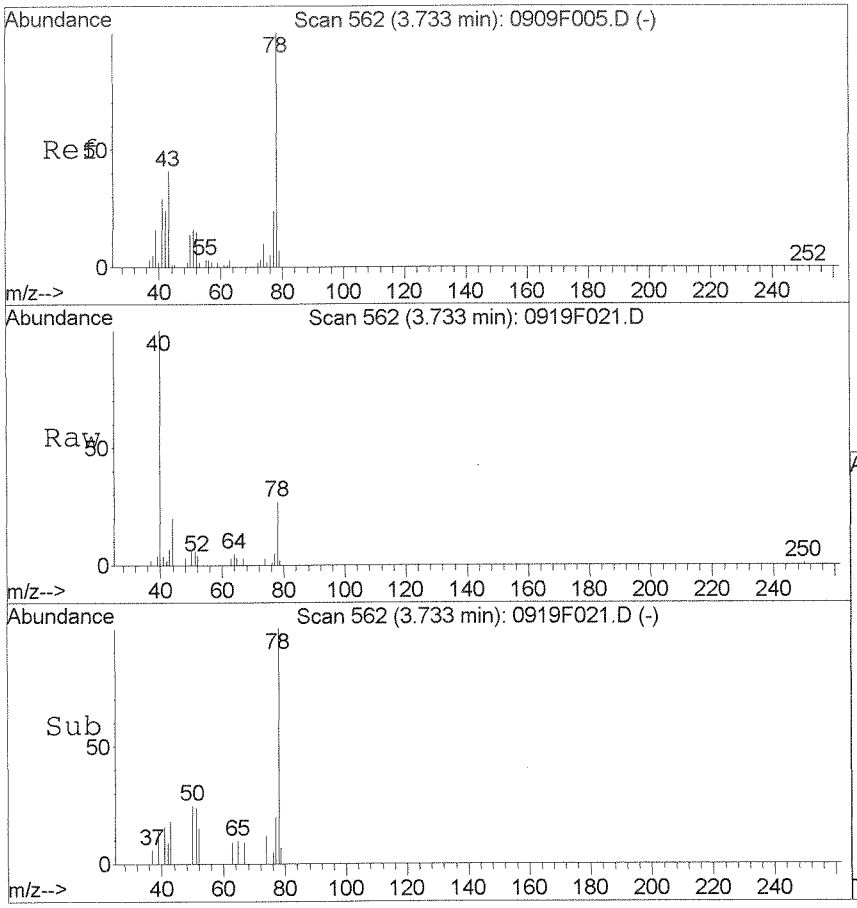


#32
2-Butanone
Concen: 6.75 PPB
RT: 3.17 min Scan# 455
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 72 Resp: 1669

Ion	Ratio	Lower	Upper
72	100		
43	264.7	284.6	344.6#
57	20.4	0.2	60.2

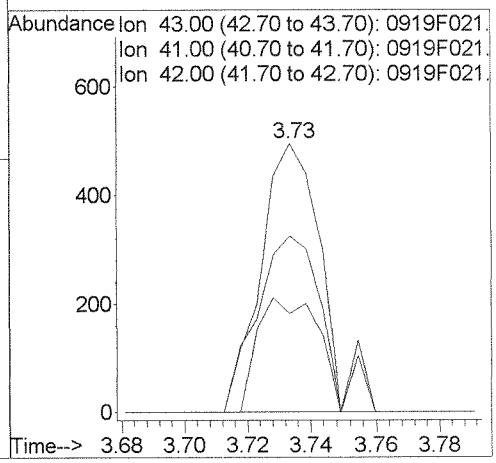


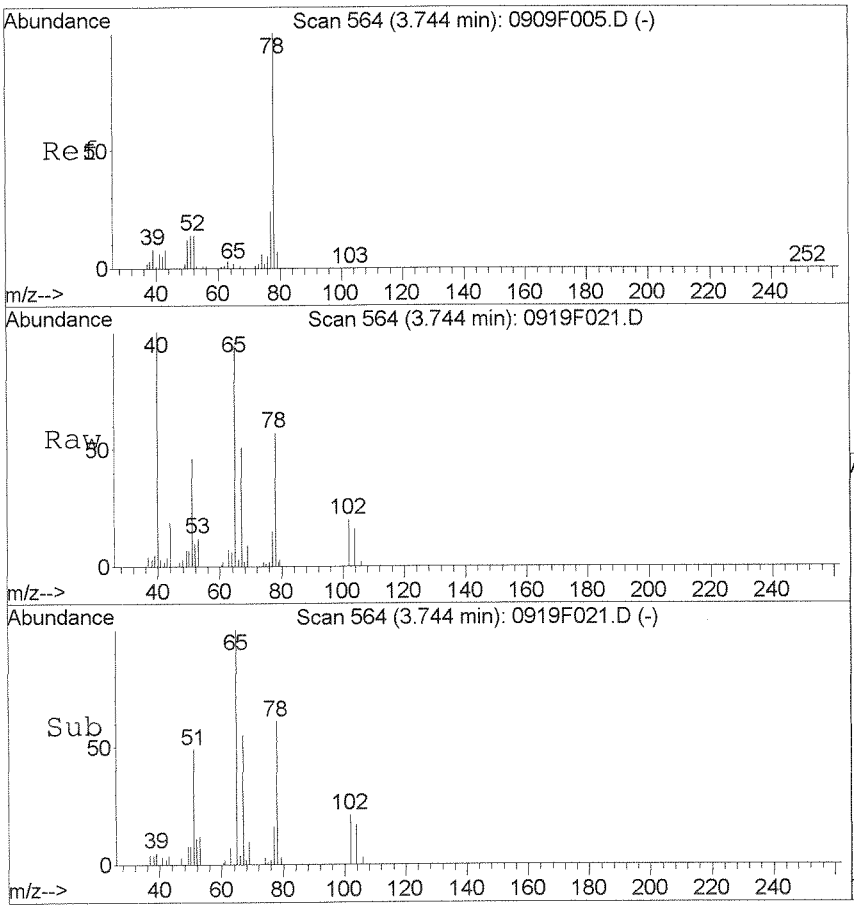


#43
Isobutyl Alcohol
Concen: 8.24 PPB
RT: 3.73 min Scan# 562
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 43 Resp: 666

Ion	Ratio	Lower	Upper
43	100		
41	65.7	41.2	101.2
42	36.8	29.1	89.1

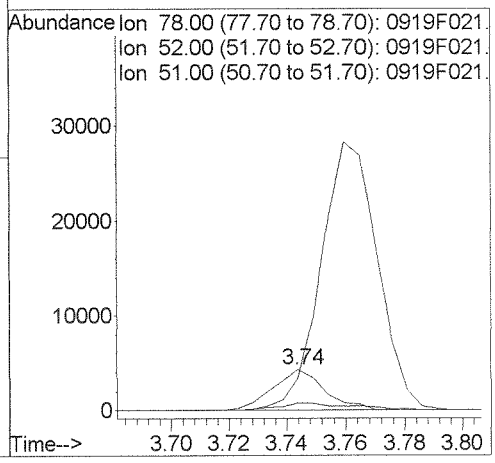


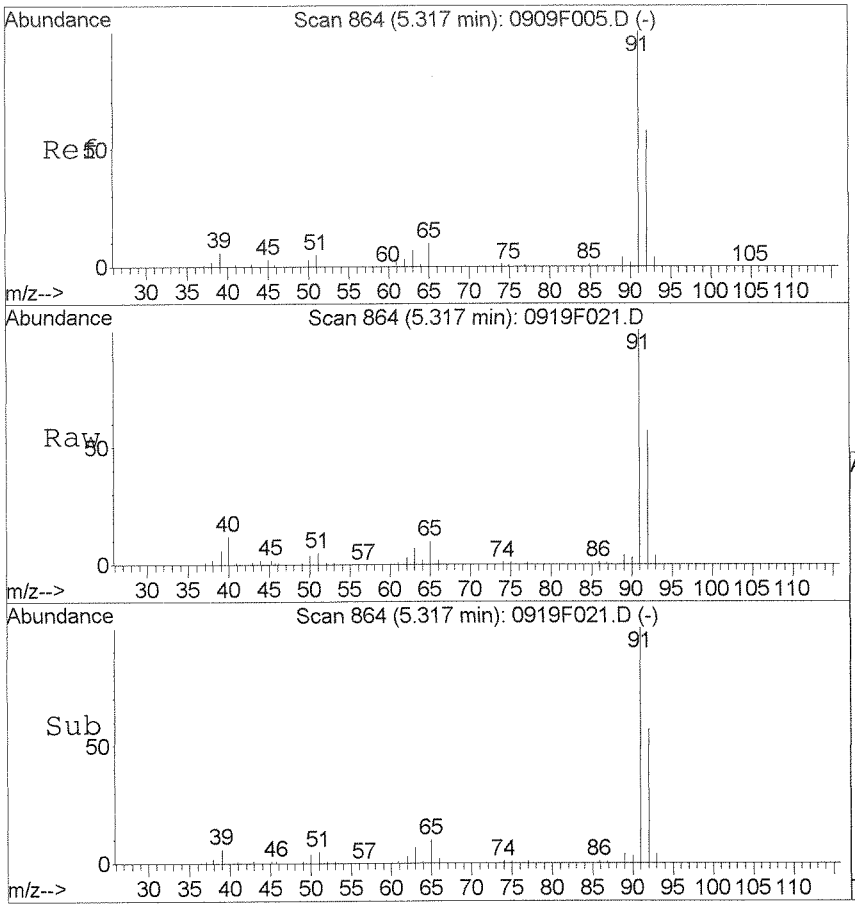


#45
Benzene
Concen: 0.72 PPB
RT: 3.74 min Scan# 564
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 78 Resp: 5308

Ion	Ratio	Lower	Upper
78	100		
52	18.3	0.0	44.3
51	79.8	0.0	44.1#

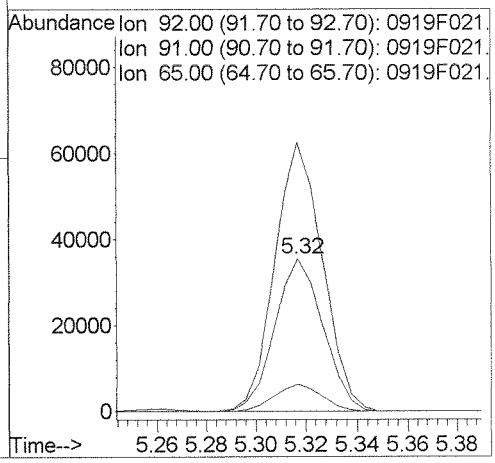


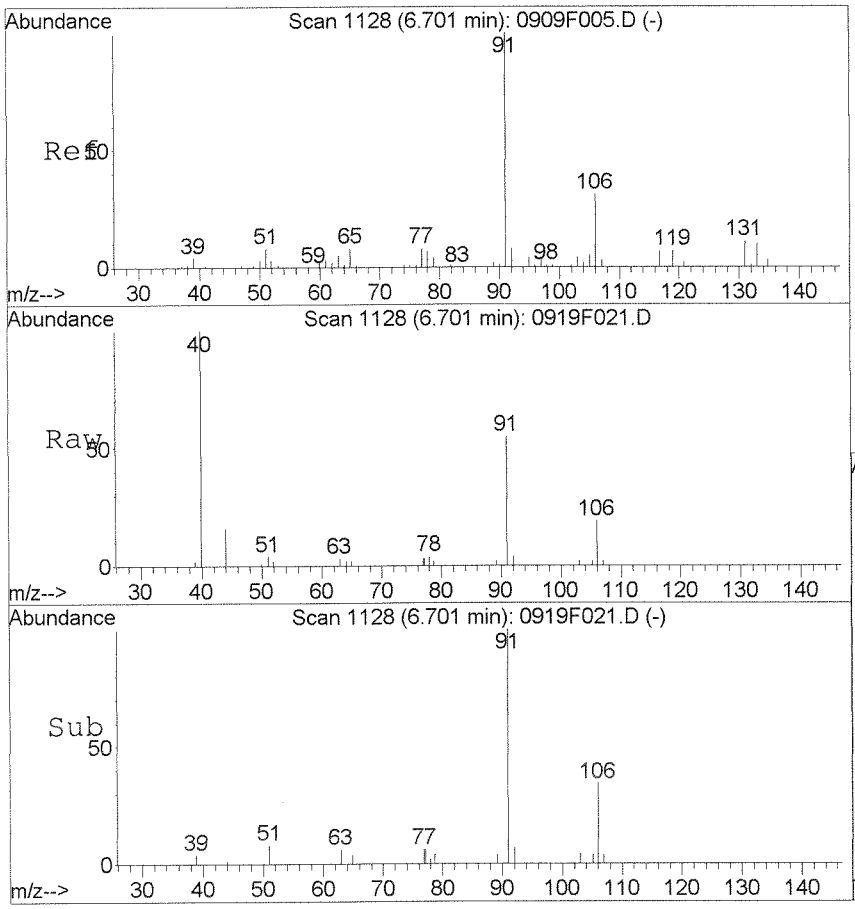


#60
Toluene
Concen: 10.09 PPB
RT: 5.32 min Scan# 864
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion: 92 Resp: 47398

Ion	Ratio	Lower	Upper
92	100		
91	176.1	143.3	203.3
65	18.0	0.0	47.5

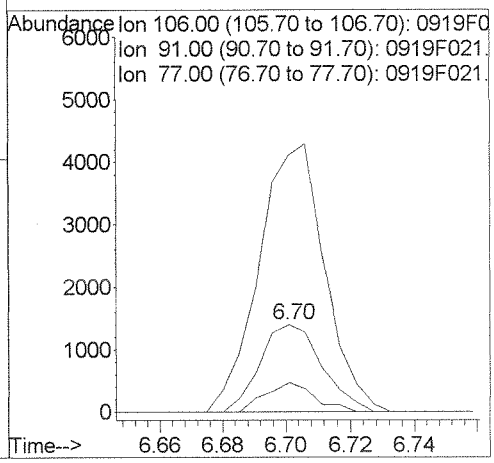


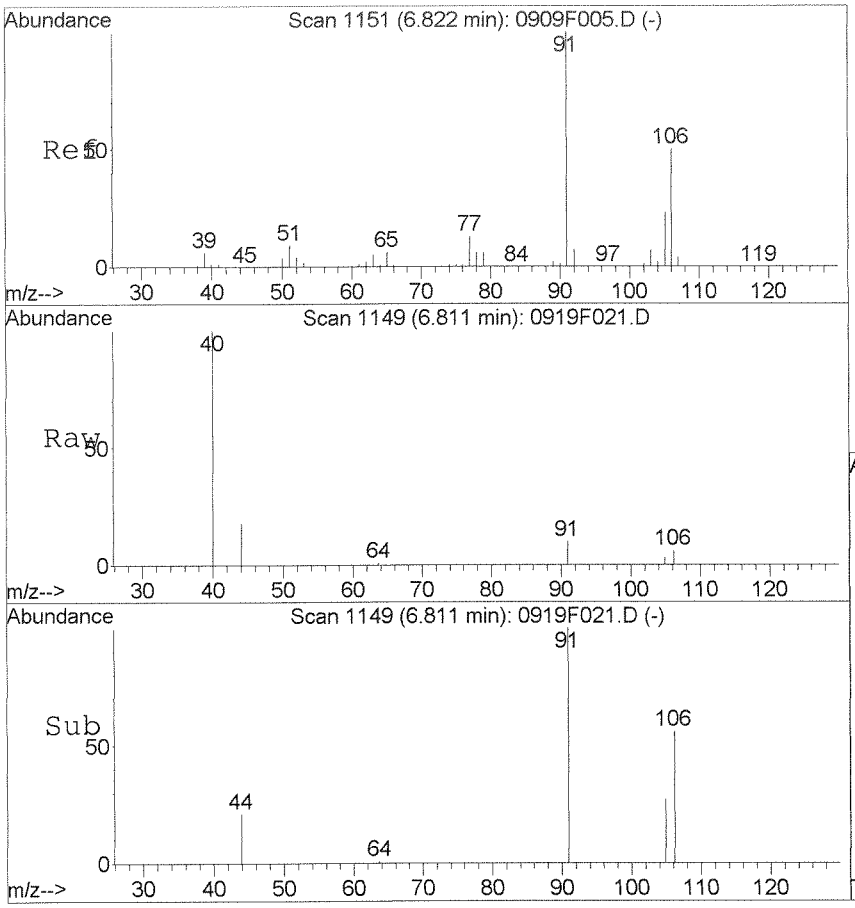


#72
Ethylbenzene
Concen: 0.78 PPB
RT: 6.70 min Scan# 1128
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:106 Resp: 1887

Ion	Ratio	Lower	Upper
106	100		
91	294.0	291.9	351.9
77	33.8	0.0	57.1

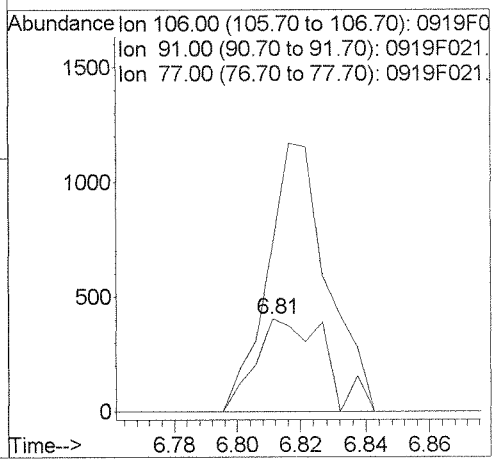


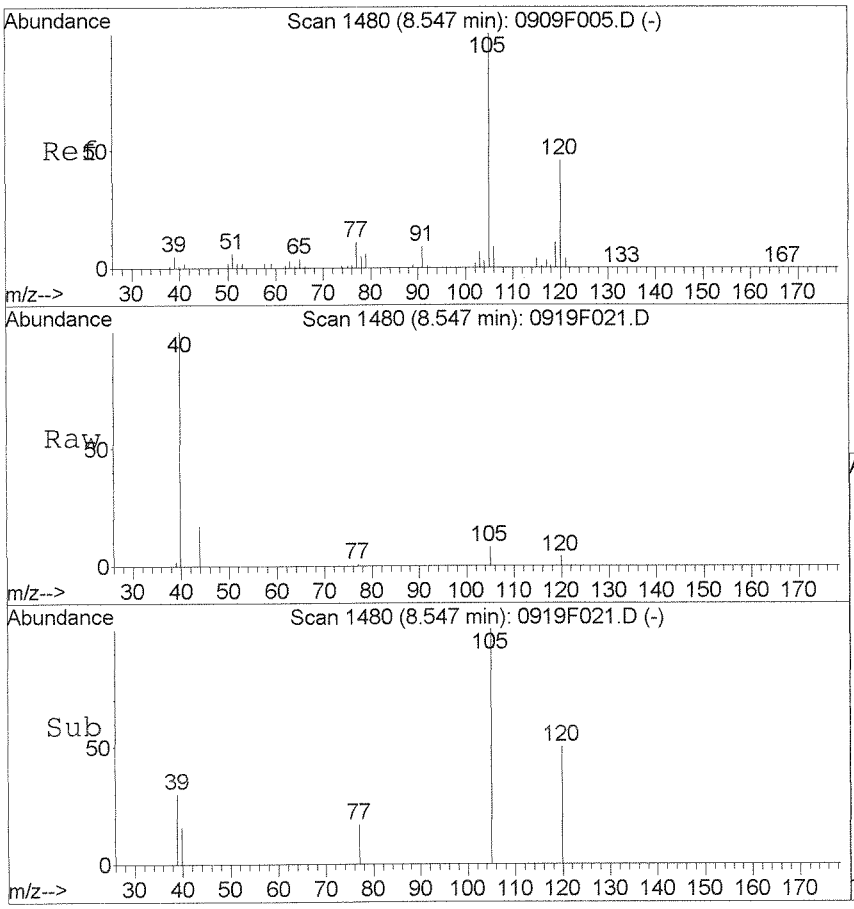


#74
m,p-Xylenes
Concen: 0.21 PPB
RT: 6.81 min Scan# 1149
Delta R.T. -0.01 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:106 Resp: 615

Ion	Ratio	Lower	Upper
106	100		
91	178.5	171.1	231.1
77	0.0	0.0	55.3

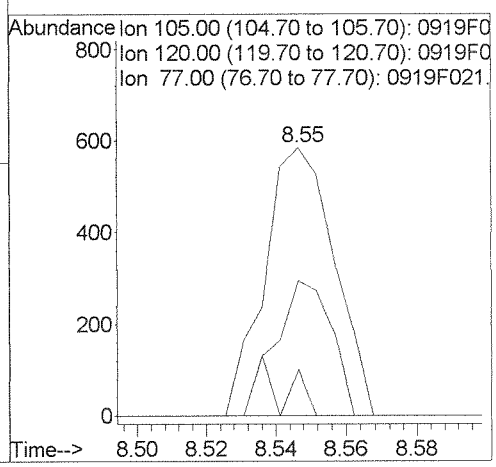


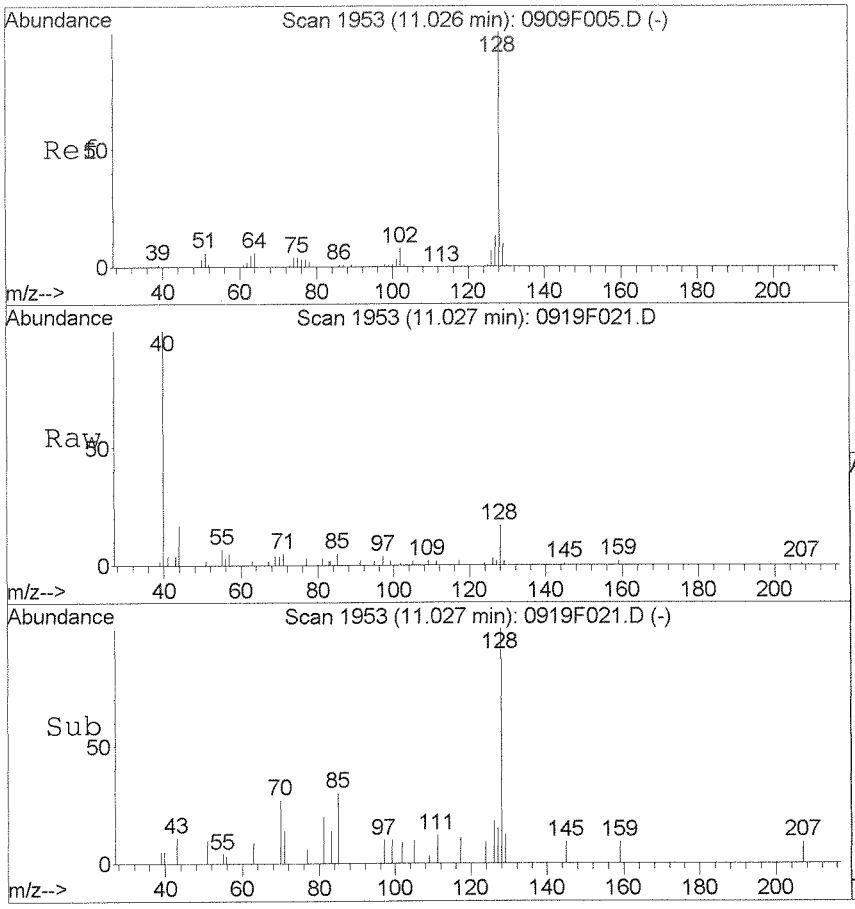


#91
1,2,4-Trimethylbenzene
Concen: 0.15 PPB
RT: 8.55 min Scan# 1480
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:105 Resp: 807

Ion	Ratio	Lower	Upper
105	100		
120	50.4	15.9	75.9
77	17.3	0.0	41.2

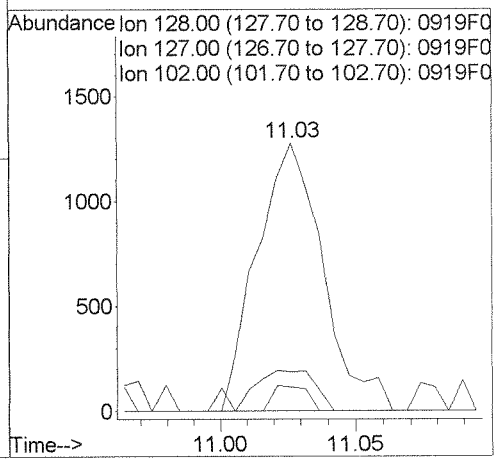




#102
Naphthalene
Concen: 0.43 PPB
RT: 11.03 min Scan# 1953
Delta R.T. 0.00 min
Lab File: 0919F021.D
Acq: 19 Sep 2014 5:23 pm

Tgt Ion:128 Resp: 2174

Ion	Ratio	Lower	Upper
128	100		
127	14.6	0.0	43.1
102	8.9	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F022.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 17:43
Date Quantitated: 09/22/2014 14:12
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV low
	Vinyl Chloride	-25.3	NA	20	"
Surrogates	4-Bromofluorobenzene	82	88	127	Reran

Primary Review: [signature]

Secondary Review: [signature] 9/24/14

Printed: 09/22/2014 14:30:25
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F022.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:43	**Quant Date:**	09/22/2014 14:12	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376456	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	386646	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	128410	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	80722	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	98873	51.23	102	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	343470	45.98	92	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	93732	41.06	82	88-127	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.26	U	
1	Vinyl Chloride				62	0		0.26	U	
1	1,1-Dichloroethene				96	0		0.36	U	
1	Acetone	1.96	0.01	0.00	43	31240	66.41	95		
1	Carbon Disulfide	2.00		0.00	76	9573	1.96	2.8	J	
1	Methylene Chloride	2.24	0.01	0.00	84	4628	2.27	3.2	J	
1	trans-1,2-Dichloroethene				96	0		0.18	U	
1	cis-1,2-Dichloroethene				96	0		0.18	U	
1	2-Butanone (MEK)	3.17		0.00	72	1882	8.09	12	J	
1	Carbon Tetrachloride				117	0		0.14	U	
1	Benzene	3.75	0.01	0.00	78	16354	2.34	3.3	J	
1	Trichloroethene (TCE)	4.26	0.01	0.00	95	920	0.5300	0.75	J	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	5.32		0.00	92	21848	4.94	7.0	J	
2	Tetrachloroethene (PCE)				164	0		0.23	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F022.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 17:43	**Quant Date:**	09/22/2014 14:12	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0**d**		1.4	U	
2	Dibromochloromethane				129	0		0.26	U	
2	Ethylbenzene	6.70		0.00	106	738	0.3500	0.50	J	
2	m,p-Xylenes	6.82		0.00	106	1712	0.6500	0.93	J	
2	o-Xylene	7.21		0.00	106	724	0.2700	0.38	J	
2	Styrene				103	0		0.20	U	
2	Bromoform				173	0		0.20	U	
3	1,2,4-Trichlorobenzene				180	0		0.19	U	

Prep Amount:	3.51 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F022.D Vial: 21
Acq On : 19 Sep 2014 5:43 pm Operator: KR
Sample : K09921-008 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:11:06 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

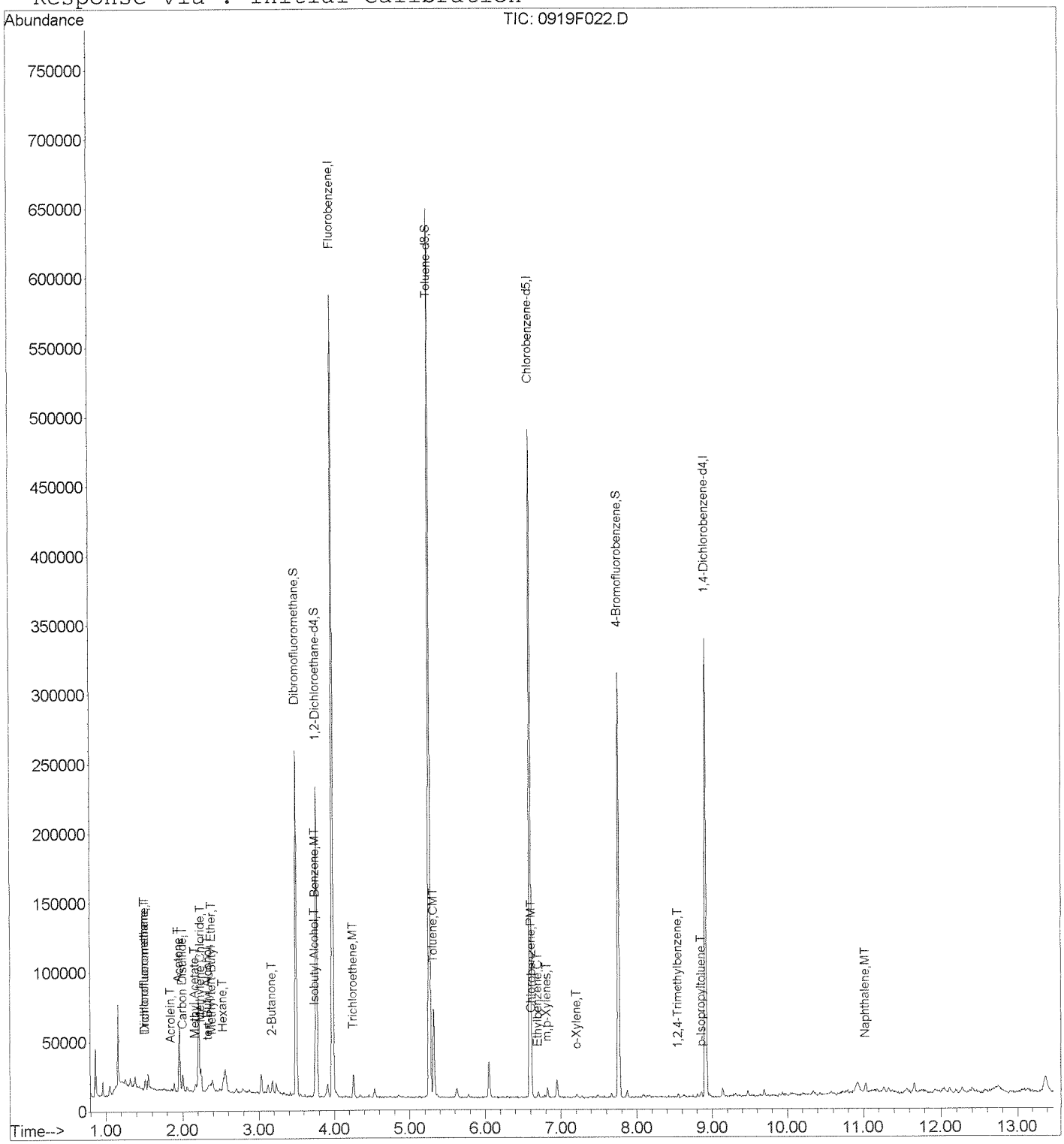
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	386646	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	128410	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	80722	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	98873	51.23	PPB		0.00
Spiked Amount 50.000			Recovery =	102.46%			
44) 1,2-Dichloroethane-d4	3.76	65	94936	49.11	PPB		0.00
Spiked Amount 50.000			Recovery =	98.22%			
59) Toluene-d8	5.26	98	343470	45.98	PPB		0.00
Spiked Amount 50.000			Recovery =	91.96%			
80) 4-Bromofluorobenzene	7.76	95	93732	41.06	PPB		0.00
Spiked Amount 50.000			Recovery =	82.12%			
Target Compounds							Qvalue
7) Dichlorofluoromethane	1.51	67	719	0.24	PPB		83
8) Trichlorofluoromethane	1.51	101	2589	1.09	PPB		91
10) Acrolein	1.85	56	588	1.96	PPB		89
13) Acetone	1.96	43	31240	66.41	PPB		98
15) Carbon Disulfide	2.00	76	9573	1.96	PPB		98
17) Methyl Acetate	2.17	43	3285	2.76	PPB	#	53
19) Methylene Chloride	2.24	84	4628	2.27	PPB		92
20) tert-Butyl Alcohol	2.33	59	990	4.89	PPB	#	36
22) Methyl tert-Butyl Ether	2.39	73	4008	0.78	PPB		95
24) Hexane	2.53	57	2407	1.08	PPB		96
32) 2-Butanone	3.17	72	1882	8.09	PPB	#	68
43) Isobutyl Alcohol	3.74	43	859	11.28	PPB		81
45) Benzene	3.75	78	16354	2.34	PPB	#	59
48) Trichloroethene	4.26	95	920	0.53	PPB		93
60) Toluene	5.32	92	21848	4.94	PPB		93
71) Chlorobenzene	6.62	112	891	0.21	PPB		75
72) Ethylbenzene	6.70	106	738	0.35	PPB	#	76
74) m,p-Xylenes	6.82	106	1712	0.65	PPB		89
75) o-Xylene	7.21	106	724	0.27	PPB		82
91) 1,2,4-Trimethylbenzene	8.55	105	1137	0.30	PPB		81
93) p-Isopropyltoluene	8.85	119	1606	0.41	PPB		85
102) Naphthalene	11.03	128	4586	1.28	PPB		90

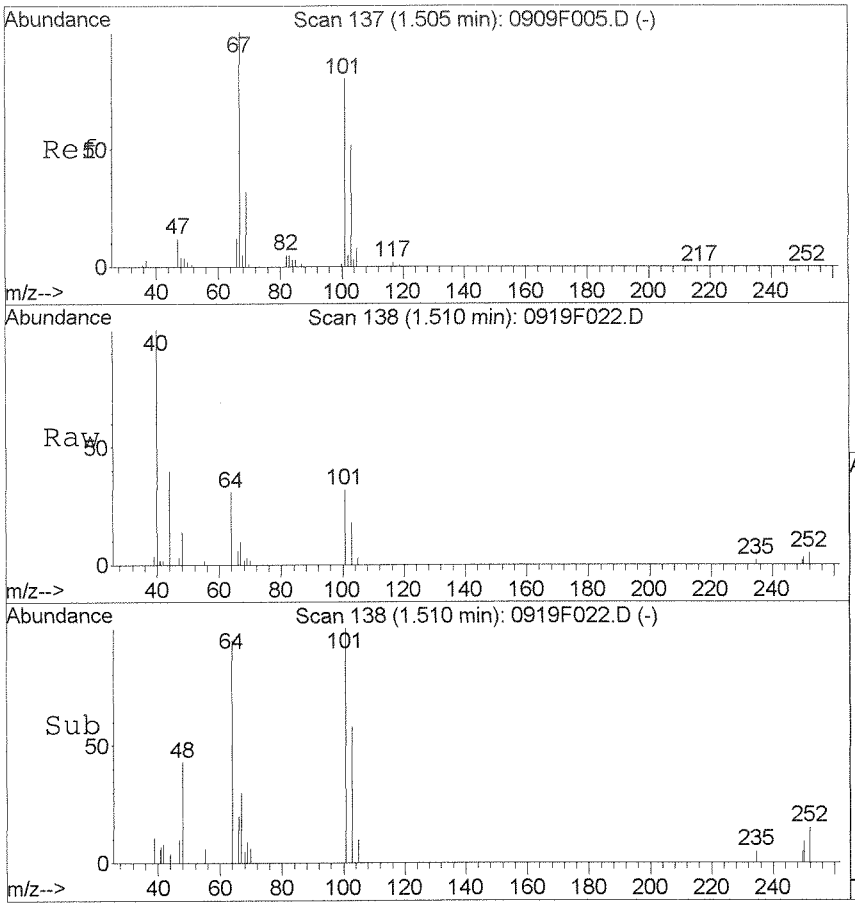
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F022.D Vial: 21
Acq On : 19 Sep 2014 5:43 pm Operator: KR
Sample : K09921-008 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:12 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

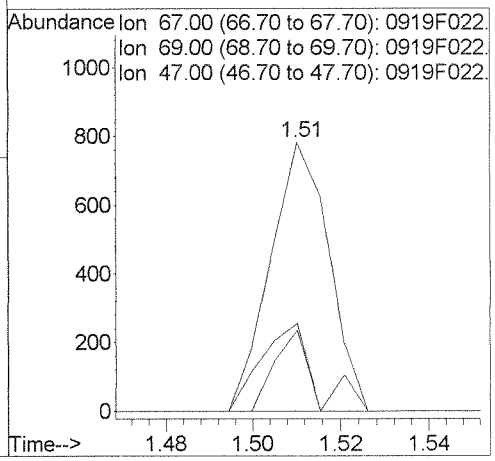


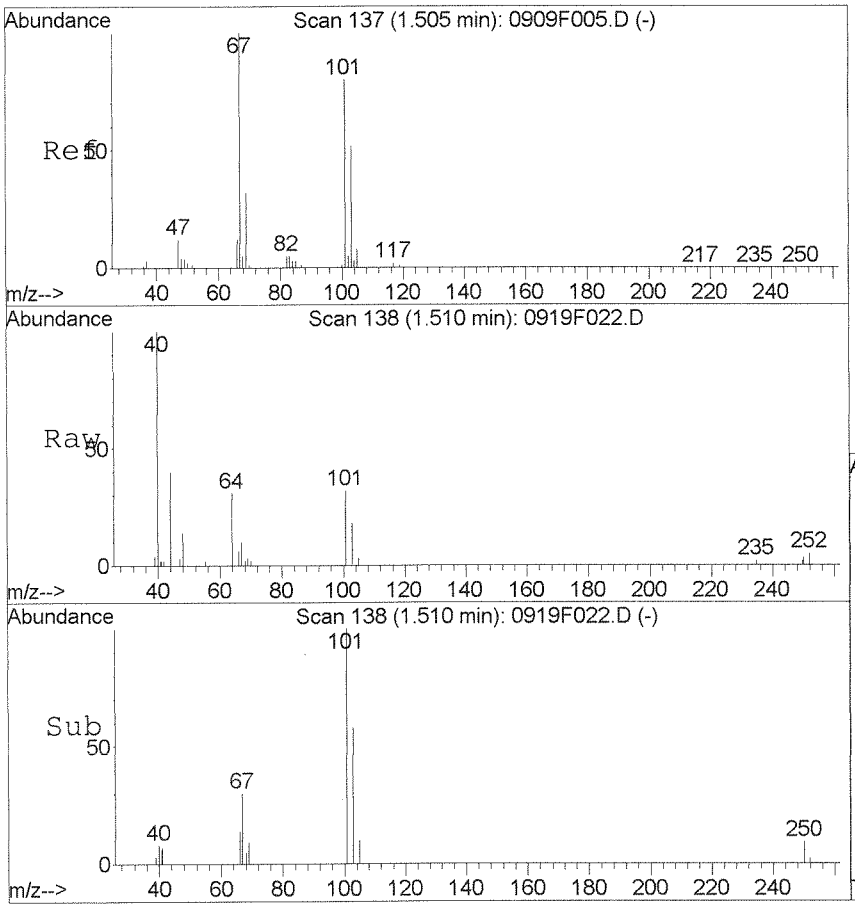


#7
Dichlorofluoromethane
Concen: 0.24 PPB
RT: 1.51 min Scan# 138
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 67 Resp: 719

Ion	Ratio	Lower	Upper
67	100		
69	30.1	1.6	61.6
47	32.6	0.0	42.2

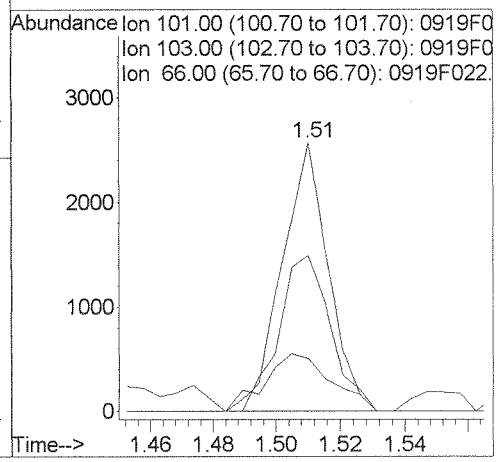


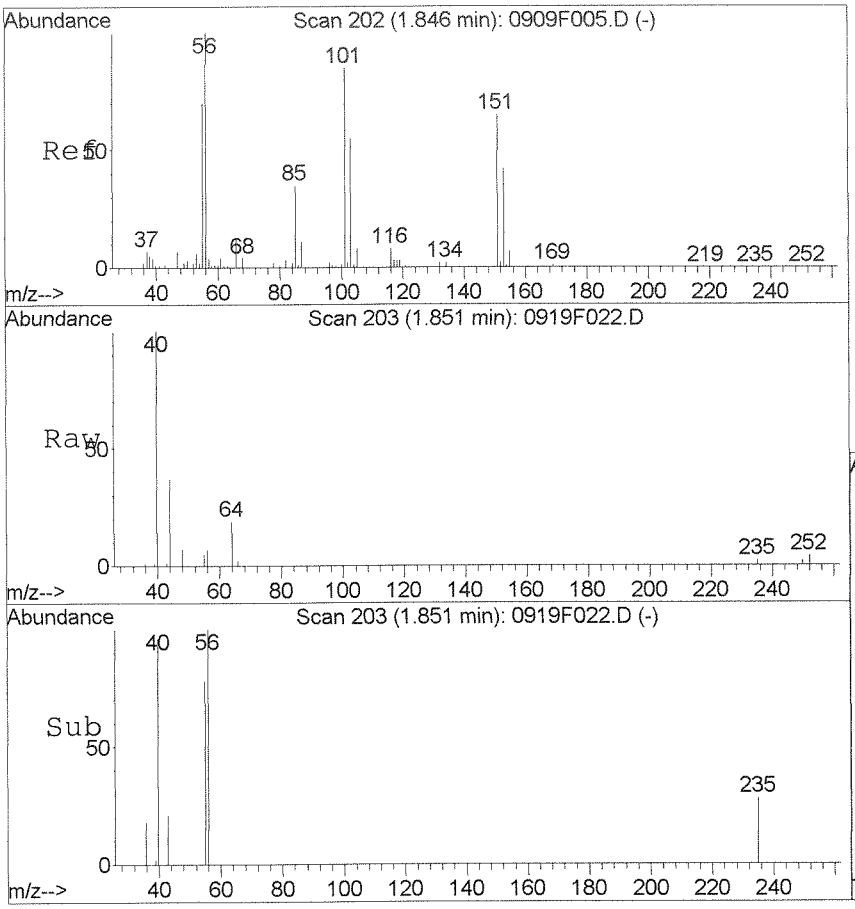


#8
Trichlorofluoromethane
Concen: 1.09 PPB
RT: 1.51 min Scan# 138
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:101 Resp: 2589

Ion	Ratio	Lower	Upper
101	100		
103	58.1	34.7	94.7
66	19.6	0.0	45.0

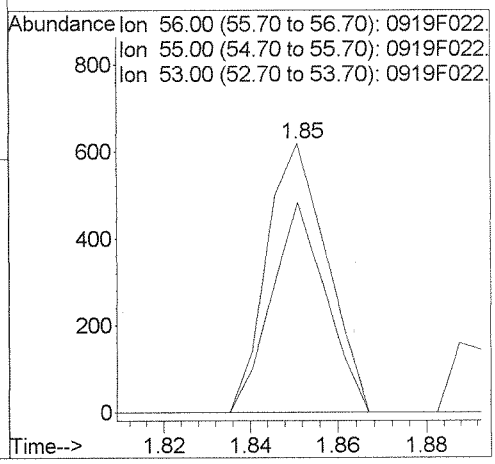


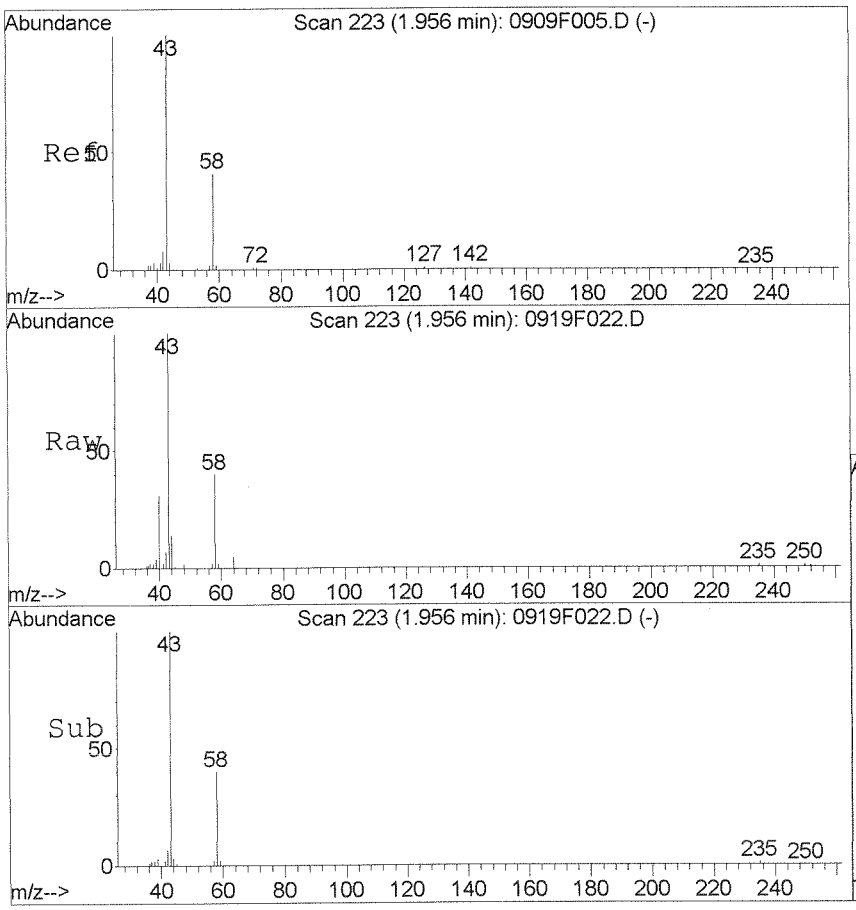


#10
Acrolein
Concen: 1.96 PPB
RT: 1.85 min Scan# 203
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 56 Resp: 588

Ion	Ratio	Lower	Upper
56	100		
55	78.2	39.9	99.9
53	0.0	0.0	36.3

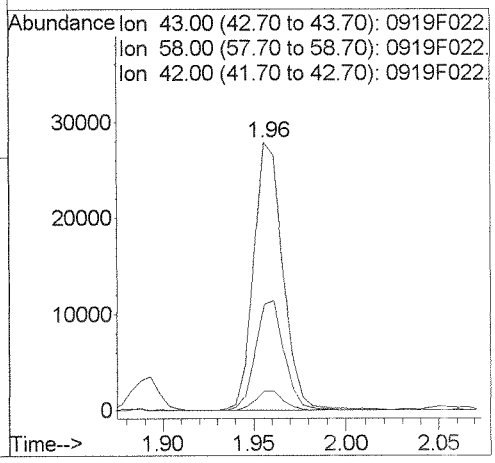


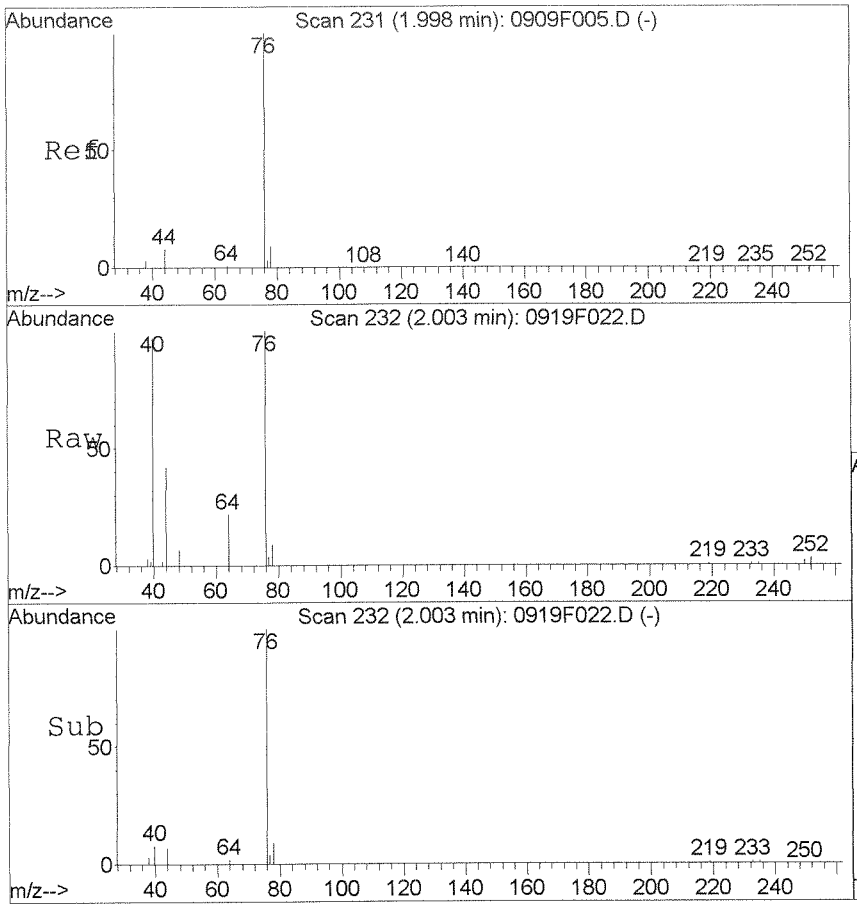


#13
Acetone
Concen: 66.41 PPB
RT: 1.96 min Scan# 223
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 43 Resp: 31240

Ion	Ratio	Lower	Upper
43	100		
58	39.6	11.3	71.3
42	7.3	0.0	37.7

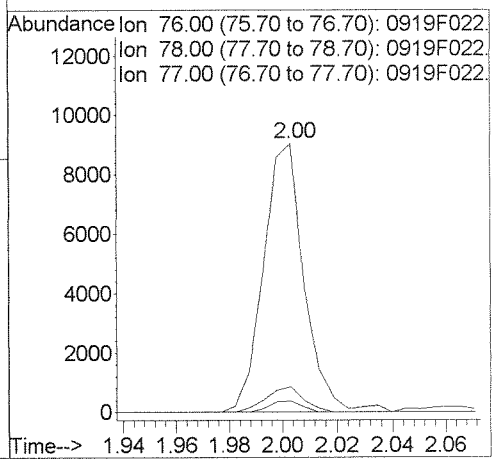


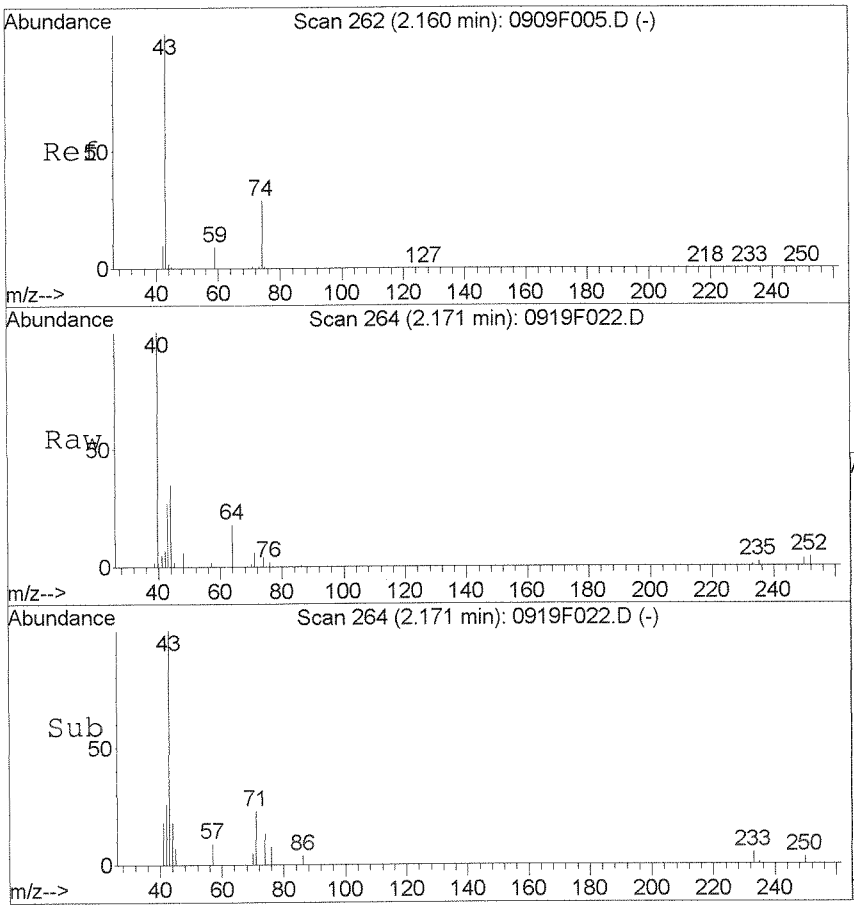


#15
Carbon Disulfide
Concen: 1.96 PPB
RT: 2.00 min Scan# 232
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 76 Resp: 9573

Ion	Ratio	Lower	Upper
76	100		
78	9.5	0.0	39.0
77	4.1	0.0	32.6

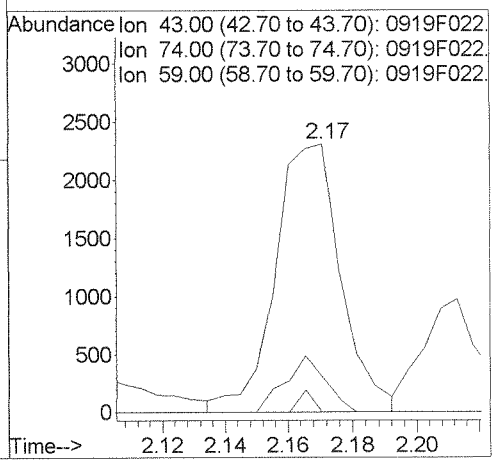


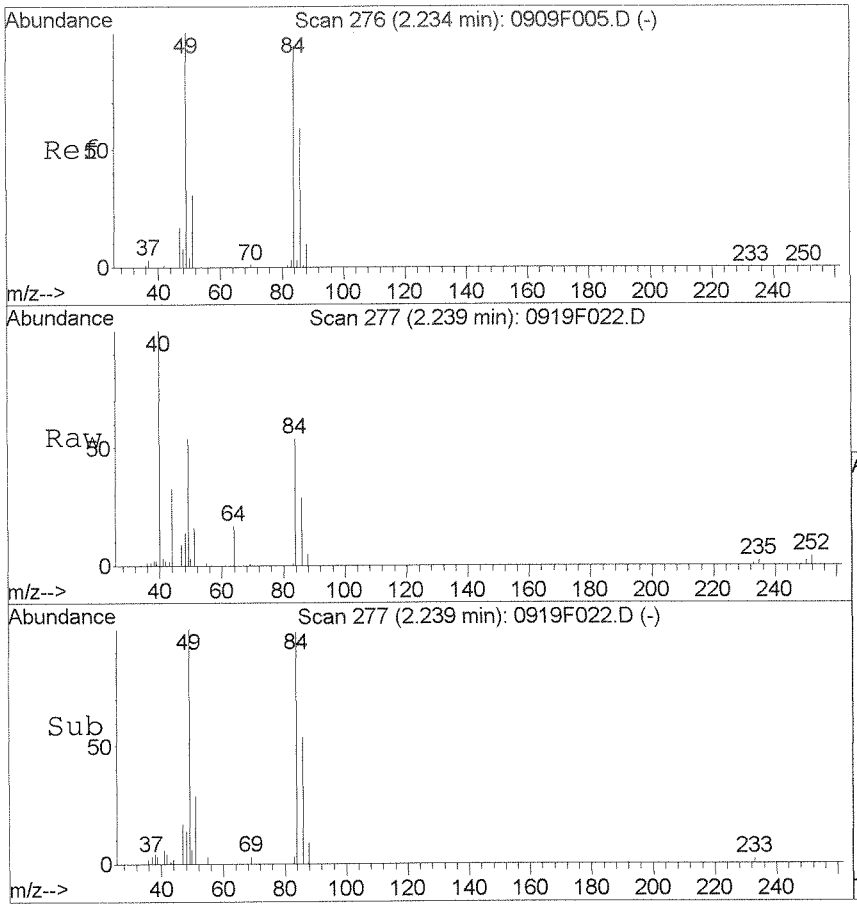


#17
Methyl Acetate
Concen: 2.76 PPB
RT: 2.17 min Scan# 264
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 43 Resp: 3285

Ion	Ratio	Lower	Upper
43	100		
74	0.0	20.4	37.8#
59	0.0	6.2	11.4#

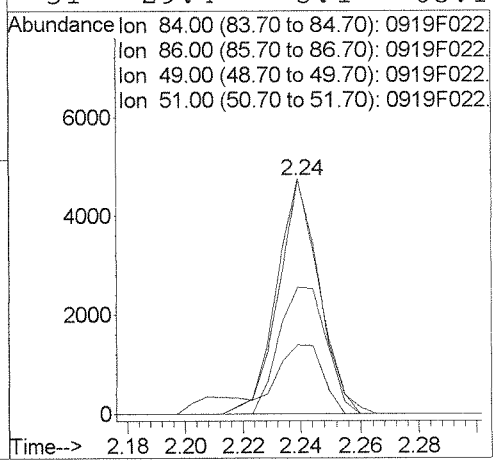


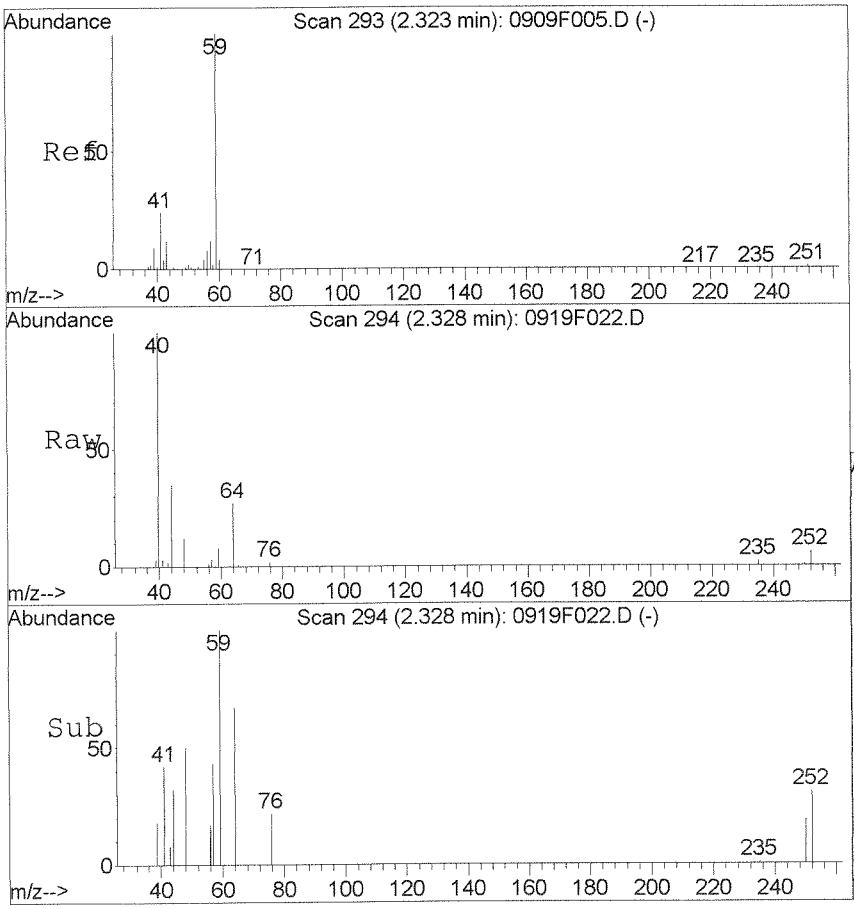


#19
Methylene Chloride
Concen: 2.27 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 84 Resp: 4628

Ion	Ratio	Lower	Upper
84	100		
86	54.0	32.9	92.9
49	100.6	76.9	136.9
51	29.4	3.1	63.1

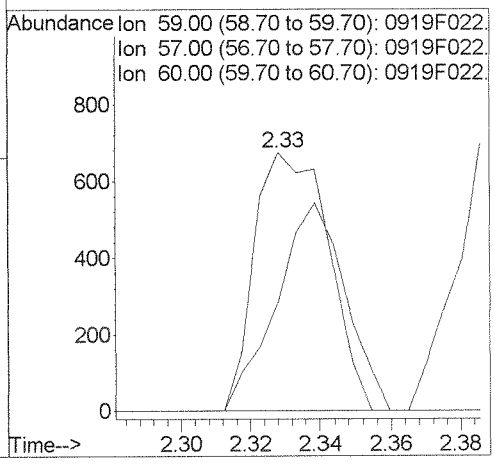


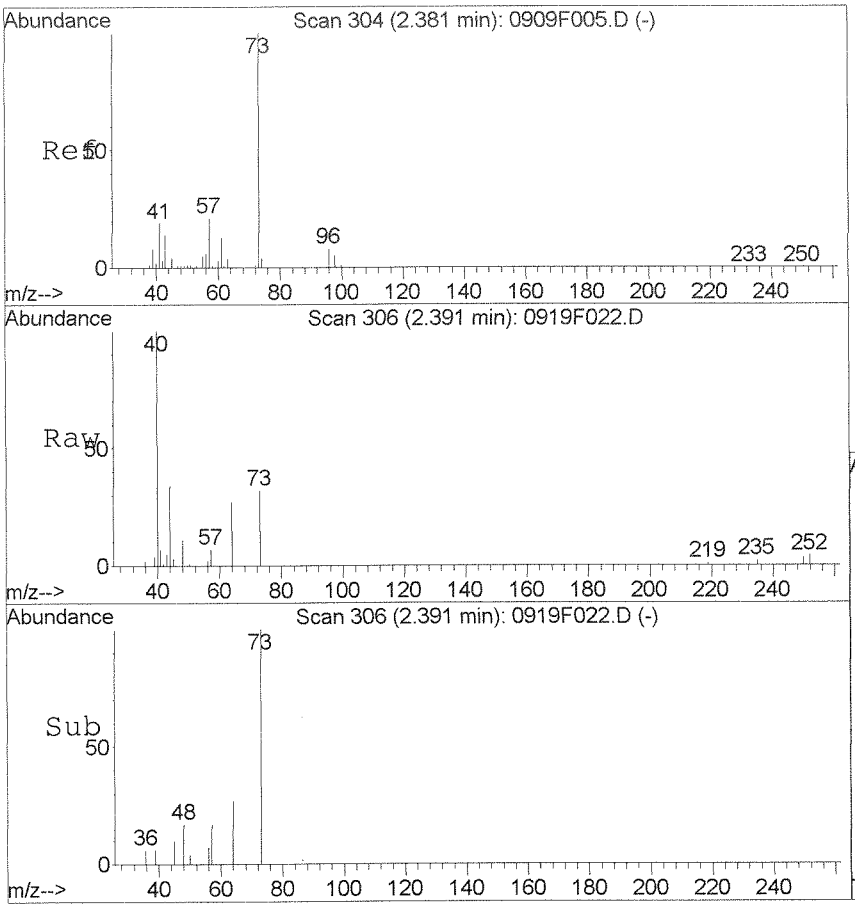


#20
tert-Butyl Alcohol
Concen: 4.89 PPB
RT: 2.33 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 59 Resp: 990

Ion	Ratio	Lower	Upper
59	100		
57	42.7	0.0	41.5#
60	0.0	0.0	33.6

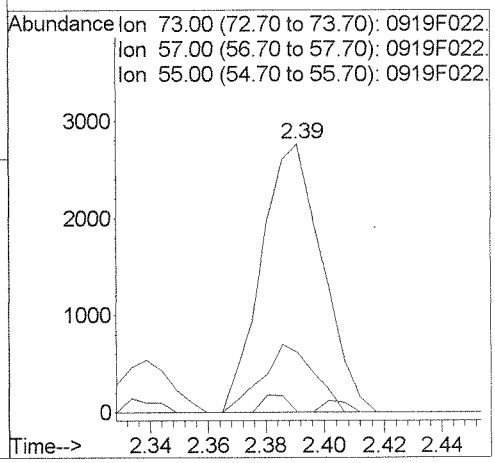


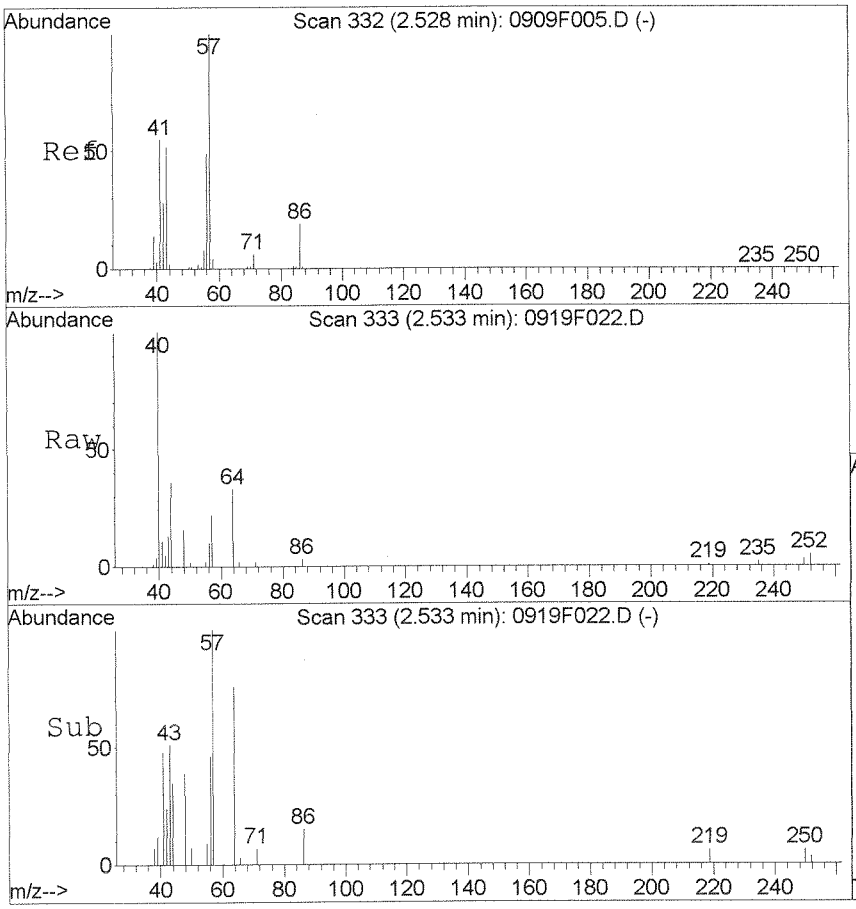


#22
Methyl tert-Butyl Ether
Concen: 0.78 PPB
RT: 2.39 min Scan# 306
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 73 Resp: 4008

Ion	Ratio	Lower	Upper
73	100		
57	22.3	0.0	51.5
55	0.0	0.0	35.6

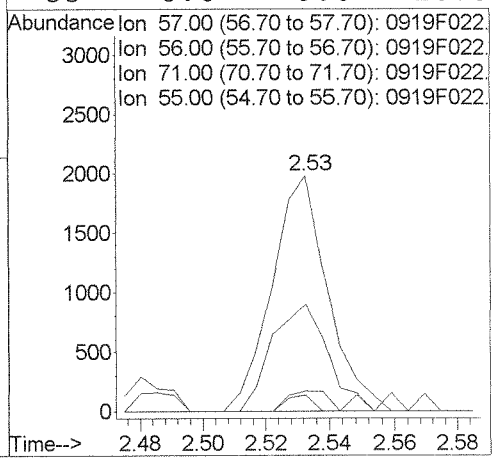


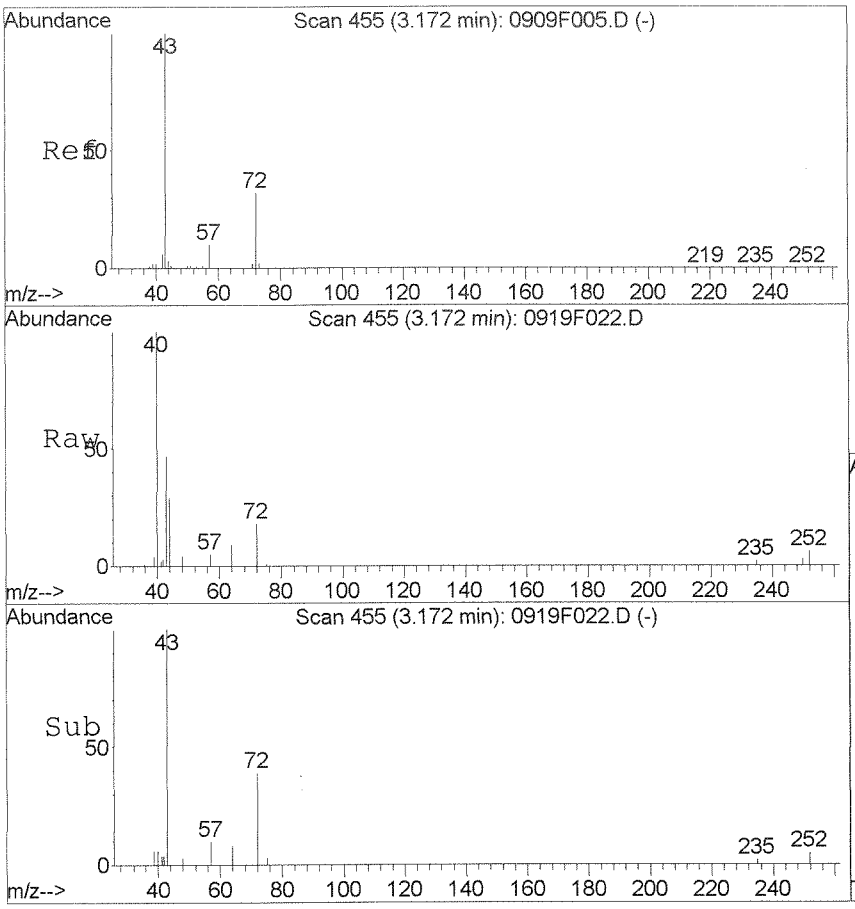


#24
Hexane
Concen: 1.08 PPB
RT: 2.53 min Scan# 333
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 57 Resp: 2407

Ion	Ratio	Lower	Upper
57	100		
56	45.6	18.8	78.8
71	6.9	0.0	35.9
55	8.6	0.0	20.6

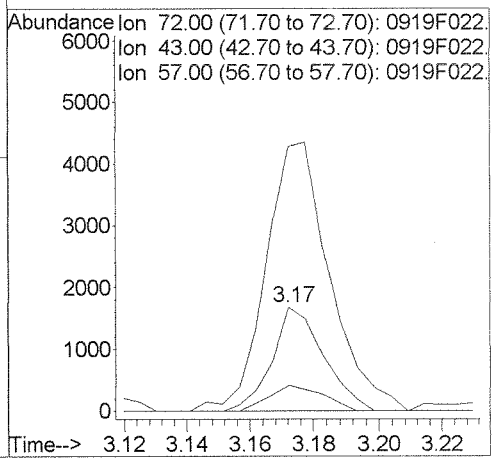


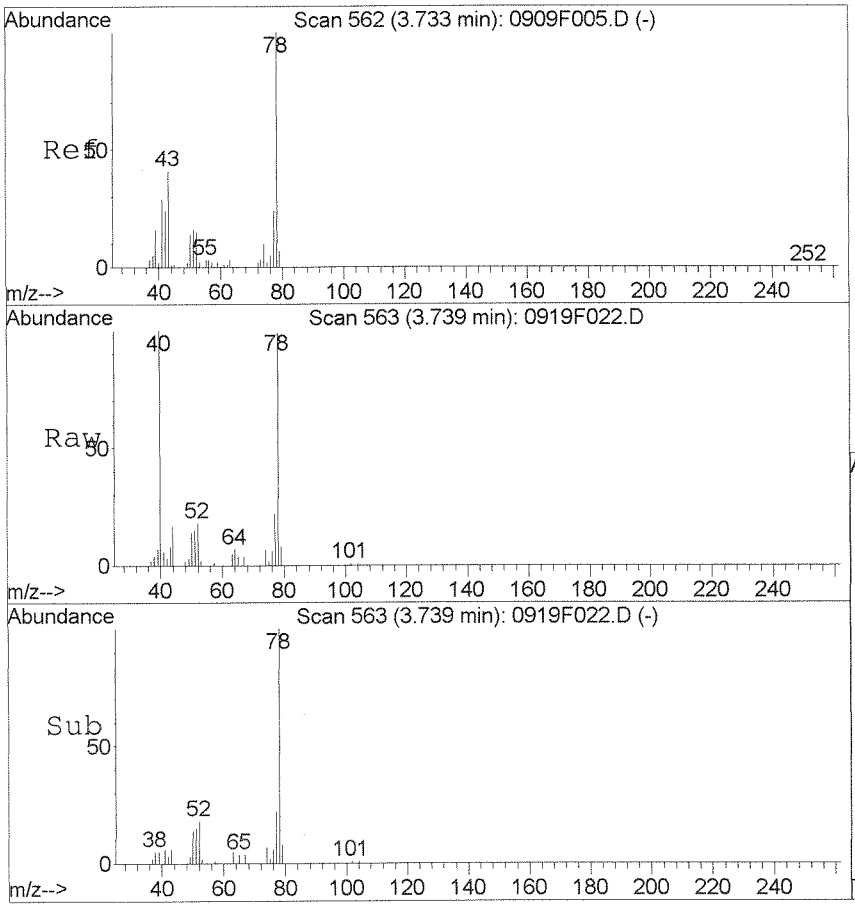


#32
2-Butanone
Concen: 8.09 PPB
RT: 3.17 min Scan# 455
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 72 Resp: 1882

Ion	Ratio	Lower	Upper
72	100		
43	245.9	284.6	344.6#
57	24.9	0.2	60.2

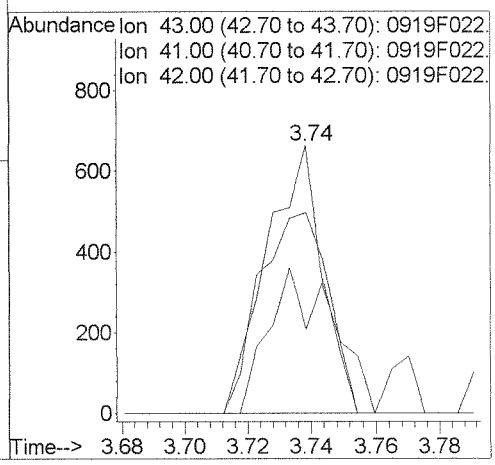


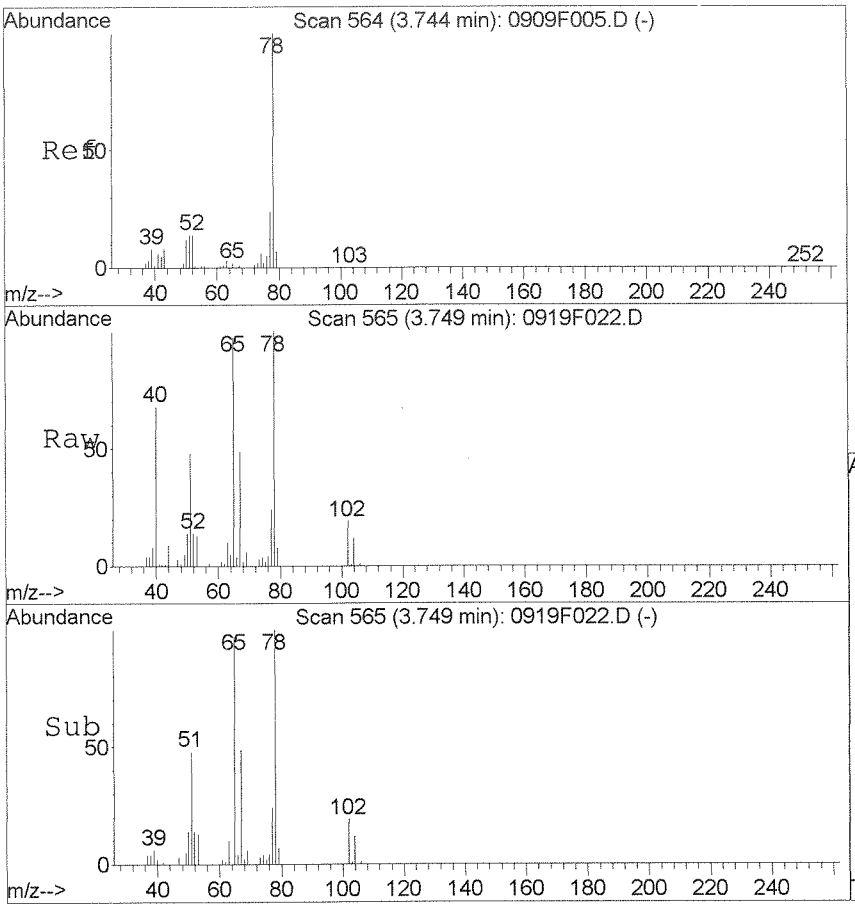


#43
Isobutyl Alcohol
Concen: 11.28 PPB
RT: 3.74 min Scan# 563
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 43 Resp: 859

Ion	Ratio	Lower	Upper
43	100		
41	74.8	41.2	101.2
42	31.5	29.1	89.1

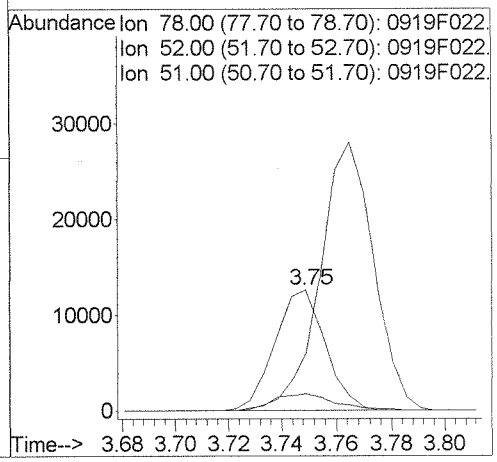


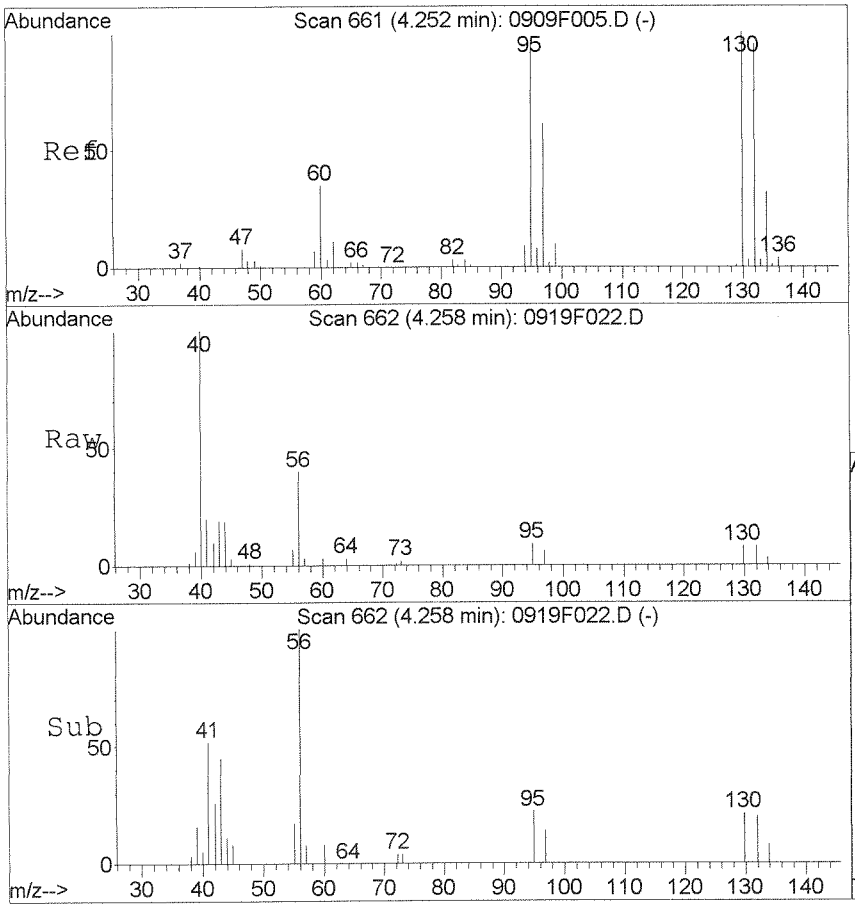


#45
Benzene
Concen: 2.34 PPB
RT: 3.75 min Scan# 565
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 78 Resp: 16354

Ion	Ratio	Lower	Upper
78	100		
52	13.9	0.0	44.3
51	47.5	0.0	44.1#

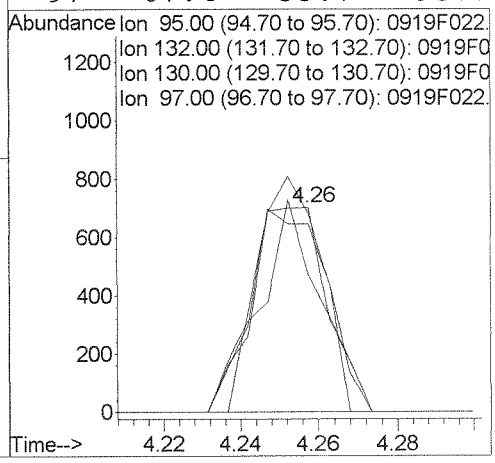


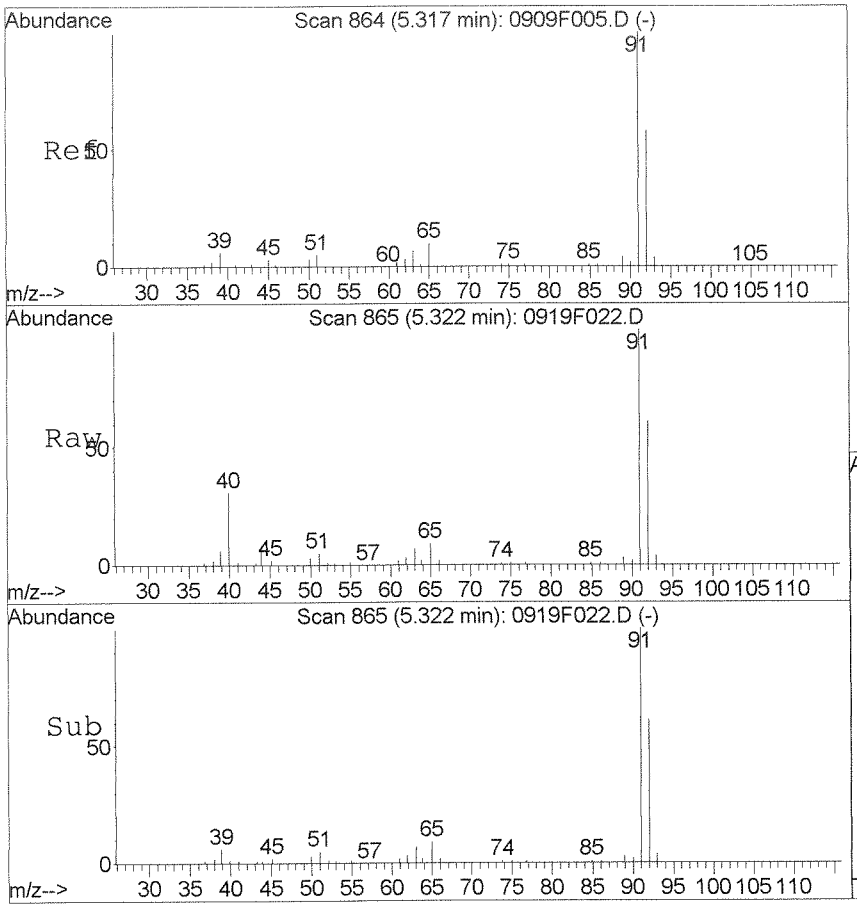


#48
Trichloroethene
Concen: 0.53 PPB
RT: 4.26 min Scan# 662
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 95 Resp: 920

Ion	Ratio	Lower	Upper
95	100		
132	92.0	70.6	130.6
130	97.0	75.3	135.3
97	67.4	33.7	93.7

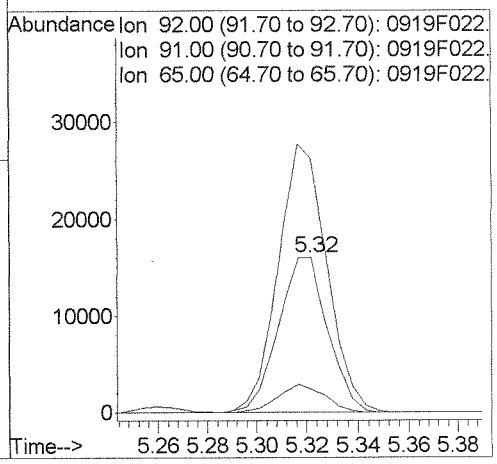


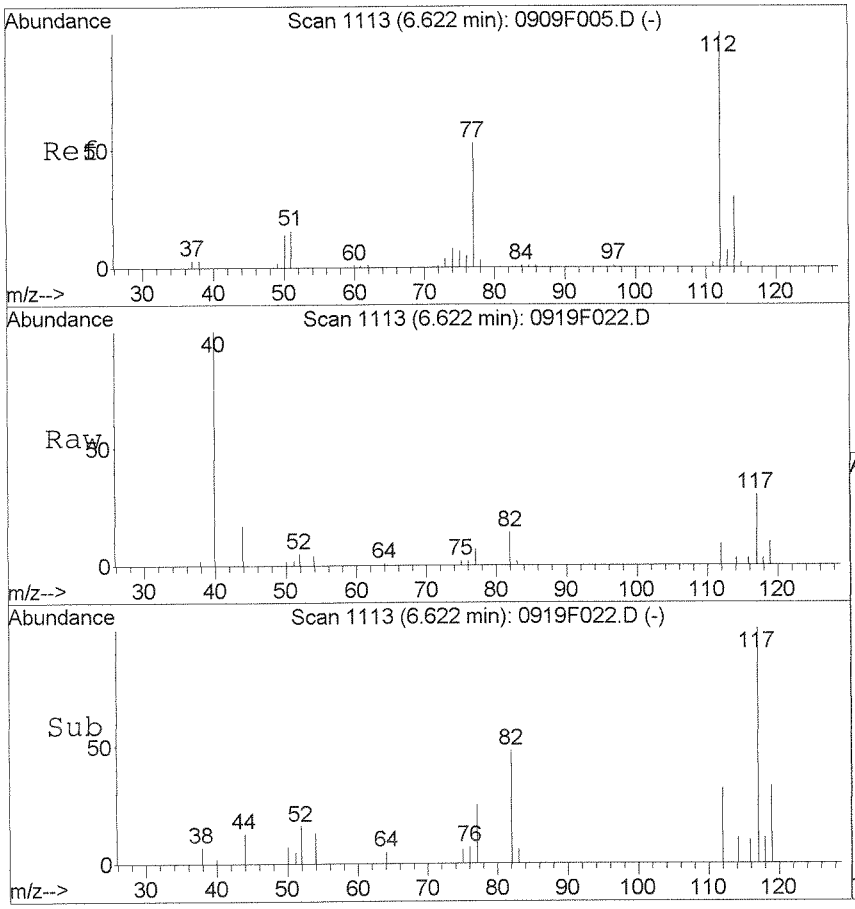


#60
Toluene
Concen: 4.94 PPB
RT: 5.32 min Scan# 865
Delta R.T. 0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion: 92 Resp: 21848

Ion	Ratio	Lower	Upper
92	100		
91	163.4	143.3	203.3
65	14.9	0.0	47.5

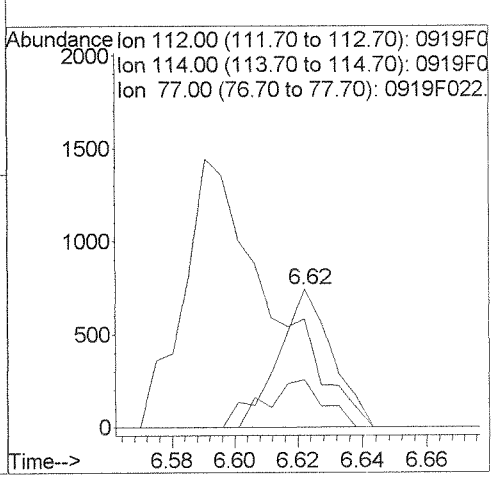


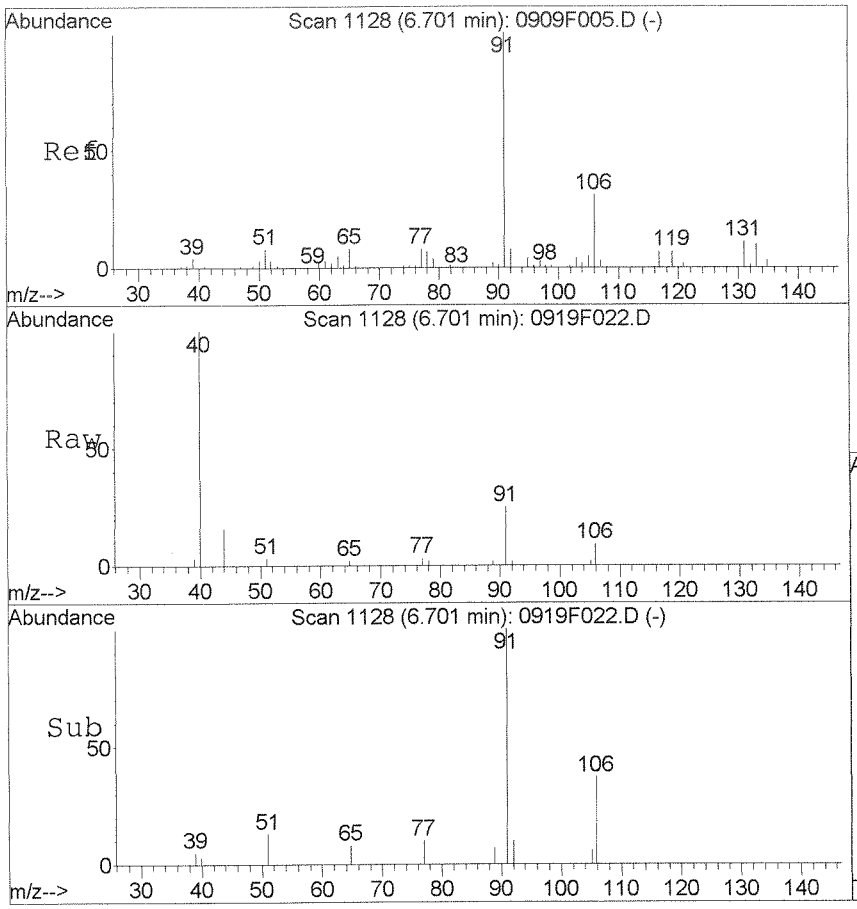


#71
Chlorobenzene
Concen: 0.21 PPB
RT: 6.62 min Scan# 1113
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:112 Resp: 891

Ion	Ratio	Lower	Upper
112	100		
114	34.6	0.5	60.5
77	78.5	23.4	83.4

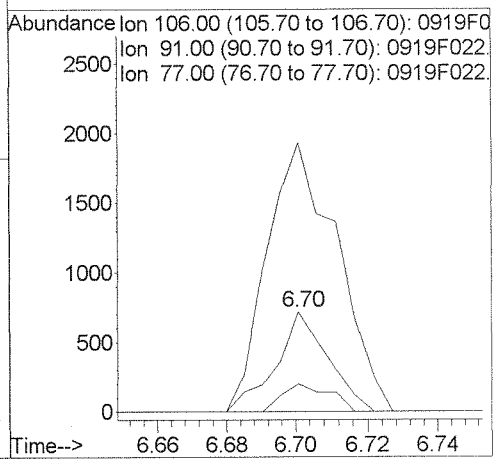


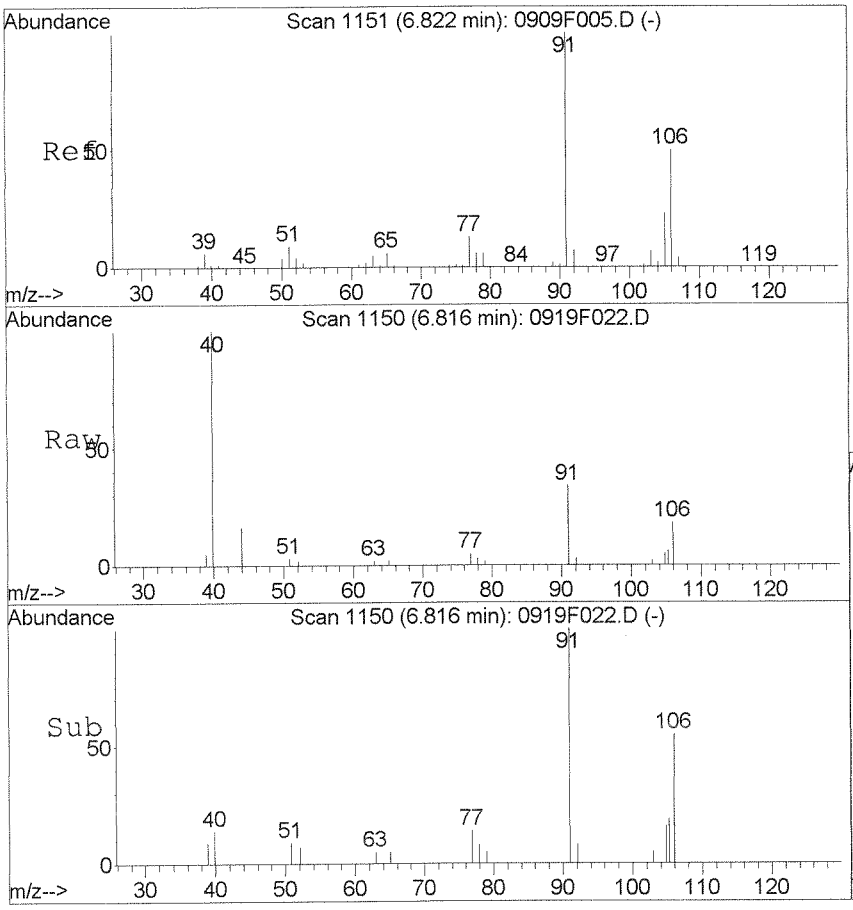


#72
Ethylbenzene
Concen: 0.35 PPB
RT: 6.70 min Scan# 1128
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:106 Resp: 738

Ion	Ratio	Lower	Upper
106	100		
91	268.9	291.9	351.9#
77	27.9	0.0	57.1

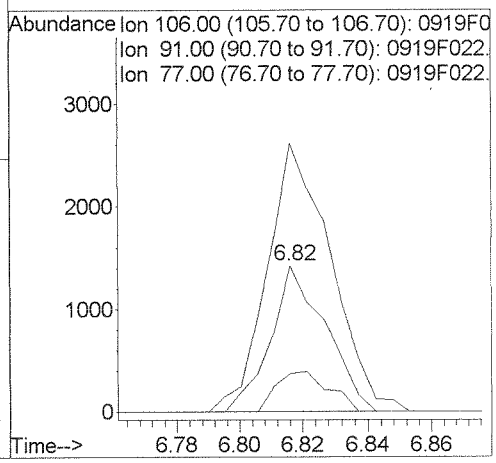


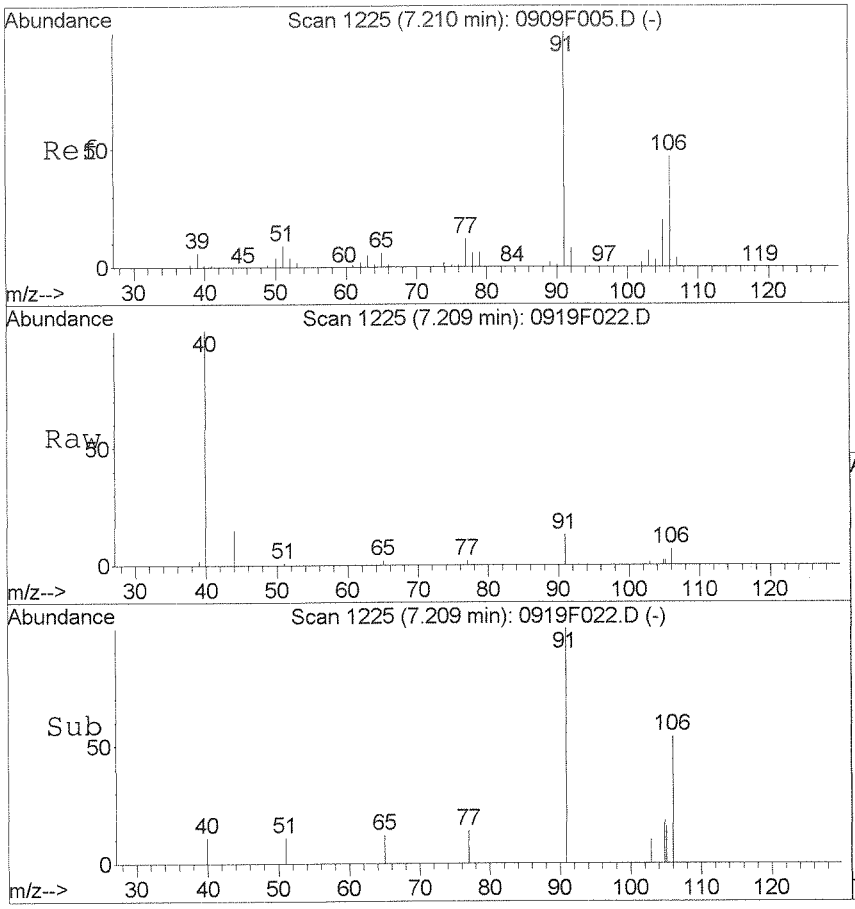


#74
m,p-Xylenes
Concen: 0.65 PPB
RT: 6.82 min Scan# 1150
Delta R.T. -0.01 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:106 Resp: 1712

Ion	Ratio	Lower	Upper
106	100		
91	183.4	171.1	231.1
77	26.2	0.0	55.3

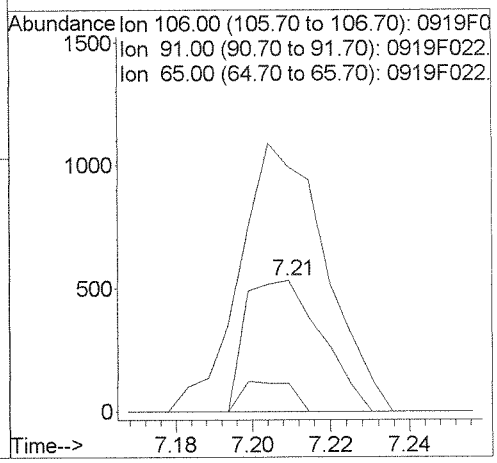


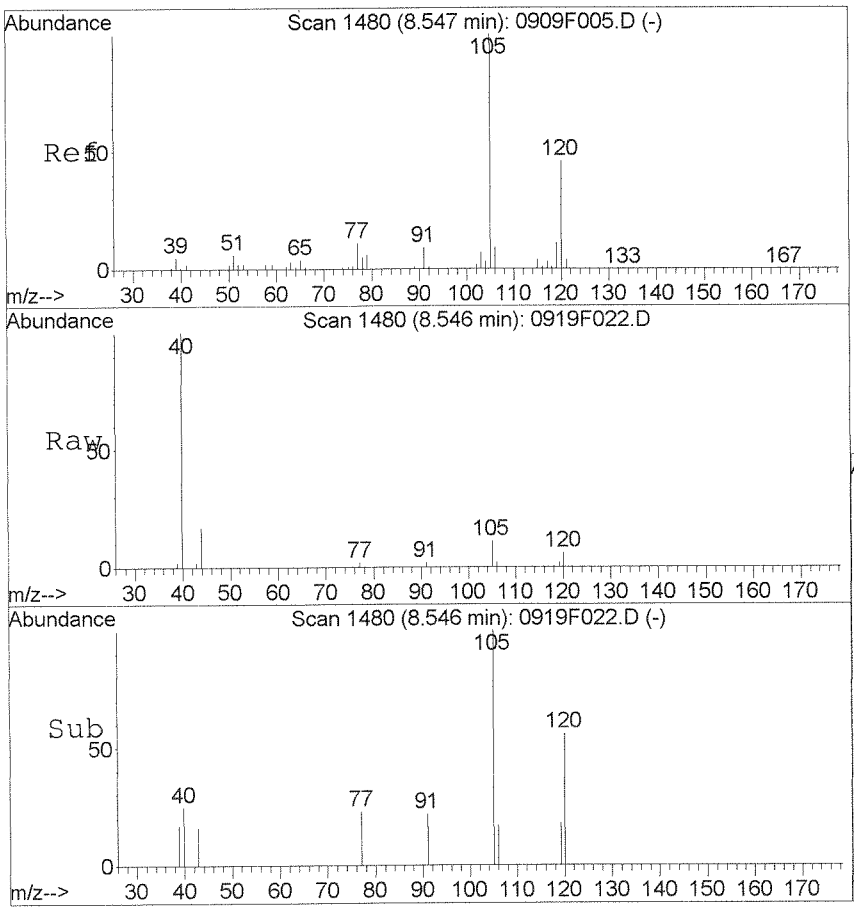


#75
o-Xylene
Concen: 0.27 PPB
RT: 7.21 min Scan# 1225
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:106 Resp: 724

Ion	Ratio	Lower	Upper
106	100		
91	186.3	183.9	243.9
65	21.8	0.0	43.0

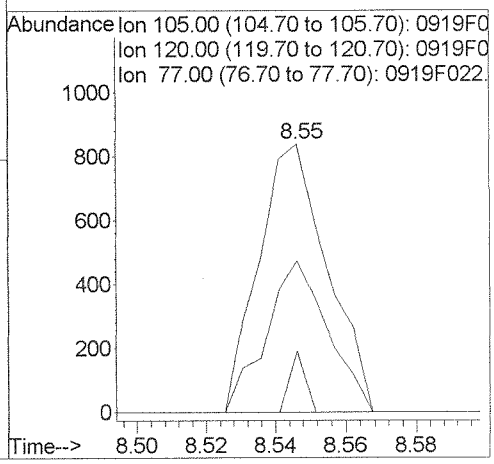


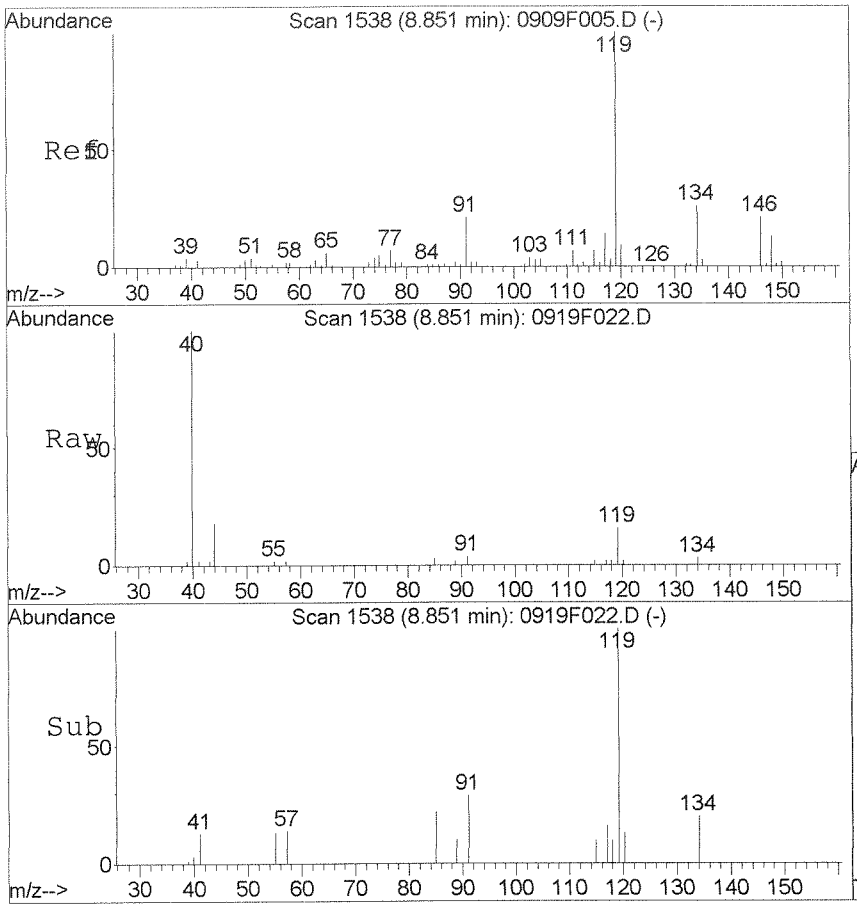


#91
1,2,4-Trimethylbenzene
Concen: 0.30 PPB
RT: 8.55 min Scan# 1480
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:105 Resp: 1137

Ion	Ratio	Lower	Upper
105	100		
120	56.4	15.9	75.9
77	22.9	0.0	41.2

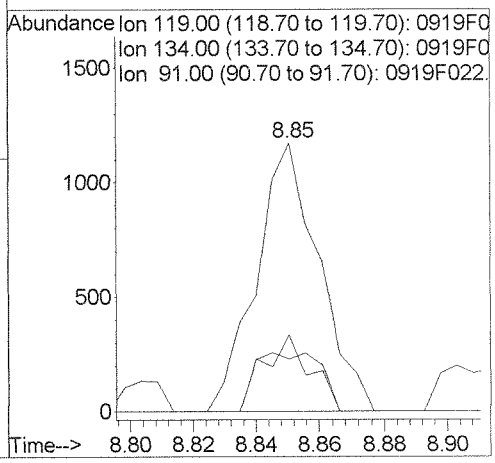


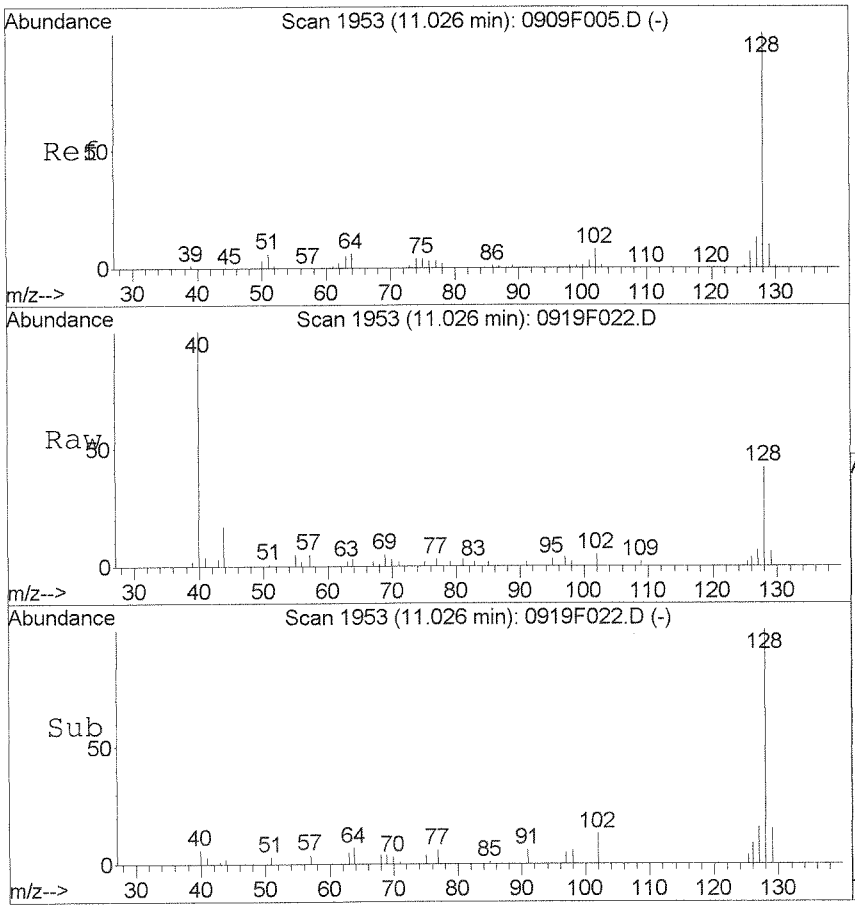


#93
p-Isopropyltoluene
Concen: 0.41 PPB
RT: 8.85 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:119 Resp: 1606

Ion	Ratio	Lower	Upper
119	100		
134	19.6	0.0	56.2
91	28.6	0.0	50.8

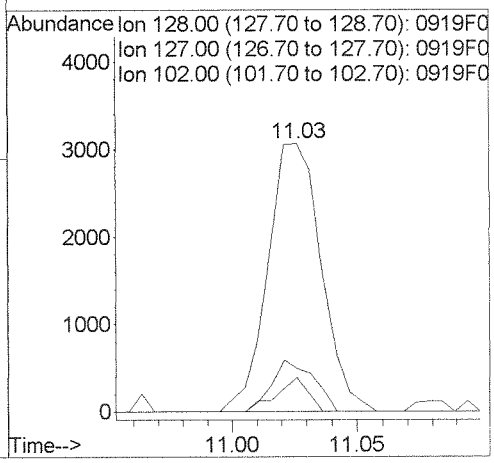




#102
Naphthalene
Concen: 1.28 PPB
RT: 11.03 min Scan# 1953
Delta R.T. -0.00 min
Lab File: 0919F022.D
Acq: 19 Sep 2014 5:43 pm

Tgt Ion:128 Resp: 4586

Ion	Ratio	Lower	Upper
128	100		
127	16.2	0.0	43.1
102	12.8	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\092614\0926F019.D
Lab ID: K1409921-008
RunType: RE
Matrix: SEDIMENT

Date Acquired: 09/26/2014 18:37
Date Quantitated: 09/29/2014 16:13
Batch ID: KWG1413162
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

NP

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Acetone	-37.5	NA	20	Qw olc
	Carbon Disulfide	-26.4	NA	20	↓
	2-Butanone (MEK)	-52.2	NA	20	↓ RF ins
	4-Methyl-2-pentanone (MIBK)	-54.9	NA	20	↓
	2-Hexanone	-57.9	NA	20	↓
Continuing Calibration Minimum RF	Trichloroethene (TCE)	0.1917	0.200	NA	MRL -
Surrogates	4-Bromofluorobenzene	86	88	127	Confirms orig

Primary Review: kmg 9/30/14

Secondary Review: 10/2/14

Quantitation Report

Data File:	J:\MS24\DATA\092614\0926F019.D			**Instrument:**	MS24
Acqu Date:	09/26/2014 18:37	**Quant Date:**	09/29/2014 16:13	**Vial:**	13
Run Type:	RE			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413162	**Prep Lot:**	KWG1413148	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1378434	**Prep Date:**	09/26/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\092614\0926F008.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\092614\0926F014.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	403714	50.00	OK
2	Chlorobenzene-d5	6.60	0.01	82	139129	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	102097	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	102621	50.92	102	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	360555	46.22	92	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	106793	43.18	86	88-127	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.20	U	
1	Vinyl Chloride				62	0		0.20	U	
1	1,1-Dichloroethene				96	0		0.28	U	
1	Acetone	1.96	0.01	0.00	43	56765	116.62	130		
1	Carbon Disulfide	2.00	0.01	0.00	76	12086	2.37	2.6	J	
1	Methylene Chloride	2.24	0.01	0.00	84	5335	2.50	2.8	J	
1	trans-1,2-Dichloroethene				96	0		0.14	U	
1	cis-1,2-Dichloroethene				96	0		0.14	U	
1	2-Butanone (MEK)	3.18	0.02	0.00	72	2804	11.54	13	J	
1	Carbon Tetrachloride				117	0		0.11	U	
1	Benzene	3.75	0.01	0.00	78	19498	2.67	3.0	J	
1	Trichloroethene (TCE)	4.25		0.00	95	811	0.4500	0.50	J	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.0	U	
1	Toluene	5.32		0.00	92	17609	3.81	4.2	J	
2	Tetrachloroethene (PCE)	5.78	0.01	0.00	164	380m	0.3100	0.34	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\092614\0926F019.D			**Instrument:**	MS24
Acqu Date:	09/26/2014 18:37	**Quant Date:**	09/29/2014 16:13	**Vial:**	13
Run Type:	RE			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		1.1	U	
2	Dibromochloromethane				129	0		0.20	U	
2	Ethylbenzene	6.71	0.01	0.00	106	653	0.2800	0.31	J	
2	m,p-Xylenes	6.82		0.00	106	1372	0.4800	0.53	J	
2	o-Xylene	7.21		0.00	106	688	0.2400	0.27	J	
2	Styrene				103	0		0.16	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.15	U	

Prep Amount: 4.52 g **Dilution:** 1.0
Prep Final Vol: 5.0 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\092614\0926F019.D Vial: 13
Acq On : 26 Sep 2014 18:37 Operator: KR
Sample : K9921-008R Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 29 16:07:09 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

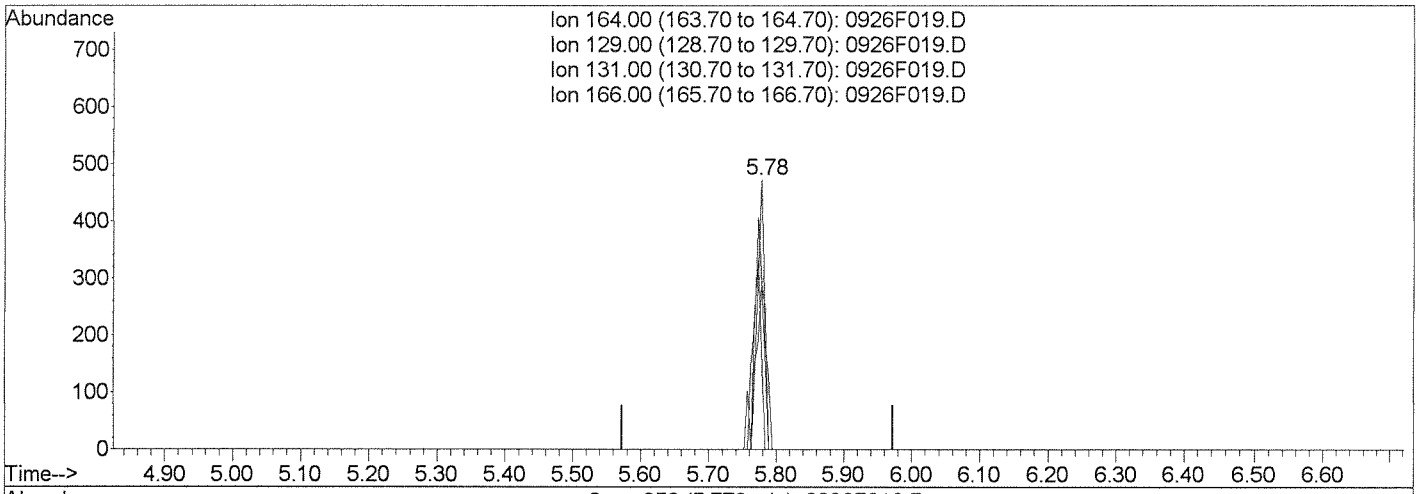
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	403714	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	139129	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	102097	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	102621	50.92	PPB		0.00
Spiked Amount 50.000			Recovery =	101.84%			
44) 1,2-Dichloroethane-d4	3.76	65	108329	53.67	PPB		0.00
Spiked Amount 50.000			Recovery =	107.34%			
59) Toluene-d8	5.26	98	360555	46.22	PPB		0.00
Spiked Amount 50.000			Recovery =	92.44%			
80) 4-Bromofluorobenzene	7.76	95	106793	43.18	PPB		0.00
Spiked Amount 50.000			Recovery =	86.36%			
Target Compounds							Qvalue
5) Bromomethane	1.29	96	619	0.40	PPB		88
7) Dichlorofluoromethane	1.51	67	1106	0.36	PPB		77
8) Trichlorofluoromethane	1.51	101	3479	1.40	PPB		99
10) Acrolein	1.85	56	647	2.07	PPB		81
13) Acetone	1.96	43	56765	116.62	PPB		97
15) Carbon Disulfide	2.00	76	12086	2.37	PPB		97
17) Methyl Acetate	2.17	43	5792	4.66	PPB	#	81
19) Methylene Chloride	2.24	84	5335	2.50	PPB		93
20) tert-Butyl Alcohol	2.33	59	1251	5.92	PPB		60
22) Methyl tert-Butyl Ether	2.39	73	2425	0.45	PPB		91
24) Hexane	2.53	57	2708	1.16	PPB		95
32) 2-Butanone	3.18	72	2804	11.54	PPB		91
43) Isobutyl Alcohol	3.73	43	1444	18.16	PPB		95
45) Benzene	3.75	78	19498	2.67	PPB	#	52
48) Trichloroethene	4.25	95	811	0.45	PPB		86
54) Bromodichloromethane	4.74	83	530	0.24	PPB	#	27
60) Toluene	5.32	92	17609	3.81	PPB		99
65) Tetrachloroethene	5.78	164	380m	0.31	PPB		
70) 1-Chlorohexane	6.60	91	647	0.30	PPB	#	30
71) Chlorobenzene	6.62	112	857	0.19	PPB		78
72) Ethylbenzene	6.71	106	653	0.28	PPB	#	27
74) m,p-Xylenes	6.82	106	1372	0.48	PPB		88
75) o-Xylene	7.21	106	688	0.24	PPB	#	56
91) 1,2,4-Trimethylbenzene	8.55	105	835	0.17	PPB		86
93) p-Isopropyltoluene	8.86	119	1404	0.28	PPB		91
102) Naphthalene	11.03	128	3206	0.71	PPB		90

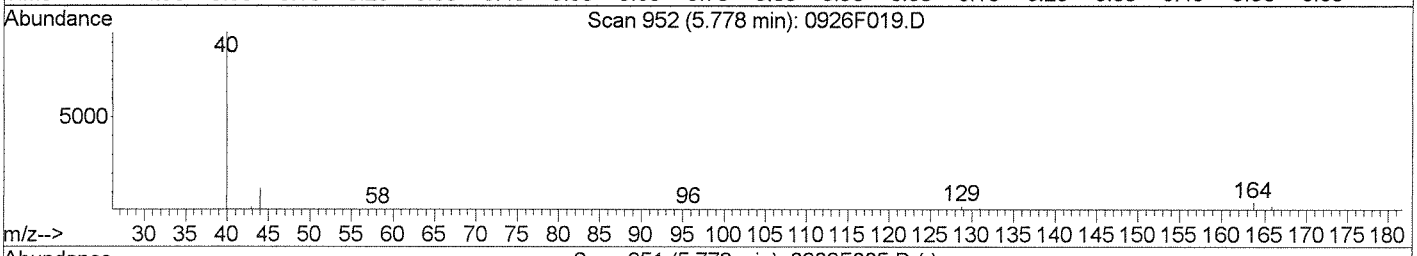
(#) = qualifier out of range (m) = manual integration

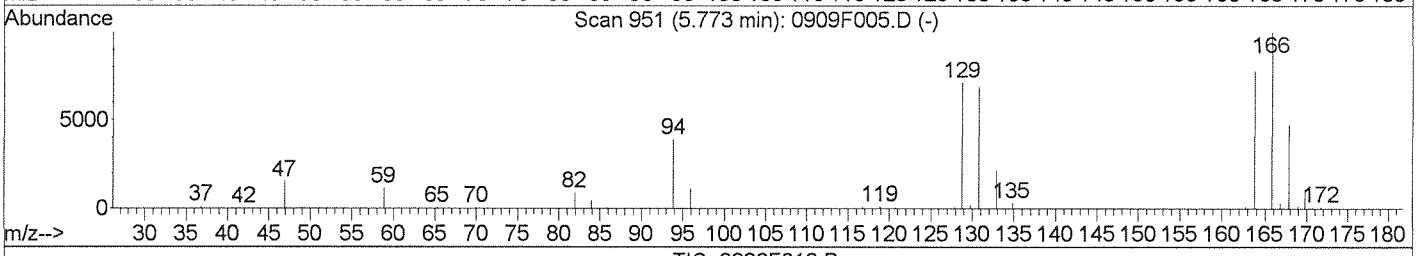
Quantitation Report (Qedit)

Data File : J:\MS24\DATA\092614\0926F019.D Vial: 13
Acq On : 26 Sep 2014 18:37 Operator: KR
Sample : K9921-008R Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 29 16:12 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration







TIC: 0926F019.D

(65) Tetrachloroethene (T)

5.78min 0.31PPB m

response 380

Ion	Exp%	Act%
164.00	100	100
129.00	91.40	61.23#
131.00	88.30	37.08#
166.00	128.10	61.44#

Manual Integration:

After

Missed peak

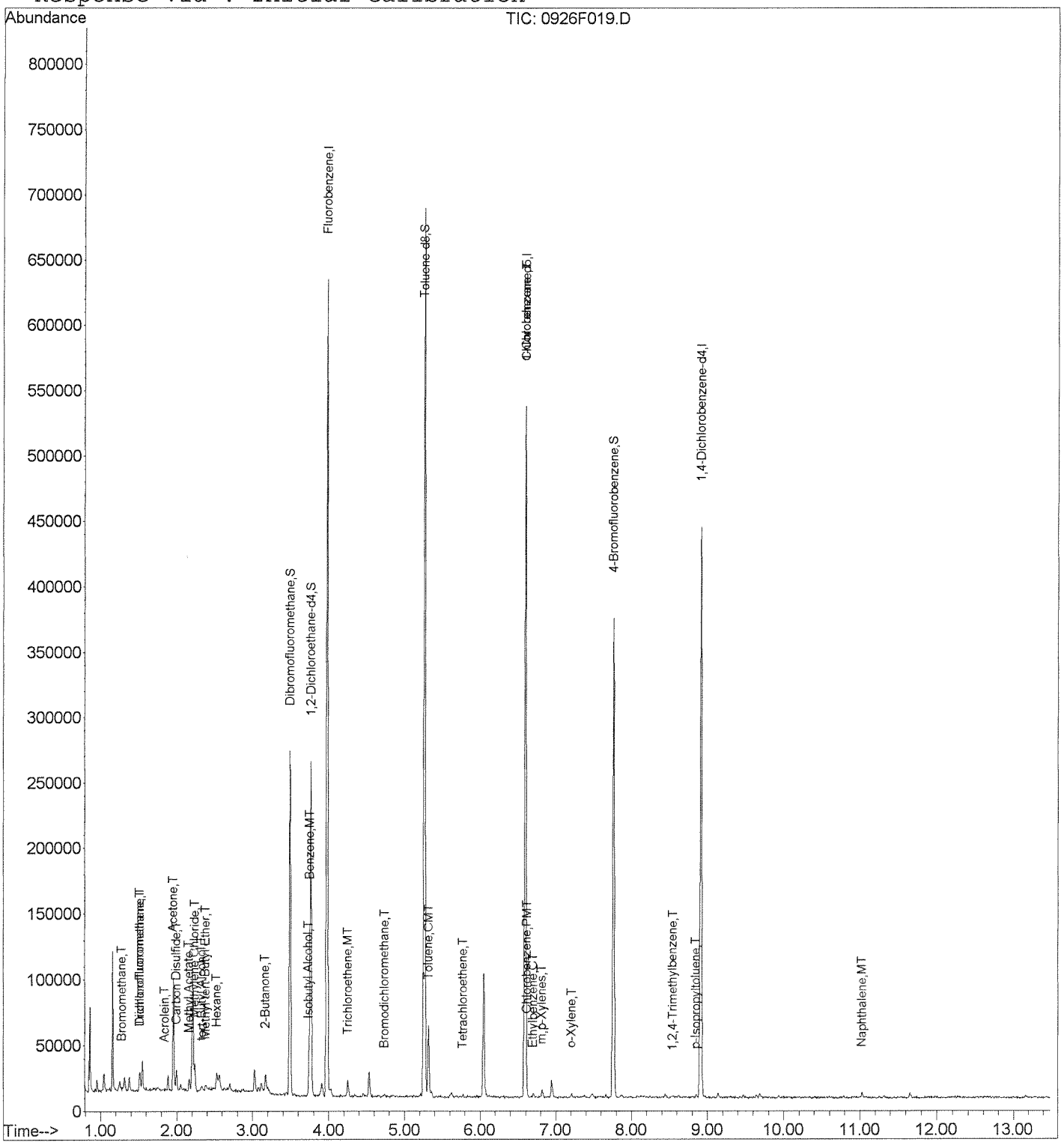
09/29/14

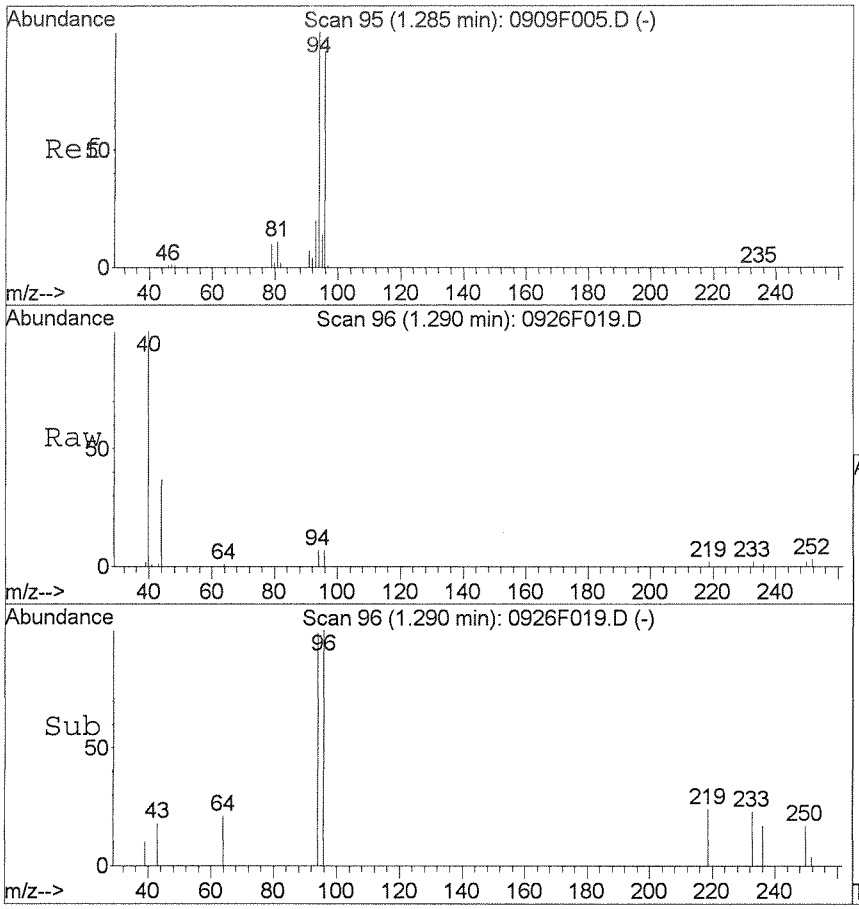
KR

0926F019.D 100713MS24SOIL.M Mon Sep 29 16:12:09 2014

Data File : J:\MS24\DATA\092614\0926F019.D Vial: 13
Acq On : 26 Sep 2014 18:37 Operator: KR
Sample : K9921-008R Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 29 16:13 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

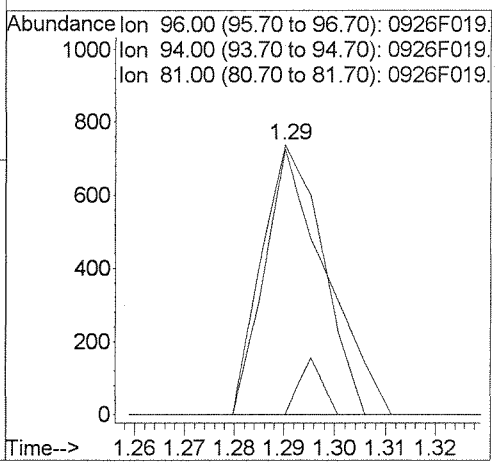


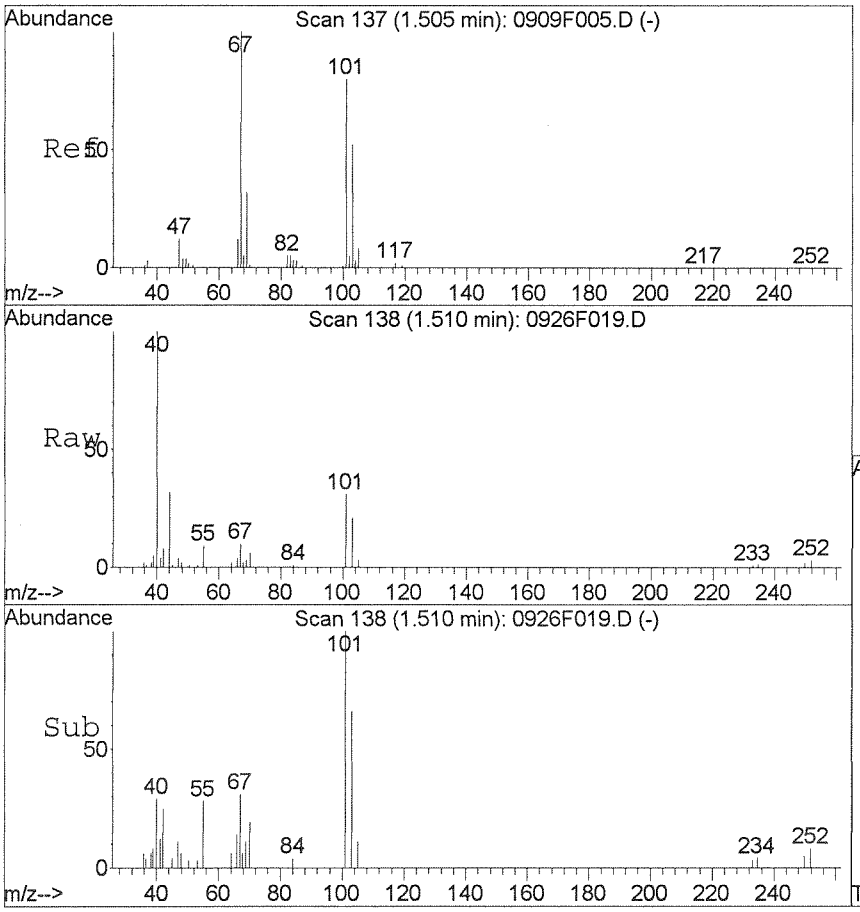


#5
Bromomethane
Concen: 0.40 PPB
RT: 1.29 min Scan# 96
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 96 Resp: 619

Ion	Ratio	Lower	Upper
96	100		
94	98.5	79.2	139.2
81	0.0	0.0	41.8

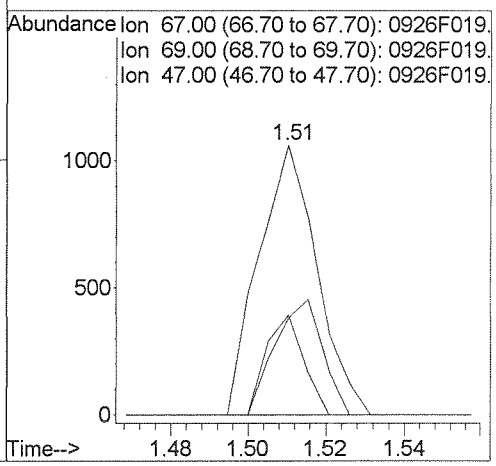


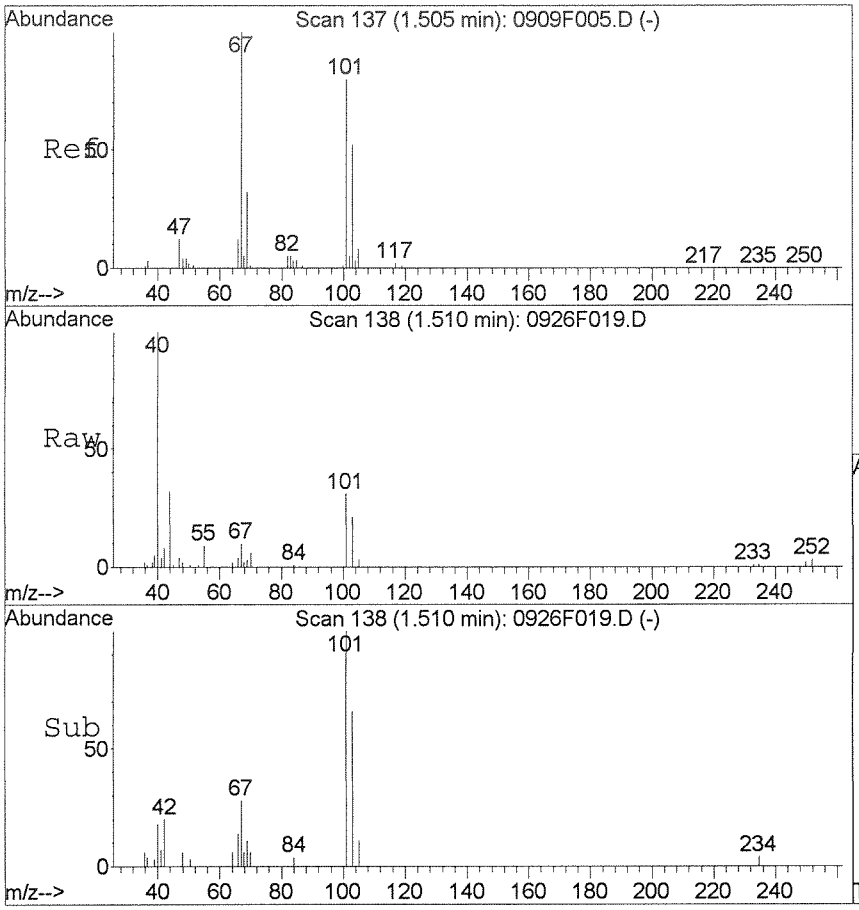


#7
Dichlorofluoromethane
Concen: 0.36 PPB
RT: 1.51 min Scan# 138
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 67 Resp: 1106

Ion	Ratio	Lower	Upper
67	100		
69	35.9	1.6	61.6
47	37.0	0.0	42.2

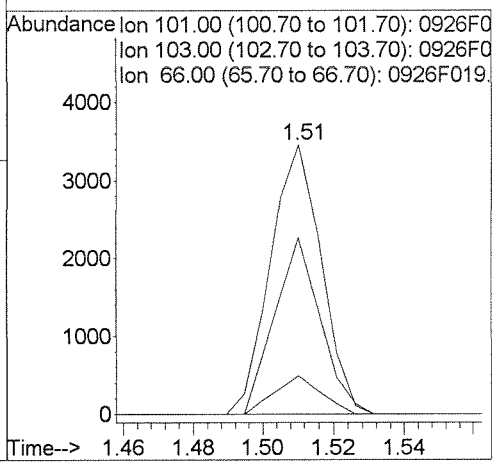


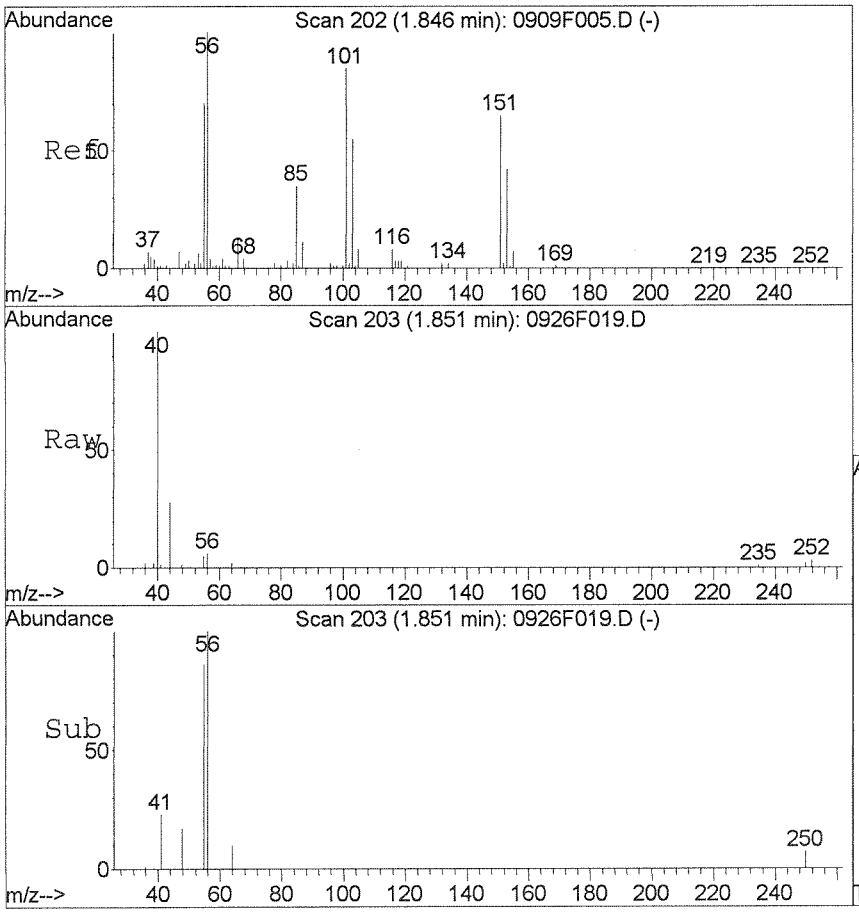


#8
Trichlorofluoromethane
Concen: 1.40 PPB
RT: 1.51 min Scan# 138
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:101 Resp: 3479

Ion	Ratio	Lower	Upper
101	100		
103	65.6	34.7	94.7
66	14.2	0.0	45.0

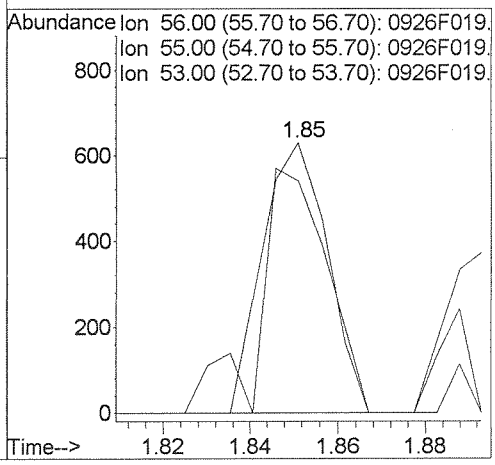


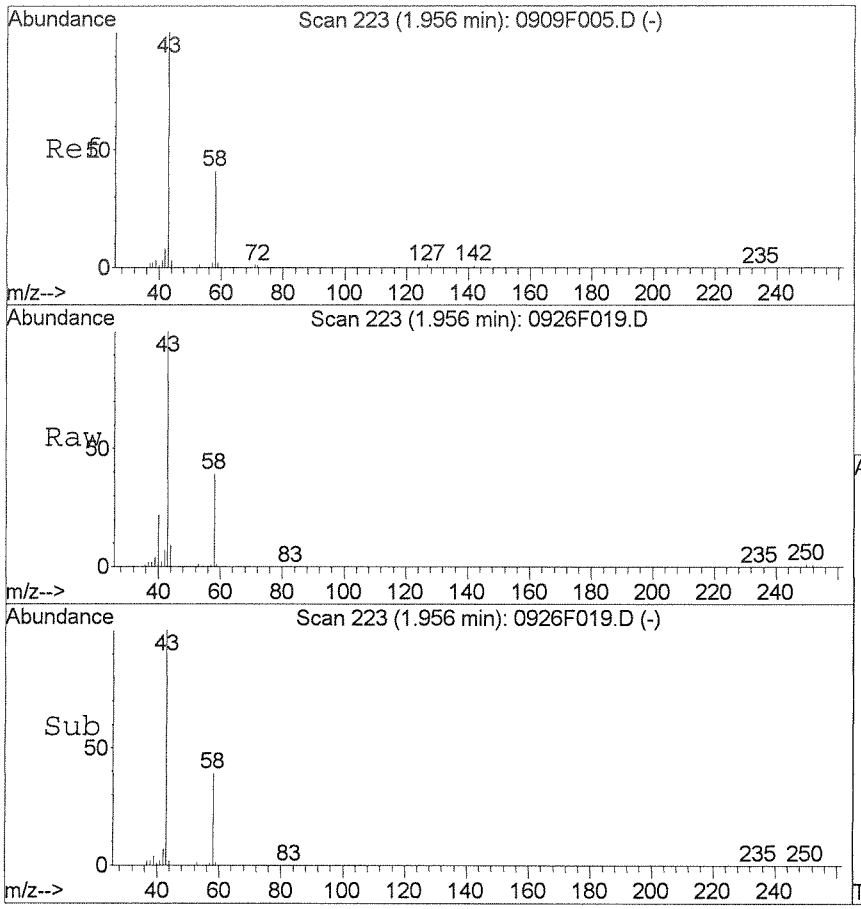


#10
Acrolein
Concen: 2.07 PPB
RT: 1.85 min Scan# 203
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 56 Resp: 647

Ion	Ratio	Lower	Upper
56	100		
55	85.7	39.9	99.9
53	0.0	0.0	36.3

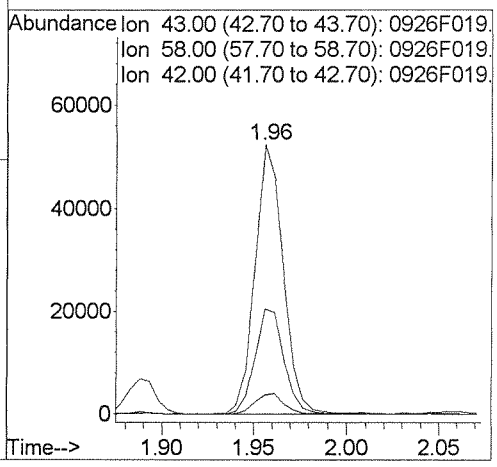


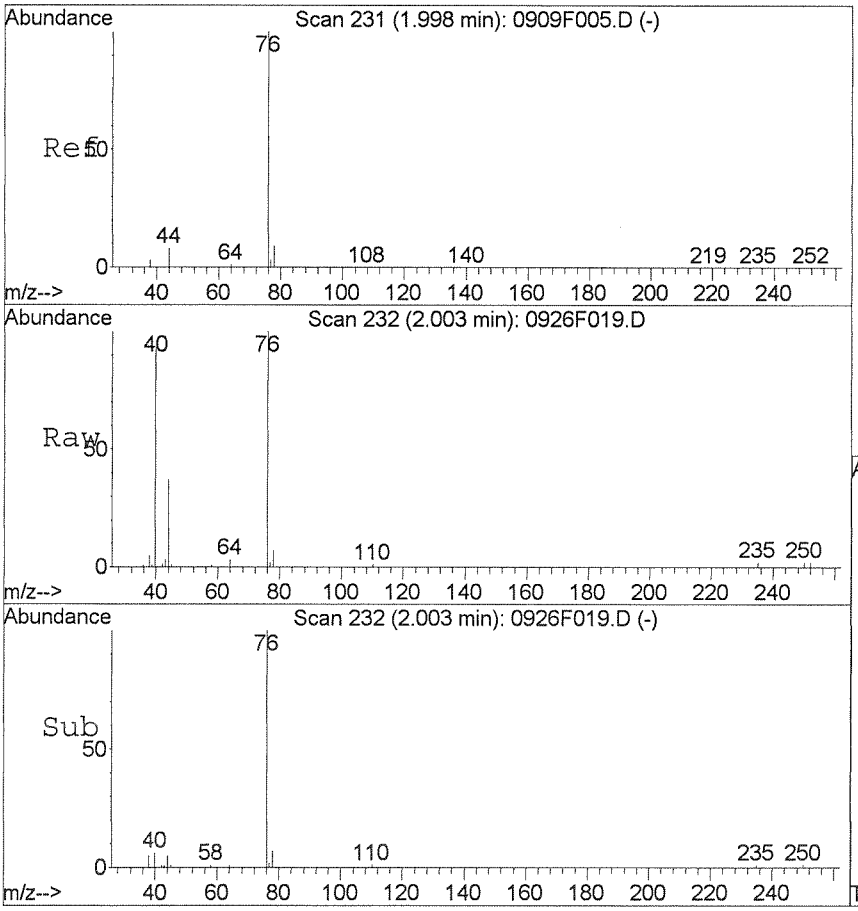


#13
Acetone
Concen: 116.62 PPB
RT: 1.96 min Scan# 223
Delta R.T. 0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 43 Resp: 56765

Ion	Ratio	Lower	Upper
43	100		
58	39.2	11.3	71.3
42	7.1	0.0	37.7

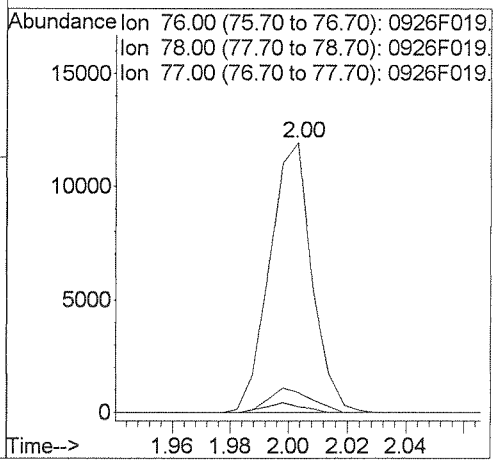


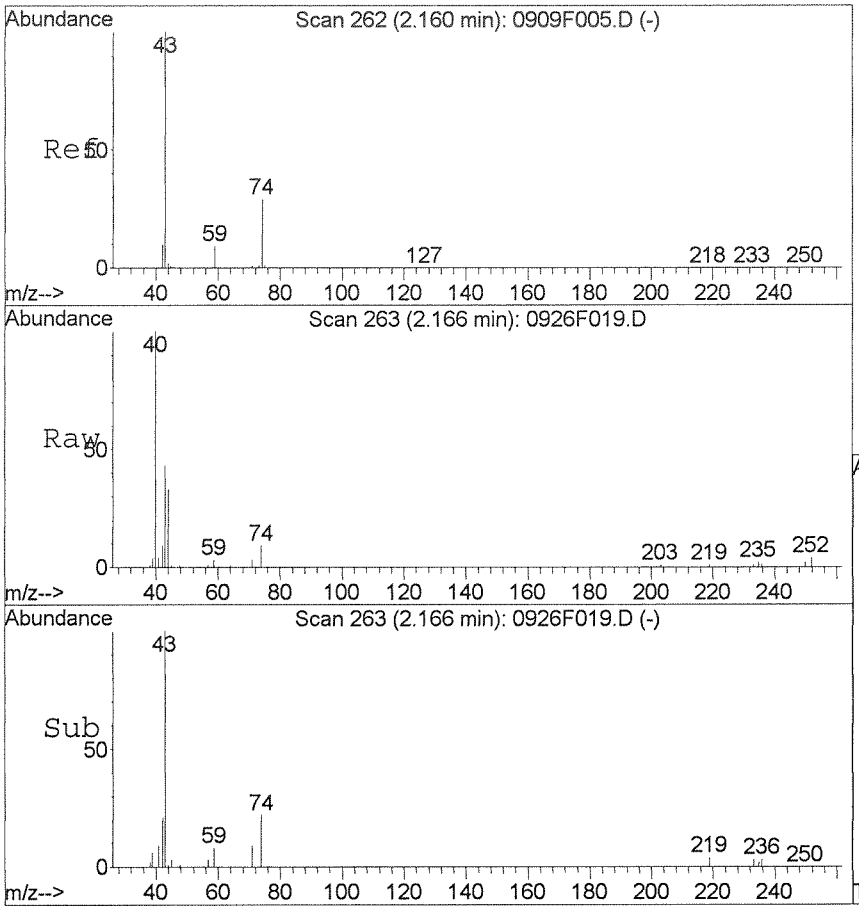


#15
Carbon Disulfide
Concen: 2.37 PPB
RT: 2.00 min Scan# 232
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 76 Resp: 12086

Ion	Ratio	Lower	Upper
76	100		
78	7.5	0.0	39.0
77	2.2	0.0	32.6

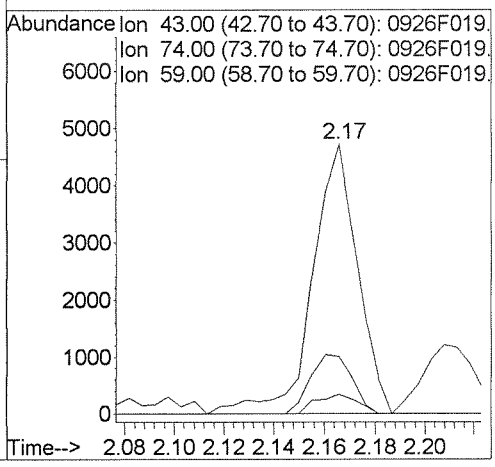


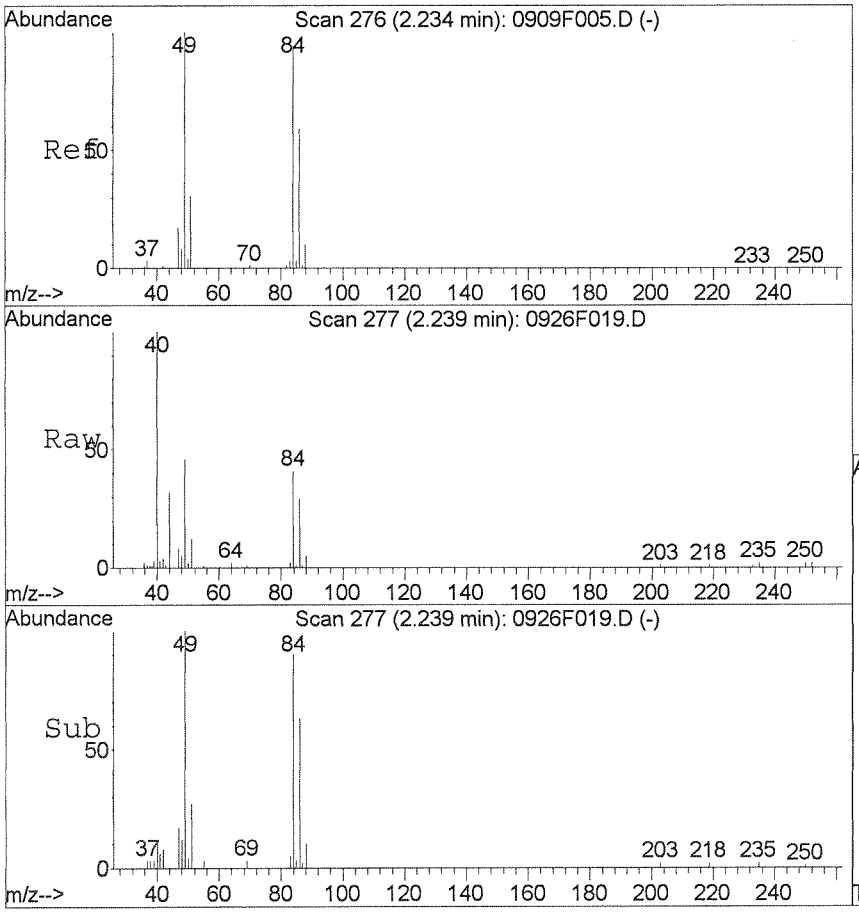


#17
Methyl Acetate
Concen: 4.66 PPB
RT: 2.17 min Scan# 263
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 43 Resp: 5792

Ion	Ratio	Lower	Upper
43	100		
74	20.2	20.4	37.8#
59	0.0	6.2	11.4#

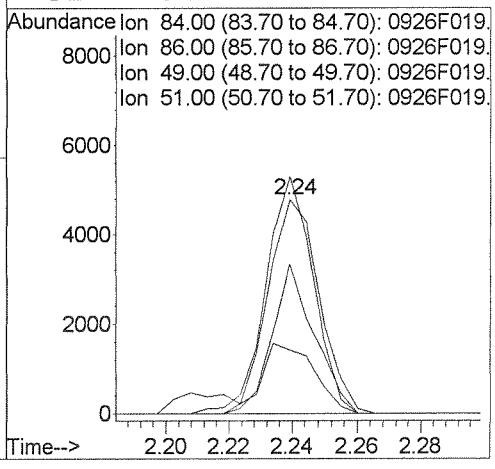


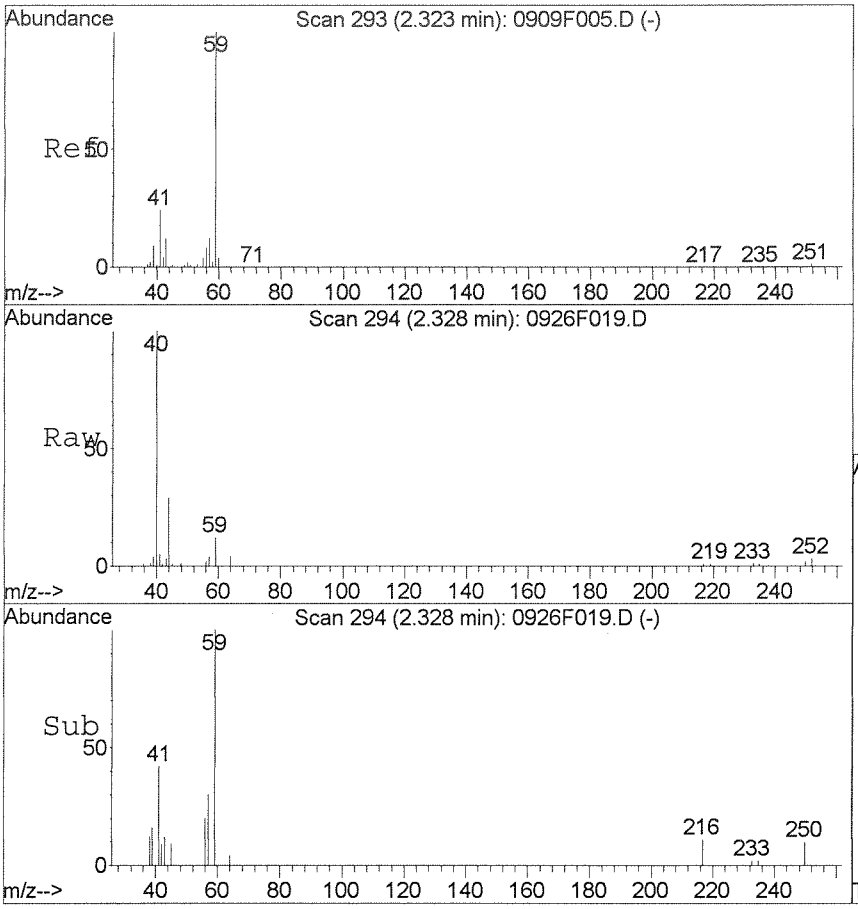


#19
Methylene Chloride
Concen: 2.50 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 84 Resp: 5335

Ion	Ratio	Lower	Upper
84	100		
86	72.4	32.9	92.9
49	110.8	76.9	136.9
51	29.7	3.1	63.1

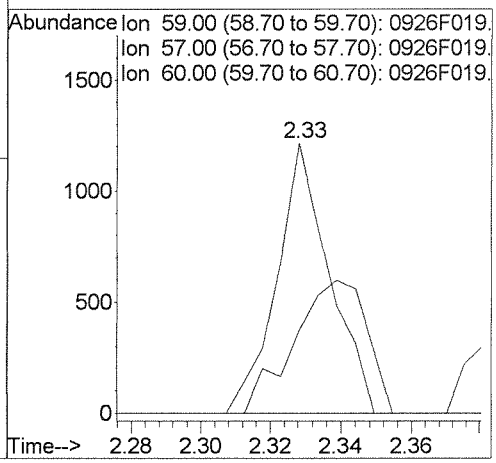


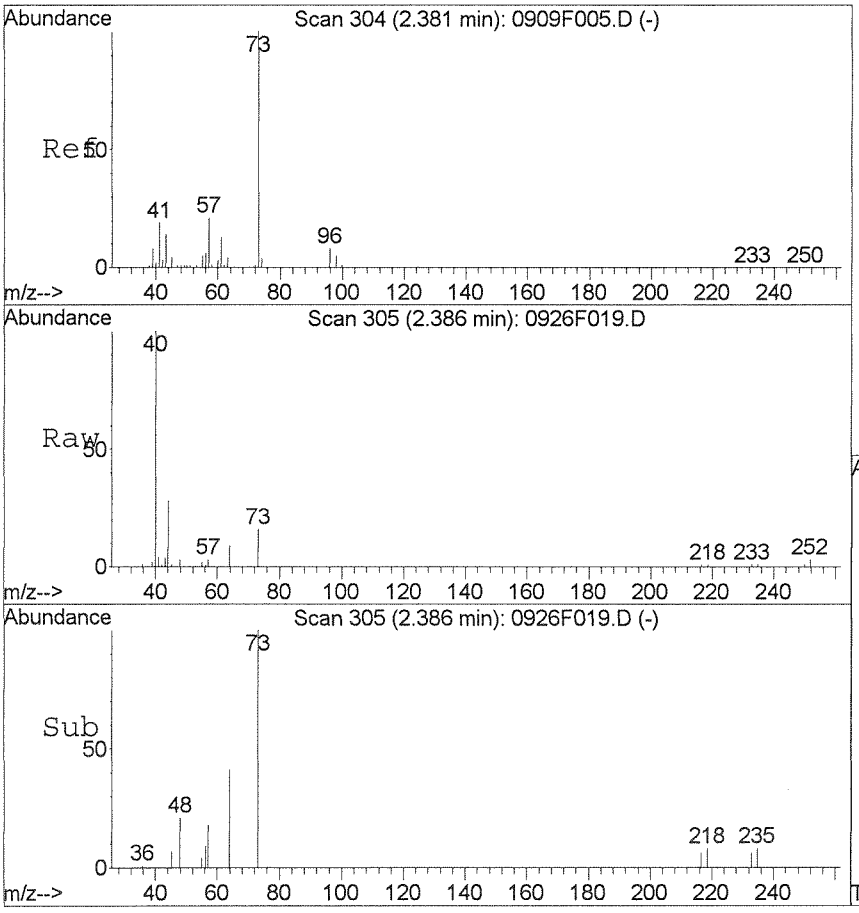


#20
tert-Butyl Alcohol
Concen: 5.92 PPB
RT: 2.33 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 59 Resp: 1251

Ion	Ratio	Lower	Upper
59	100		
57	30.3	0.0	41.5
60	0.0	0.0	33.6

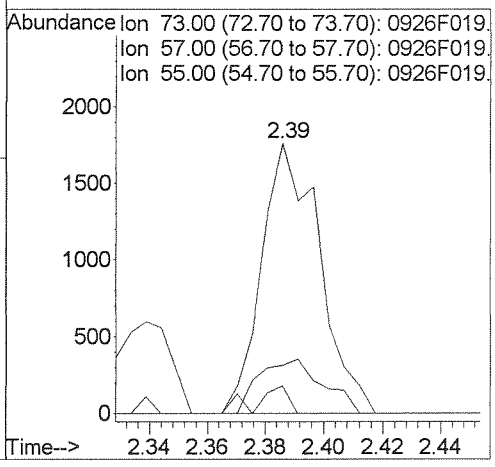


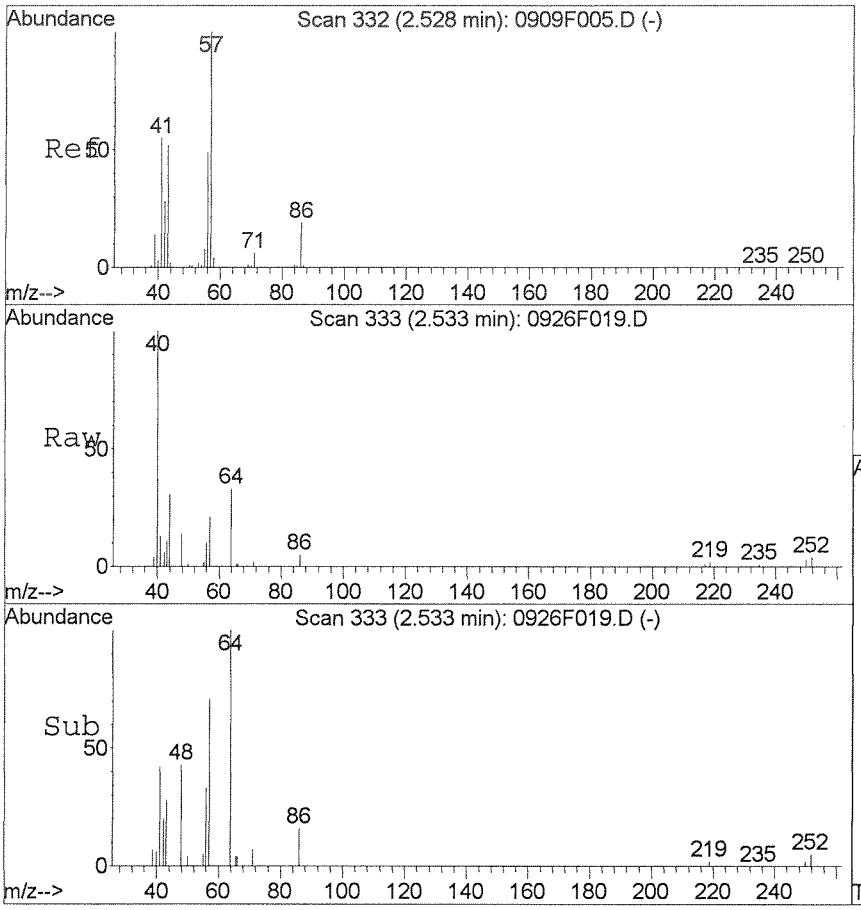


#22
Methyl tert-Butyl Ether
Concen: 0.45 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 73 Resp: 2425

Ion	Ratio	Lower	Upper
73	100		
57	17.9	0.0	51.5
55	10.3	0.0	35.6

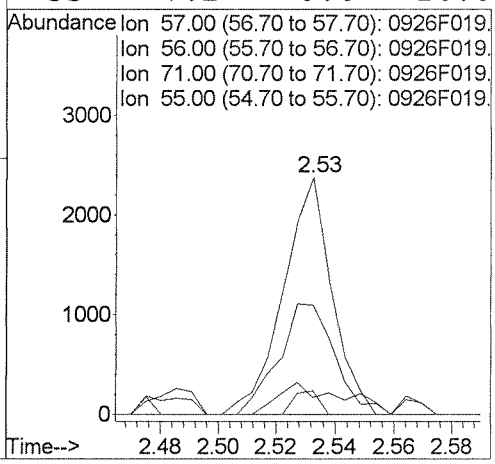


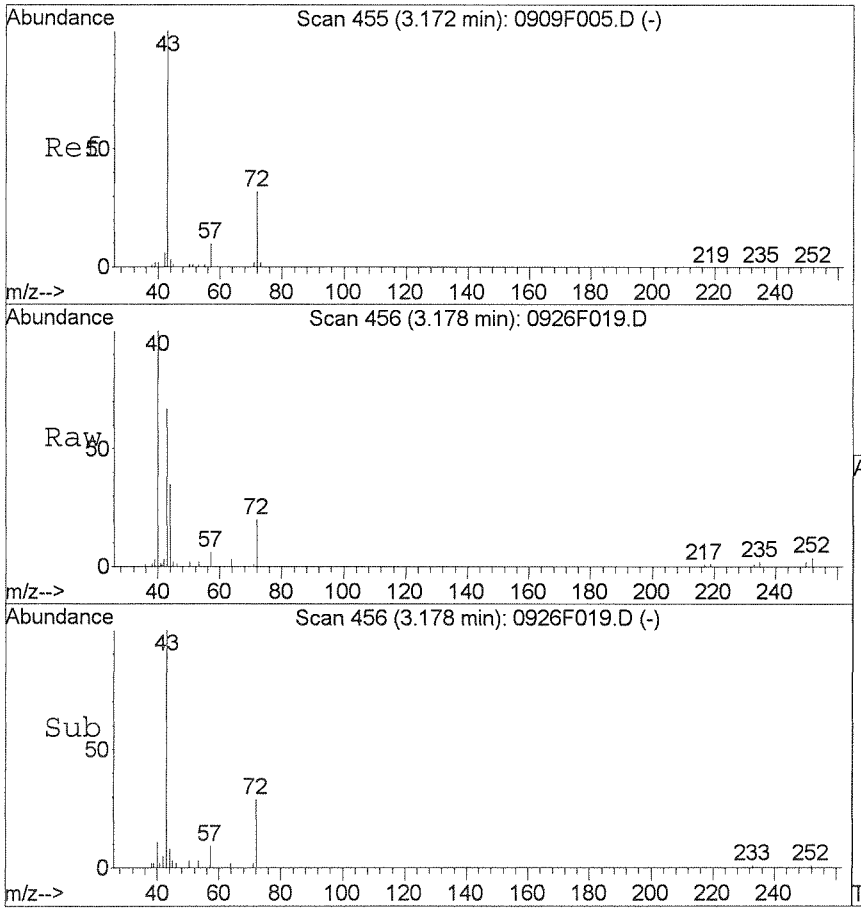


#24
Hexane
Concen: 1.16 PPB
RT: 2.53 min Scan# 333
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 57 Resp: 2708

Ion	Ratio	Lower	Upper
57	100		
56	46.0	18.8	78.8
71	9.9	0.0	35.9
55	7.2	0.0	20.6

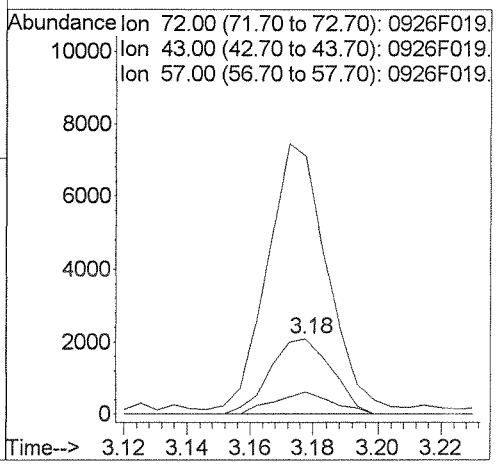


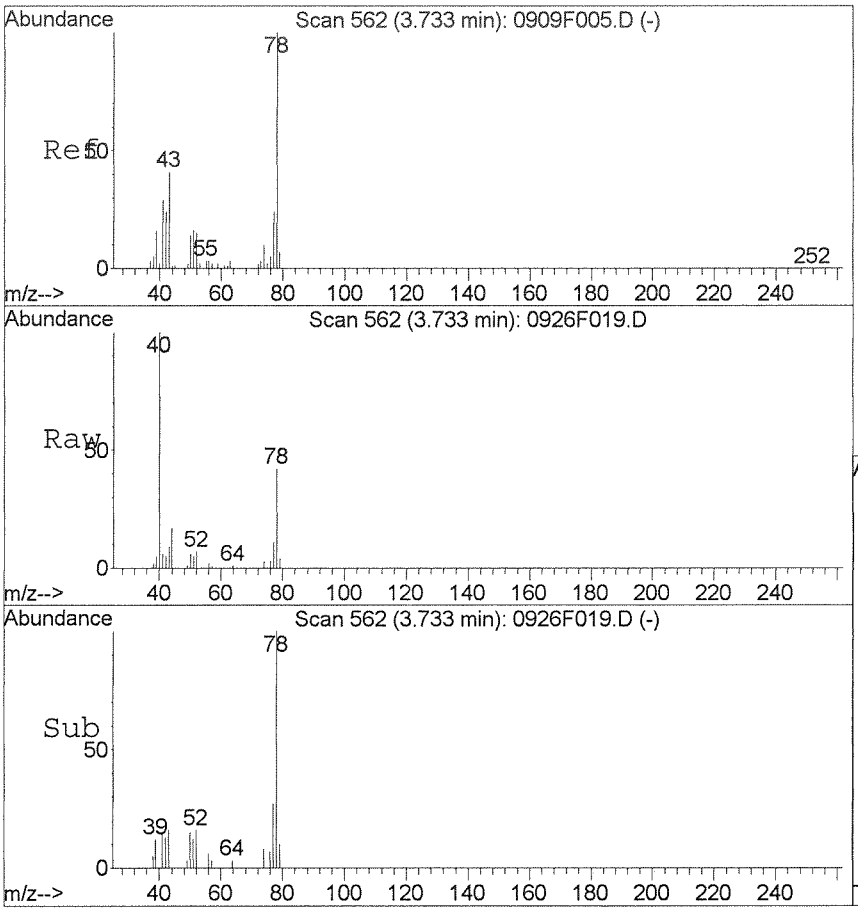


#32
2-Butanone
Concen: 11.54 PPB
RT: 3.18 min Scan# 456
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 72 Resp: 2804

Ion	Ratio	Lower	Upper
72	100		
43	334.1	284.6	344.6
57	29.4	0.2	60.2

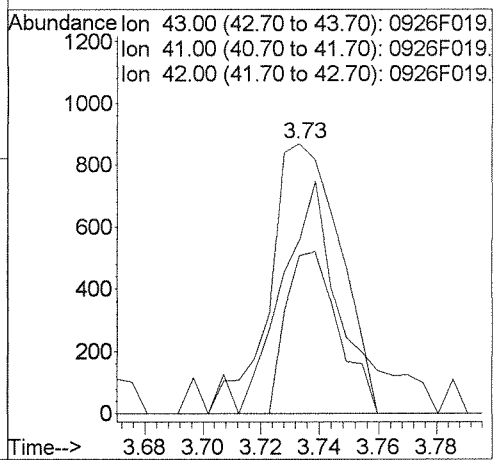


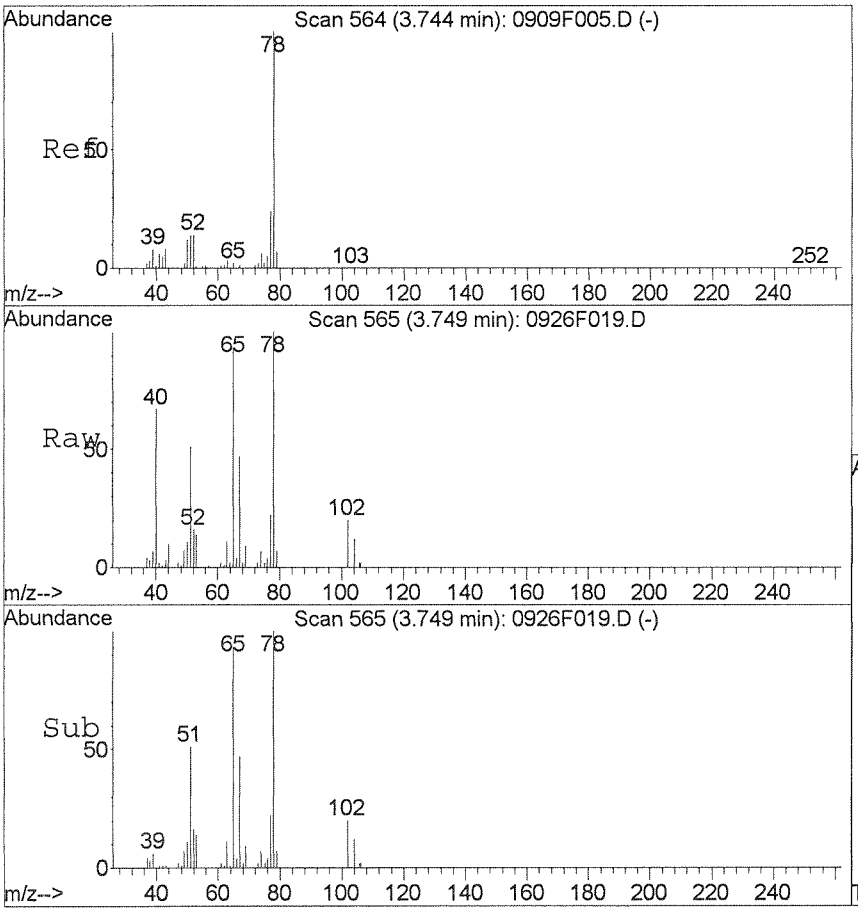


#43
Isobutyl Alcohol
Concen: 18.16 PPB
RT: 3.73 min Scan# 562
Delta R.T. -0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 43 Resp: 1444

Ion	Ratio	Lower	Upper
43	100		
41	64.2	41.2	101.2
42	58.3	29.1	89.1

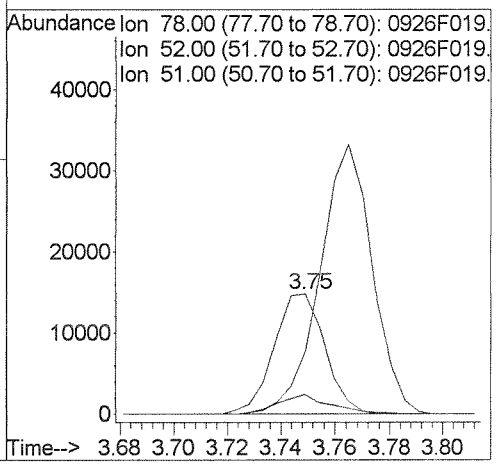


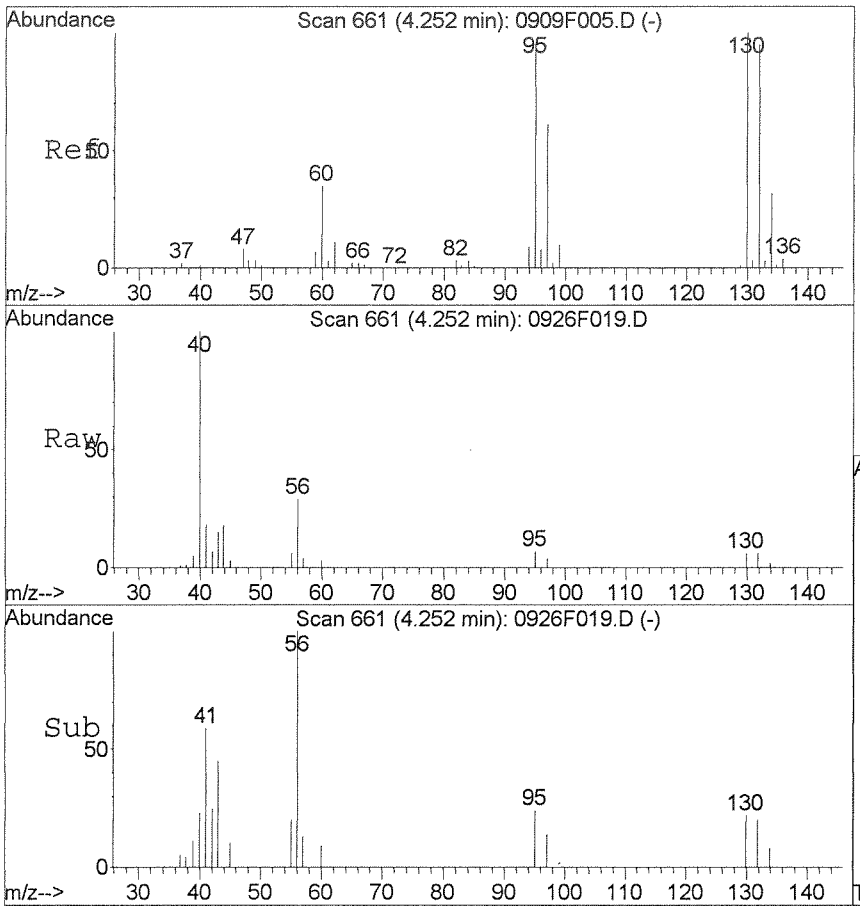


#45
Benzene
Concen: 2.67 PPB
RT: 3.75 min Scan# 565
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 78 Resp: 19498

Ion	Ratio	Lower	Upper
78	100		
52	16.4	0.0	44.3
51	51.4	0.0	44.1#

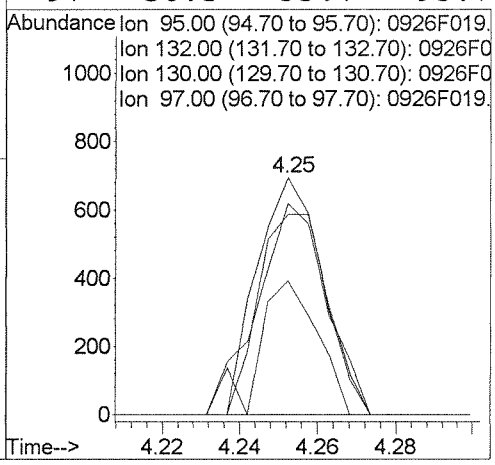


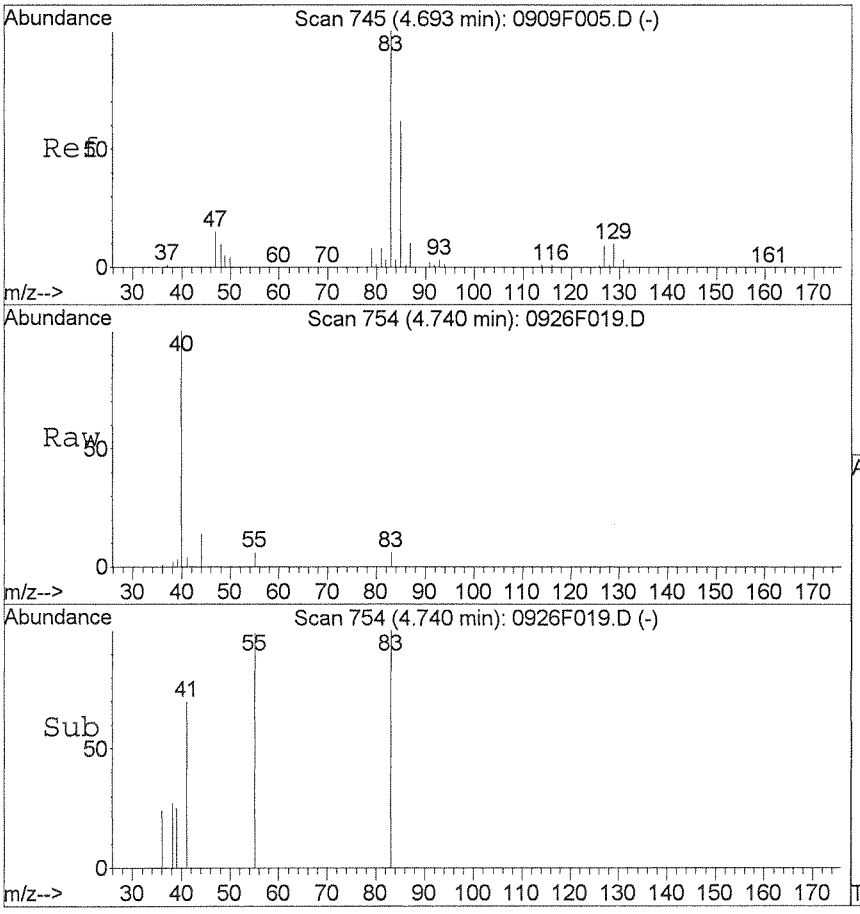


#48
Trichloroethene
Concen: 0.45 PPB
RT: 4.25 min Scan# 661
Delta R.T. 0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 95 Resp: 811

Ion	Ratio	Lower	Upper
95	100		
132	84.4	70.6	130.6
130	89.0	75.3	135.3
97	56.5	33.7	93.7

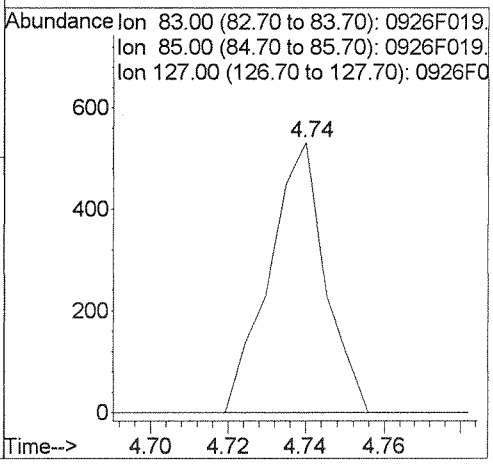


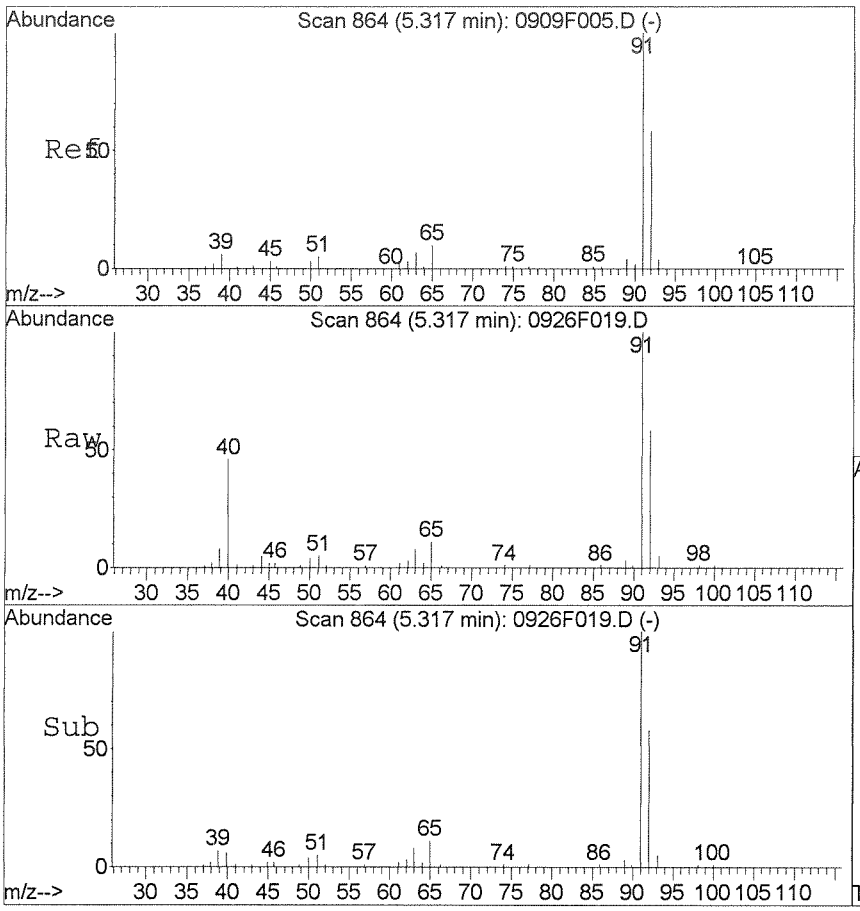


#54
Bromodichloromethane
Concen: 0.24 PPB
RT: 4.74 min Scan# 754
Delta R.T. 0.05 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 83 Resp: 530

Ion	Ratio	Lower	Upper
83	100		
85	0.0	31.8	91.8#
127	0.0	0.0	38.8

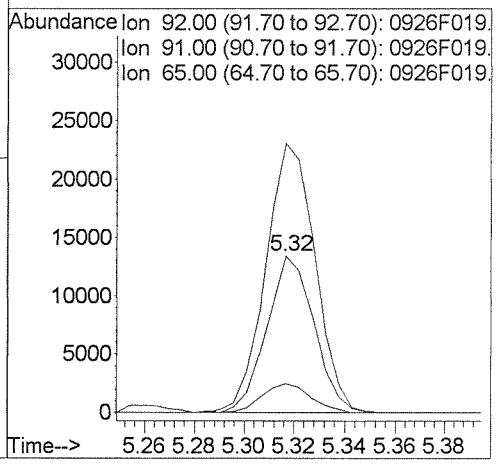


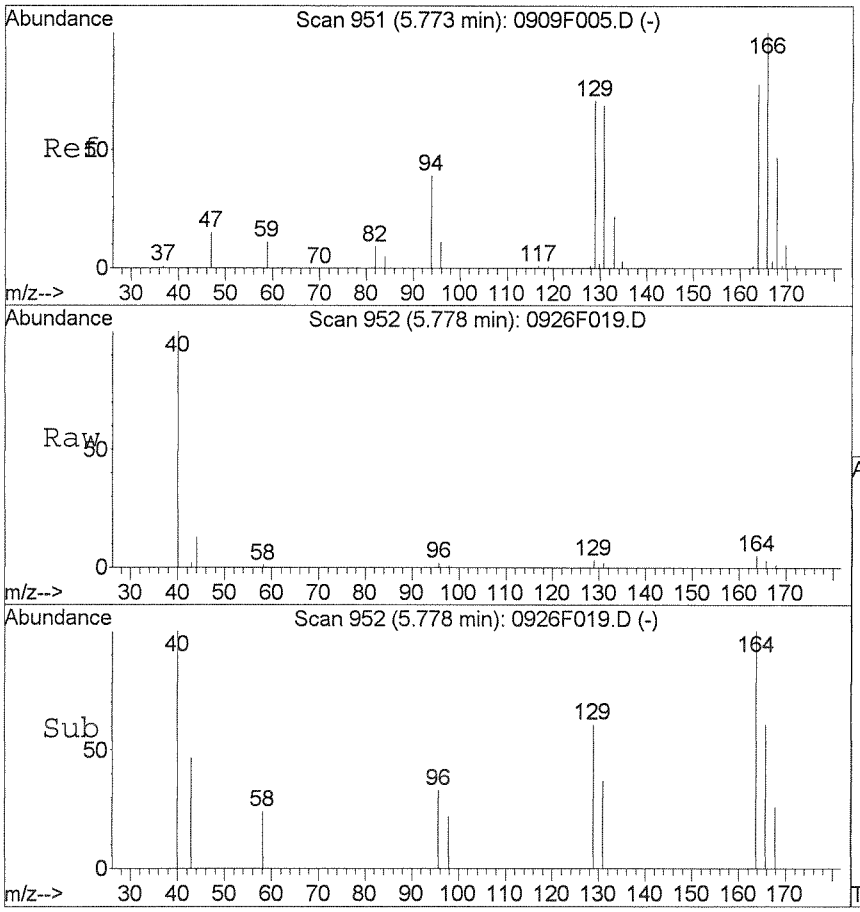


#60
Toluene
Concen: 3.81 PPB
RT: 5.32 min Scan# 864
Delta R.T. -0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 92 Resp: 17609

Ion	Ratio	Lower	Upper
92	100		
91	172.2	143.3	203.3
65	18.6	0.0	47.5

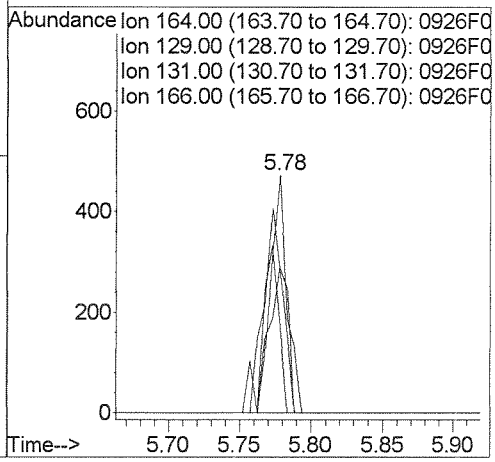


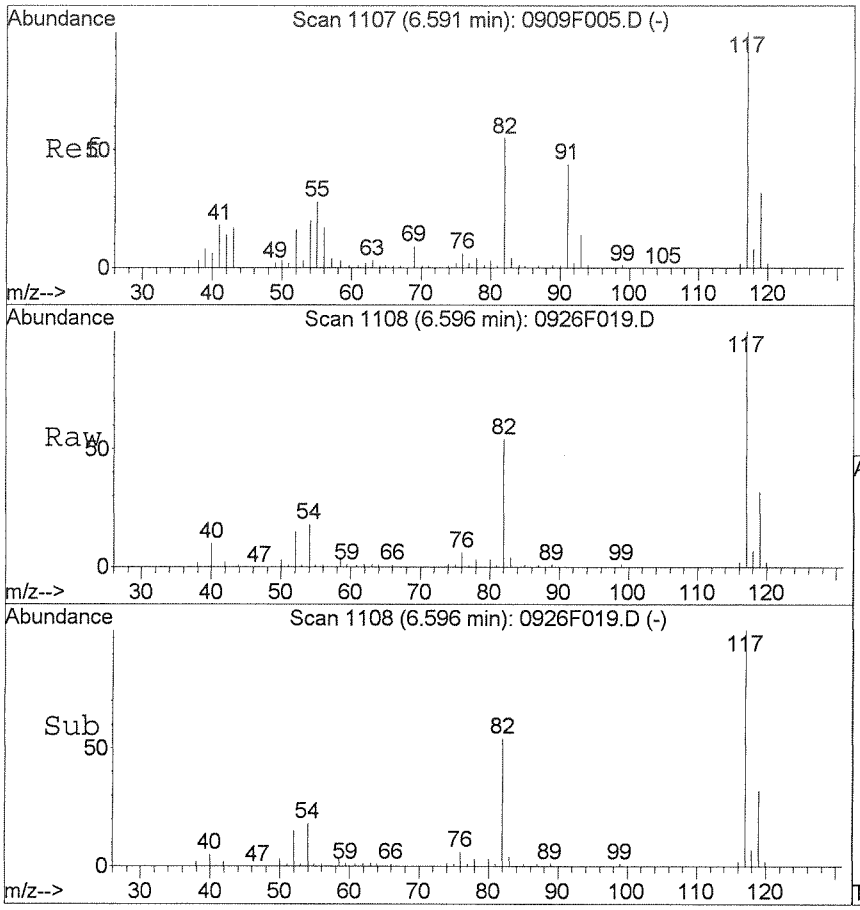


#65
Tetrachloroethene
Concen: 0.31 PPB m
RT: 5.78 min Scan# 952
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:164 Resp: 380

Ion	Ratio	Lower	Upper
164	100		
129	61.2	61.4	121.4#
131	37.1	58.3	118.3#
166	61.4	98.1	158.1#

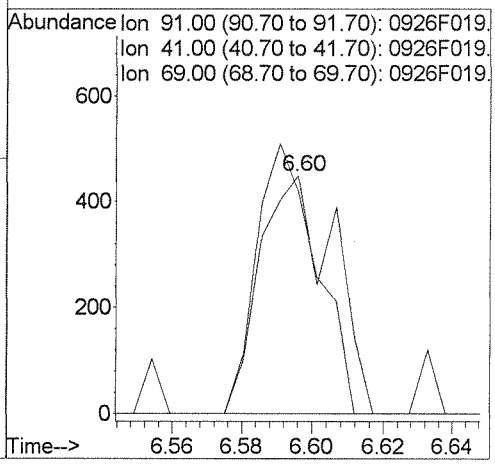


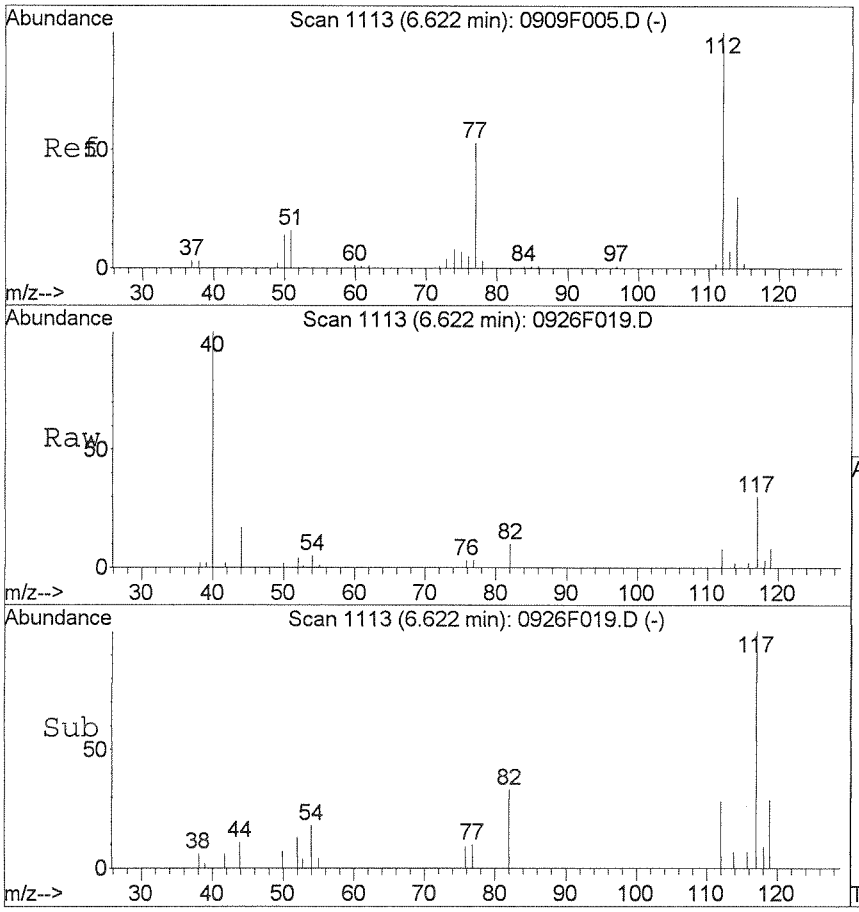


#70
1-Chlorohexane
Concen: 0.30 PPB
RT: 6.60 min Scan# 1108
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion: 91 Resp: 647

Ion	Ratio	Lower	Upper
91	100		
41	93.3	11.2	71.2#
69	0.0	0.0	49.8

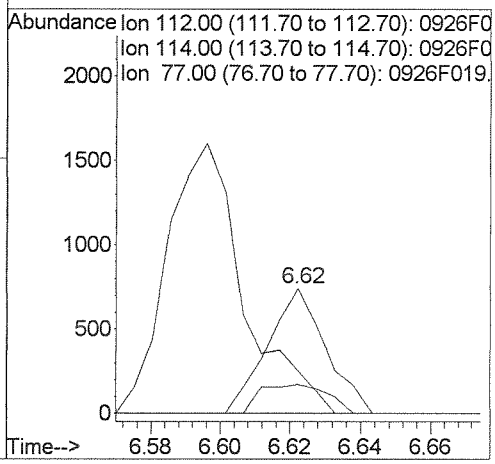


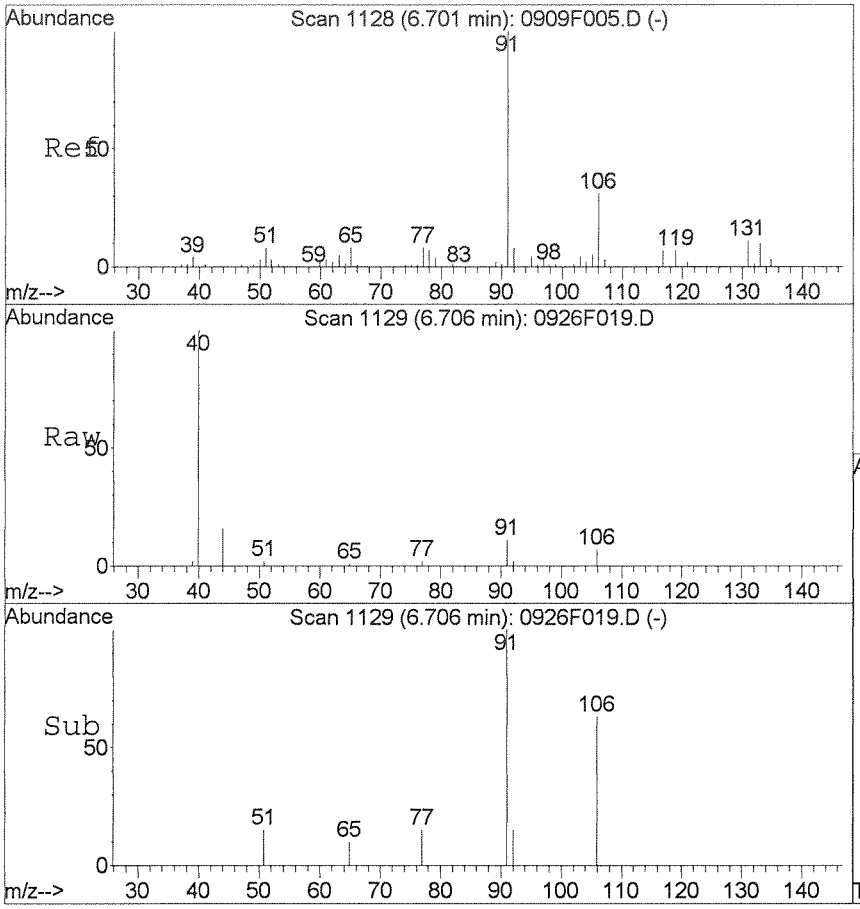


#71
Chlorobenzene
Concen: 0.19 PPB
RT: 6.62 min Scan# 1113
Delta R.T. -0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:112 Resp: 857

Ion	Ratio	Lower	Upper
112	100		
114	23.3	0.5	60.5
77	34.4	23.4	83.4

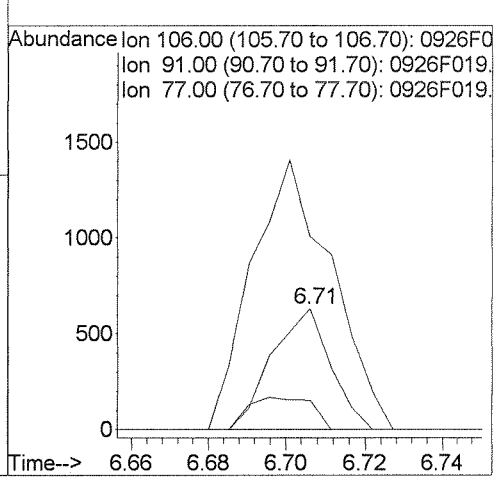


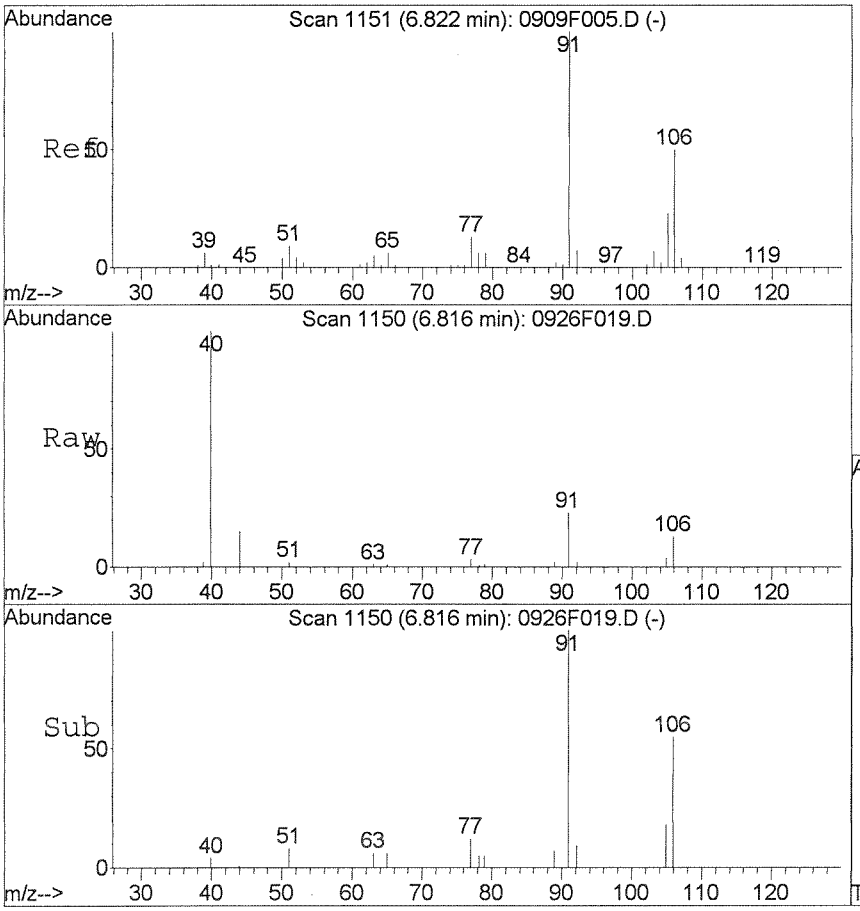


#72
Ethylbenzene
Concen: 0.28 PPB
RT: 6.71 min Scan# 1129
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:106 Resp: 653

Ion	Ratio	Lower	Upper
106	100		
91	159.3	291.9	351.9#
77	24.4	0.0	57.1

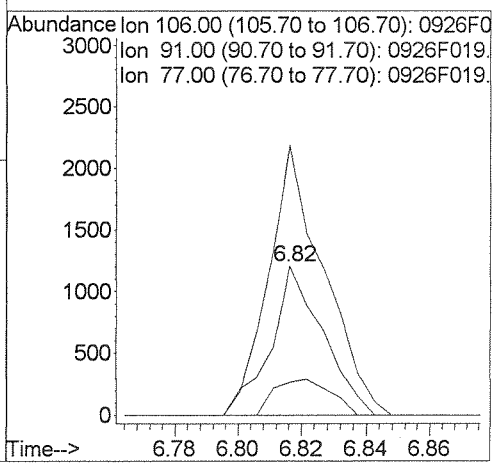


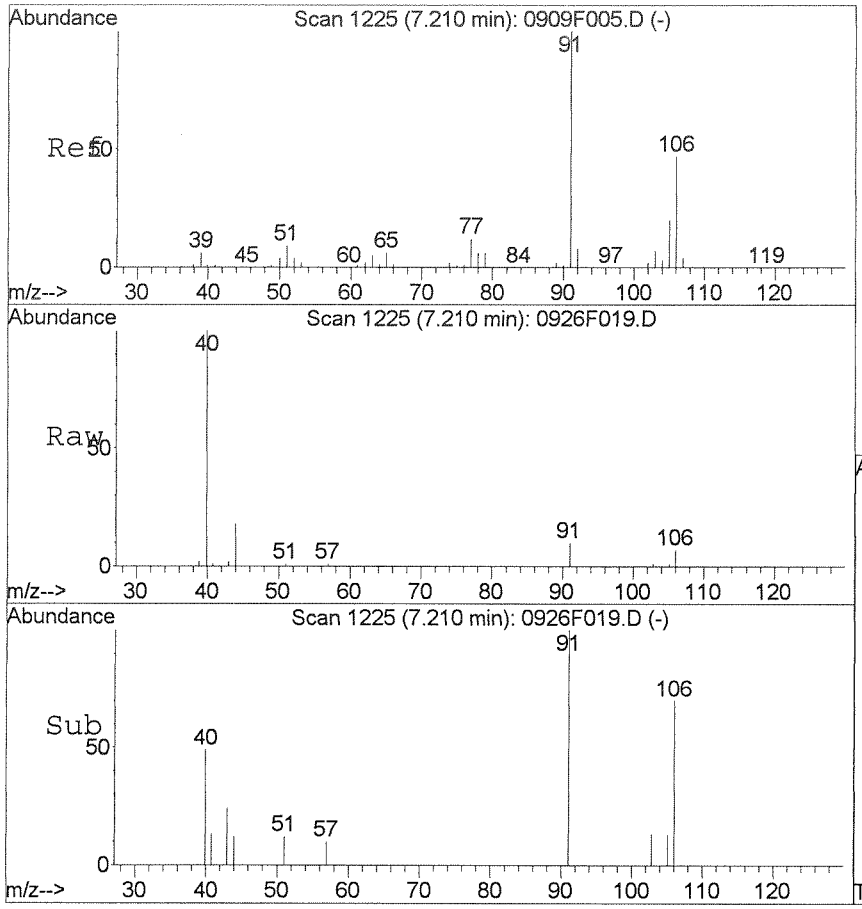


#74
m,p-Xylenes
Concen: 0.48 PPB
RT: 6.82 min Scan# 1150
Delta R.T. -0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:106 Resp: 1372

Ion	Ratio	Lower	Upper
106	100		
91	181.3	171.1	231.1
77	22.2	0.0	55.3

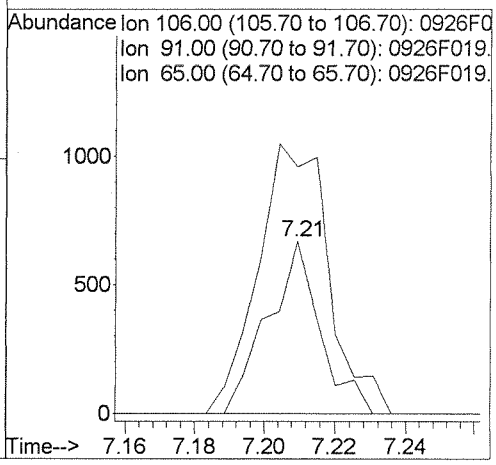


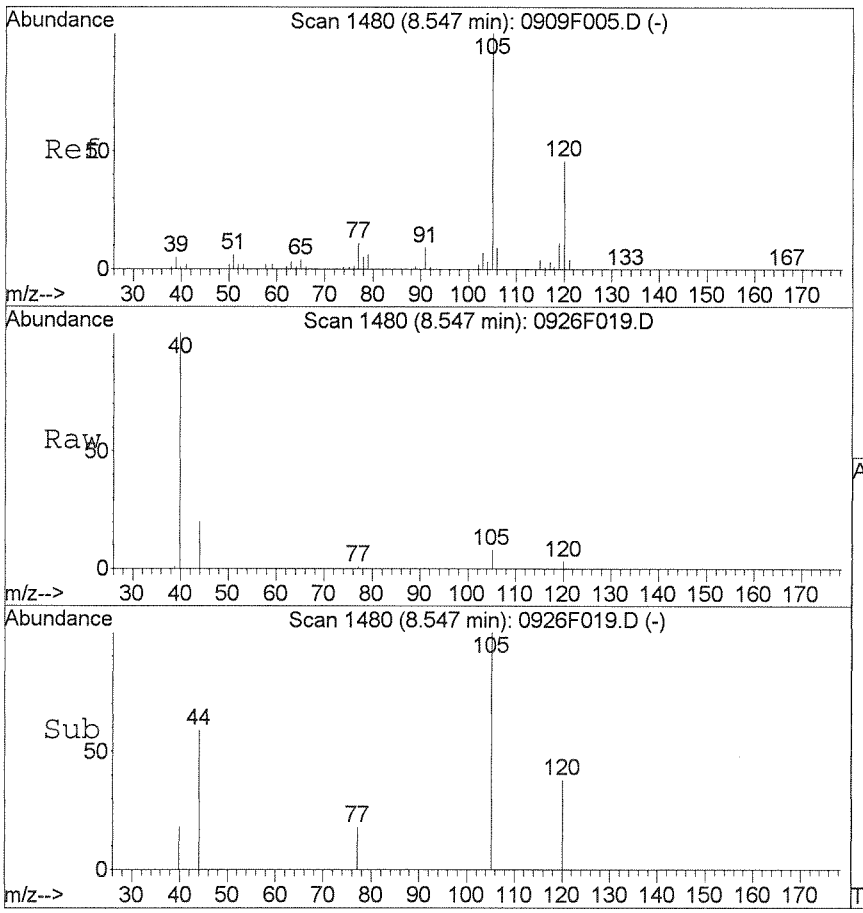


#75
o-Xylene
Concen: 0.24 PPB
RT: 7.21 min Scan# 1225
Delta R.T. -0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:106 Resp: 688

Ion	Ratio	Lower	Upper
106	100		
91	143.0	183.9	243.9#
65	0.0	0.0	43.0

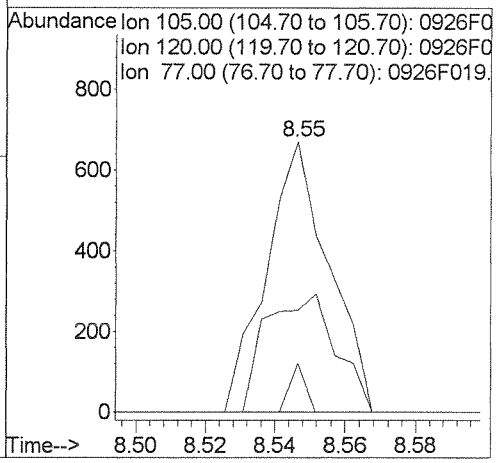


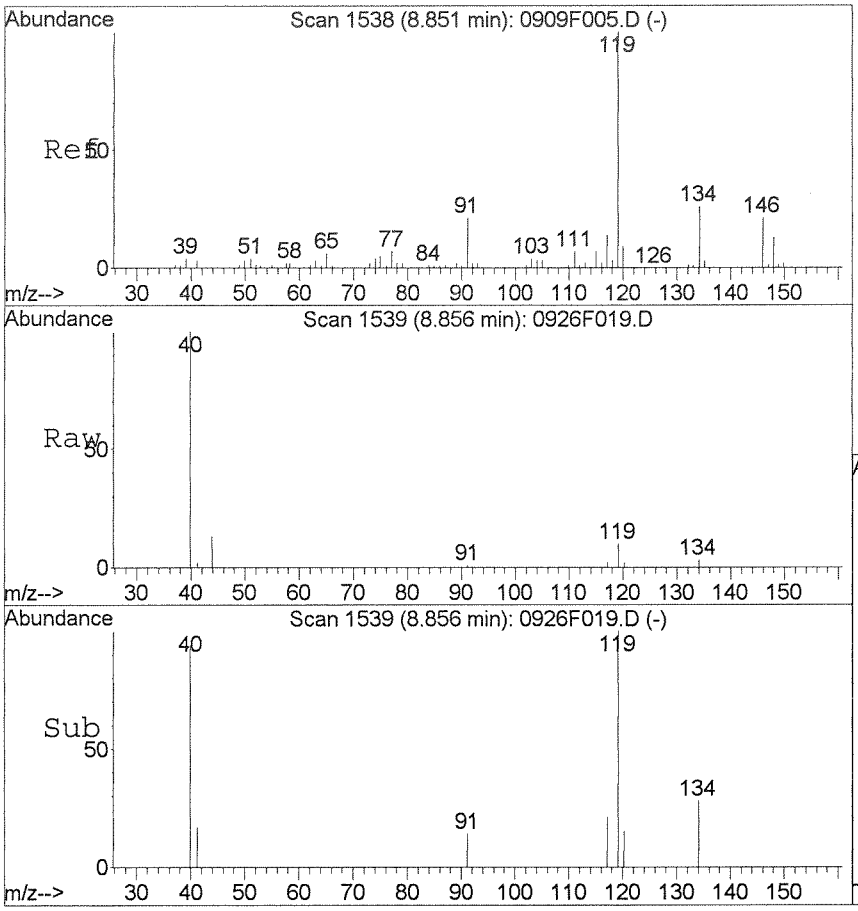


#91
1,2,4-Trimethylbenzene
Concen: 0.17 PPB
RT: 8.55 min Scan# 1480
Delta R.T. 0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:105 Resp: 835

Ion	Ratio	Lower	Upper
105	100		
120	37.8	15.9	75.9
77	18.2	0.0	41.2

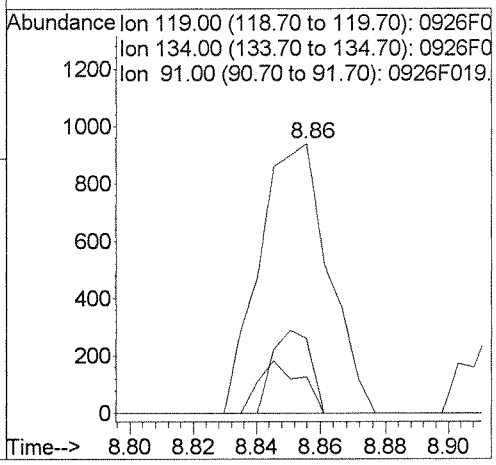


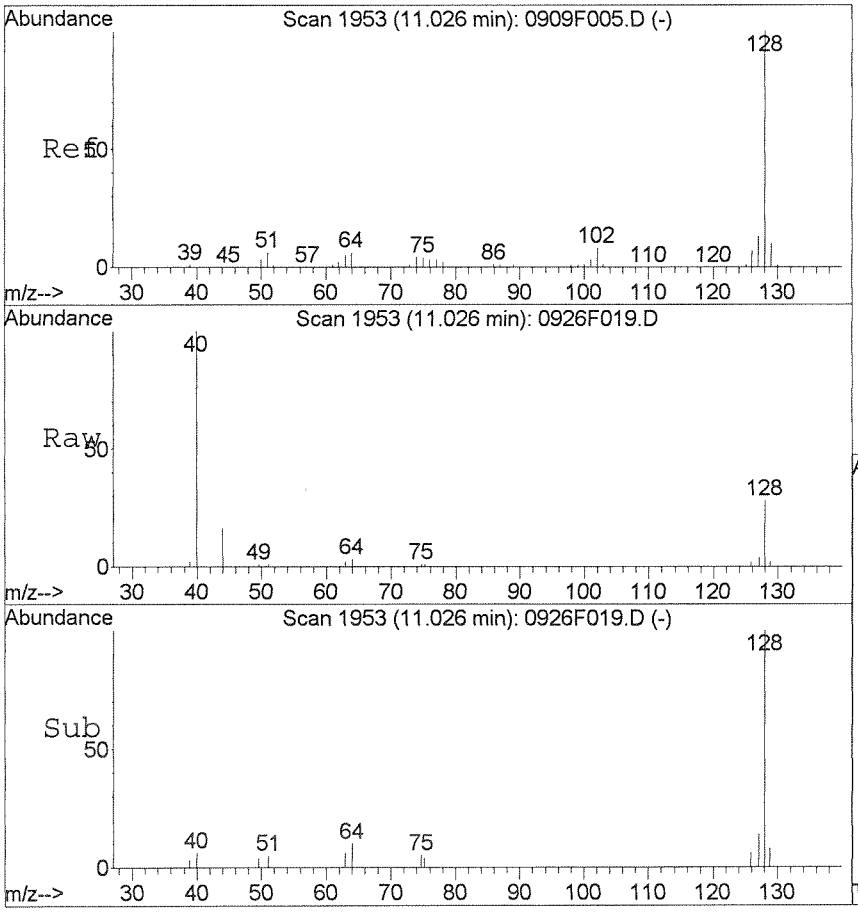


#93
p-Isopropyltoluene
Concen: 0.28 PPB
RT: 8.86 min Scan# 1539
Delta R.T. 0.01 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:119 Resp: 1404

Ion	Ratio	Lower	Upper
119	100		
134	27.7	0.0	56.2
91	13.5	0.0	50.8

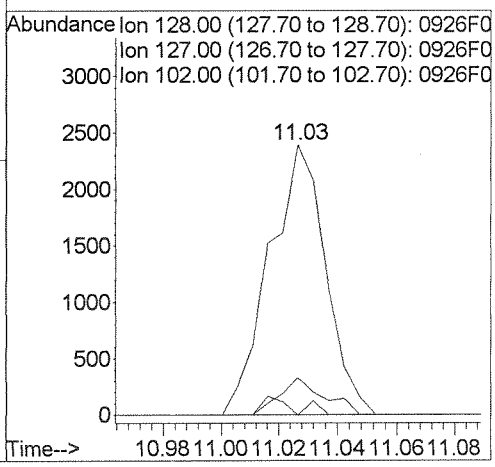




#102
Naphthalene
Concen: 0.71 PPB
RT: 11.03 min Scan# 1953
Delta R.T. -0.00 min
Lab File: 0926F019.D
Acq: 26 Sep 2014 18:37

Tgt Ion:128 Resp: 3206

Ion	Ratio	Lower	Upper
128	100		
127	13.9	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F023.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 18:04
Date Quantitated: 09/22/2014 14:13
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	Cevoic
	Vinyl Chloride	-25.3	NA	20	I

Primary Review: KNGWH

Secondary Review: 9/24/14

Printed: 09/22/2014 14:30:28
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F023.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:04	**Quant Date:**	09/22/2014 14:13	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-009			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376457	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	428240	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	152633	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	133519	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	105964	49.57	99	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	376108	45.46	91	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	127700	47.07	94	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.18	U	
1	Vinyl Chloride				62	0		0.18	U	
1	1,1-Dichloroethene				96	0		0.25	U	
1	Acetone	1.97	0.02	0.00	43	16062	30.63	27		
1	Carbon Disulfide	2.00		0.00	76	2629	0.4900	0.43	J	
1	Methylene Chloride	2.23		0.00	84	4298	1.90	1.7	J	
1	trans-1,2-Dichloroethene				96	0		0.12	U	
1	cis-1,2-Dichloroethene				96	0		0.12	U	
1	2-Butanone (MEK)	3.18	0.01	0.00	72	872	3.38	2.9	J	
1	Carbon Tetrachloride				117	0		0.094	U	
1	Benzene	3.74		0.00	78	1647	0.2100	0.18	J	
1	Trichloroethene (TCE)				95	0		0.15	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		1.8	U	
1	Toluene	5.32		0.00	92	1467	0.3000	0.26	J	
2	Tetrachloroethene (PCE)				164	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F023.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:04	**Quant Date:**	09/22/2014 14:13	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-009			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		0.93	U	
2	Dibromochloromethane				129	0		0.18	U	
2	Ethylbenzene	6.70		0.00	106	2622	1.04	0.90	J	
2	m,p-Xylenes				106	0		0.10	U	
2	o-Xylene				106	0		0.081	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.14	U	
3	1,2,4-Trichlorobenzene				180	0		0.13	U	

Prep Amount:	5.75 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F023.D Vial: 22
Acq On : 19 Sep 2014 6:04 pm Operator: KR
Sample : K09921-009 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:12:50 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

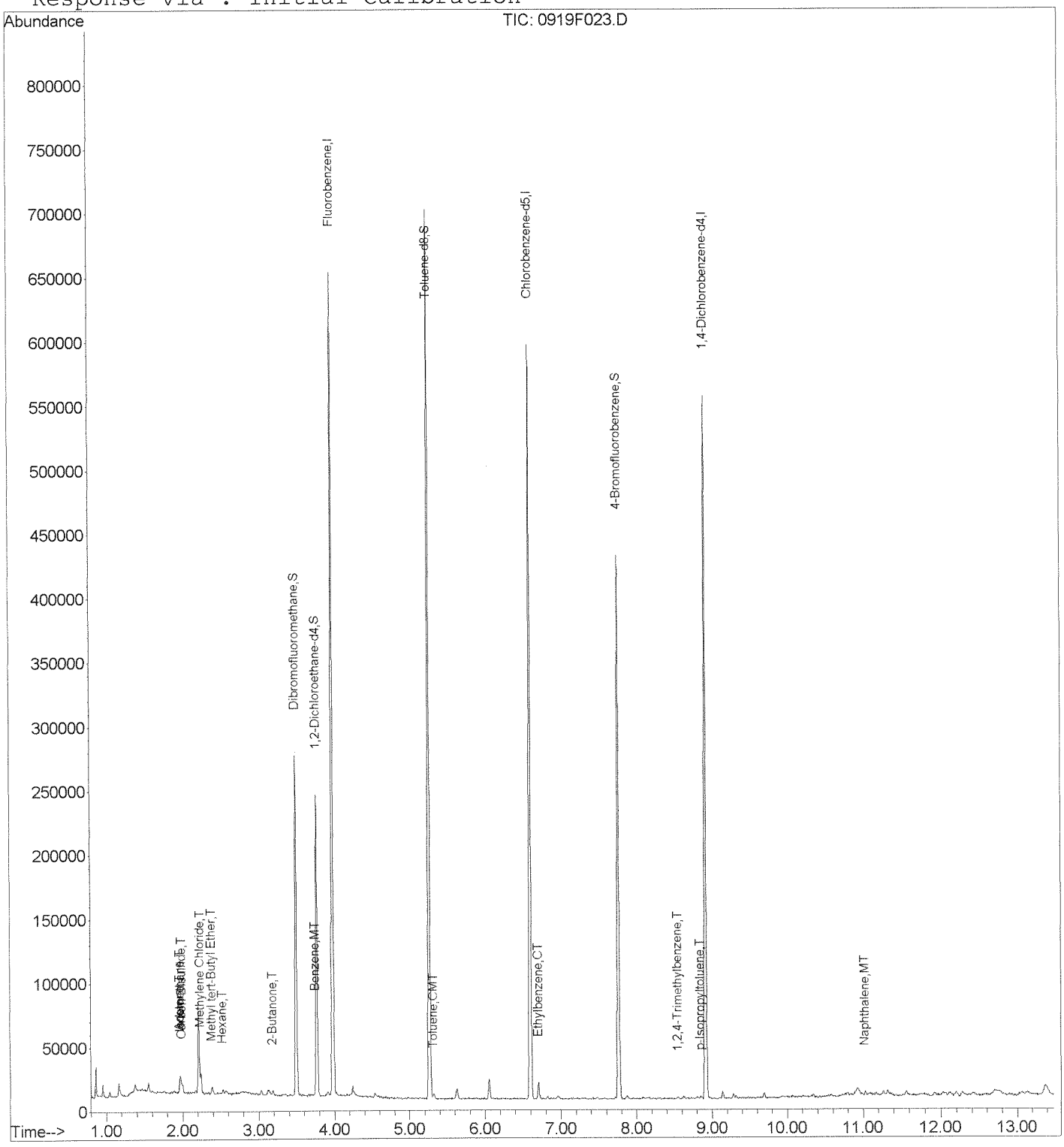
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	428240	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	152633	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	133519	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	105964	49.57	PPB		0.00
Spiked Amount 50.000			Recovery =	99.14%			
44) 1,2-Dichloroethane-d4	3.76	65	100836	47.09	PPB		0.00
Spiked Amount 50.000			Recovery =	94.18%			
59) Toluene-d8	5.26	98	376108	45.46	PPB		0.00
Spiked Amount 50.000			Recovery =	90.92%			
80) 4-Bromofluorobenzene	7.76	95	127700	47.07	PPB		0.00
Spiked Amount 50.000			Recovery =	94.14%			
Target Compounds							Qvalue
13) Acetone	1.97	43	16062	30.63	PPB		96
14) Iodomethane	1.98	142	694	0.41	PPB		85
15) Carbon Disulfide	2.00	76	2629	0.49	PPB		97
19) Methylene Chloride	2.23	84	4298	1.90	PPB		93
22) Methyl tert-Butyl Ether	2.39	73	3529	0.62	PPB		97
24) Hexane	2.53	57	1249	0.51	PPB		91
32) 2-Butanone	3.18	72	872	3.38	PPB		94
45) Benzene	3.74	78	1647	0.21	PPB	#	1
60) Toluene	5.32	92	1467	0.30	PPB		92
72) Ethylbenzene	6.70	106	2622	1.04	PPB		92
91) 1,2,4-Trimethylbenzene	8.55	105	668	0.11	PPB		80
93) p-Isopropyltoluene	8.85	119	939	0.14	PPB		93
102) Naphthalene	11.03	128	1657	0.28	PPB		92

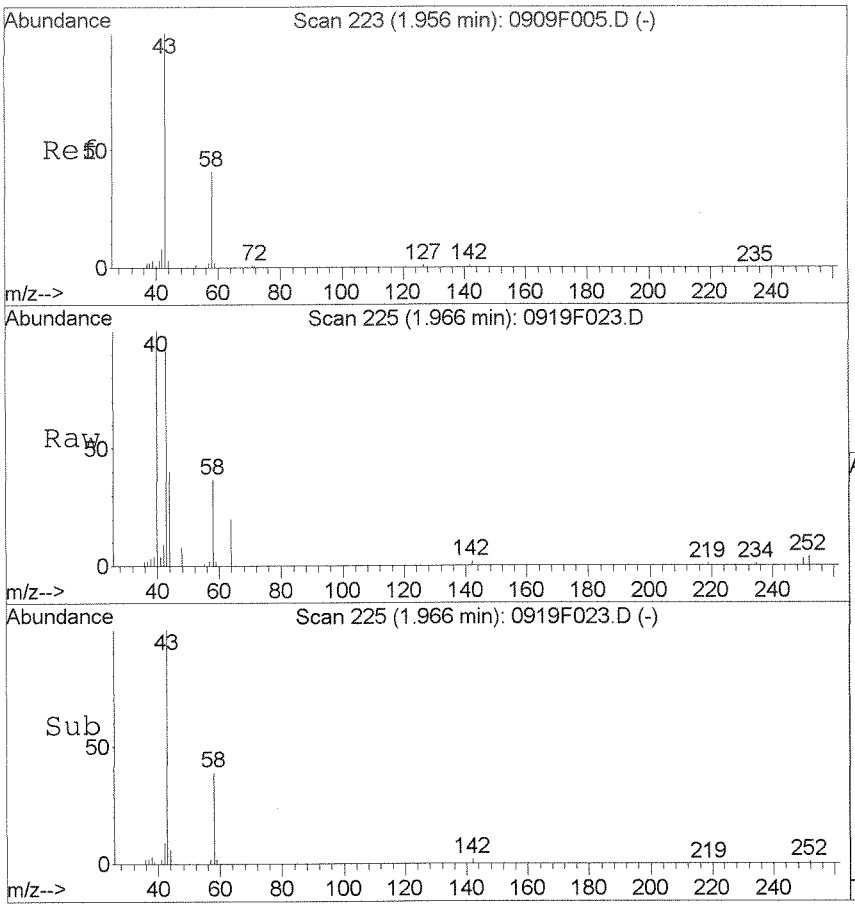
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F023.D Vial: 22
Acq On : 19 Sep 2014 6:04 pm Operator: KR
Sample : K09921-009 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:13 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

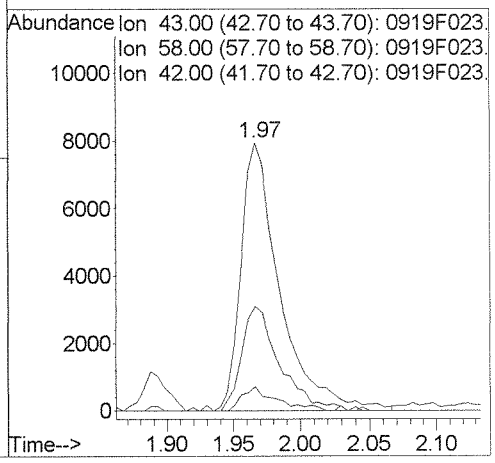


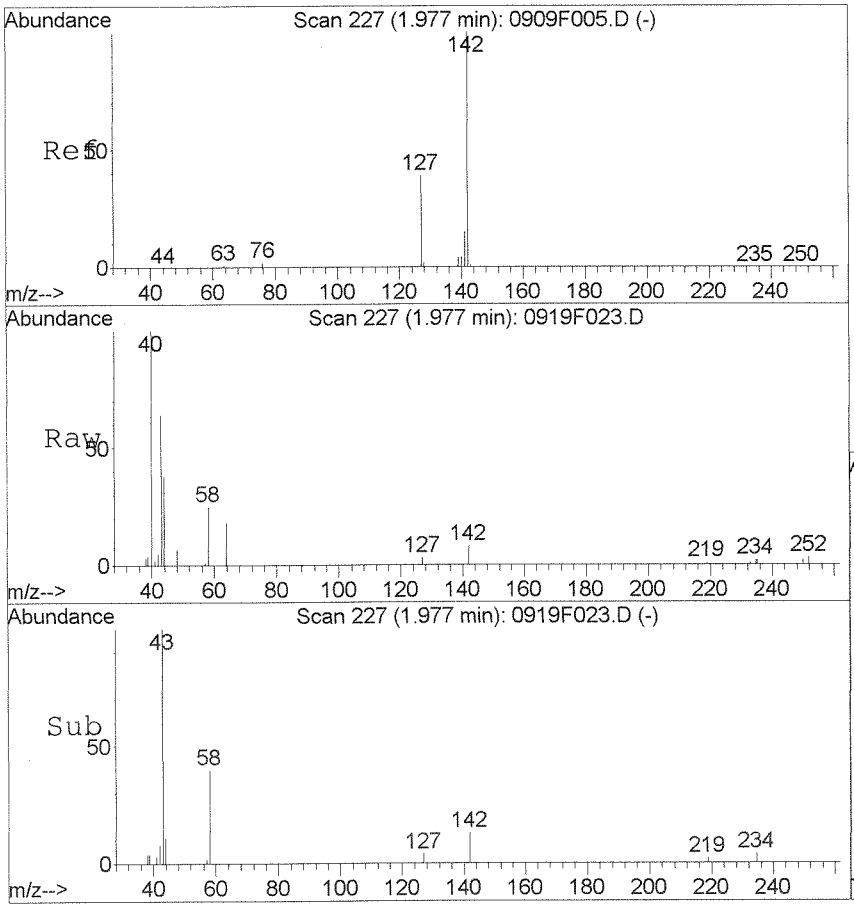


#13
Acetone
Concen: 30.63 PPB
RT: 1.97 min Scan# 225
Delta R.T. 0.01 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 43 Resp: 16062

Ion	Ratio	Lower	Upper
43	100		
58	38.9	11.3	71.3
42	9.0	0.0	37.7

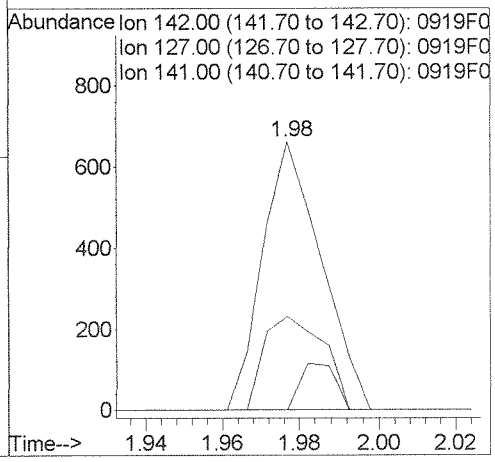


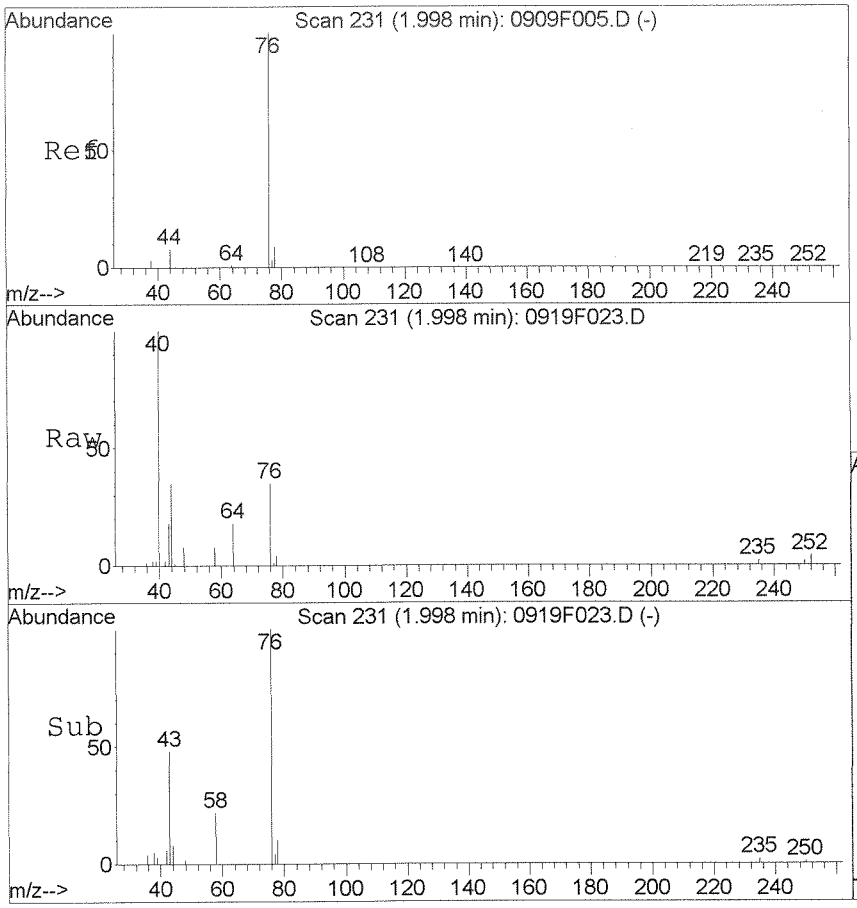


#14
Iodomethane
Concen: 0.41 PPB
RT: 1.98 min Scan# 227
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion:142 Resp: 694

Ion	Ratio	Lower	Upper
142	100		
127	34.9	9.4	69.4
141	0.0	0.0	44.9

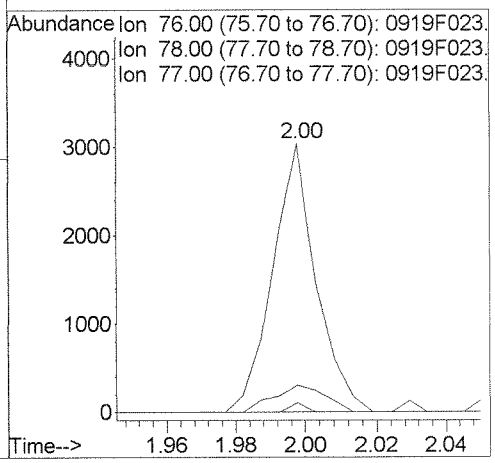


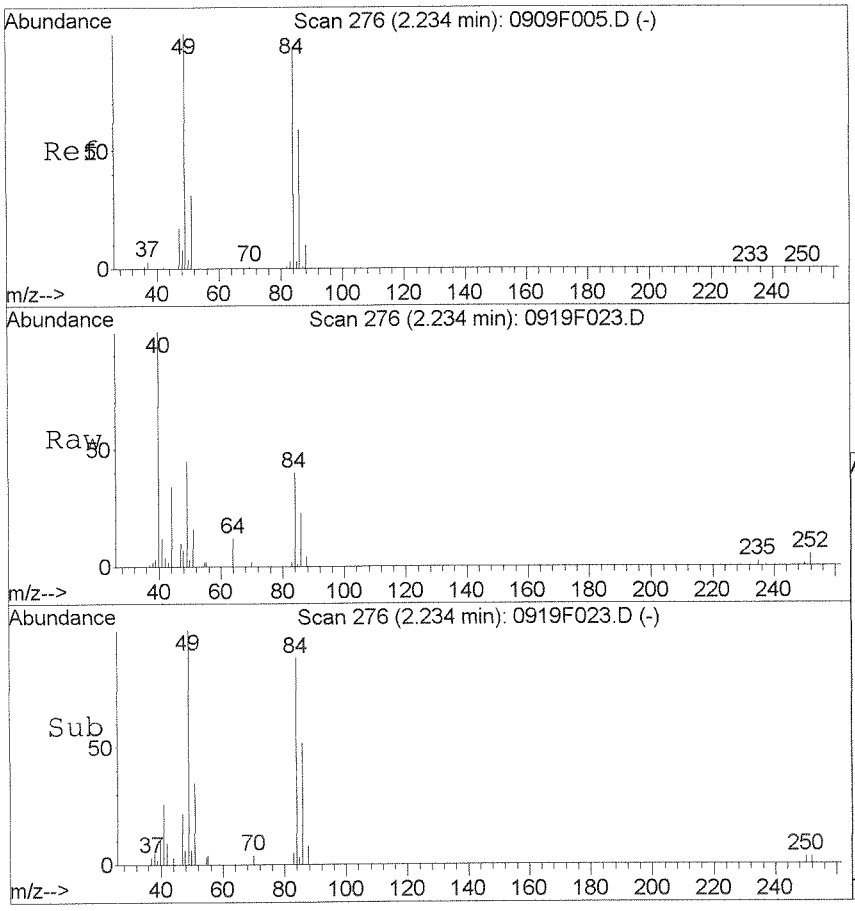


#15
Carbon Disulfide
Concen: 0.49 PPB
RT: 2.00 min Scan# 231
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 76 Resp: 2629

Ion	Ratio	Lower	Upper
76	100		
78	10.1	0.0	39.0
77	3.6	0.0	32.6

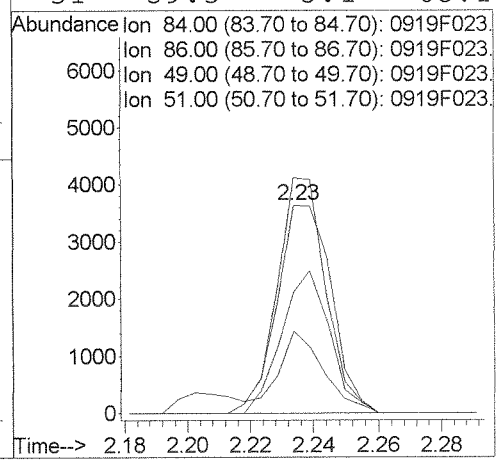


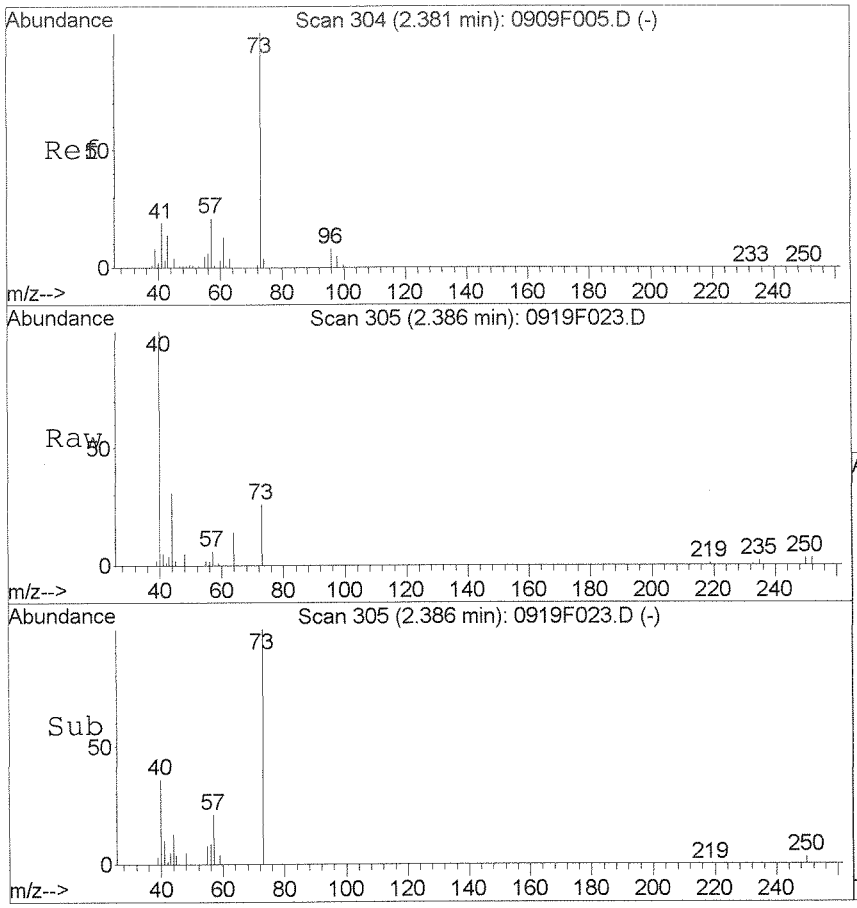


#19
Methylene Chloride
Concen: 1.90 PPB
RT: 2.23 min Scan# 276
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 84 Resp: 4298

Ion	Ratio	Lower	Upper
84	100		
86	58.3	32.9	92.9
49	113.2	76.9	136.9
51	39.5	3.1	63.1

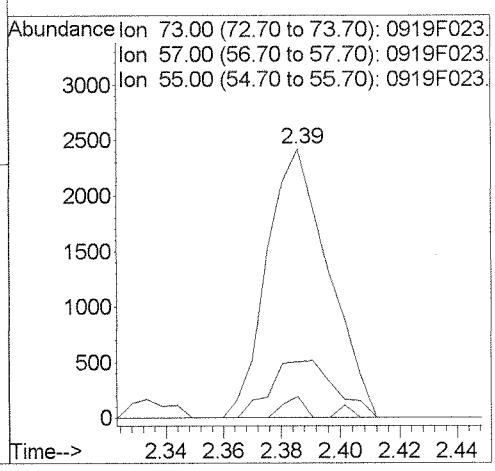


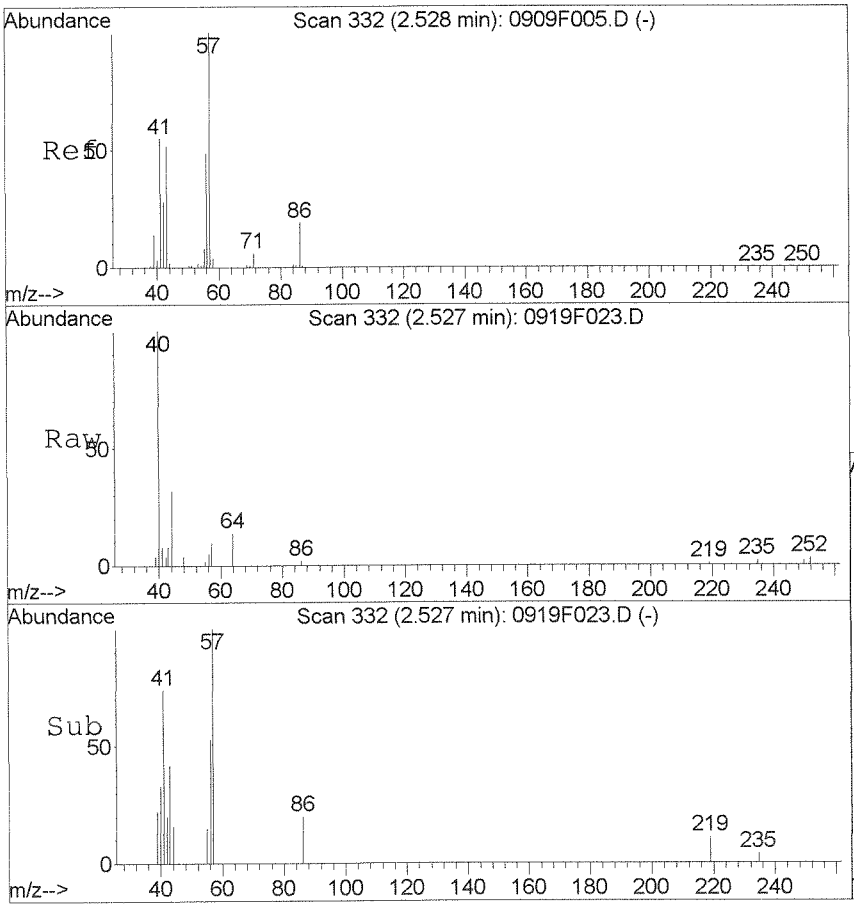


#22
Methyl tert-Butyl Ether
Concen: 0.62 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 73 Resp: 3529

Ion	Ratio	Lower	Upper
73	100		
57	20.8	0.0	51.5
55	8.0	0.0	35.6

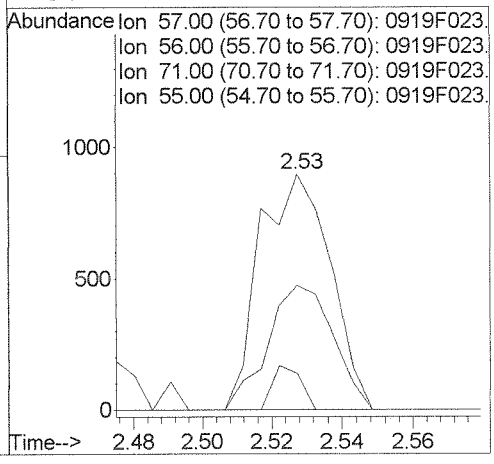


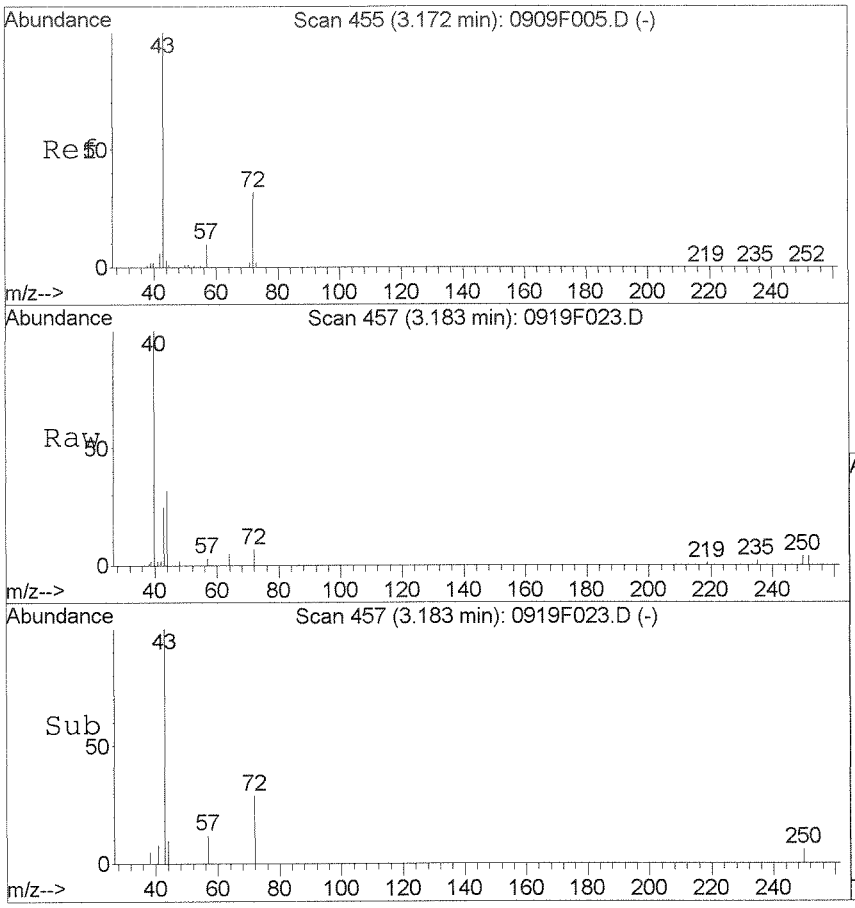


#24
Hexane
Concen: 0.51 PPB
RT: 2.53 min Scan# 332
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 57 Resp: 1249

Ion	Ratio	Lower	Upper
57	100		
56	52.8	18.8	78.8
71	0.0	0.0	35.9
55	15.3	0.0	20.6

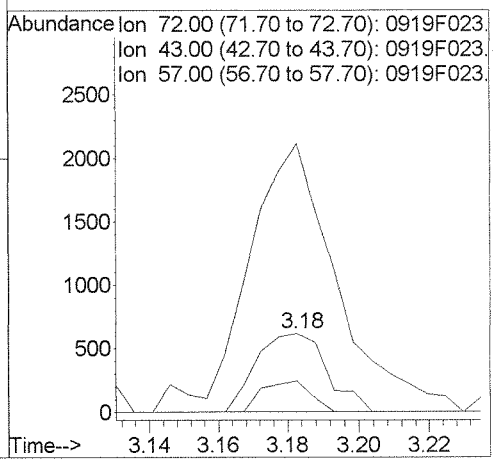


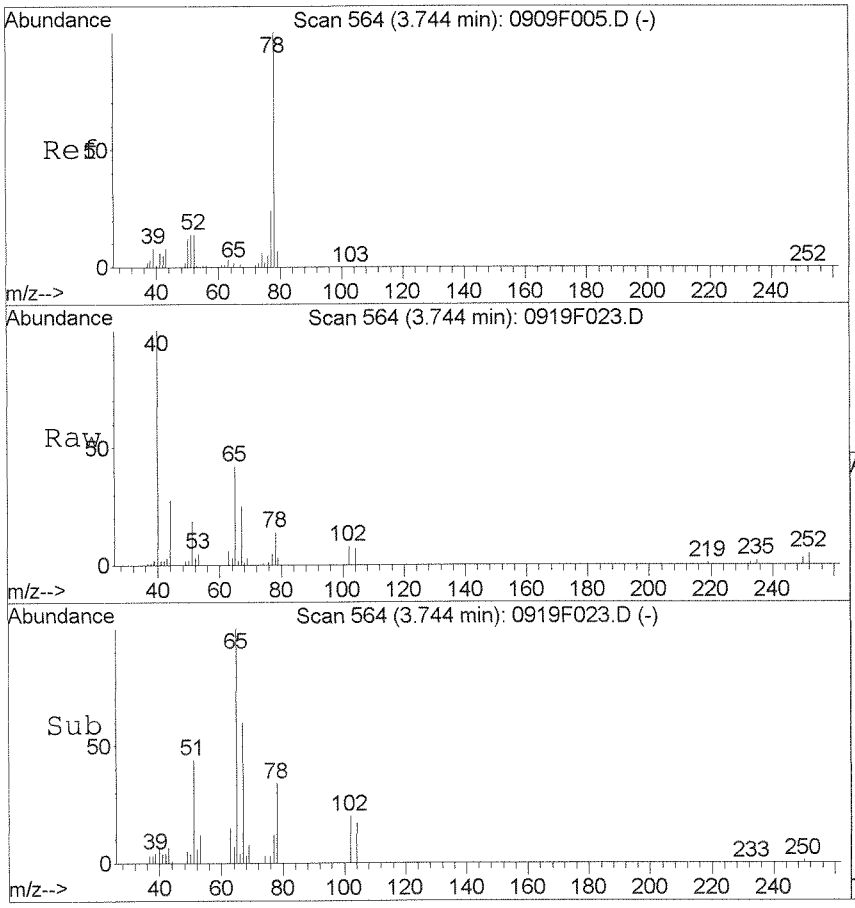


#32
2-Butanone
Concen: 3.38 PPB
RT: 3.18 min Scan# 457
Delta R.T. 0.01 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 72 Resp: 872

Ion	Ratio	Lower	Upper
72	100		
43	324.8	284.6	344.6
57	39.6	0.2	60.2

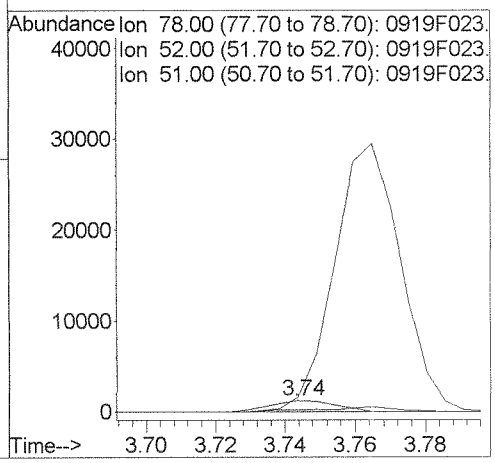


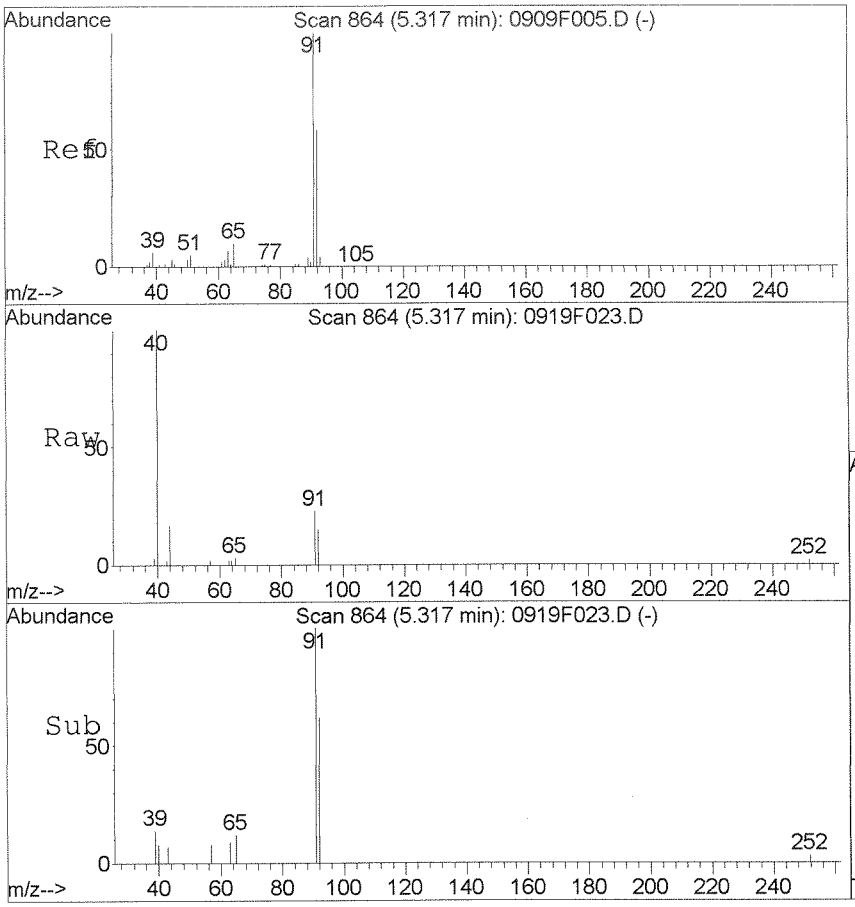


#45
Benzene
Concen: 0.21 PPB
RT: 3.74 min Scan# 564
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 78 Resp: 1647

Ion	Ratio	Lower	Upper
78	100		
52	17.8	0.0	44.3
51	129.0	0.0	44.1#

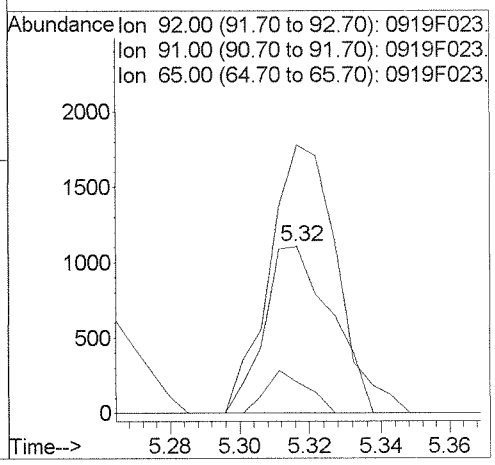


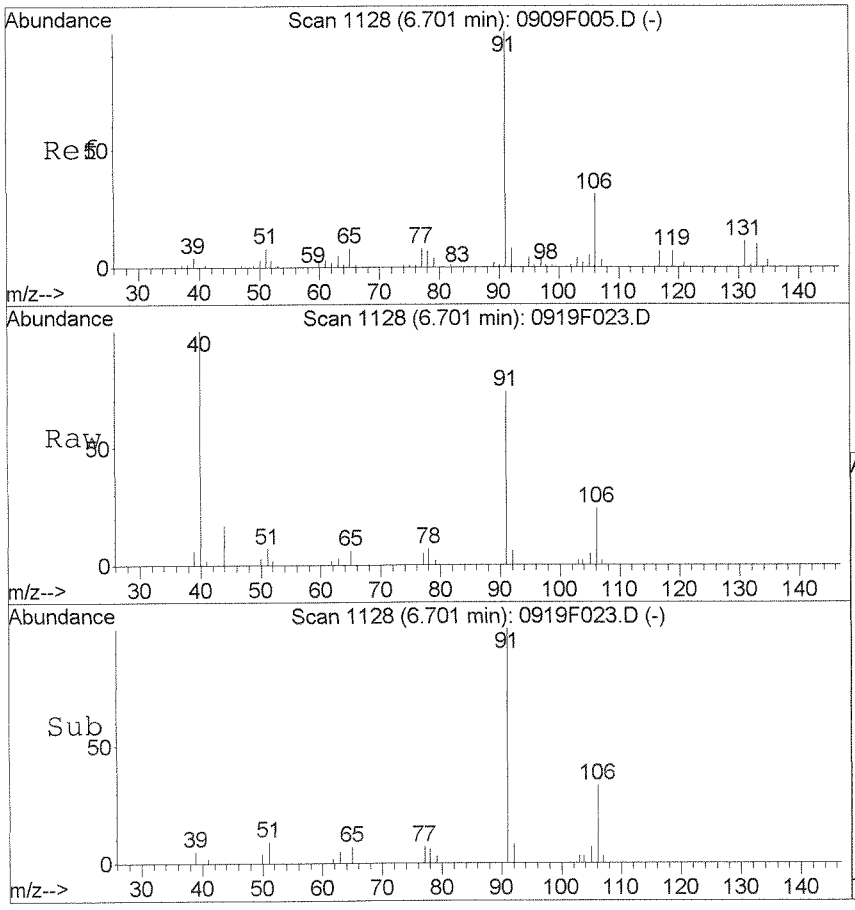


#60
Toluene
Concen: 0.30 PPB
RT: 5.32 min Scan# 864
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion: 92 Resp: 1467

Ion	Ratio	Lower	Upper
92	100		
91	161.1	143.3	203.3
65	18.6	0.0	47.5

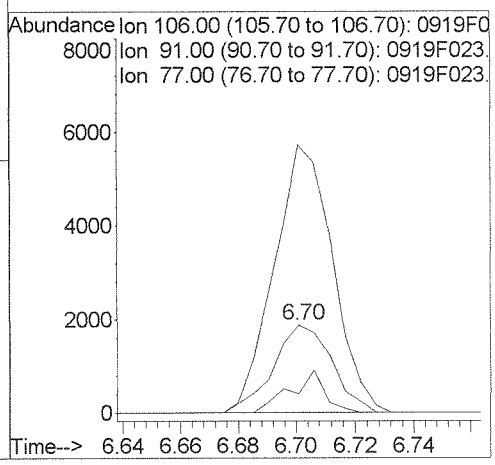


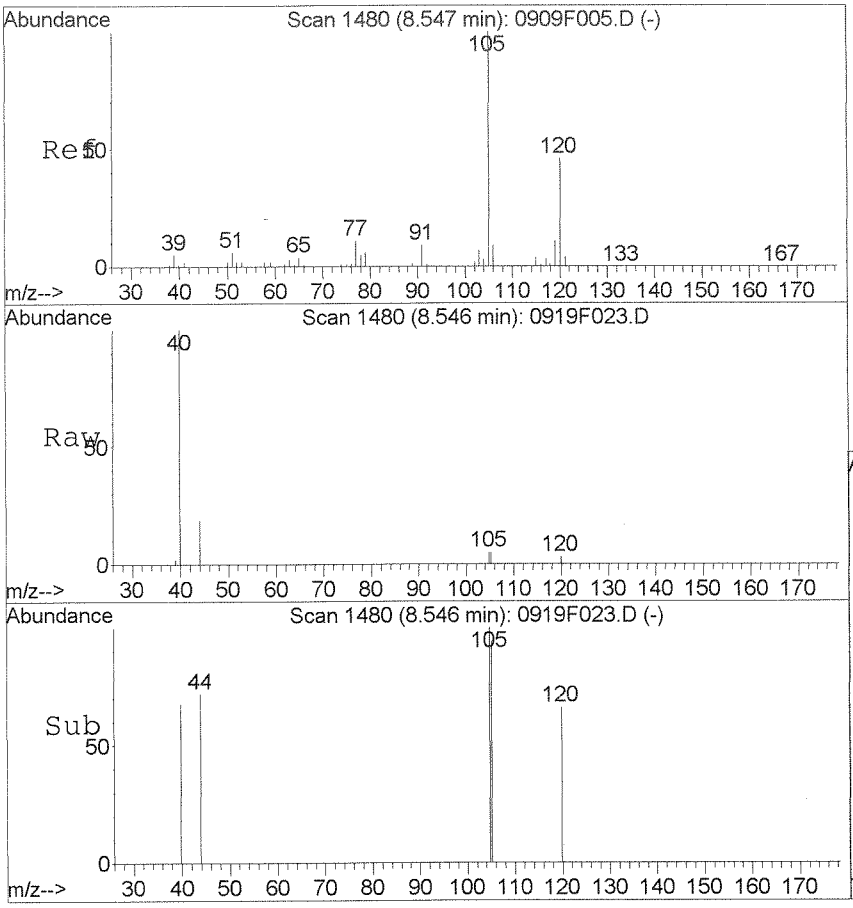


#72
Ethylbenzene
Concen: 1.04 PPB
RT: 6.70 min Scan# 1128
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion:106 Resp: 2622

Ion	Ratio	Lower	Upper
106	100		
91	305.2	291.9	351.9
77	21.7	0.0	57.1

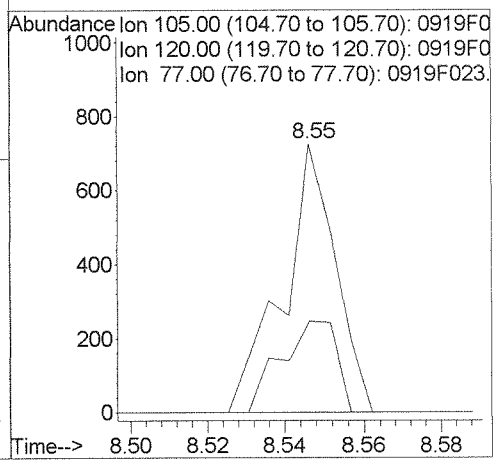


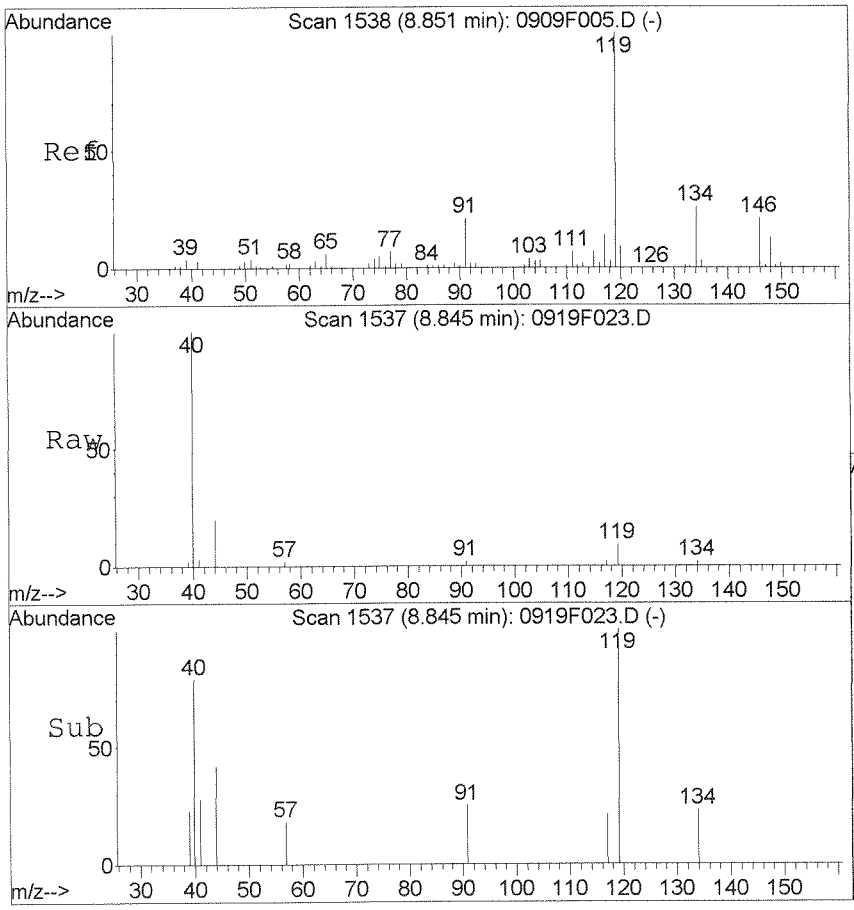


#91
1,2,4-Trimethylbenzene
Concen: 0.11 PPB
RT: 8.55 min Scan# 1480
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion:105 Resp: 668

Ion	Ratio	Lower	Upper
105	100		
120	33.9	15.9	75.9
77	0.0	0.0	41.2

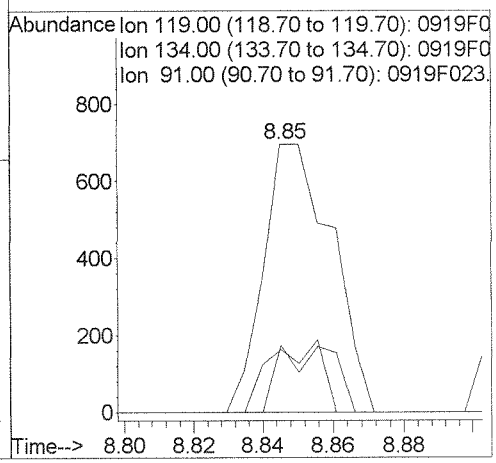


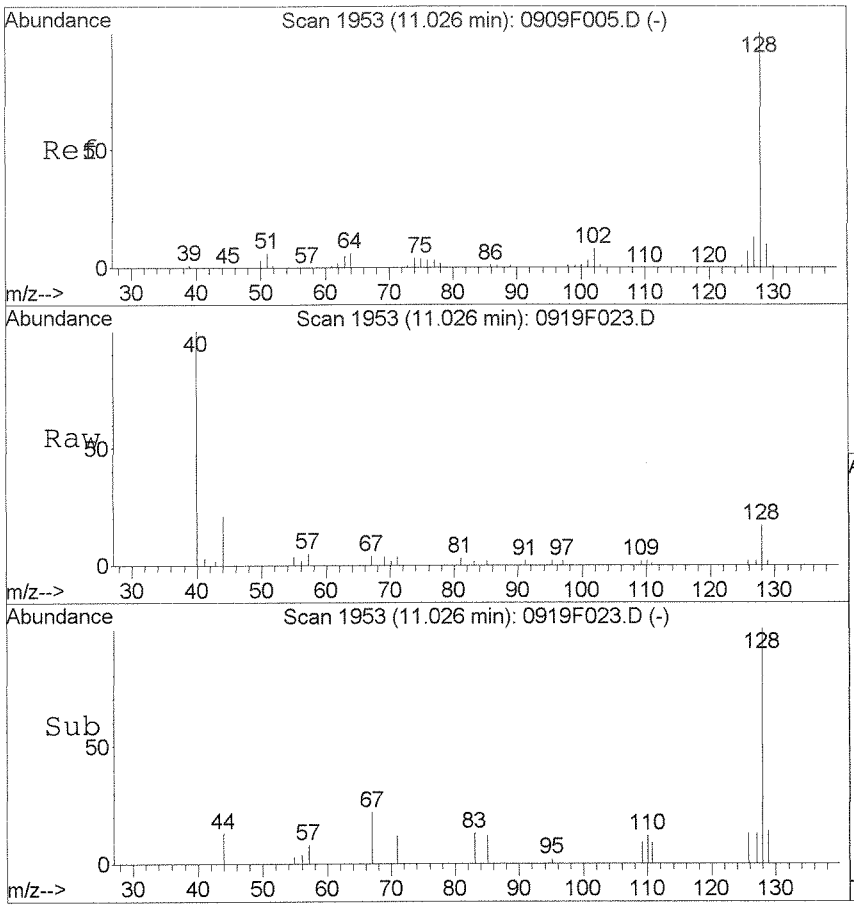


#93
p-Isopropyltoluene
Concen: 0.14 PPB
RT: 8.85 min Scan# 1537
Delta R.T. -0.01 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion:119 Resp: 939

Ion	Ratio	Lower	Upper
119	100		
134	23.4	0.0	56.2
91	25.0	0.0	50.8

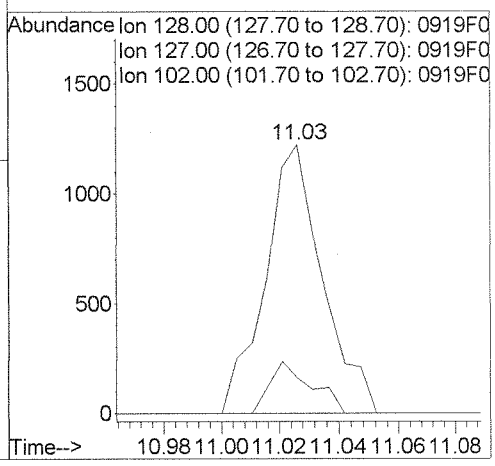




#102
Naphthalene
Concen: 0.28 PPB
RT: 11.03 min Scan# 1953
Delta R.T. -0.00 min
Lab File: 0919F023.D
Acq: 19 Sep 2014 6:04 pm

Tgt Ion:128 Resp: 1657

Ion	Ratio	Lower	Upper
128	100		
127	13.1	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F024.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 18:24
Date Quantitated: 09/22/2014 14:15
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CCV OK
	Vinyl Chloride	-25.3	NA	20	1
Internal Standards	1,4-Dichlorobenzene-d4	73090	73603	294412	client
Surrogates	4-Bromofluorobenzene	81	88	127	1

Primary Review: KA 9/22/14

Secondary Review: [illegible] 9/24/14

Printed: 09/22/2014 14:30:31
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F024.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:24	**Quant Date:**	09/22/2014 14:15	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1376458	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	377919	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	123413	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	73090	50.00	*

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	97689	51.78	104	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	338200	46.32	93	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	88969	40.55	81	88-127	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0d		0.28	U	
1	Vinyl Chloride				62	0		0.28	U	
1	1,1-Dichloroethene				96	0		0.38	U	
1	Acetone	1.95		0.00	43	38967	85.03	130		
1	Carbon Disulfide	1.99	-0.01	0.00	76	47257	9.89	15		
1	Methylene Chloride	2.24	0.01	0.00	84	4215	2.11	3.2	J	
1	trans-1,2-Dichloroethene				96	0		0.19	U	
1	cis-1,2-Dichloroethene				96	0		0.19	U	
1	2-Butanone (MEK)	3.17		0.00	72	2874	12.63	19	J	
1	Carbon Tetrachloride				117	0		0.15	U	
1	Benzene	3.75	0.01	0.00	78	1796	0.2600	0.39	J	
1	Trichloroethene (TCE)				95	0		0.23	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.8	U	
1	Toluene	5.31	-0.01	0.00	92	2381	0.5500	0.83	J	
2	Tetrachloroethene (PCE)				164	0		0.25	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F024.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:24	**Quant Date:**	09/22/2014 14:15	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		1.5	U	
2	Dibromochloromethane				129	0		0.28	U	
2	Ethylbenzene				106	0		0.15	U	
2	m,p-Xylenes				106	0		0.16	U	
2	o-Xylene				106	0		0.13	U	
2	Styrene				103	0		0.22	U	
2	Bromoform				173	0		0.22	U	
3	1,2,4-Trichlorobenzene				180	0		0.20	U	

Prep Amount:	3.30 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F024.D Vial: 23
Acq On : 19 Sep 2014 6:24 pm Operator: KR
Sample : K09921-010 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:14:15 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

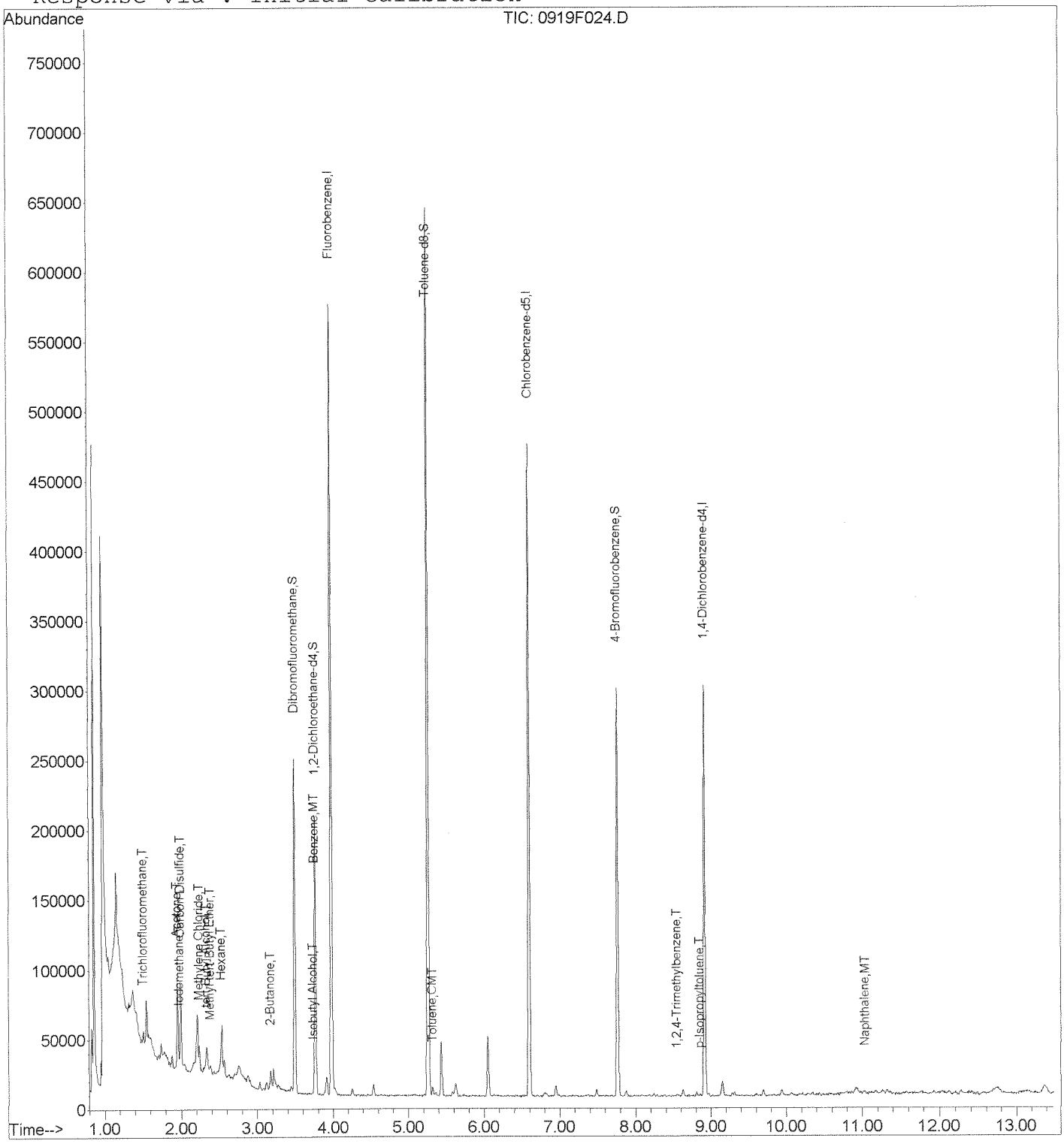
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	377919	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	123413	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	73090	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	97689	51.78	PPB		0.00
Spiked Amount 50.000			Recovery = 103.56%				
44) 1,2-Dichloroethane-d4	3.76	65	89092	47.15	PPB		0.00
Spiked Amount 50.000			Recovery = 94.30%				
59) Toluene-d8	5.26	98	338200	46.32	PPB		0.00
Spiked Amount 50.000			Recovery = 92.64%				
80) 4-Bromofluorobenzene	7.76	95	88969	40.55	PPB		0.00
Spiked Amount 50.000			Recovery = 81.10%				
Target Compounds							Qvalue
8) Trichlorofluoromethane	1.50	101	4081	1.76	PPB		92
13) Acetone	1.95	43	38967	85.03	PPB		99
14) Iodomethane	1.98	142	570	0.38	PPB		89
15) Carbon Disulfide	1.99	76	47257	9.89	PPB		99
19) Methylene Chloride	2.24	84	4215	2.11	PPB		90
20) tert-Butyl Alcohol	2.32	59	704	3.56	PPB	#	12
22) Methyl tert-Butyl Ether	2.39	73	3476	0.69	PPB		95
24) Hexane	2.52	57	1910	0.88	PPB		95
32) 2-Butanone	3.17	72	2874	12.63	PPB	#	75
43) Isobutyl Alcohol	3.73	43	576	7.74	PPB		83
45) Benzene	3.75	78	1796	0.26	PPB	#	1
60) Toluene	5.31	92	2381	0.55	PPB		91
91) 1,2,4-Trimethylbenzene	8.54	105	601	0.18	PPB		77
93) p-Isopropyltoluene	8.85	119	787	0.22	PPB		75
102) Naphthalene	11.03	128	1194	0.37	PPB		85

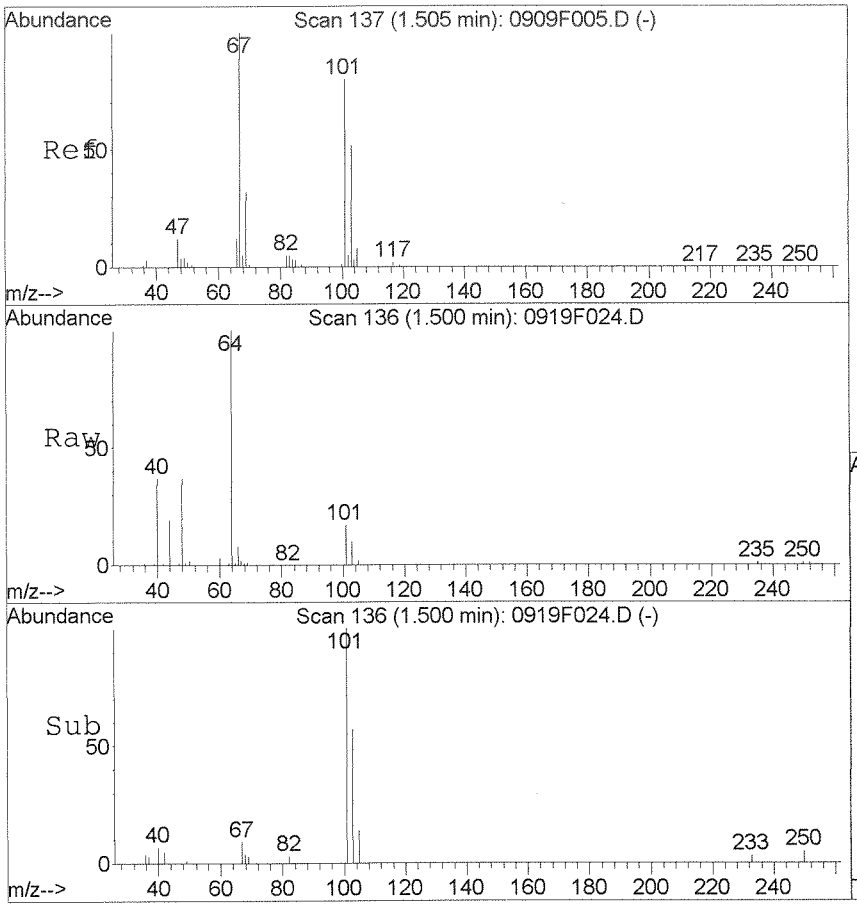
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F024.D Vial: 23
Acq On : 19 Sep 2014 6:24 pm Operator: KR
Sample : K09921-010 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:15 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

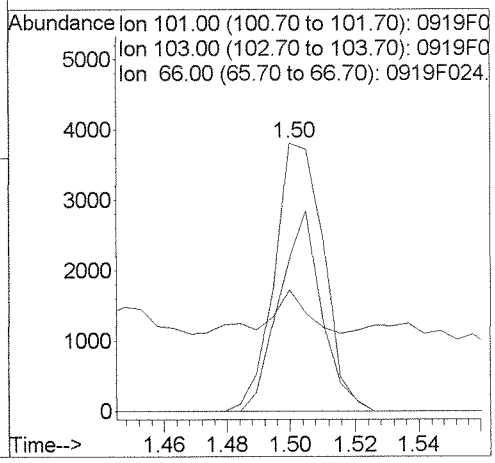


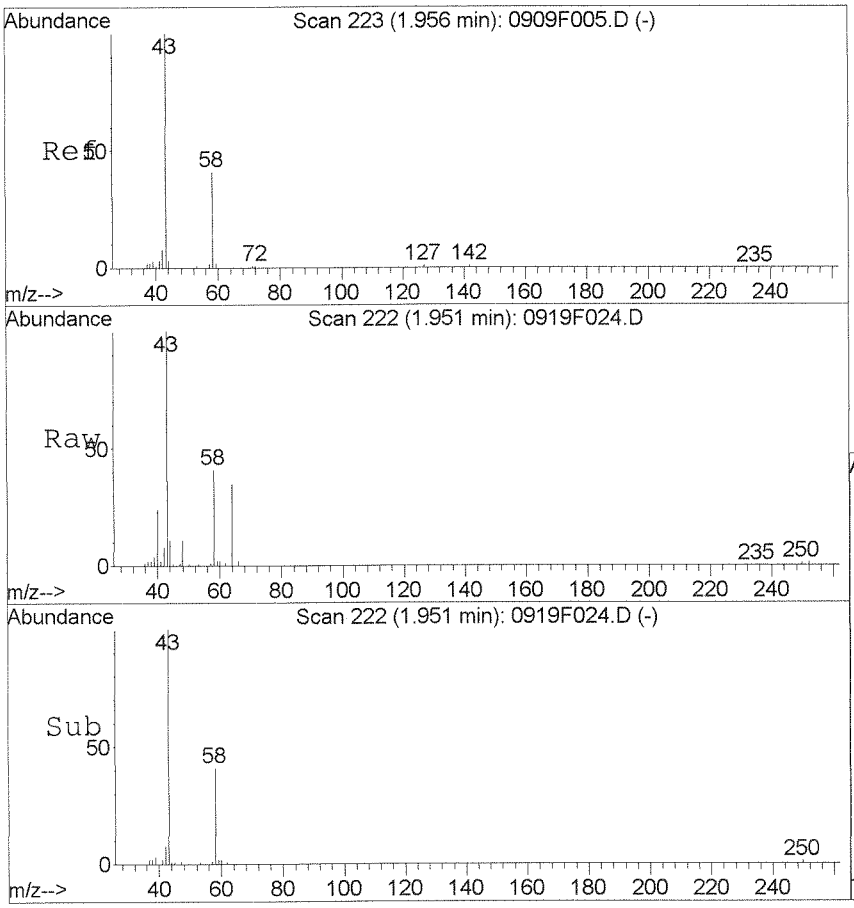


#8
Trichlorofluoromethane
Concen: 1.76 PPB
RT: 1.50 min Scan# 136
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion:101 Resp: 4081

Ion	Ratio	Lower	Upper
101	100		
103	57.0	34.7	94.7
66	15.9	0.0	45.0

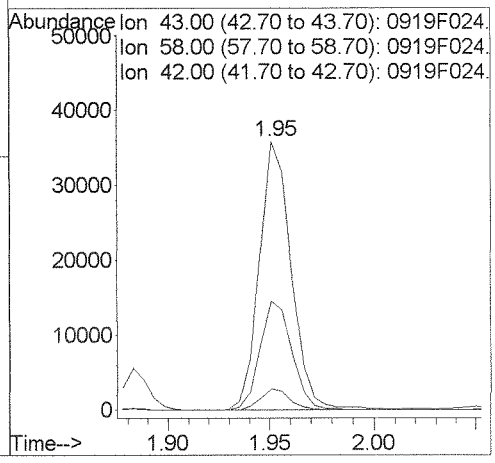


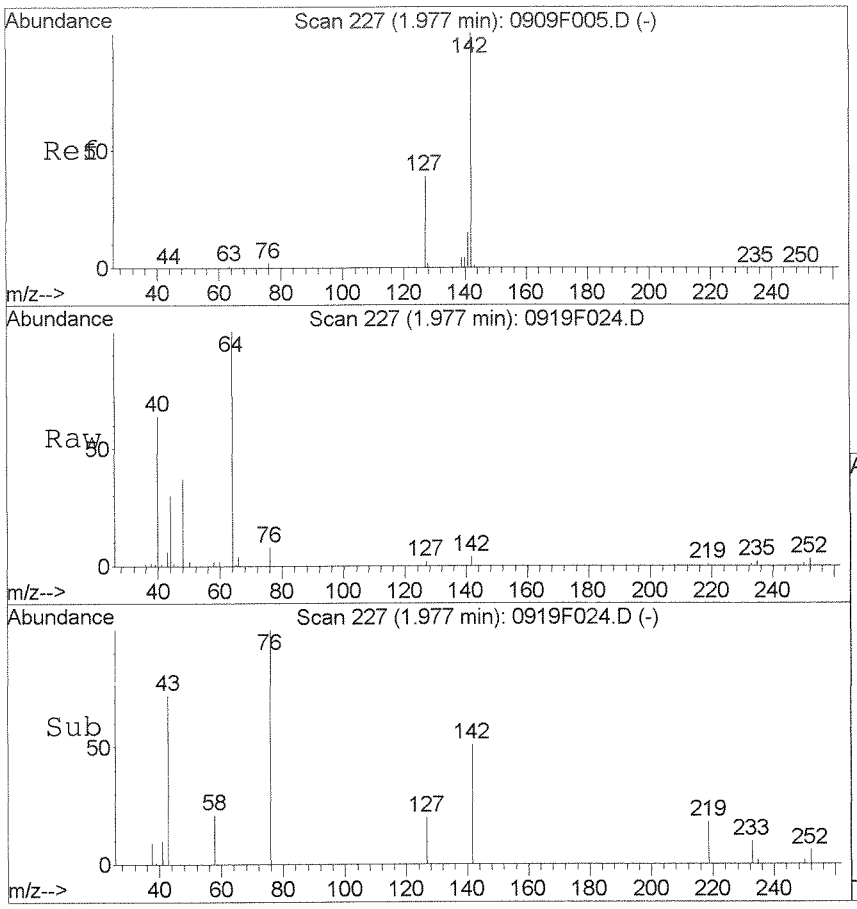


#13
Acetone
Concen: 85.03 PPB
RT: 1.95 min Scan# 222
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 43 Resp: 38967

Ion	Ratio	Lower	Upper
43	100		
58	40.6	11.3	71.3
42	8.0	0.0	37.7

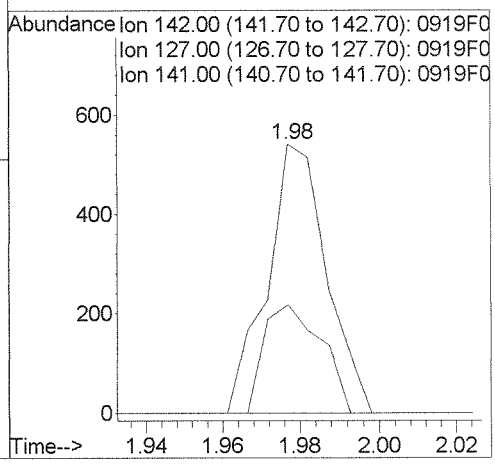


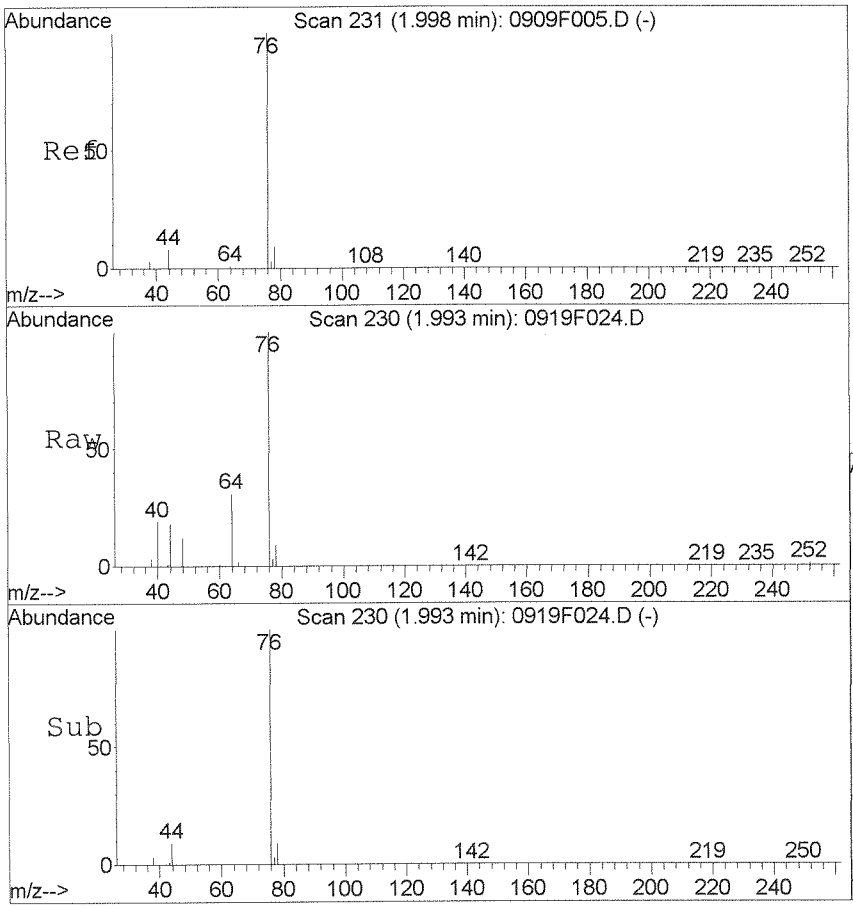


#14
Iodomethane
Concen: 0.38 PPB
RT: 1.98 min Scan# 227
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion:142 Resp: 570

Ion	Ratio	Lower	Upper
142	100		
127	40.3	9.4	69.4
141	0.0	0.0	44.9

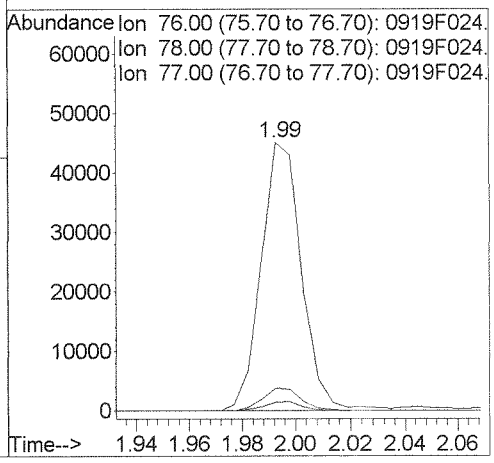


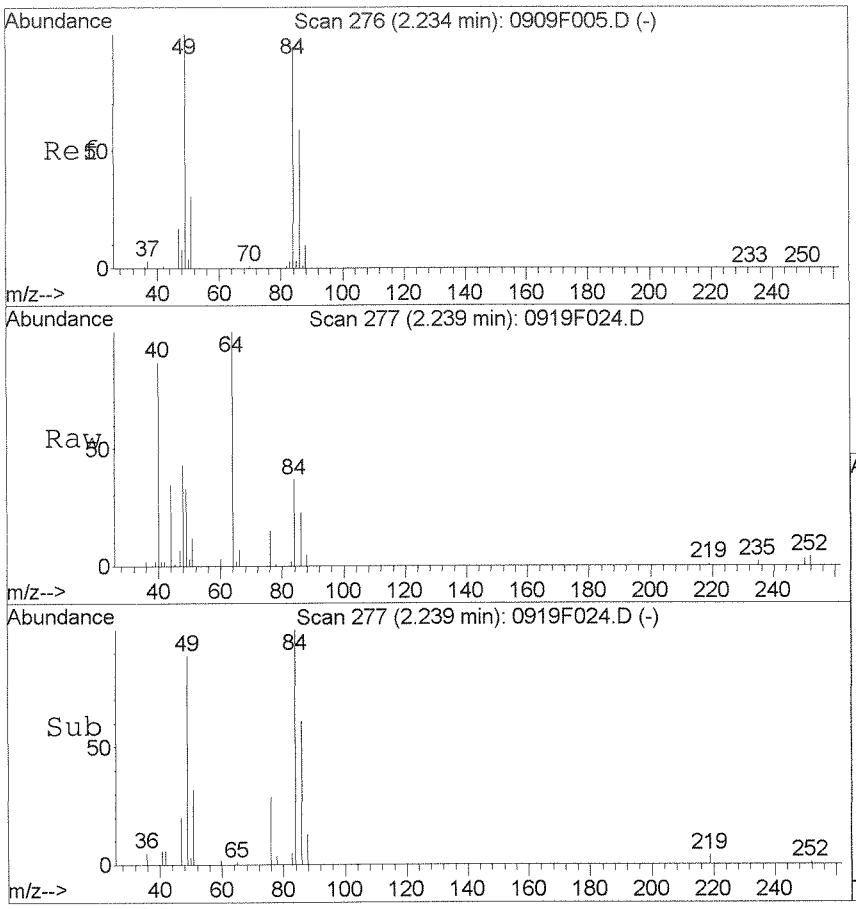


#15
Carbon Disulfide
Concen: 9.89 PPB
RT: 1.99 min Scan# 230
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 76 Resp: 47257

Ion	Ratio	Lower	Upper
76	100		
78	8.5	0.0	39.0
77	3.3	0.0	32.6

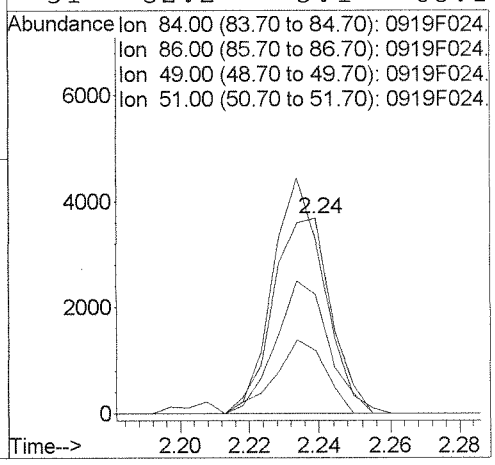


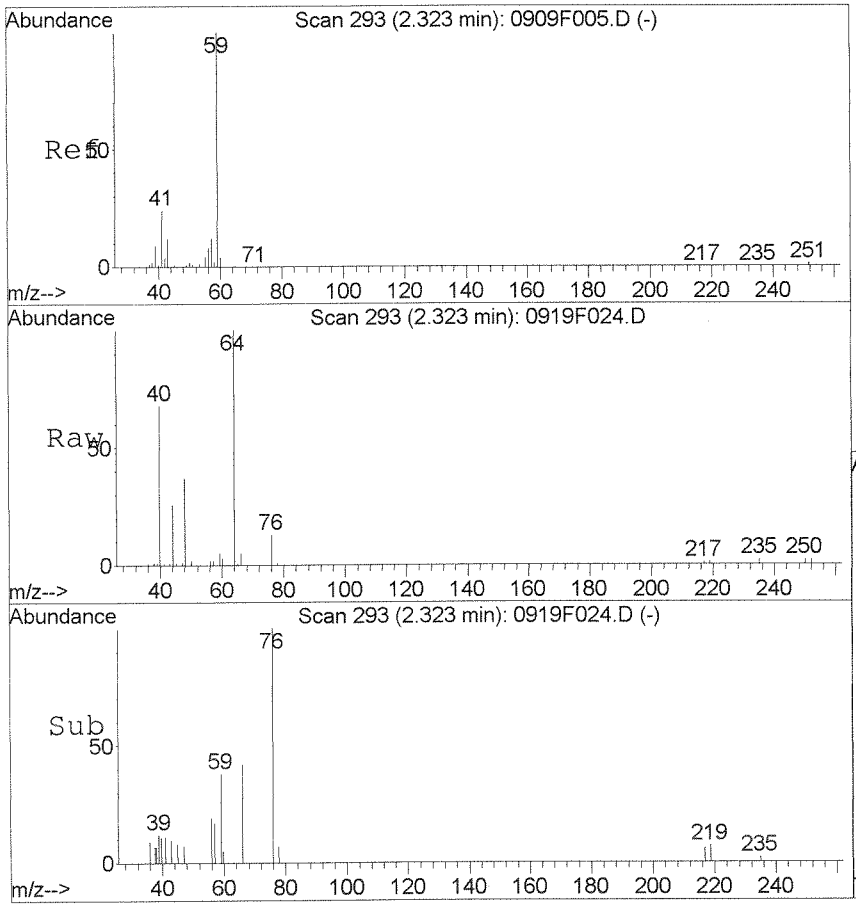


#19
Methylene Chloride
Concen: 2.11 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 84 Resp: 4215

Ion	Ratio	Lower	Upper
84	100		
86	60.9	32.9	92.9
49	89.0	76.9	136.9
51	32.2	3.1	63.1

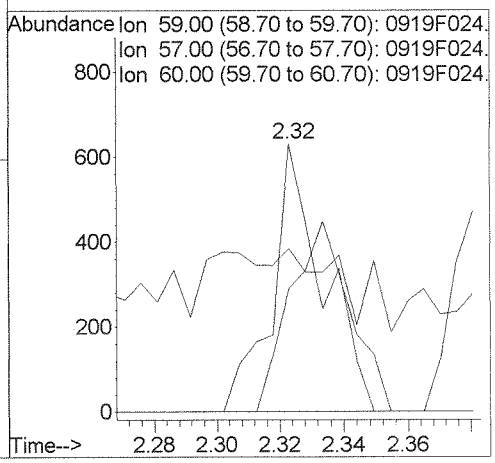


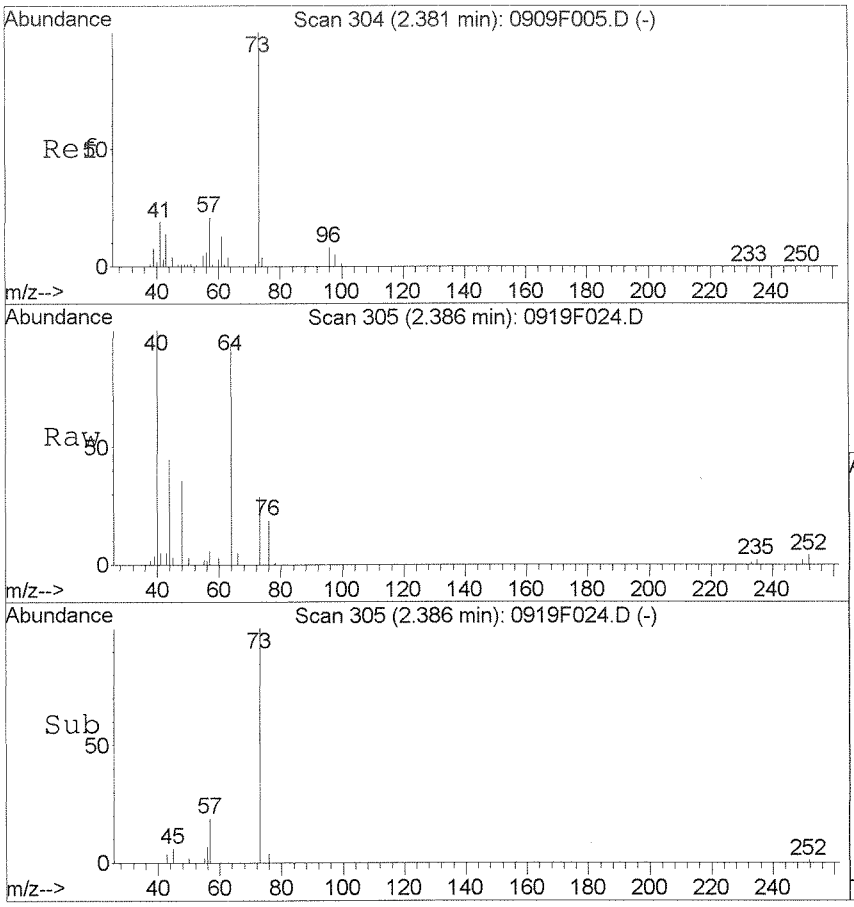


#20
tert-Butyl Alcohol
Concen: 3.56 PPB
RT: 2.32 min Scan# 293
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 59 Resp: 704

Ion	Ratio	Lower	Upper
59	100		
57	46.0	0.0	41.5#
60	31.2	0.0	33.6

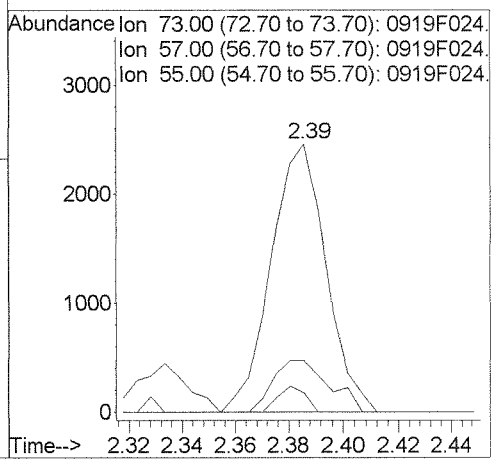


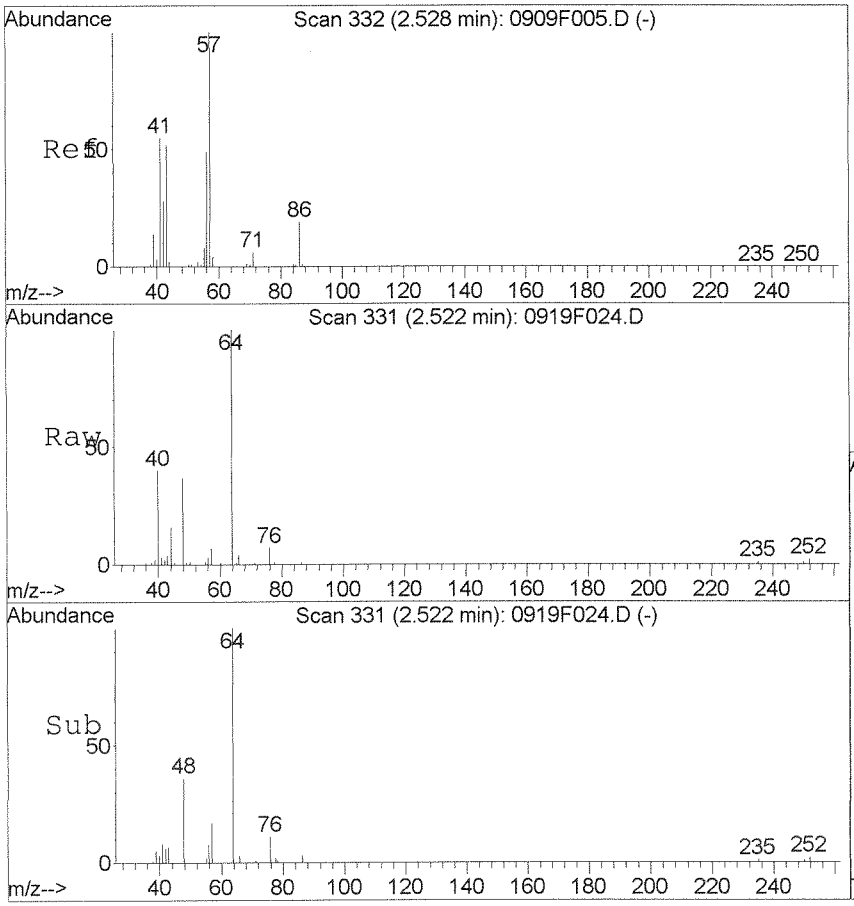


#22
Methyl tert-Butyl Ether
Concen: 0.69 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 73 Resp: 3476

Ion	Ratio	Lower	Upper
73	100		
57	19.2	0.0	51.5
55	7.1	0.0	35.6

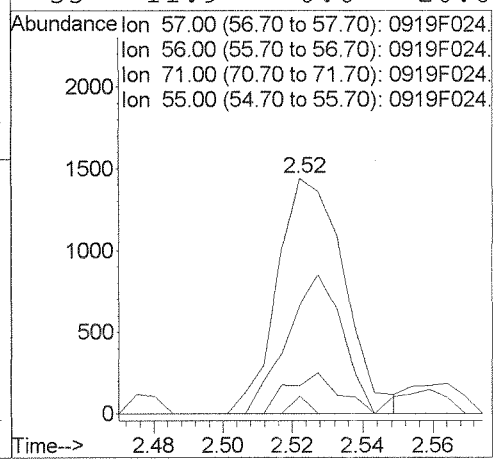


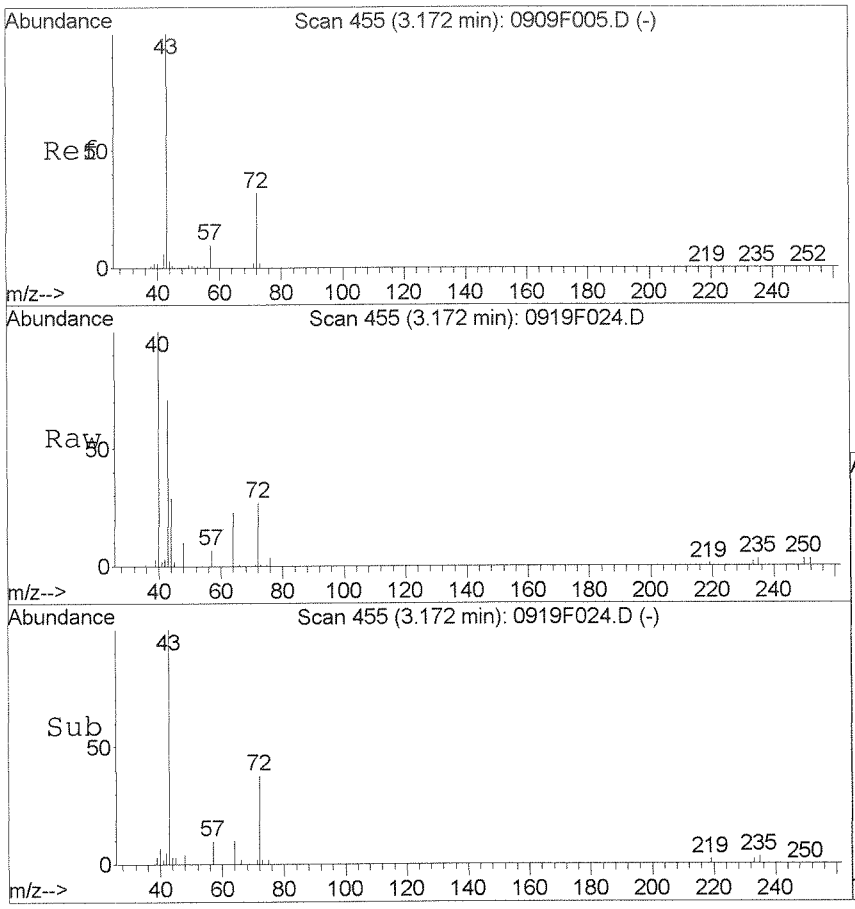


#24
Hexane
Concen: 0.88 PPB
RT: 2.52 min Scan# 331
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 57 Resp: 1910

Ion	Ratio	Lower	Upper
57	100		
56	46.3	18.8	78.8
71	7.6	0.0	35.9
55	11.9	0.0	20.6

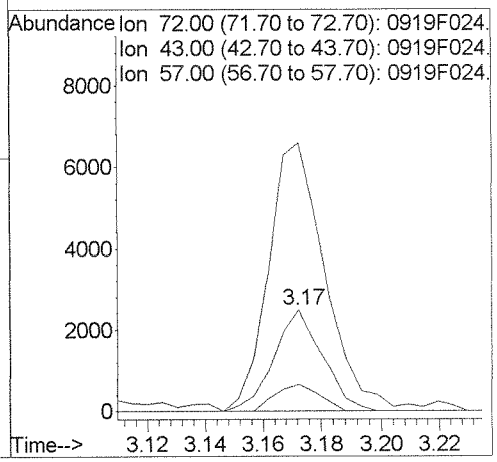


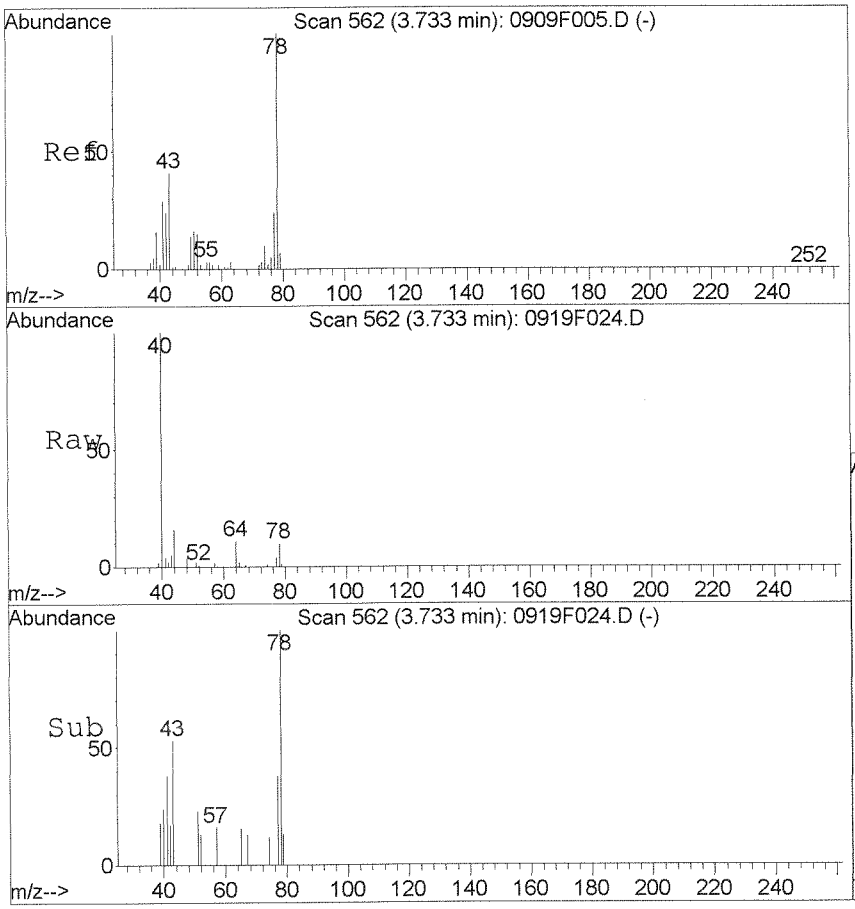


#32
2-Butanone
Concen: 12.63 PPB
RT: 3.17 min Scan# 455
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 72 Resp: 2874

Ion	Ratio	Lower	Upper
72	100		
43	259.5	284.6	344.6#
57	26.2	0.2	60.2

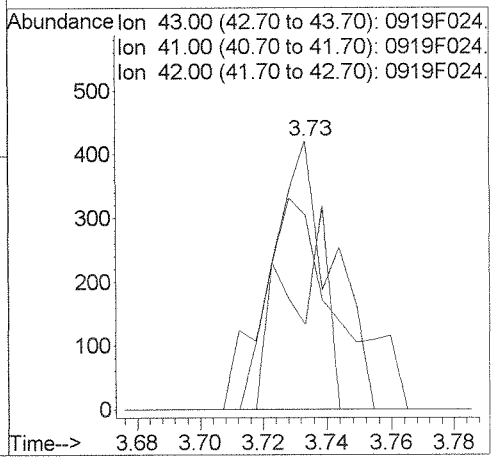


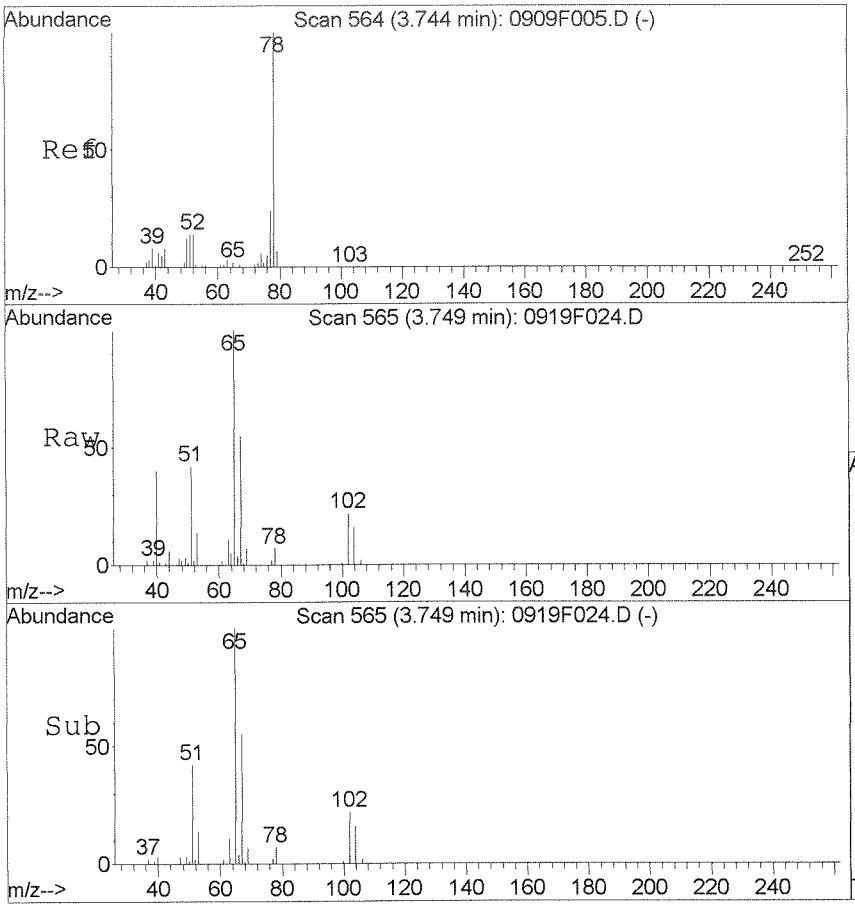


#43
Isobutyl Alcohol
Concen: 7.74 PPB
RT: 3.73 min Scan# 562
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 43 Resp: 576

Ion	Ratio	Lower	Upper
43	100		
41	72.4	41.2	101.2
42	31.6	29.1	89.1

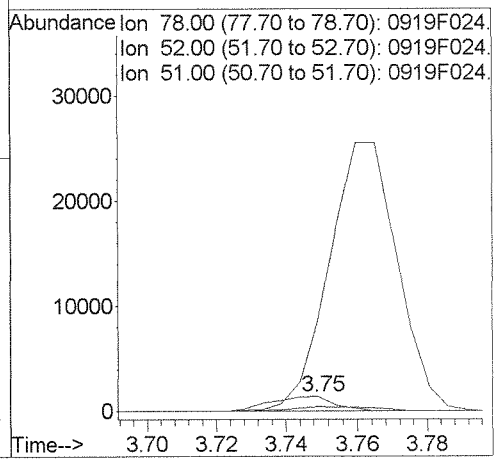


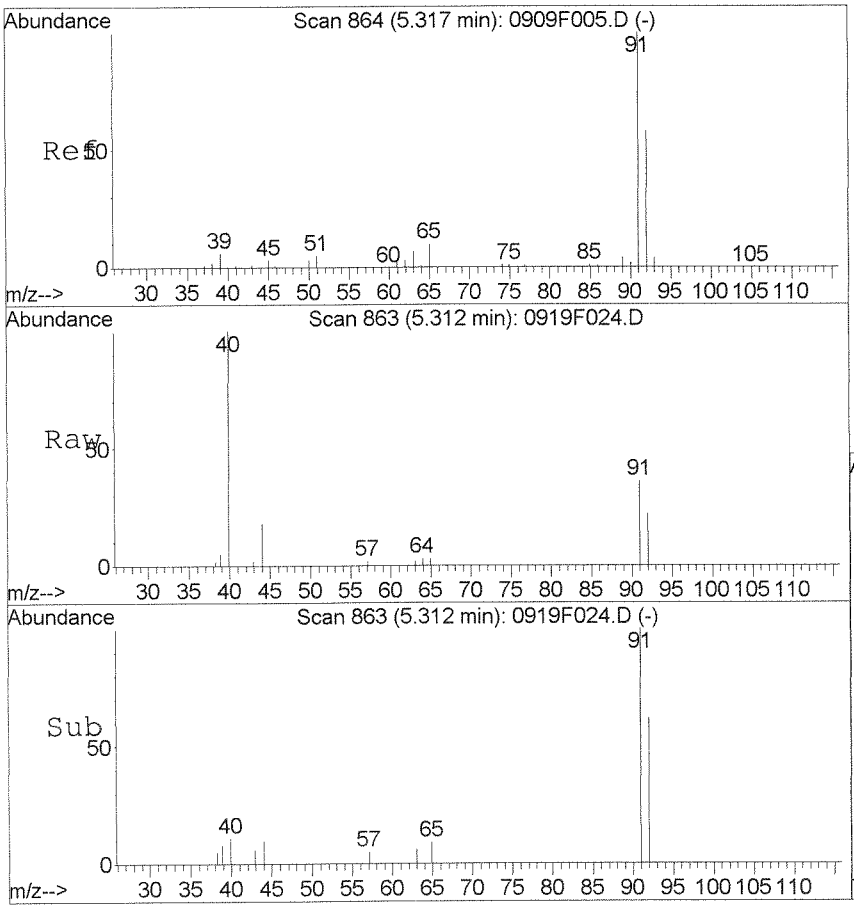


#45
Benzene
Concen: 0.26 PPB
RT: 3.75 min Scan# 565
Delta R.T. 0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 78 Resp: 1796

Ion	Ratio	Lower	Upper
78	100		
52	31.1	0.0	44.3
51	614.3	0.0	44.1#

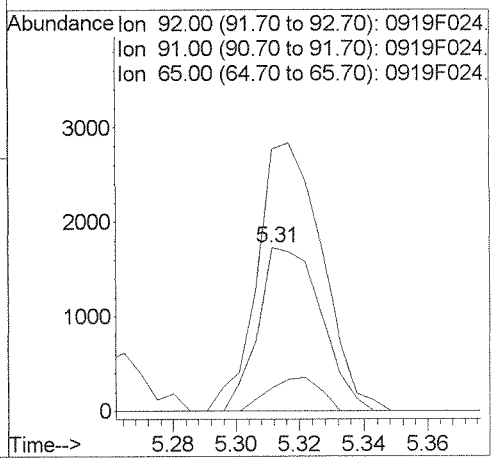


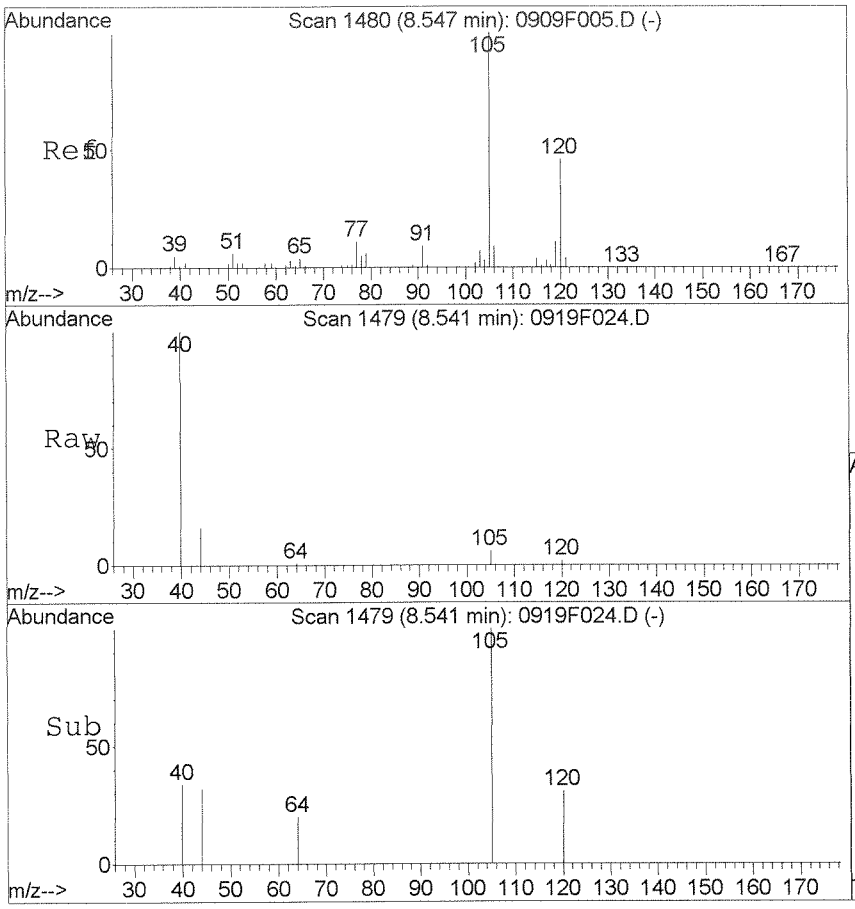


#60
Toluene
Concen: 0.55 PPB
RT: 5.31 min Scan# 863
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion: 92 Resp: 2381

Ion	Ratio	Lower	Upper
92	100		
91	160.0	143.3	203.3
65	14.4	0.0	47.5

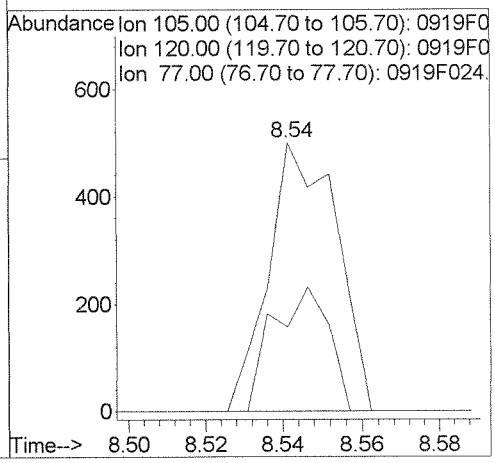


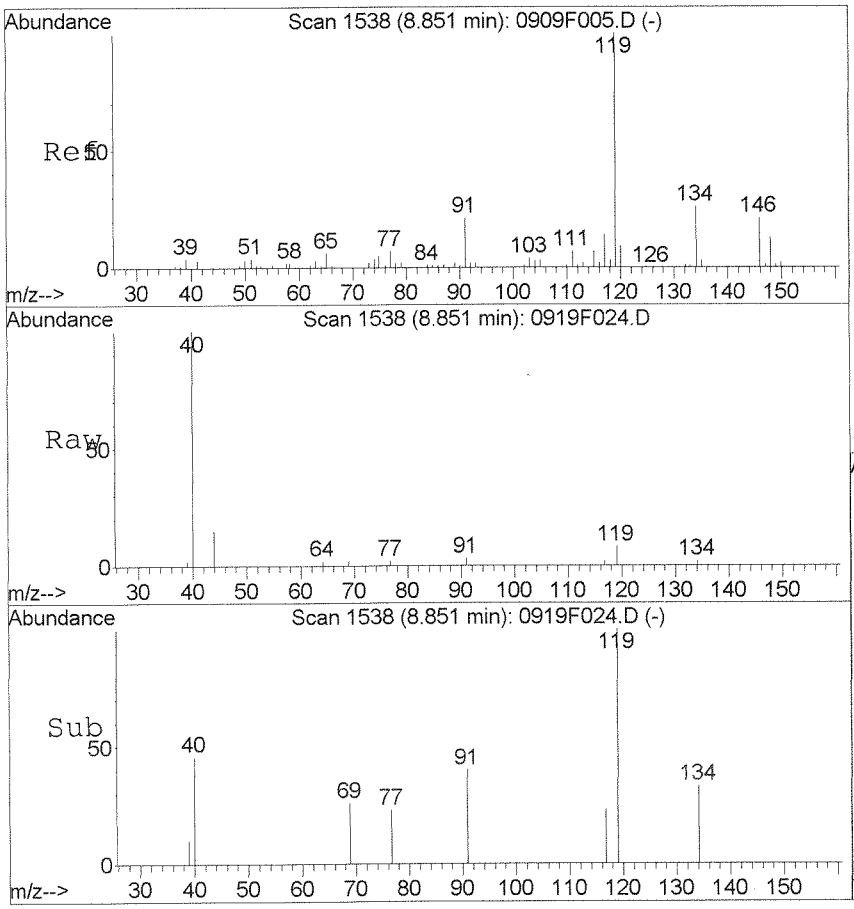


#91
1,2,4-Trimethylbenzene
Concen: 0.18 PPB
RT: 8.54 min Scan# 1479
Delta R.T. -0.01 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion:105 Resp: 601

Ion	Ratio	Lower	Upper
105	100		
120	31.4	15.9	75.9
77	0.0	0.0	41.2

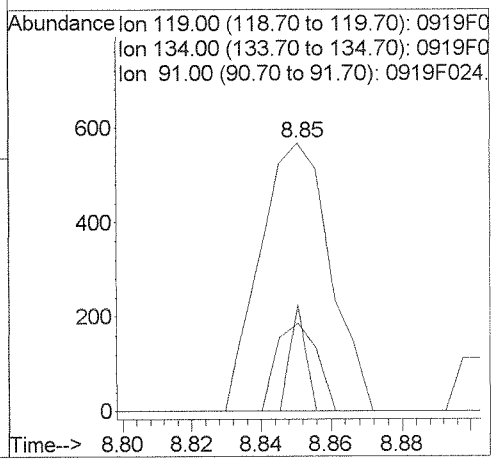


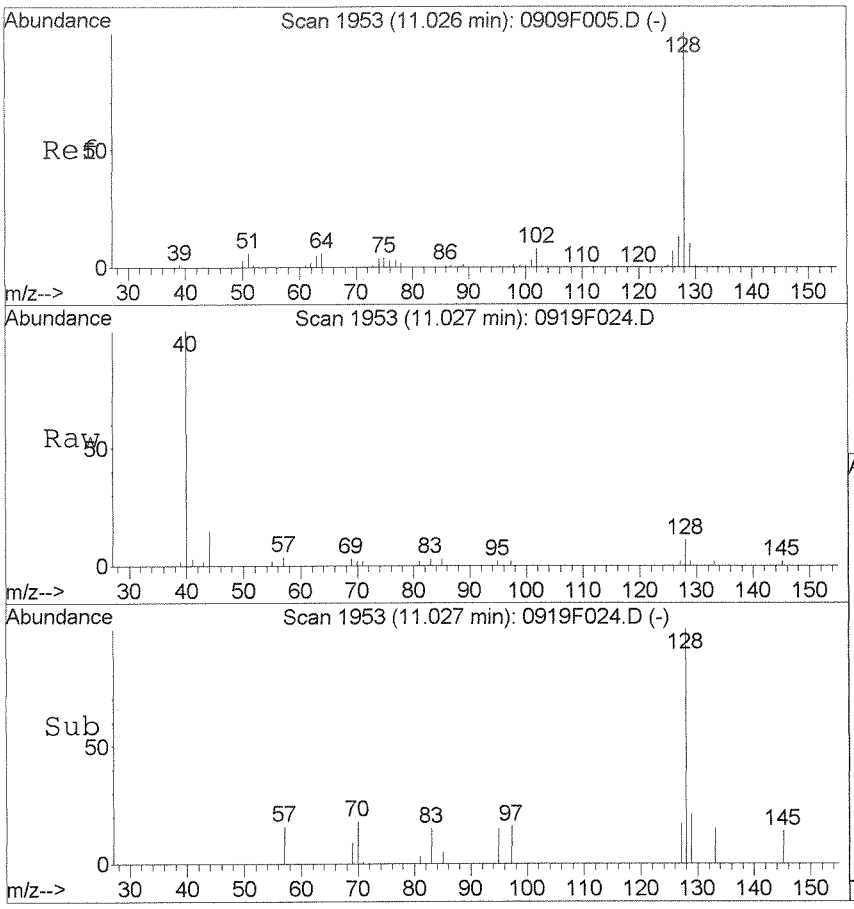


#93
p-Isopropyltoluene
Concen: 0.22 PPB
RT: 8.85 min Scan# 1538
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion:119 Resp: 787

Ion	Ratio	Lower	Upper
119	100		
134	32.8	0.0	56.2
91	39.7	0.0	50.8

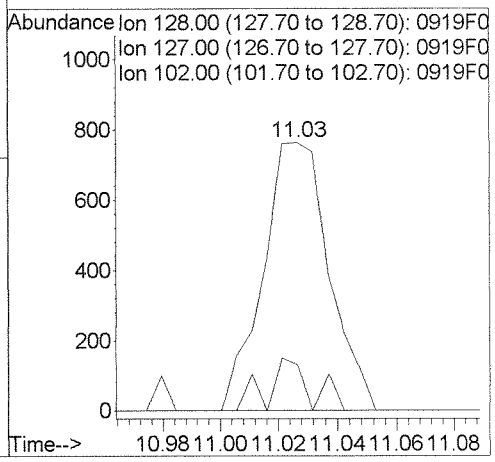




#102
Naphthalene
Concen: 0.37 PPB
RT: 11.03 min Scan# 1953
Delta R.T. 0.00 min
Lab File: 0919F024.D
Acq: 19 Sep 2014 6:24 pm

Tgt Ion:128 Resp: 1194

Ion	Ratio	Lower	Upper
128	100		
127	17.1	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\092614\0926F020.D
Lab ID: K1409921-010
RunType: RE
Matrix: SEDIMENT

Date Acquired: 09/26/2014 18:58
Date Quantitated: 09/29/2014 16:18
Batch ID: KWG1413162
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

NE

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Acetone	-37.5	NA	20	CCV OK
	Carbon Disulfide	-26.4	NA	20	RA ok
	2-Butanone (MEK)	-52.2	NA	20	"
	4-Methyl-2-pentanone (MIBK)	-54.9	NA	20	"
	2-Hexanone	-57.9	NA	20	"
Continuing Calibration Minimum RF	Trichloroethene (TCE)	0.1917	0.200	NA	meh
Surrogates	4-Bromofluorobenzene	79	88	127	confirms orig

Primary Review: KA 9/30/14

Secondary Review: CA 10/2/14

Quantitation Report

Data File:	J:\MS24\DATA\092614\0926F020.D			**Instrument:**	MS24
Acqu Date:	09/26/2014 18:58	**Quant Date:**	09/29/2014 16:18	**Vial:**	14
Run Type:	RE			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413162	**Prep Lot:**	KWG1413148	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5035A		
Prep Ref:	1378435	**Prep Date:**	09/26/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\092614\0926F008.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\092614\0926F014.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	426660	50.00	OK
2	Chlorobenzene-d5	6.60	0.01	82	142540	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	88345	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	109188	51.27	103	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	378239	45.88	92	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	100696	39.74	79	88-127	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.25	U	
1	Vinyl Chloride				62	0		0.25	U	
1	1,1-Dichloroethene				96	0		0.35	U	
1	Acetone	1.96	0.01	0.00	43	85475	167.73	230		
1	Carbon Disulfide	2.00	0.01	0.00	76	53140	9.85	14		
1	Methylene Chloride	2.24	0.01	0.00	84	4973	2.21	3.0	J	
1	trans-1,2-Dichloroethene				96	0		0.17	U	
1	cis-1,2-Dichloroethene				96	0		0.17	U	
1	2-Butanone (MEK)	3.17	0.01	0.00	72	2876	11.20	15	J	
1	Carbon Tetrachloride				117	0		0.13	U	
1	Benzene	3.74		0.00	78	3785	0.4900	0.67	J	
1	Trichloroethene (TCE)				95	0		0.21	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.5	U	
1	Toluene	5.32		0.00	92	6158	1.26	1.7	J	
2	Tetrachloroethene (PCE)				164	0		0.22	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\092614\0926F020.D			**Instrument:**	MS24
Acqu Date:	09/26/2014 18:58	**Quant Date:**	09/29/2014 16:18	**Vial:**	14
Run Type:	RE			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		1.3	U	
2	Dibromochloromethane				129	0		0.25	U	
2	Ethylbenzene				106	0		0.13	U	
2	m,p-Xylenes	6.82		0.00	106	1094	0.3700	0.51	J	
2	o-Xylene				106	0		0.12	U	
2	Styrene				103	0		0.20	U	
2	Bromoform				173	0		0.20	U	
3	1,2,4-Trichlorobenzene				180	0		0.18	U	

Prep Amount: 3.64 g **Dilution:** 1.0
Prep Final Vol: 5.0 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\092614\0926F020.D Vial: 14
Acq On : 26 Sep 2014 18:58 Operator: KR
Sample : K9921-010R Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 29 16:14:48 2014 Quant Results File: 100713MS24SOIL.

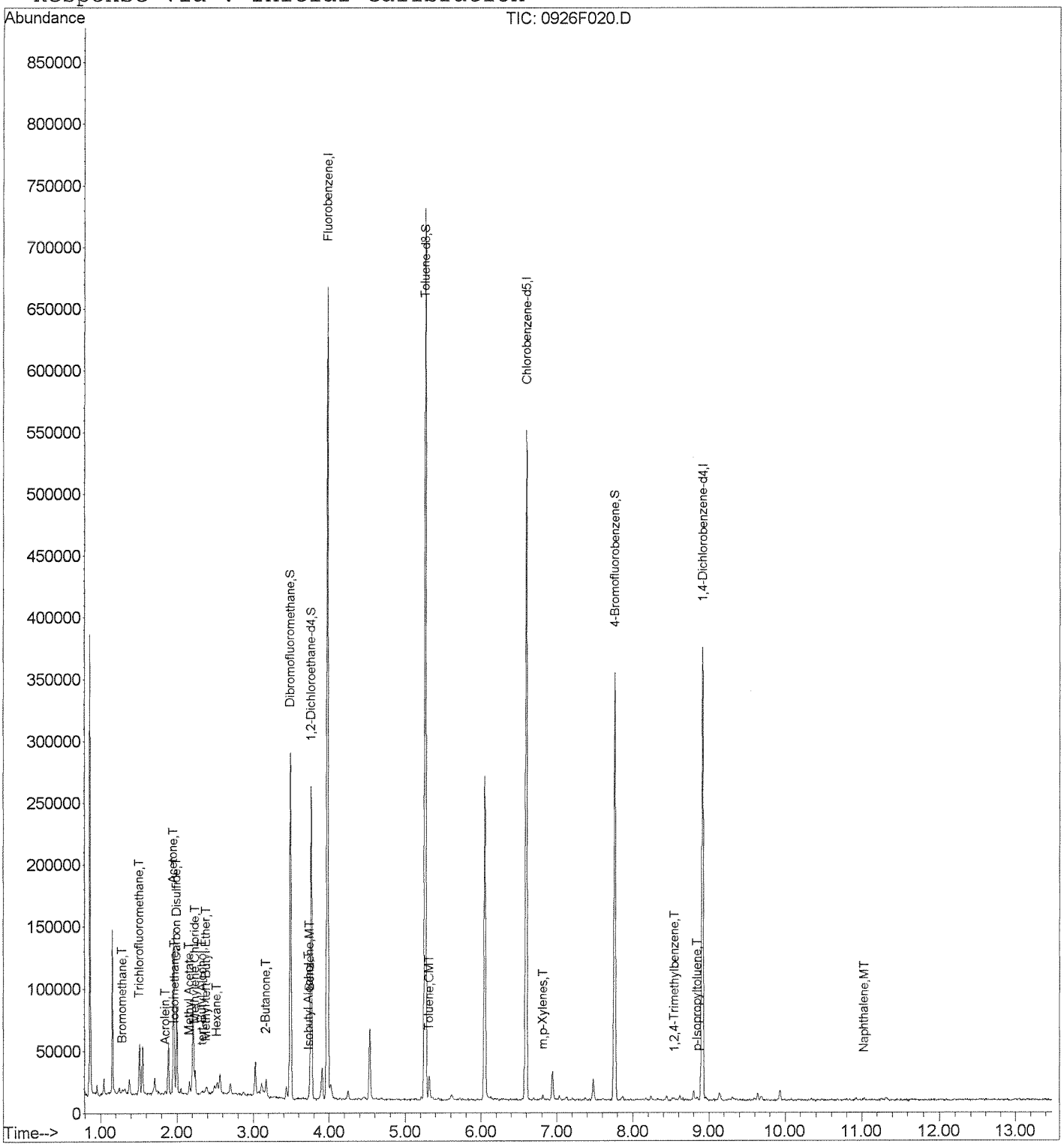
Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

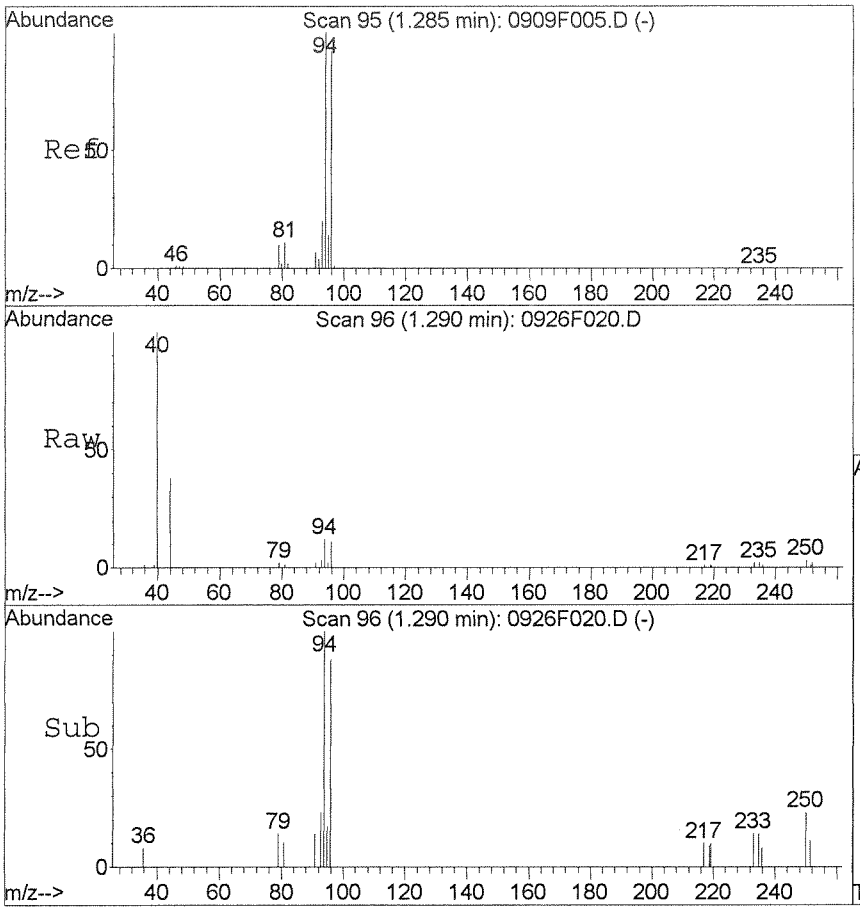
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	426660	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	142540	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	88345	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	109188	51.27	PPB		0.00
Spiked Amount 50.000			Recovery =	102.54%			
44) 1,2-Dichloroethane-d4	3.76	65	111926	52.47	PPB		0.00
Spiked Amount 50.000			Recovery =	104.94%			
59) Toluene-d8	5.26	98	378239	45.88	PPB		0.00
Spiked Amount 50.000			Recovery =	91.76%			
80) 4-Bromofluorobenzene	7.76	95	100696	39.74	PPB		0.00
Spiked Amount 50.000			Recovery =	79.48%			
Target Compounds							Qvalue
5) Bromomethane	1.29	96	895	0.55	PPB		96
8) Trichlorofluoromethane	1.51	101	18596	7.10	PPB		96
10) Acrolein	1.85	56	1053	3.19	PPB		92
13) Acetone	1.96	43	85475	167.73	PPB		97
14) Iodomethane	1.98	142	845	0.51	PPB		89
15) Carbon Disulfide	2.00	76	53140	9.85	PPB		100
17) Methyl Acetate	2.16	43	6417	4.89	PPB		93
19) Methylene Chloride	2.24	84	4973	2.21	PPB		88
20) tert-Butyl Alcohol	2.33	59	761	3.41	PPB		86
22) Methyl tert-Butyl Ether	2.39	73	2922	0.51	PPB		83
24) Hexane	2.53	57	2301	0.94	PPB		92
32) 2-Butanone	3.17	72	2876	11.20	PPB	#	65
43) Isobutyl Alcohol	3.73	43	862	10.26	PPB		88
45) Benzene	3.74	78	3785	0.49	PPB	#	14
60) Toluene	5.32	92	6158	1.26	PPB		92
74) m,p-Xylenes	6.82	106	1094	0.37	PPB		82
91) 1,2,4-Trimethylbenzene	8.54	105	680	0.16	PPB		71
93) p-Isopropyltoluene	8.85	119	1117	0.26	PPB		79
102) Naphthalene	11.03	128	1344	0.34	PPB		75

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\092614\0926F020.D Vial: 14
Acq On : 26 Sep 2014 18:58 Operator: KR
Sample : K9921-010R Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 29 16:18 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

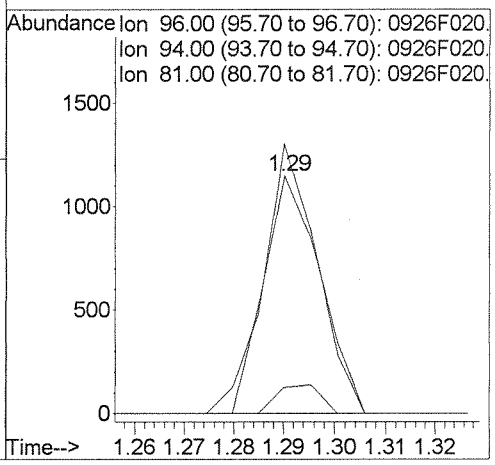


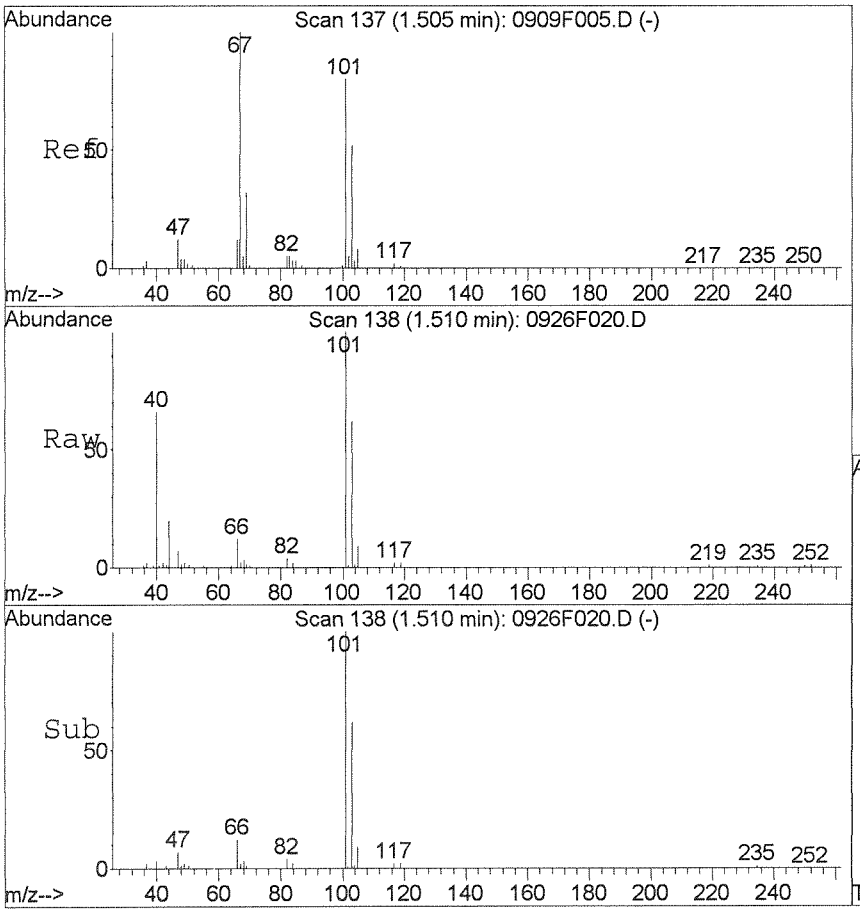


#5
Bromomethane
Concen: 0.55 PPB
RT: 1.29 min Scan# 96
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 96 Resp: 895

Ion	Ratio	Lower	Upper
96	100		
94	113.5	79.2	139.2
81	11.0	0.0	41.8

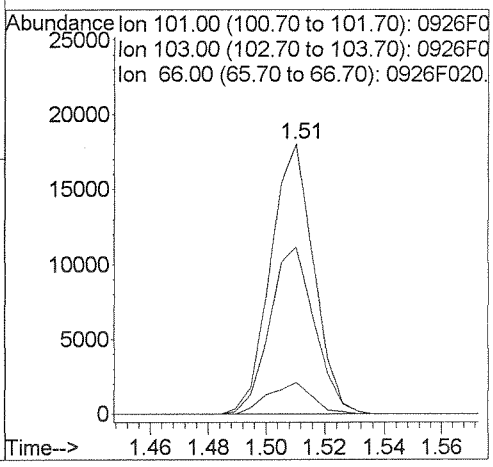


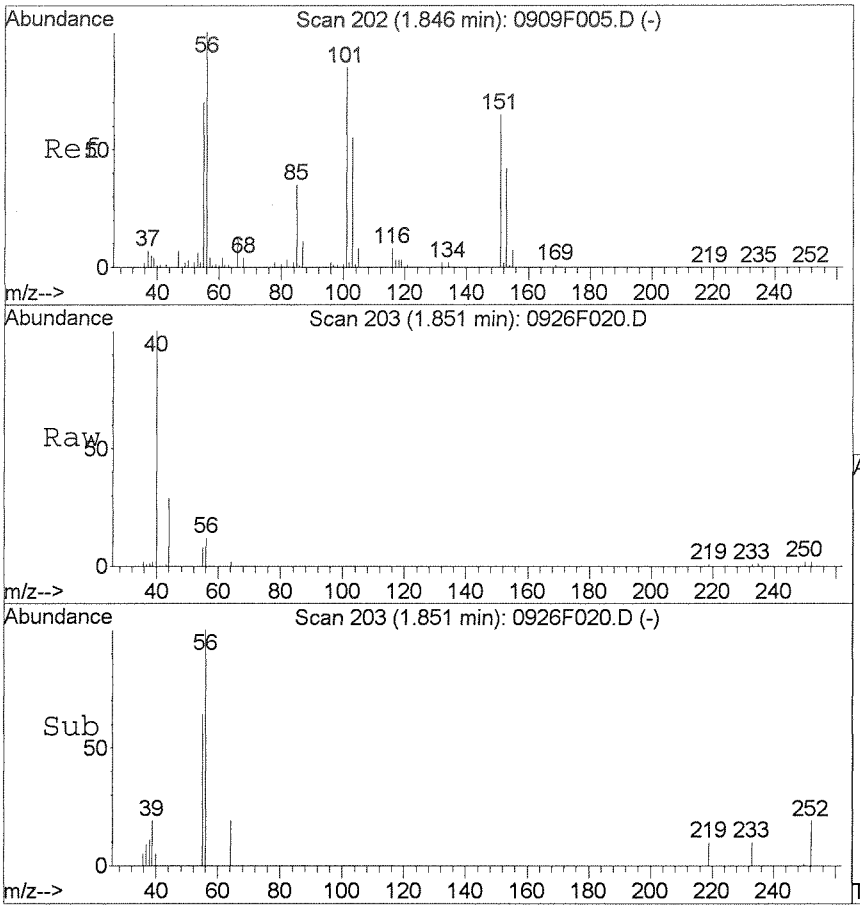


#8
Trichlorofluoromethane
Concen: 7.10 PPB
RT: 1.51 min Scan# 138
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:101 Resp: 18596

Ion	Ratio	Lower	Upper
101	100		
103	62.1	34.7	94.7
66	11.7	0.0	45.0

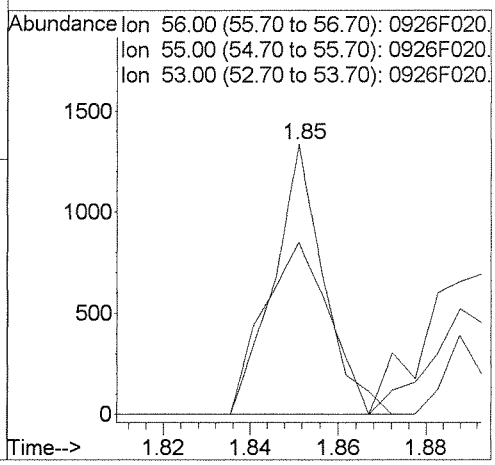


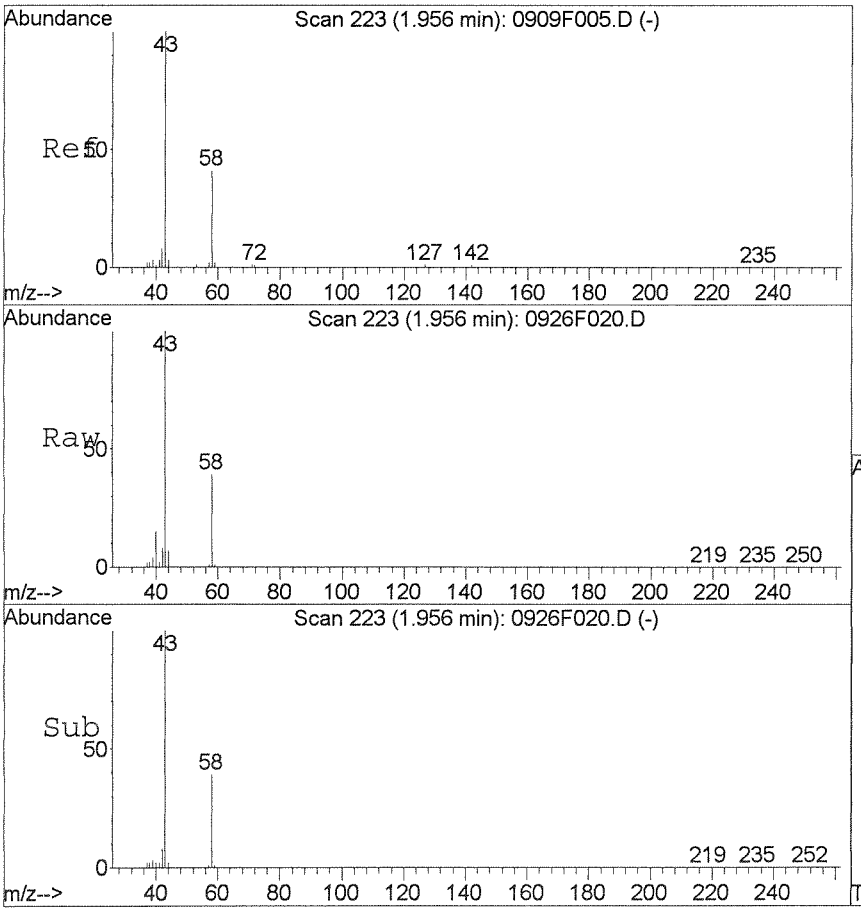


#10
Acrolein
Concen: 3.19 PPB
RT: 1.85 min Scan# 203
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 56 Resp: 1053

Ion	Ratio	Lower	Upper
56	100		
55	63.7	39.9	99.9
53	0.0	0.0	36.3

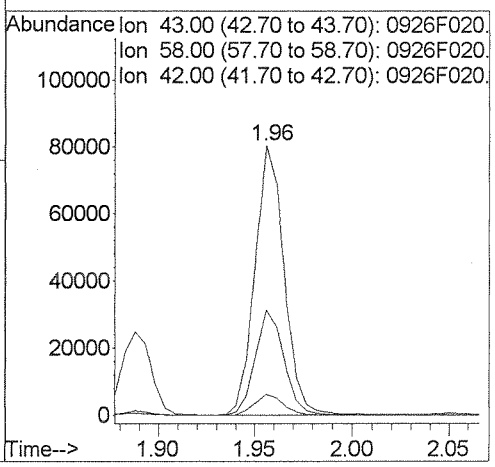


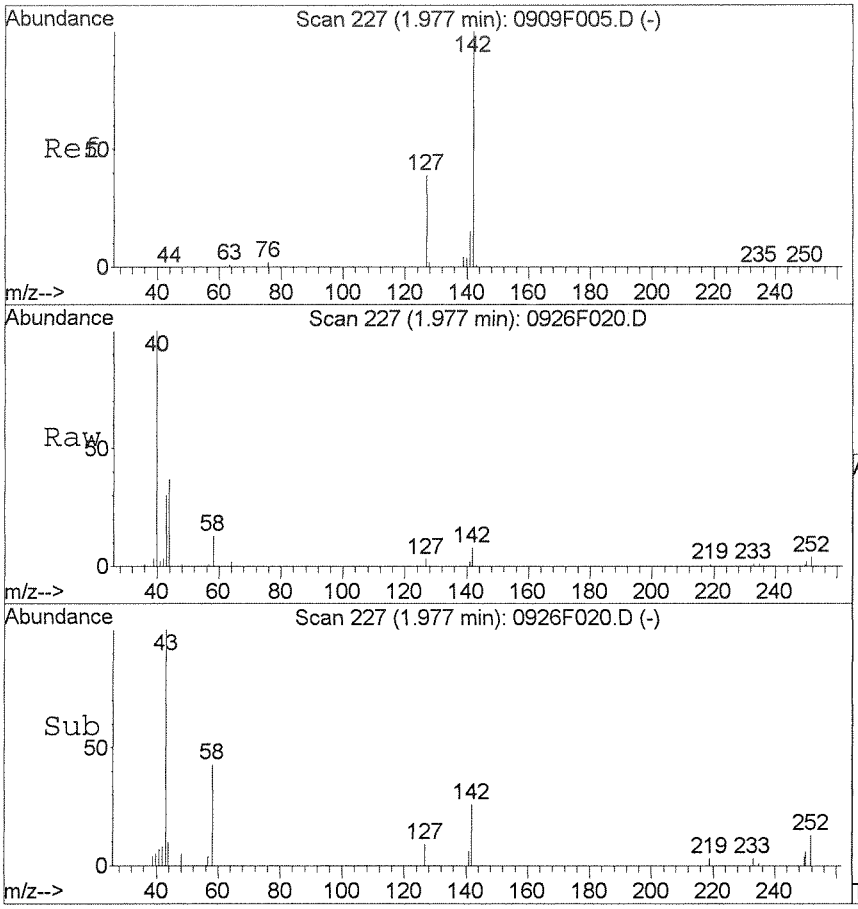


#13
Acetone
Concen: 167.73 PPB
RT: 1.96 min Scan# 223
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 43 Resp: 85475

Ion	Ratio	Lower	Upper
43	100		
58	39.0	11.3	71.3
42	7.8	0.0	37.7

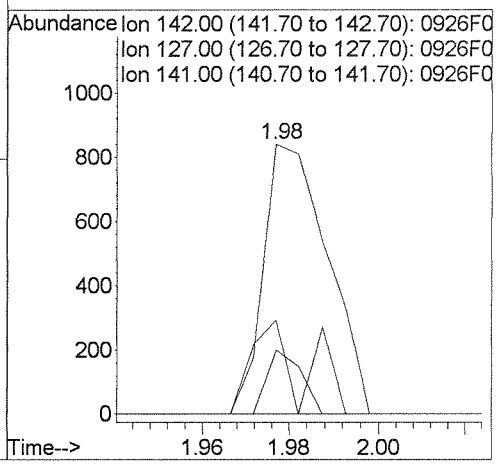


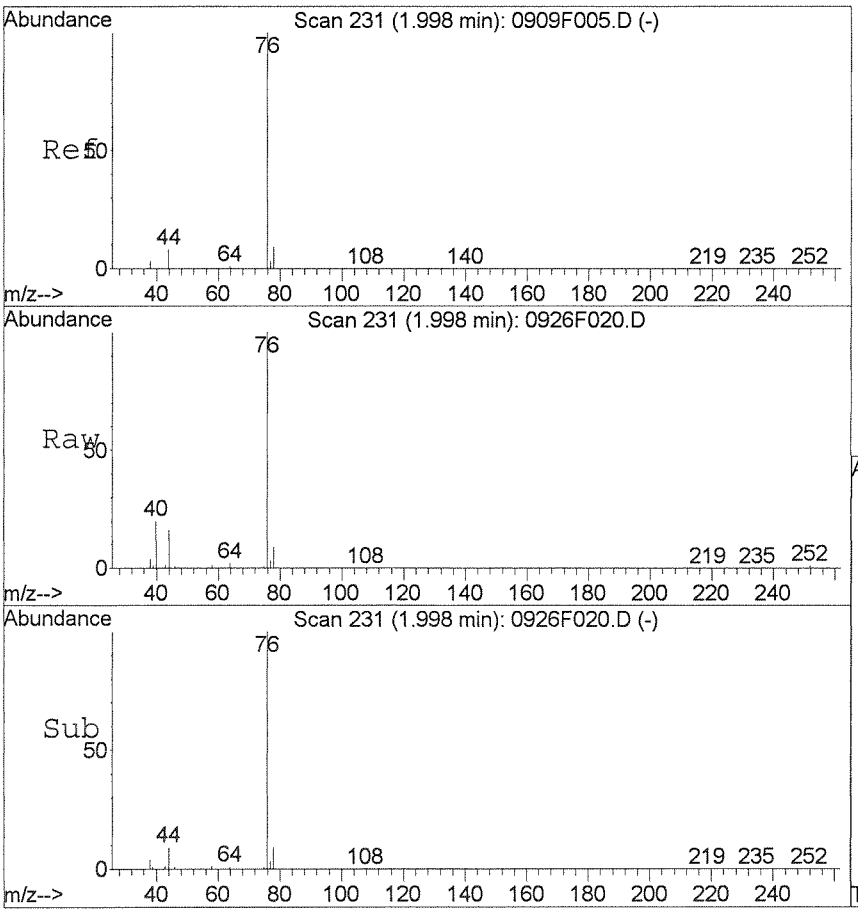


#14
Iodomethane
Concen: 0.51 PPB
RT: 1.98 min Scan# 227
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:142 Resp: 845

Ion	Ratio	Lower	Upper
142	100		
127	34.8	9.4	69.4
141	23.7	0.0	44.9

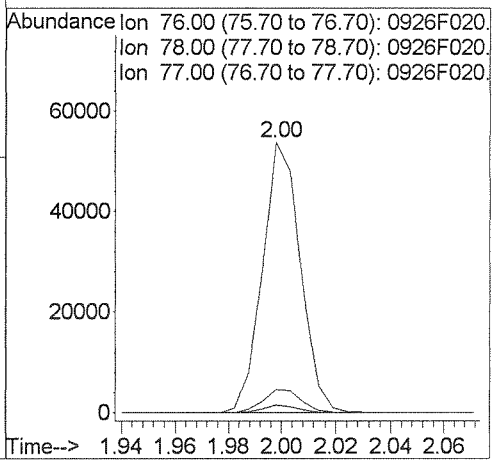


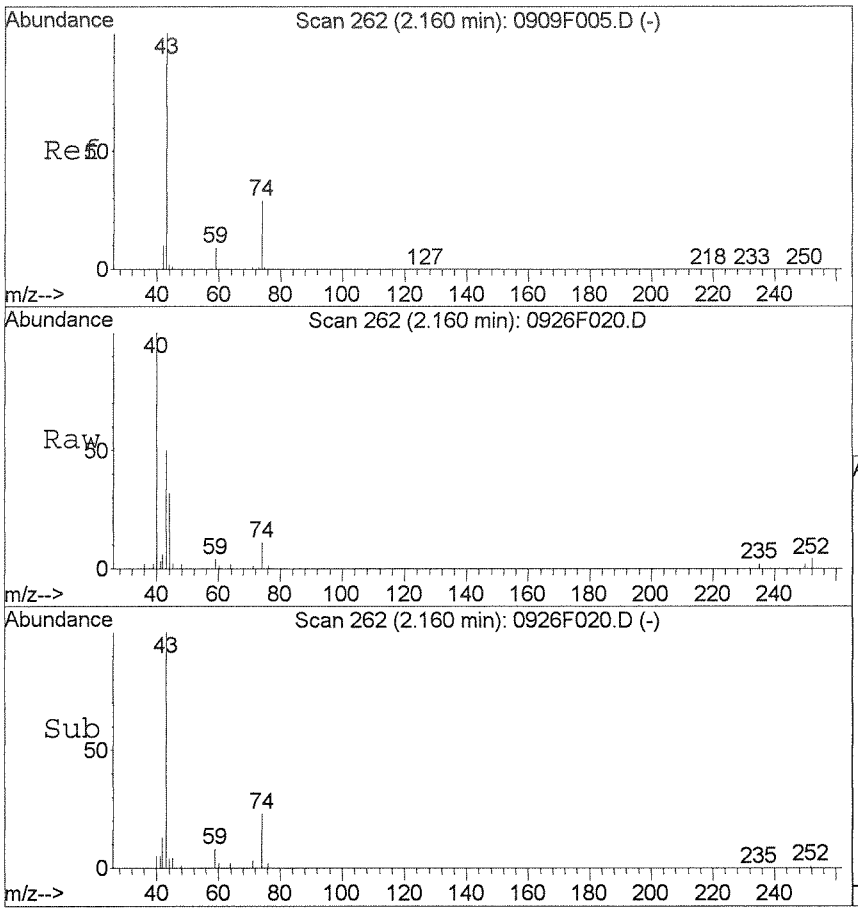


#15
Carbon Disulfide
Concen: 9.85 PPB
RT: 2.00 min Scan# 231
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 76 Resp: 53140

Ion	Ratio	Lower	Upper
76	100		
78	8.9	0.0	39.0
77	2.9	0.0	32.6

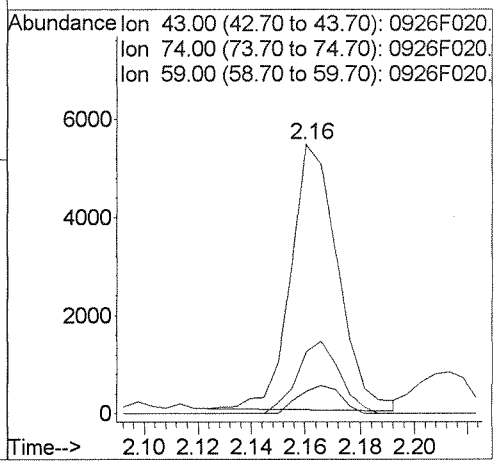


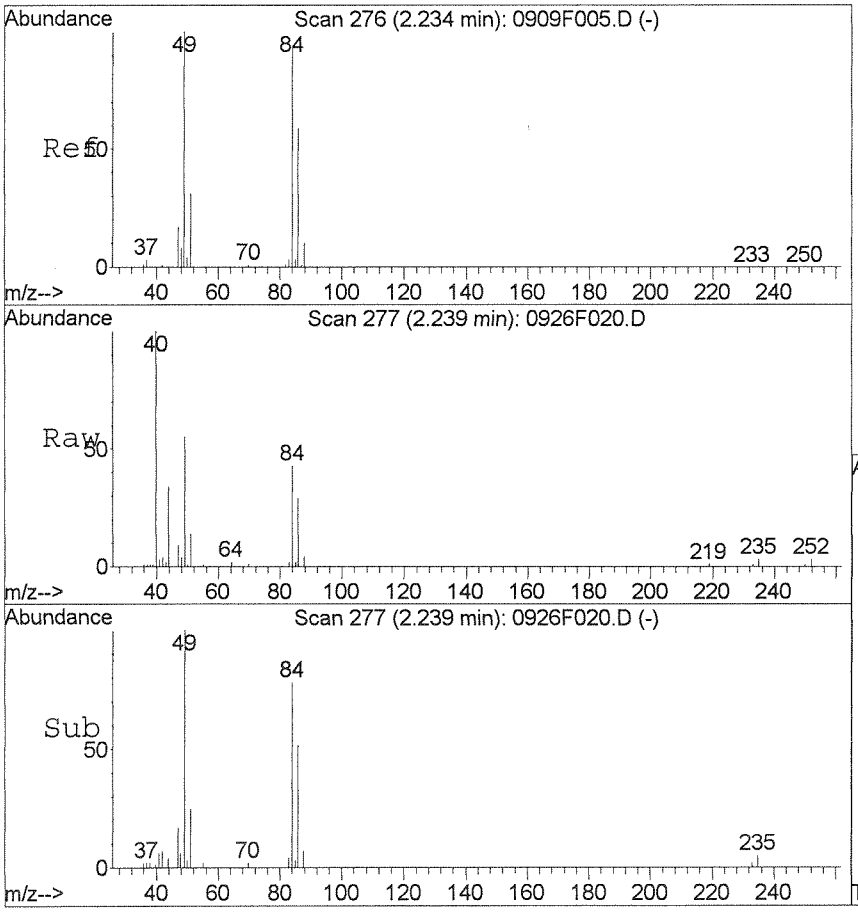


#17
Methyl Acetate
Concen: 4.89 PPB
RT: 2.16 min Scan# 262
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 43 Resp: 6417

Ion	Ratio	Lower	Upper
43	100		
74	24.6	20.4	37.8
59	9.4	6.2	11.4

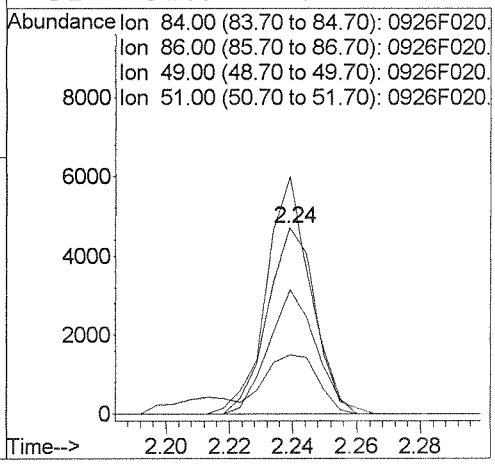


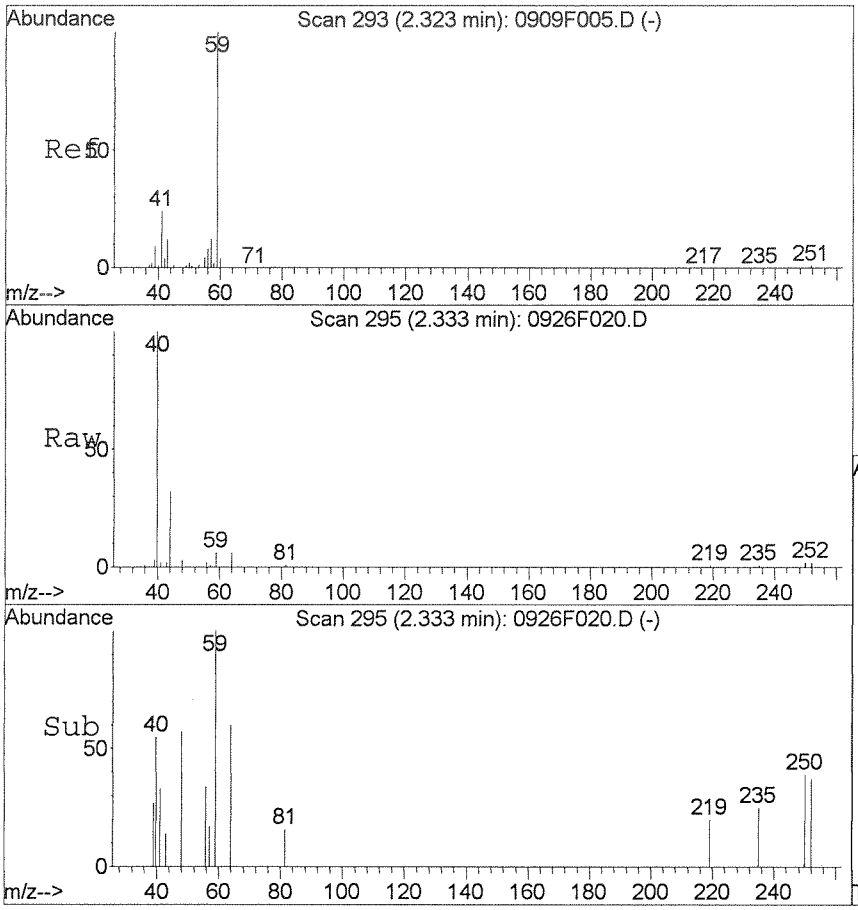


#19
Methylene Chloride
Concen: 2.21 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 84 Resp: 4973

Ion	Ratio	Lower	Upper
84	100		
86	66.9	32.9	92.9
49	127.5	76.9	136.9
51	31.9	3.1	63.1

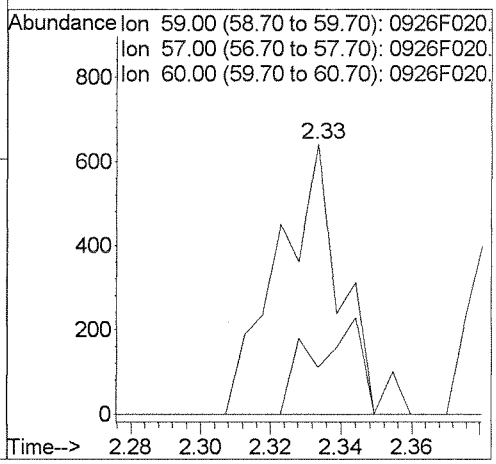


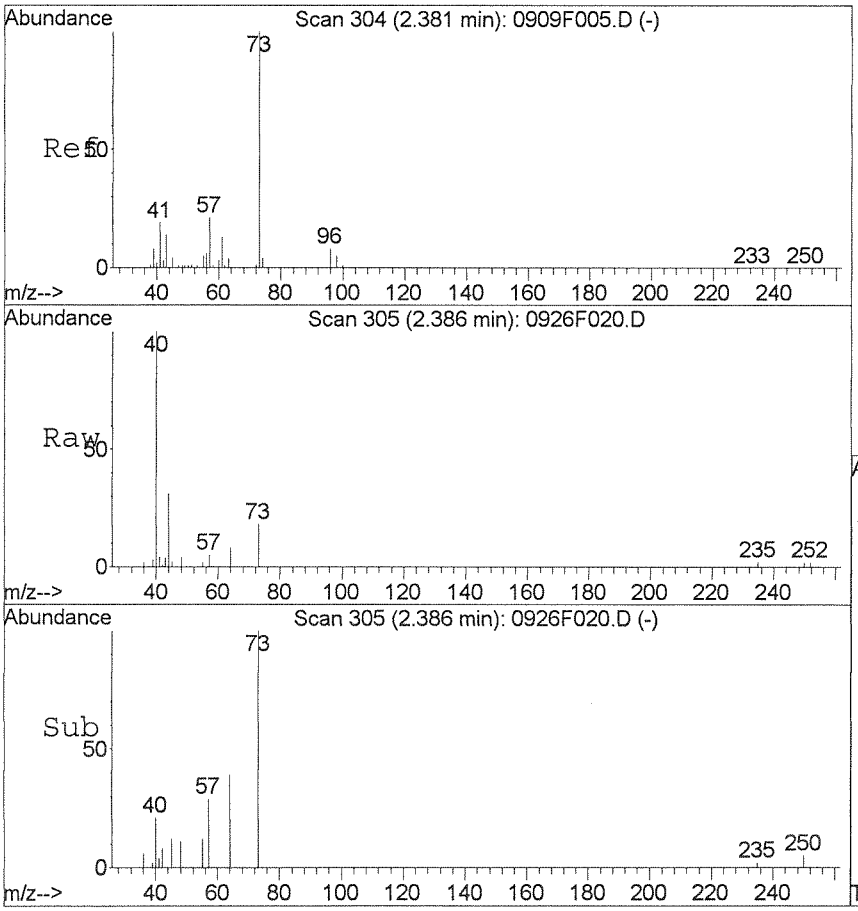


#20
tert-Butyl Alcohol
Concen: 3.41 PPB
RT: 2.33 min Scan# 295
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 59 Resp: 761

Ion	Ratio	Lower	Upper
59	100		
57	17.2	0.0	41.5
60	0.0	0.0	33.6

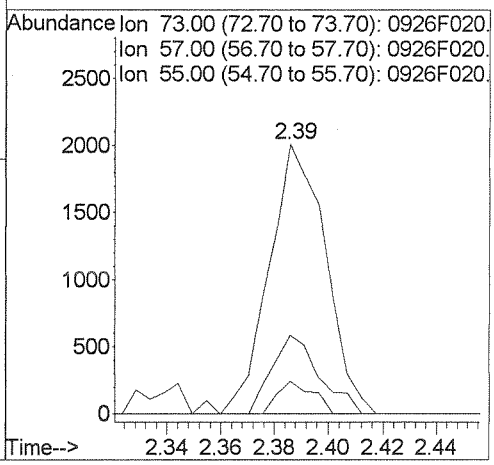


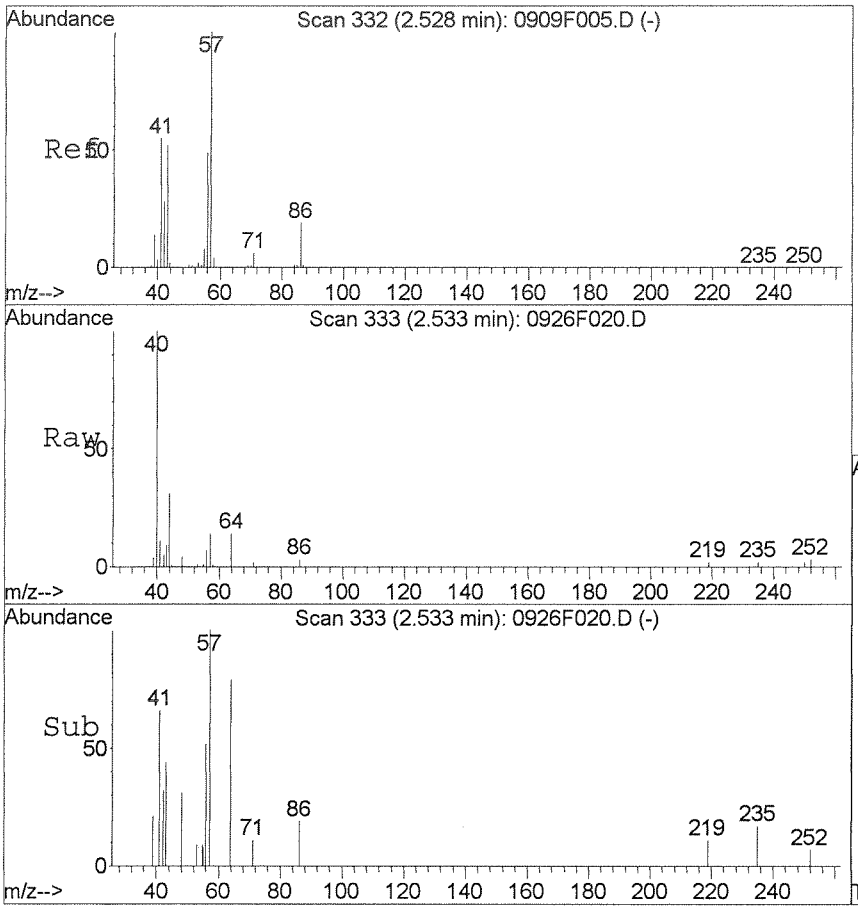


#22
Methyl tert-Butyl Ether
Concen: 0.51 PPB
RT: 2.39 min Scan# 305
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 73 Resp: 2922

Ion	Ratio	Lower	Upper
73	100		
57	29.1	0.0	51.5
55	12.1	0.0	35.6

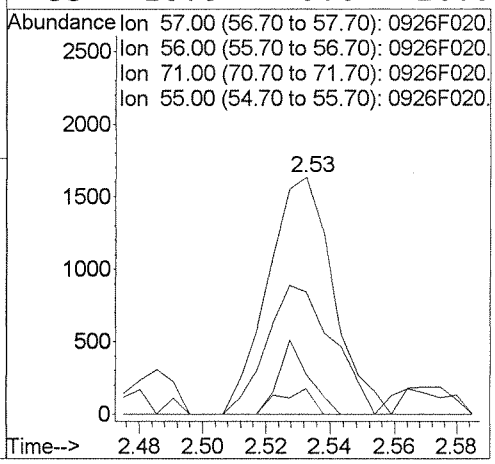


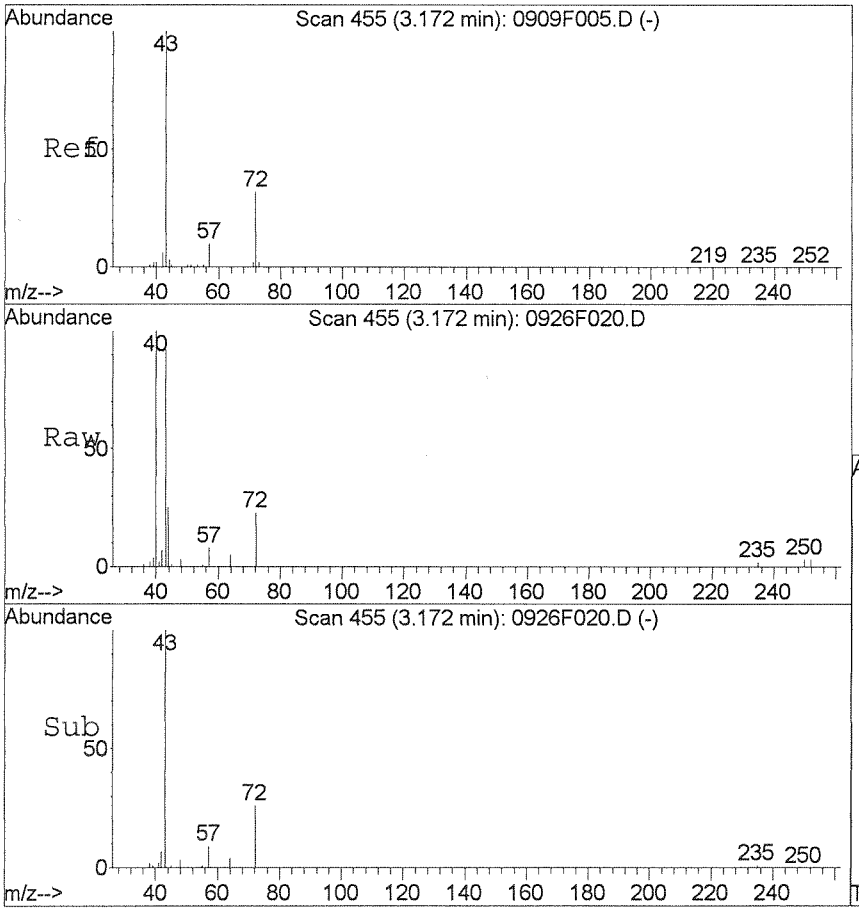


#24
Hexane
Concen: 0.94 PPB
RT: 2.53 min Scan# 333
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 57 Resp: 2301

Ion	Ratio	Lower	Upper
57	100		
56	51.7	18.8	78.8
71	10.8	0.0	35.9
55	16.8	0.0	20.6

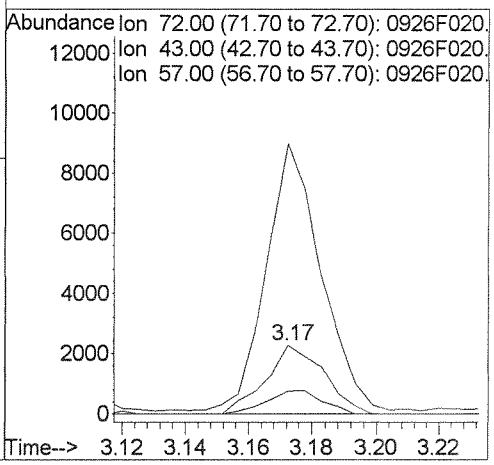


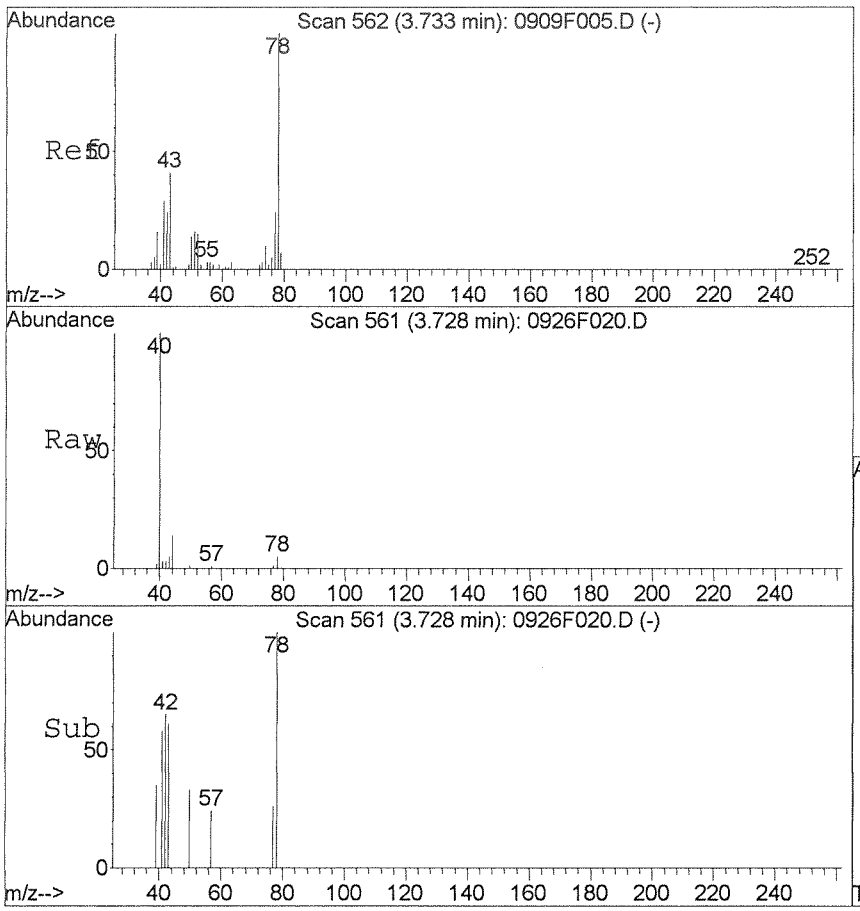


#32
2-Butanone
Concen: 11.20 PPB
RT: 3.17 min Scan# 455
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 72 Resp: 2876

Ion	Ratio	Lower	Upper
72	100		
43	390.3	284.6	344.6#
57	33.7	0.2	60.2

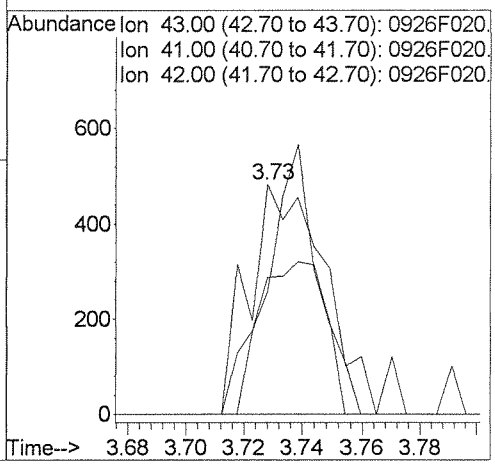


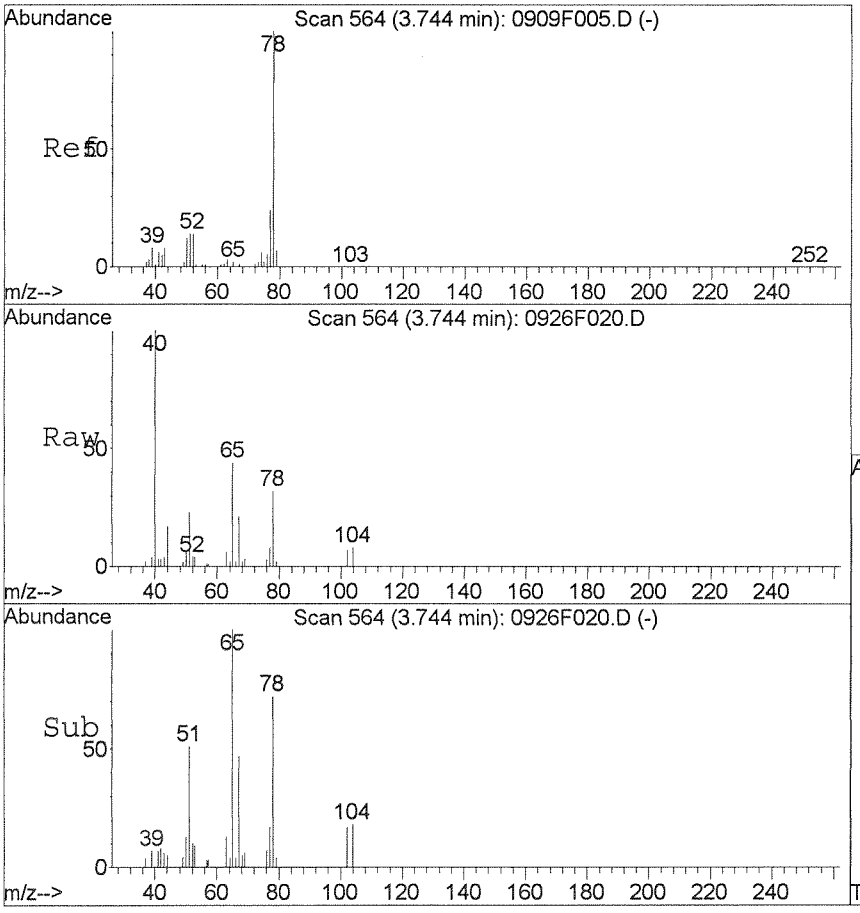


#43
Isobutyl Alcohol
Concen: 10.26 PPB
RT: 3.73 min Scan# 561
Delta R.T. -0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 43 Resp: 862

Ion	Ratio	Lower	Upper
43	100		
41	53.4	41.2	101.2
42	59.6	29.1	89.1

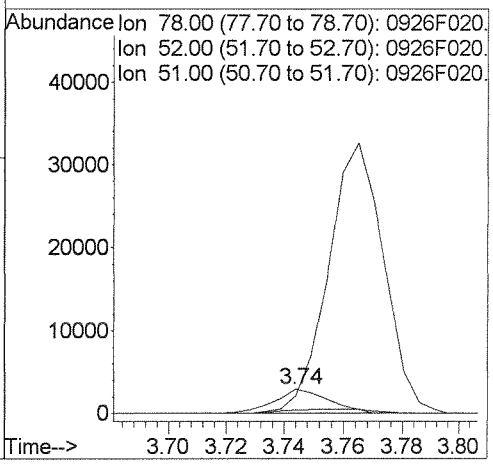


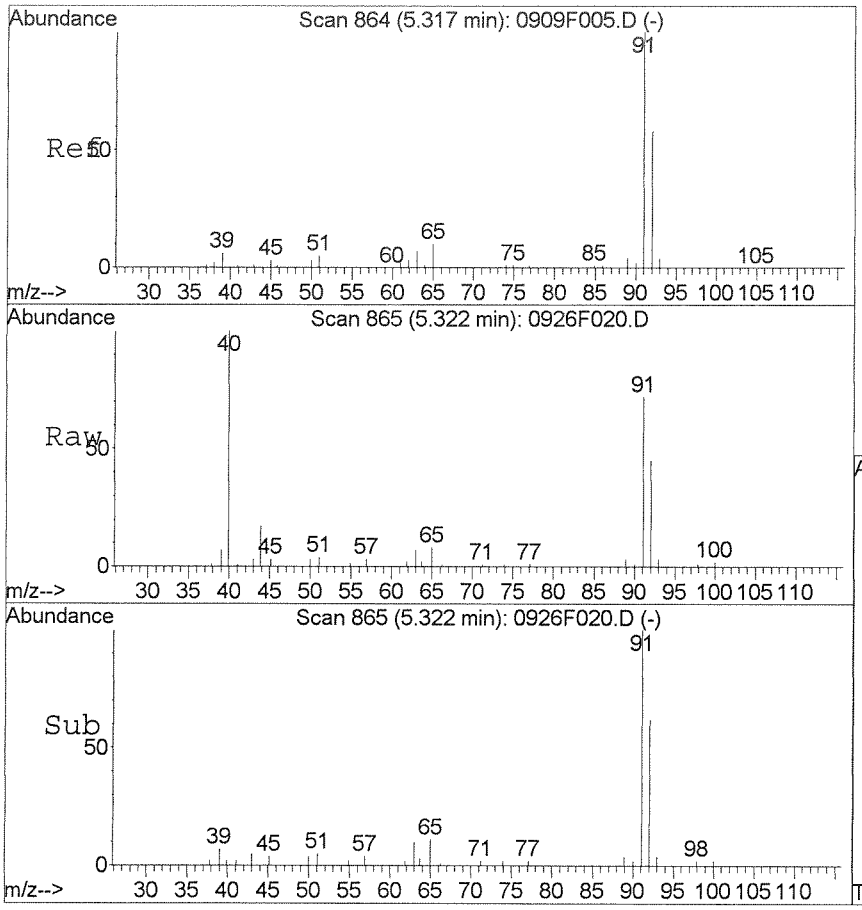


#45
Benzene
Concen: 0.49 PPB
RT: 3.74 min Scan# 564
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 78 Resp: 3785

Ion	Ratio	Lower	Upper
78	100		
52	27.1	0.0	44.3
51	71.6	0.0	44.1#

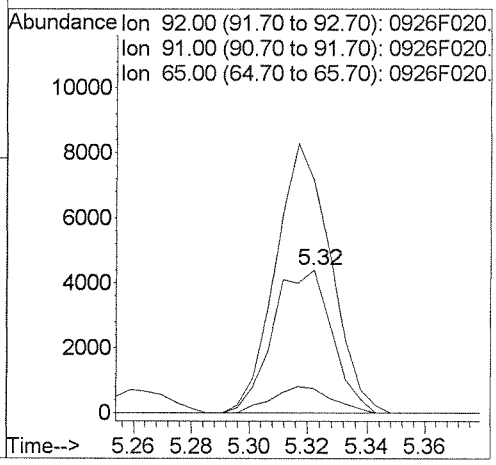


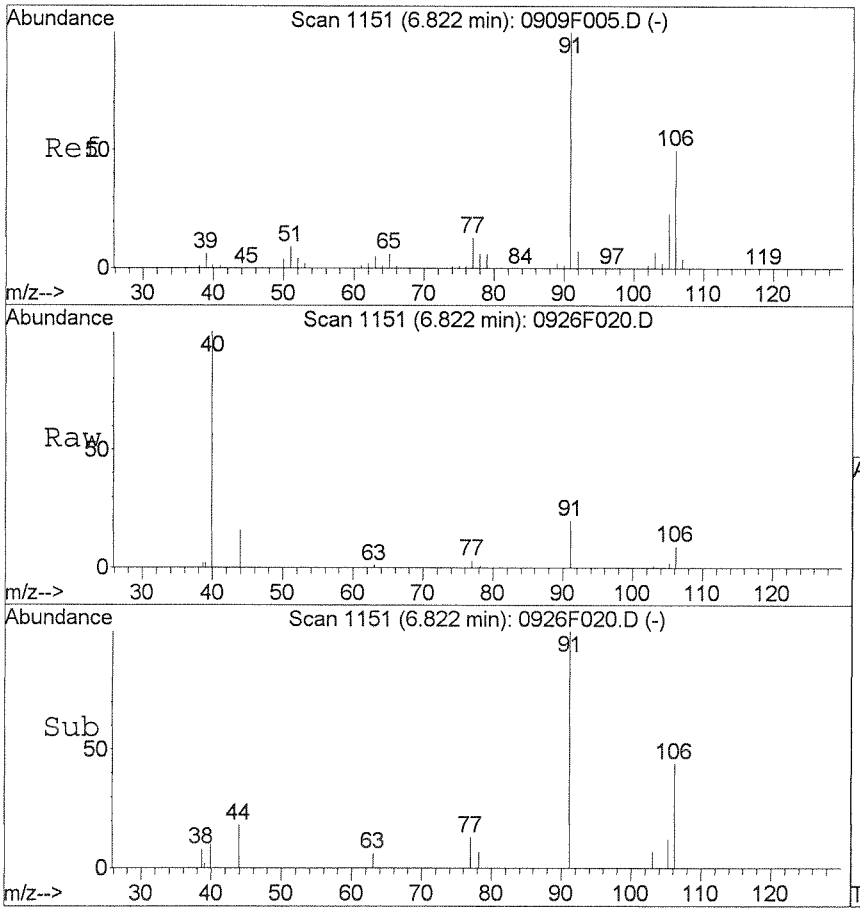


#60
Toluene
Concen: 1.26 PPB
RT: 5.32 min Scan# 865
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion: 92 Resp: 6158

Ion	Ratio	Lower	Upper
92	100		
91	161.9	143.3	203.3
65	17.2	0.0	47.5

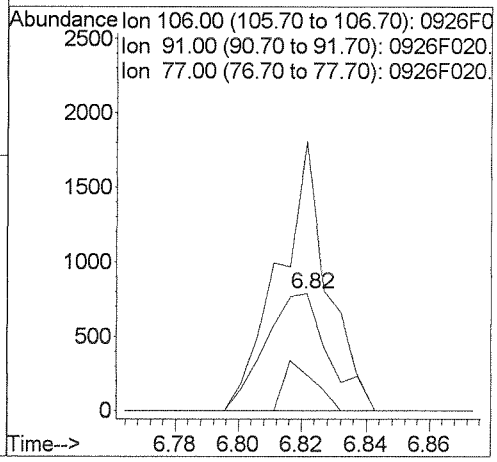


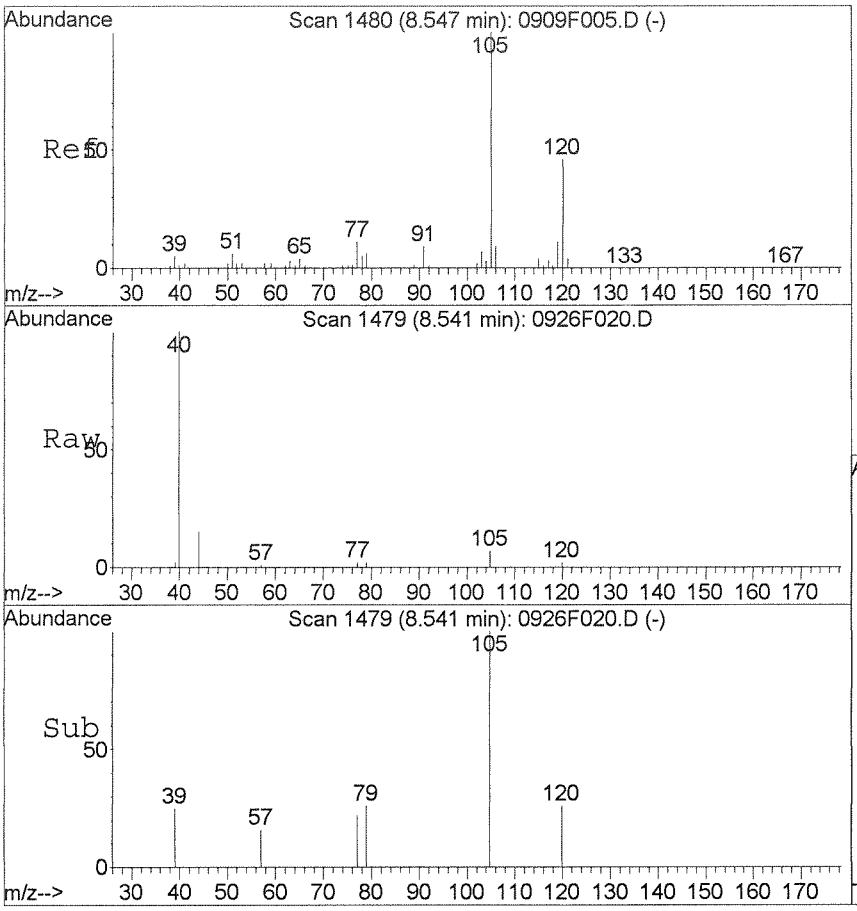


#74
m,p-Xylenes
Concen: 0.37 PPB
RT: 6.82 min Scan# 1151
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:106 Resp: 1094

Ion	Ratio	Lower	Upper
106	100		
91	229.4	171.1	231.1
77	30.9	0.0	55.3

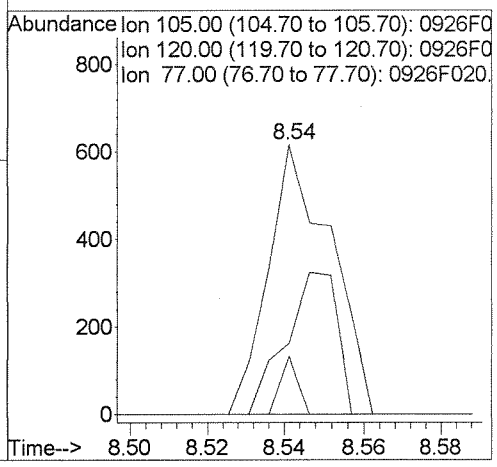


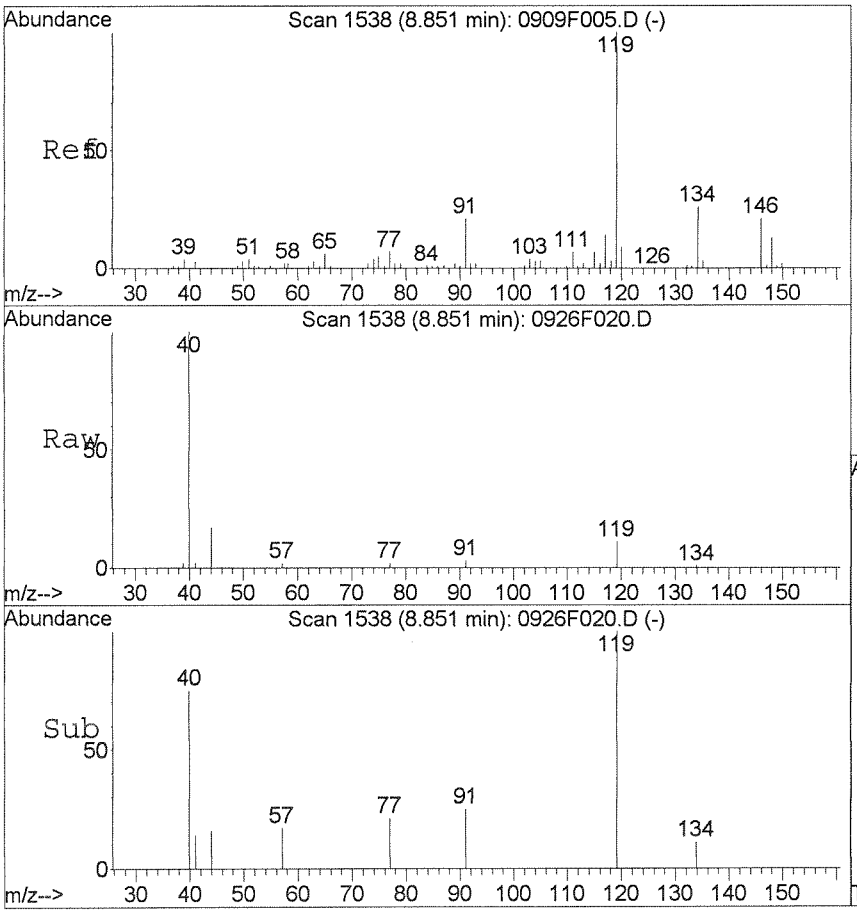


#91
1,2,4-Trimethylbenzene
Concen: 0.16 PPB
RT: 8.54 min Scan# 1479
Delta R.T. -0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:105 Resp: 680

Ion	Ratio	Lower	Upper
105	100		
120	26.4	15.9	75.9
77	21.6	0.0	41.2

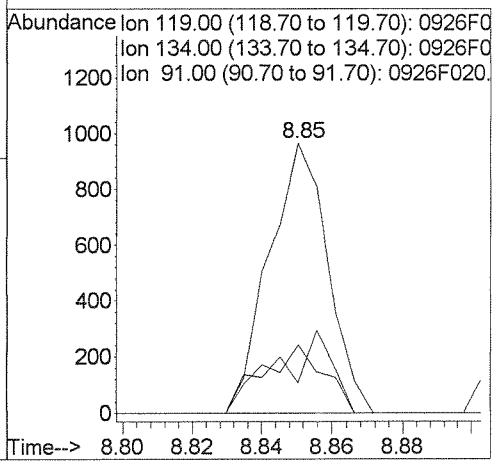


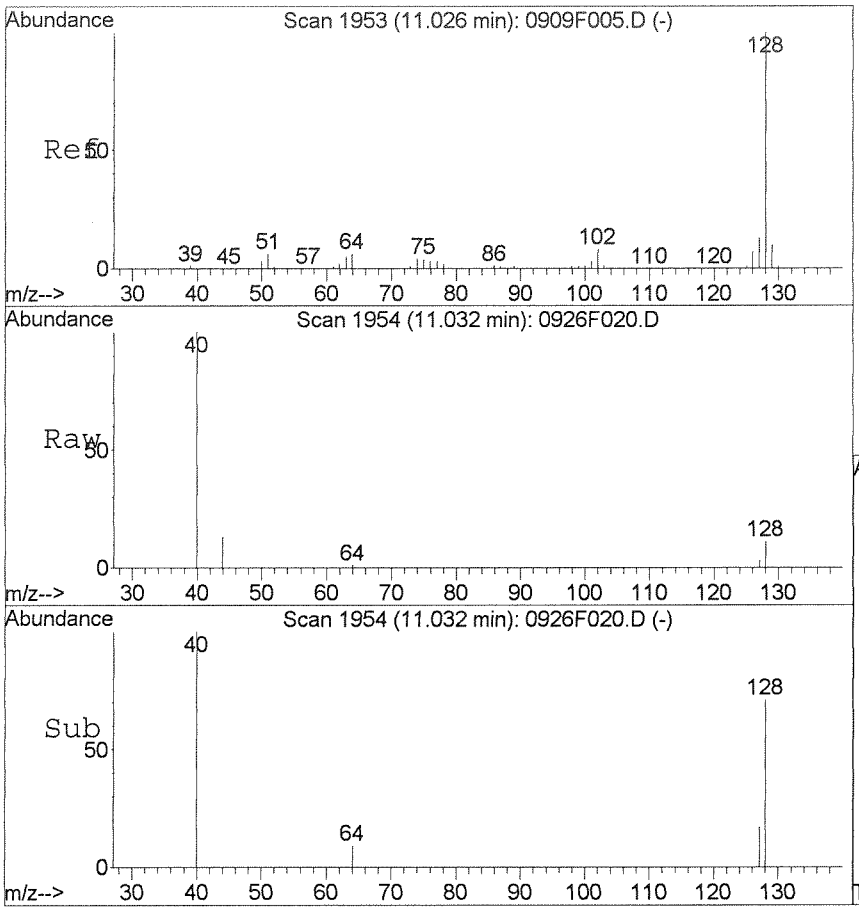


#93
p-Isopropyltoluene
Concen: 0.26 PPB
RT: 8.85 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:119 Resp: 1117

Ion	Ratio	Lower	Upper
119	100		
134	11.2	0.0	56.2
91	25.2	0.0	50.8

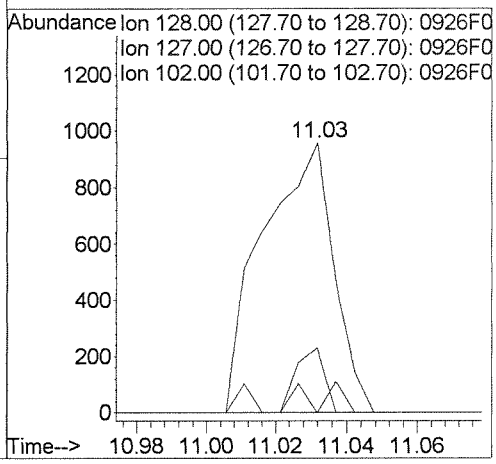




#102
Naphthalene
Concen: 0.34 PPB
RT: 11.03 min Scan# 1954
Delta R.T. 0.01 min
Lab File: 0926F020.D
Acq: 26 Sep 2014 18:58

Tgt Ion:128 Resp: 1344

Ion	Ratio	Lower	Upper
128	100		
127	24.0	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F025.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 09/19/2014 18:45
Date Quantitated: 09/22/2014 14:17
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ16518

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Chloromethane	-35.4	NA	20	CAO1K
	Vinyl Chloride	-25.3	NA	20	1

Primary Review: KA 9/22/14

Secondary Review: GR 9/24/14

Printed: 09/22/2014 14:30:34
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F025.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:45	**Quant Date:**	09/22/2014 14:17	**Vial:**	24
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-011			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8260C VOC FP	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
Prep Ref:	1376446	**Prep Date:**	09/19/2014		

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16518
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	402688	50.00	OK
2	Chlorobenzene-d5	6.59	-0.01	82	159792	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	144546	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.48	-0.01	0.00	113	103986	51.73	103	82-146	OK	
1	Toluene-d8	5.25	-0.01	0.00	98	378197	48.61	97	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	136089	47.91	96	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0**d**		0.18	U	
1	Vinyl Chloride				62	0		0.18	U	
1	1,1-Dichloroethene				96	0		0.25	U	
1	Acetone	1.94	-0.01	0.00	43	19660	39.93	35		
1	Carbon Disulfide	1.98	-0.02	-0.01	76	173910	34.17	30		
1	Methylene Chloride	2.22	-0.01	0.00	84	4297	2.02	1.8	J	
1	trans-1,2-Dichloroethene				96	0		0.12	U	
1	cis-1,2-Dichloroethene				96	0		0.12	U	
1	2-Butanone (MEK)	3.16	-0.01	0.00	72	1326	5.47	4.8	J	
1	Carbon Tetrachloride				117	0		0.094	U	
1	Benzene	3.74		0.00	78	24932	3.42	3.0	J	
1	Trichloroethene (TCE)	4.21	-0.04	-0.01	95	1012	0.5600	0.50	J	
1	4-Methyl-2-pentanone (MIBK)				58	0**d**		1.8	U	
1	Toluene	5.32		0.00	92	3229	0.7000	0.62	J	
2	Tetrachloroethene (PCE)				164	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F025.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 18:45	**Quant Date:**	09/22/2014 14:17	**Vial:**	24
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-011			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0d		0.93	U	
2	Dibromochloromethane				129	0		0.18	U	
2	Ethylbenzene				106	0		0.094	U	
2	m,p-Xylenes				106	0		0.10	U	
2	o-Xylene				106	0		0.081	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.14	U	
3	1,2,4-Trichlorobenzene				180	0		0.13	U	

Prep Amount: 5.65 g **Dilution:** 1.0
Prep Final Vol: 5.0 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F025.D Vial: 24
Acq On : 19 Sep 2014 6:45 pm Operator: KR
Sample : K09921-011 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:15:55 2014 Quant Results File: 100713MS24SOIL.

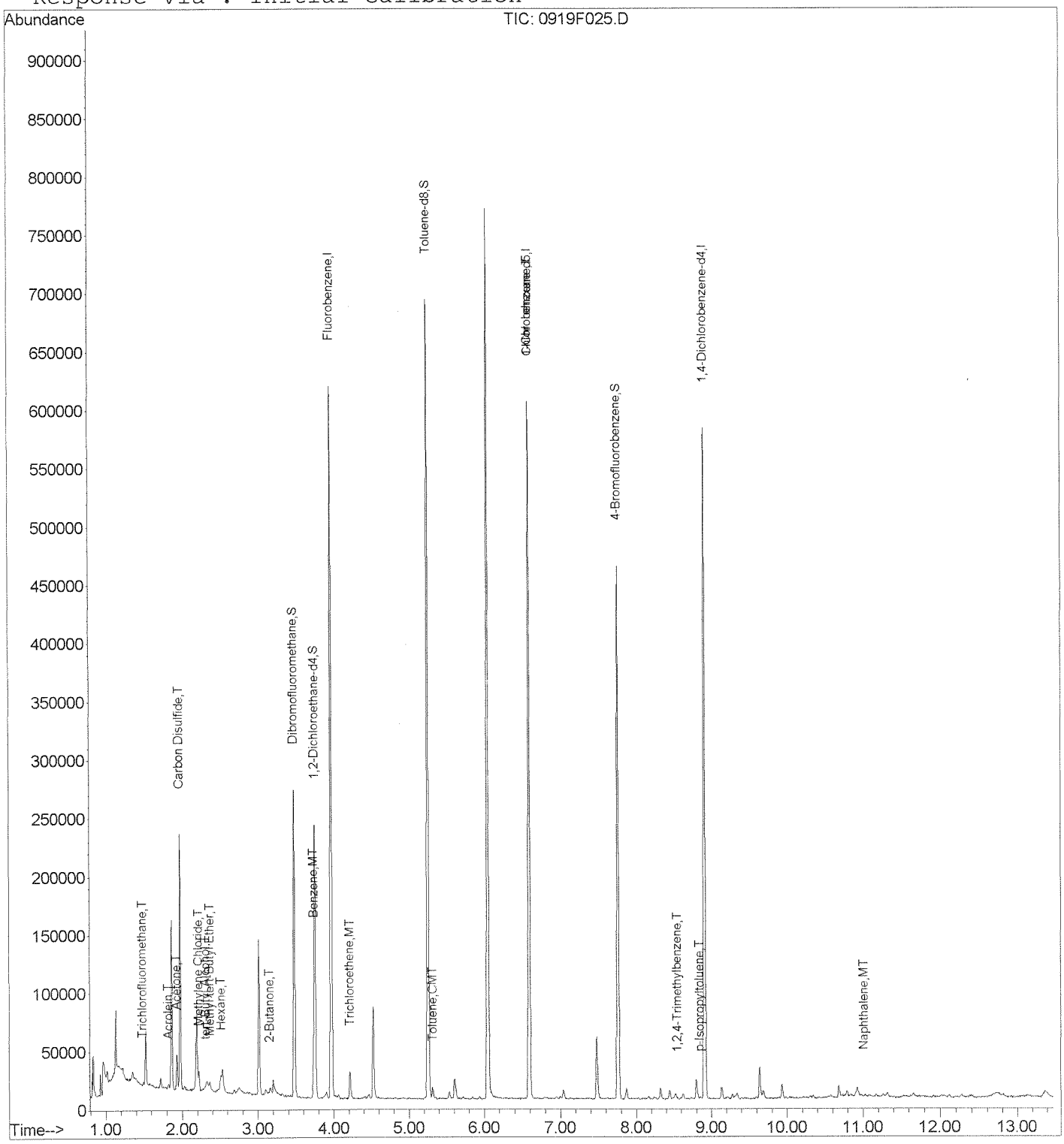
Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

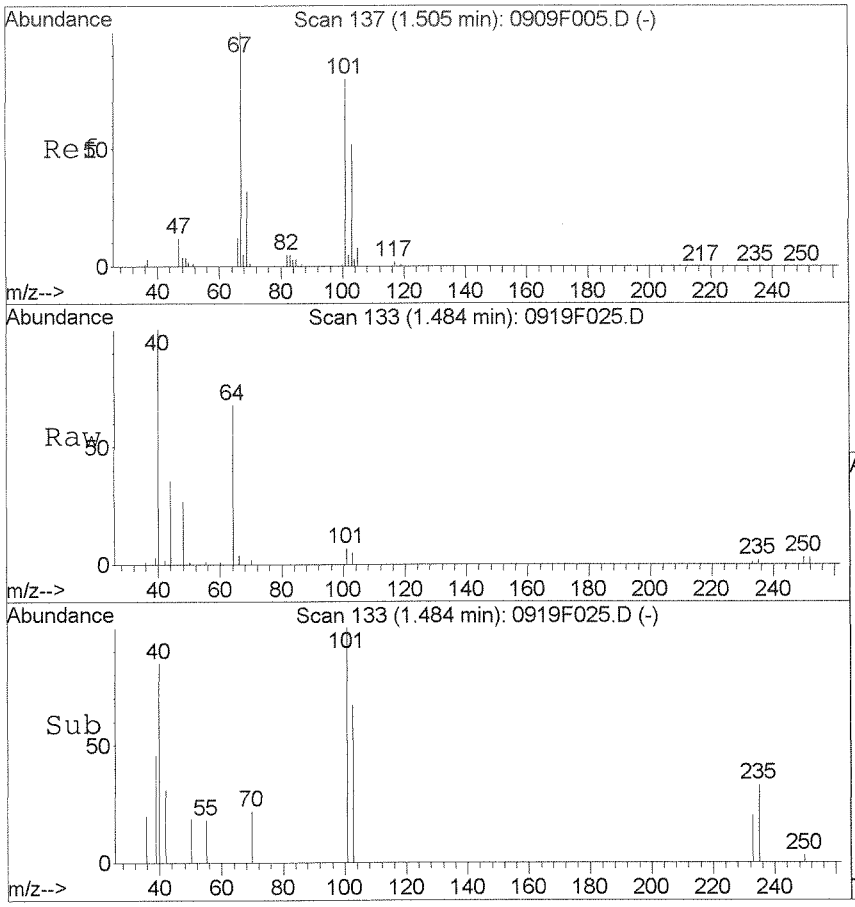
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	402688	50.00	PPB		-0.01
61) Chlorobenzene-d5	6.59	82	159792	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	144546	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.48	113	103986	51.73	PPB		-0.01
Spiked Amount 50.000			Recovery = 103.46%				
44) 1,2-Dichloroethane-d4	3.75	65	99898	49.62	PPB		-0.01
Spiked Amount 50.000			Recovery = 99.24%				
59) Toluene-d8	5.25	98	378197	48.61	PPB		0.00
Spiked Amount 50.000			Recovery = 97.22%				
80) 4-Bromofluorobenzene	7.76	95	136089	47.91	PPB		0.00
Spiked Amount 50.000			Recovery = 95.82%				
Target Compounds							Qvalue
8) Trichlorofluoromethane	1.48	101	620	0.25	PPB		95
10) Acrolein	1.83	56	2106	6.75	PPB		91
13) Acetone	1.94	43	19660	39.93	PPB		95
15) Carbon Disulfide	1.98	76	173910	34.17	PPB		98
19) Methylene Chloride	2.22	84	4297	2.02	PPB		95
20) tert-Butyl Alcohol	2.31	59	630	2.99	PPB		75
22) Methyl tert-Butyl Ether	2.38	73	3696	0.69	PPB		96
24) Hexane	2.51	57	2816	1.21	PPB		98
32) 2-Butanone	3.16	72	1326	5.47	PPB	#	61
45) Benzene	3.74	78	24932	3.42	PPB		73
48) Trichloroethene	4.21	95	1012	0.56	PPB	#	11
60) Toluene	5.32	92	3229	0.70	PPB		86
70) 1-Chlorohexane	6.60	91	625	0.25	PPB		84
91) 1,2,4-Trimethylbenzene	8.55	105	575	0.08	PPB		94
93) p-Isopropyltoluene	8.86	119	506	0.07	PPB		78
102) Naphthalene	11.02	128	789	0.12	PPB		71

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F025.D Vial: 24
Acq On : 19 Sep 2014 6:45 pm Operator: KR
Sample : K09921-011 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:17 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

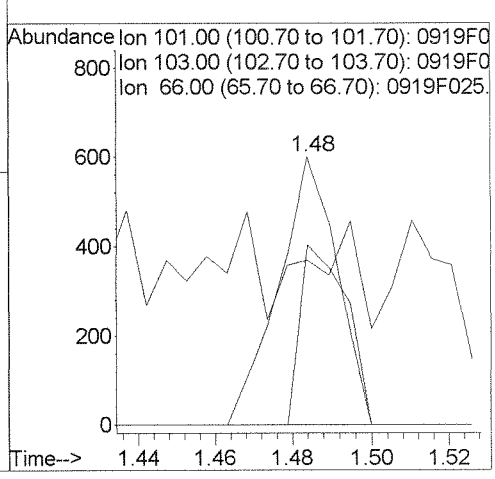


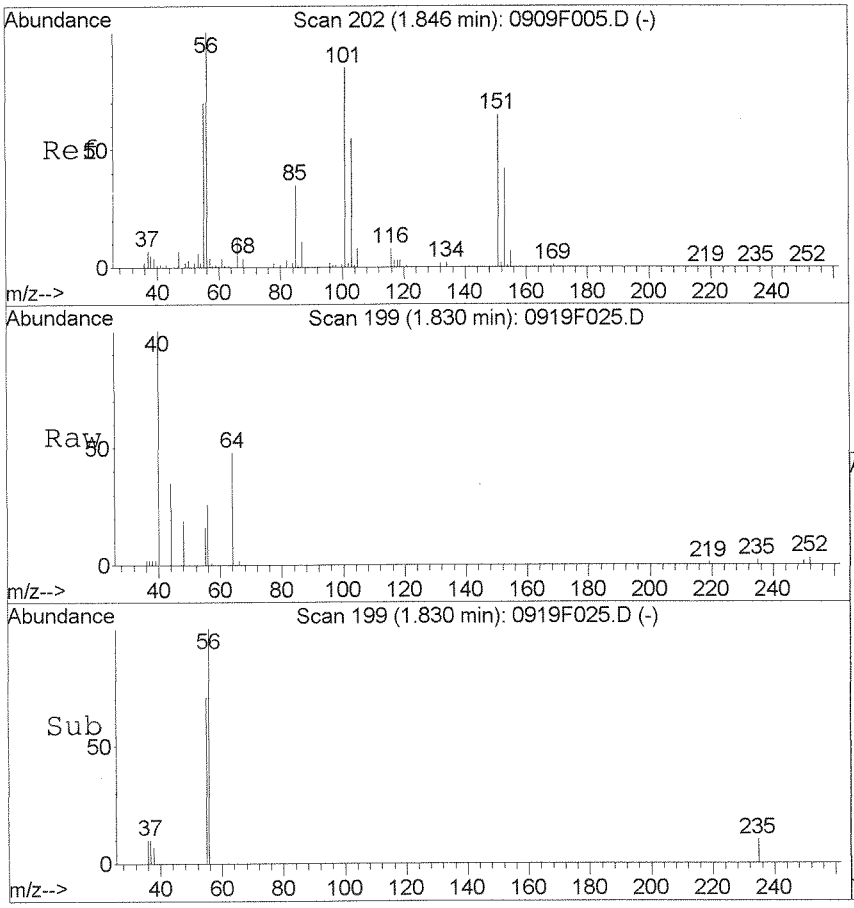


#8
Trichlorofluoromethane
Concen: 0.25 PPB
RT: 1.48 min Scan# 133
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion:101 Resp: 620

Ion	Ratio	Lower	Upper
101	100		
103	67.1	34.7	94.7
66	10.3	0.0	45.0

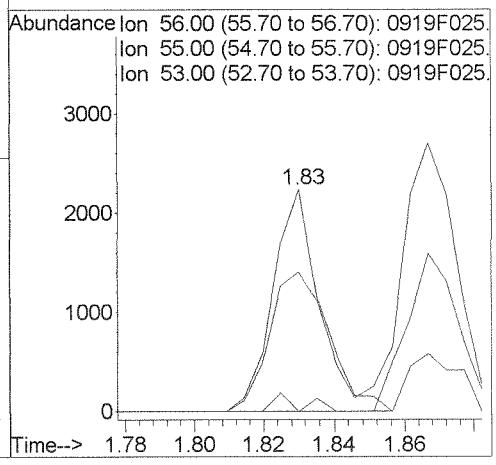


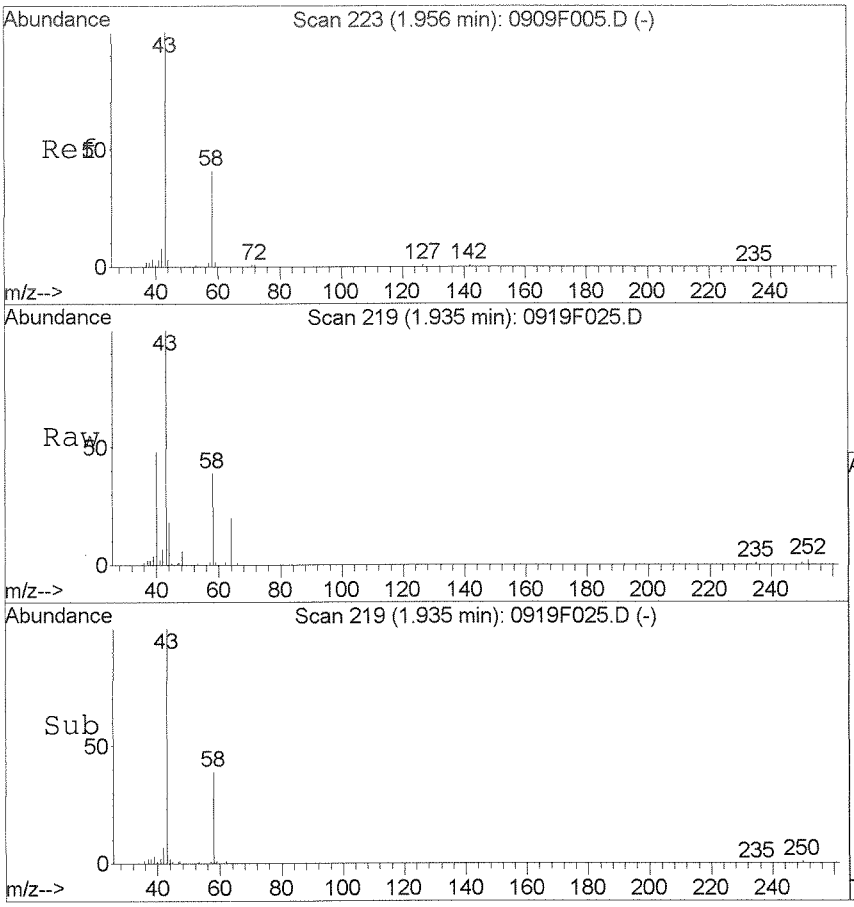


#10
Acrolein
Concen: 6.75 PPB
RT: 1.83 min Scan# 199
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 56 Resp: 2106

Ion	Ratio	Lower	Upper
56	100		
55	62.9	39.9	99.9
53	0.0	0.0	36.3

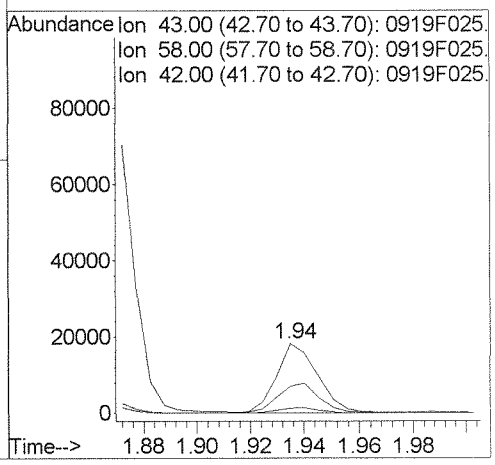


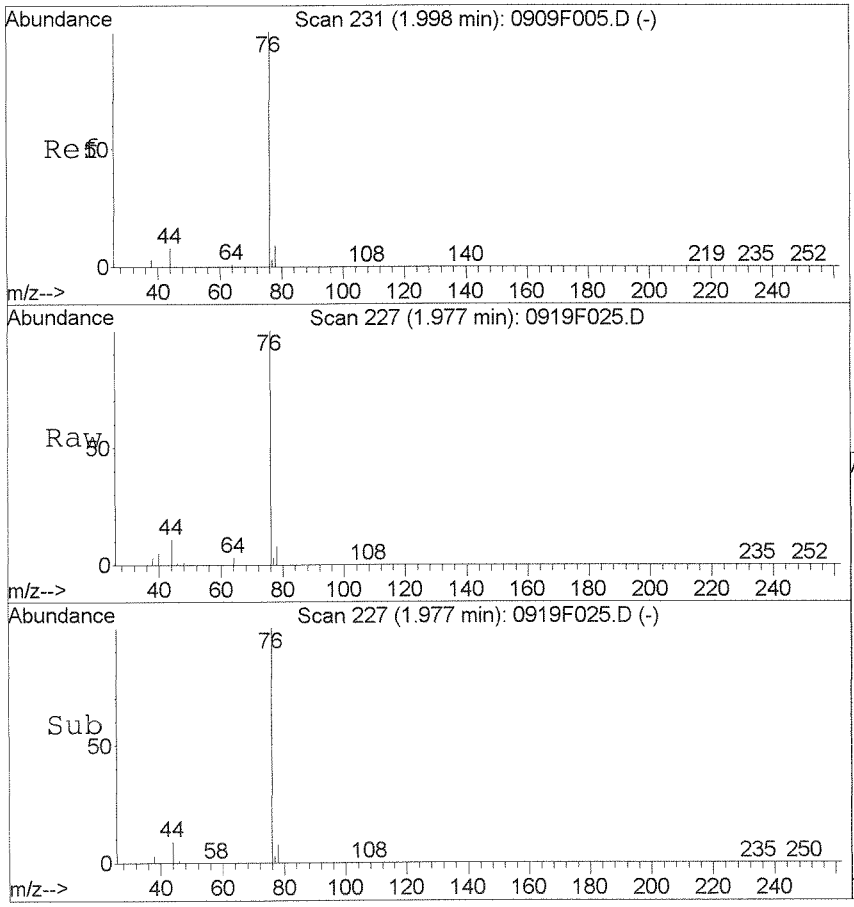


#13
Acetone
Concen: 39.93 PPB
RT: 1.94 min Scan# 219
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 43 Resp: 19660

Ion	Ratio	Lower	Upper
43	100		
58	37.5	11.3	71.3
42	7.1	0.0	37.7

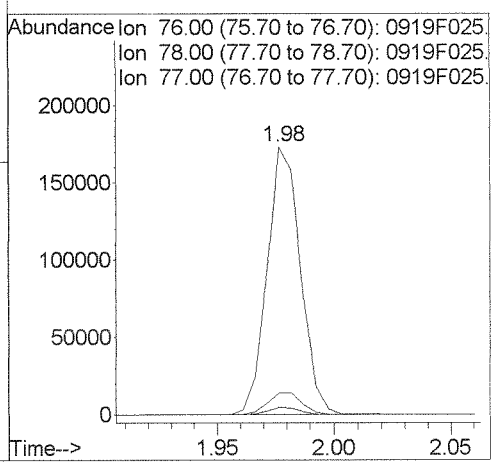


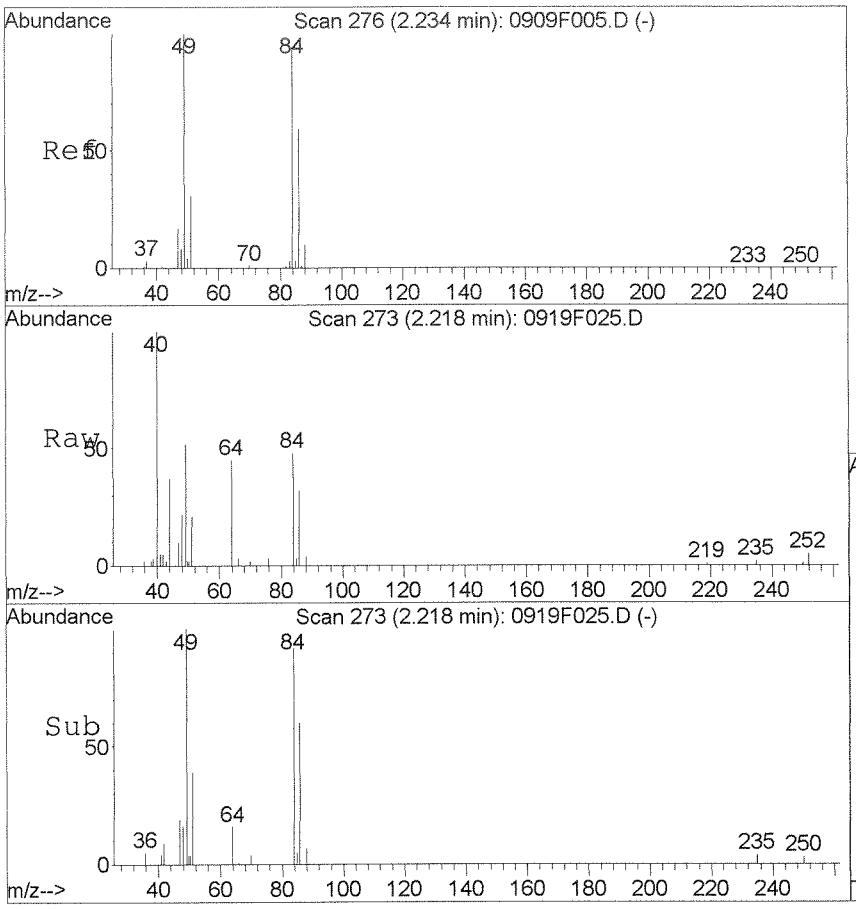


#15
Carbon Disulfide
Concen: 34.17 PPB
RT: 1.98 min Scan# 227
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 76 Resp: 173910

Ion	Ratio	Lower	Upper
76	100		
78	8.3	0.0	39.0
77	2.8	0.0	32.6

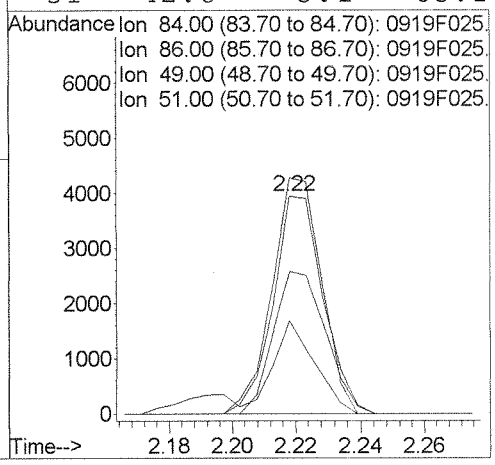


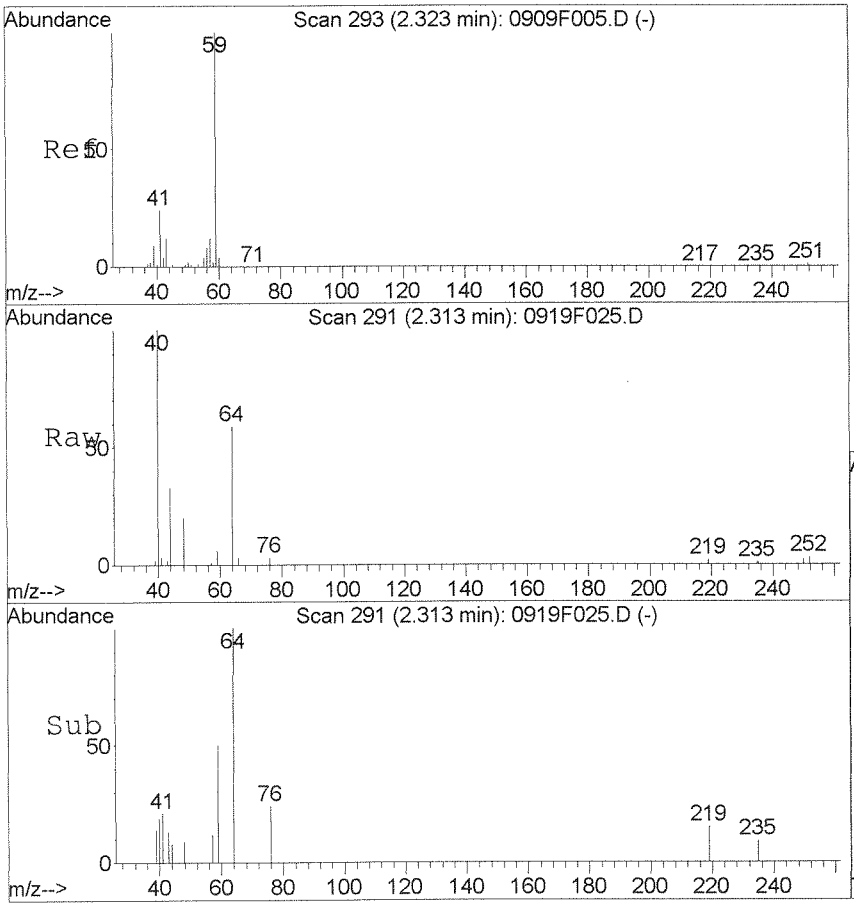


#19
Methylene Chloride
Concen: 2.02 PPB
RT: 2.22 min Scan# 273
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 84 Resp: 4297

Ion	Ratio	Lower	Upper
84	100		
86	65.4	32.9	92.9
49	108.5	76.9	136.9
51	42.8	3.1	63.1

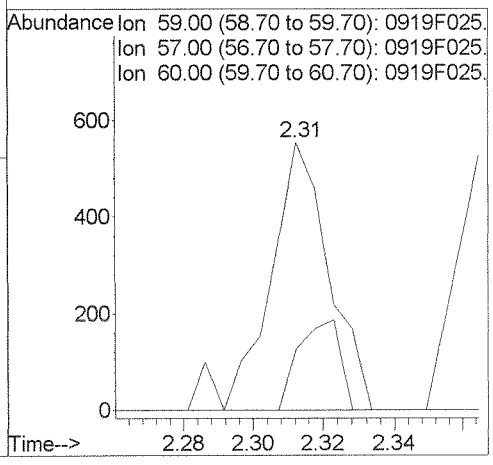


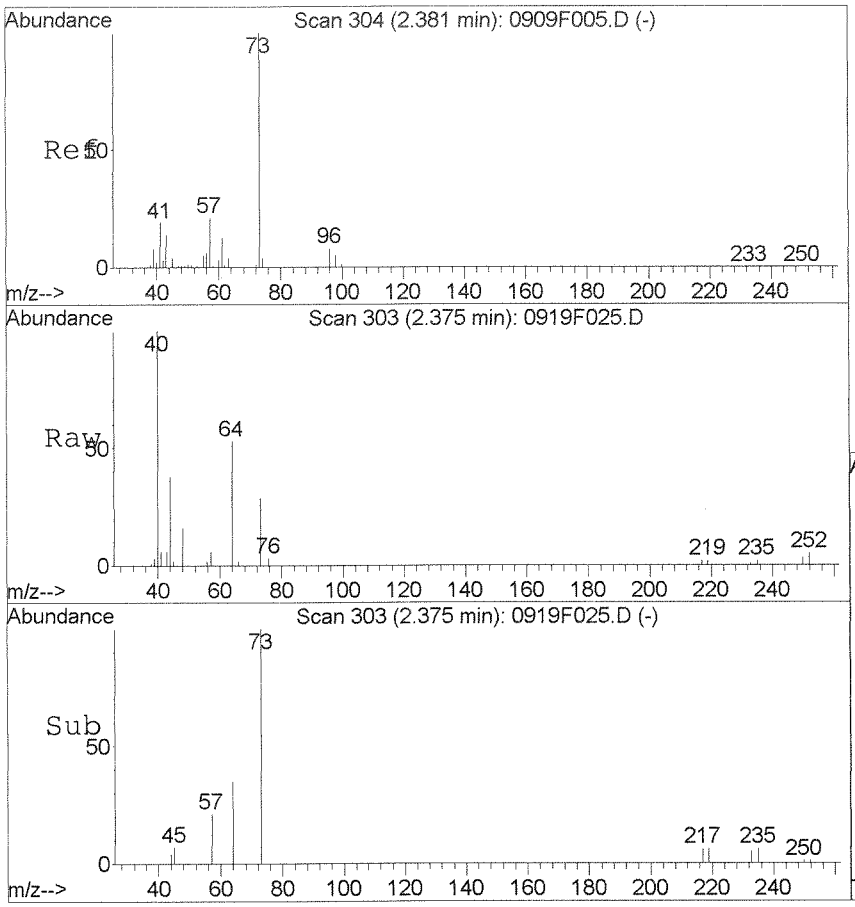


#20
tert-Butyl Alcohol
Concen: 2.99 PPB
RT: 2.31 min Scan# 291
Delta R.T. -0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 59 Resp: 630

Ion	Ratio	Lower	Upper
59	100		
57	22.9	0.0	41.5
60	0.0	0.0	33.6

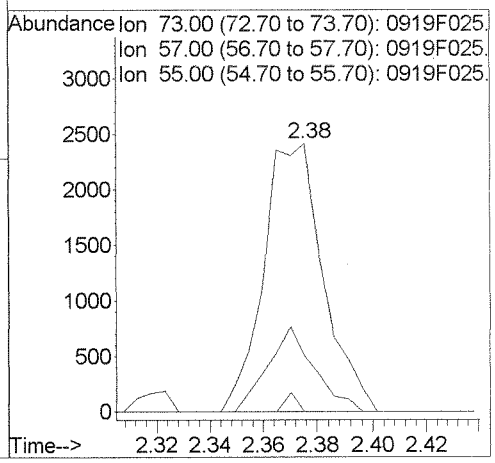


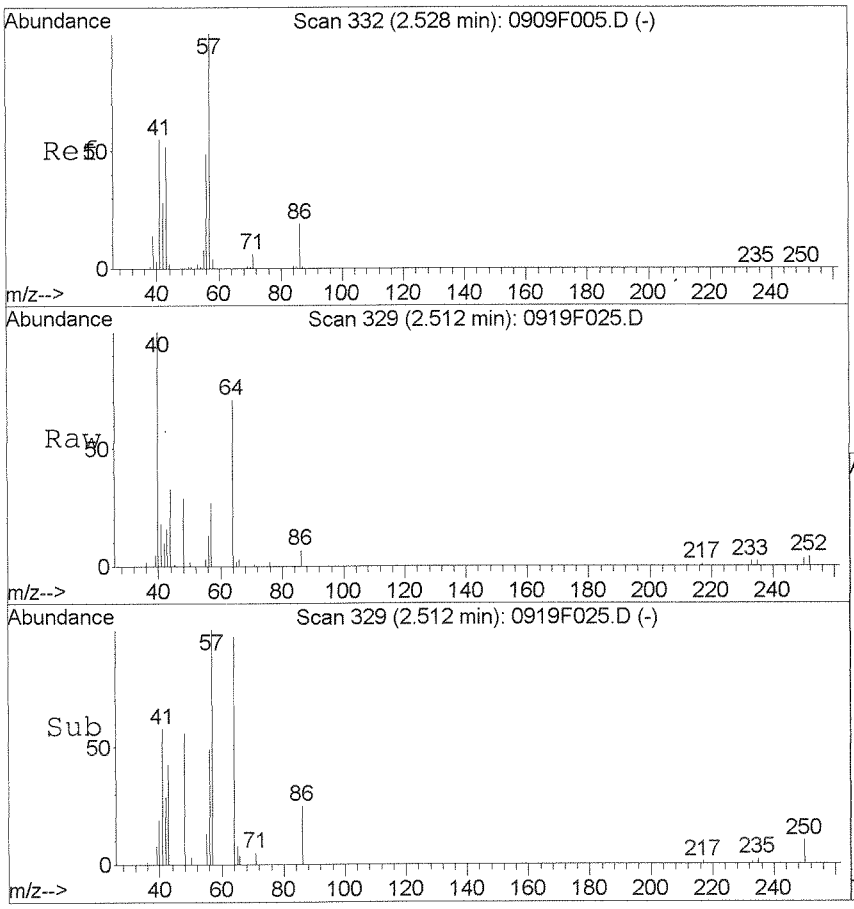


#22
Methyl tert-Butyl Ether
Concen: 0.69 PPB
RT: 2.38 min Scan# 303
Delta R.T. -0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 73 Resp: 3696

Ion	Ratio	Lower	Upper
73	100		
57	20.9	0.0	51.5
55	0.0	0.0	35.6

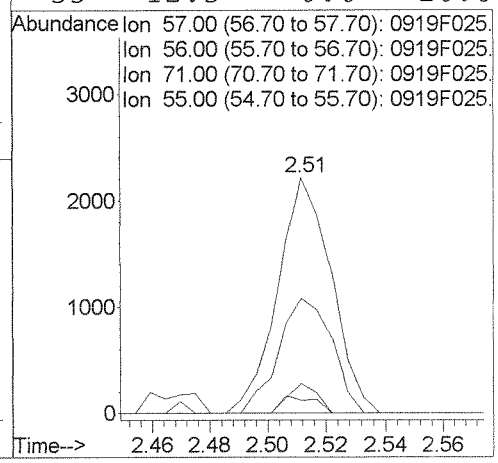


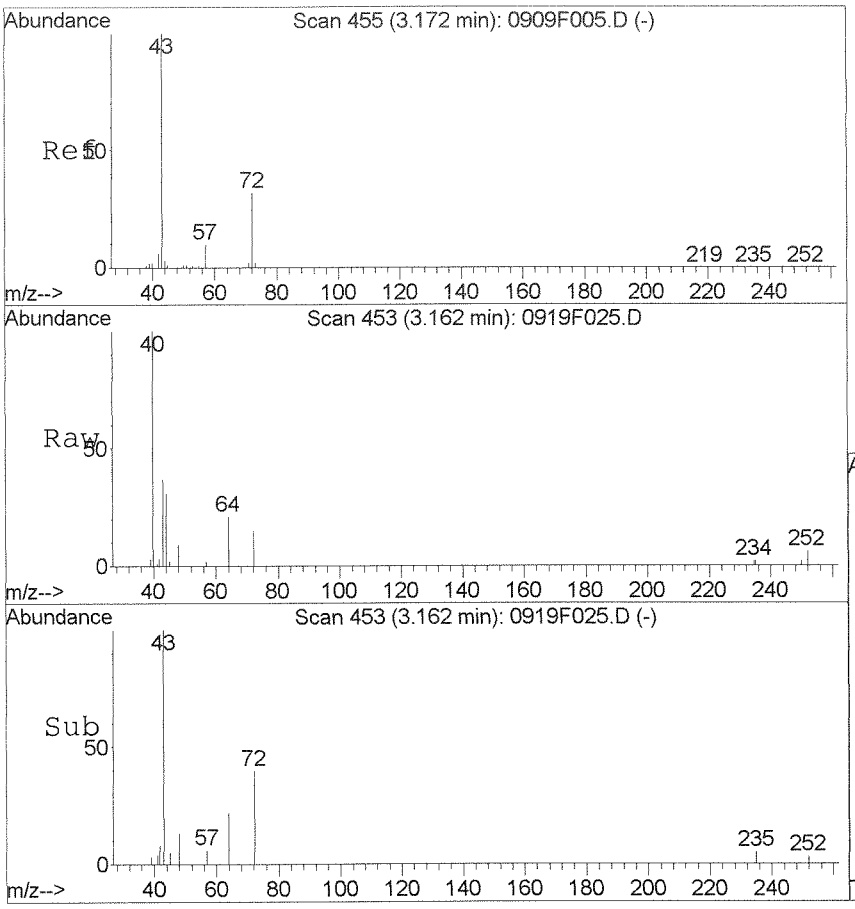


#24
Hexane
Concen: 1.21 PPB
RT: 2.51 min Scan# 329
Delta R.T. -0.02 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 57 Resp: 2816

Ion	Ratio	Lower	Upper
57	100		
56	48.7	18.8	78.8
71	5.4	0.0	35.9
55	12.5	0.0	20.6

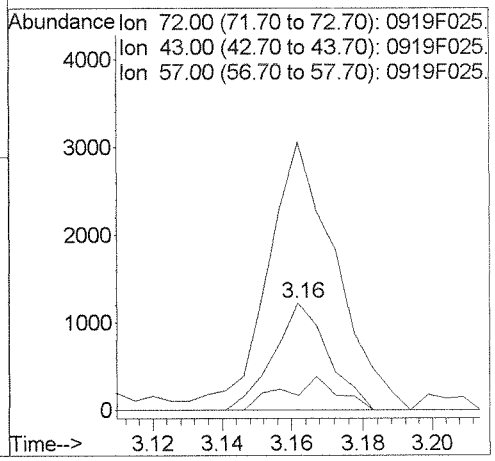


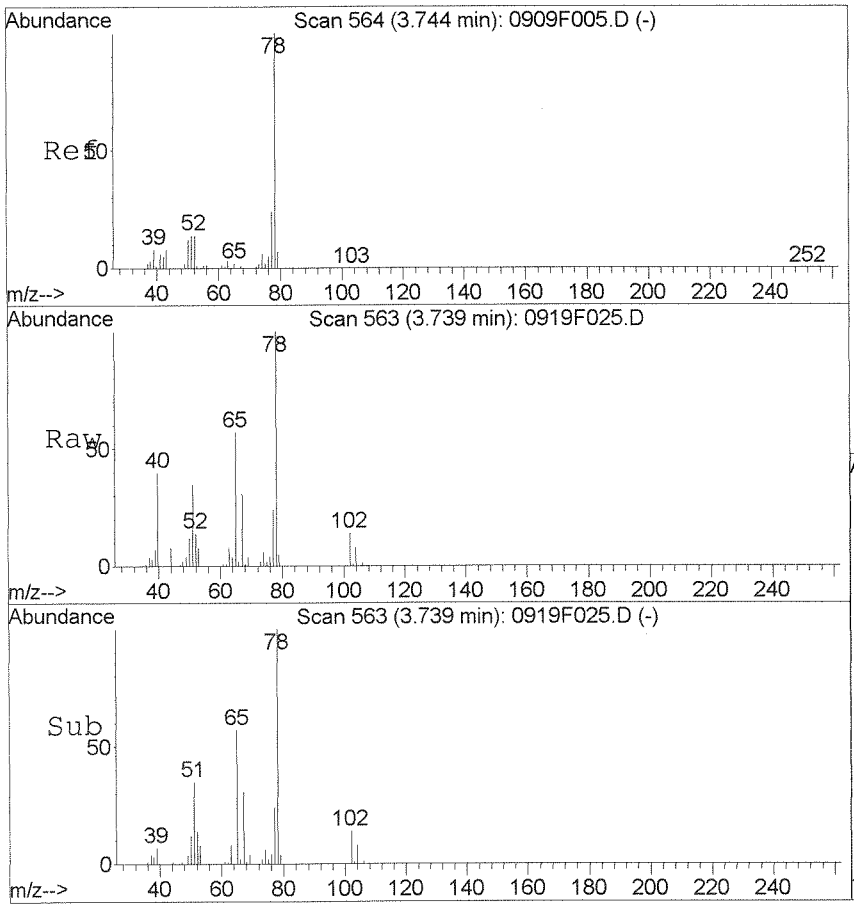


#32
2-Butanone
Concen: 5.47 PPB
RT: 3.16 min Scan# 453
Delta R.T. -0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 72 Resp: 1326

Ion	Ratio	Lower	Upper
72	100		
43	234.7	284.6	344.6#
57	13.8	0.2	60.2

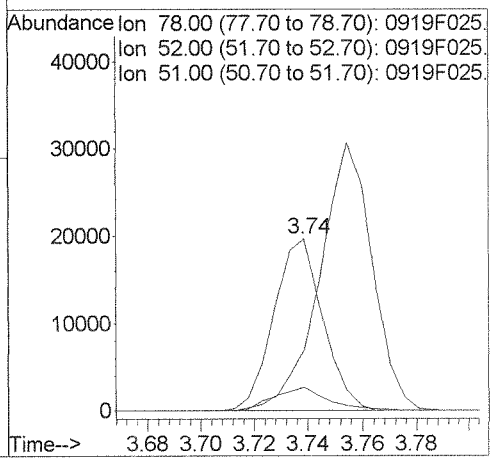


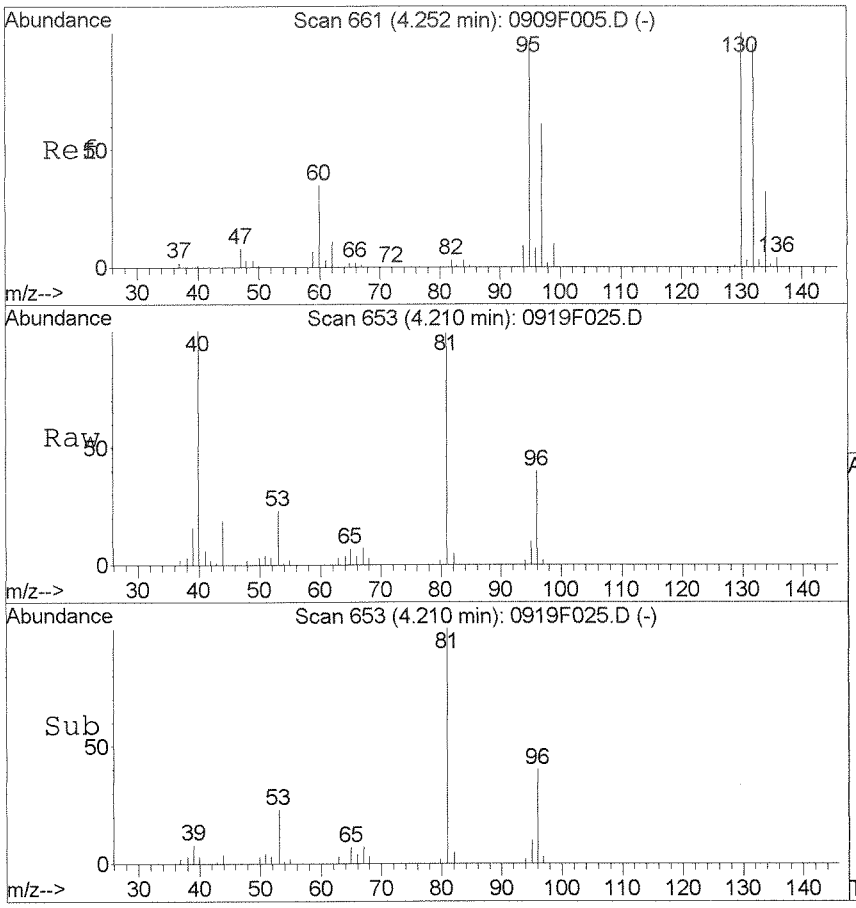


#45
Benzene
Concen: 3.42 PPB
RT: 3.74 min Scan# 563
Delta R.T. -0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 78 Resp: 24932

Ion	Ratio	Lower	Upper
78	100		
52	13.8	0.0	44.3
51	35.5	0.0	44.1

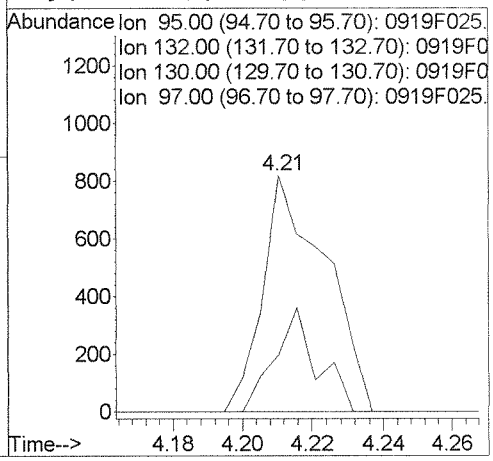


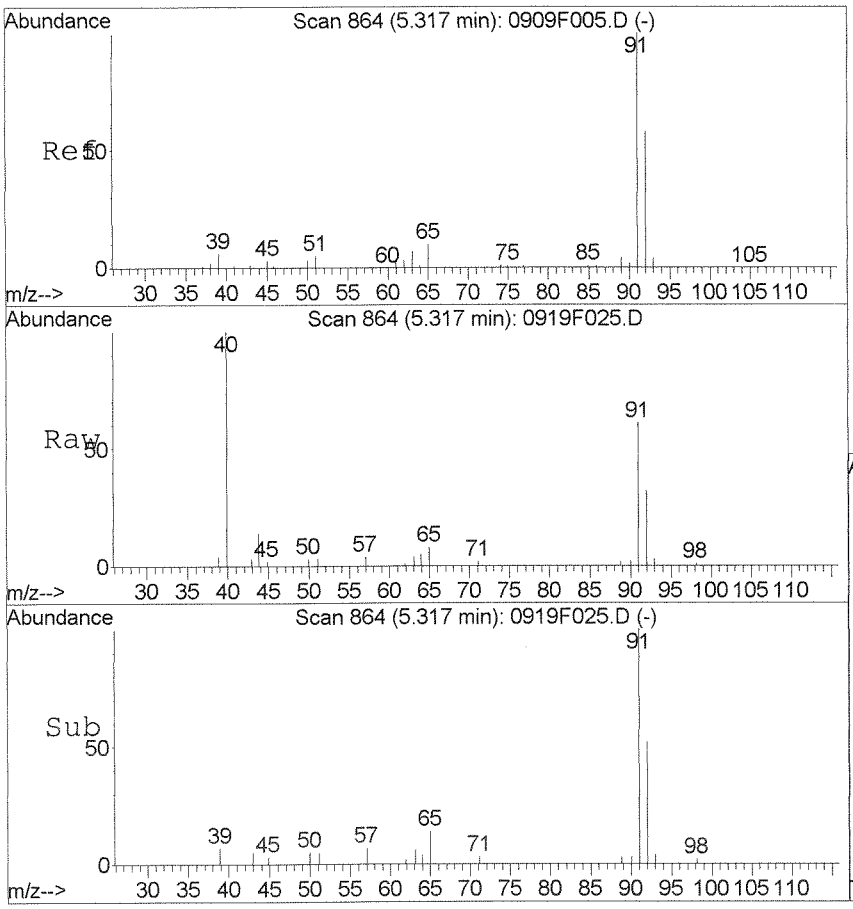


#48
Trichloroethene
Concen: 0.56 PPB
RT: 4.21 min Scan# 653
Delta R.T. -0.04 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 95 Resp: 1012

Ion	Ratio	Lower	Upper
95	100		
132	0.0	70.6	130.6#
130	0.0	75.3	135.3#
97	24.0	33.7	93.7#

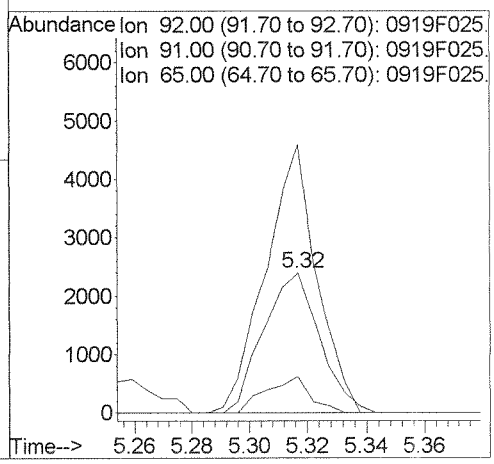


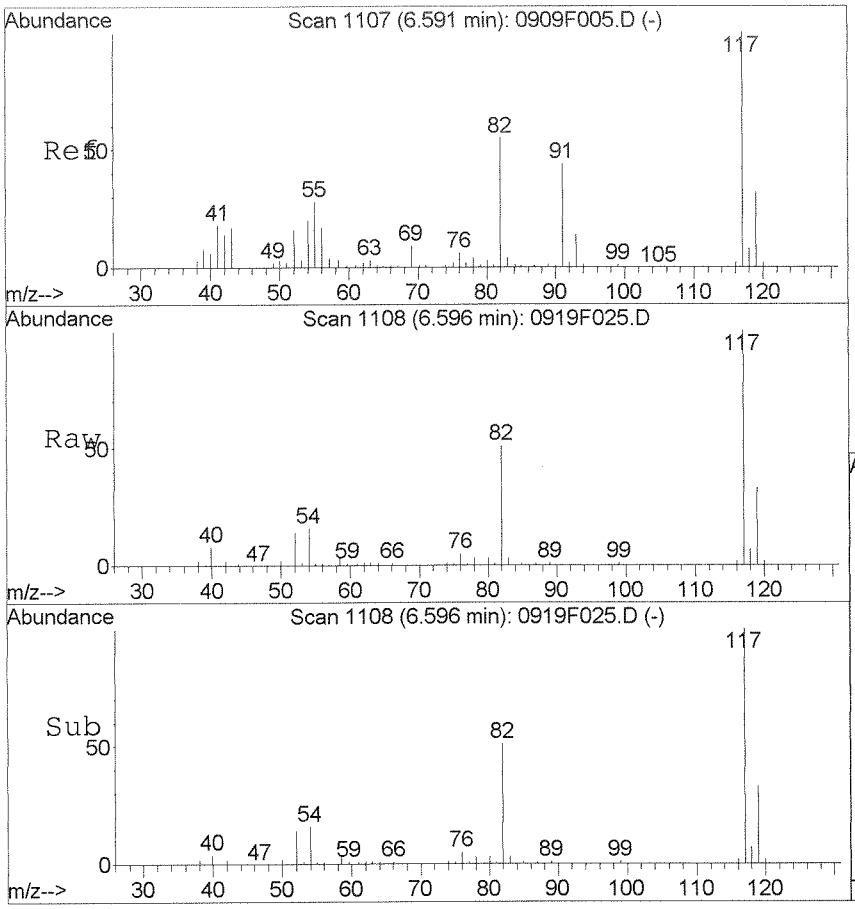


#60
Toluene
Concen: 0.70 PPB
RT: 5.32 min Scan# 864
Delta R.T. -0.00 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 92 Resp: 3229

Ion	Ratio	Lower	Upper
92	100		
91	192.1	143.3	203.3
65	26.2	0.0	47.5

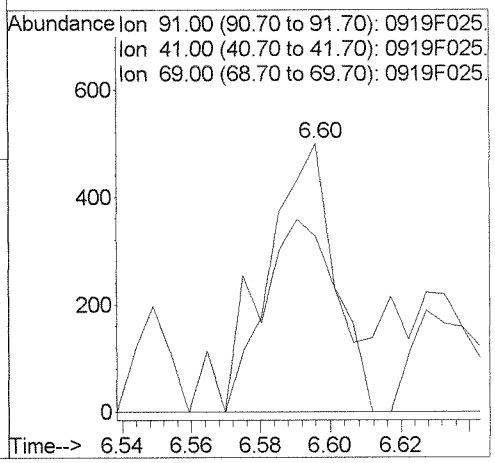


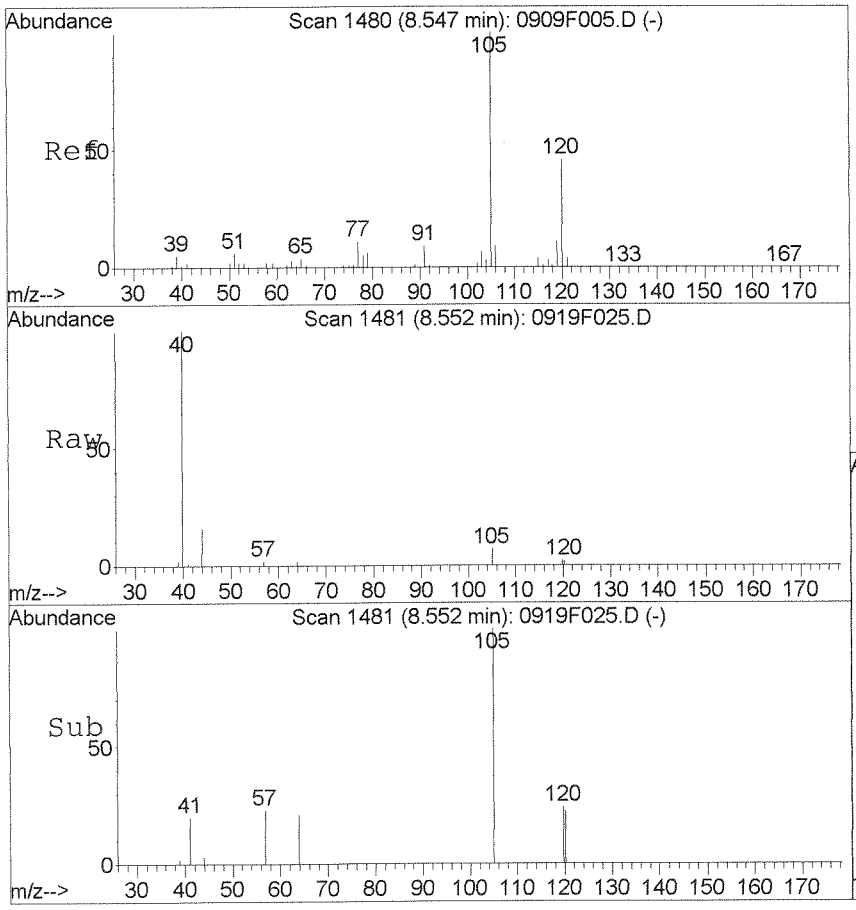


#70
1-Chlorohexane
Concen: 0.25 PPB
RT: 6.60 min Scan# 1108
Delta R.T. 0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion: 91 Resp: 625

Ion	Ratio	Lower	Upper
91	100		
41	42.6	11.2	71.2
69	0.0	0.0	49.8

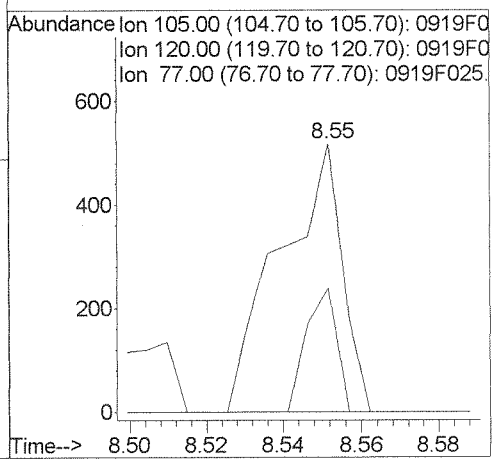


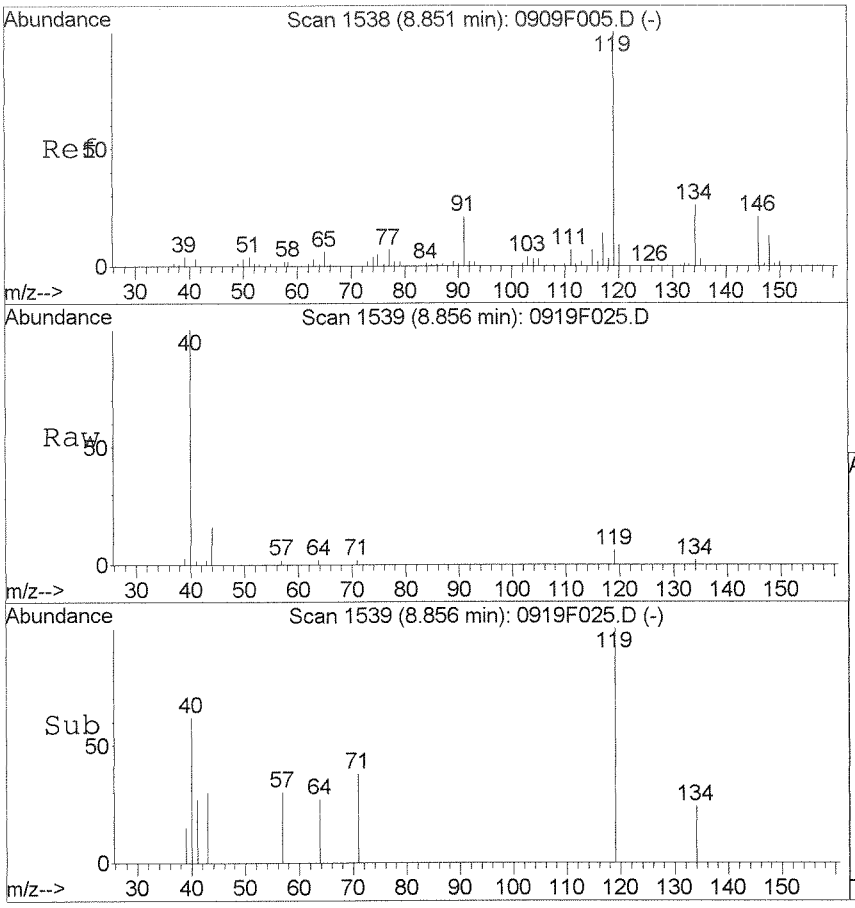


#91
1,2,4-Trimethylbenzene
Concen: 0.08 PPB
RT: 8.55 min Scan# 1481
Delta R.T. 0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion:105 Resp: 575

Ion	Ratio	Lower	Upper
105	100		
120	46.0	15.9	75.9
77	0.0	0.0	41.2

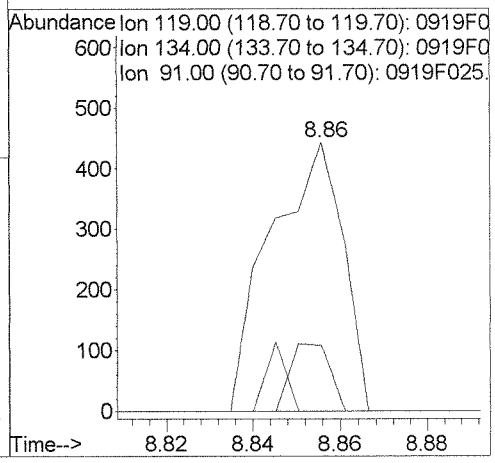


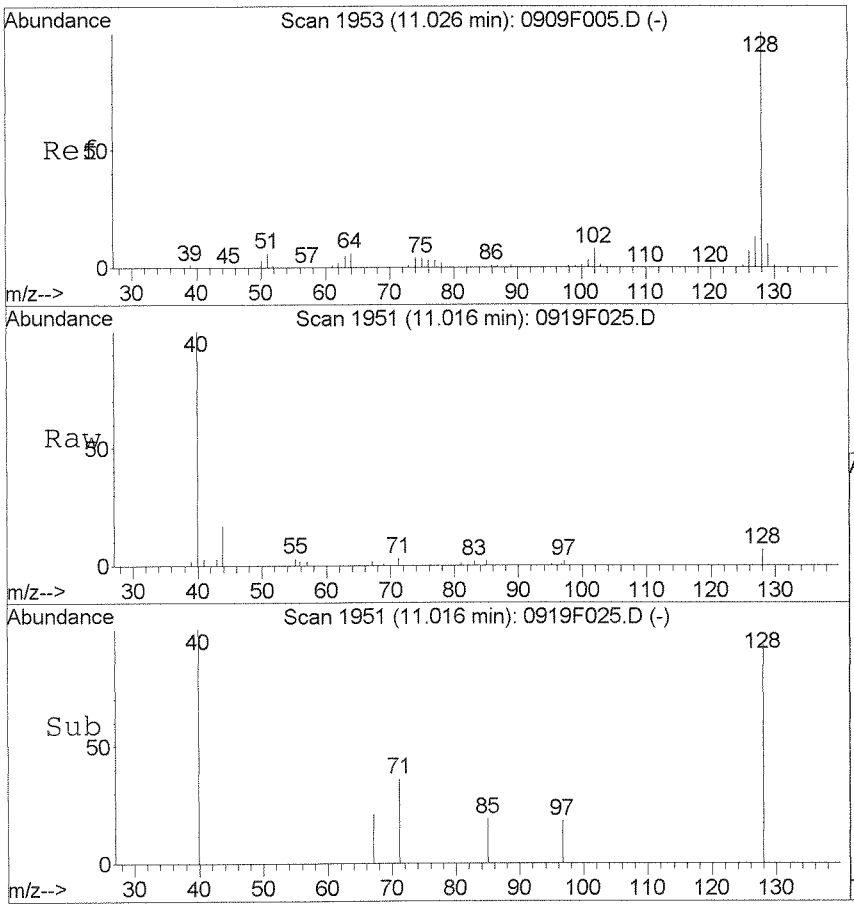


#93
p-Isopropyltoluene
Concen: 0.07 PPB
RT: 8.86 min Scan# 1539
Delta R.T. 0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion:119 Resp: 506

Ion	Ratio	Lower	Upper
119	100		
134	24.4	0.0	56.2
91	0.0	0.0	50.8

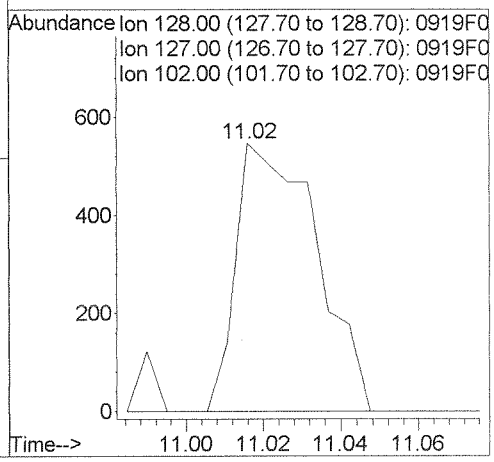




#102
Naphthalene
Concen: 0.12 PPB
RT: 11.02 min Scan# 1951
Delta R.T. -0.01 min
Lab File: 0919F025.D
Acq: 19 Sep 2014 6:45 pm

Tgt Ion:128 Resp: 789

Ion	Ratio	Lower	Upper
128	100		
127	0.0	0.0	43.1
102	0.0	0.0	37.8



Exception Report

Data File: J:\MS18\DATA\092014\0920F019.D
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 14:30
Date Quantitated: 09/22/2014 16:58
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F019.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 14:30	**Quant Date:**	09/22/2014 16:58	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-012			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1377430	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	294710	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	123067	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	117878	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	61463	9.51	95	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	295309	9.92	99	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	105915	9.54	95	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	3160	2.25	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F019.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 14:30	**Quant Date:**	09/22/2014 16:58	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F019.D Vial: 18
Acq On : 20 Sep 2014 2:30 pm Operator: GH
Sample : K9921-012 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:54:36 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

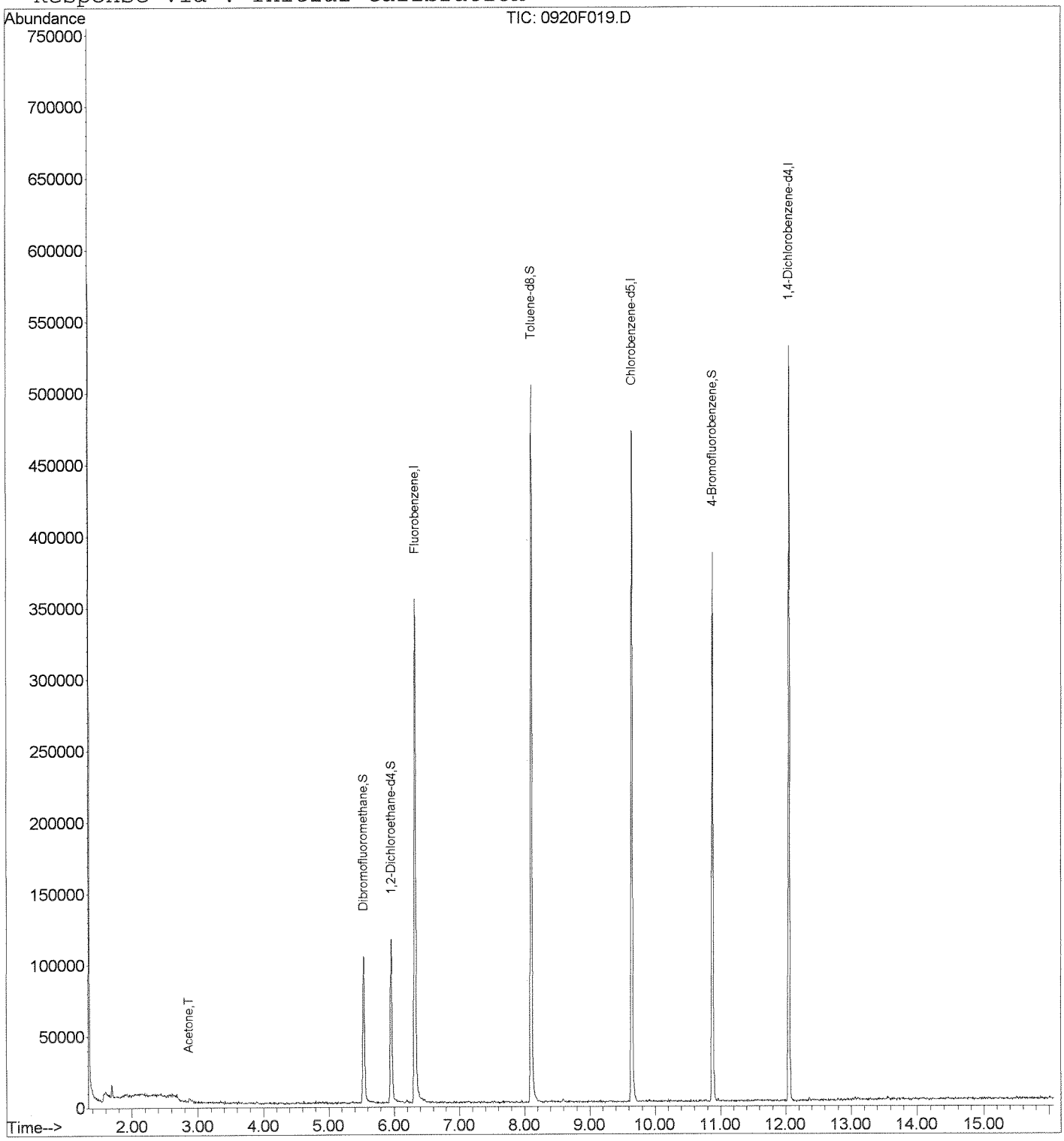
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	294710	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	123067	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	117878	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	61463	9.51	PPB	0.00
Spiked Amount 10.000			Recovery =	95.10%		
48) 1,2-Dichloroethane-d4	5.96	65	77998	10.25	PPB	0.00
Spiked Amount 10.000			Recovery =	102.50%		
63) Toluene-d8	8.10	98	295309	9.92	PPB	0.00
Spiked Amount 10.000			Recovery =	99.20%		
85) 4-Bromofluorobenzene	10.88	95	105915	9.54	PPB	0.00
Spiked Amount 10.000			Recovery =	95.40%		
Target Compounds						Qvalue
14) Acetone	2.87	43	3160	2.25	PPB	83

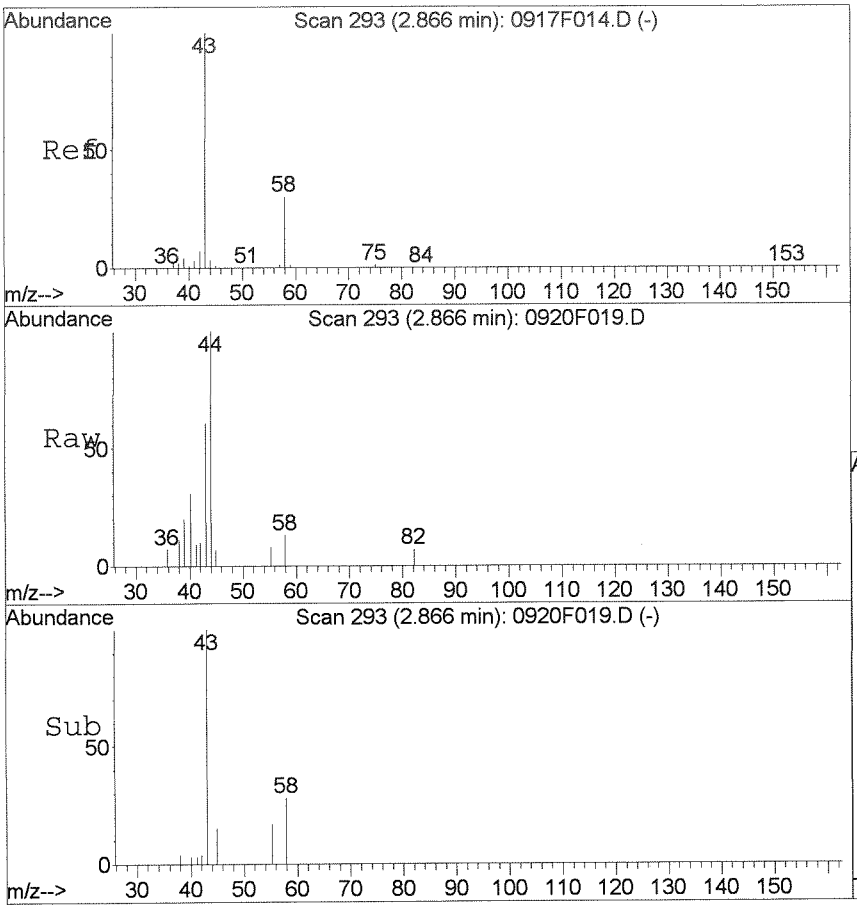
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F019.D Vial: 18
Acq On : 20 Sep 2014 2:30 pm Operator: GH
Sample : K9921-012 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 16:58 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

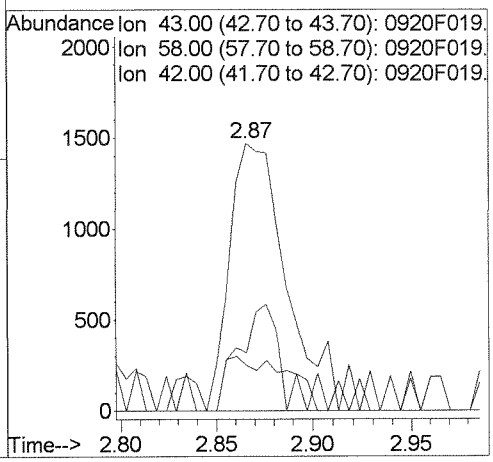




#14
Acetone
Concen: 2.25 PPB
RT: 2.87 min Scan# 293
Delta R.T. 0.00 min
Lab File: 0920F019.D
Acq: 20 Sep 2014 2:30 pm

Tgt Ion: 43 Resp: 3160

Ion	Ratio	Lower	Upper
43	100		
58	21.8	0.0	59.6
42	17.0	0.0	37.2



Exception Report

Data File: J:\MS18\DATA\092014\0920F020.D
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 14:51
Date Quantitated: 09/22/2014 16:59
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F020.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 14:51	**Quant Date:**	09/22/2014 16:59	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-013			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1377431	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	247503	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	100581	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	95457	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	50112	9.23	92	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	241132	9.65	97	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	86971	9.59	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	2746	2.33	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F020.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 14:51	**Quant Date:**	09/22/2014 16:59	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-013			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F020.D Vial: 19
Acq On : 20 Sep 2014 2:51 pm Operator: GH
Sample : K9921-013 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:54:44 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

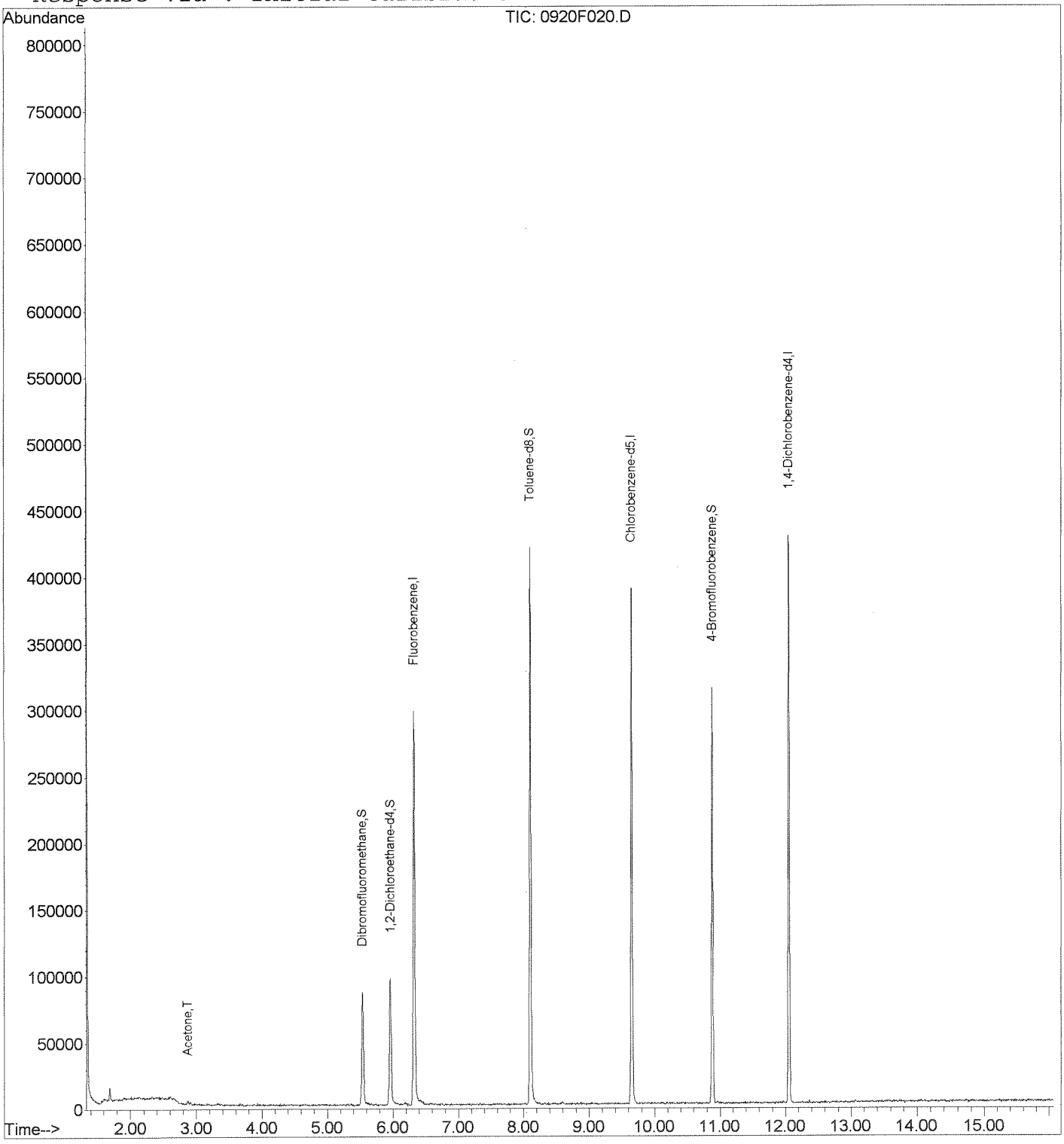
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	247503	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	100581	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	95457	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	50112	9.23	PPB	0.00
Spiked Amount 10.000			Recovery = 92.30%			
48) 1,2-Dichloroethane-d4	5.96	65	63716	9.97	PPB	0.00
Spiked Amount 10.000			Recovery = 99.70%			
63) Toluene-d8	8.10	98	241132	9.65	PPB	0.00
Spiked Amount 10.000			Recovery = 96.50%			
85) 4-Bromofluorobenzene	10.88	95	86971	9.59	PPB	0.00
Spiked Amount 10.000			Recovery = 95.90%			
Target Compounds						Qvalue
14) Acetone	2.87	43	2746	2.33	PPB	90

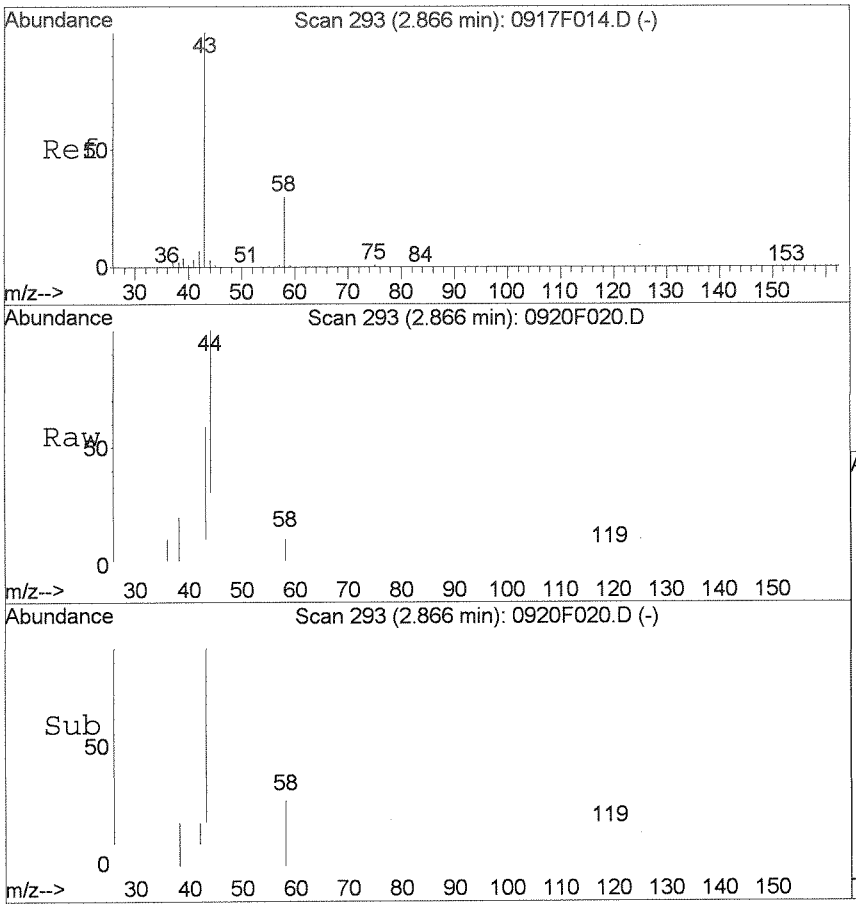
(#) = qualifier out of range (m) = manual integration
0920F020.D 091714MS18_8260.M Mon Sep 22 17:00:25 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F020.D Vial: 19
Acq On : 20 Sep 2014 2:51 pm Operator: GH
Sample : K9921-013 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 16:59 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

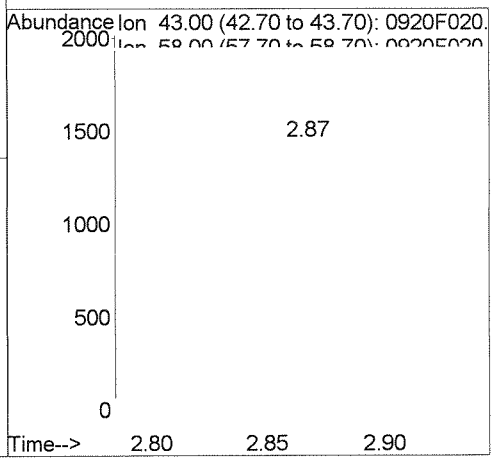




#14
Acetone
Concen: 2.33 PPB
RT: 2.87 min Scan# 293
Delta R.T. -0.00 min
Lab File: 0920F020.D
Acq: 20 Sep 2014 2:51 pm

Tgt Ion: 43 Resp: 2746

Ion	Ratio	Lower	Upper
43	100		
58	23.1	0.0	59.6
42	7.5	0.0	37.2



Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F020.D Vial: 19
Acq On : 20 Sep 2014 2:51 pm Operator: GH
Sample : K9921-013 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:54:44 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

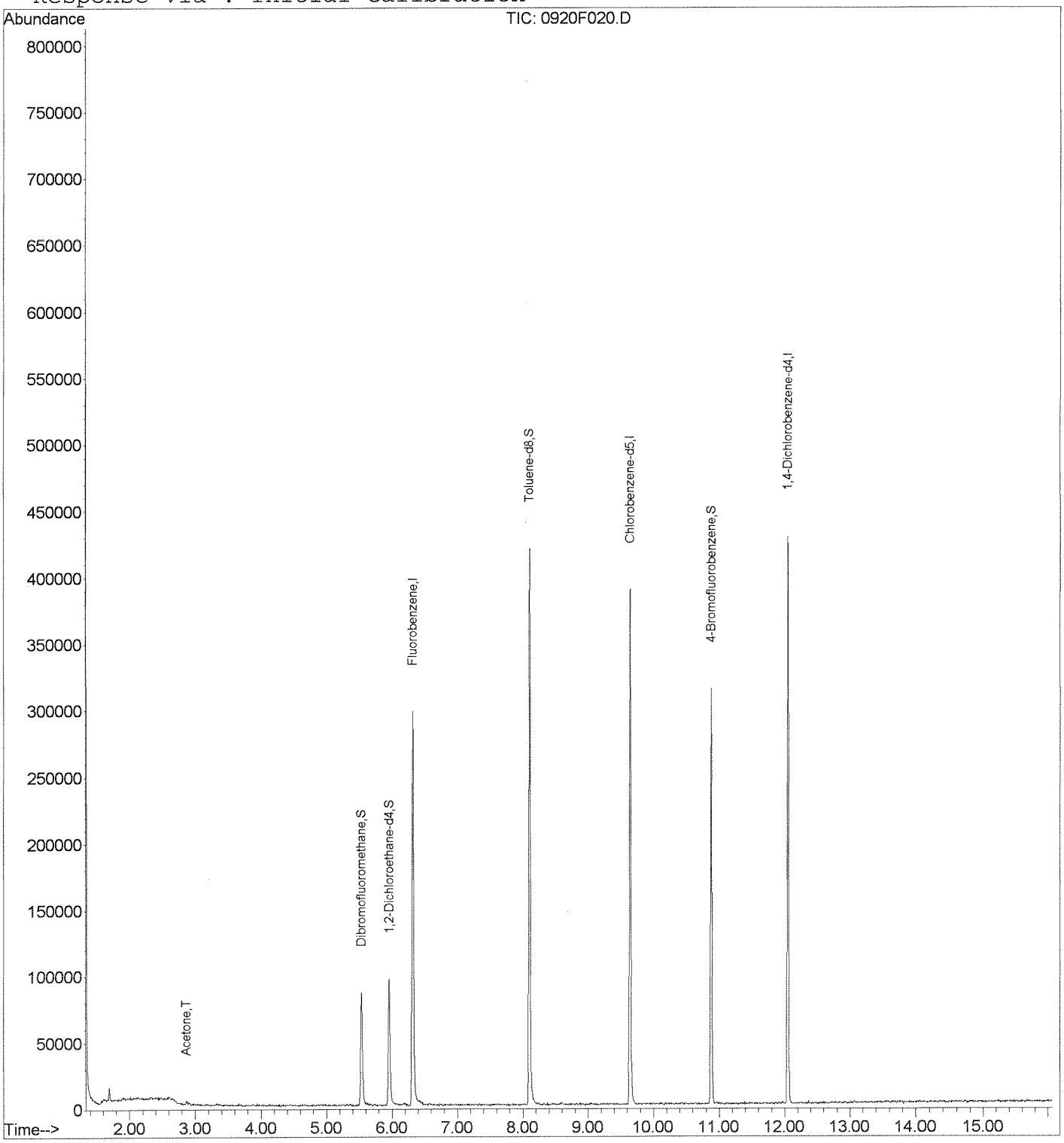
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	247503	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	100581	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	95457	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	50112	9.23	PPB	0.00
Spiked Amount 10.000			Recovery = 92.30%			
48) 1,2-Dichloroethane-d4	5.96	65	63716	9.97	PPB	0.00
Spiked Amount 10.000			Recovery = 99.70%			
63) Toluene-d8	8.10	98	241132	9.65	PPB	0.00
Spiked Amount 10.000			Recovery = 96.50%			
85) 4-Bromofluorobenzene	10.88	95	86971	9.59	PPB	0.00
Spiked Amount 10.000			Recovery = 95.90%			
Target Compounds						Qvalue
14) Acetone	2.87	43	2746	2.33	PPB	90

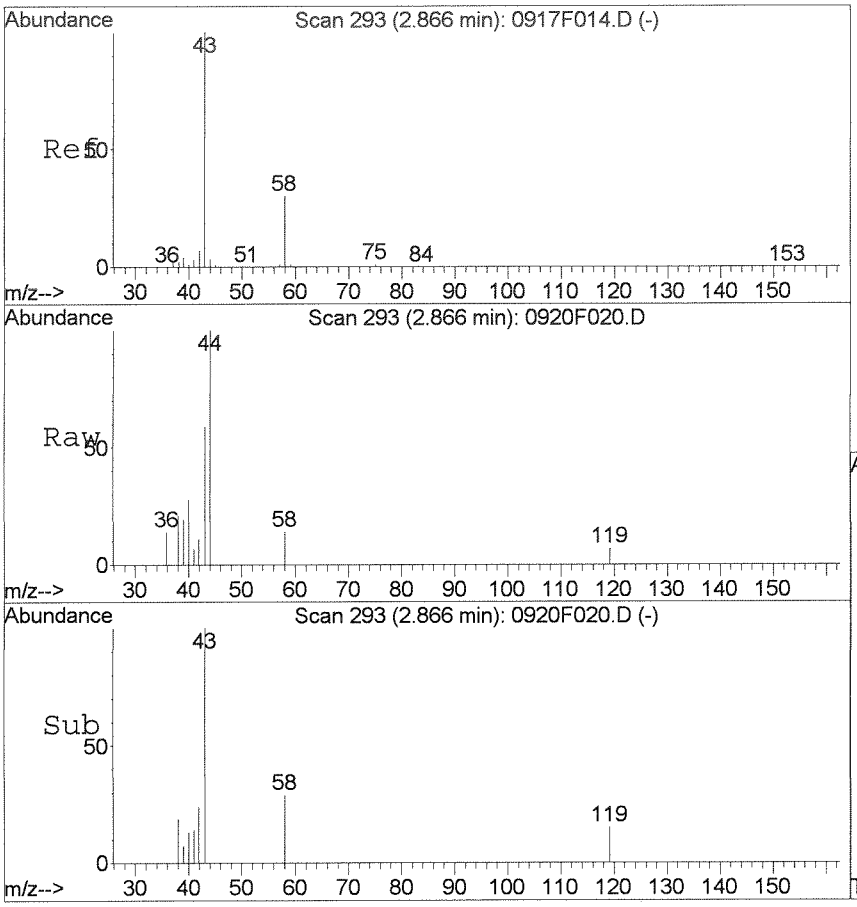
(#) = qualifier out of range (m) = manual integration
0920F020.D 091714MS18_8260.M Mon Sep 22 17:00:25 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F020.D Vial: 19
Acq On : 20 Sep 2014 2:51 pm Operator: GH
Sample : K9921-013 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 16:59 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

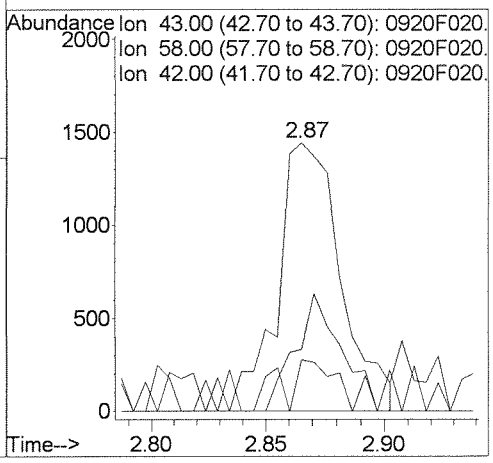




#14
Acetone
Concen: 2.33 PPB
RT: 2.87 min Scan# 293
Delta R.T. -0.00 min
Lab File: 0920F020.D
Acq: 20 Sep 2014 2:51 pm

Tgt Ion: 43 Resp: 2746

Ion	Ratio	Lower	Upper
43	100		
58	23.1	0.0	59.6
42	7.5	0.0	37.2



Exception Report

Data File: J:\MS18\DATA\092014\0920F021.D
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 15:12
Date Quantitated: 09/22/2014 17:02
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F021.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:12	**Quant Date:**	09/22/2014 17:02	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-014			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1377432	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	294691	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	122203	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	117616	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	59686	9.23	92	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	290029	9.74	97	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	106784	9.69	97	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	1669	1.19	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	8.18	0.01	0.00	92	1599	0.0700	0.070	J	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F021.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:12	**Quant Date:**	09/22/2014 17:02	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-014			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F021.D Vial: 20
Acq On : 20 Sep 2014 3:12 pm Operator: GH
Sample : K9921-014 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:54:56 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

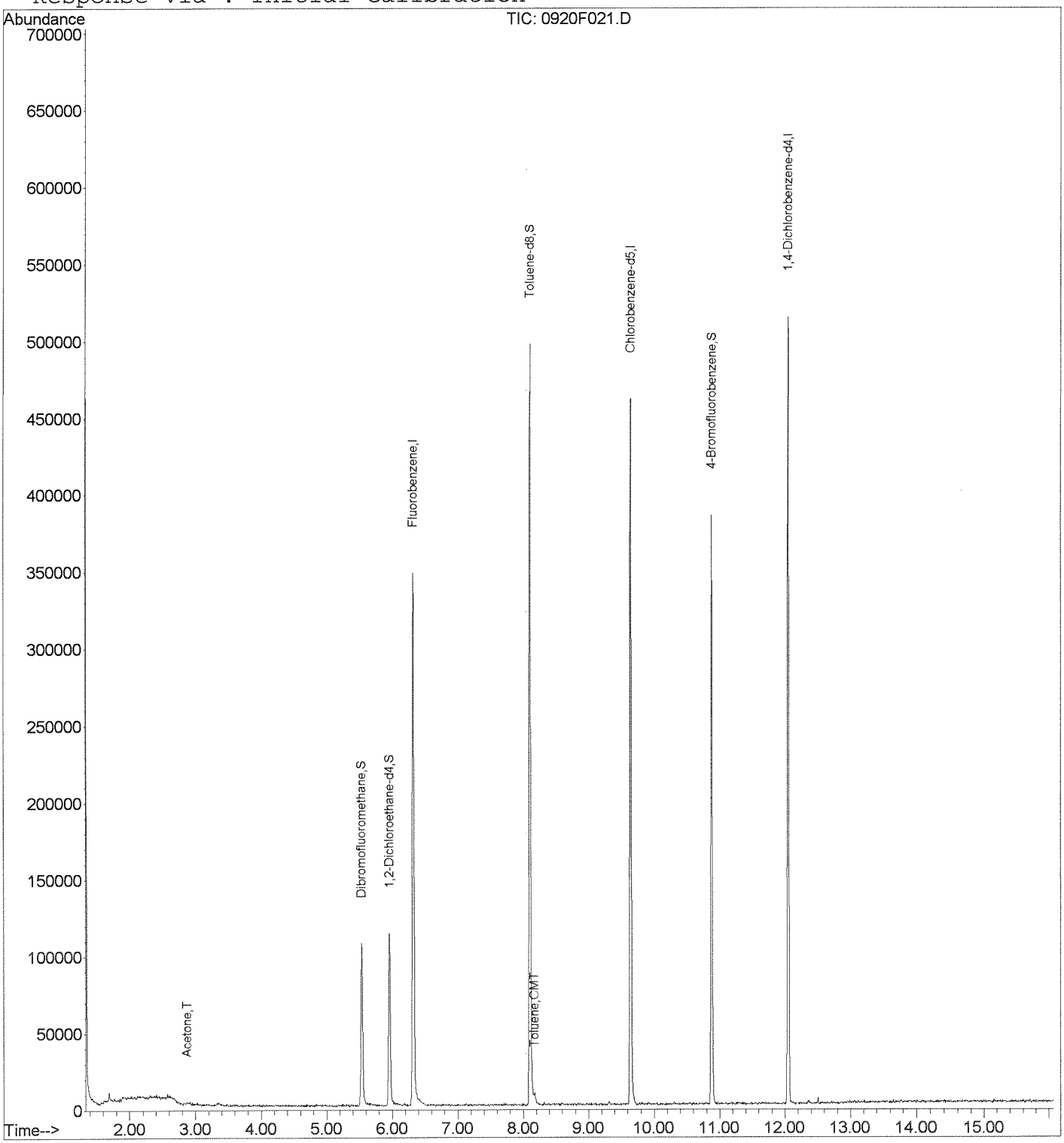
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	294691	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	122203	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	117616	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	59686	9.23	PPB	0.00
Spiked Amount 10.000			Recovery = 92.30%			
48) 1,2-Dichloroethane-d4	5.96	65	75261	9.89	PPB	0.00
Spiked Amount 10.000			Recovery = 98.90%			
63) Toluene-d8	8.10	98	290029	9.74	PPB	0.00
Spiked Amount 10.000			Recovery = 97.40%			
85) 4-Bromofluorobenzene	10.88	95	106784	9.69	PPB	0.00
Spiked Amount 10.000			Recovery = 96.90%			
Target Compounds						Qvalue
14) Acetone	2.87	43	1669	1.19	PPB	70
64) Toluene	8.18	92	1599	0.07	PPB	92

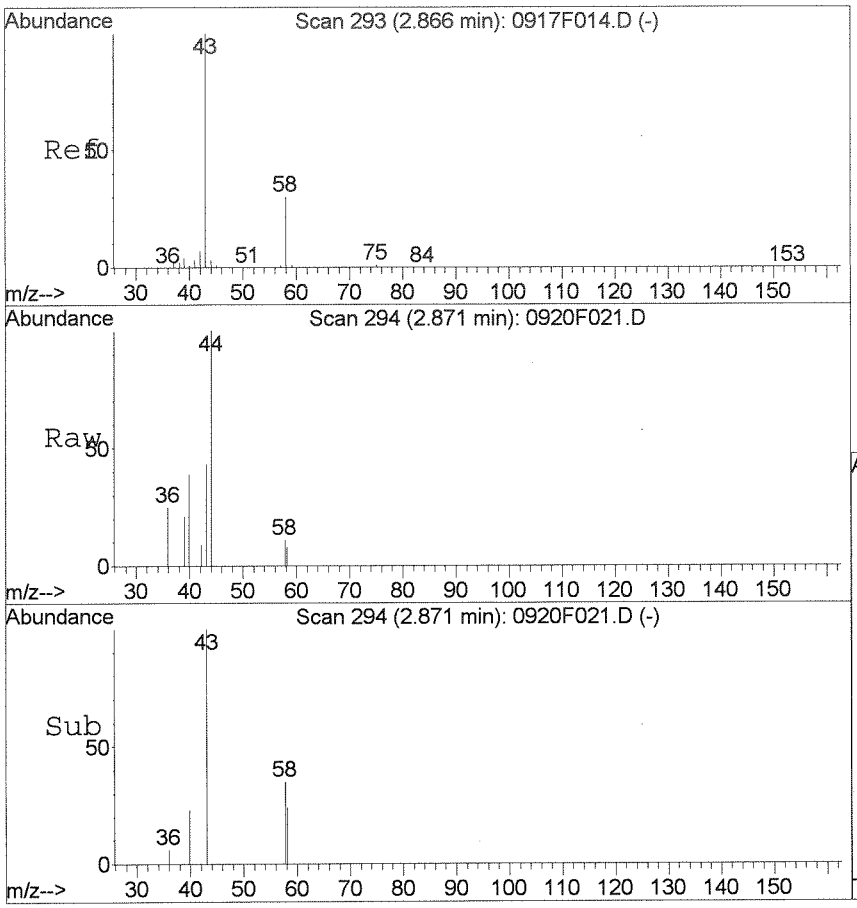
(#) = qualifier out of range (m) = manual integration
0920F021.D 091714MS18_8260.M Mon Sep 22 17:05:20 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F021.D Vial: 20
Acq On : 20 Sep 2014 3:12 pm Operator: GH
Sample : K9921-014 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 17:02 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

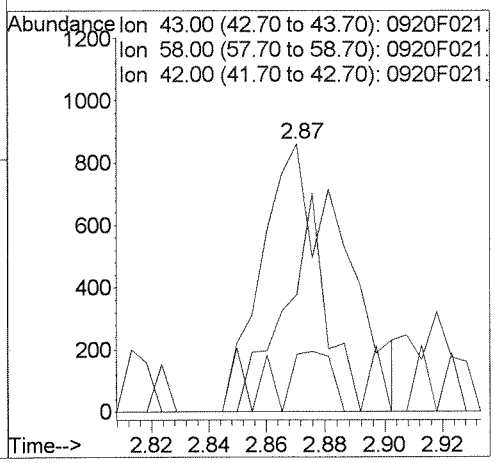


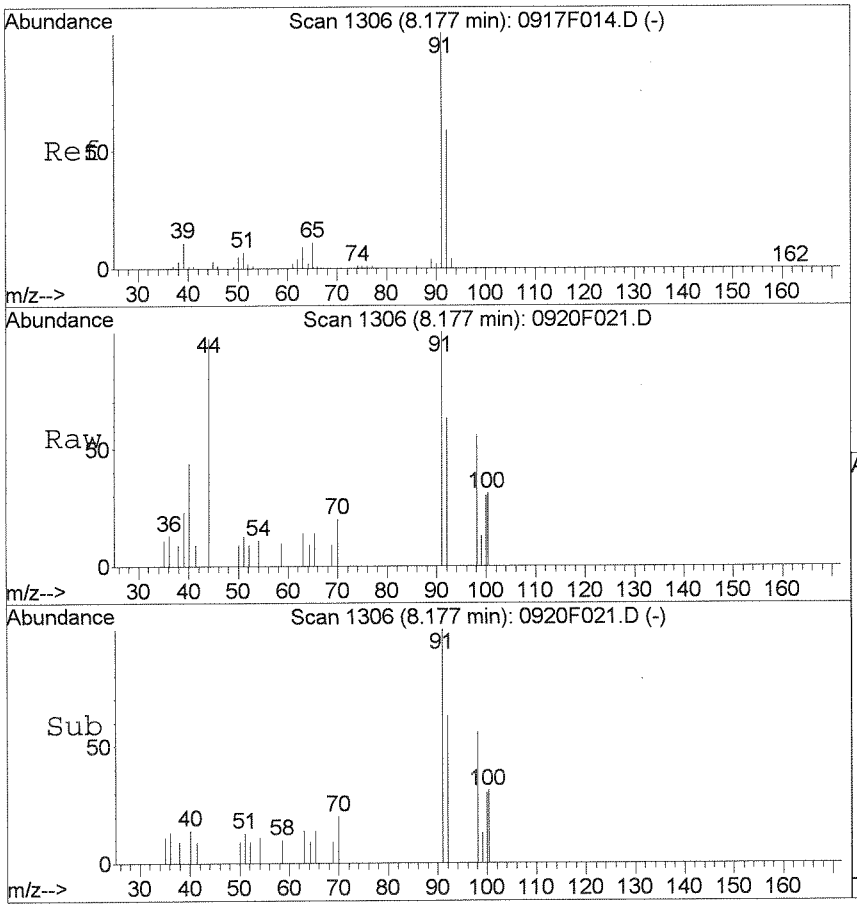


#14
Acetone
Concen: 1.19 PPB
RT: 2.87 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0920F021.D
Acq: 20 Sep 2014 3:12 pm

Tgt Ion: 43 Resp: 1669

Ion	Ratio	Lower	Upper
43	100		
58	44.0	0.0	59.6
42	21.5	0.0	37.2

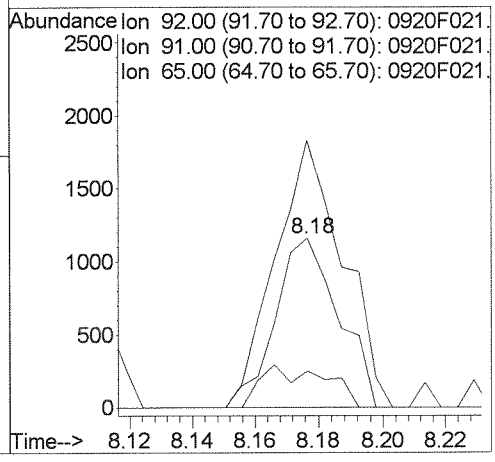




#64
Toluene
Concen: 0.07 PPB
RT: 8.18 min Scan# 1306
Delta R.T. -0.00 min
Lab File: 0920F021.D
Acq: 20 Sep 2014 3:12 pm

Tgt Ion: 92 Resp: 1599

Ion	Ratio	Lower	Upper
92	100		
91	157.6	138.4	198.4
65	21.6	0.0	49.0



Exception Report

Data File: J:\MS18\DATA\092014\0920F022.D
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 15:34
Date Quantitated: 09/22/2014 17:03
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 10/6/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F022.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:34	**Quant Date:**	09/22/2014 17:03	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-015			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1377433				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	294758	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	120970	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	118111	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	60228	9.32	93	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	287676	9.66	97	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	105636	9.68	97	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	1113	0.7900	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F022.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:34	**Quant Date:**	09/22/2014 17:03	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-015			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F022.D Vial: 21
Acq On : 20 Sep 2014 3:34 pm Operator: GH
Sample : K9921-015 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:55:04 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

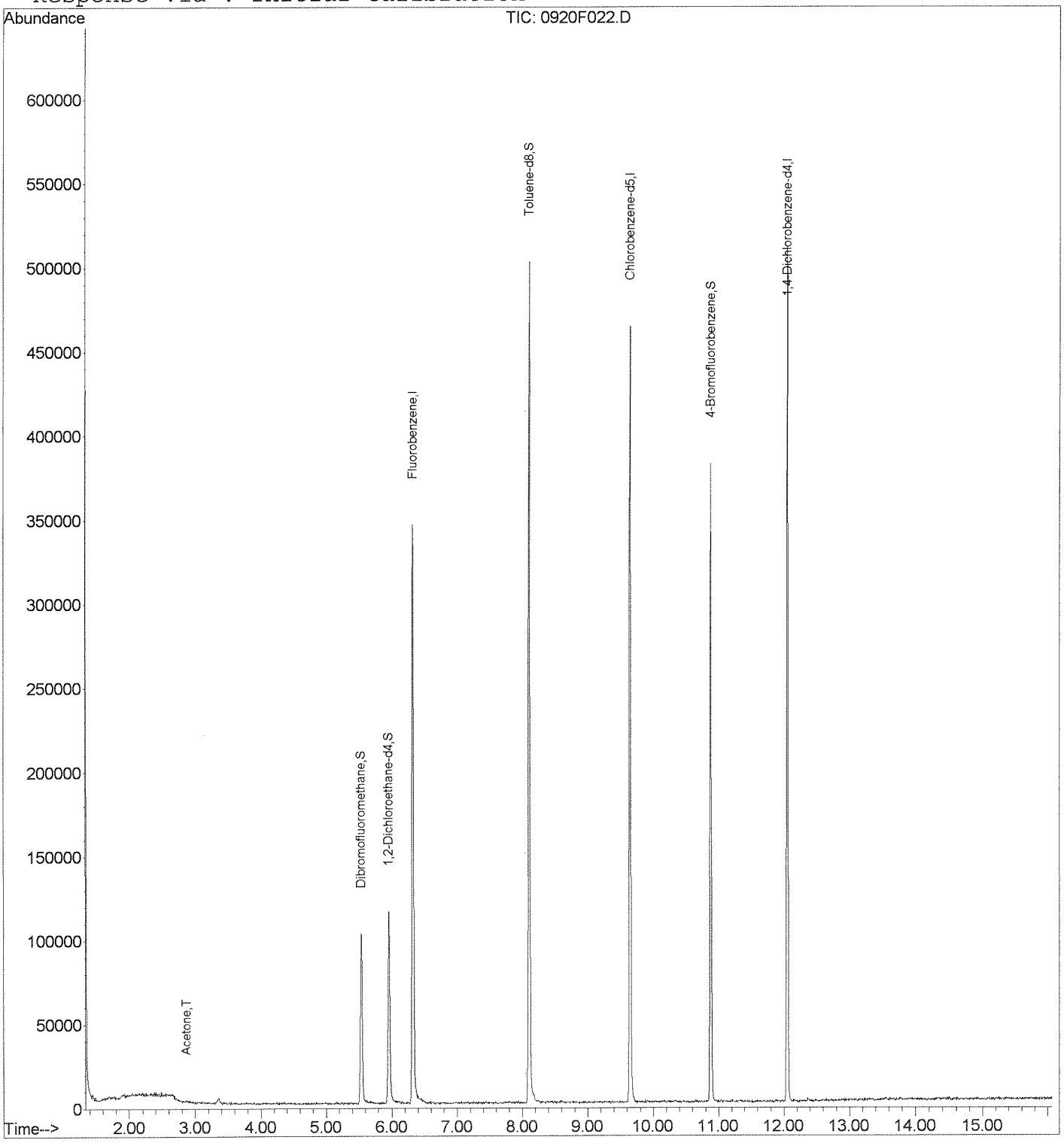
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	294758	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	120970	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	118111	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	60228	9.32	PPB	0.00
Spiked Amount 10.000			Recovery = 93.20%			
48) 1,2-Dichloroethane-d4	5.95	65	76661	10.07	PPB	0.00
Spiked Amount 10.000			Recovery = 100.70%			
63) Toluene-d8	8.10	98	287676	9.66	PPB	0.00
Spiked Amount 10.000			Recovery = 96.60%			
85) 4-Bromofluorobenzene	10.88	95	105636	9.68	PPB	0.00
Spiked Amount 10.000			Recovery = 96.80%			
Target Compounds						Qvalue
14) Acetone	2.87	43	1113	0.79	PPB	95

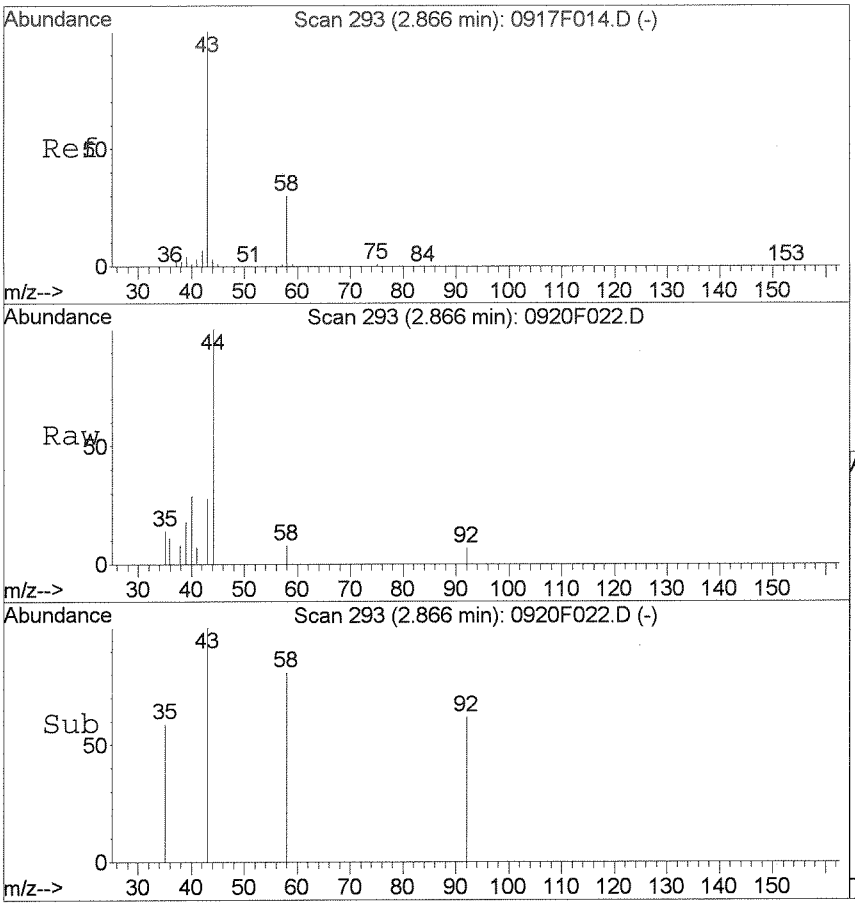
(#) = qualifier out of range (m) = manual integration
0920F022.D 091714MS18_8260.M Mon Sep 22 17:05:22 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F022.D Vial: 21
Acq On : 20 Sep 2014 3:34 pm Operator: GH
Sample : K9921-015 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 17:03 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

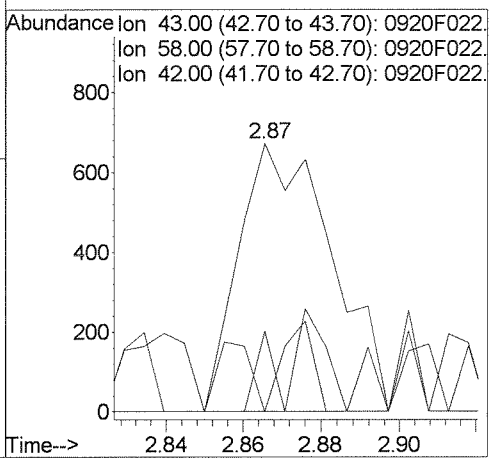




#14
Acetone
Concen: 0.79 PPB
RT: 2.87 min Scan# 293
Delta R.T. 0.00 min
Lab File: 0920F022.D
Acq: 20 Sep 2014 3:34 pm

Tgt Ion: 43 Resp: 1113

Ion	Ratio	Lower	Upper
43	100		
58	30.1	0.0	59.6
42	0.0	0.0	37.2



Exception Report

Data File: J:\MS18\DATA\092014\0920F023.D
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 15:55
Date Quantitated: 09/22/2014 17:04
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F023.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:55	**Quant Date:**	09/22/2014 17:04	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-016			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1377434				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	298623	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	121982	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	118002	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	59881	9.14	91	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	290729	9.64	96	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	105959	9.63	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	1287	0.9100	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F023.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 15:55	**Quant Date:**	09/22/2014 17:04	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-016			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F023.D Vial: 22
Acq On : 20 Sep 2014 3:55 pm Operator: GH
Sample : K9921-016 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:55:12 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

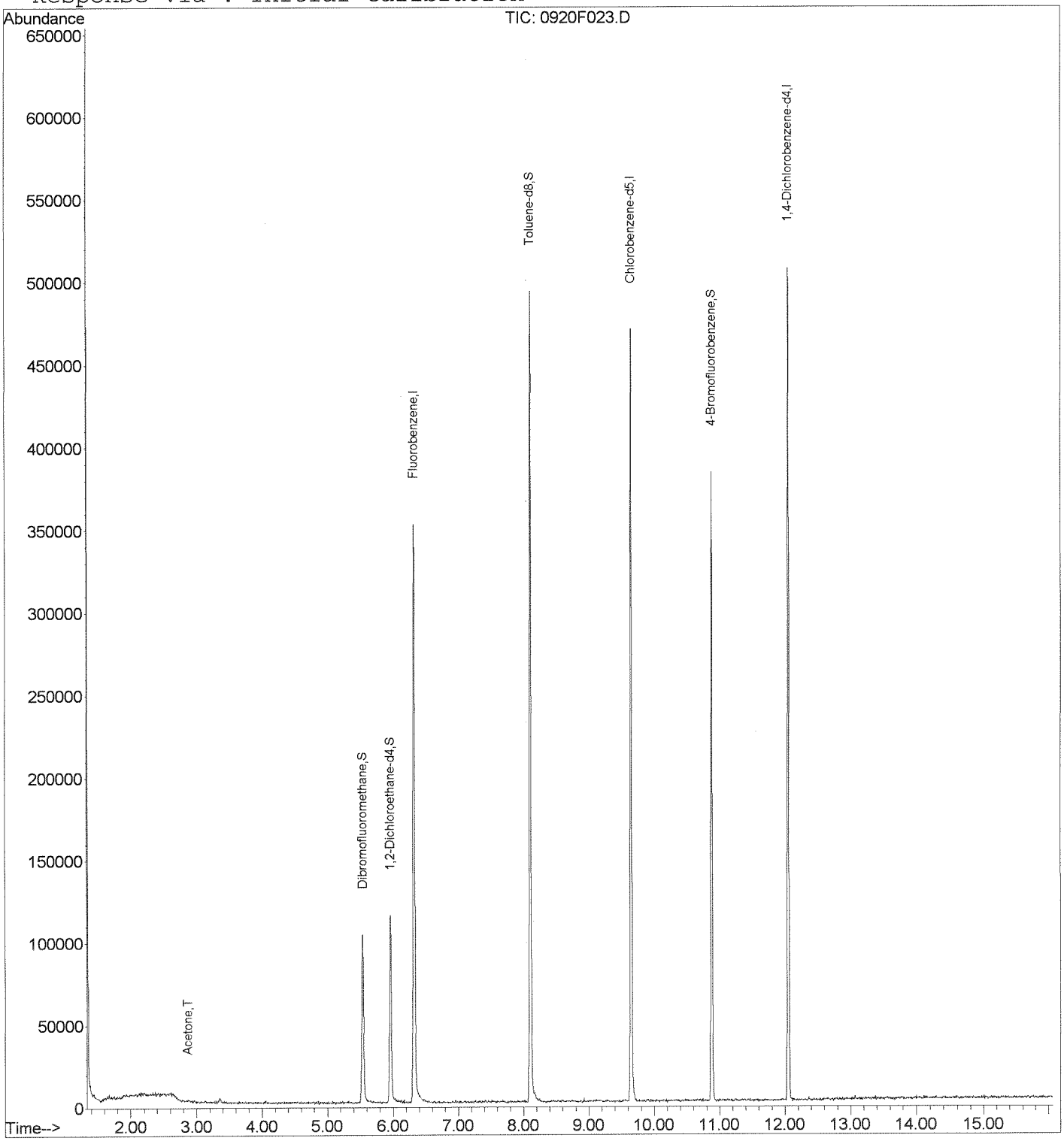
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	298623	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	121982	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	118002	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	59881	9.14	PPB	0.00
Spiked Amount 10.000			Recovery = 91.40%			
48) 1,2-Dichloroethane-d4	5.95	65	77415	10.04	PPB	0.00
Spiked Amount 10.000			Recovery = 100.40%			
63) Toluene-d8	8.10	98	290729	9.64	PPB	0.00
Spiked Amount 10.000			Recovery = 96.40%			
85) 4-Bromofluorobenzene	10.88	95	105959	9.63	PPB	0.00
Spiked Amount 10.000			Recovery = 96.30%			
Target Compounds						Qvalue
14) Acetone	2.87	43	1287	0.91	PPB	89

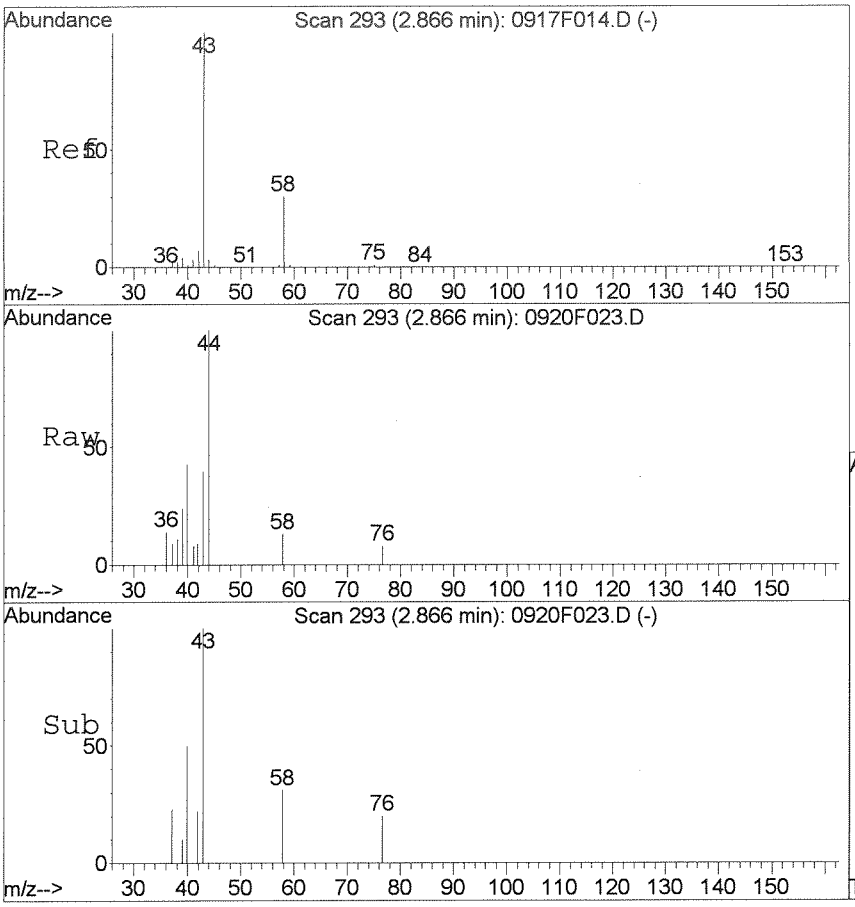
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F023.D Vial: 22
Acq On : 20 Sep 2014 3:55 pm Operator: GH
Sample : K9921-016 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 17:04 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

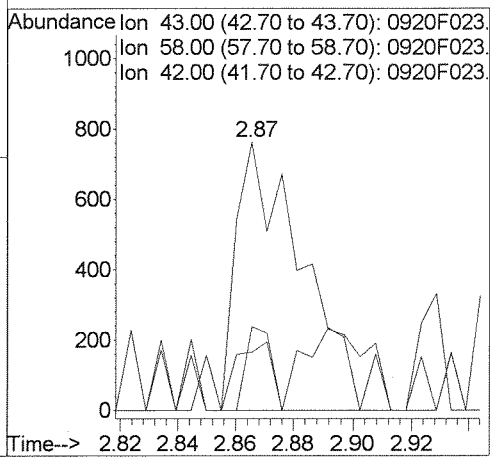




#14
Acetone
Concen: 0.91 PPB
RT: 2.87 min Scan# 293
Delta R.T. 0.00 min
Lab File: 0920F023.D
Acq: 20 Sep 2014 3:55 pm

Tgt Ion: 43 Resp: 1287

Ion	Ratio	Lower	Upper
43	100		
58	31.2	0.0	59.6
42	21.8	0.0	37.2



Exception Report

Data File: J:\MS18\DATA\092014\0920F024.D
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 16:16
Date Quantitated: 09/22/2014 17:35
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:14:17
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F024.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 16:16	**Quant Date:**	09/22/2014 17:35	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-017			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1377429				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	296292	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	121607	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	117156	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	60192	9.26	93	73-122	OK	
1	Toluene-d8	8.10	0.00	0.00	98	285280	9.53	95	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	105058	9.58	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.88	0.01	0.00	43	1857	1.32	3.3	U	
1	Carbon Disulfide				76	0		0.069	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	8.18	0.01	0.00	92	1560	0.0600	0.060	J	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F024.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 16:16	**Quant Date:**	09/22/2014 17:35	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-017			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F024.D Vial: 23
Acq On : 20 Sep 2014 4:16 pm Operator: GH
Sample : K9921-017 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:55:19 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

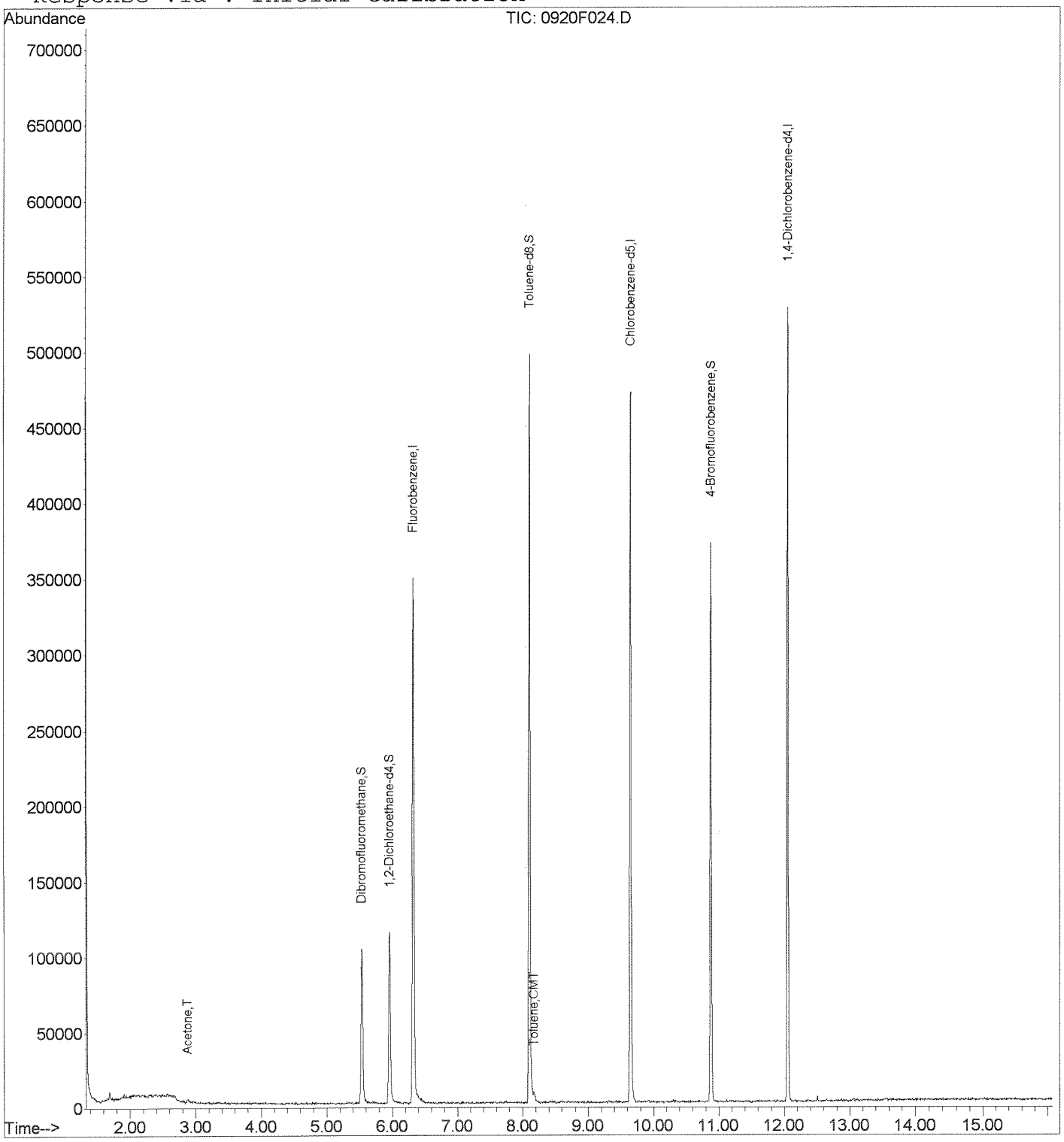
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	296292	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	121607	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	117156	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	60192	9.26	PPB	0.00
Spiked Amount 10.000			Recovery = 92.60%			
48) 1,2-Dichloroethane-d4	5.96	65	75813	9.91	PPB	0.00
Spiked Amount 10.000			Recovery = 99.10%			
63) Toluene-d8	8.10	98	285280	9.53	PPB	0.00
Spiked Amount 10.000			Recovery = 95.30%			
85) 4-Bromofluorobenzene	10.88	95	105058	9.58	PPB	0.00
Spiked Amount 10.000			Recovery = 95.80%			
Target Compounds						Qvalue
14) Acetone	2.88	43	1857	1.32	PPB	94
64) Toluene	8.18	92	1560	0.06	PPB	85

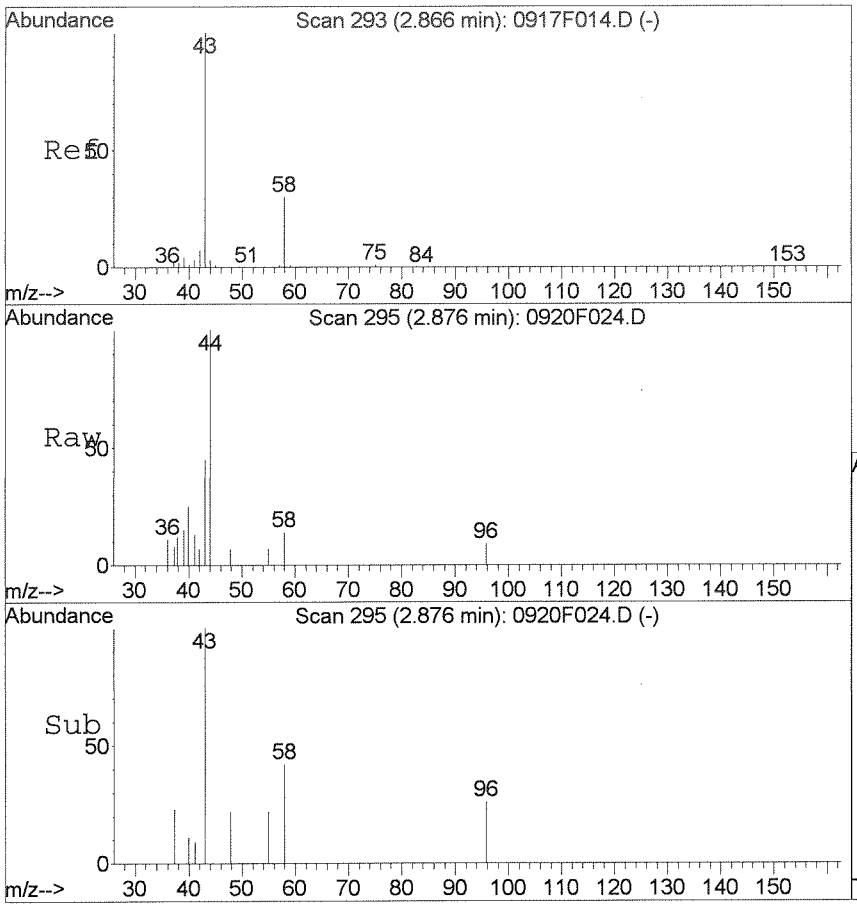
(#) = qualifier out of range (m) = manual integration
0920F024.D 091714MS18_8260.M Mon Sep 22 17:37:08 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F024.D Vial: 23
Acq On : 20 Sep 2014 4:16 pm Operator: GH
Sample : K9921-017 Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 17:35 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

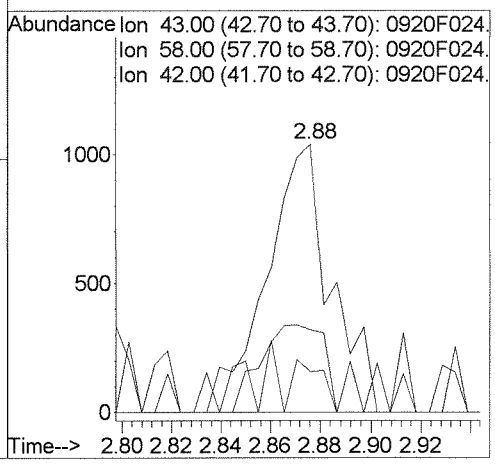


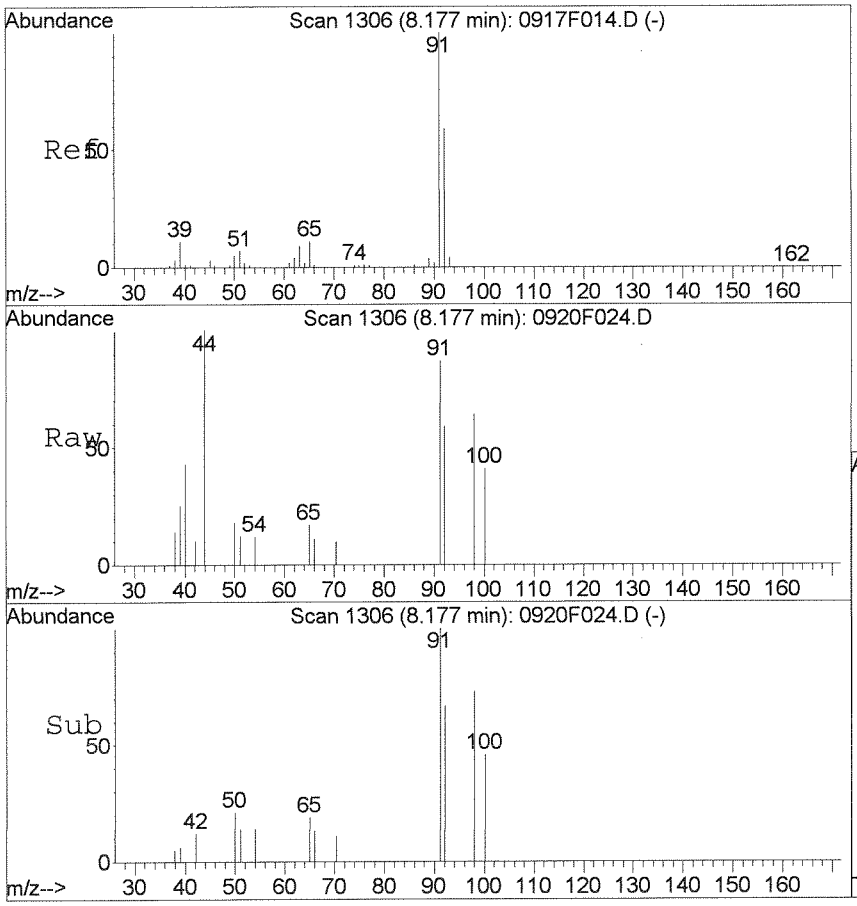


#14
Acetone
Concen: 1.32 PPB
RT: 2.88 min Scan# 295
Delta R.T. 0.01 min
Lab File: 0920F024.D
Acq: 20 Sep 2014 4:16 pm

Tgt Ion: 43 Resp: 1857

Ion	Ratio	Lower	Upper
43	100		
58	30.8	0.0	59.6
42	15.2	0.0	37.2

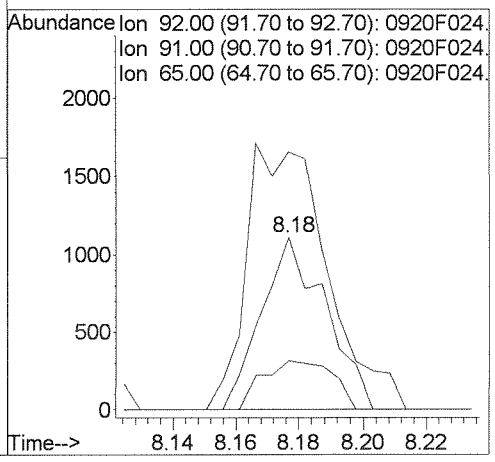




#64
Toluene
Concen: 0.06 PPB
RT: 8.18 min Scan# 1306
Delta R.T. 0.00 min
Lab File: 0920F024.D
Acq: 20 Sep 2014 4:16 pm

Tgt Ion: 92 Resp: 1560

Ion	Ratio	Lower	Upper
92	100		
91	148.9	138.4	198.4
65	28.3	0.0	49.0



Exception Report

Data File: J:\MS13\DATA\092014\0920F014.D
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 13:55
Date Quantitated: 09/23/2014 17:23
Batch ID: KWG1412900
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/24/14

Secondary Review: 9/25/14

Quantitation Report

Data File:	J:\MS13\DATA\092014\0920F014.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 13:55	**Quant Date:**	09/23/2014 17:23	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412900	**Prep Lot:**	KWG1412904	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1377768	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS13\DATA\092014\0920F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS13\DATA\092014\0920F008.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	478906	10.00	OK
2	Chlorobenzene-d5	12.02	-0.01	82	192891	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	150016	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.01	0.00	113	105130	10.30	103	73-122	OK	
1	Toluene-d8	9.30	0.00	0.00	98	451113	9.71	97	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	143683	9.16	92	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.48	0.01	0.00	43	18415	10.97	11	J	
1	Carbon Disulfide	2.56		0.00	76	2121	0.0600	0.069	U	
1	Methylene Chloride	2.89		0.00	84	1059	0.0800	0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F014.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 13:55	**Quant Date:**	09/23/2014 17:23	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	PPB

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes	12.42		0.00	106	658	0.0300	0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS13\DATA\092014\0920F014.D Vial: 13
Acq On : 20 Sep 2014 1:55 pm Operator: GH
Sample : K9921-018 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:43:22 2014 Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

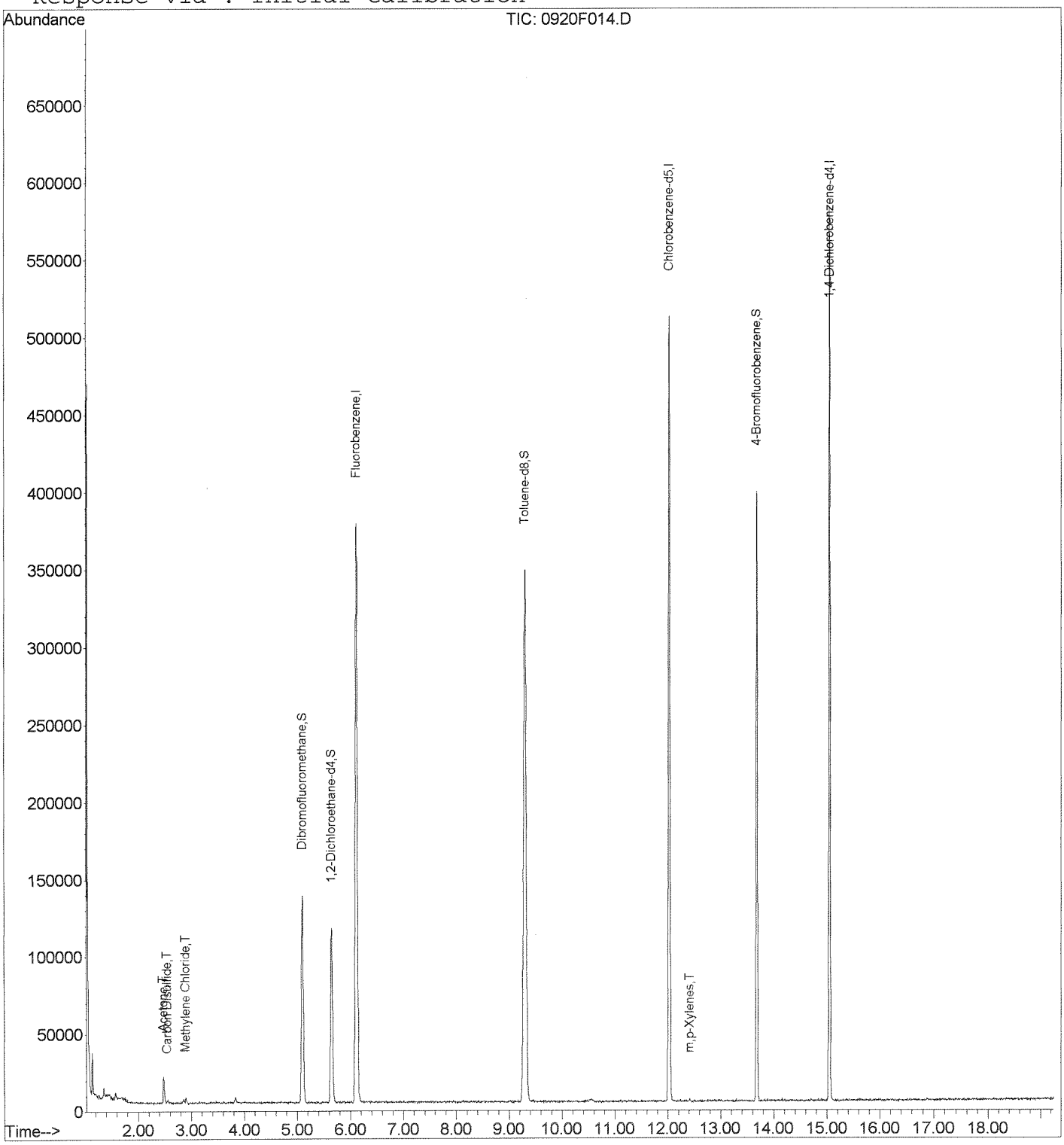
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.11	96	478906	10.00	PPB		0.00
64) Chlorobenzene-d5	12.02	82	192891	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	150016	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.10	113	105130	10.30	PPB		0.00
Spiked Amount 10.000			Recovery =	103.00%			
47) 1,2-Dichloroethane-d4	5.64	65	107764	10.77	PPB		0.00
Spiked Amount 10.000			Recovery =	107.70%			
62) Toluene-d8	9.30	98	451113	9.71	PPB		0.00
Spiked Amount 10.000			Recovery =	97.10%			
84) 4-Bromofluorobenzene	13.68	95	143683	9.16	PPB		0.00
Spiked Amount 10.000			Recovery =	91.60%			
Target Compounds							Qvalue
13) Acetone	2.48	43	18415	10.97	PPB		95
15) Carbon Disulfide	2.56	76	2121	0.06	PPB		73
20) Methylene Chloride	2.89	84	1059	0.08	PPB	#	72
78) m,p-Xylenes	12.42	106	658	0.03	PPB	#	53

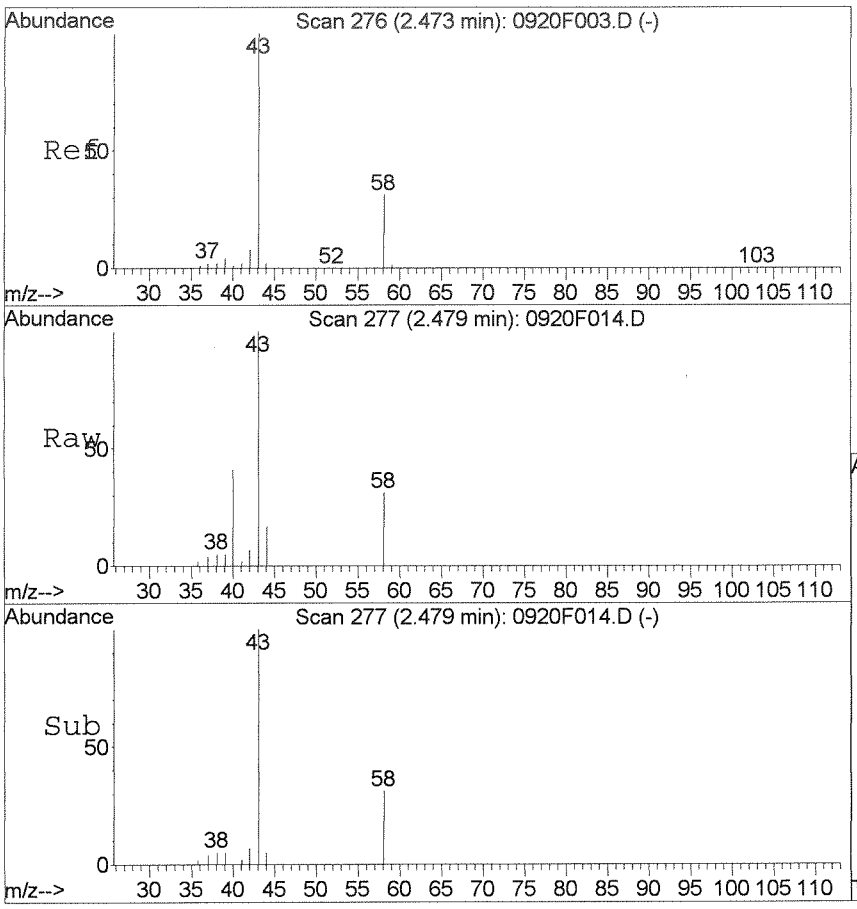
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS13\DATA\092014\0920F014.D Vial: 13
Acq On : 20 Sep 2014 1:55 pm Operator: GH
Sample : K9921-018 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 23 17:23 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration

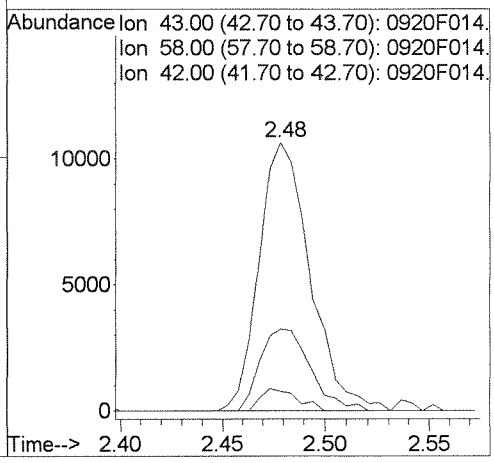


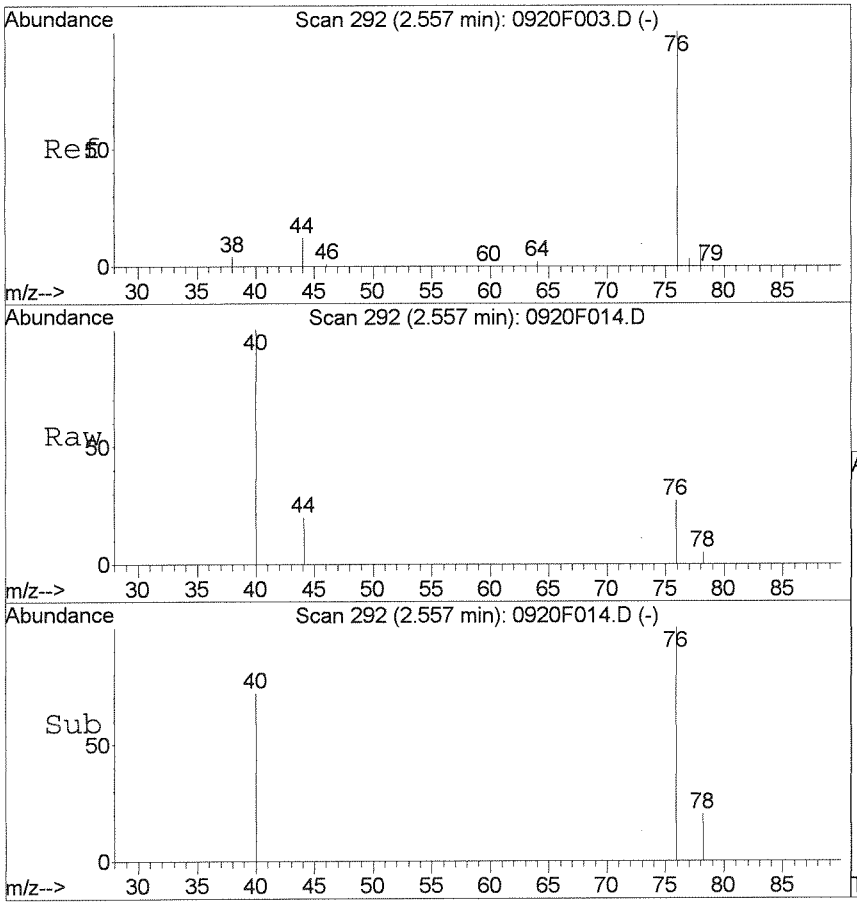


#13
Acetone
Concen: 10.97 PPB
RT: 2.48 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0920F014.D
Acq: 20 Sep 2014 1:55 pm

Tgt Ion: 43 Resp: 18415

Ion	Ratio	Lower	Upper
43	100		
58	30.5	3.8	63.8
42	7.3	0.0	37.8

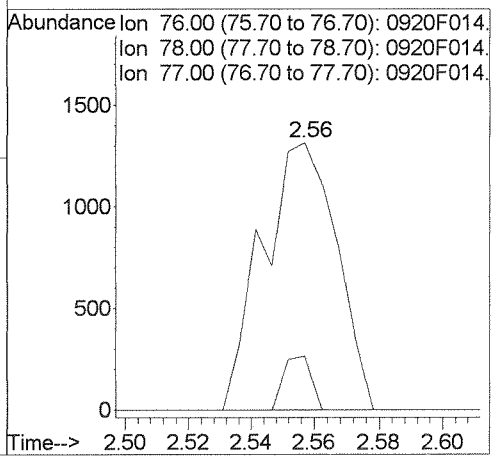


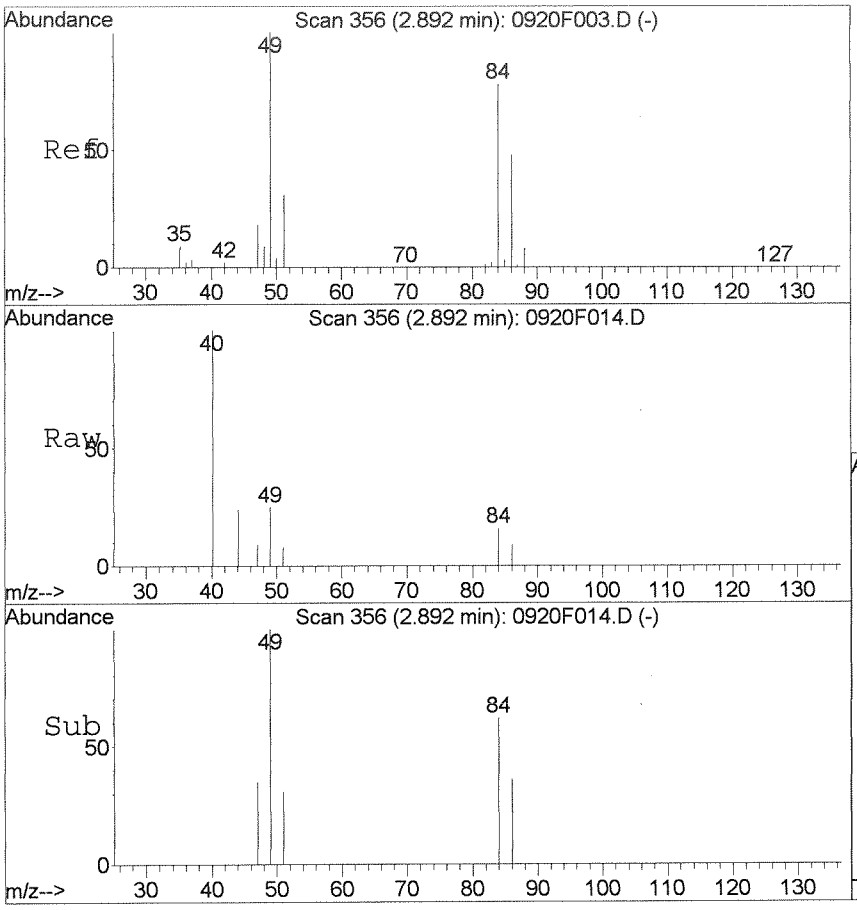


#15
Carbon Disulfide
Concen: 0.06 PPB
RT: 2.56 min Scan# 292
Delta R.T. 0.01 min
Lab File: 0920F014.D
Acq: 20 Sep 2014 1:55 pm

Tgt Ion: 76 Resp: 2121

Ion	Ratio	Lower	Upper
76	100		
78	20.1	0.0	38.5
77	0.0	0.0	32.6

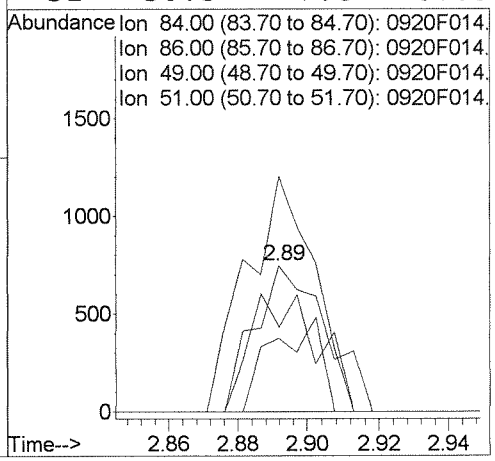


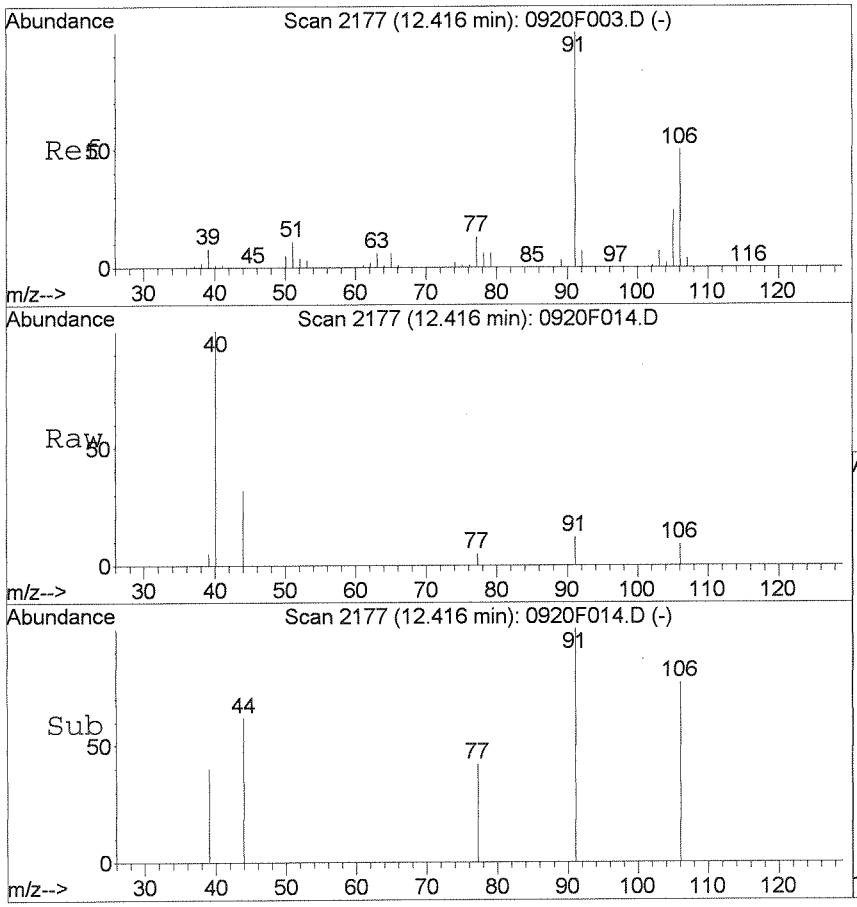


#20
Methylene Chloride
Concen: 0.08 PPB
RT: 2.89 min Scan# 356
Delta R.T. 0.00 min
Lab File: 0920F014.D
Acq: 20 Sep 2014 1:55 pm

Tgt Ion: 84 Resp: 1059

Ion	Ratio	Lower	Upper
84	100		
86	57.9	35.8	95.8
49	161.4	86.8	146.8#
51	50.3	7.8	67.8

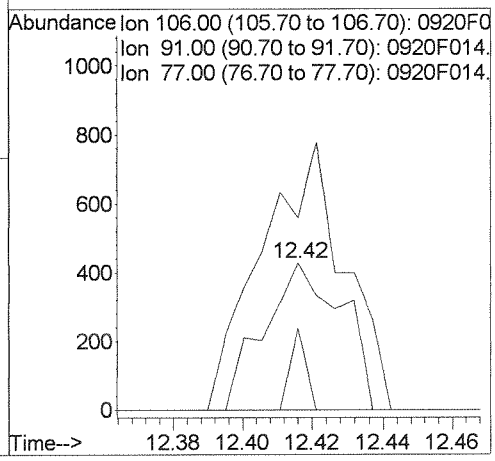




#78
m,p-Xylenes
Concen: 0.03 PPB
RT: 12.42 min Scan# 2177
Delta R.T. -0.00 min
Lab File: 0920F014.D
Acq: 20 Sep 2014 1:55 pm

Tgt Ion:106 Resp: 658

Ion	Ratio	Lower	Upper
106	100		
91	130.6	169.5	229.5#
77	55.4	0.0	54.9#



Exception Report

Data File: J:\MS13\DATA\092214\0922F011.D
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 09/22/2014 13:05
Date Quantitated: 09/25/2014 11:37
Batch ID: KWG1412934
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

NR

Primary Review: [signature]

Secondary Review: [signature] 9/25/14

Quantitation Report

Data File:	J:\MS13\DATA\092214\0922F011.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 13:05	**Quant Date:**	09/25/2014 11:37	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412934	**Prep Lot:**	KWG1412938	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1378073	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS13\DATA\092214\0922F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS13\DATA\092214\0922F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	491070	10.00	OK
2	Chlorobenzene-d5	12.03	0.01	82	194887	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	155528	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.00	0.00	113	107655	10.29	103	73-122	OK	
1	Toluene-d8	9.30	0.00	0.00	98	464854	9.76	98	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	146648	9.25	93	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.49	0.02	0.00	43	988	0.5700	3.3	U	
1	Carbon Disulfide	2.55	-0.01	0.00	76	2876	0.0800	0.080	J	
1	Methylene Chloride	2.89		0.00	84	1403	0.1100	0.11	J	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092214\0922F011.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 13:05	**Quant Date:**	09/25/2014 11:37	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes	12.42		0.00	106	618	0.0300	0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS13\DATA\092214\0922F011.D Vial: 10
Acq On : 22 Sep 2014 13:05 Operator: GH
Sample : K9921-018 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 15:38:07 2014 Quant Results File: 091014MS13_8260

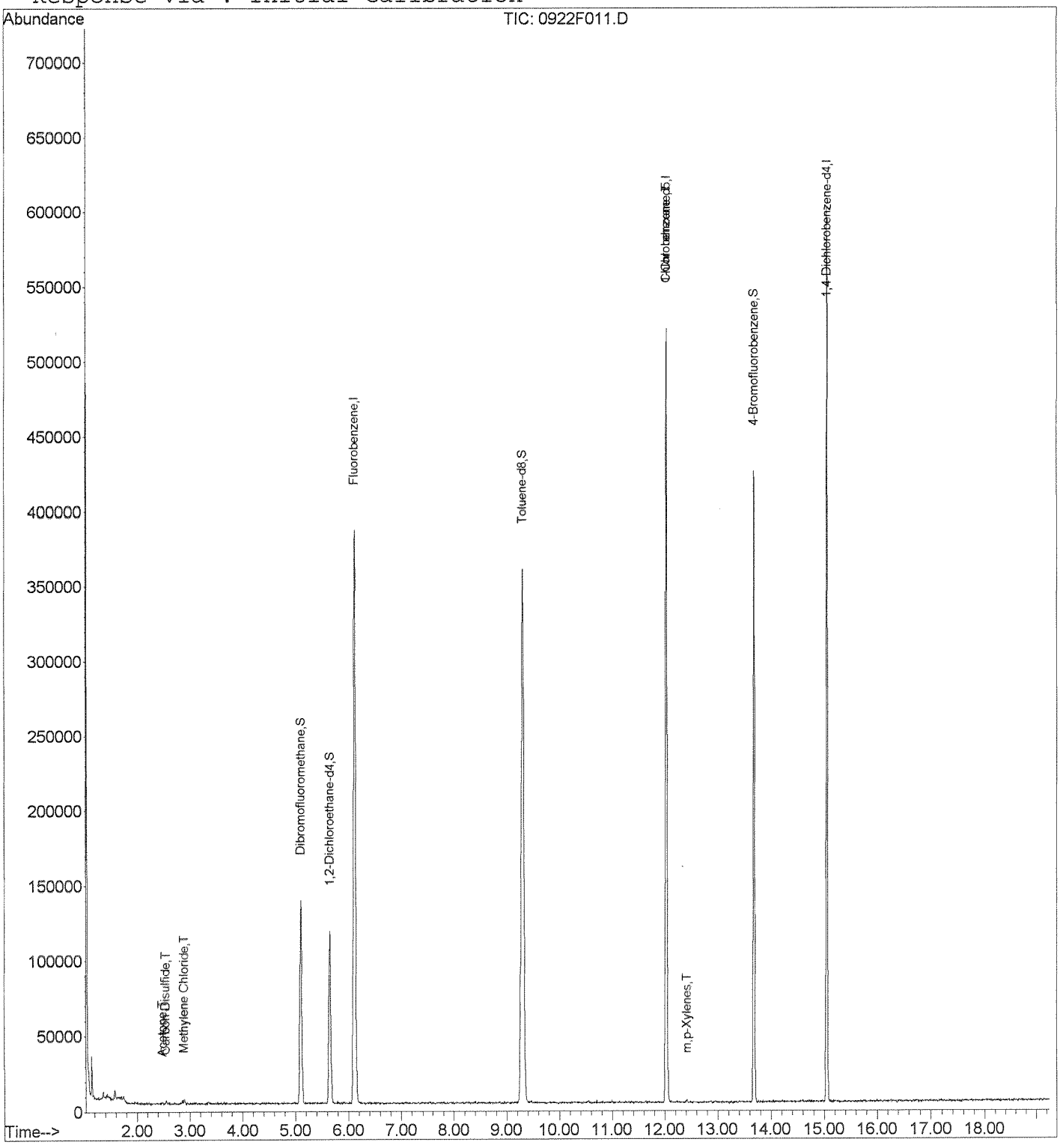
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

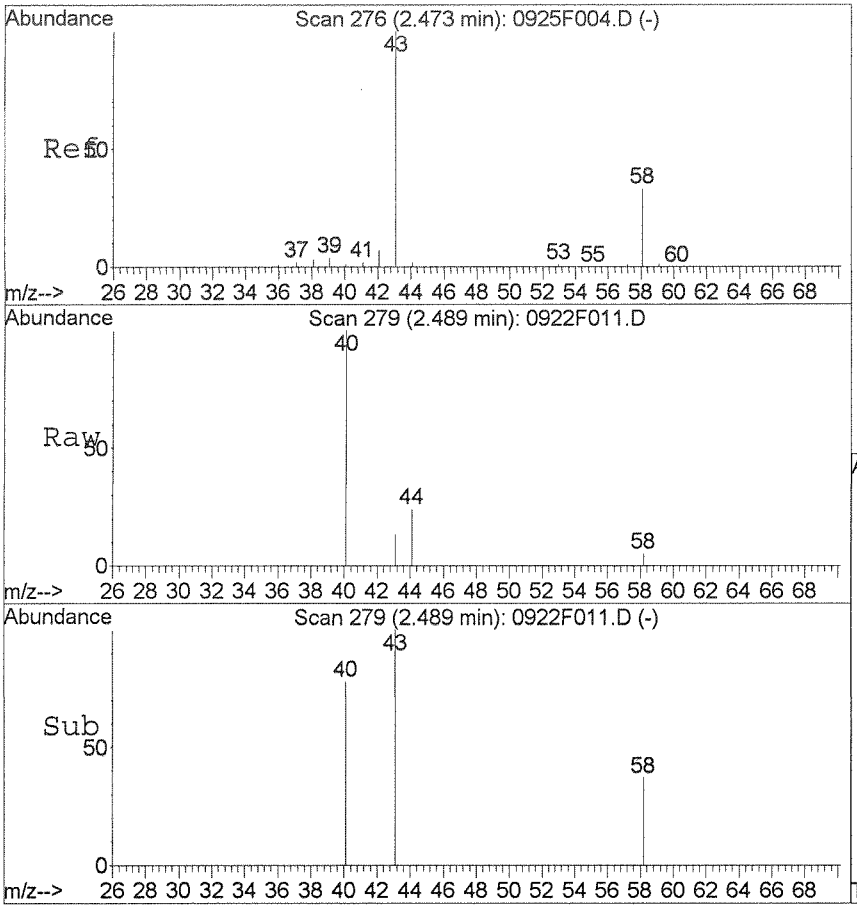
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.11	96	491070	10.00	PPB		0.00
64) Chlorobenzene-d5	12.03	82	194887	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	155528	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.10	113	107655	10.29	PPB		0.00
Spiked Amount 10.000			Recovery =	102.90%			
47) 1,2-Dichloroethane-d4	5.64	65	108872	10.61	PPB		0.00
Spiked Amount 10.000			Recovery =	106.10%			
62) Toluene-d8	9.30	98	464854	9.76	PPB		0.00
Spiked Amount 10.000			Recovery =	97.60%			
84) 4-Bromofluorobenzene	13.68	95	146648	9.25	PPB		0.00
Spiked Amount 10.000			Recovery =	92.50%			
Target Compounds							Qvalue
13) Acetone	2.49	43	988	0.57	PPB		91
15) Carbon Disulfide	2.55	76	2876	0.08	PPB		80
20) Methylene Chloride	2.89	84	1403	0.11	PPB		94
74) 1-Chlorohexane	12.03	91	622	0.04	PPB		83
78) m,p-Xylenes	12.42	106	618	0.03	PPB	#	62

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F011.D Vial: 10
Acq On : 22 Sep 2014 13:05 Operator: GH
Sample : K9921-018 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 25 11:37 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration

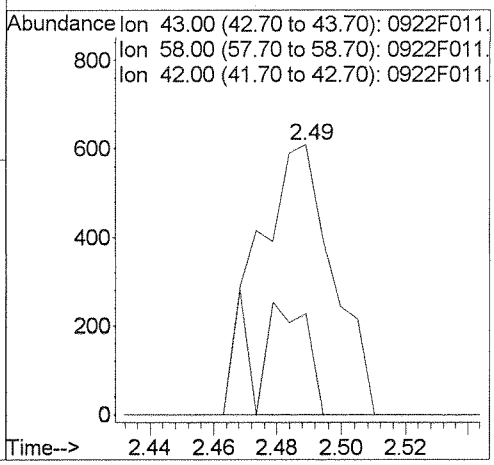


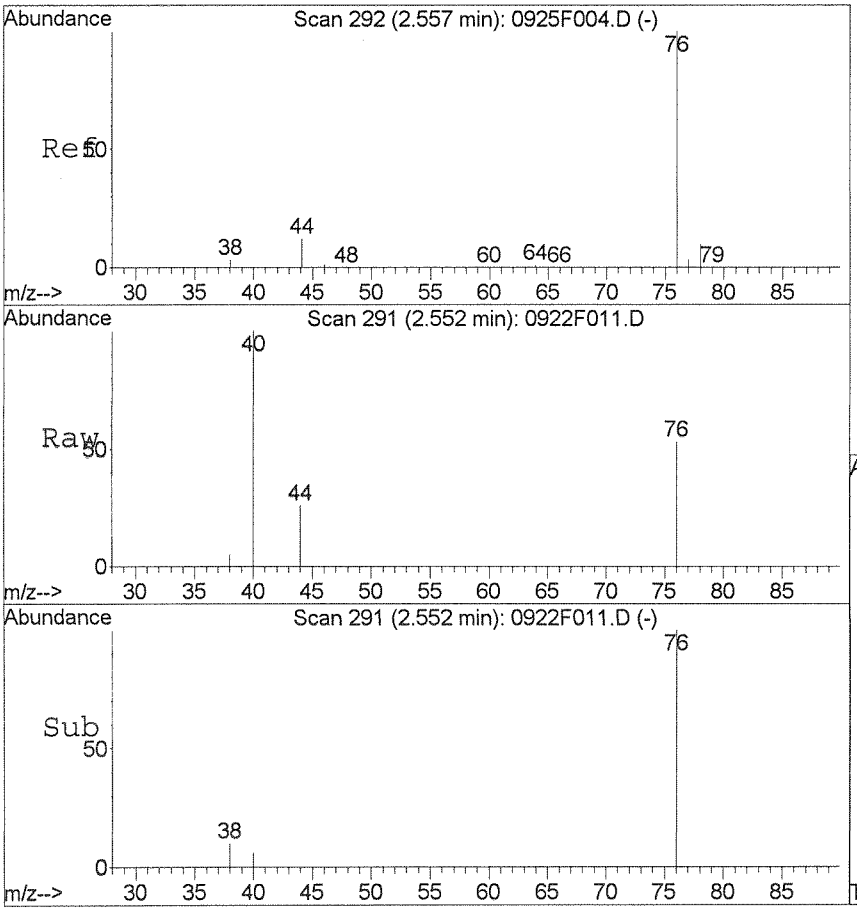


#13
Acetone
Concen: 0.57 PPB
RT: 2.49 min Scan# 279
Delta R.T. 0.02 min
Lab File: 0922F011.D
Acq: 22 Sep 2014 13:05

Tgt Ion: 43 Resp: 988

Ion	Ratio	Lower	Upper
43	100		
58	37.4	3.8	63.8
42	0.0	0.0	37.8

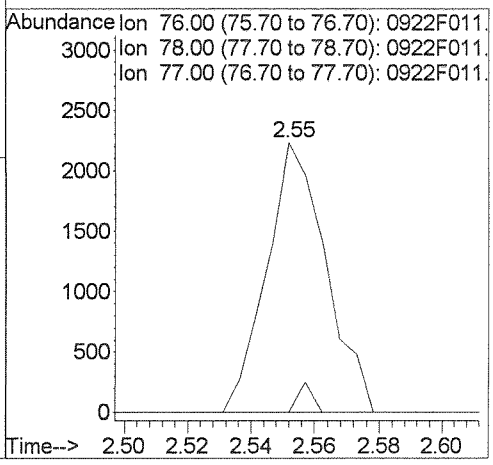


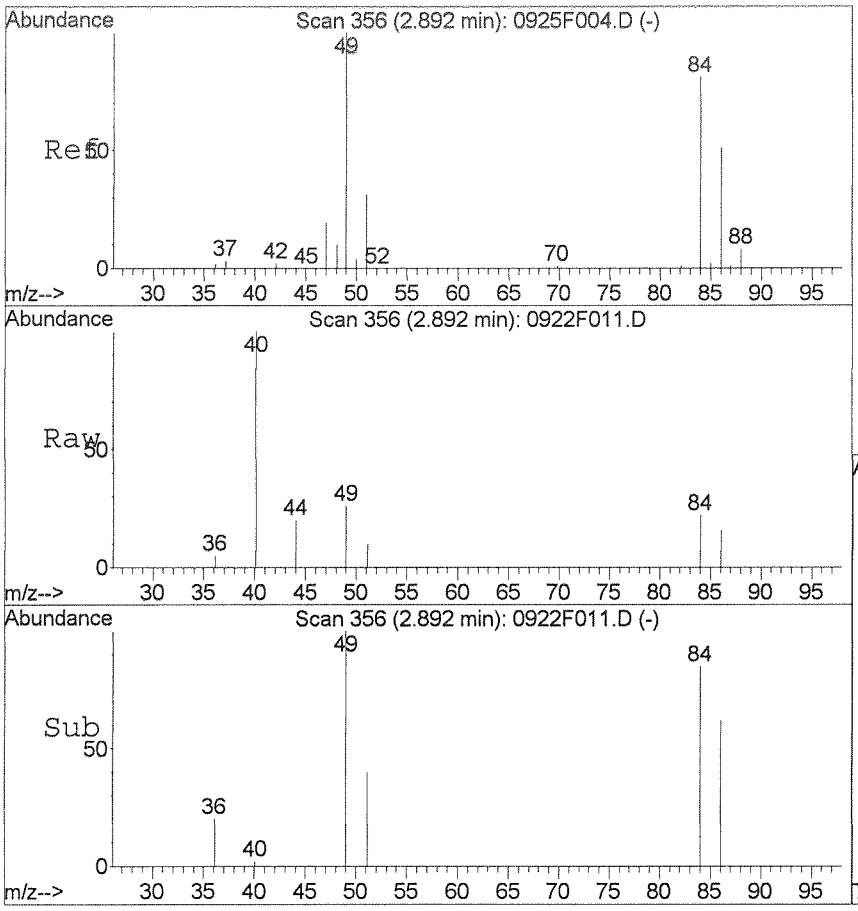


#15
Carbon Disulfide
Concen: 0.08 PPB
RT: 2.55 min Scan# 291
Delta R.T. 0.00 min
Lab File: 0922F011.D
Acq: 22 Sep 2014 13:05

Tgt Ion: 76 Resp: 2876

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	38.5
77	0.0	0.0	32.6

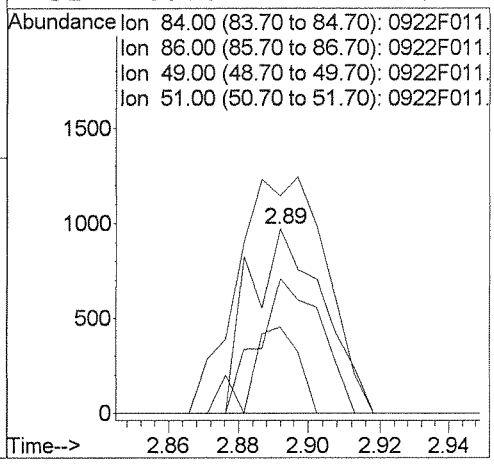


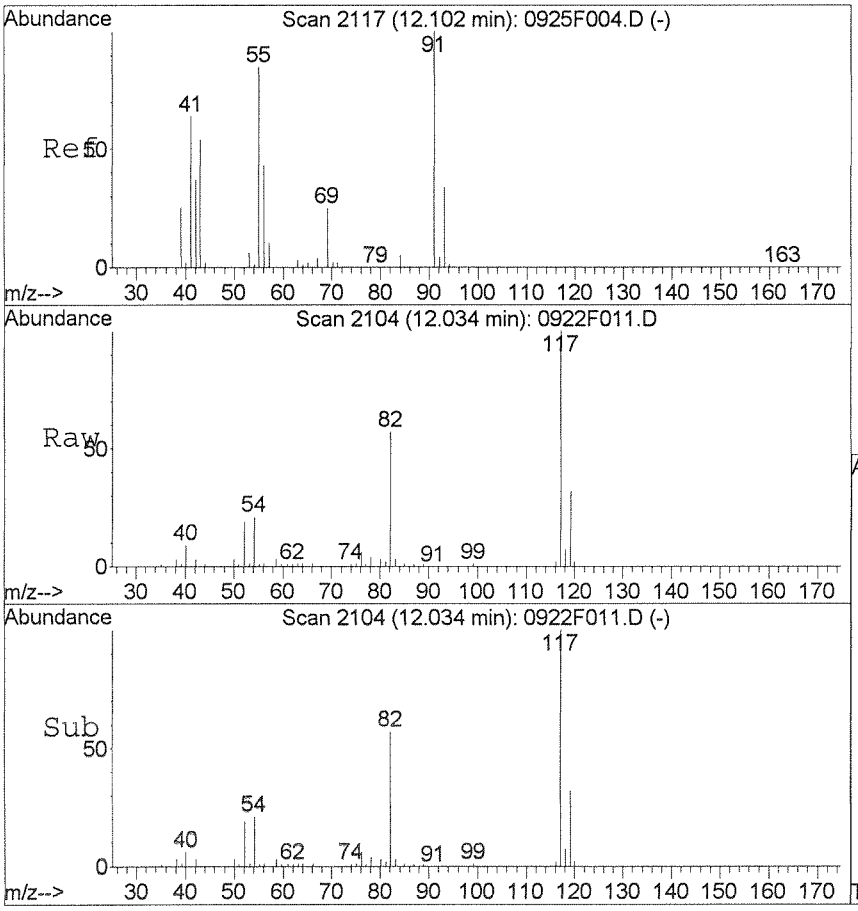


#20
Methylene Chloride
Concen: 0.11 PPB
RT: 2.89 min Scan# 356
Delta R.T. 0.00 min
Lab File: 0922F011.D
Acq: 22 Sep 2014 13:05

Tgt Ion: 84 Resp: 1403

Ion	Ratio	Lower	Upper
84	100		
86	72.9	35.8	95.8
49	117.9	86.8	146.8
51	46.6	7.8	67.8

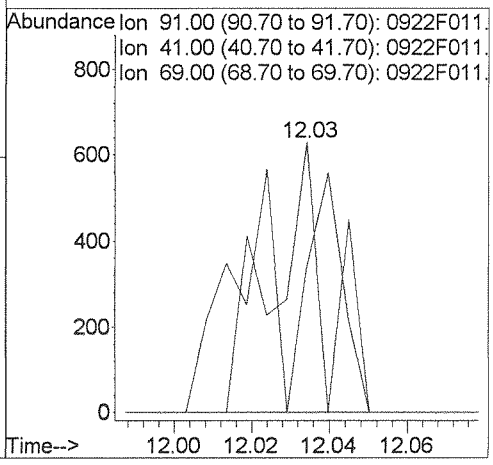


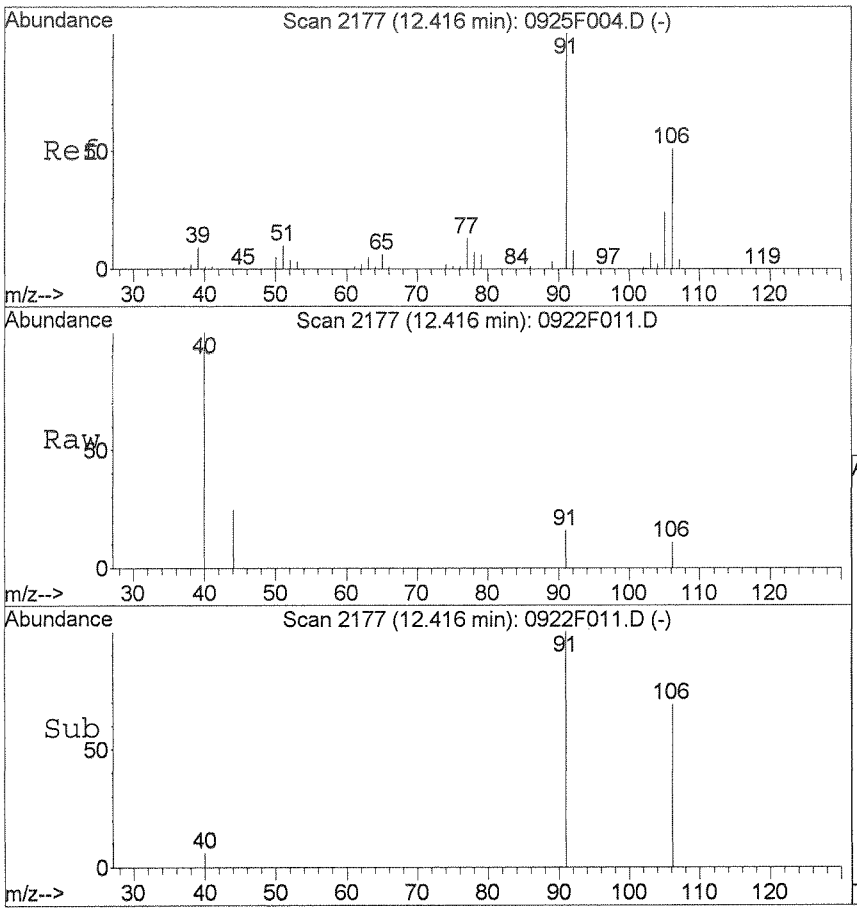


#74
1-Chlorohexane
Concen: 0.04 PPB
RT: 12.03 min Scan# 2104
Delta R.T. -0.07 min
Lab File: 0922F011.D
Acq: 22 Sep 2014 13:05

Tgt Ion: 91 Resp: 622

Ion	Ratio	Lower	Upper
91	100		
41	54.7	20.1	80.1
69	0.0	0.0	50.0

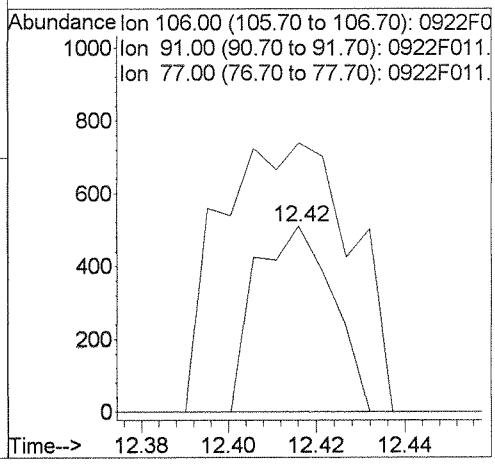




#78
m,p-Xylenes
Concen: 0.03 PPB
RT: 12.42 min Scan# 2177
Delta R.T. 0.00 min
Lab File: 0922F011.D
Acq: 22 Sep 2014 13:05

Tgt Ion:106 Resp: 618

Ion	Ratio	Lower	Upper
106	100		
91	144.9	169.5	229.5#
77	0.0	0.0	54.9



Exception Report

Data File: J:\MS13\DATA\092014\0920F011.D
Lab ID: K1409921-019
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 12:34
Date Quantitated: 09/23/2014 17:16
Batch ID: KWG1412900
Analysis Method: 8260C
ListJoinID: LJ16480

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/24/14

Secondary Review: 9/25/14

Quantitation Report

Data File:	J:\MS13\DATA\092014\0920F011.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 12:34	**Quant Date:**	09/23/2014 17:16	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-019			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1412900	**Prep Lot:**	KWG1412904	**Report Group:**	K1409921
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1377767	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:	Volatile Organic Compounds	**Report List ID:**	LJ16480
Tune Ref:	J:\MS13\DATA\092014\0920F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS13\DATA\092014\0920F008.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	505906	10.00	OK
2	Chlorobenzene-d5	12.02	-0.01	82	201120	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	157956	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.01	0.00	113	112532	10.44	104	73-122	OK	
1	Toluene-d8	9.30	0.00	0.00	98	480778	9.80	98	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	149478	9.14	91	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone				43	0d		3.3	U	
1	Carbon Disulfide	2.56		0.00	76	2798	0.0800	0.080	J	
1	Methylene Chloride	2.90	0.01	0.00	84	1363	0.1000	0.10	J	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F011.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 12:34	**Quant Date:**	09/23/2014 17:16	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-019			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	2-Hexanone				57	0		2.7	U	
2	Dibromochloromethane				129	0		0.14	U	
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS13\DATA\092014\0920F011.D Vial: 10
Acq On : 20 Sep 2014 12:34 pm Operator: GH
Sample : K9921-019TB 54216 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:41:49 2014 Quant Results File: 091014MS13_8260

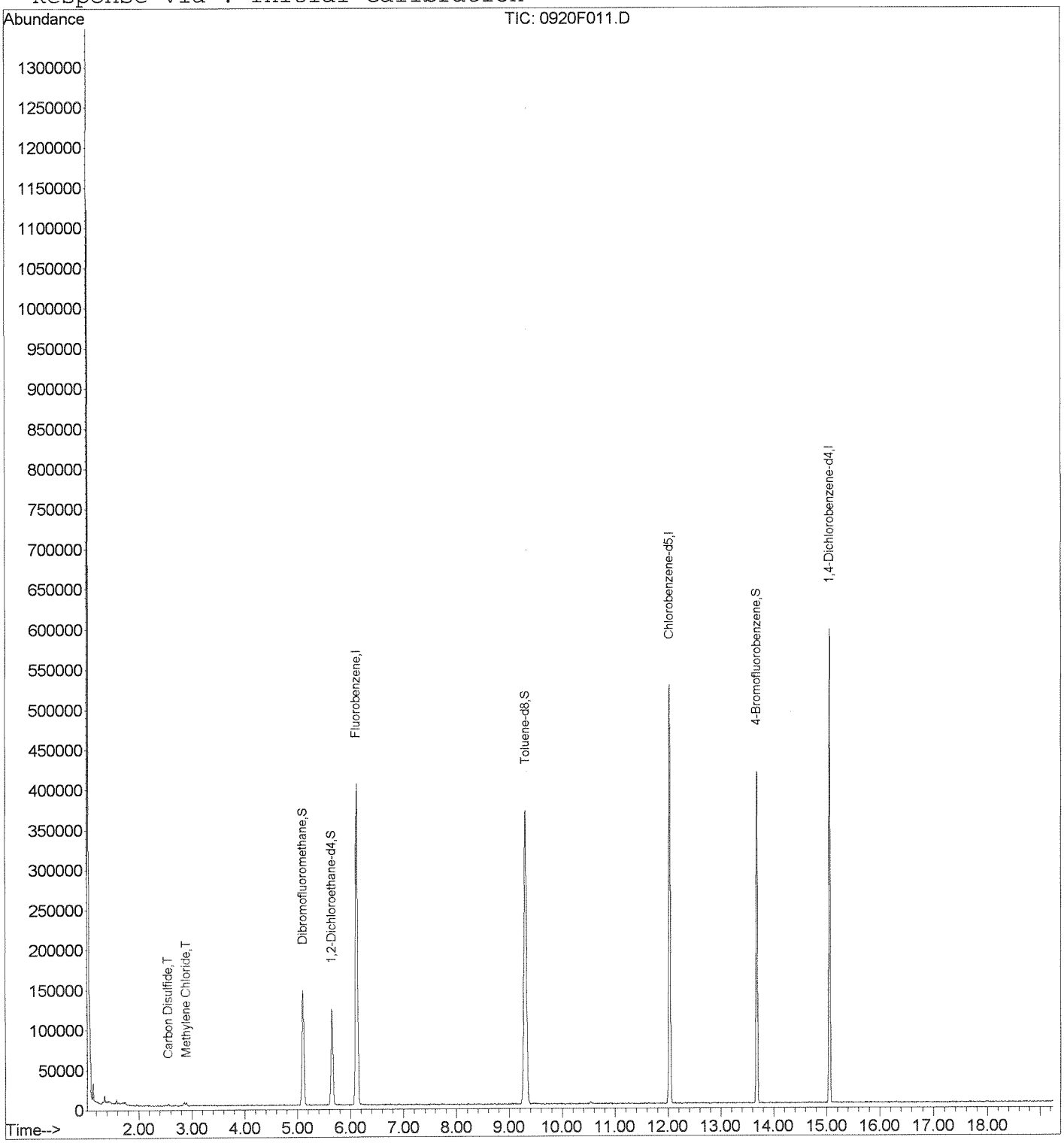
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

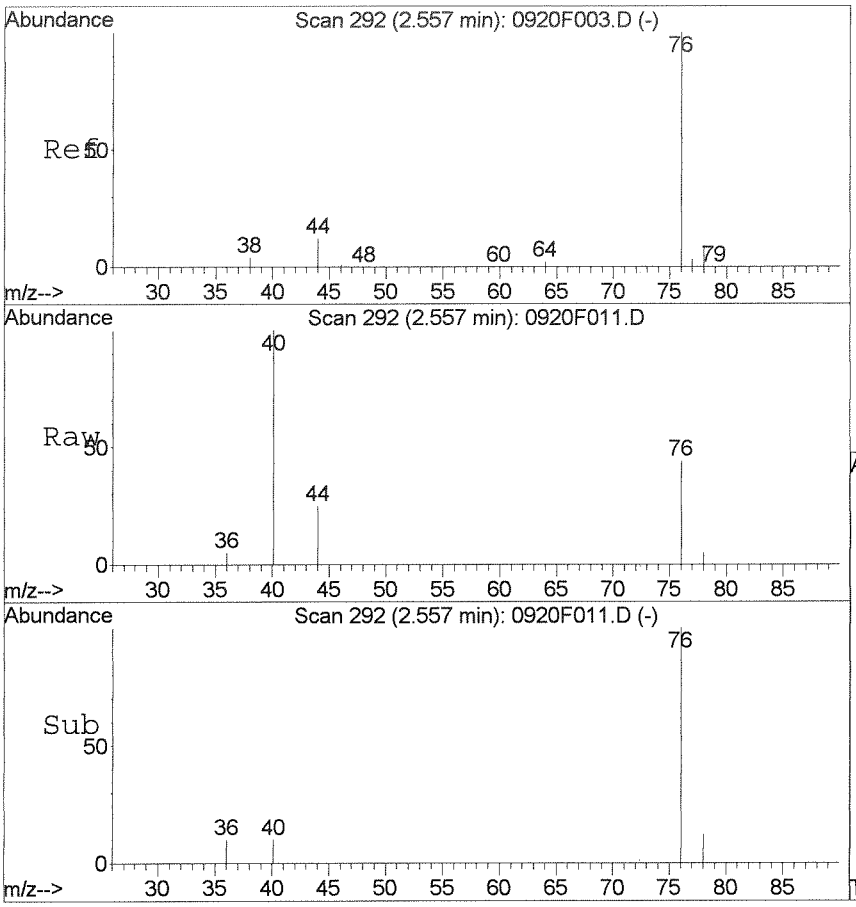
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.11	96	505906	10.00	PPB	0.00
64) Chlorobenzene-d5	12.02	82	201120	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	157956	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.10	113	112532	10.44	PPB	0.00
Spiked Amount 10.000			Recovery =	104.40%		
47) 1,2-Dichloroethane-d4	5.64	65	112592	10.65	PPB	0.00
Spiked Amount 10.000			Recovery =	106.50%		
62) Toluene-d8	9.30	98	480778	9.80	PPB	0.00
Spiked Amount 10.000			Recovery =	98.00%		
84) 4-Bromofluorobenzene	13.68	95	149478	9.14	PPB	0.00
Spiked Amount 10.000			Recovery =	91.40%		
Target Compounds						Qvalue
15) Carbon Disulfide	2.56	76	2798	0.08	PPB	91
20) Methylene Chloride	2.90	84	1363	0.10	PPB	89

(#) = qualifier out of range (m) = manual integration
0920F011.D 091014MS13_8260W.M Tue Sep 23 17:17:42 2014 Page 1

Data File : J:\MS13\DATA\092014\0920F011.D Vial: 10
Acq On : 20 Sep 2014 12:34 pm Operator: GH
Sample : K9921-019TB 54216 Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 23 17:16 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration

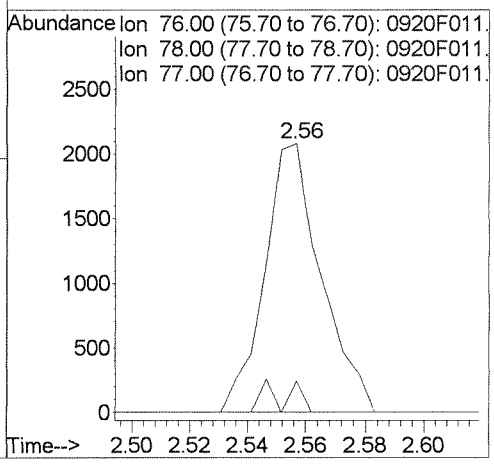


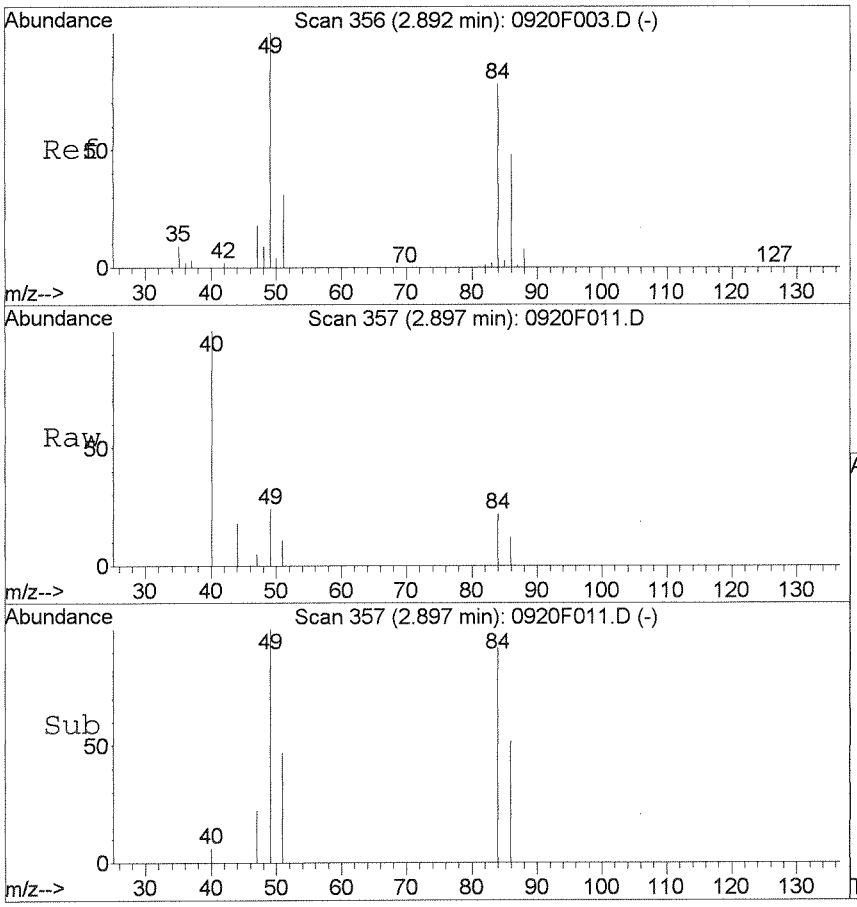


#15
Carbon Disulfide
Concen: 0.08 PPB
RT: 2.56 min Scan# 292
Delta R.T. 0.00 min
Lab File: 0920F011.D
Acq: 20 Sep 2014 12:34 pm

Tgt Ion: 76 Resp: 2798

Ion	Ratio	Lower	Upper
76	100		
78	11.6	0.0	38.5
77	0.0	0.0	32.6

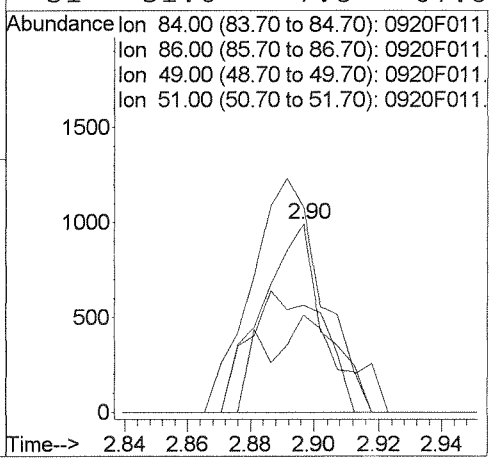




#20
Methylene Chloride
Concen: 0.10 PPB
RT: 2.90 min Scan# 357
Delta R.T. 0.01 min
Lab File: 0920F011.D
Acq: 20 Sep 2014 12:34 pm

Tgt Ion: 84 Resp: 1363

Ion	Ratio	Lower	Upper
84	100		
86	56.8	35.8	95.8
49	108.7	86.8	146.8
51	51.6	7.8	67.8



Exception Report

Data File: J:\MS18\DATA\092014\0920F010.D
Lab ID: KWG1412906-4
RunType: MB
Matrix: WATER

Date Acquired: 09/20/2014 11:18
Date Quantitated: 09/22/2014 14:33
Batch ID: KWG1412905
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutyl Alcohol	0.0064	0.01	NA	NT
	1,4-Dioxane	0.0021	0.01	NA	J
Second Source ICAL Verification	Acrolein	62.6	NA	30	J
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	CCV okay
	Acrolein	-61.7	NA	20	NT
Continuing Calibration Minimum RF	Acrolein	0.0066	0.01	NA	J
	Isobutyl Alcohol	0.0058	0.01	NA	
	1,4-Dioxane	0.0022	0.01	NA	J

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:13:35
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/23/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376688				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	313132	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	125417	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	121861	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	62254	9.06	91	85-115	OK
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	80064	9.90	99	70-120	OK
1	Toluene-d8	8.10	0.00	0.00	98	301308	9.53	95	85-120	OK
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	110895	9.80	98	75-120	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	Bromomethane				96	0		0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Acrolein				56	0		1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	1722	1.16	3.3	U	
1	Iodomethane	2.95		0.00	142	807	0.1600	0.160	J	
1	Carbon Disulfide				76	0		0.069	U	
1	3-Chloro-1-propene				76	0		0.094	U	
1	Acetonitrile				40	0d		4.5	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.33		0.00	84	880	0.0900	0.10	U	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	Diisopropyl Ether				45	0		0.048	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	tert-Butyl Ethyl Ether				59	0		0.048	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Propionitrile				54	0		1.1	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Chloroform				83	0		0.072	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Isobutyl Alcohol				43	0		6.9	U	
1	Benzene				78	0		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	tert-Amyl Methyl Ether				55	0d		0.098	U	
1	Trichloroethene (TCE)	6.73		0.00	95	676	0.0700	0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				41	0d		0.96	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0d		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane				91	0d		0.058	U	
2	Chlorobenzene				112	0		0.11	U	
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene				105	0		0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0d		0.10	U	
3	1,3,5-Trimethylbenzene				105	0d		0.089	U	
3	4-Chlorotoluene				91	0d		0.13	U	
3	tert-Butylbenzene				119	0		0.059	U	
3	1,2,4-Trimethylbenzene				105	0d		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene	12.07		0.00	146	916	0.0400	0.12	U	
3	n-Butylbenzene	12.36		0.00	91	1270	0.0400	0.054	U	
3	1,2-Dichlorobenzene				146	0d		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	1123	0.0700	0.10	U	
3	1,2,4-Trichlorobenzene	13.56	0.01	0.00	180	1147	0.1000	0.100	J	
3	Hexachlorobutadiene				225	0		0.11	U	
3	Naphthalene	13.78		0.00	128	1388	0.0800	0.088	U	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	937	0.1100	0.110	J	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/23/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376688				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	313132	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	125417	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	121861	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	62254	9.06	91	73-122	OK	
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	80064	9.90	99	59-127	OK	
1	Toluene-d8	8.10	0.00	0.00	98	301308	9.53	95	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	110895	9.80	98	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	1,3-Butadiene				54	0		0.50	U	
1	Bromomethane				96	0		0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.065	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Ethyl Ether				59	0		0.075	U	
1	Acrolein				56	0		1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.87		0.00	43	1722	1.16	3.3	U	
1	Iodomethane	2.95		0.00	142	807	0.1600	0.160	J	

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide				76	0		0.069	U	
1	2-Propanol				45	0		17	U	
1	3-Chloro-1-propene				76	0		0.094	U	
1	Methyl Acetate				43	0d		0.38	U	
1	Acetonitrile				40	0d		4.5	U	
1	Methylene Chloride	3.33		0.00	84	880	0.0900	0.10	U	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	n-Hexane	3.91	0.01	0.00	57	705	0.0800	0.090	U	
1	Diisopropyl Ether				45	0		0.048	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	tert-Butyl Ethyl Ether				59	0		0.048	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Propionitrile				54	0		1.1	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Tetrahydrofuran				71	0		0.94	U	
1	Chloroform				83	0		0.072	U	
1	tert-Butyl Formate				59	0		0.26	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Cyclohexane				56	0		0.36	U	
1	Isobutyl Alcohol				43	0		6.9	U	
1	Benzene				78	0		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	tert-Amyl Methyl Ether				55	0d		0.098	U	
1	Trichloroethene (TCE)	6.73		0.00	95	676	0.0700	0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				41	0d		0.96	U	
1	Methylcyclohexane				83	0		0.33	U	

U: Undetected at or above MDL
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D: Result from dilution
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?: Insufficient information to determine acceptance
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Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	n-Octane				85	0		0.16	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0d		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane				91	0d		0.058	U	
2	Chlorobenzene				112	0		0.11	U	
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene				105	0		0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0d		0.10	U	
3	1,3,5-Trimethylbenzene				105	0d		0.089	U	
3	4-Chlorotoluene				91	0d		0.13	U	
3	tert-Butylbenzene				119	0		0.059	U	
3	1,2,4-Trimethylbenzene				105	0d		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene	12.07		0.00	146	916	0.0400	0.12	U	
3	n-Butylbenzene	12.36		0.00	91	1270	0.0400	0.054	U	
3	1,2-Dichlorobenzene				146	0d		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	1123	0.0700	0.10	U	
3	1,2,4-Trichlorobenzene	13.56	0.01	0.00	180	1147	0.1000	0.100	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F010.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 11:18	**Quant Date:**	09/22/2014 14:33	**Vial:**	9
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412906-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Hexachlorobutadiene				225	0		0.11	U	
3	Naphthalene	13.78		0.00	128	1388	0.0800	0.088	U	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	937	0.1100	0.110	J	
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F010.D Vial: 9
Acq On : 20 Sep 2014 11:18 am Operator: GH
Sample : MB Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 08:53:06 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

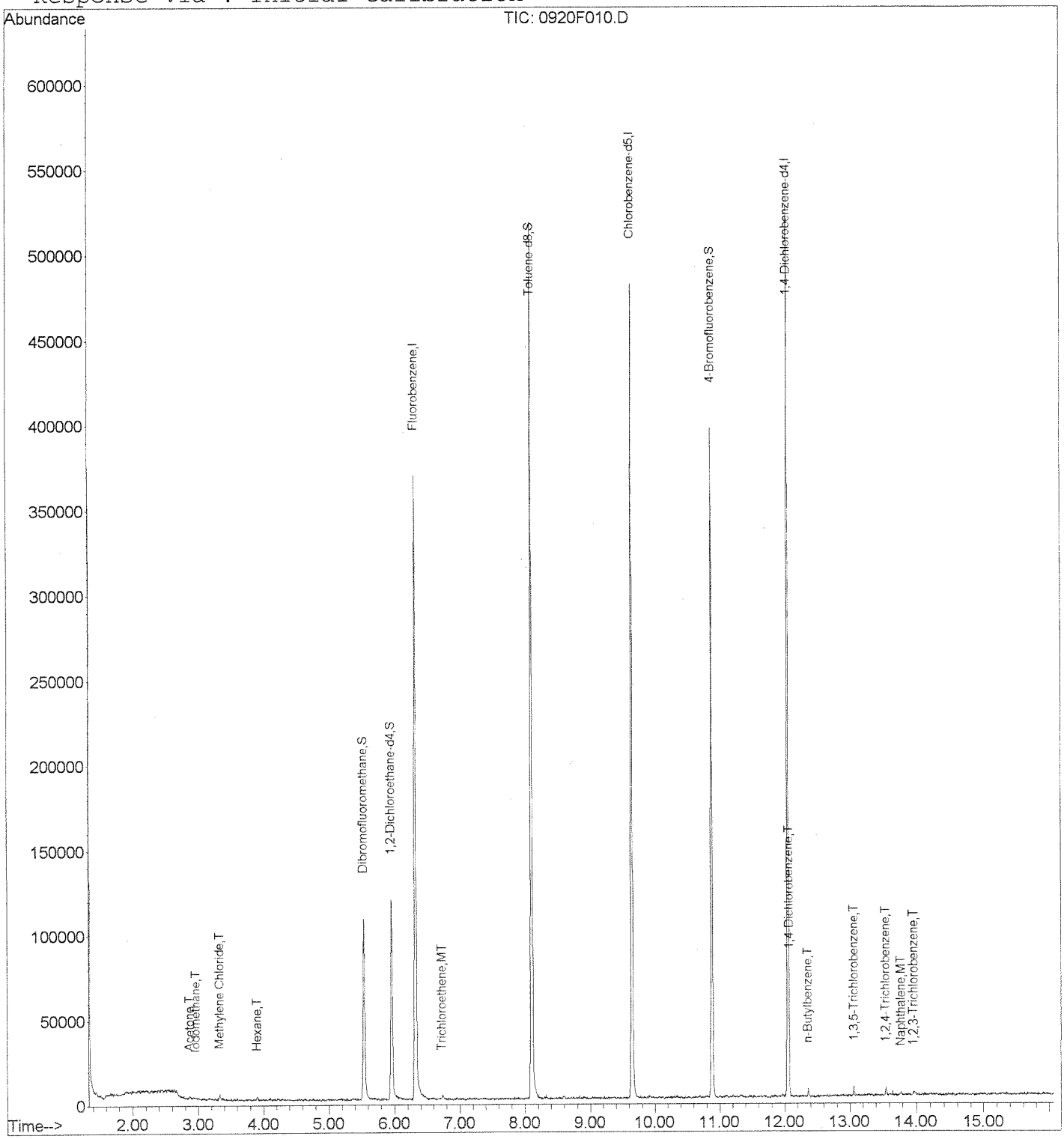
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.32	96	313132	10.00	PPB		0.00
65) Chlorobenzene-d5	9.64	82	125417	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	121861	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	62254	9.06	PPB		0.00
Spiked Amount 10.000			Recovery =	90.60%			
48) 1,2-Dichloroethane-d4	5.95	65	80064	9.90	PPB		0.00
Spiked Amount 10.000			Recovery =	99.00%			
63) Toluene-d8	8.10	98	301308	9.53	PPB		0.00
Spiked Amount 10.000			Recovery =	95.30%			
85) 4-Bromofluorobenzene	10.88	95	110895	9.80	PPB		0.00
Spiked Amount 10.000			Recovery =	98.00%			
Target Compounds							Qvalue
14) Acetone	2.87	43	1722	1.16	PPB		89
15) Iodomethane	2.95	142	807	0.16	PPB		91
21) Methylene Chloride	3.33	84	880	0.09	PPB	#	81
26) Hexane	3.91	57	705	0.08	PPB		82
52) Trichloroethene	6.73	95	676	0.07	PPB	#	81
100) 1,4-Dichlorobenzene	12.07	146	916	0.04	PPB		69
101) n-Butylbenzene	12.36	91	1270	0.04	PPB		83
104) 1,3,5-Trichlorobenzene	13.06	180	1123	0.07	PPB		94
105) 1,2,4-Trichlorobenzene	13.56	180	1147	0.10	PPB		90
107) Naphthalene	13.78	128	1388	0.08	PPB		90
108) 1,2,3-Trichlorobenzene	13.97	180	937	0.11	PPB		80

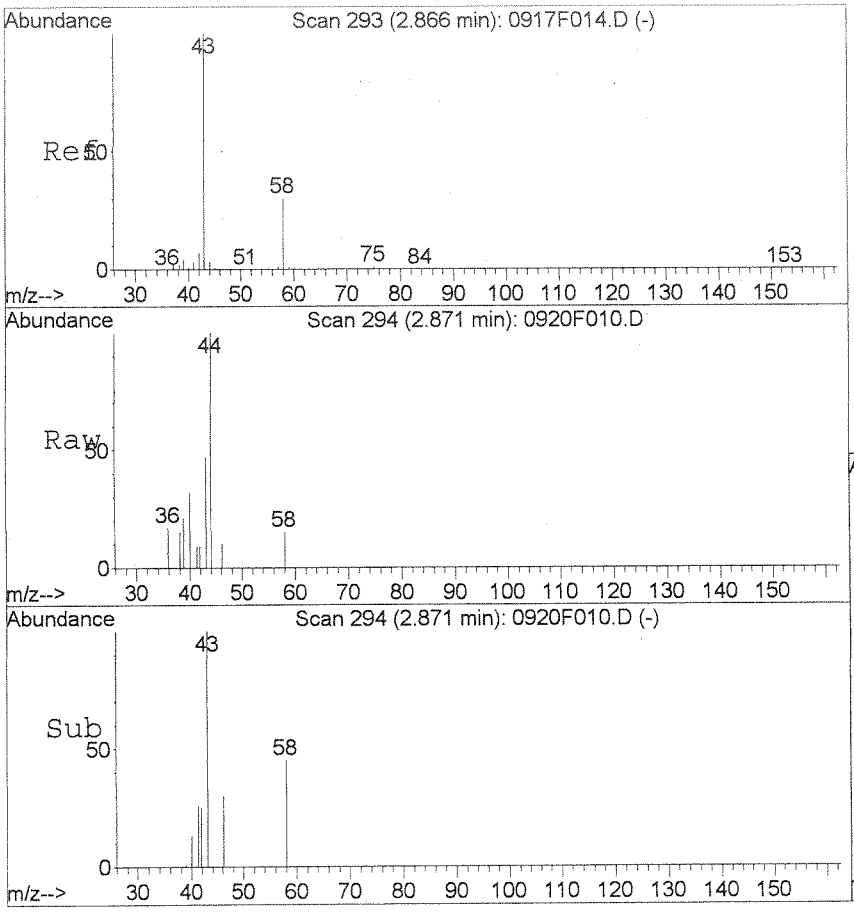
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F010.D Vial: 9
Acq On : 20 Sep 2014 11:18 am Operator: GH
Sample : MB Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 14:33 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

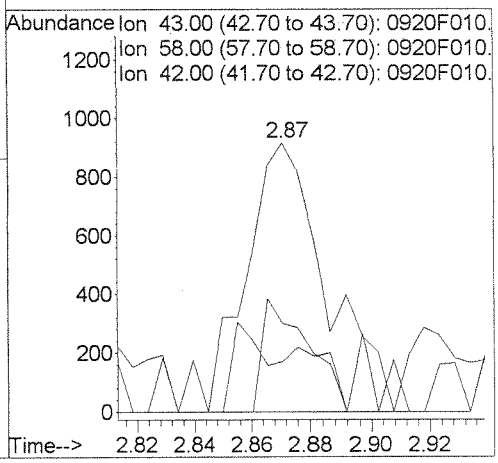


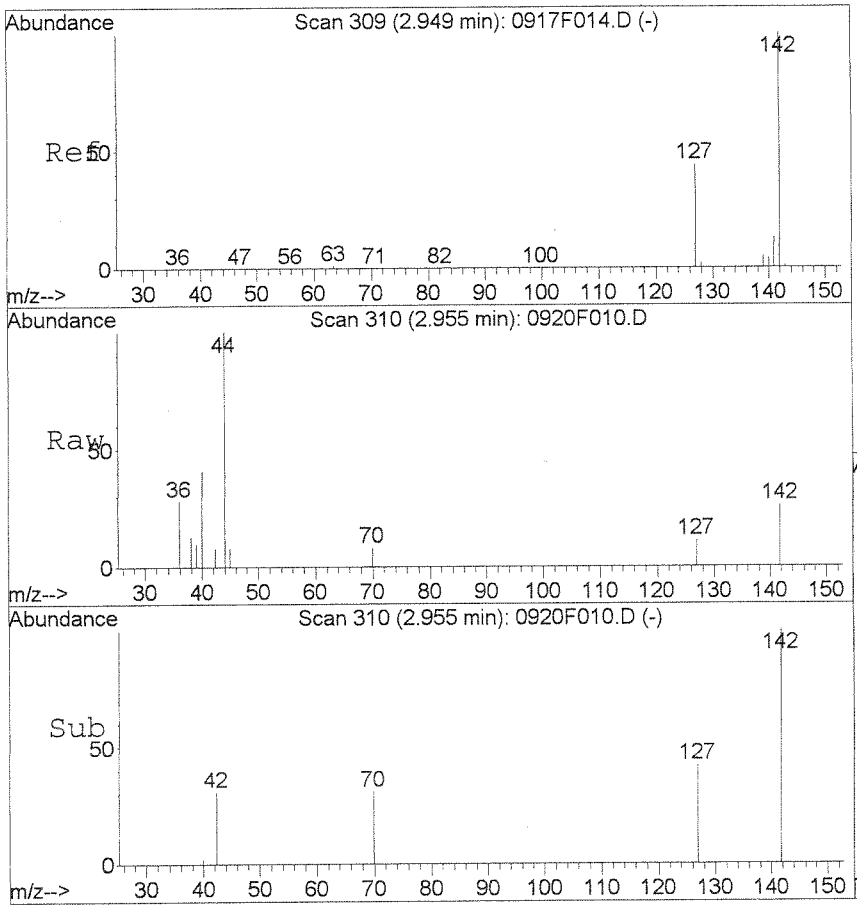


#14
Acetone
Concen: 1.16 PPB
RT: 2.87 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion: 43 Resp: 1722

Ion	Ratio	Lower	Upper
43	100		
58	32.8	0.0	59.6
42	18.7	0.0	37.2

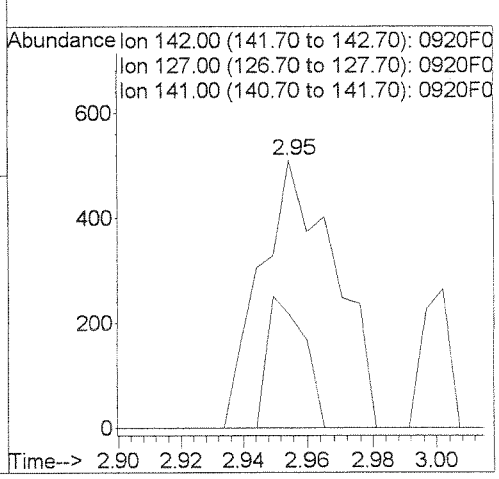


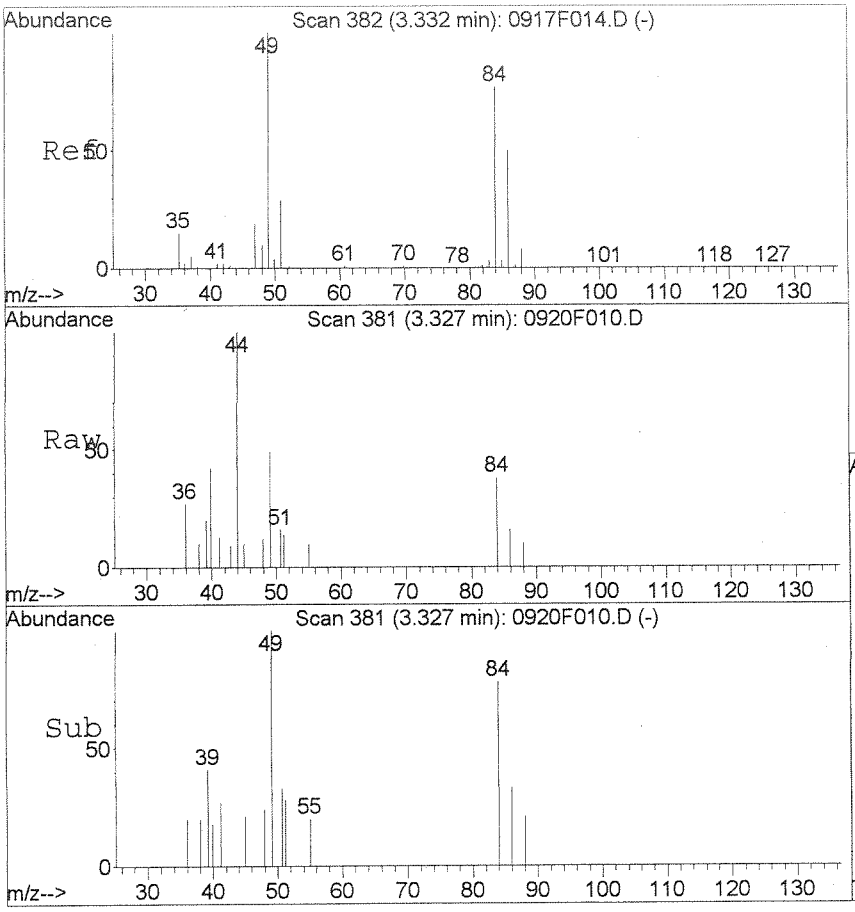


#15
Iodomethane
Concen: 0.16 PPB
RT: 2.95 min Scan# 310
Delta R.T. 0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:142 Resp: 807

Ion	Ratio	Lower	Upper
142	100		
127	42.4	13.9	73.9
141	0.0	0.0	42.9

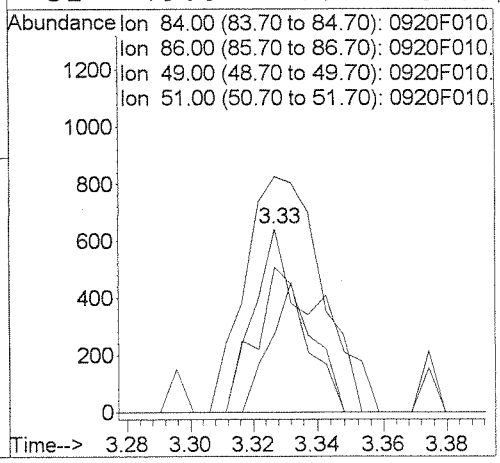


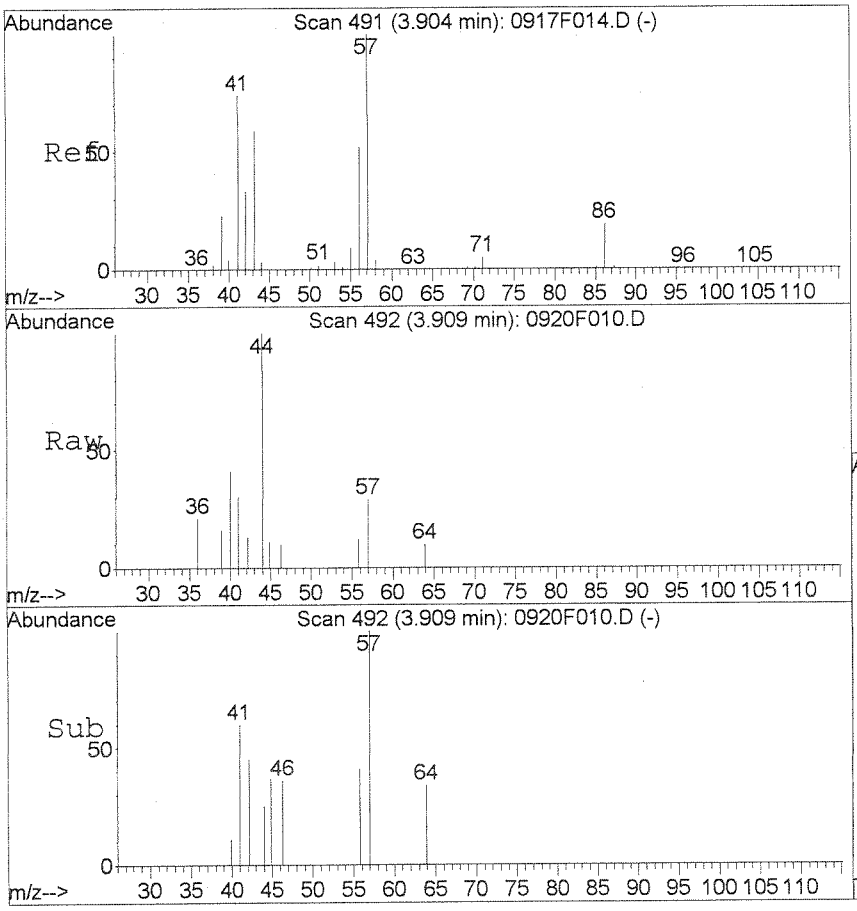


#21
Methylene Chloride
Concen: 0.09 PPB
RT: 3.33 min Scan# 381
Delta R.T. -0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion: 84 Resp: 880

Ion	Ratio	Lower	Upper
84	100		
86	42.9	34.7	94.7
49	128.5	99.2	159.2
51	79.0	7.7	67.7#

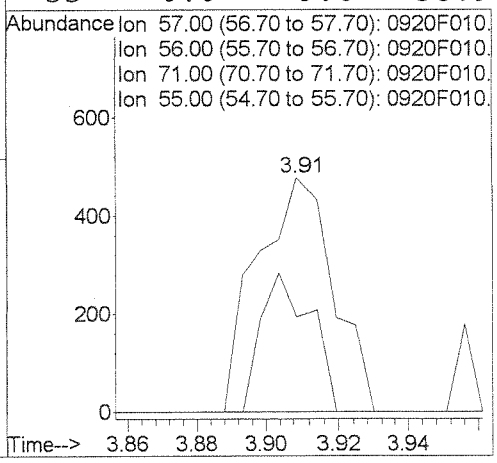


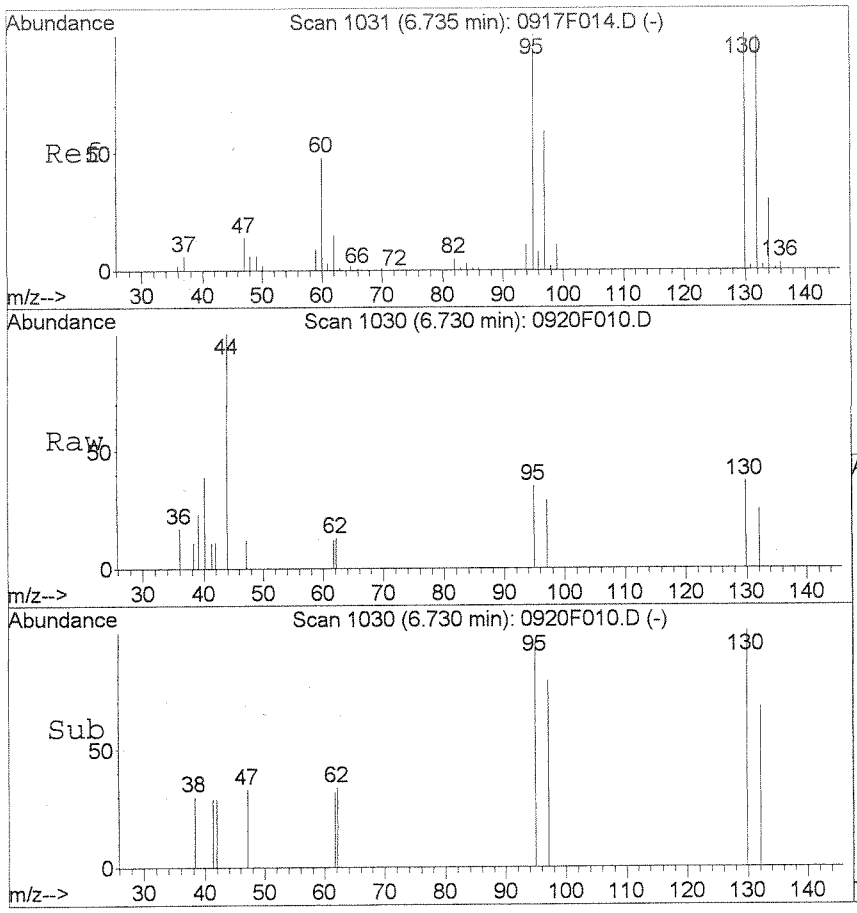


#26
Hexane
Concen: 0.08 PPB
RT: 3.91 min Scan# 492
Delta R.T. 0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion: 57 Resp: 705

Ion	Ratio	Lower	Upper
57	100		
56	40.6	22.3	82.3
71	0.0	0.0	35.3
55	0.0	0.0	38.9

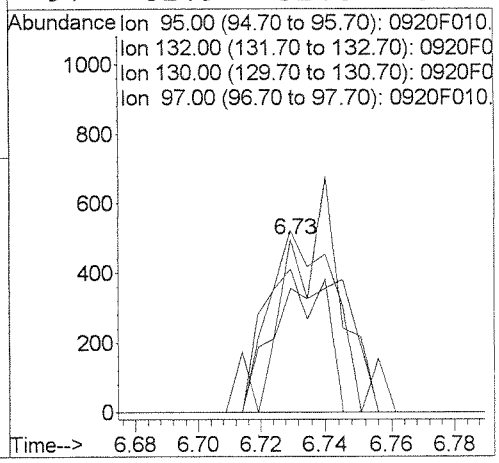


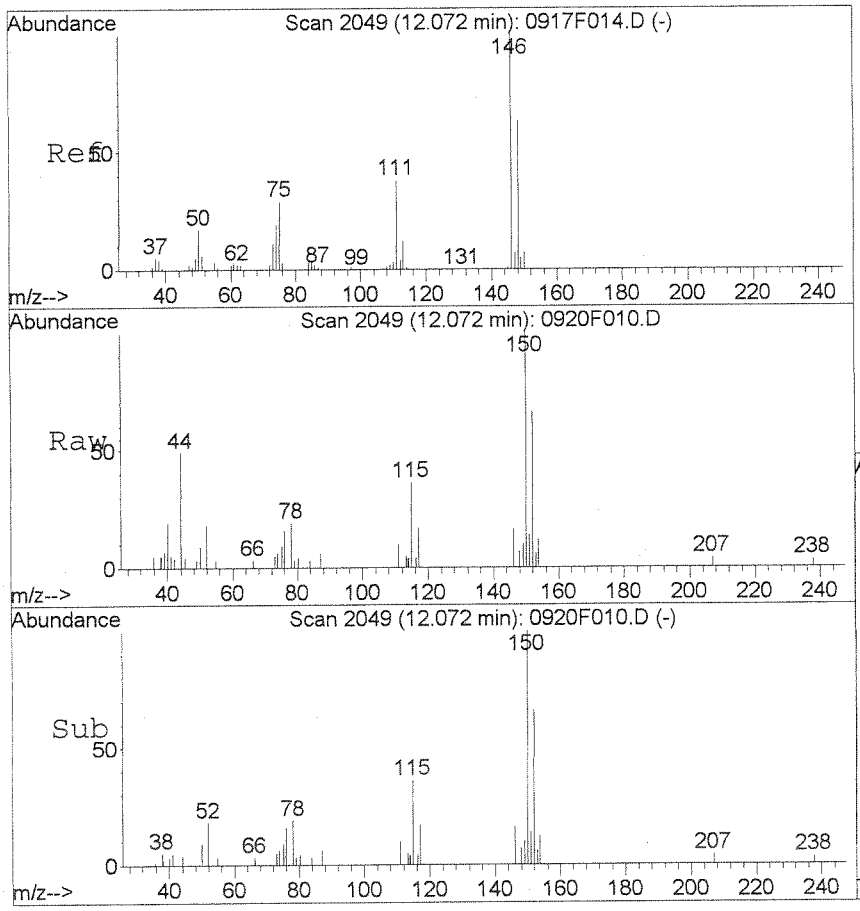


#52
Trichloroethene
Concen: 0.07 PPB
RT: 6.73 min Scan# 1030
Delta R.T. -0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion: 95 Resp: 676

Ion	Ratio	Lower	Upper
95	100		
132	71.8	75.3	135.3#
130	105.4	76.6	136.6
97	82.9	32.3	92.3

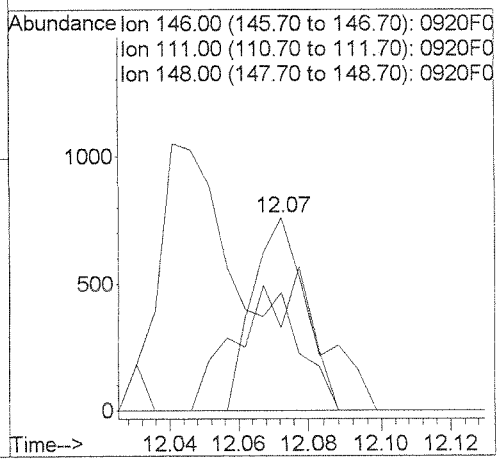


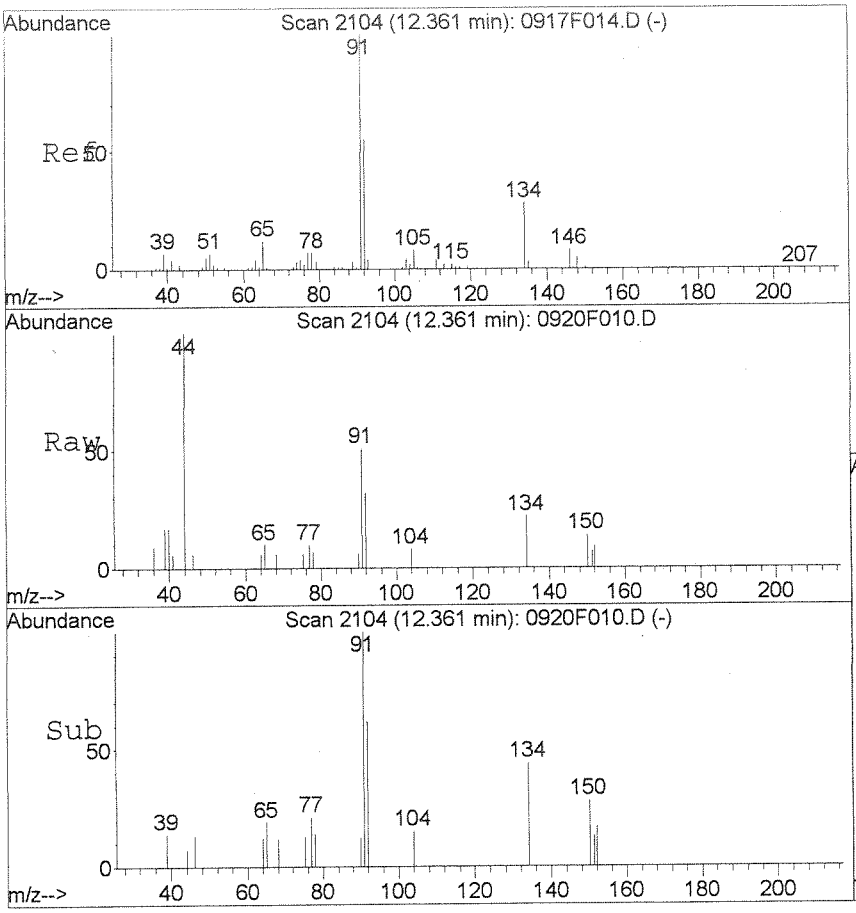


#100
1,4-Dichlorobenzene
Concen: 0.04 PPB
RT: 12.07 min Scan# 2049
Delta R.T. 0.00 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:146 Resp: 916

Ion	Ratio	Lower	Upper
146	100		
111	61.2	7.7	67.7
148	43.0	33.2	93.2

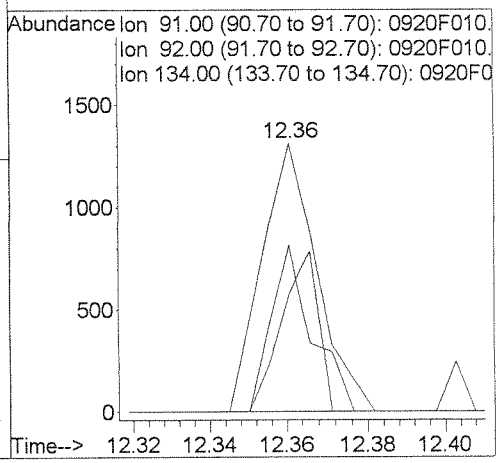


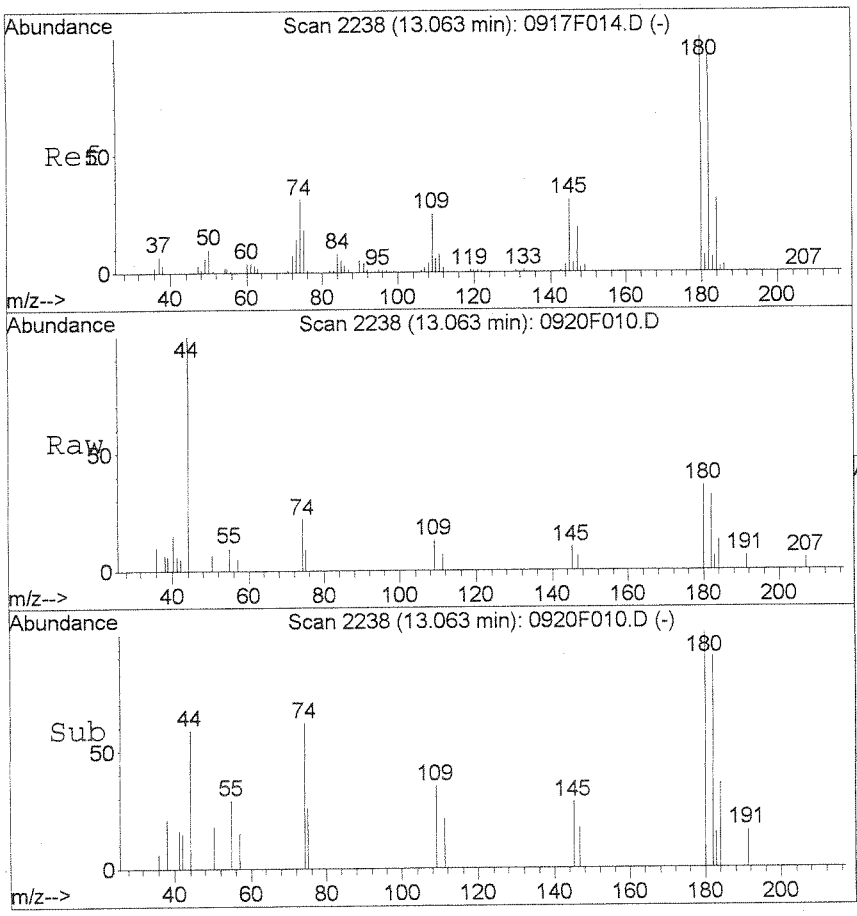


#101
n-Butylbenzene
Concen: 0.04 PPB
RT: 12.36 min Scan# 2104
Delta R.T. 0.00 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion: 91 Resp: 1270

Ion	Ratio	Lower	Upper
91	100		
92	62.2	25.0	85.0
134	43.9	0.0	58.3

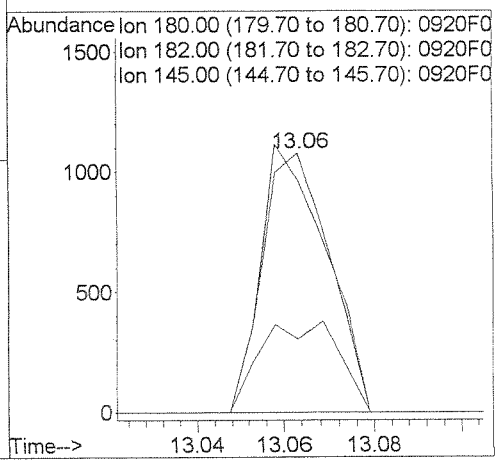


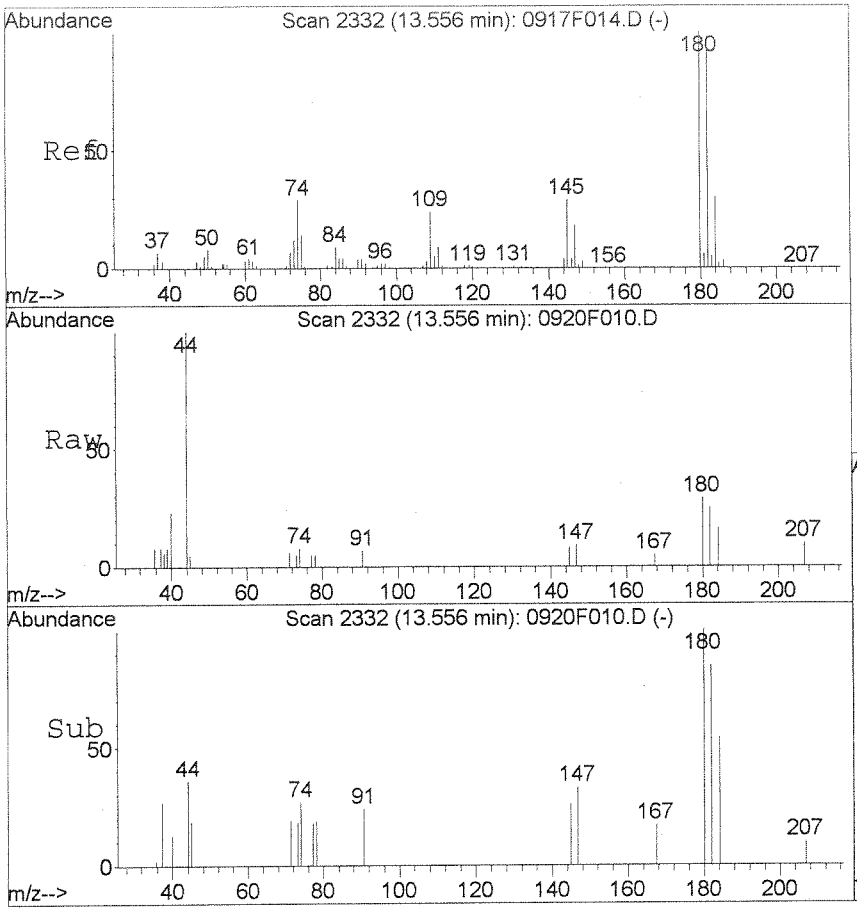


#104
1,3,5-Trichlorobenzene
Concen: 0.07 PPB
RT: 13.06 min Scan# 2238
Delta R.T. 0.00 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:180 Resp: 1123

Ion	Ratio	Lower	Upper
180	100		
182	89.7	66.1	126.1
145	28.2	0.9	60.9

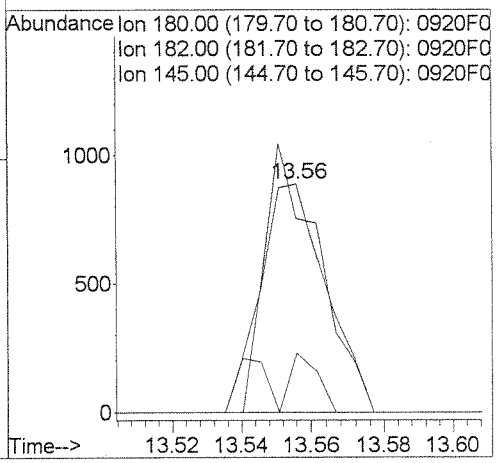


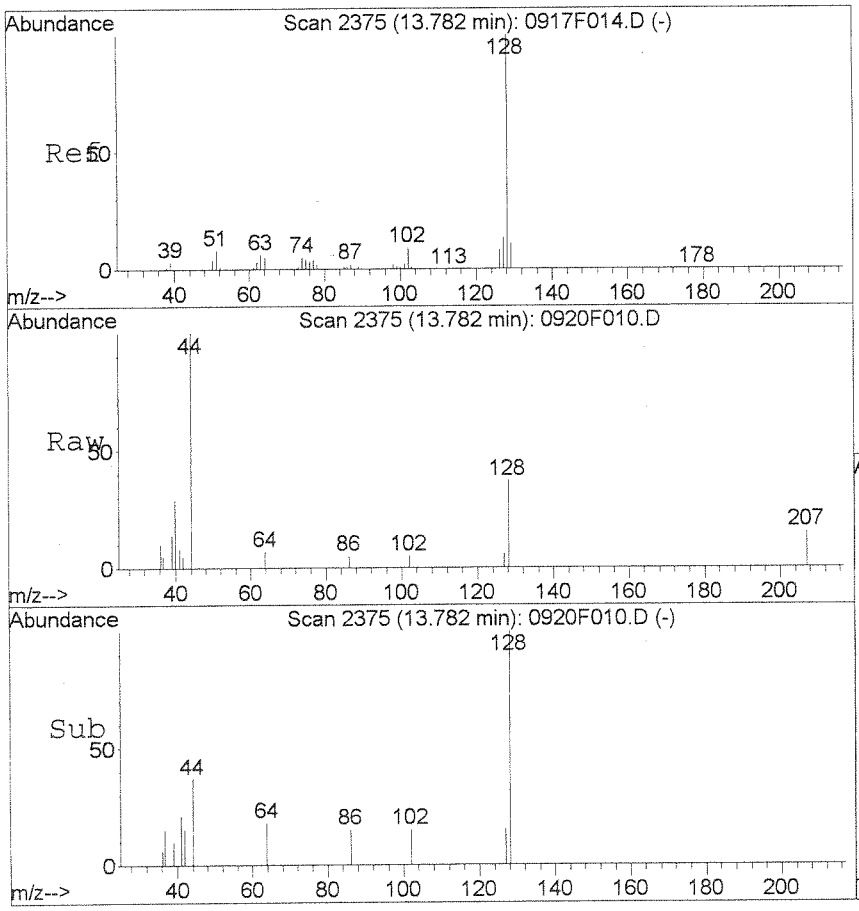


#105
1,2,4-Trichlorobenzene
Concen: 0.10 PPB
RT: 13.56 min Scan# 2332
Delta R.T. 0.00 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:180 Resp: 1147

Ion	Ratio	Lower	Upper
180	100		
182	84.8	65.1	125.1
145	25.9	0.0	59.4

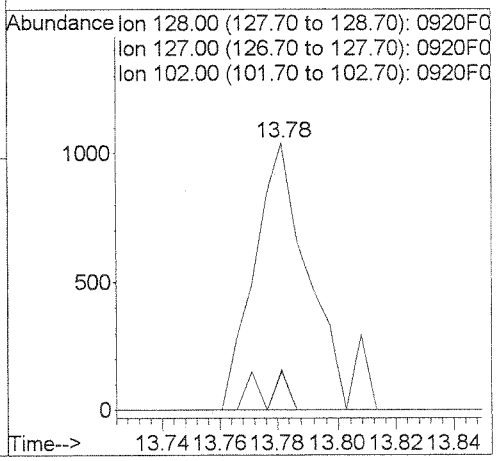


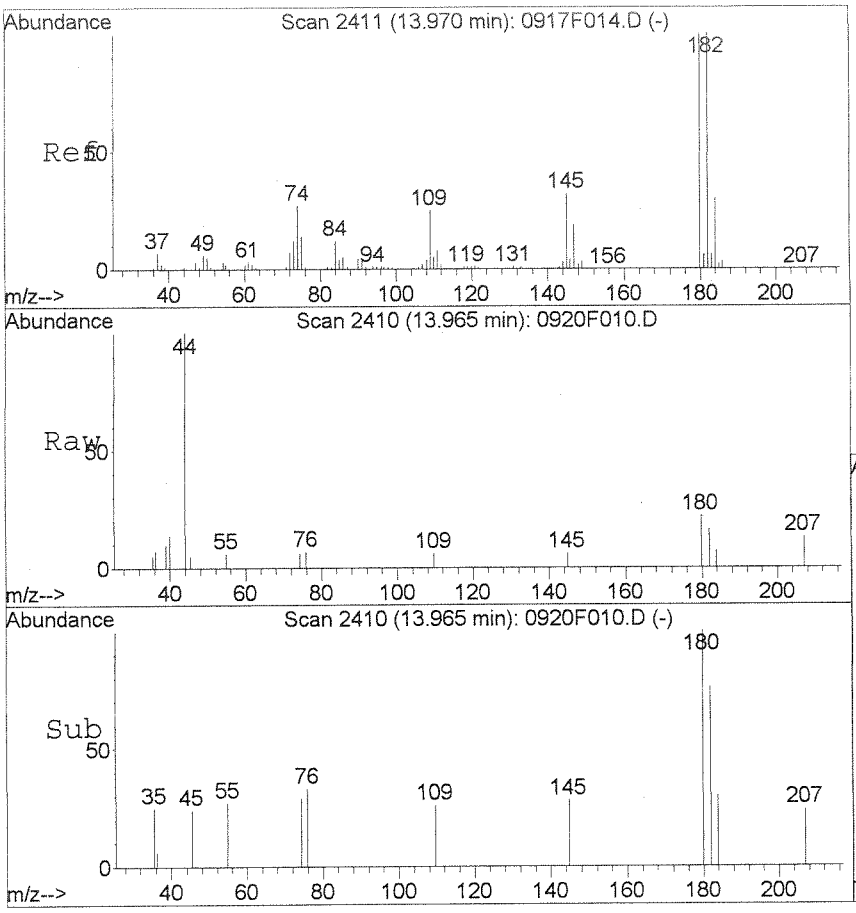


#107
Naphthalene
Concen: 0.08 PPB
RT: 13.78 min Scan# 2375
Delta R.T. 0.00 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:128 Resp: 1388

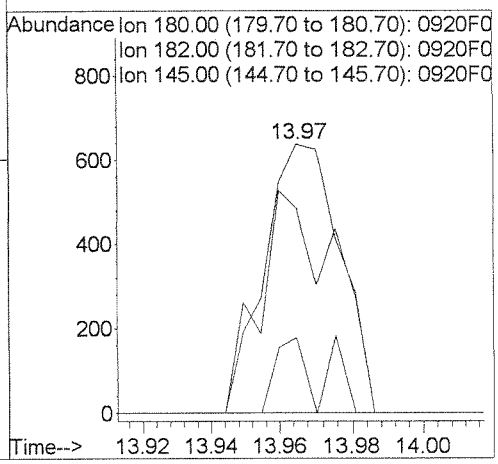
Ion	Ratio	Lower	Upper
128	100		
127	15.5	0.0	43.1
102	14.5	0.0	38.7





#108
1,2,3-Trichlorobenzene
Concen: 0.11 PPB
RT: 13.97 min Scan# 2410
Delta R.T. -0.01 min
Lab File: 0920F010.D
Acq: 20 Sep 2014 11:18 am

Tgt Ion:180	Resp:	937	
Ion	Ratio	Lower	Upper
180	100		
182	75.9	70.2	130.2
145	27.9	1.9	61.9



Exception Report

Data File: J:\MS13\DATA\092014\0920F008.D
Lab ID: KWG1412904-4
RunType: MB
Matrix: WATER

Date Acquired: 09/20/2014 11:13
Date Quantitated: 09/23/2014 17:13
Batch ID: KWG1412900
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0050	0.01	NA	int
	Acetonitrile	0.0095	0.01	NA	
	tert-Butyl Alcohol	0.0067	0.01	NA	
	tert-Butyl Formate	0.0091	0.01	NA	
	Isobutyl Alcohol	0.0035	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	
Second Source ICAL Verification	Iodomethane	55.8	NA	30	
Continuing Calibration Recovery	Bromomethane	-27.3	NA	20	passes CCV
	Naphthalene	-26.1	NA	20	"
Continuing Calibration Minimum RF	2-Propanol	0.0044	0.01	NA	int
	Acetonitrile	0.0093	0.01	NA	
	tert-Butyl Alcohol	0.0056	0.01	NA	
	tert-Butyl Formate	0.0095	0.01	NA	

Primary Review: DLL 9/24/14

Secondary Review: [illegible] 9/25/14

Printed: 09/24/2014 14:14:39
u:\Stealth\Crystal.rpt\except2.rpt

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutyl Alcohol	0.0033	0.01	NA	NT
	1,4-Dioxane	0.0010	0.01	NA	2
Std MRL Unsupported by ICAL	tert-Butyl Formate	5.0	0.50	NA	2

Primary Review: 9/24/14

Secondary Review: 9/25/14

Quantitation Report

Data File:	J:\MS13\DATA\092014\0920F008.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 11:13	**Quant Date:**	09/23/2014 17:13	**Vial:**	7
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412904-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/24/2014

Analysis Lot:	KWG1412900	**Prep Lot:**	KWG1412904	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1376670	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:			
Tune Ref:	J:\MS13\DATA\092014\0920F002.D	**Method ID:**	MJ119
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	495876	10.00	OK
2	Chlorobenzene-d5	12.03	0.00	82	198157	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	157137	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.01	0.00	113	108842	10.30	103	73-122	OK	
1	1,2-Dichloroethane-d4	5.65	0.01	0.00	65	110009	10.62	106	59-127	OK	
1	Toluene-d8	9.30	0.00	0.00	98	467937	9.73	97	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	150296	9.32	93	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	Bromomethane				96	0		0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.065	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Ethyl Ether				59	0		0.075	U	
1	Acrolein				56	0		1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.48	0.01	0.00	43	1766	1.02	3.3	U	
1	Iodomethane				142	0		0.12	U	
1	Carbon Disulfide	2.56		0.00	76	4176	0.1200	0.120	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F008.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 11:13	**Quant Date:**	09/23/2014 17:13	**Vial:**	7
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412904-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Propanol				45	0		17	U	
1	3-Chloro-1-propene				76	0d		0.094	U	
1	Acetonitrile				40	0d		4.5	U	
1	Methyl Acetate				43	0		0.38	U	
1	Methylene Chloride	2.89		0.00	84	1248	0.0900	0.10	U	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	n-Hexane				57	0d		0.090	U	
1	Diisopropyl Ether				45	0		0.048	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	tert-Butyl Ethyl Ether				59	0		0.048	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Propionitrile				54	0		1.1	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Tetrahydrofuran				71	0		0.94	U	
1	Chloroform				83	0		0.072	U	
1	tert-Butyl Formate				59	0		0.26	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Cyclohexane				56	0		0.36	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Isobutyl Alcohol				43	0		6.9	U	
1	Benzene				78	0		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	tert-Amyl Methyl Ether				55	0		0.098	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	Methylcyclohexane				83	0		0.33	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				43	0		0.96	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F008.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 11:13	**Quant Date:**	09/23/2014 17:13	**Vial:**	7
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412904-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	n-Octane				85	0		0.16	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane				91	0d		0.058	U	
2	Chlorobenzene				112	0		0.11	U	
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene				105	0		0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0		0.10	U	
3	1,3,5-Trimethylbenzene				105	0		0.089	U	
3	4-Chlorotoluene				91	0		0.13	U	
3	tert-Butylbenzene				119	0		0.059	U	
3	1,2,4-Trimethylbenzene				105	0		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0		0.060	U	
3	1,3-Dichlorobenzene				146	0		0.10	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	n-Butylbenzene				91	0d		0.054	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene				180	0		0.10	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	
3	Hexachlorobutadiene				225	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F008.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 11:13	**Quant Date:**	09/23/2014 17:13	**Vial:**	7
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412904-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene				128	0		0.088	U	
3	1,2,3-Trichlorobenzene				180	0		0.11	U	
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS13\DATA\092014\0920F008.D
Acq On : 20 Sep 2014 11:13 am
Sample : MB
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:41:13 2014

Vial: 7
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

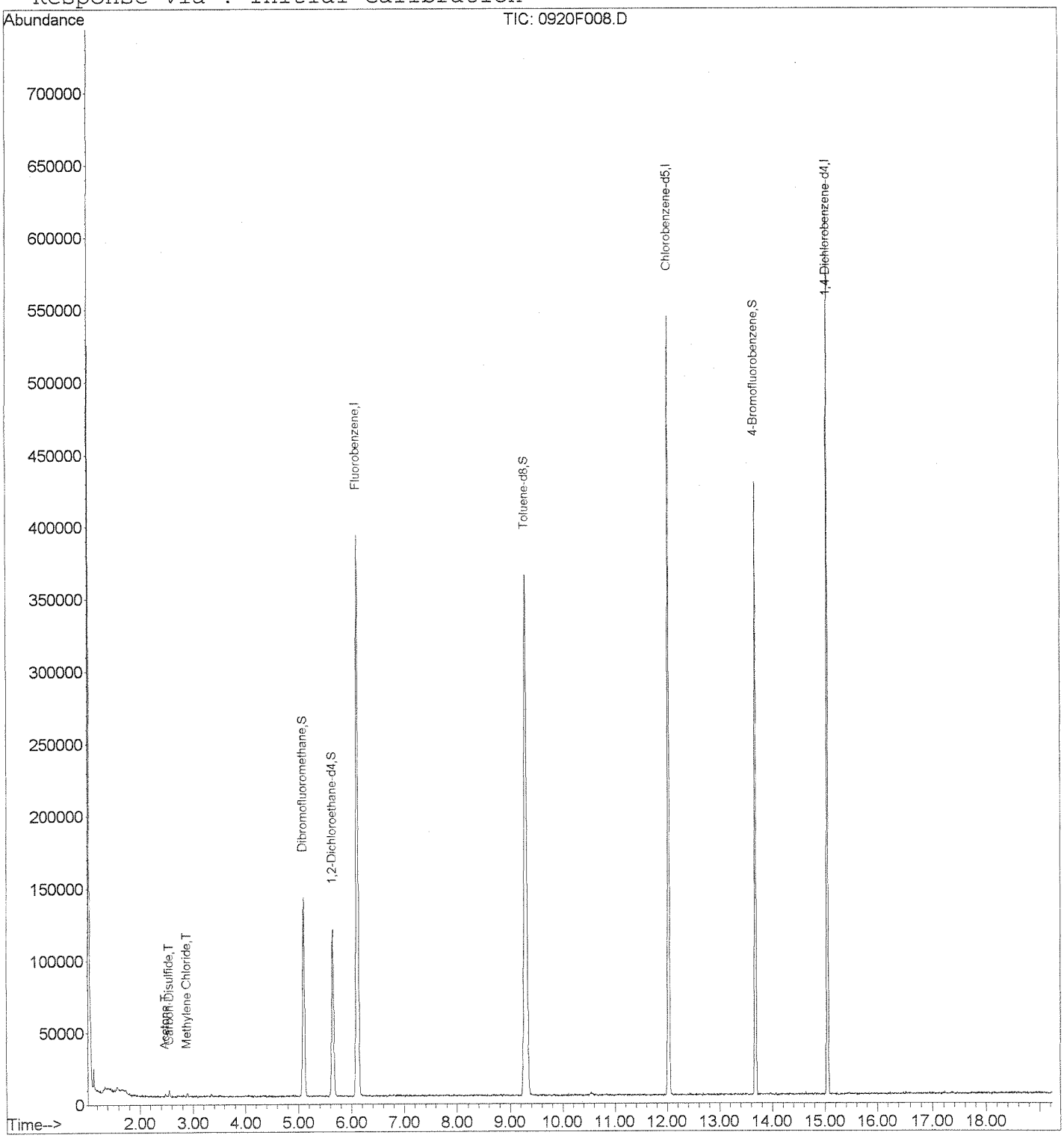
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

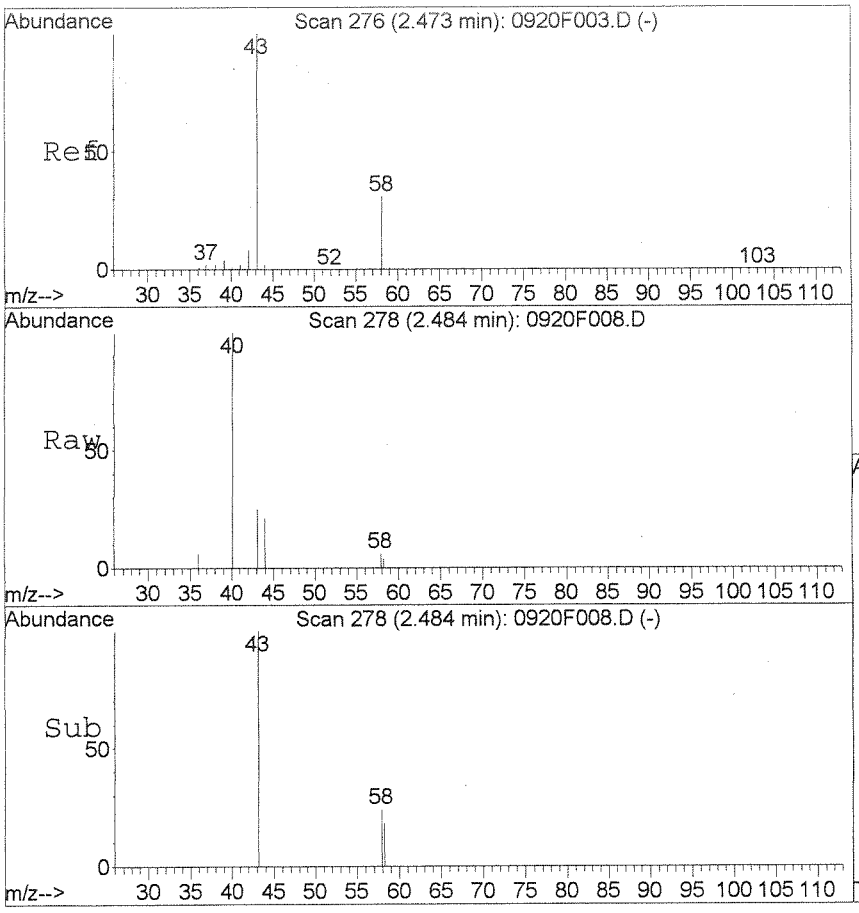
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.11	96	495876	10.00	PPB	0.00
64) Chlorobenzene-d5	12.03	82	198157	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	157137	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.10	113	108842	10.30	PPB	0.00
Spiked Amount 10.000			Recovery =	103.00%		
47) 1,2-Dichloroethane-d4	5.65	65	110009	10.62	PPB	0.00
Spiked Amount 10.000			Recovery =	106.20%		
62) Toluene-d8	9.30	98	467937	9.73	PPB	0.00
Spiked Amount 10.000			Recovery =	97.30%		
84) 4-Bromofluorobenzene	13.68	95	150296	9.32	PPB	0.00
Spiked Amount 10.000			Recovery =	93.20%		
Target Compounds						Qvalue
13) Acetone	2.48	43	1766	1.02	PPB	85
15) Carbon Disulfide	2.56	76	4176	0.12	PPB	98
20) Methylene Chloride	2.89	84	1248	0.09	PPB	88

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092014\0920F008.D Vial: 7
Acq On : 20 Sep 2014 11:13 am Operator: GH
Sample : MB Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 23 17:13 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration

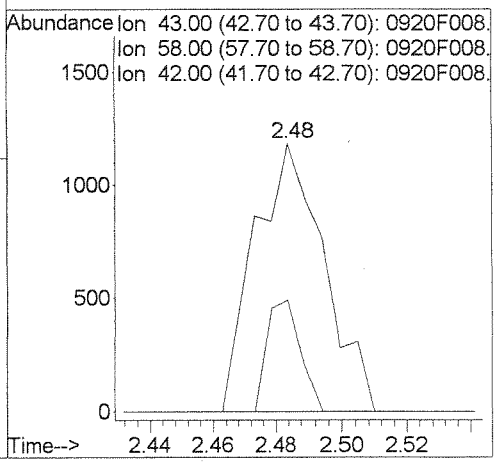


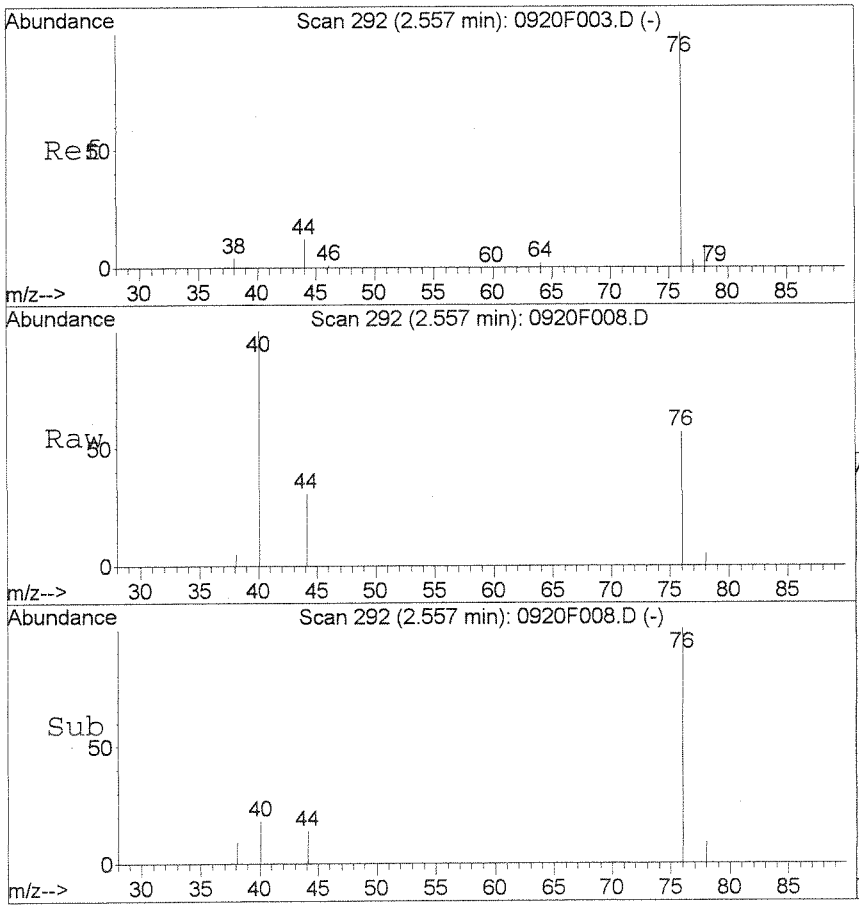


#13
Acetone
Concen: 1.02 PPB
RT: 2.48 min Scan# 278
Delta R.T. 0.01 min
Lab File: 0920F008.D
Acq: 20 Sep 2014 11:13 am

Tgt Ion: 43 Resp: 1766

Ion	Ratio	Lower	Upper
43	100		
58	41.4	3.8	63.8
42	0.0	0.0	37.8

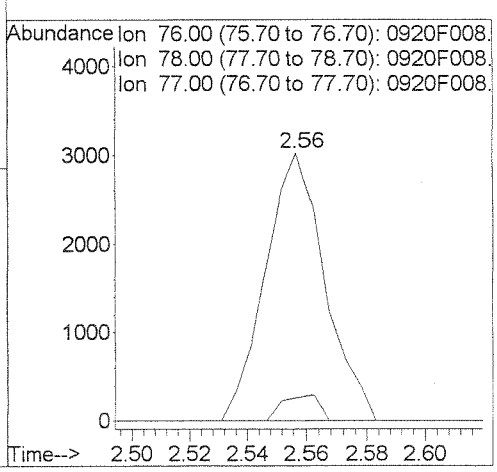


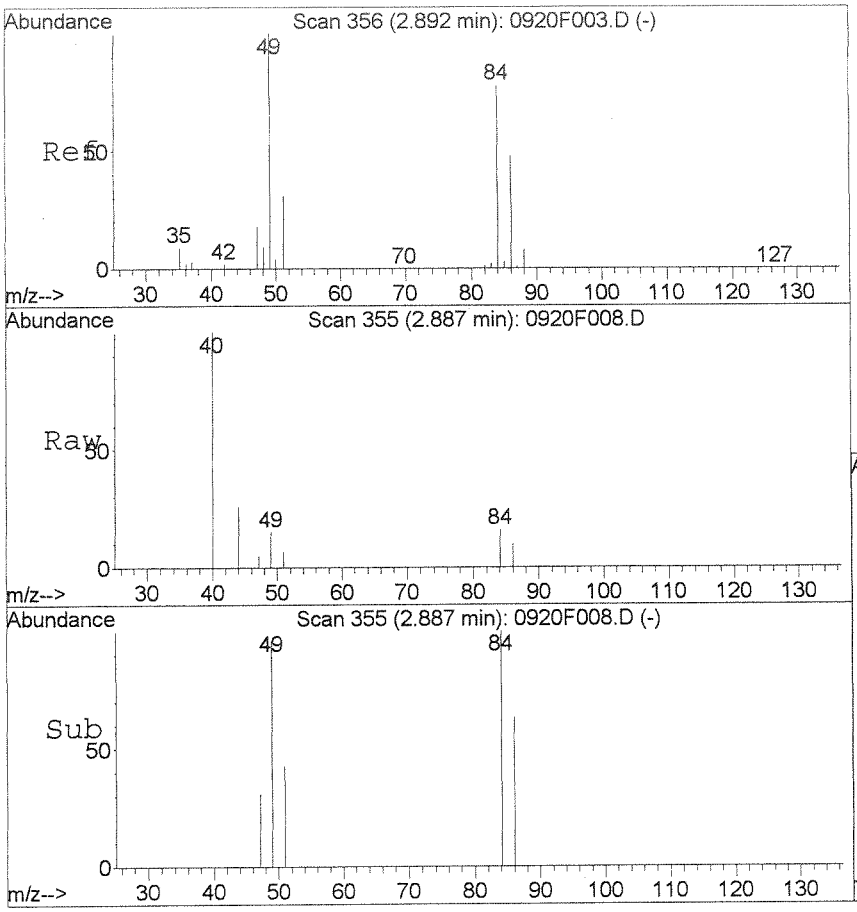


#15
Carbon Disulfide
Concen: 0.12 PPB
RT: 2.56 min Scan# 292
Delta R.T. 0.01 min
Lab File: 0920F008.D
Acq: 20 Sep 2014 11:13 am

Tgt Ion: 76 Resp: 4176

Ion	Ratio	Lower	Upper
76	100		
78	8.7	0.0	38.5
77	0.0	0.0	32.6

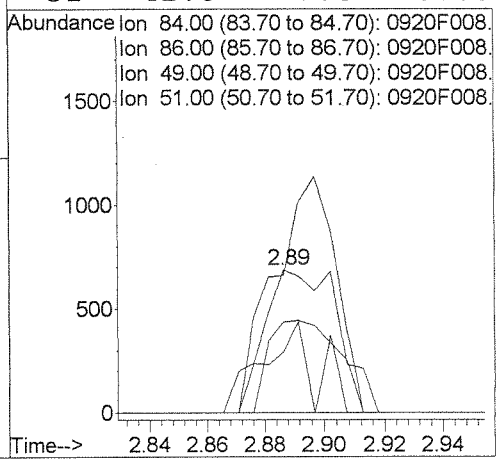




#20
Methylene Chloride
Concen: 0.09 PPB
RT: 2.89 min Scan# 355
Delta R.T. -0.00 min
Lab File: 0920F008.D
Acq: 20 Sep 2014 11:13 am

Tgt Ion: 84 Resp: 1248

Ion	Ratio	Lower	Upper
84	100		
86	63.5	35.8	95.8
49	96.1	86.8	146.8
51	42.8	7.8	67.8



Exception Report

Data File: J:\MS13\DATA\092214\0922F009.D
Lab ID: KWG1412938-4
RunType: MB
Matrix: WATER

Date Acquired: 09/22/2014 12:11
Date Quantitated: 09/25/2014 11:35
Batch ID: KWG1412934
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0050	0.01	NA	NT
	Acetonitrile	0.0095	0.01	NA	"
	tert-Butyl Alcohol	0.0067	0.01	NA	"
	tert-Butyl Formate	0.0091	0.01	NA	"
	Isobutyl Alcohol	0.0035	0.01	NA	LCS ok
	1,4-Dioxane	0.0011	0.01	NA	NT
Second Source ICAL Verification	Iodomethane	55.8	NA	30	
Continuing Calibration Recovery	Bromomethane	-28.2	NA	20	ok
	Naphthalene	-22.5	NA	20	"
Continuing Calibration Minimum RF	2-Propanol	0.0043	0.01	NA	NT
	Acetonitrile	0.0100	0.01	NA	"
	tert-Butyl Alcohol	0.0053	0.01	NA	"
	Isobutyl Alcohol	0.0033	0.01	NA	LCS ok

Primary Review: JB 9/25/14

Secondary Review: 9/25/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	1,4-Dioxane	0.0011	0.01	NA	NJ
Std MRL Unsupported by ICAL	tert-Butyl Formate	5.0	0.50	NA	

Primary Review: _____

Secondary Review: _____ 9/25/14

Quantitation Report

Data File:	J:\MS13\DATA\092214\0922F009.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 12:11	**Quant Date:**	09/25/2014 11:35	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412938-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**		**Receive Date:**	09/25/2014

Analysis Lot:	KWG1412934	**Prep Lot:**	KWG1412938	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/22/2014		
Prep Ref:	1376913				

Quant Method:	J:\MS13\METHODS\091014MS13_8			**Calibration ID:**	CAL13540
Title:					
Tune Ref:	J:\MS13\DATA\092214\0922F002.D			**Method ID:**	MJ119
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	487921	10.00	OK
2	Chlorobenzene-d5	12.03	0.01	82	193013	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	152339	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.00	0.00	113	105141	10.11	101	73-122	OK	
1	1,2-Dichloroethane-d4	5.64	-0.01	0.00	65	104867	10.29	103	59-127	OK	
1	Toluene-d8	9.30	0.00	0.00	98	464858	9.82	98	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	143572	9.14	91	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane				50	0		0.068	U	
1	Vinyl Chloride				62	0		0.075	U	
1	Bromomethane				96	0		0.10	U	
1	Chloroethane				64	0d		0.16	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.065	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Ethyl Ether				59	0		0.075	U	
1	Acrolein				56	0		1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.48	0.01	0.00	43	1822	1.07	3.3	U	
1	Iodomethane				142	0		0.12	U	
1	Carbon Disulfide	2.55	-0.01	0.00	76	4426	0.1200	0.120	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092214\0922F009.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 12:11	**Quant Date:**	09/25/2014 11:35	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412938-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Propanol				45	0		17	U	
1	3-Chloro-1-propene				76	0d		0.094	U	
1	Acetonitrile				40	0d		4.5	U	
1	Methyl Acetate				43	0		0.38	U	
1	Methylene Chloride	2.89		0.00	84	1470	0.1100	0.110	J	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	n-Hexane				57	0		0.090	U	
1	Diisopropyl Ether				45	0		0.048	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	tert-Butyl Ethyl Ether				59	0		0.048	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Propionitrile				54	0		1.1	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Tetrahydrofuran				71	0		0.94	U	
1	Chloroform				83	0		0.072	U	
1	tert-Butyl Formate				59	0		0.26	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Cyclohexane				56	0		0.36	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Isobutyl Alcohol				43	0		6.9	U	
1	Benzene				78	0		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	tert-Amyl Methyl Ether				55	0		0.098	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	Methylcyclohexane				83	0		0.33	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				43	0		0.96	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
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*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092214\0922F009.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 12:11	**Quant Date:**	09/25/2014 11:35	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412938-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene				92	0		0.054	U	
2	n-Octane				85	0		0.16	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane				91	0d		0.058	U	
2	Chlorobenzene				112	0		0.11	U	
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene				105	0		0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0		0.10	U	
3	1,3,5-Trimethylbenzene				105	0		0.089	U	
3	4-Chlorotoluene				91	0		0.13	U	
3	tert-Butylbenzene				119	0		0.059	U	
3	1,2,4-Trimethylbenzene				105	0		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene				146	0d		0.12	U	
3	n-Butylbenzene				91	0d		0.054	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene				180	0		0.10	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	
3	Hexachlorobutadiene				225	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092214\0922F009.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 12:11	**Quant Date:**	09/25/2014 11:35	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412938-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene				128	0		0.088	U	
3	1,2,3-Trichlorobenzene				180	0		0.11	U	
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS13\DATA\092214\0922F009.D Vial: 8
Acq On : 22 Sep 2014 12:11 Operator: GH
Sample : MB Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 15:37:42 2014 Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

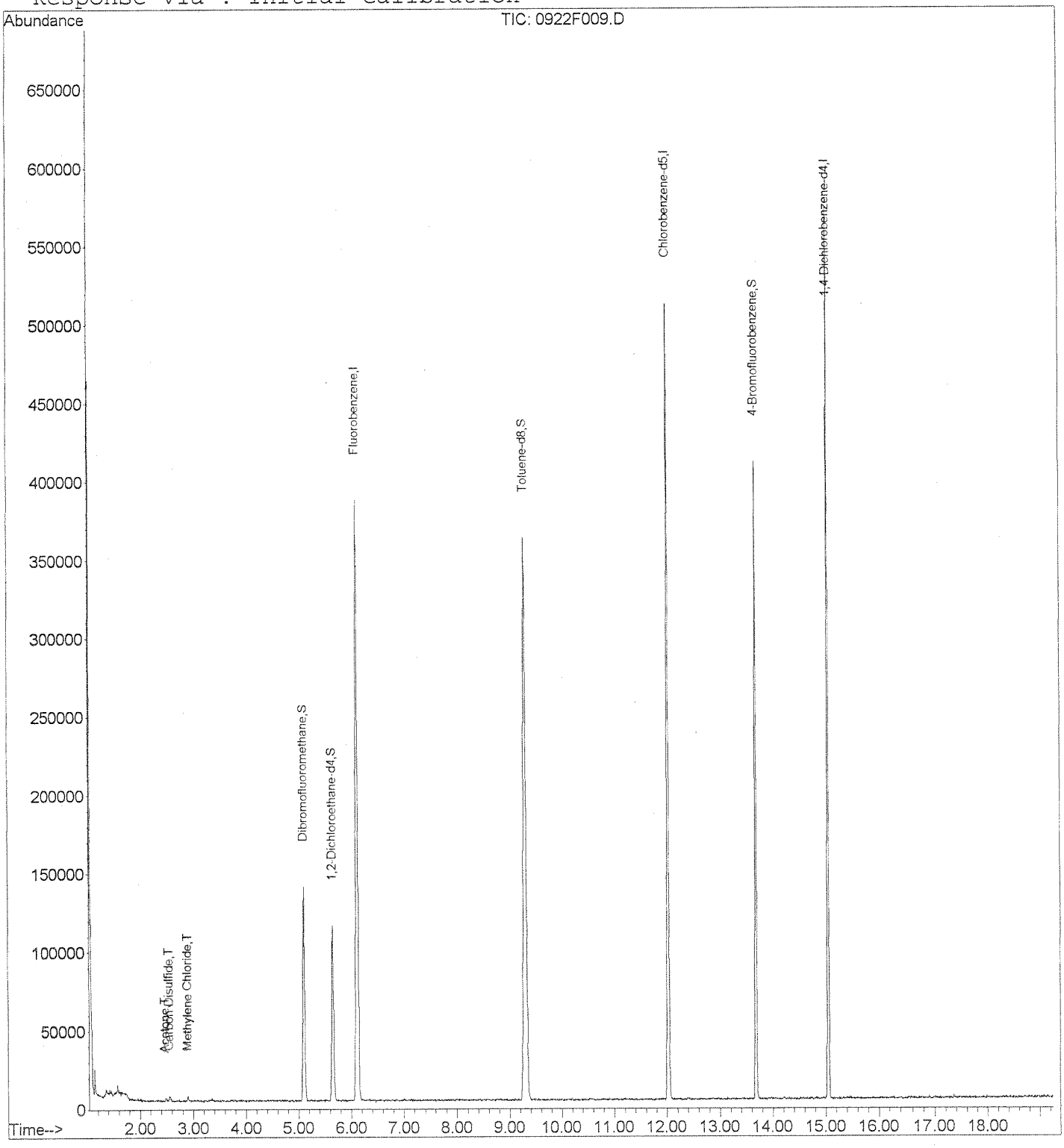
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.11	96	487921	10.00	PPB	0.00
64) Chlorobenzene-d5	12.03	82	193013	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	152339	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.10	113	105141	10.11	PPB	0.00
Spiked Amount 10.000			Recovery =	101.10%		
47) 1,2-Dichloroethane-d4	5.64	65	104867	10.29	PPB	0.00
Spiked Amount 10.000			Recovery =	102.90%		
62) Toluene-d8	9.30	98	464858	9.82	PPB	0.00
Spiked Amount 10.000			Recovery =	98.20%		
84) 4-Bromofluorobenzene	13.68	95	143572	9.14	PPB	0.00
Spiked Amount 10.000			Recovery =	91.40%		
Target Compounds						Qvalue
13) Acetone	2.48	43	1822	1.07	PPB	74
15) Carbon Disulfide	2.55	76	4426	0.12	PPB	96
20) Methylene Chloride	2.89	84	1470	0.11	PPB	89

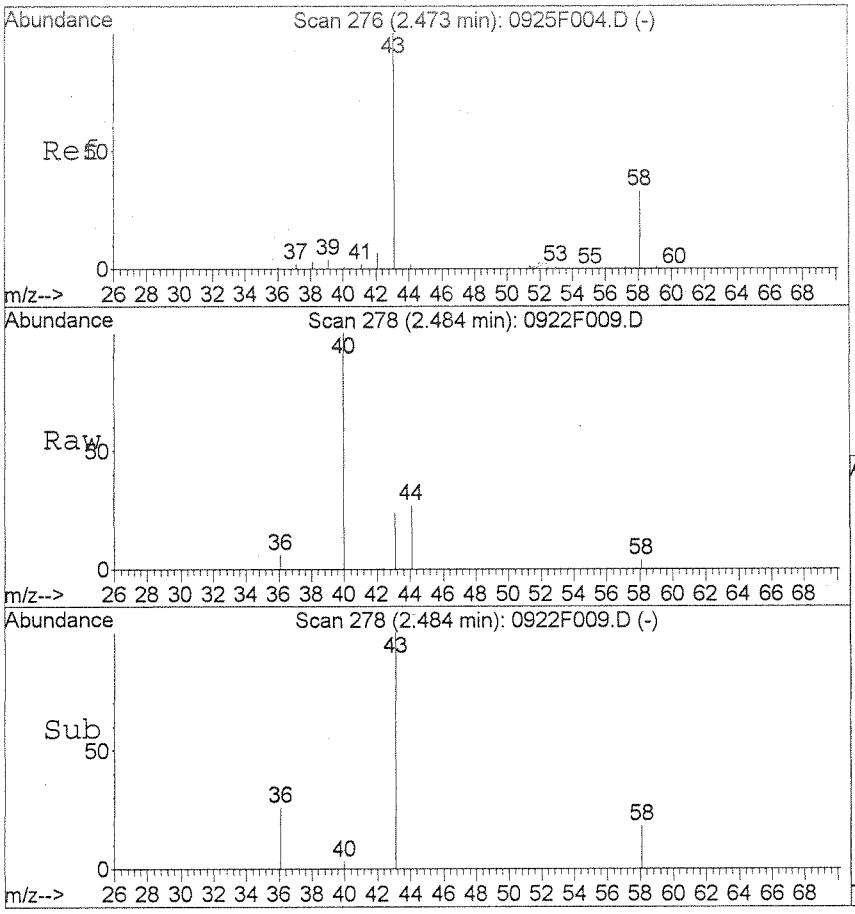
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F009.D
Acq On : 22 Sep 2014 12:11
Sample : MB
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 25 11:35 2014

Vial: 8
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration

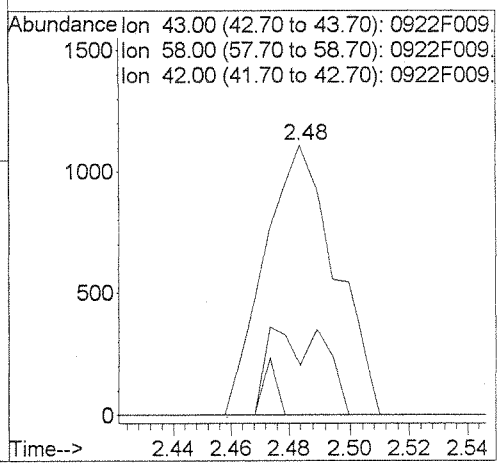


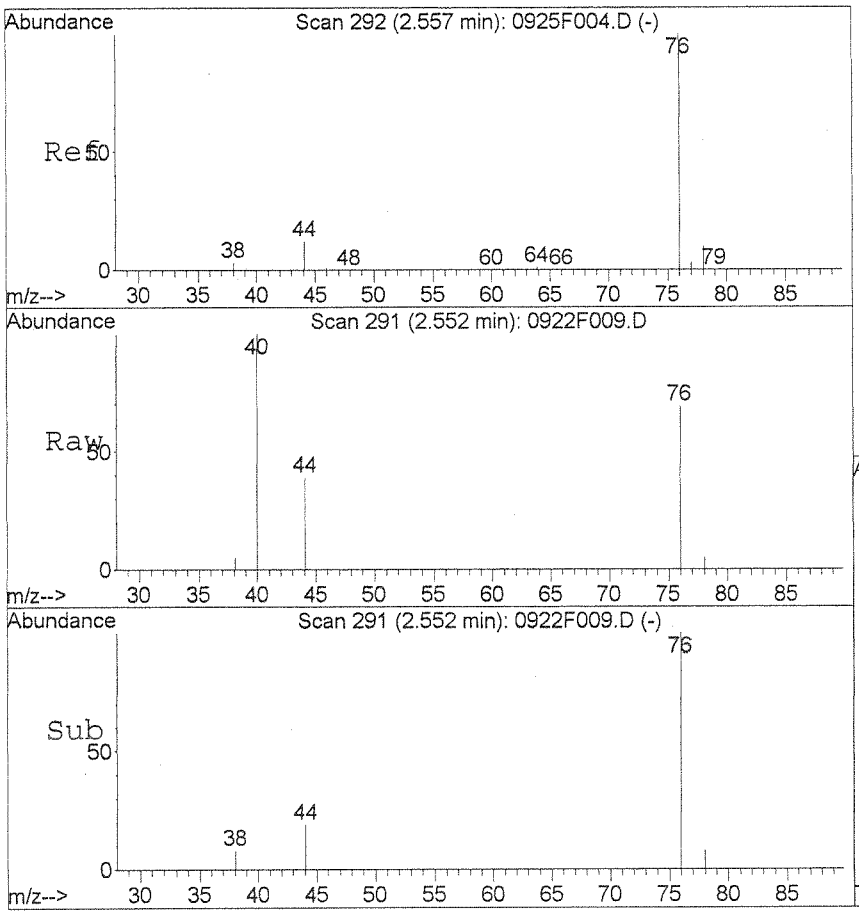


#13
Acetone
Concen: 1.07 PPB
RT: 2.48 min Scan# 278
Delta R.T. 0.01 min
Lab File: 0922F009.D
Acq: 22 Sep 2014 12:11

Tgt Ion: 43 Resp: 1822

Ion	Ratio	Lower	Upper
43	100		
58	18.5	3.8	63.8
42	0.0	0.0	37.8

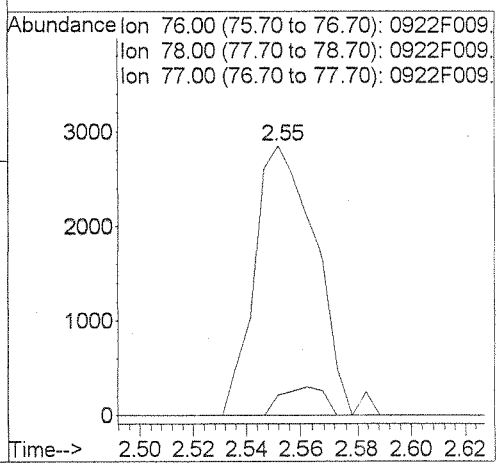


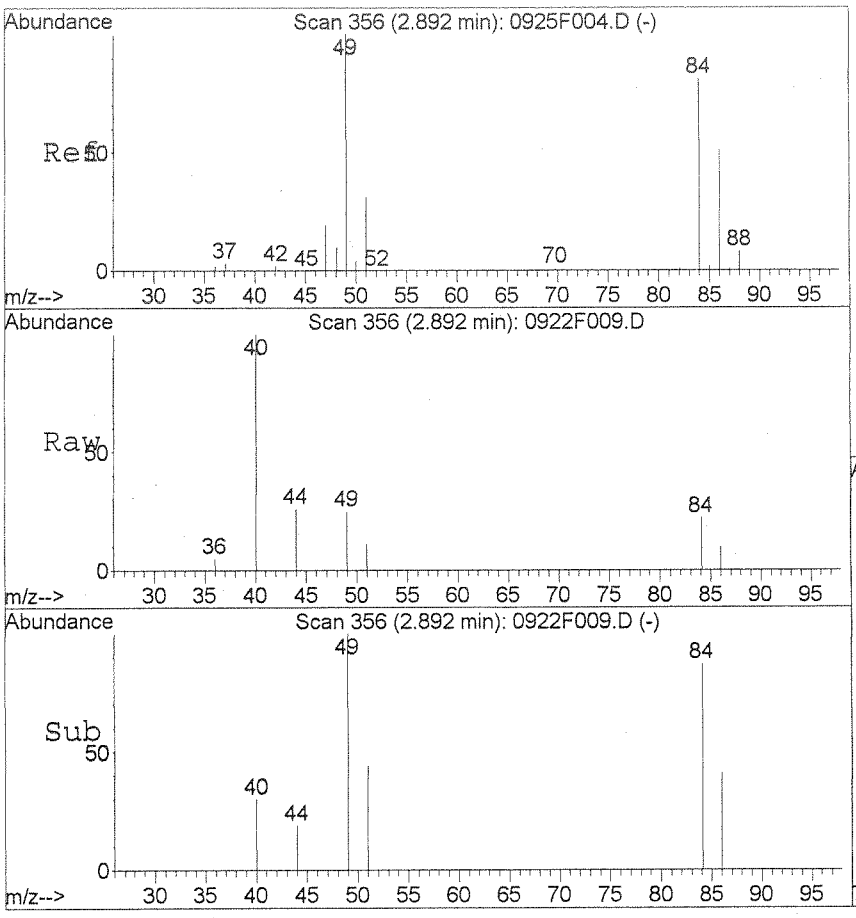


#15
Carbon Disulfide
Concen: 0.12 PPB
RT: 2.55 min Scan# 291
Delta R.T. 0.00 min
Lab File: 0922F009.D
Acq: 22 Sep 2014 12:11

Tgt Ion: 76 Resp: 4426

Ion	Ratio	Lower	Upper
76	100		
78	7.6	0.0	38.5
77	0.0	0.0	32.6

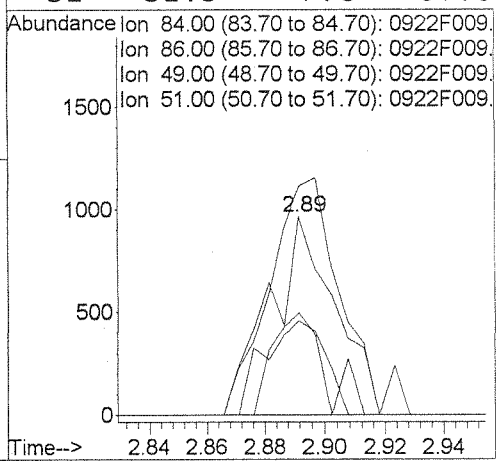




#20
Methylene Chloride
Concen: 0.11 PPB
RT: 2.89 min Scan# 356
Delta R.T. 0.00 min
Lab File: 0922F009.D
Acq: 22 Sep 2014 12:11

Tgt Ion: 84 Resp: 1470

Ion	Ratio	Lower	Upper
84	100		
86	47.4	35.8	95.8
49	115.5	86.8	146.8
51	51.3	7.8	67.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F011.D
Lab ID: KWG1412873-5
RunType: MB
Matrix: SOIL

Date Acquired: 09/19/2014 13:57
Date Quantitated: 09/19/2014 14:31
Batch ID: KWG1412874
Analysis Method: 8260C
MethodJoinID: MJ120

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutanol	0.0098	0.01	NA	MF
	1,4-Dioxane	0.0028	0.01	NA	
Continuing Calibration Recovery	Dichlorodifluoromethane	-61.9	NA	20	↓ mav RA ING
	Chloromethane	-35.4	NA	20	Cav ok
	Vinyl Chloride	-25.3	NA	20	
	Bromomethane	-34.4	NA	20	
	Chloroethane	-26.6	NA	20	
	Acrolein	-37.4	NA	20	MF
	tert-Butyl Alcohol	-22.3	NA	20	
	n-Hexane	-21.0	NA	20	
	Vinyl Acetate	-26.8	NA	20	
Continuing Calibration Minimum RF	Dichlorodifluoromethane	0.0798	0.100	NA	mav
	Isobutanol	0.0086	0.01	NA	MF

Primary Review: KR 9/19/14

Secondary Review: [signature] 9/19/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	1,4-Dioxane	0.0025	0.01	NA	M

Primary Review: KA 9/19/14

Secondary Review: 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F011.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 13:57	**Quant Date:**	09/19/2014 14:31	**Vial:**	10
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412873-5			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/19/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376463				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO			**Calibration ID:**	CAL12826
Title:					
Tune Ref:	J:\MS24\DATA\091914\0919F003.D			**Method ID:**	MJ120
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	393244	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	150054	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	136558	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	100025	50.95	102	82-146	OK
1	1,2-Dichloroethane-d4	3.76	0.00	0.00	65	93525	47.57	95	78-121	OK
1	Toluene-d8	5.26	0.00	0.00	98	361481	47.58	95	90-142	OK
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	127602	47.84	96	88-127	OK

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.12	U	
1	Chloromethane				50	0		0.18	U	
1	Vinyl Chloride				62	0		0.18	U	
1	Bromomethane				96	0		0.20	U	
1	Chloroethane				64	0		0.74	U	
1	Dichlorofluoromethane (CFC 21)				67	0		0.15	U	
1	Trichlorofluoromethane				101	0		0.085	U	
1	Diethyl Ether				59	0		0.12	U	
1	Acrolein				56	0		1.7	U	
1	Trichlorotrifluoroethane				151	0		0.24	U	
1	1,1-Dichloroethene				96	0		0.25	U	
1	Acetone	1.95		0.00	43	4301	8.90	8.90	J	
1	Iodomethane (Methyl Iodide)				142	0		0.21	U	
1	Carbon Disulfide	1.99	-0.01	0.00	76	963	0.1900	0.190	J	

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
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e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F011.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 13:57	**Quant Date:**	09/19/2014 14:31	**Vial:**	10
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412873-5			**Soln Conc. Units:**	PPB

Target Compounds — **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	3-Chloro-1-propene				76	0d		0.54	U	
1	Methyl Acetate				43	0d		0.57	U	
1	Acetonitrile				40	0d		23	U	
1	Methylene Chloride	2.23		0.00	84	9055	4.36	4.36	J	
1	tert-Butyl Alcohol				59	0		3.9	U	
1	Acrylonitrile				53	0		0.43	U	
1	Methyl tert-Butyl Ether	2.38		0.00	73	5534	1.06	1.06	J	
1	trans-1,2-Dichloroethene				96	0		0.12	U	
1	n-Hexane	2.53		0.00	57	602	0.2700	0.270	J	
1	Diisopropyl Ether				45	0		0.11	U	
1	1,1-Dichloroethane				63	0		0.12	U	
1	Vinyl Acetate				86	0		0.31	U	
1	Chloroprene				53	0		0.35	U	
1	tert-Butyl Ethyl Ether				59	0		0.065	U	
1	2,2-Dichloropropane				77	0		0.098	U	
1	cis-1,2-Dichloroethene				96	0		0.12	U	
1	2-Butanone (MEK)				72	0		0.90	U	
1	Propionitrile				54	0		0.80	U	
1	Ethyl Acetate				61	0		20	U	
1	Methacrylonitrile				67	0d		0.44	U	
1	Bromochloromethane				128	0		0.24	U	
1	Chloroform				83	0		0.11	U	
1	Cyclohexane				56	0		0.15	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.11	U	
1	Carbon Tetrachloride				117	0		0.094	U	
1	1,1-Dichloropropene				75	0		0.13	U	
1	Isobutanol				43	0		8.6	U	
1	Benzene				78	0		0.054	U	
1	1,2-Dichloroethane (EDC)				62	0d		0.070	U	
1	tert-Amyl Methyl Ether				55	0		0.20	U	
1	Trichloroethene (TCE)				95	0		0.15	U	
1	Methylcyclohexane				83	0		0.11	U	
1	1,2-Dichloropropane				63	0		0.13	U	
1	Dibromomethane				93	0		0.28	U	
1	Methyl Methacrylate				69	0		0.39	U	
1	1,4-Dioxane				88	0		14	U	
1	Bromodichloromethane				83	0		0.16	U	
1	2-Nitropropane				41	0d		1.1	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.43	U	
1	cis-1,3-Dichloropropene				75	0		0.13	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		1.8	U	
1	Toluene				92	0		0.15	U	

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e: Result >= MRL, but MRL less than low point of ICAL
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Data File:	J:\MS24\DATA\091914\0919F011.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 13:57	**Quant Date:**	09/19/2014 14:31	**Vial:**	10
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412873-5			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	trans-1,3-Dichloropropene				75	0		0.11	U	
2	Ethyl Methacrylate				69	0d		0.14	U	
2	1,1,2-Trichloroethane				83	0		0.15	U	
2	Tetrachloroethene (PCE)				164	0		0.16	U	
2	2-Hexanone				57	0		0.93	U	
2	1,3-Dichloropropane				76	0		0.12	U	
2	Dibromochloromethane				129	0		0.18	U	
2	1,2-Dibromoethane (EDB)				107	0		0.094	U	
2	1-Chlorohexane	6.60	0.01	0.00	91	609	0.2600	0.260	J	
2	Chlorobenzene				112	0		0.065	U	
2	Ethylbenzene				106	0		0.094	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0		0.10	U	
2	o-Xylene				106	0		0.081	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.14	U	
2	Isopropylbenzene				105	0		0.081	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.2	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.13	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.43	U	
3	Bromobenzene				156	0		0.088	U	
3	n-Propylbenzene				91	0		0.13	U	
3	1,2,3-Trichloropropane				110	0		0.45	U	
3	2-Chlorotoluene				91	0		0.12	U	
3	1,3,5-Trimethylbenzene				105	0		0.092	U	
3	4-Chlorotoluene				91	0		0.088	U	
3	tert-Butylbenzene				119	0		0.14	U	
3	1,2,4-Trimethylbenzene				105	0d		0.054	U	
3	sec-Butylbenzene				105	0d		0.074	U	
3	4-Isopropyltoluene	8.85		0.00	119	522	0.0800	0.0800	J	
3	1,3-Dichlorobenzene				146	0		0.094	U	
3	1,4-Dichlorobenzene				146	0		0.086	U	
3	n-Butylbenzene	9.24	-0.01	0.00	91	609	0.1000	0.100	J	
3	1,2-Dichlorobenzene				146	0		0.077	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.40	U	
3	1,2,4-Trichlorobenzene	10.80		0.00	180	545	0.2100	0.210	J	
3	Hexachlorobutadiene				225	0		0.40	U	
3	Naphthalene	11.03		0.00	128	2716	0.4500	0.450	J	
3	1,2,3-Trichlorobenzene	11.25	-0.01	0.00	180	670	0.2700	0.270	J	
	4-Vinyl-1-cyclohexene				0	0		5.0	U	NR
	Benzyl Chloride				0	0		5.0	U	NR
	1,3-Butadiene				0	0		1.0	U	NR

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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F011.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 13:57	**Quant Date:**	09/19/2014 14:31	**Vial:**	10
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412873-5			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT	RT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2-Methylpentane			0	0		5.0	U	NR
Cyclohexanone			0	0		5.0	U	NR
Tetrahydrofuran			0	0		5.0	U	NR
n-Heptane			0	0		5.0	U	NR
2,2-Dichloro-1,1,1-trifluoroethan			0	0		5.0	U	NR
1,1,2-Trifluoroethane			0	0		10	U	NR
2,2,4-Trimethylpentane			0	0		5.0	U	NR
Bis(chloromethyl) Ether			0	0		10	U	NR
Ethyl Alcohol			0	0		200	U	NR
2-Propanol			0	0		200	U	NR
Hexachloroethane			0	0		1.0	U	NR
n-Butyl Alcohol			0	0		250	U	NR
3-Methylpentane			0	0		5.0	U	NR
Methylcyclopentane			0	0		5.0	U	NR

Prep Amount:	5.00 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS24\DATA\091914\0919F011.D
Acq On : 19 Sep 2014 1:57 pm
Sample : MB
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:31:02 2014

Vial: 10
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	393244	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	150054	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	136558	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	100025	50.95	PPB		0.00
Spiked Amount 50.000			Recovery =	101.90%			
44) 1,2-Dichloroethane-d4	3.76	65	93525	47.57	PPB		0.00
Spiked Amount 50.000			Recovery =	95.14%			
59) Toluene-d8	5.26	98	361481	47.58	PPB		0.00
Spiked Amount 50.000			Recovery =	95.16%			
80) 4-Bromofluorobenzene	7.76	95	127602	47.84	PPB		0.00
Spiked Amount 50.000			Recovery =	95.68%			
Target Compounds							Qvalue
13) Acetone	1.95	43	4301	8.90	PPB		97
15) Carbon Disulfide	1.99	76	963	0.19	PPB		90
19) Methylene Chloride	2.23	84	9055	4.36	PPB		90
22) Methyl tert-Butyl Ether	2.38	73	5534	1.06	PPB		97
24) Hexane	2.53	57	602	0.27	PPB		83
70) 1-Chlorohexane	6.60	91	609	0.26	PPB		66
93) p-Isopropyltoluene	8.85	119	522	0.08	PPB		63
96) n-Butylbenzene	9.24	91	609	0.10	PPB		74
100) 1,2,4-Trichlorobenzene	10.80	180	545	0.21	PPB	#	53
102) Naphthalene	11.03	128	2716	0.45	PPB		86
103) 1,2,3-Trichlorobenzene	11.25	180	670	0.27	PPB		88

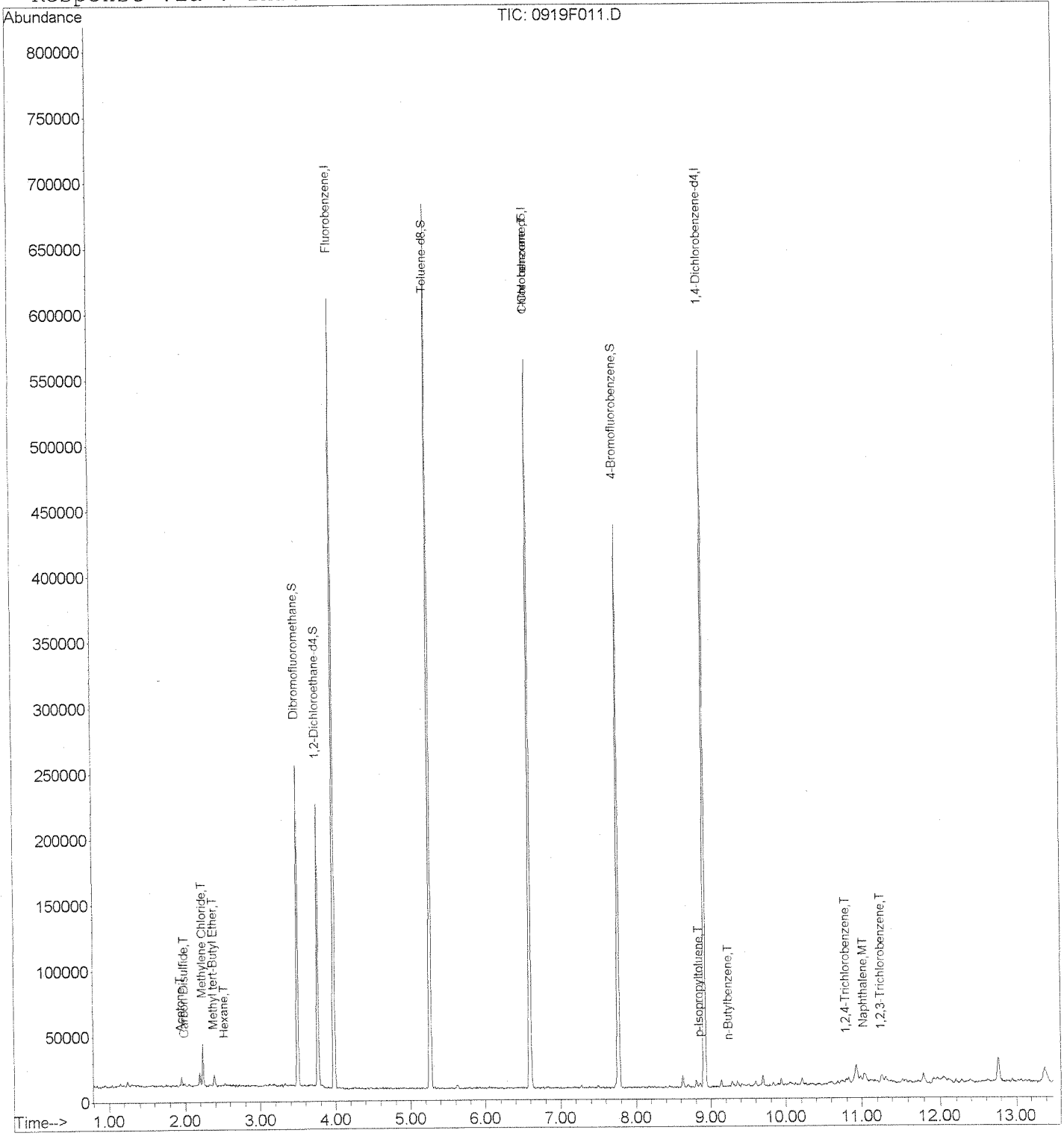
(#) = qualifier out of range (m) = manual integration

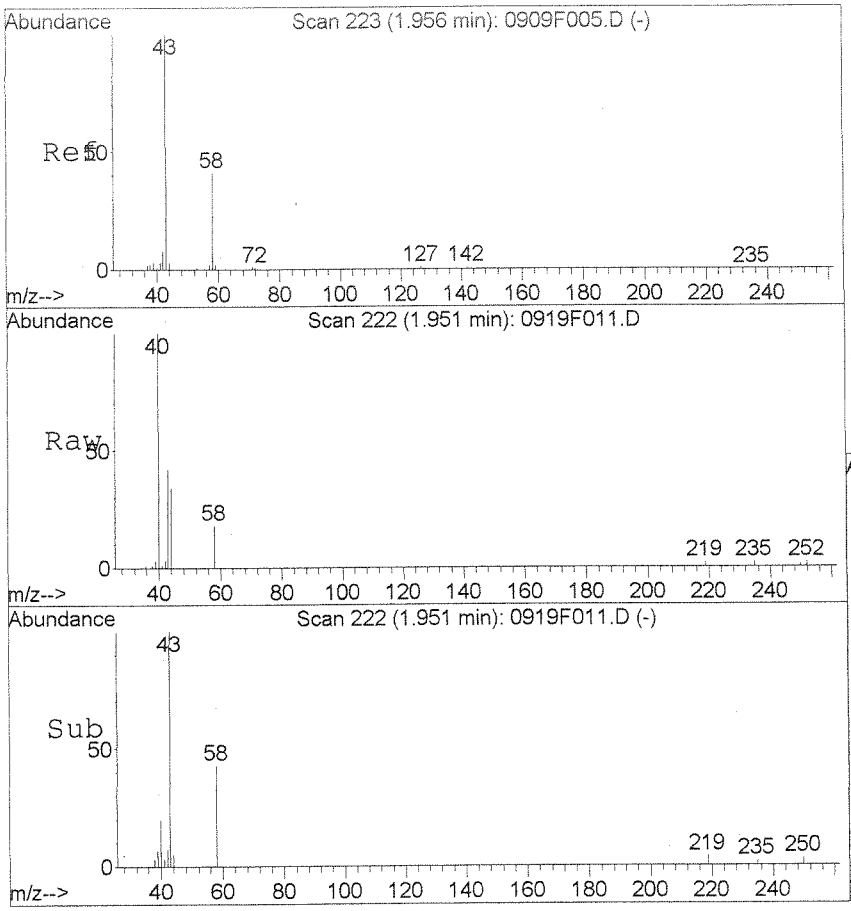
Data File : J:\MS24\DATA\091914\0919F011.D
Acq On : 19 Sep 2014 1:57 pm
Sample : MB
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:31 2014

Vial: 10
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

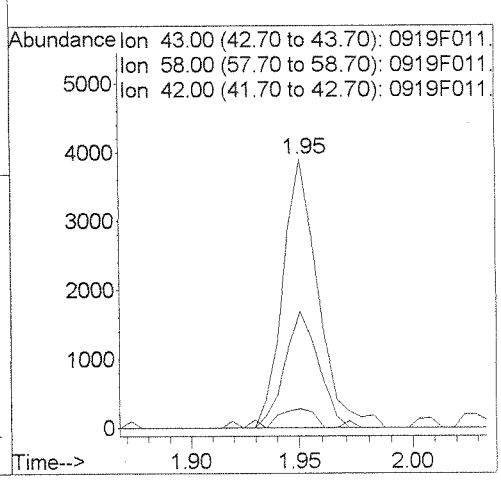


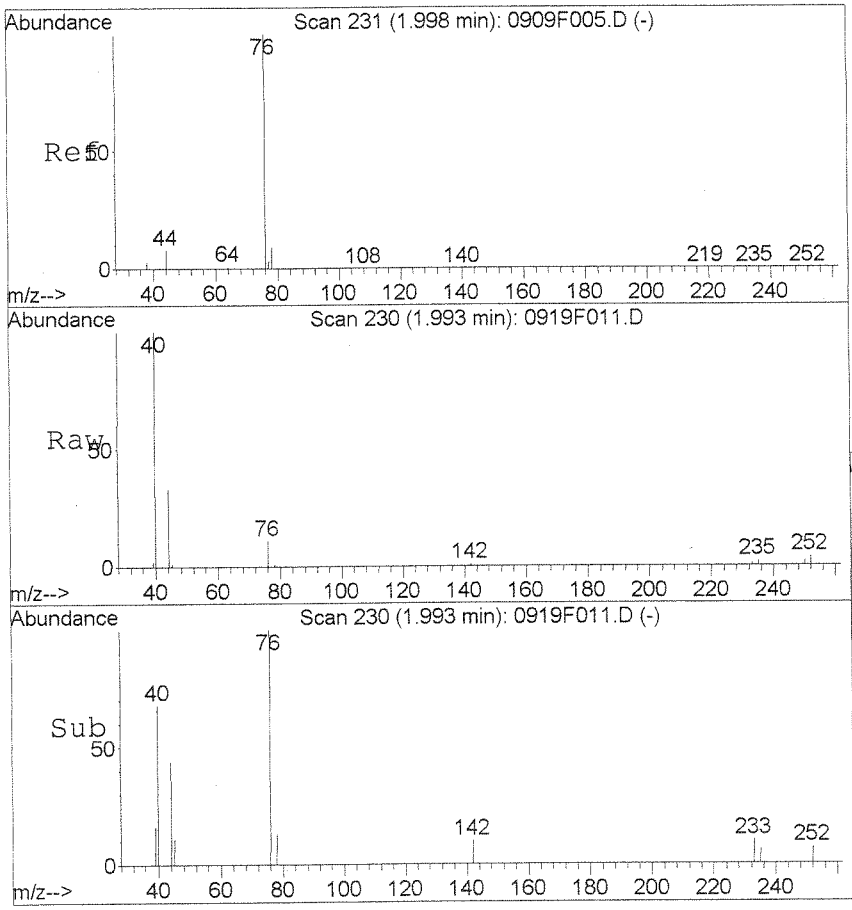


#13
Acetone
Concen: 8.90 PPB
RT: 1.95 min Scan# 222
Delta R.T. -0.01 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 43 Resp: 4301

Ion	Ratio	Lower	Upper
43	100		
58	43.3	11.3	71.3
42	7.2	0.0	37.7

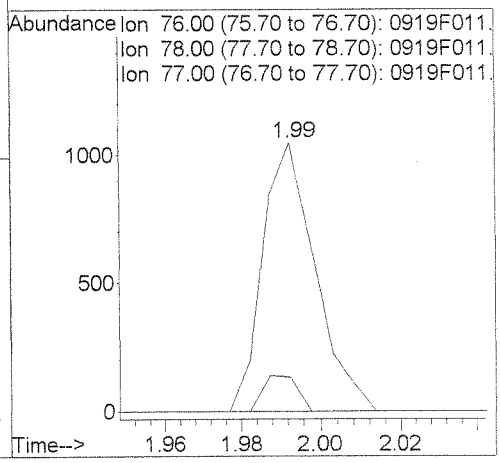


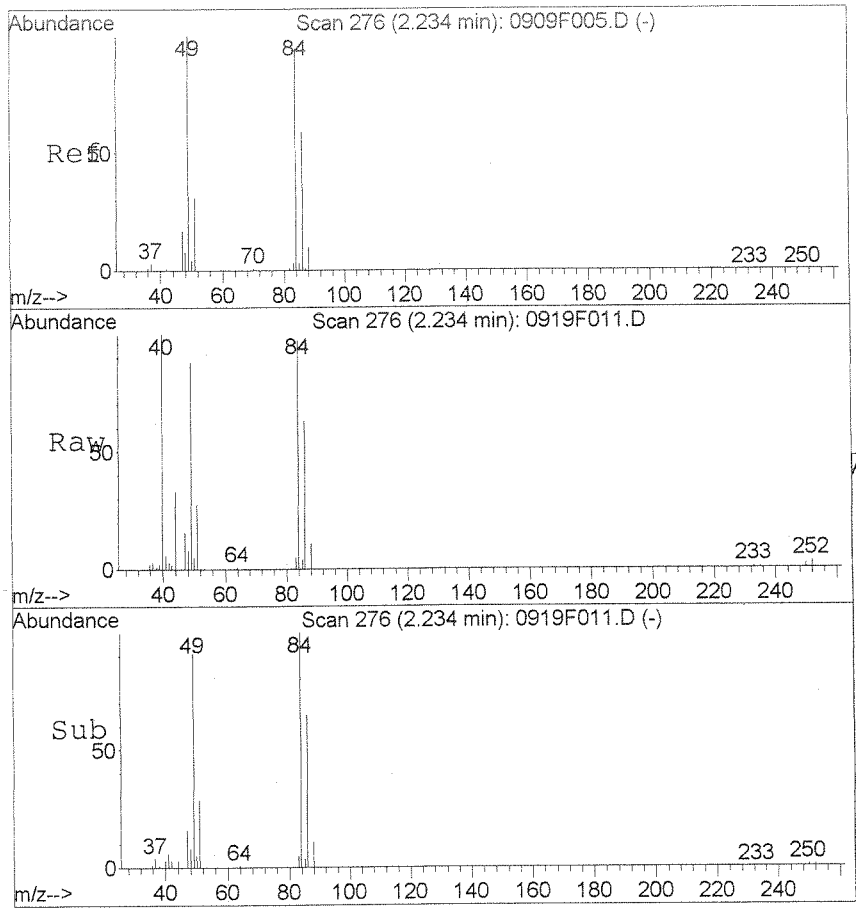


#15
Carbon Disulfide
Concen: 0.19 PPB
RT: 1.99 min Scan# 230
Delta R.T. -0.01 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 76 Resp: 963

Ion	Ratio	Lower	Upper
76	100		
78	12.7	0.0	39.0
77	0.0	0.0	32.6

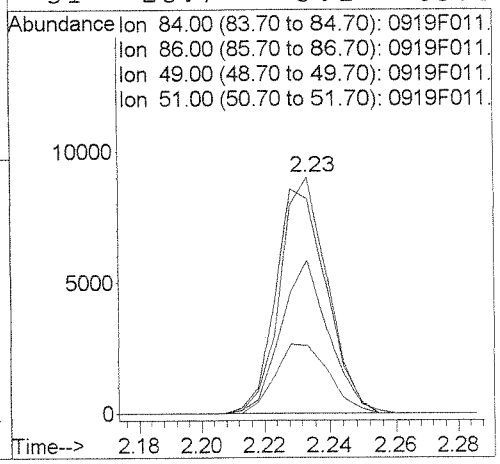


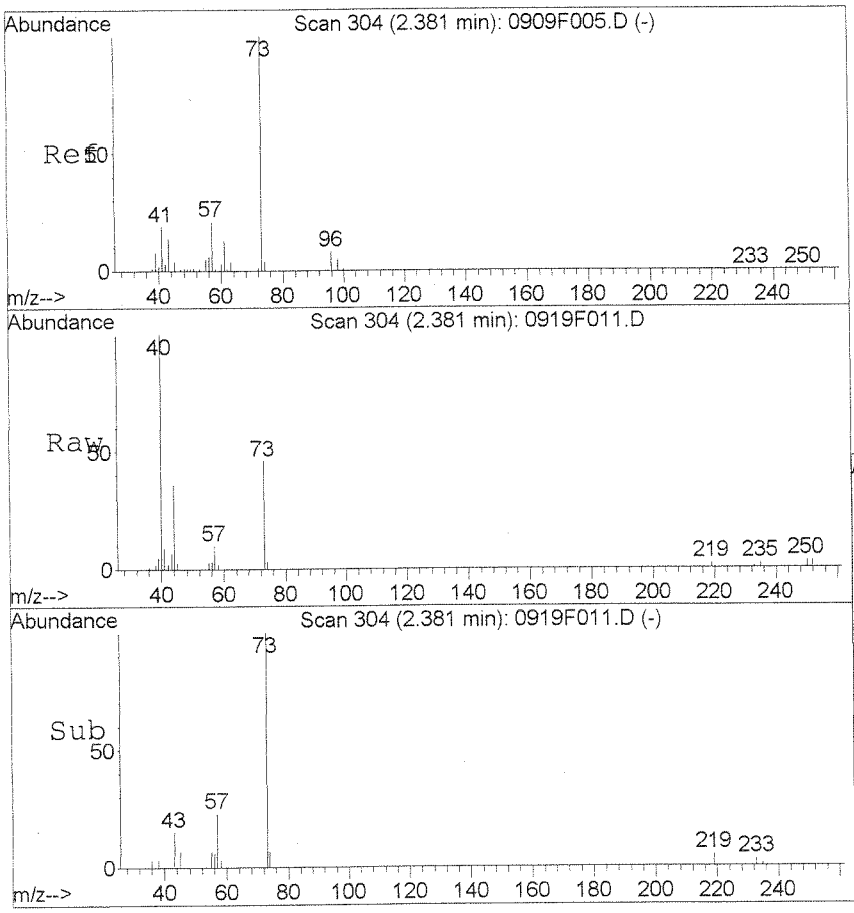


#19
Methylene Chloride
Concen: 4.36 PPB
RT: 2.23 min Scan# 276
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 84 Resp: 9055

Ion	Ratio	Lower	Upper
84	100		
86	64.8	32.9	92.9
49	90.9	76.9	136.9
51	28.7	3.1	63.1

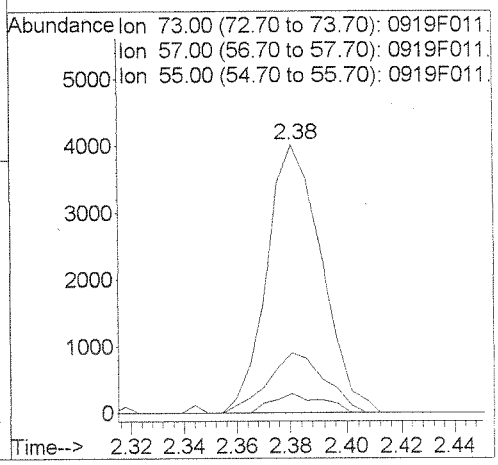


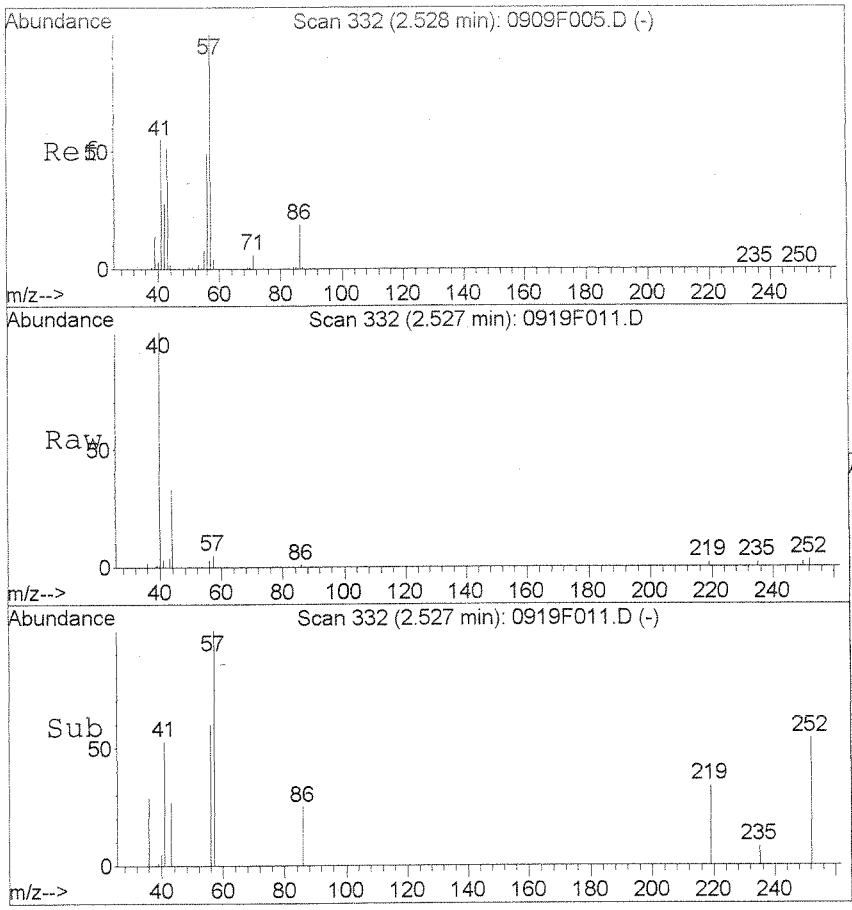


#22
Methyl tert-Butyl Ether
Concen: 1.06 PPB
RT: 2.38 min Scan# 304
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 73 Resp: 5534

Ion	Ratio	Lower	Upper
73	100		
57	22.6	0.0	51.5
55	7.4	0.0	35.6

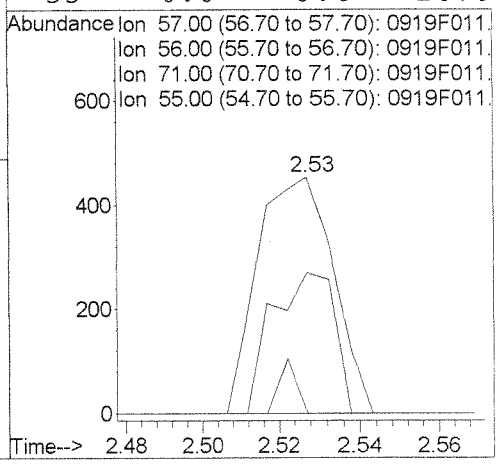


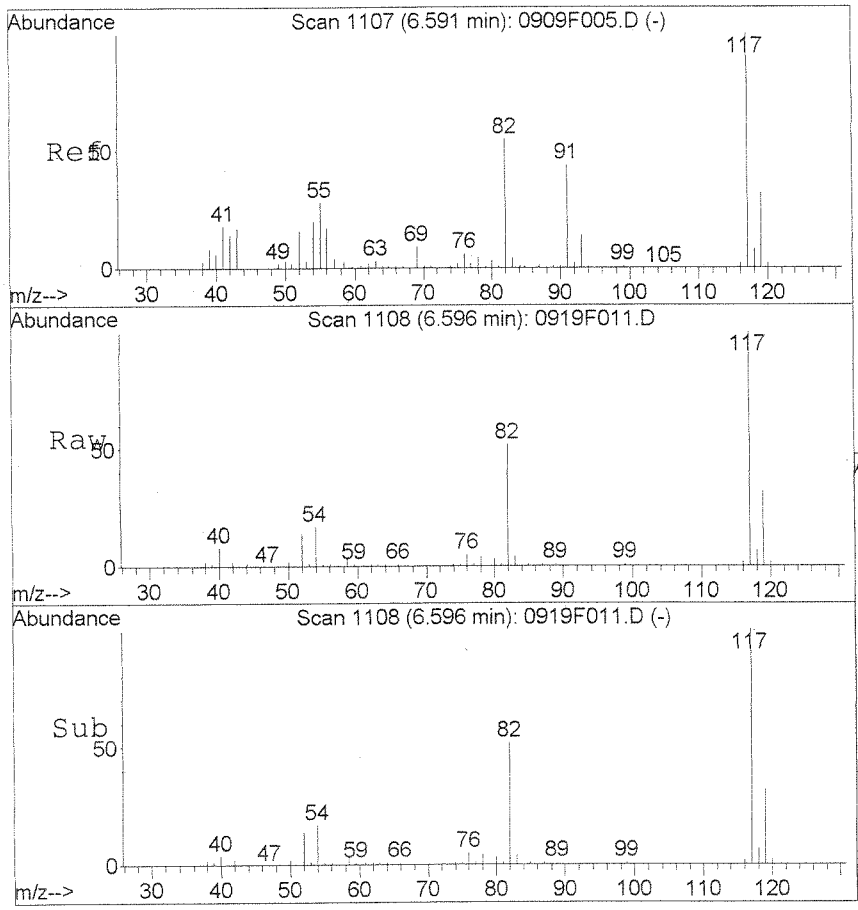


#24
Hexane
Concen: 0.27 PPB
RT: 2.53 min Scan# 332
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 57 Resp: 602

Ion	Ratio	Lower	Upper
57	100		
56	59.6	18.8	78.8
71	0.0	0.0	35.9
55	0.0	0.0	20.6

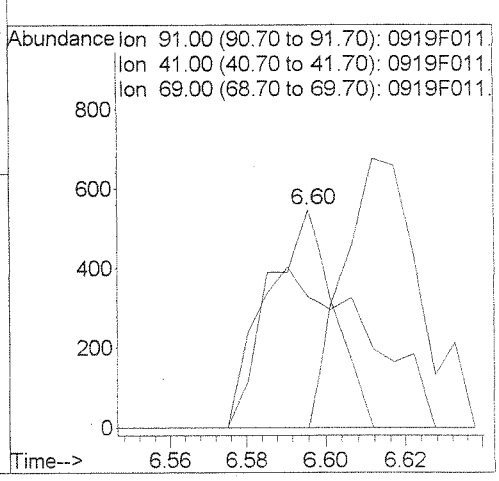


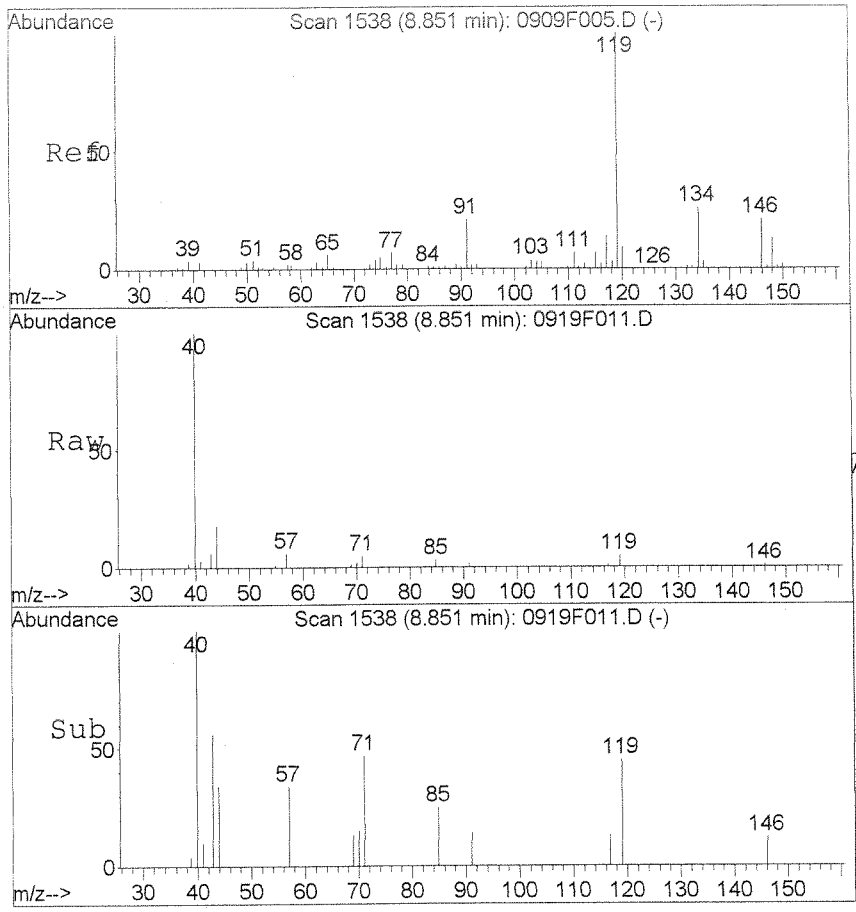


#70
1-Chlorohexane
Concen: 0.26 PPB
RT: 6.60 min Scan# 1108
Delta R.T. 0.01 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 91 Resp: 609

Ion	Ratio	Lower	Upper
91	100		
41	60.0	11.2	71.2
69	0.0	0.0	49.8

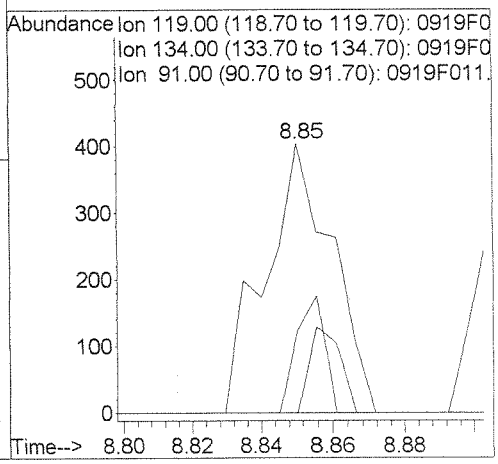


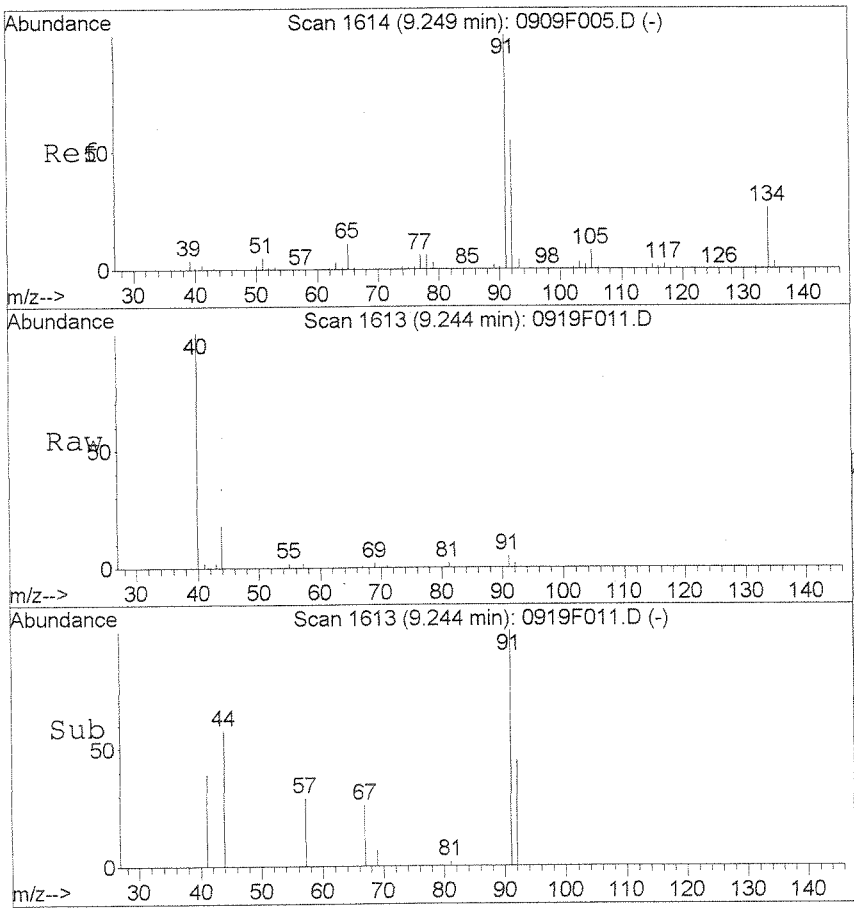


#93
p-Isopropyltoluene
Concen: 0.08 PPB
RT: 8.85 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion:119 Resp: 522

Ion	Ratio	Lower	Upper
119	100		
134	0.0	0.0	56.2
91	30.2	0.0	50.8

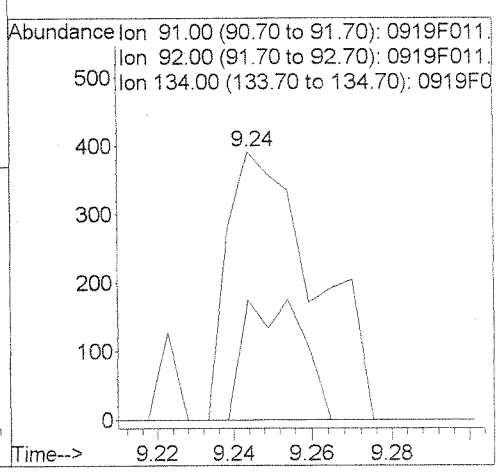


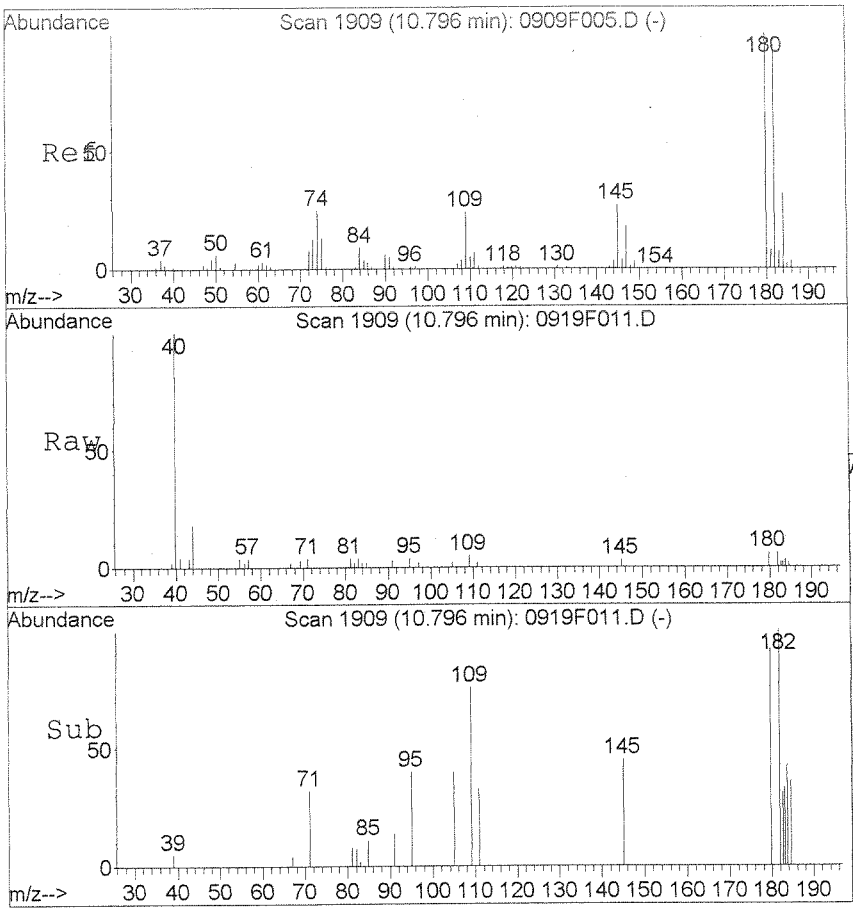


#96
n-Butylbenzene
Concen: 0.10 PPB
RT: 9.24 min Scan# 1613
Delta R.T. -0.01 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion: 91 Resp: 609

Ion	Ratio	Lower	Upper
91	100		
92	44.6	24.7	84.7
134	0.0	0.0	56.1

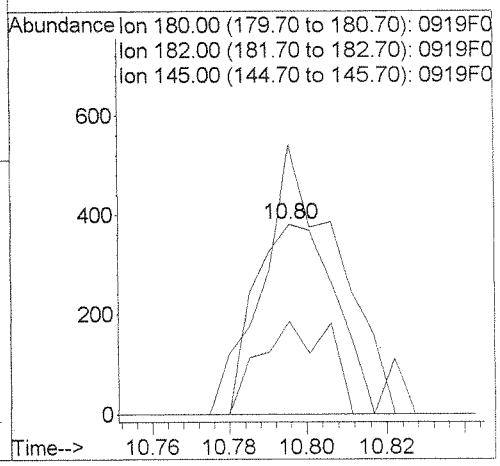


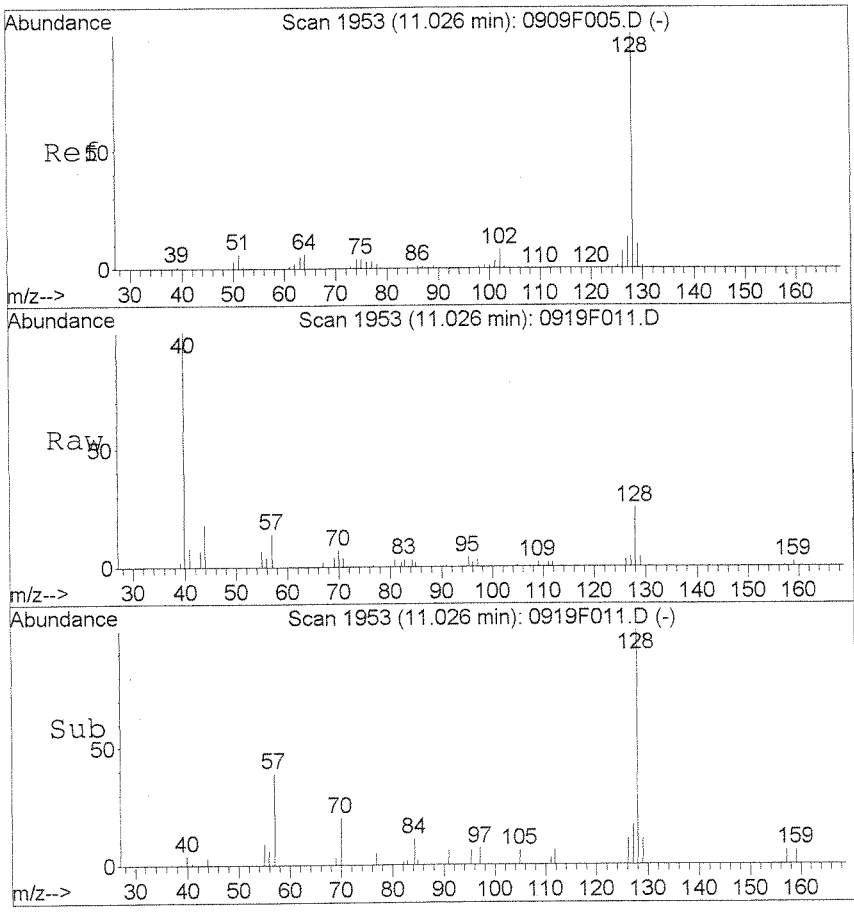


#100
1,2,4-Trichlorobenzene
Concen: 0.21 PPB
RT: 10.80 min Scan# 1909
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion:180 Resp: 545

Ion	Ratio	Lower	Upper
180	100		
182	142.0	64.9	124.9#
145	48.8	0.0	57.5

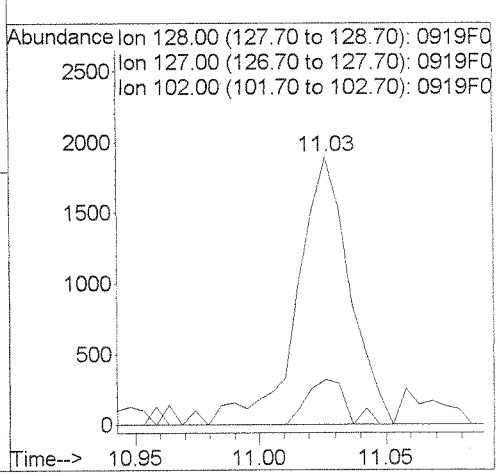


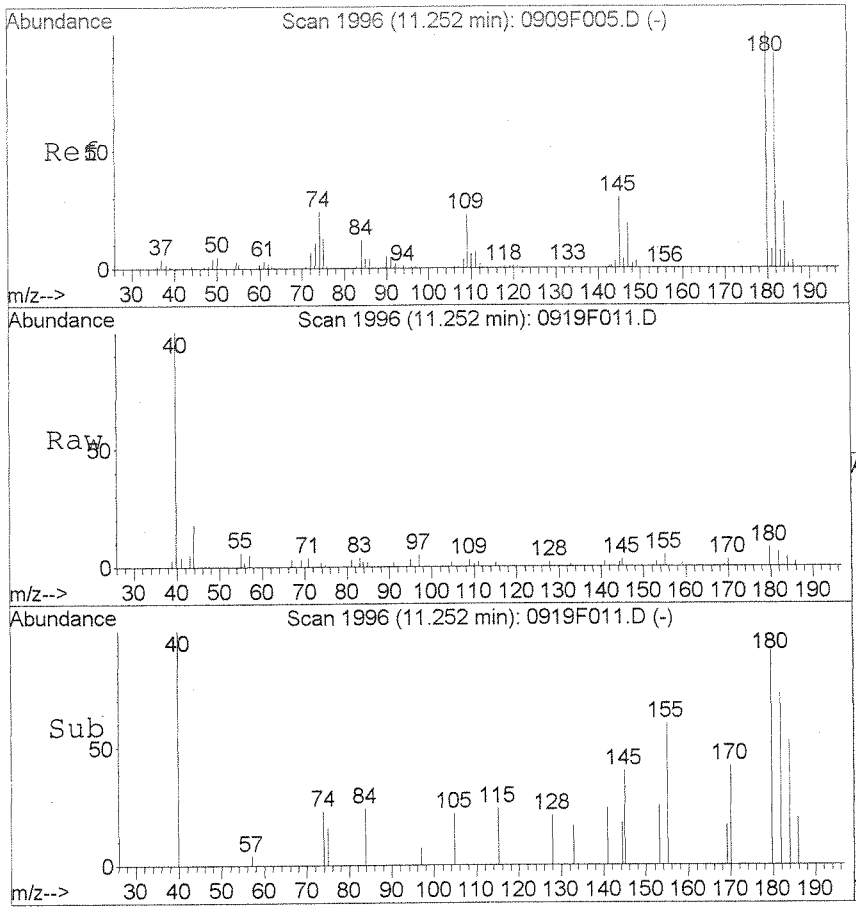


#102
Naphthalene
Concen: 0.45 PPB
RT: 11.03 min Scan# 1953
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion:128 Resp: 2716

Ion	Ratio	Lower	Upper
128	100		
127	16.8	0.0	43.1
102	0.0	0.0	37.8

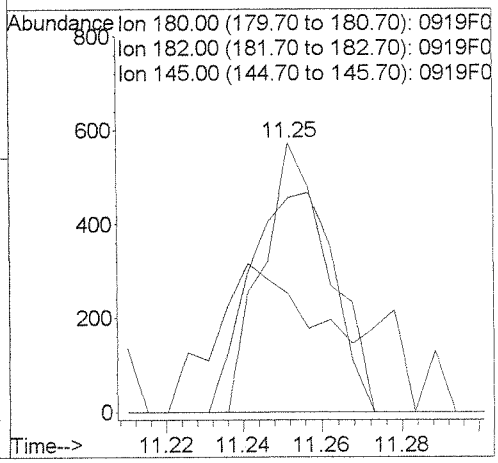




#103
1,2,3-Trichlorobenzene
Concen: 0.27 PPB
RT: 11.25 min Scan# 1996
Delta R.T. -0.00 min
Lab File: 0919F011.D
Acq: 19 Sep 2014 1:57 pm

Tgt Ion:180 Resp: 670

Ion	Ratio	Lower	Upper
180	100		
182	79.6	61.5	121.5
145	24.8	0.0	59.9



Exception Report

Data File: J:\MS18\DATA\092014\0920F031.D
Lab ID: K1409859-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/20/2014 18:45
Date Quantitated: 09/22/2014 09:44
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ11272

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Base Run

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	passes CCV
Above Highest ICAL Level	Trichloroethene (TCE)	212.54	NA	80	see SOP

Primary Review: 9/23/14

Secondary Review: 9/24/14

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F031.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:45	**Quant Date:**	09/22/2014 09:44	**Vial:**	30
Run Type:	SMPL			**Dilution:**	2.5
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**	09/08/2014	**Receive Date:**	09/13/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409859
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376682				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ11272
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	289306	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	118995	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	112937	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	60476	9.53	95	85-115	OK
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	76786	10.28	103	70-120	OK
1	Toluene-d8	8.10	0.00	0.00	98	282613	9.67	97	85-120	OK
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	104035	9.69	97	75-120	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.33	U	
1	Chloromethane	1.62		0.00	50	1375	0.1200	0.30	JD	
1	Vinyl Chloride				62	0		0.19	U	
1	Bromomethane				96	0		0.25	U	
1	Chloroethane				64	0d		0.40	U	
1	Trichlorofluoromethane	2.31	0.01	0.00	101	5502	0.3700	0.93	JD	
1	1,1-Dichloroethene				96	0		0.20	U	
1	Acetone	2.87		0.00	43	2823	2.05	8.3	U	
1	Carbon Disulfide				76	0		0.18	U	
1	Methylene Chloride	3.33		0.00	84	1964	0.2200	0.55	JD	
1	Methyl tert-Butyl Ether				73	0		0.28	U	
1	trans-1,2-Dichloroethene				96	0		0.18	U	
1	1,1-Dichloroethane				63	0		0.20	U	
1	2,2-Dichloropropane				77	0		0.15	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F031.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:45	**Quant Date:**	09/22/2014 09:44	**Vial:**	30
Run Type:	SMPL			**Dilution:**	2.5
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,2-Dichloroethene				96	0		0.17	U	
1	2-Butanone (MEK)				72	0		4.8	U	
1	Bromochloromethane				128	0		0.40	U	
1	Chloroform	5.33	0.01	0.00	83	1009	0.0700	0.18	U	
1	1,1,1-Trichloroethane (TCA)	5.49		0.00	97	5085	0.4200	1.1	JD	
1	Carbon Tetrachloride				117	0d		0.24	U	
1	1,1-Dichloropropene				75	0		0.23	U	
1	Benzene				78	0d		0.16	U	
1	1,2-Dichloroethane (EDC)				62	0		0.20	U	
1	Trichloroethene (TCE)	6.73		0.00	95	1777386	212.54	530	ED	NR
1	1,2-Dichloropropane				63	0		0.24	U	
1	Dibromomethane				93	0		0.38	U	
1	Bromodichloromethane				83	0		0.23	U	
1	cis-1,3-Dichloropropene				75	0		0.45	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		6.5	U	
1	Toluene				92	0		0.14	U	
2	trans-1,3-Dichloropropene				75	0		0.17	U	
2	1,1,2-Trichloroethane				83	0		0.35	U	
2	Tetrachloroethene (PCE)				164	0		0.25	U	
2	2-Hexanone				57	0		6.8	U	
2	1,3-Dichloropropane				76	0		0.35	U	
2	Dibromochloromethane				129	0		0.35	U	
2	1,2-Dibromoethane (EDB)				107	0		0.25	U	
2	Chlorobenzene				112	0		0.28	U	
2	Ethylbenzene				106	0		0.13	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.28	U	
2	m,p-Xylenes				106	0		0.28	U	
2	o-Xylene				106	0		0.19	U	
2	Styrene				103	0		0.23	U	
2	Bromoform				173	0		0.40	U	
2	Isopropylbenzene				105	0		0.13	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.40	U	
3	Bromobenzene				156	0		0.30	U	
3	n-Propylbenzene				91	0		0.14	U	
3	1,2,3-Trichloropropane				110	0		0.50	U	
3	2-Chlorotoluene				91	0		0.25	U	
3	1,3,5-Trimethylbenzene				105	0		0.23	U	
3	4-Chlorotoluene				91	0		0.33	U	
3	tert-Butylbenzene				119	0		0.15	U	
3	1,2,4-Trimethylbenzene				105	0		0.18	U	
3	sec-Butylbenzene				105	0		0.16	U	
3	4-Isopropyltoluene				119	0		0.15	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F031.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:45	**Quant Date:**	09/22/2014 09:44	**Vial:**	30
Run Type:	SMPL			**Dilution:**	2.5
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	1,3-Dichlorobenzene				146	0		0.25	U	
3	1,4-Dichlorobenzene				146	0		0.30	U	
3	n-Butylbenzene				91	0		0.14	U	
3	1,2-Dichlorobenzene				146	0		0.30	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.50	U	
3	1,2,4-Trichlorobenzene				180	0		0.24	U	
3	Hexachlorobutadiene				225	0		0.28	U	
3	Naphthalene				128	0		0.22	U	
3	1,2,3-Trichlorobenzene				180	0		0.28	U	

Prep Amount:	10 ml	**Dilution:**	2.5
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F031.D
Acq On : 20 Sep 2014 6:45 pm
Sample : K9859-012BASE 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:56:19 2014

Vial: 30
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

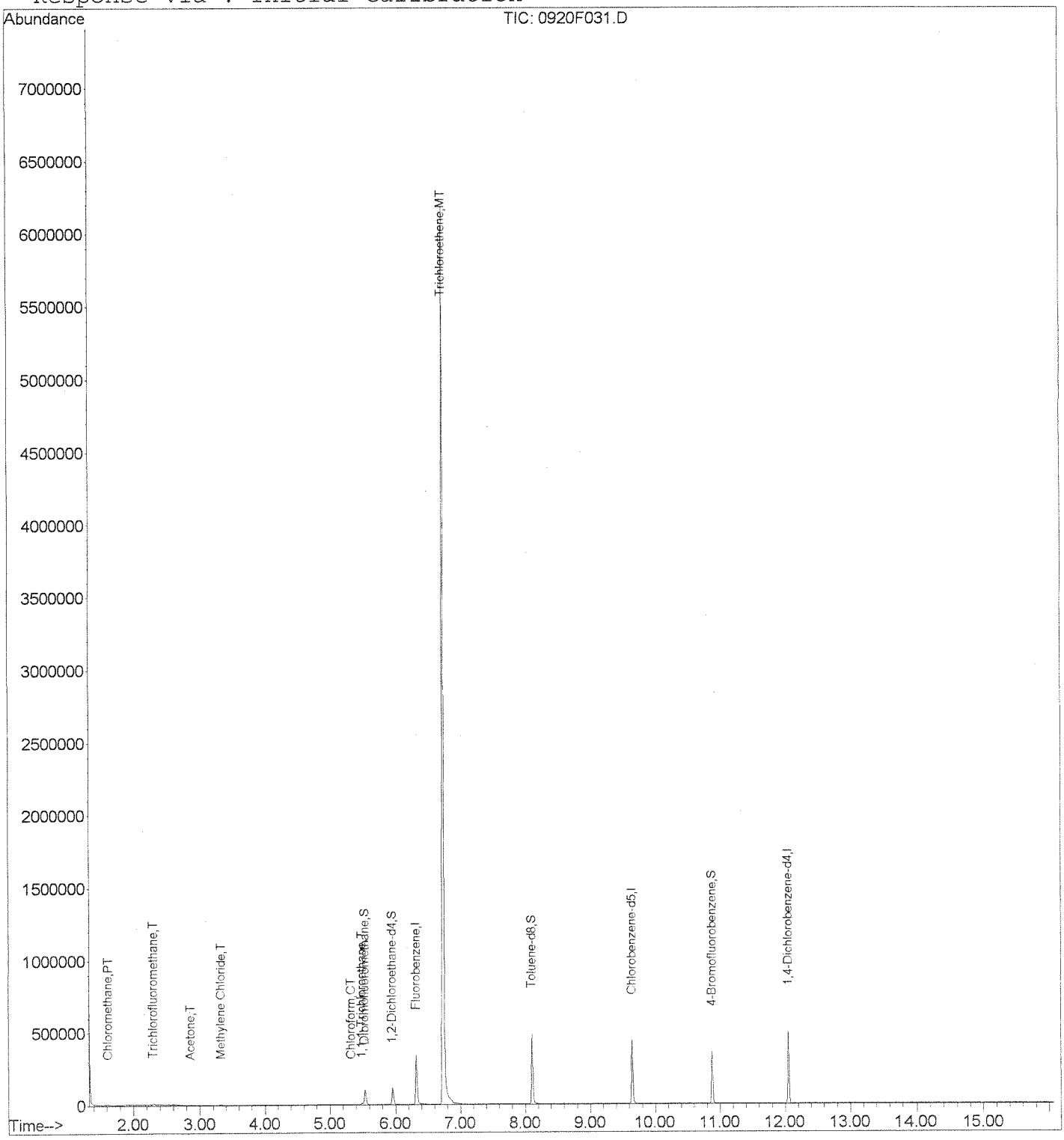
Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

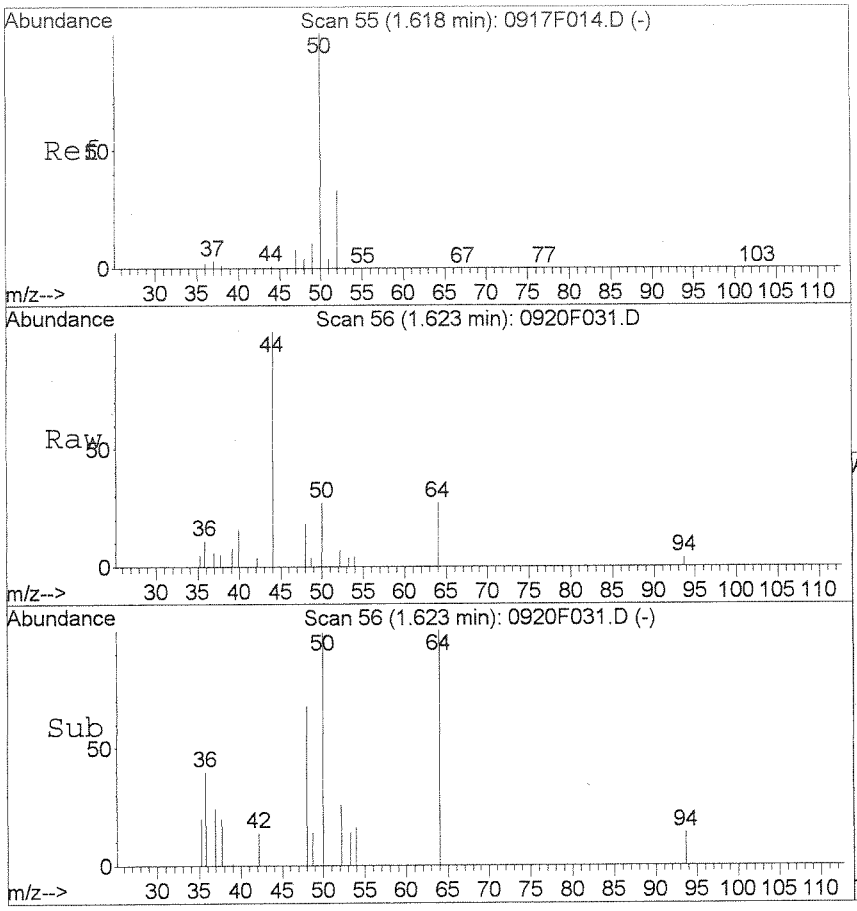
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.32	96	289306	10.00	PPB		0.00
65) Chlorobenzene-d5	9.64	82	118995	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	112937	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	60476	9.53	PPB		0.00
Spiked Amount 10.000			Recovery =	95.30%			
48) 1,2-Dichloroethane-d4	5.95	65	76786	10.28	PPB		0.00
Spiked Amount 10.000			Recovery =	102.80%			
63) Toluene-d8	8.10	98	282613	9.67	PPB		0.00
Spiked Amount 10.000			Recovery =	96.70%			
85) 4-Bromofluorobenzene	10.88	95	104035	9.69	PPB		0.00
Spiked Amount 10.000			Recovery =	96.90%			
Target Compounds							Qvalue
3) Chloromethane	1.62	50	1375	0.12	PPB		89
9) Trichlorofluoromethane	2.31	101	5502	0.37	PPB		98
14) Acetone	2.87	43	2823	2.05	PPB		74
21) Methylene Chloride	3.33	84	1964	0.22	PPB	#	71
40) Chloroform	5.33	83	1009	0.07	PPB		74
42) 1,1,1-Trichloroethane	5.49	97	5085	0.42	PPB		92
52) Trichloroethene	6.73	95	1777386	212.54	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F031.D Vial: 30
Acq On : 20 Sep 2014 6:45 pm Operator: GH
Sample : K9859-012BASE 2.5X Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 9:44 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

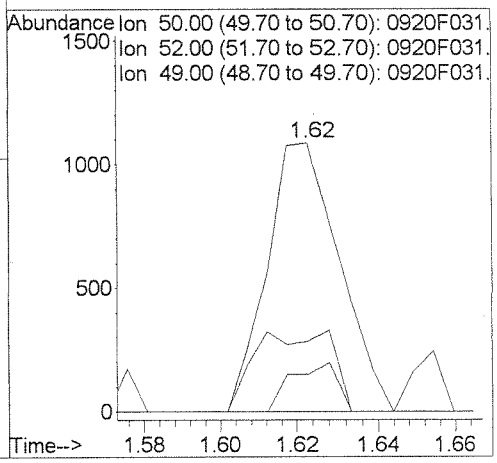


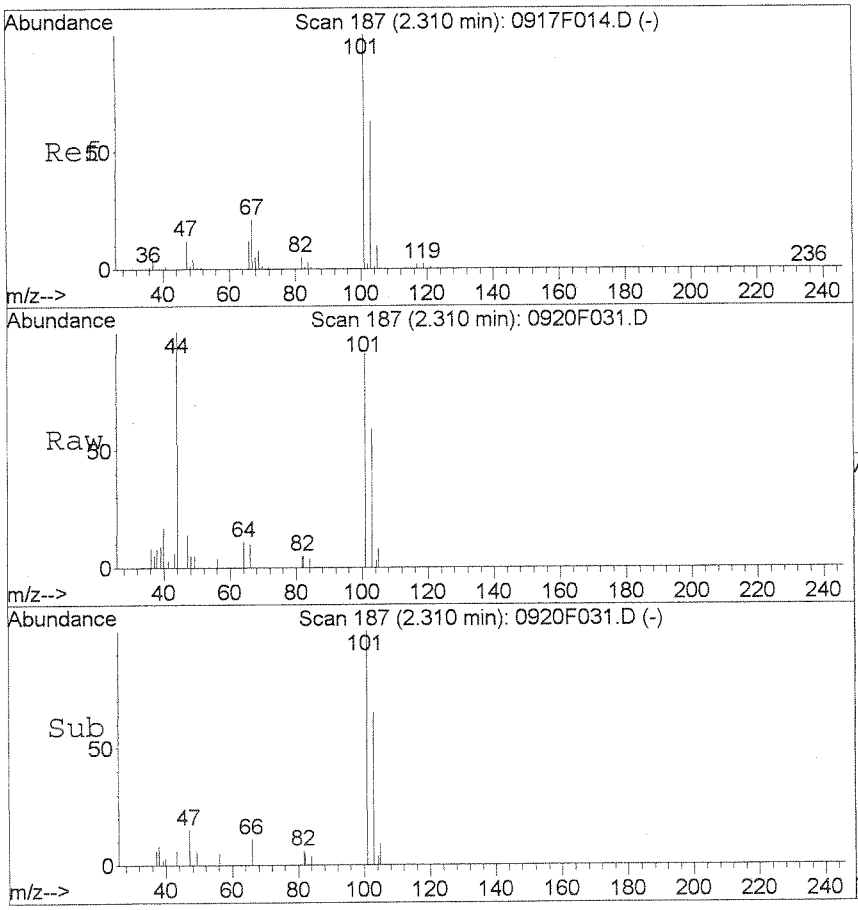


#3
Chloromethane
Concen: 0.12 PPB
RT: 1.62 min Scan# 56
Delta R.T. 0.01 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 50 Resp: 1375

Ion	Ratio	Lower	Upper
50	100		
52	26.1	2.6	62.6
49	13.8	0.0	40.8

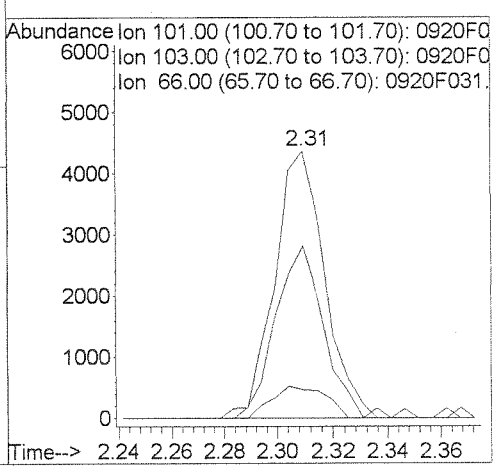


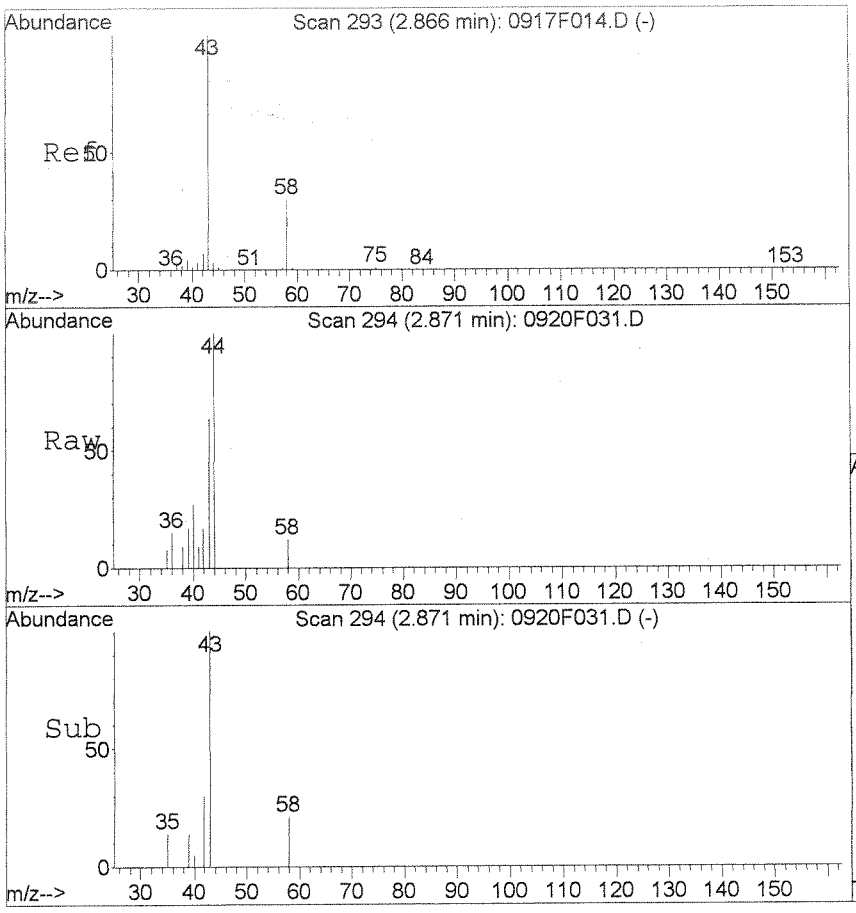


#9
Trichlorofluoromethane
Concen: 0.37 PPB
RT: 2.31 min Scan# 187
Delta R.T. -0.00 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion:101 Resp: 5502

Ion	Ratio	Lower	Upper
101	100		
103	64.7	33.2	93.2
66	10.7	0.0	42.4

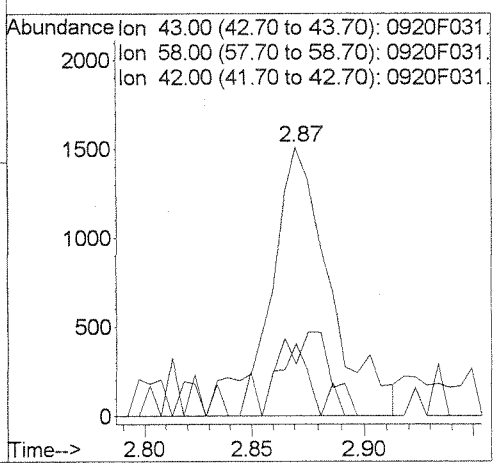


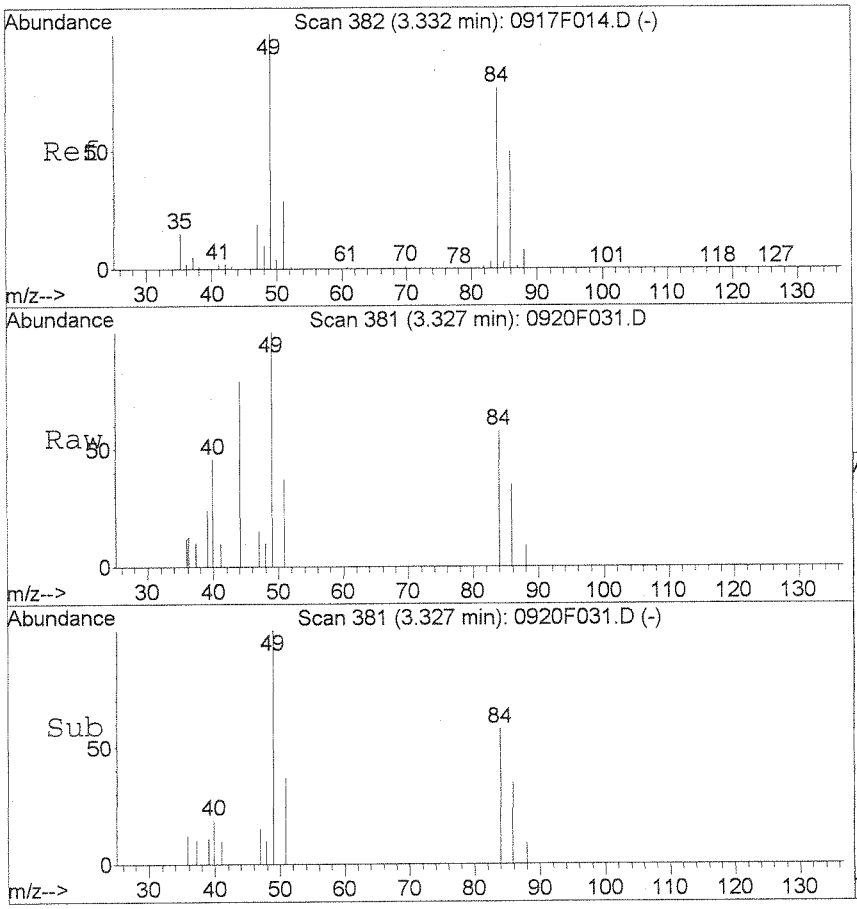


#14
Acetone
Concen: 2.05 PPB
RT: 2.87 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 43 Resp: 2823

Ion	Ratio	Lower	Upper
43	100		
58	19.3	0.0	59.6
42	26.9	0.0	37.2

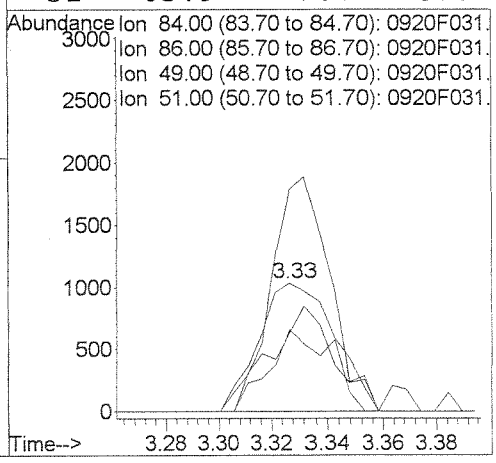


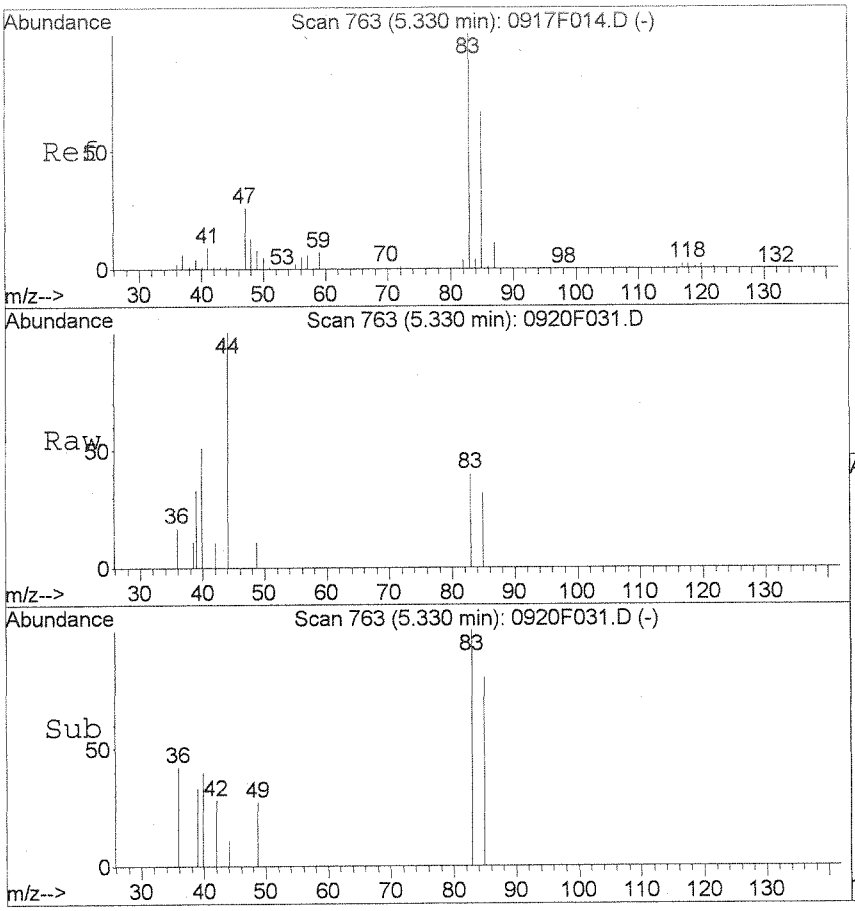


#21
Methylene Chloride
Concen: 0.22 PPB
RT: 3.33 min Scan# 381
Delta R.T. -0.01 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 84 Resp: 1964

Ion	Ratio	Lower	Upper
84	100		
86	61.3	34.7	94.7
49	172.8	99.2	159.2#
51	63.9	7.7	67.7

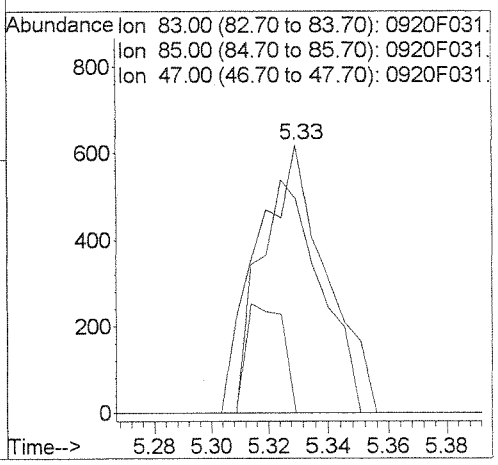


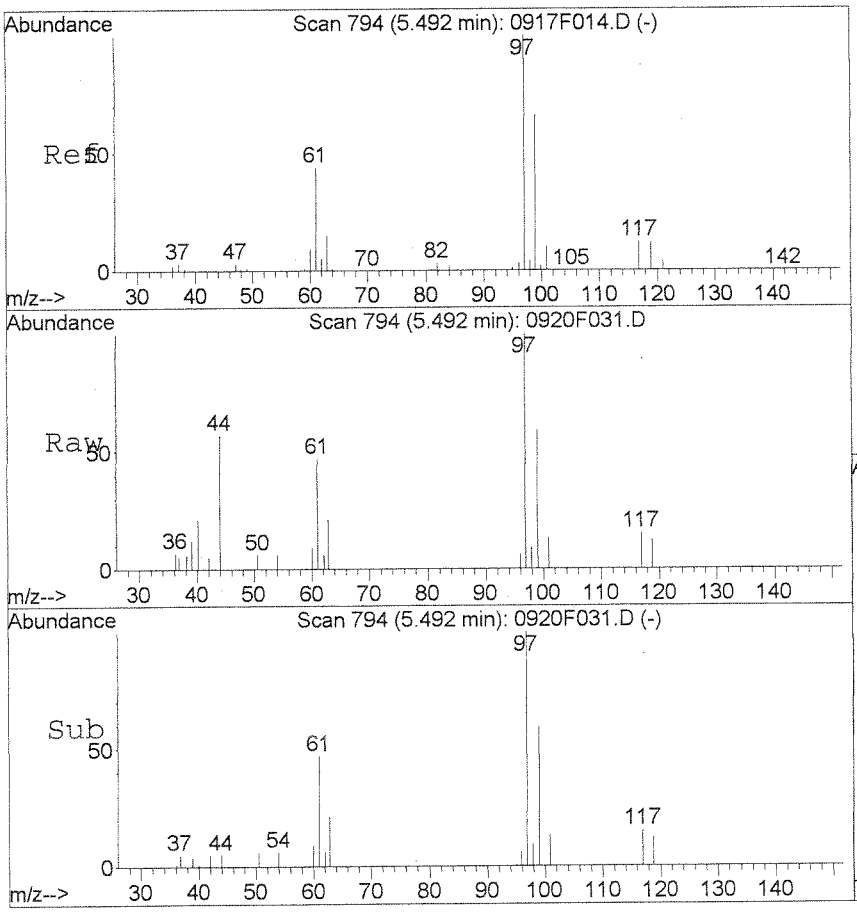


#40
Chloroform
Concen: 0.07 PPB
RT: 5.33 min Scan# 763
Delta R.T. -0.00 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 83 Resp: 1009

Ion	Ratio	Lower	Upper
83	100		
85	79.8	36.9	96.9
47	0.0	0.0	56.1

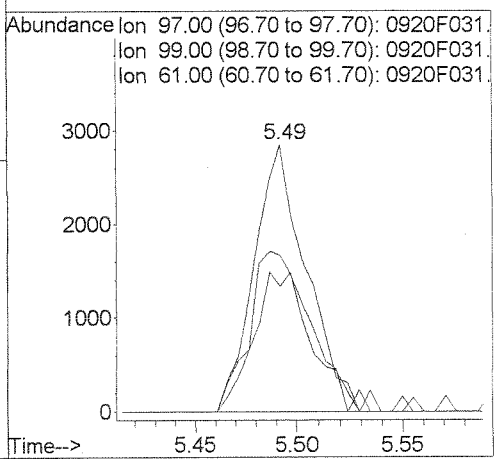


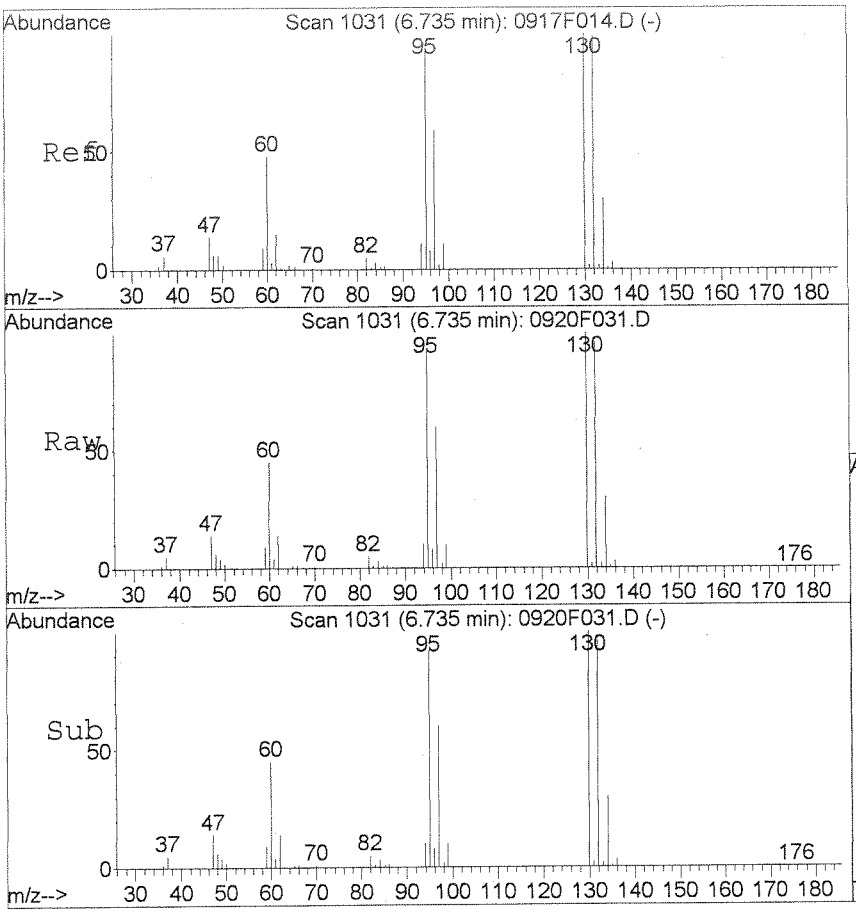


#42
1,1,1-Trichloroethane
Concen: 0.42 PPB
RT: 5.49 min Scan# 794
Delta R.T. -0.00 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 97 Resp: 5085

Ion	Ratio	Lower	Upper
97	100		
99	58.5	35.8	95.8
61	46.9	13.6	73.6

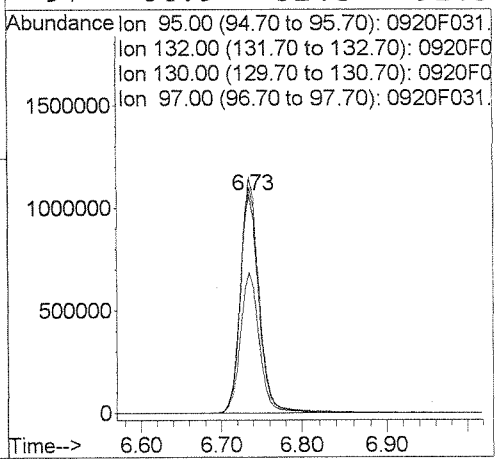




#52
Trichloroethene
Concen: 212.54 PPB
RT: 6.73 min Scan# 1031
Delta R.T. -0.00 min
Lab File: 0920F031.D
Acq: 20 Sep 2014 6:45 pm

Tgt Ion: 95 Resp: 1777386

Ion	Ratio	Lower	Upper
95	100		
132	103.7	75.3	135.3
130	108.4	76.6	136.6
97	64.9	32.3	92.3



Exception Report

Data File: J:\MS18\DATA\092014\0920F029.D
Lab ID: K1409859-012
RunType: DL
Matrix: WATER

Date Acquired: 09/20/2014 18:03
Date Quantitated: 09/22/2014 09:46
Batch ID: KWG1412905
Analysis Method: 8260C
ListJoinID: LJ11272

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	passes CCV

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:14:32
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F029.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:03	**Quant Date:**	09/22/2014 09:46	**Vial:**	28
Run Type:	DL			**Dilution:**	50.0
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**	09/08/2014	**Receive Date:**	09/13/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	K1409859
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1376682	**Prep Date:**	09/20/2014		

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:	Volatile Organic Compounds	**Report List ID:**	LJ11272
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	290499	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	119654	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	114419	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	57497	9.02	90	85-115	OK	NR
1	1,2-Dichloroethane-d4	5.96	0.01	0.00	65	74221	9.89	99	70-120	OK	NR
1	Toluene-d8	8.10	0.00	0.00	98	282773	9.64	96	85-120	OK	NR
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	103249	9.57	96	75-120	OK	NR

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		6.5	U	NR
1	Chloromethane				50	0		3.4	U	NR
1	Vinyl Chloride				62	0		3.8	U	NR
1	Bromomethane				96	0		5.0	U	NR
1	Chloroethane				64	0d		8.0	U	NR
1	Trichlorofluoromethane				101	0		6.0	U	NR
1	1,1-Dichloroethene				96	0		4.0	U	NR
1	Acetone	2.87		0.00	43	1805	1.31	170	U	NR
1	Carbon Disulfide				76	0		3.5	U	NR
1	Methylene Chloride	3.33		0.00	84	1513	0.1700	8.5	JD	NR
1	Methyl tert-Butyl Ether				73	0		5.5	U	NR
1	trans-1,2-Dichloroethene				96	0		3.6	U	NR
1	1,1-Dichloroethane				63	0		3.9	U	NR
1	2,2-Dichloropropane				77	0		3.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F029.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:03	**Quant Date:**	09/22/2014 09:46	**Vial:**	28
Run Type:	DL			**Dilution:**	50.0
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,2-Dichloroethene				96	0		3.4	U	NR
1	2-Butanone (MEK)				72	0		95	U	NR
1	Bromochloromethane				128	0		8.0	U	NR
1	Chloroform				83	0		3.6	U	NR
1	1,1,1-Trichloroethane (TCA)				97	0		3.8	U	NR
1	Carbon Tetrachloride				117	0		4.8	U	NR
1	1,1-Dichloropropene				75	0		4.5	U	NR
1	Benzene				78	0		3.1	U	NR
1	1,2-Dichloroethane (EDC)				62	0		4.0	U	NR
1	Trichloroethene (TCE)	6.73		0.00	95	81277	9.68	480	D	
1	1,2-Dichloropropane				63	0		4.8	U	NR
1	Dibromomethane				93	0		7.5	U	NR
1	Bromodichloromethane				83	0		4.6	U	NR
1	cis-1,3-Dichloropropene				75	0		9.0	U	NR
1	4-Methyl-2-pentanone (MIBK)				58	0d		130	U	NR
1	Toluene				92	0		2.7	U	NR
2	trans-1,3-Dichloropropene				75	0		3.4	U	NR
2	1,1,2-Trichloroethane				83	0		7.0	U	NR
2	Tetrachloroethene (PCE)				164	0		5.0	U	NR
2	2-Hexanone				57	0		140	U	NR
2	1,3-Dichloropropane				76	0		7.0	U	NR
2	Dibromochloromethane				129	0		7.0	U	NR
2	1,2-Dibromoethane (EDB)				107	0		5.0	U	NR
2	Chlorobenzene				112	0		5.5	U	NR
2	Ethylbenzene				106	0		2.5	U	NR
2	1,1,1,2-Tetrachloroethane				131	0		5.5	U	NR
2	m,p-Xylenes				106	0		5.5	U	NR
2	o-Xylene				106	0		3.7	U	NR
2	Styrene				103	0		4.5	U	NR
2	Bromoform				173	0		8.0	U	NR
2	Isopropylbenzene				105	0		2.6	U	NR
3	1,1,2,2-Tetrachloroethane				83	0		8.0	U	NR
3	Bromobenzene				156	0		6.0	U	NR
3	n-Propylbenzene				91	0		2.7	U	NR
3	1,2,3-Trichloropropane				110	0		10	U	NR
3	2-Chlorotoluene				91	0		5.0	U	NR
3	1,3,5-Trimethylbenzene				105	0		4.5	U	NR
3	4-Chlorotoluene				91	0		6.5	U	NR
3	tert-Butylbenzene				119	0		3.0	U	NR
3	1,2,4-Trimethylbenzene				105	0		3.5	U	NR
3	sec-Butylbenzene				105	0		3.1	U	NR
3	4-Isopropyltoluene				119	0		3.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F029.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 18:03	**Quant Date:**	09/22/2014 09:46	**Vial:**	28
Run Type:	DL			**Dilution:**	50.0
Lab ID:	K1409859-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	1,3-Dichlorobenzene				146	0		5.0	U	NR
3	1,4-Dichlorobenzene				146	0		6.0	U	NR
3	n-Butylbenzene				91	0		2.7	U	NR
3	1,2-Dichlorobenzene				146	0		6.0	U	NR
3	1,2-Dibromo-3-chloropropane				155	0		10	U	NR
3	1,2,4-Trichlorobenzene				180	0		4.8	U	NR
3	Hexachlorobutadiene				225	0		5.5	U	NR
3	Naphthalene				128	0		4.4	U	NR
3	1,2,3-Trichlorobenzene				180	0		5.5	U	NR

Prep Amount: 10 ml **Dilution:** 50.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS18\DATA\092014\0920F029.D
Acq On : 20 Sep 2014 6:03 pm
Sample : K9859-012DL 50X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:55:59 2014

Vial: 28
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

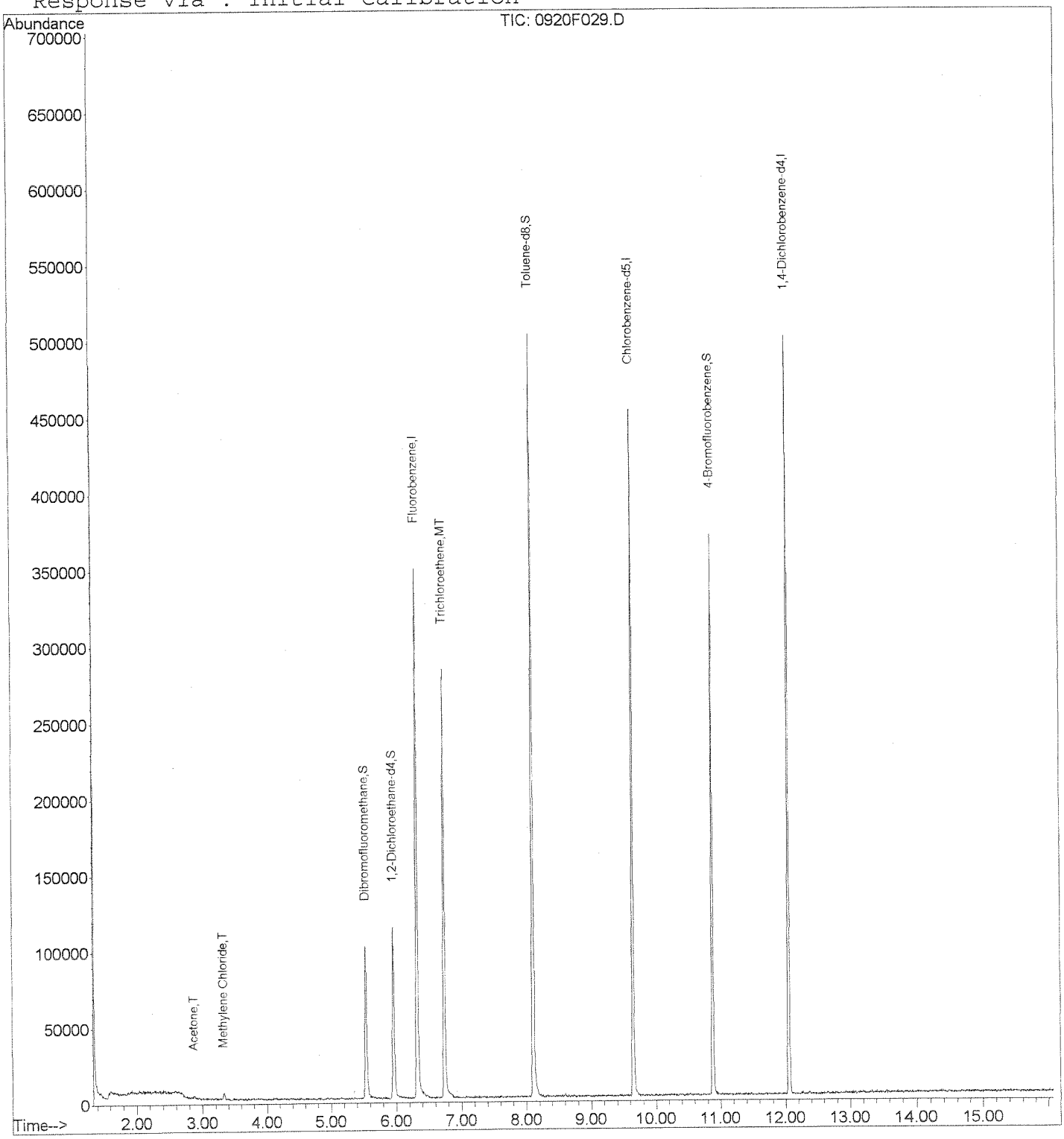
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.32	96	290499	10.00	PPB	0.00
65) Chlorobenzene-d5	9.64	82	119654	10.00	PPB	0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	114419	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.53	113	57497	9.02	PPB	0.00
Spiked Amount 10.000			Recovery =	90.20%		
48) 1,2-Dichloroethane-d4	5.96	65	74221	9.89	PPB	0.00
Spiked Amount 10.000			Recovery =	98.90%		
63) Toluene-d8	8.10	98	282773	9.64	PPB	0.00
Spiked Amount 10.000			Recovery =	96.40%		
85) 4-Bromofluorobenzene	10.88	95	103249	9.57	PPB	0.00
Spiked Amount 10.000			Recovery =	95.70%		
Target Compounds						Qvalue
14) Acetone	2.87	43	1805	1.31	PPB	85
21) Methylene Chloride	3.33	84	1513	0.17	PPB	94
52) Trichloroethene	6.73	95	81277	9.68	PPB	99

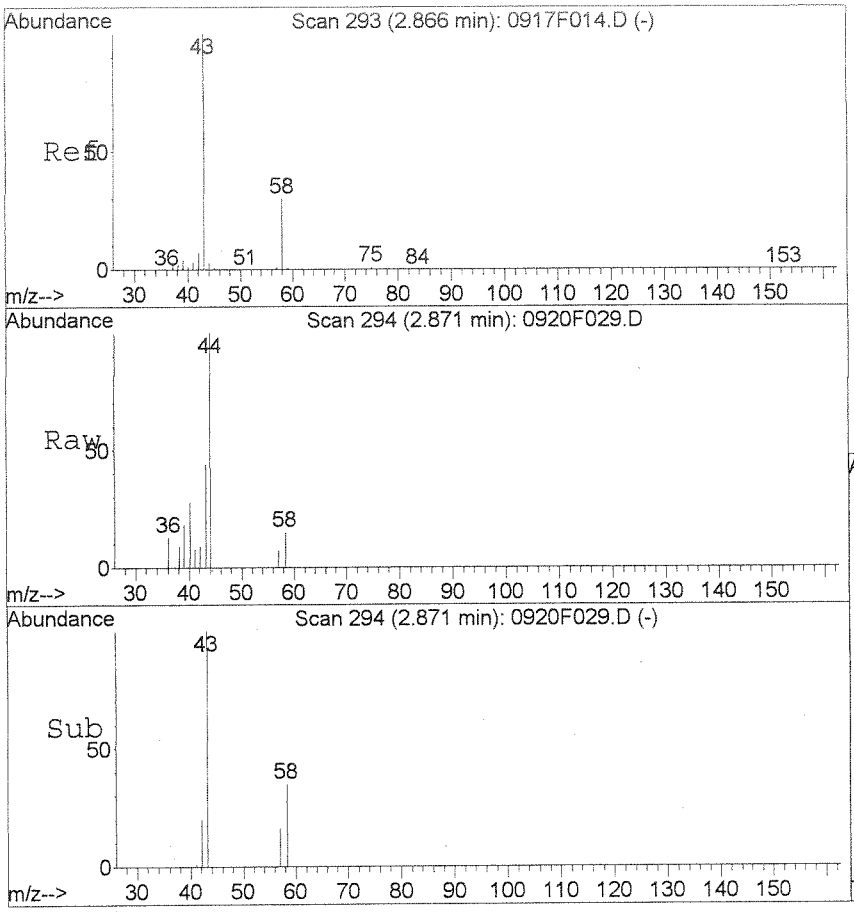
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F029.D
Acq On : 20 Sep 2014 6:03 pm
Sample : K9859-012DL 50X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:46 2014

Vial: 28
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration

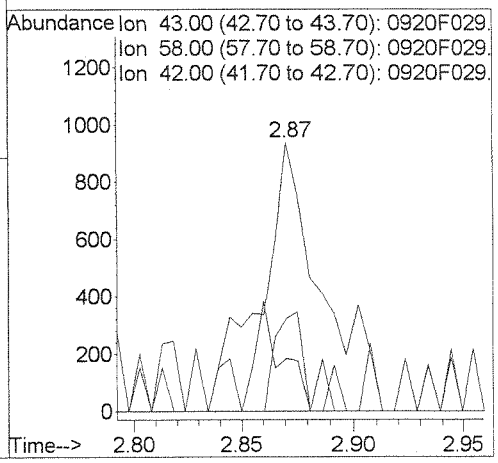


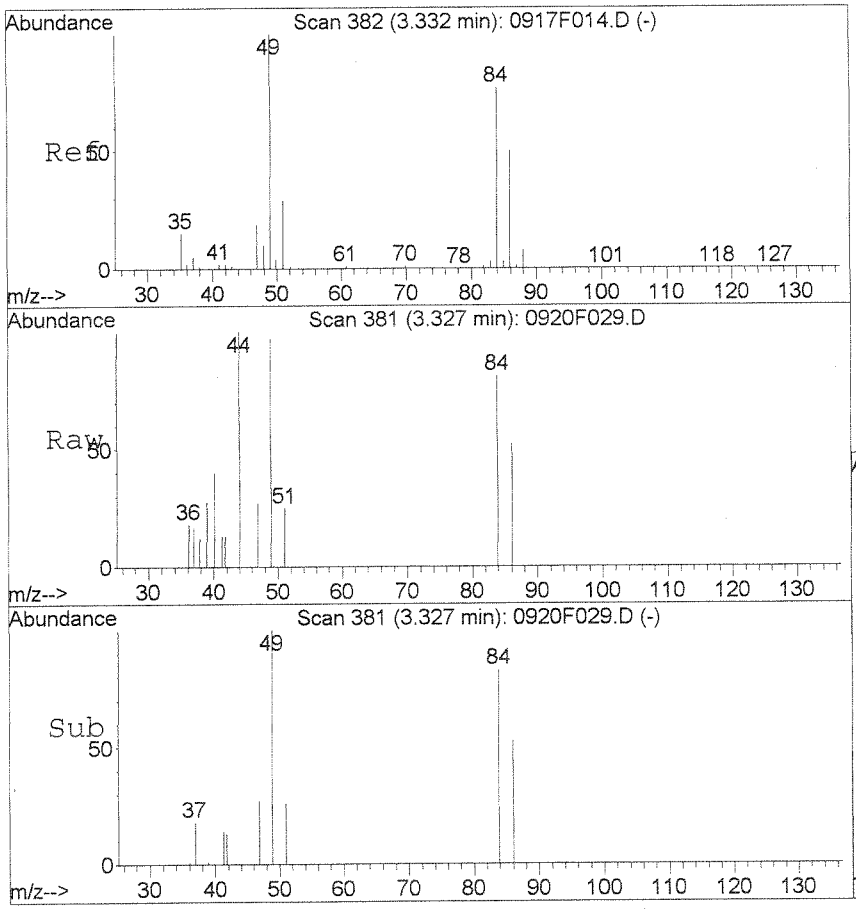


#14
Acetone
Concen: 1.31 PPB
RT: 2.87 min Scan# 294
Delta R.T. 0.01 min
Lab File: 0920F029.D
Acq: 20 Sep 2014 6:03 pm

Tgt Ion: 43 Resp: 1805

Ion	Ratio	Lower	Upper
43	100		
58	34.6	0.0	59.6
42	19.7	0.0	37.2

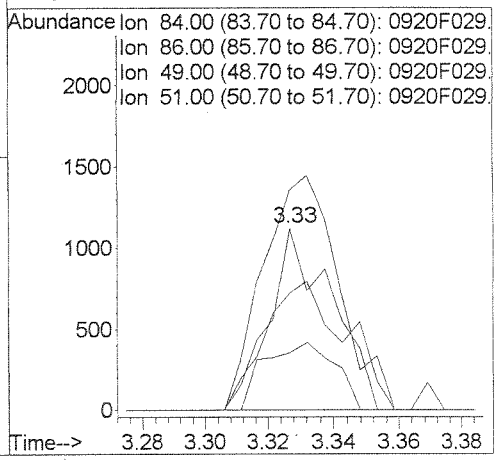


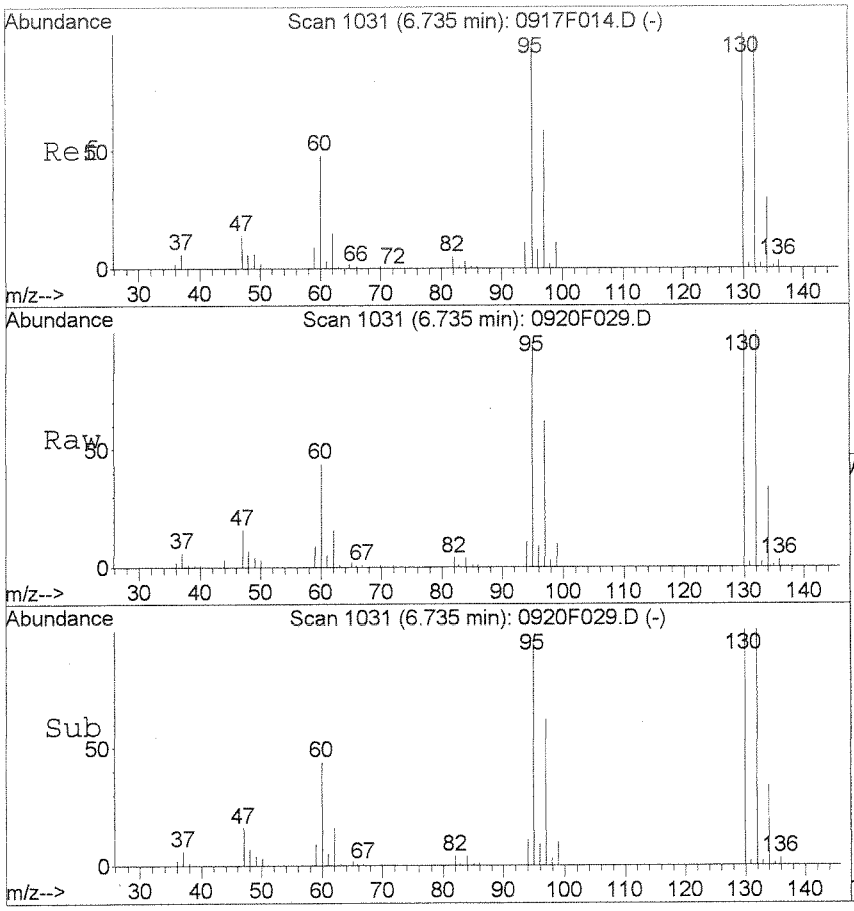


#21
Methylene Chloride
Concen: 0.17 PPB
RT: 3.33 min Scan# 381
Delta R.T. -0.01 min
Lab File: 0920F029.D
Acq: 20 Sep 2014 6:03 pm

Tgt Ion: 84 Resp: 1513

Ion	Ratio	Lower	Upper
84	100		
86	64.2	34.7	94.7
49	120.6	99.2	159.2
51	31.5	7.7	67.7

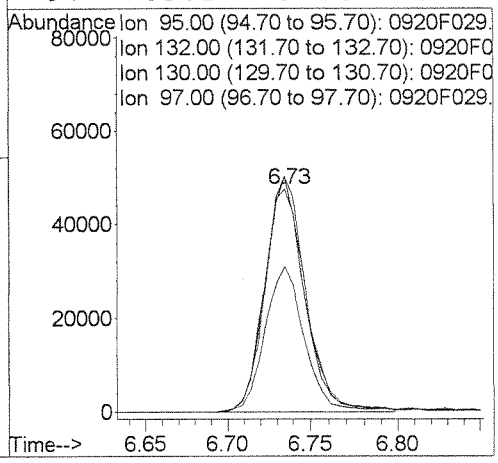




#52
Trichloroethene
Concen: 9.68 PPB
RT: 6.73 min Scan# 1031
Delta R.T. 0.00 min
Lab File: 0920F029.D
Acq: 20 Sep 2014 6:03 pm

Tgt Ion: 95 Resp: 81277

Ion	Ratio	Lower	Upper
95	100		
132	105.4	75.3	135.3
130	105.9	76.6	136.6
97	65.2	32.3	92.3



Exception Report

Data File: J:\MS18\DATA\092014\0920F006.D
Lab ID: KWG1412906-1 -- K1409859-012MS
RunType: MS
Matrix: WATER

Date Acquired: 09/20/2014 09:53
Date Quantitated: 09/22/2014 09:42
Batch ID: KWG1412905
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutyl Alcohol	0.0064	0.01	NA	NT
	1,4-Dioxane	0.0021	0.01	NA	
Second Source ICAL Verification	Acrolein	62.6	NA	30	
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	CCV okay
	Acrolein	-61.7	NA	20	NT
	tert-Amyl Methyl Ether	43.7	NA	20	
Continuing Calibration Minimum RF	Acrolein	0.0066	0.01	NA	
	Isobutyl Alcohol	0.0058	0.01	NA	
	1,4-Dioxane	0.0022	0.01	NA	
Above Highest ICAL Level	Trichloroethene (TCE)	224.96	NA	80	"E"

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:13:29
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376685				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	320387	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	132487	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	132635	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	70492	10.03	100	85-115	OK
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	81644	9.87	99	70-120	OK
1	Toluene-d8	8.10	0.00	0.00	98	323951	10.01	100	85-120	OK
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	119600	10.01	100	75-120	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	106961	9.80	24.5	D	
1	Chloromethane	1.62		0.00	50	123131	9.85	24.6	D	
1	Vinyl Chloride	1.71		0.00	62	128322	10.68	26.7	D	
1	Bromomethane	1.99	-0.01	0.00	96	66676	7.28	18.2	D	
1	Chloroethane	2.09		0.00	64	83413	12.21	30.5	D	
1	Trichlorofluoromethane	2.30		0.00	101	157417	9.63	24.1	D	
1	Acrolein	2.73	0.01	0.00	56	97145	177.05	443	D	
1	Trichlorotrifluoroethane	2.80		0.00	151	66874	11.06	27.7	D	
1	1,1-Dichloroethene	2.80	0.01	0.00	96	80827	11.53	28.8	D	
1	Acetone	2.87		0.00	43	77111	50.61	127	D	
1	Iodomethane	2.95		0.00	142	336361	56.27	141	D	
1	Carbon Disulfide	3.01		0.00	76	567016	23.76	59.4	D	
1	3-Chloro-1-propene	3.18		0.00	76	149291	30.85	77.1	D	
1	Acetonitrile	3.17		0.00	40	169449	379.39	948	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.33		0.00	84	86376	8.55	21.4	D	
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	37498	87.30	218	D	
1	Acrylonitrile	3.61		0.00	53	86513	36.74	91.9	D	
1	Methyl tert-Butyl Ether	3.60	0.01	0.00	73	204426	9.38	23.5	D	
1	trans-1,2-Dichloroethene	3.61		0.00	96	95992	10.99	27.5	D	
1	Diisopropyl Ether	4.16		0.00	45	619902	20.29	50.7	D	
1	1,1-Dichloroethane	4.14	0.01	0.00	63	167543	10.93	27.3	D	
1	Vinyl Acetate	4.16	0.01	0.00	86	73242	57.35	143	D	
1	Chloroprene	4.20		0.00	53	455356	29.28	73.2	D	
1	tert-Butyl Ethyl Ether	4.61		0.00	59	525683	20.17	50.4	D	
1	2,2-Dichloropropane	4.85		0.00	77	127291	10.20	25.5	D	
1	cis-1,2-Dichloroethene	4.85		0.00	96	105540	10.26	25.7	D	
1	2-Butanone (MEK)	4.87		0.00	72	33149	53.50	134	D	
1	Propionitrile	4.99	0.01	0.00	54	23870	29.04	72.6	D	
1	Ethyl Acetate	4.93		0.00	61	22105	24.59	61.5	D	
1	Methacrylonitrile	5.17		0.00	67	80457	28.71	71.8	D	
1	Bromochloromethane	5.18	0.01	0.00	128	47441	10.84	27.1	D	
1	Chloroform	5.32		0.00	83	165648	10.22	25.6	D	
1	1,1,1-Trichloroethane (TCA)	5.49		0.00	97	144119	10.70	26.8	D	
1	Carbon Tetrachloride	5.67	0.01	0.00	117	119689	10.51	26.3	D	
1	1,1-Dichloropropene	5.69		0.00	75	135110	11.07	27.7	D	
1	Isobutyl Alcohol	5.92		0.00	43	50239	244.25	611	D	
1	Benzene	5.93		0.00	78	412458	10.39	26.0	D	
1	1,2-Dichloroethane (EDC)	6.05		0.00	62	123732	9.88	24.7	D	
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	145168	16.29	40.7	D	
1	Trichloroethene (TCE)	6.73		0.00	95	2083332	224.96	562	ED	
1	1,2-Dichloropropane	7.05		0.00	63	94950	9.84	24.6	D	
1	Dibromomethane	7.15		0.00	93	50402	9.86	24.7	D	
1	Methyl Methacrylate	7.14		0.00	69	142054	30.66	76.7	D	
1	1,4-Dioxane	7.14		0.00	88	20447	306.61	767	D	
1	Bromodichloromethane	7.36		0.00	83	109656	9.81	24.5	D	
1	2-Nitropropane	7.64	0.01	0.00	41	35236	23.55	58.9	D	
1	2-Chloroethyl Vinyl Ether	7.69		0.00	63	12616	2.71	6.78	JD	
1	cis-1,3-Dichloropropene	7.84		0.00	75	133904	9.88	24.7	D	
1	4-Methyl-2-pentanone (MIBK)	8.01		0.00	58	108275	52.54	131	D	
1	Toluene	8.18	0.01	0.00	92	278297	10.46	26.2	D	
2	trans-1,3-Dichloropropene	8.47		0.00	75	99672	8.94	22.4	D	
2	Ethyl Methacrylate	8.53		0.00	69	293792	32.50	81.3	D	
2	1,1,2-Trichloroethane	8.68		0.00	83	64553	10.14	25.4	D	
2	Tetrachloroethene (PCE)	8.70		0.00	164	90488	11.15	27.9	D	
2	2-Hexanone	8.91		0.00	57	35526	51.10	128	D	
2	1,3-Dichloropropane	8.84		0.00	76	140573	10.14	25.4	D	

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J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
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D: Result from dilution
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*: Result fails acceptance criteria
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Dibromochloromethane	9.06		0.00	129	71405	10.08	25.2	D	
2	1,2-Dibromoethane (EDB)	9.17		0.00	107	71066	9.99	25.0	D	
2	1-Chlorohexane	9.67		0.00	91	133296	8.87	22.2	D	
2	Chlorobenzene	9.67		0.00	112	313616	10.70	26.8	D	
2	Ethylbenzene	9.78		0.00	106	168957	10.56	26.4	D	
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	93156	10.14	25.4	D	
2	m,p-Xylenes	9.91		0.00	106	424816	21.52	53.8	D	
2	o-Xylene	10.31		0.00	106	205472	10.61	26.5	D	
2	Styrene	10.34	0.01	0.00	103	152783**m**	10.51	26.3	D	
2	Bromoform	10.54		0.00	173	37085	9.34	23.4	D	
2	Isopropylbenzene	10.68		0.00	105	526549	10.74	26.9	D	
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28653	25.48	63.7	D	
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	77753	9.56	23.9	D	
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	70996	29.01	72.5	D	
3	Bromobenzene	11.01		0.00	156	131409	10.36	25.9	D	
3	n-Propylbenzene	11.11		0.00	91	624047	10.49	26.2	D	
3	1,2,3-Trichloropropane	11.09	-0.01	0.00	110	26774	9.51	23.8	D	
3	2-Chlorotoluene	11.20		0.00	91	366443	10.03	25.1	D	
3	1,3,5-Trimethylbenzene	11.30		0.00	105	437676	10.71	26.8	D	
3	4-Chlorotoluene	11.33		0.00	91	427516	10.19	25.5	D	
3	tert-Butylbenzene	11.62	0.01	0.00	119	393398	10.61	26.5	D	
3	1,2,4-Trimethylbenzene	11.68		0.00	105	437708	10.54	26.4	D	
3	sec-Butylbenzene	11.84		0.00	105	544205	10.42	26.1	D	
3	4-Isopropyltoluene	12.00		0.00	119	467425	10.88	27.2	D	
3	1,3-Dichlorobenzene	11.96		0.00	146	249326	10.26	25.7	D	
3	1,4-Dichlorobenzene	12.07		0.00	146	255931	10.24	25.6	D	
3	n-Butylbenzene	12.36		0.00	91	386634	10.49	26.2	D	
3	1,2-Dichlorobenzene	12.37		0.00	146	233883	10.34	25.9	D	
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8110	8.68	21.7	D	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	166138	10.19	25.5	D	
3	1,2,4-Trichlorobenzene	13.55		0.00	180	126777	10.09	25.2	D	
3	Hexachlorobutadiene	13.66		0.00	225	57575	10.36	25.9	D	
3	Naphthalene	13.78		0.00	128	197717	9.87	24.7	D	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	88788	9.83	24.6	D	

Prep Amount:	10 ml	**Dilution:**	2.5
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376685				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	320387	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	132487	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	132635	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	70492	10.03	100	73-122	OK
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	81644	9.87	99	59-127	OK
1	Toluene-d8	8.10	0.00	0.00	98	323951	10.01	100	65-144	OK
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	119600	10.01	100	68-117	OK

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	106961	9.80	24.5	D	
1	Chloromethane	1.62		0.00	50	123131	9.85	24.6	D	
1	Vinyl Chloride	1.71		0.00	62	128322	10.68	26.7	D	
1	1,3-Butadiene				54	0d		1.3	U	
1	Bromomethane	1.99	-0.01	0.00	96	66676	7.28	18.2	D	
1	Chloroethane	2.09		0.00	64	83413	12.21	30.5	D	
1	Dichlorofluoromethane (CFC 21	2.29		0.00	67	211593	11.24	28.1	D	
1	Trichlorofluoromethane	2.30		0.00	101	157417	9.63	24.1	D	
1	Ethyl Ether	2.57		0.00	59	74262	10.68	26.7	D	
1	Acrolein	2.73	0.01	0.00	56	97145	177.05	443	D	
1	Trichlorotrifluoroethane	2.80		0.00	151	66874	11.06	27.7	D	
1	1,1-Dichloroethene	2.80	0.01	0.00	96	80827	11.53	28.8	D	
1	Acetone	2.87		0.00	43	77111	50.61	127	D	
1	Iodomethane	2.95		0.00	142	336361	56.27	141	D	

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Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	3.01		0.00	76	567016	23.76	59.4	D	
1	2-Propanol				45	0d		43	U	
1	3-Chloro-1-propene	3.18		0.00	76	149291	30.85	77.1	D	
1	Methyl Acetate				43	0d		0.95	U	
1	Acetonitrile	3.17		0.00	40	169449	379.39	948	D	
1	Methylene Chloride	3.33		0.00	84	86376	8.55	21.4	D	
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	37498	87.30	218	D	
1	Acrylonitrile	3.61		0.00	53	86513	36.74	91.9	D	
1	Methyl tert-Butyl Ether	3.60	0.01	0.00	73	204426	9.38	23.5	D	
1	trans-1,2-Dichloroethene	3.61		0.00	96	95992	10.99	27.5	D	
1	n-Hexane	3.90		0.00	57	343856	37.41	93.5	D	
1	Diisopropyl Ether	4.16		0.00	45	619902	20.29	50.7	D	
1	1,1-Dichloroethane	4.14	0.01	0.00	63	167543	10.93	27.3	D	
1	Vinyl Acetate	4.16	0.01	0.00	86	73242	57.35	143	D	
1	Chloroprene	4.20		0.00	53	455356	29.28	73.2	D	
1	tert-Butyl Ethyl Ether	4.61		0.00	59	525683	20.17	50.4	D	
1	2,2-Dichloropropane	4.85		0.00	77	127291	10.20	25.5	D	
1	cis-1,2-Dichloroethene	4.85		0.00	96	105540	10.26	25.7	D	
1	2-Butanone (MEK)	4.87		0.00	72	33149	53.50	134	D	
1	Propionitrile	4.99	0.01	0.00	54	23870	29.04	72.6	D	
1	Ethyl Acetate	4.93		0.00	61	22105	24.59	61.5	D	
1	Methacrylonitrile	5.17		0.00	67	80457	28.71	71.8	D	
1	Bromochloromethane	5.18	0.01	0.00	128	47441	10.84	27.1	D	
1	Tetrahydrofuran				71	0d		2.4	U	
1	Chloroform	5.32		0.00	83	165648	10.22	25.6	D	
1	tert-Butyl Formate				59	0d		0.65	U	
1	1,1,1-Trichloroethane (TCA)	5.49		0.00	97	144119	10.70	26.8	D	
1	Carbon Tetrachloride	5.67	0.01	0.00	117	119689	10.51	26.3	D	
1	1,1-Dichloropropene	5.69		0.00	75	135110	11.07	27.7	D	
1	Cyclohexane				56	0d		0.90	U	
1	Isobutyl Alcohol	5.92		0.00	43	50239	244.25	611	D	
1	Benzene	5.93		0.00	78	412458	10.39	26.0	D	
1	1,2-Dichloroethane (EDC)	6.05		0.00	62	123732	9.88	24.7	D	
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	145168	16.29	40.7	D	
1	Trichloroethene (TCE)	6.73		0.00	95	2083332	224.96	562	ED	
1	1,2-Dichloropropane	7.05		0.00	63	94950	9.84	24.6	D	
1	Dibromomethane	7.15		0.00	93	50402	9.86	24.7	D	
1	Methyl Methacrylate	7.14		0.00	69	142054	30.66	76.7	D	
1	1,4-Dioxane	7.14		0.00	88	20447	306.61	767	D	
1	Bromodichloromethane	7.36		0.00	83	109656	9.81	24.5	D	
1	2-Nitropropane	7.64	0.01	0.00	41	35236	23.55	58.9	D	
1	Methylcyclohexane				83	0d		0.83	U	

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Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Chloroethyl Vinyl Ether	7.69		0.00	63	12616	2.71	6.78	JD	
1	cis-1,3-Dichloropropene	7.84		0.00	75	133904	9.88	24.7	D	
1	4-Methyl-2-pentanone (MIBK)	8.01		0.00	58	108275	52.54	131	D	
1	Toluene	8.18	0.01	0.00	92	278297	10.46	26.2	D	
2	n-Octane				85	0d		0.40	U	
2	trans-1,3-Dichloropropene	8.47		0.00	75	99672	8.94	22.4	D	
2	Ethyl Methacrylate	8.53		0.00	69	293792	32.50	81.3	D	
2	1,1,2-Trichloroethane	8.68		0.00	83	64553	10.14	25.4	D	
2	Tetrachloroethene (PCE)	8.70		0.00	164	90488	11.15	27.9	D	
2	2-Hexanone	8.91		0.00	57	35526	51.10	128	D	
2	1,3-Dichloropropane	8.84		0.00	76	140573	10.14	25.4	D	
2	Dibromochloromethane	9.06		0.00	129	71405	10.08	25.2	D	
2	1,2-Dibromoethane (EDB)	9.17		0.00	107	71066	9.99	25.0	D	
2	1-Chlorohexane	9.67		0.00	91	133296	8.87	22.2	D	
2	Chlorobenzene	9.67		0.00	112	313616	10.70	26.8	D	
2	Ethylbenzene	9.78		0.00	106	168957	10.56	26.4	D	
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	93156	10.14	25.4	D	
2	m,p-Xylenes	9.91		0.00	106	424816	21.52	53.8	D	
2	o-Xylene	10.31		0.00	106	205472	10.61	26.5	D	
2	Styrene	10.34	0.01	0.00	103	152783m	10.51	26.3	D	
2	Bromoform	10.54		0.00	173	37085	9.34	23.4	D	
2	Isopropylbenzene	10.68		0.00	105	526549	10.74	26.9	D	
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28653	25.48	63.7	D	
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	77753	9.56	23.9	D	
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	70996	29.01	72.5	D	
3	Bromobenzene	11.01		0.00	156	131409	10.36	25.9	D	
3	n-Propylbenzene	11.11		0.00	91	624047	10.49	26.2	D	
3	1,2,3-Trichloropropane	11.09	-0.01	0.00	110	26774	9.51	23.8	D	
3	2-Chlorotoluene	11.20		0.00	91	366443	10.03	25.1	D	
3	1,3,5-Trimethylbenzene	11.30		0.00	105	437676	10.71	26.8	D	
3	4-Chlorotoluene	11.33		0.00	91	427516	10.19	25.5	D	
3	tert-Butylbenzene	11.62	0.01	0.00	119	393398	10.61	26.5	D	
3	1,2,4-Trimethylbenzene	11.68		0.00	105	437708	10.54	26.4	D	
3	sec-Butylbenzene	11.84		0.00	105	544205	10.42	26.1	D	
3	4-Isopropyltoluene	12.00		0.00	119	467425	10.88	27.2	D	
3	1,3-Dichlorobenzene	11.96		0.00	146	249326	10.26	25.7	D	
3	1,4-Dichlorobenzene	12.07		0.00	146	255931	10.24	25.6	D	
3	n-Butylbenzene	12.36		0.00	91	386634	10.49	26.2	D	
3	1,2-Dichlorobenzene	12.37		0.00	146	233883	10.34	25.9	D	
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8110	8.68	21.7	D	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	166138	10.19	25.5	D	
3	1,2,4-Trichlorobenzene	13.55		0.00	180	126777	10.09	25.2	D	

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Data File:	J:\MS18\DATA\092014\0920F006.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:53	**Quant Date:**	09/22/2014 09:42	**Vial:**	6
Run Type:	MS			**Dilution:**	2.5
Lab ID:	KWG1412906-1 -- K1409859-012MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Hexachlorobutadiene	13.66		0.00	225	57575	10.36	25.9	D	
3	Naphthalene	13.78		0.00	128	197717	9.87	24.7	D	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	88788	9.83	24.6	D	
	Benzyl Chloride				0	0		2.5	U	NR
	Isopropyl Acetate				0	0		50	U	NR
	Cyclohexanone				0	0		2.5	U	NR
	2-Ethoxyethanol				0	0		2.5	U	NR
	Bis(2-chloroethyl) Ether				0	0		50	U	NR
	beta-Pinene				0	0		2.5	U	NR
	1,1,2-Trifluoroethane				0	0		2.5	U	NR
	2,2,4-Trimethylpentane				0	0		2.5	U	NR
	Bis(chloromethyl) Ether				0	0		2.5	U	NR
	Amyl Acetate				0	0		50	U	NR
	Bromoethane				0	0		2.5	U	NR
	Pentachloroethane				0	0		13	U	NR
	1,1-Dichloropropane				0	0		2.5	U	NR
	alpha-Pinene				0	0		2.5	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		2.5	U	NR
	Nitrobenzene				0	0		50	U	NR

Prep Amount:	10 ml	**Dilution:**	2.5
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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Data File : J:\MS18\DATA\092014\0920F006.D Vial: 6
Acq On : 20 Sep 2014 9:53 am Operator: GH
Sample : K9859-012MS 2.5X Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 09:41:33 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.32	96	320387	10.00	PPB		0.00
65) Chlorobenzene-d5	9.64	82	132487	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	132635	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	70492	10.03	PPB		0.00
Spiked Amount 10.000			Recovery = 100.30%				
48) 1,2-Dichloroethane-d4	5.95	65	81644	9.87	PPB		0.00
Spiked Amount 10.000			Recovery = 98.70%				
63) Toluene-d8	8.10	98	323951	10.01	PPB		0.00
Spiked Amount 10.000			Recovery = 100.10%				
85) 4-Bromofluorobenzene	10.88	95	119600	10.01	PPB		0.00
Spiked Amount 10.000			Recovery = 100.10%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.47	85	106961	9.80	PPB		98
3) Chloromethane	1.62	50	123131	9.85	PPB		98
4) Vinyl Chloride	1.71	62	128322	10.68	PPB		100
6) Bromomethane	1.99	96	66676	7.28	PPB		96
7) Chloroethane	2.09	64	83413	12.21	PPB		99
8) Dichlorofluoromethane	2.29	67	211593	11.24	PPB		98
9) Trichlorofluoromethane	2.30	101	157417	9.63	PPB		97
10) Ethyl Ether	2.57	59	74262	10.68	PPB		98
11) Acrolein	2.73	56	97145	177.05	PPB		97
12) Trichlorotrifluoroethane	2.80	151	66874	11.06	PPB		93
13) 1,1-Dichloroethene	2.80	96	80827	11.53	PPB		93
14) Acetone	2.87	43	77111	50.61	PPB		99
15) Iodomethane	2.95	142	336361	56.27	PPB		96
16) Carbon Disulfide	3.01	76	567016	23.76	PPB		99
18) 3-Chloro-1-propene	3.18	76	149291	30.85	PPB	#	50
20) Acetonitrile	3.17	40	169449	379.39	PPB	#	1
21) Methylene Chloride	3.33	84	86376	8.55	PPB		97
22) tert-Butyl Alcohol	3.46	59	37498	87.30	PPB		95
23) Acrylonitrile	3.61	53	86513	36.74	PPB		100
24) Methyl tert-Butyl Ether	3.60	73	204426	9.38	PPB		98
25) trans-1,2-Dichloroethene	3.61	96	95992	10.99	PPB		92
26) Hexane	3.90	57	343856	37.41	PPB		98
27) Diisopropyl Ether	4.16	45	619902	20.29	PPB		98
28) 1,1-Dichloroethane	4.14	63	167543	10.93	PPB		98
29) Vinyl Acetate	4.16	86	73242	57.35	PPB	#	80
30) Chloroprene	4.20	53	455356	29.28	PPB		99
31) tert-Butyl Ethyl Ether	4.61	59	525683	20.17	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F006.D
Acq On : 20 Sep 2014 9:53 am
Sample : K9859-012MS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 09:41:33 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	2,2-Dichloropropane	4.85	77	127291	10.20	PPB		99
33)	cis-1,2-Dichloroethene	4.85	96	105540	10.26	PPB		92
34)	2-Butanone	4.87	72	33149	53.50	PPB		90
35)	Propionitrile	4.99	54	23870	29.04	PPB		99
36)	Ethyl Acetate	4.93	61	22105	24.59	PPB		99
37)	Methacrylonitrile	5.17	67	80457	28.71	PPB		93
38)	Bromochloromethane	5.18	128	47441	10.84	PPB		93
40)	Chloroform	5.32	83	165648	10.22	PPB		99
42)	1,1,1-Trichloroethane	5.49	97	144119	10.70	PPB		96
44)	Carbon Tetrachloride	5.67	117	119689	10.51	PPB		93
45)	1,1-Dichloropropene	5.69	75	135110	11.07	PPB		98
47)	Isobutyl Alcohol	5.92	43	50239	244.25	PPB		92
49)	Benzene	5.93	78	412458	10.39	PPB		100
50)	1,2-Dichloroethane	6.05	62	123732	9.88	PPB		97
51)	tert-Amyl Methyl Ether	6.11	55	145168	16.29	PPB	#	85
52)	Trichloroethene	6.73	95	2083332	224.96	PPB		98
53)	1,2-Dichloropropane	7.05	63	94950	9.84	PPB		95
54)	Dibromomethane	7.15	93	50402	9.86	PPB		90
55)	Methyl methacrylate	7.14	69	142054	30.66	PPB		95
56)	1,4-Dioxane	7.14	88	20447	306.61	PPB		99
57)	Bromodichloromethane	7.36	83	109656	9.81	PPB		98
58)	2-Nitropropane	7.64	41	35236	23.55	PPB		99
60)	2-Chloroethyl Vinyl Ether	7.69	63	12616	2.71	PPB		97
61)	cis-1,3-Dichloropropene	7.84	75	133904	9.88	PPB		97
62)	4-Methyl-2-pentanone (MIBK	8.01	58	108275	52.54	PPB		95
64)	Toluene	8.18	92	278297	10.46	PPB		99
67)	trans-1,3-Dichloropropene	8.47	75	99672	8.94	PPB		94
68)	Ethyl methacrylate	8.53	69	293792	32.50	PPB		97
69)	1,1,2-Trichloroethane	8.68	83	64553	10.14	PPB		94
70)	Tetrachloroethene	8.70	164	90488	11.15	PPB		95
71)	2-Hexanone	8.91	57	35526	51.10	PPB		96
72)	1,3-Dichloropropane	8.84	76	140573	10.14	PPB		99
73)	Dibromochloromethane	9.06	129	71405	10.08	PPB		99
74)	1,2-Dibromoethane (EDB)	9.17	107	71066	9.99	PPB		100
75)	1-Chlorohexane	9.67	91	133296	8.87	PPB		98
76)	Chlorobenzene	9.67	112	313616	10.70	PPB		99
77)	Ethylbenzene	9.78	106	168957	10.56	PPB		96
78)	1,1,1,2-Tetrachloroethane	9.78	131	93156	10.14	PPB		98
79)	m,p-Xylenes	9.91	106	424816	21.52	PPB		97
80)	o-Xylene	10.31	106	205472	10.61	PPB		98
81)	Styrene	10.34	103	152783m	10.51	PPB		

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F006.D Vial: 6
Acq On : 20 Sep 2014 9:53 am Operator: GH
Sample : K9859-012MS 2.5X Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 09:41:33 2014 Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

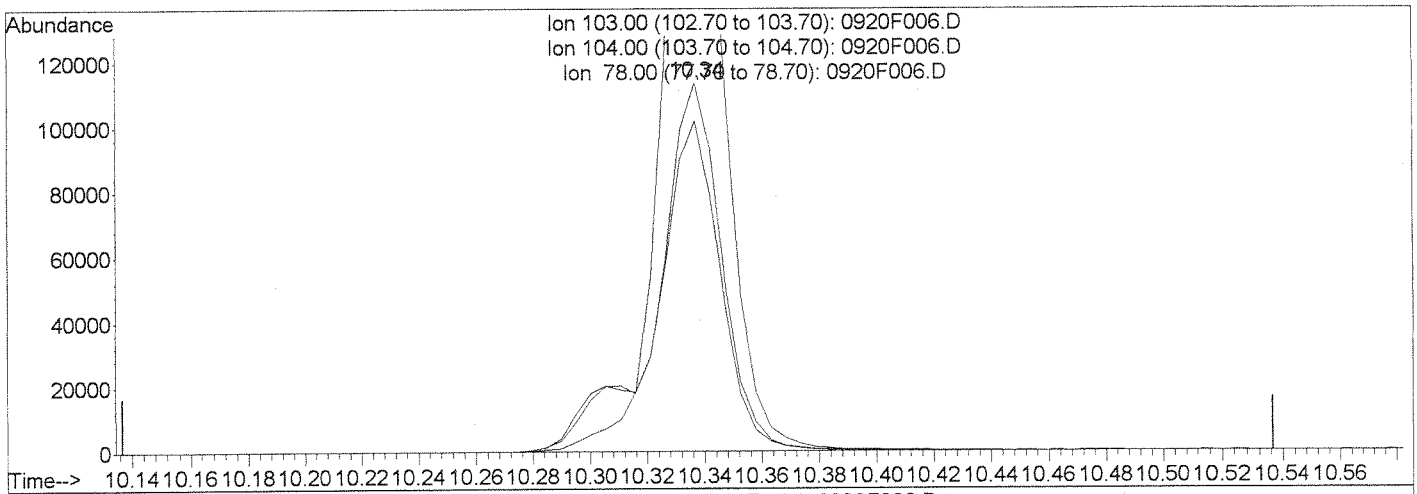
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
82)	Bromoform	10.54	173	37085	9.34	PPB		96
83)	Isopropylbenzene	10.68	105	526549	10.74	PPB		99
84)	cis-1,4-Dichloro-2-butene	10.78	89	28653	25.48	PPB		96
87)	1,1,2,2-Tetrachloroethane	11.04	83	77753	9.56	PPB		98
88)	trans-1,4-Dichloro-2-buten	11.08	53	70996	29.01	PPB		96
89)	Bromobenzene	11.01	156	131409	10.36	PPB		94
90)	n-Propylbenzene	11.11	91	624047	10.49	PPB		99
91)	1,2,3-Trichloropropane	11.09	110	26774	9.51	PPB	#	48
92)	2-Chlorotoluene	11.20	91	366443	10.03	PPB		98
93)	1,3,5-Trimethylbenzene	11.30	105	437676	10.71	PPB		98
94)	4-Chlorotoluene	11.33	91	427516	10.19	PPB		98
95)	tert-Butylbenzene	11.62	119	393398	10.61	PPB		99
96)	1,2,4-Trimethylbenzene	11.68	105	437708	10.54	PPB		97
97)	sec-Butylbenzene	11.84	105	544205	10.42	PPB		99
98)	p-Isopropyltoluene	12.00	119	467425	10.88	PPB		100
99)	1,3-Dichlorobenzene	11.96	146	249326	10.26	PPB		98
100)	1,4-Dichlorobenzene	12.07	146	255931	10.24	PPB		98
101)	n-Butylbenzene	12.36	91	386634	10.49	PPB		99
102)	1,2-Dichlorobenzene	12.37	146	233883	10.34	PPB		99
103)	1,2-Dibromo-3-chloropropan	12.95	155	8110	8.68	PPB		89
104)	1,3,5-Trichlorobenzene	13.06	180	166138	10.19	PPB		99
105)	1,2,4-Trichlorobenzene	13.55	180	126777	10.09	PPB		99
106)	Hexachlorobutadiene	13.66	225	57575	10.36	PPB		98
107)	Naphthalene	13.78	128	197717	9.87	PPB		98
108)	1,2,3-Trichlorobenzene	13.97	180	88788	9.83	PPB		99

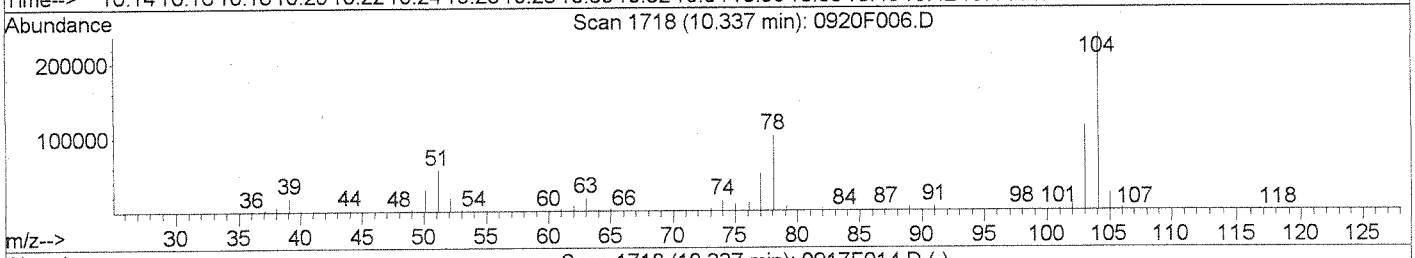
(#) = qualifier out of range (m) = manual integration

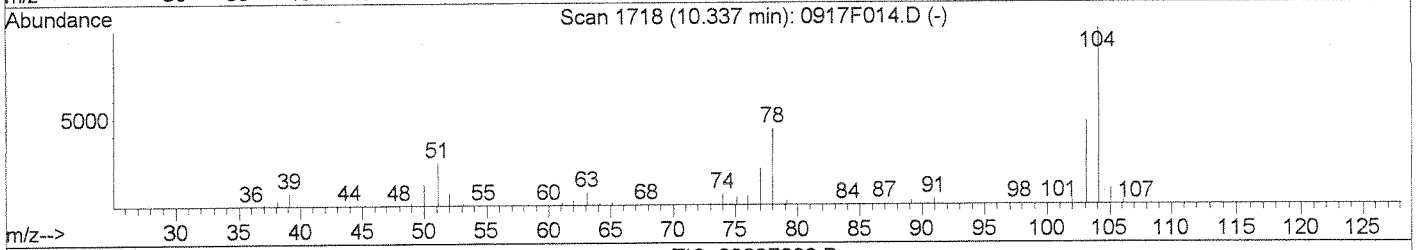
Data File : J:\MS18\DATA\092014\0920F006.D
Acq On : 20 Sep 2014 9:53 am
Sample : K9859-012MS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:37 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F006.D

(81) Styrene (T)

10.34min 12.42PPB

response 180424

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	209.44
78.00	91.60	89.69
0.00	0.00	0.00

Manual Integration:

Before

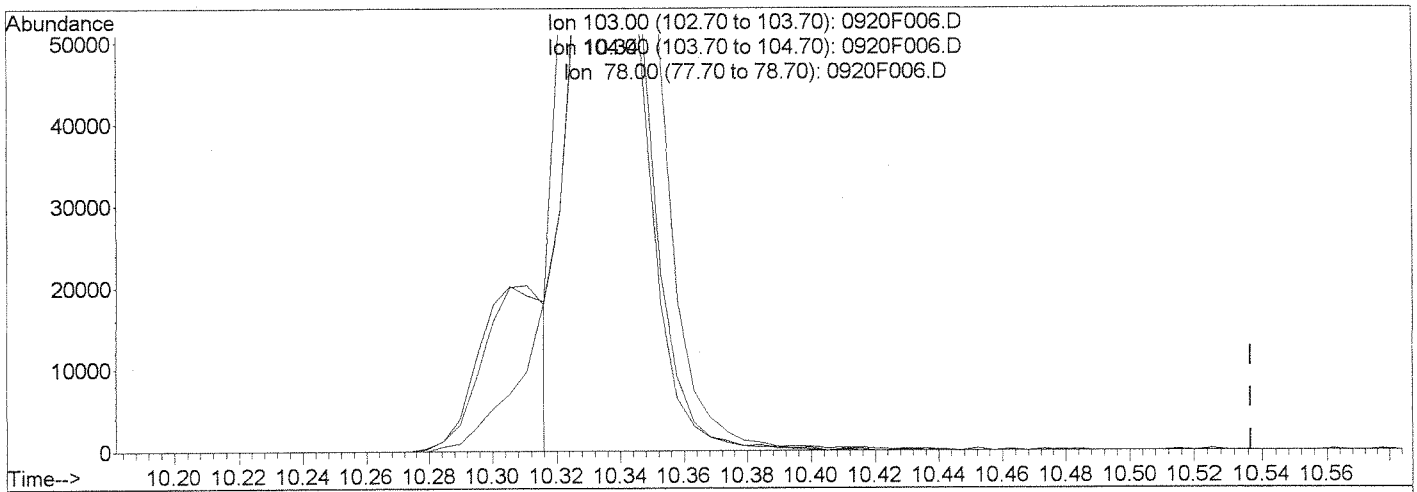
09/22/14

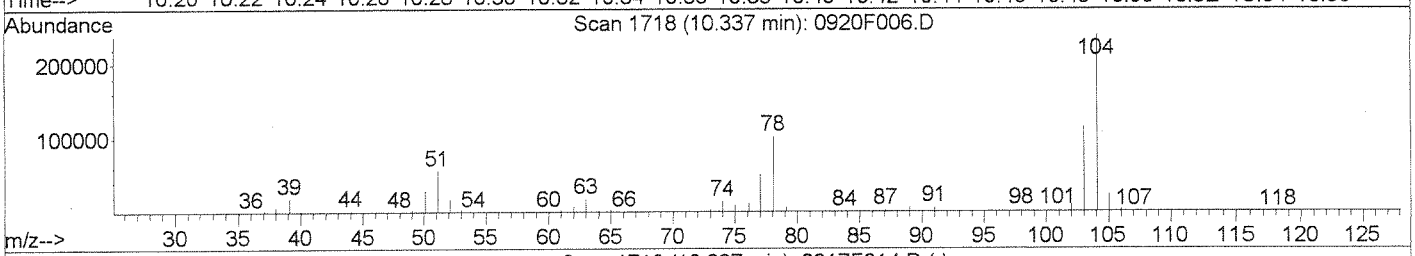
0920F006.D 091714MS18_8260.M Mon Sep 22 09:37:49 2014

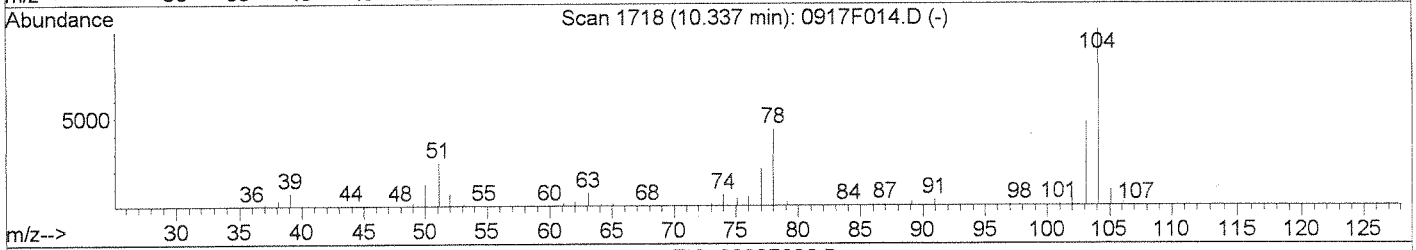
Data File : J:\MS18\DATA\092014\0920F006.D
Acq On : 20 Sep 2014 9:53 am
Sample : K9859-012MS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:42 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F006.D

(81) Styrene (T)

10.34min 10.51PPB m

response 152783

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	209.44
78.00	91.60	89.69
0.00	0.00	0.00

Manual Integration:

After

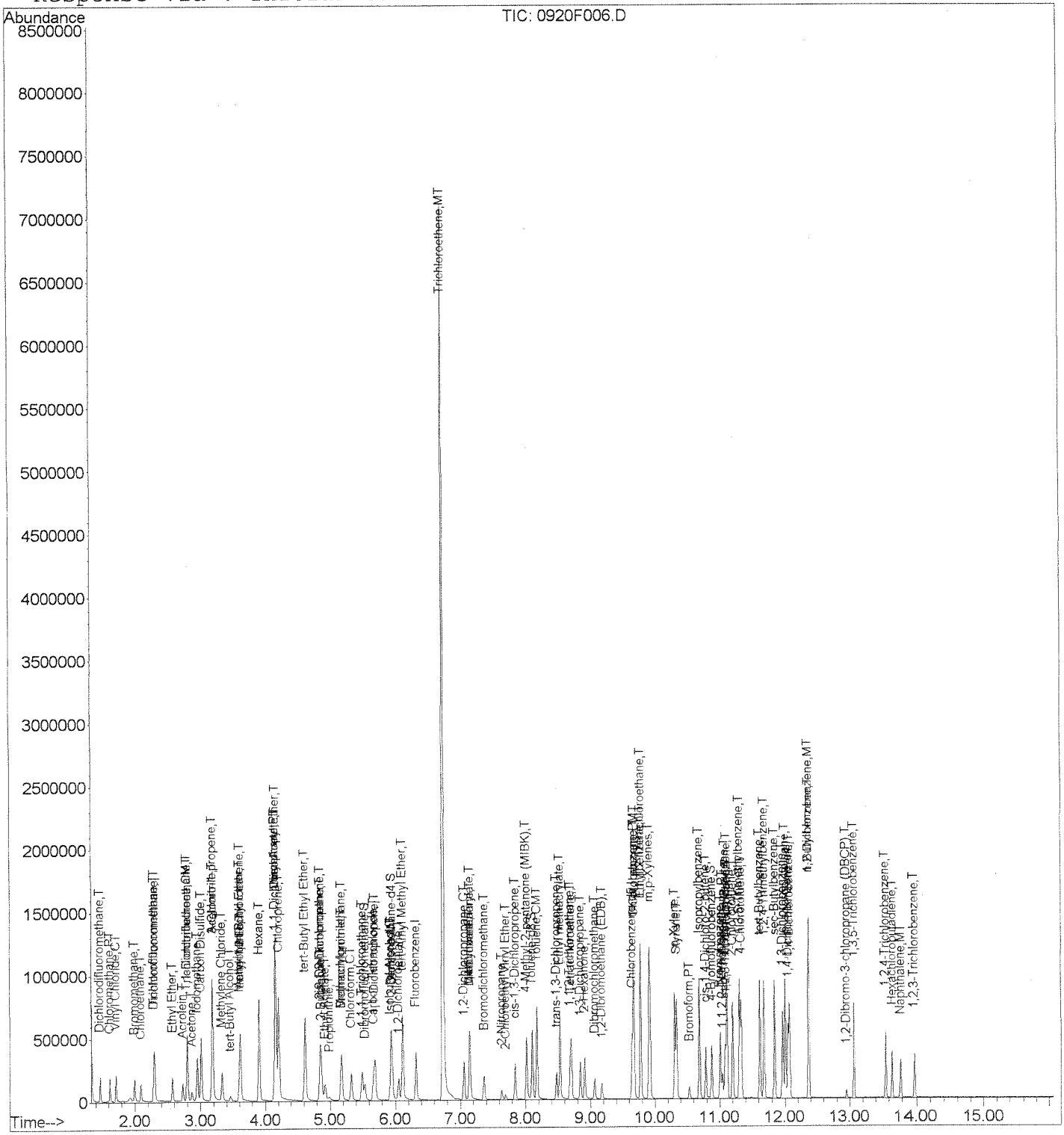
Shoulder

09/22/14

0920F006.D 091714MS18_8260.M Mon Sep 22 09:43:04 2014

Data File : J:\MS18\DATA\092014\0920F006.D Vial: 6
Acq On : 20 Sep 2014 9:53 am Operator: GH
Sample : K9859-012MS 2.5X Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 9:42 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS18\DATA\092014\0920F007.D
Lab ID: KWG1412906-2 -- K1409859-012DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/20/2014 10:14
Date Quantitated: 09/22/2014 09:39
Batch ID: KWG1412905
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutyl Alcohol	0.0064	0.01	NA	NT
	1,4-Dioxane	0.0021	0.01	NA	
Second Source ICAL Verification	Acrolein	62.6	NA	30	
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	CCV diary
	Acrolein	-61.7	NA	20	NT
	tert-Amyl Methyl Ether	43.7	NA	20	
Continuing Calibration Minimum RF	Acrolein	0.0066	0.01	NA	
	Isobutyl Alcohol	0.0058	0.01	NA	
	1,4-Dioxane	0.0022	0.01	NA	
Above Highest ICAL Level	Trichloroethene (TCE)	257.34	NA	80	"E"

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:13:32
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376686				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	277885	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	112963	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	112066	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	60680	9.96	100	85-115	OK	
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	68181	9.50	95	70-120	OK	
1	Toluene-d8	8.10	0.00	0.00	98	279131	9.95	100	85-120	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	101918	10.00	100	75-120	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	107713	11.38	28.5	D	
1	Chloromethane	1.62		0.00	50	127010	11.71	29.3	D	
1	Vinyl Chloride	1.71		0.00	62	126036	12.10	30.3	D	
1	Bromomethane	1.99	-0.01	0.00	96	67698	8.52	21.3	D	
1	Chloroethane	2.09		0.00	64	83913	14.17	35.4	D	
1	Trichlorofluoromethane	2.30		0.00	101	159186	11.23	28.1	D	
1	Acrolein	2.73	0.01	0.00	56	99602	209.29	523	D	
1	Trichlorotrifluoroethane	2.80		0.00	151	67723	12.91	32.3	D	
1	1,1-Dichloroethene	2.80	0.01	0.00	96	81612	13.42	33.6	D	
1	Acetone	2.87		0.00	43	78011	59.03	148	D	
1	Iodomethane	2.95		0.00	142	328048	62.42	156	D	
1	Carbon Disulfide	3.01		0.00	76	550627	26.60	66.5	D	
1	3-Chloro-1-propene	3.18		0.00	76	150242	35.80	89.5	D	
1	Acetonitrile	3.17		0.00	40	171292	442.17	1110	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.33		0.00	84	88157	10.06	25.2	D	
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	38195	102.52	256	D	
1	Acrylonitrile	3.62	0.01	0.00	53	87521	42.85	107	D	
1	Methyl tert-Butyl Ether	3.60	0.01	0.00	73	212178	11.22	28.1	D	
1	trans-1,2-Dichloroethene	3.62	0.01	0.00	96	95904	12.66	31.7	D	
1	Diisopropyl Ether	4.16		0.00	45	626629	23.65	59.1	D	
1	1,1-Dichloroethane	4.14	0.01	0.00	63	163388	12.29	30.7	D	
1	Vinyl Acetate	4.16	0.01	0.00	86	71910	64.92	162	D	
1	Chloroprene	4.21	0.01	0.00	53	462198	34.26	85.7	D	
1	tert-Butyl Ethyl Ether	4.62	0.01	0.00	59	536065	23.72	59.3	D	
1	2,2-Dichloropropane	4.85		0.00	77	126886	11.72	29.3	D	
1	cis-1,2-Dichloroethene	4.86	0.01	0.00	96	104046	11.66	29.2	D	
1	2-Butanone (MEK)	4.88	0.01	0.00	72	32779	61.00	153	D	
1	Propionitrile	4.99	0.01	0.00	54	24221	33.97	84.9	D	
1	Ethyl Acetate	4.93		0.00	61	23392	30.01	75.0	D	
1	Methacrylonitrile	5.17		0.00	67	78770	32.40	81.0	D	
1	Bromochloromethane	5.18	0.01	0.00	128	46644	12.29	30.7	D	
1	Chloroform	5.32		0.00	83	164931	11.73	29.3	D	
1	1,1,1-Trichloroethane (TCA)	5.49		0.00	97	145900	12.49	31.2	D	
1	Carbon Tetrachloride	5.67	0.01	0.00	117	115690	11.72	29.3	D	
1	1,1-Dichloropropene	5.69		0.00	75	135452	12.79	32.0	D	
1	Isobutyl Alcohol	5.92		0.00	43	50585	283.55	709	D	
1	Benzene	5.94	0.01	0.00	78	407910	11.84	29.6	D	
1	1,2-Dichloroethane (EDC)	6.05		0.00	62	119994	11.05	27.6	D	
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	143480	18.56	46.4	D	
1	Trichloroethene (TCE)	6.73		0.00	95	2067070	257.34	643	ED	
1	1,2-Dichloropropane	7.05		0.00	63	96041	11.47	28.7	D	
1	Dibromomethane	7.15		0.00	93	51208	11.55	28.9	D	
1	Methyl Methacrylate	7.14		0.00	69	141901	35.31	88.3	D	
1	1,4-Dioxane	7.15	0.01	0.00	88	20006	345.88	865	D	
1	Bromodichloromethane	7.36		0.00	83	111428	11.49	28.7	D	
1	2-Nitropropane	7.64	0.01	0.00	41	35158	27.09	67.7	D	
1	2-Chloroethyl Vinyl Ether	7.70	0.01	0.00	63	1214	0.3000	0.750	JD	
1	cis-1,3-Dichloropropene	7.84		0.00	75	134879	11.47	28.7	D	
1	4-Methyl-2-pentanone (MIBK)	8.02	0.01	0.00	58	109033	60.99	152	D	
1	Toluene	8.18	0.01	0.00	92	277806	12.04	30.1	D	
2	trans-1,3-Dichloropropene	8.48	0.01	0.00	75	100900	10.62	26.6	D	
2	Ethyl Methacrylate	8.53		0.00	69	296962	38.53	96.3	D	
2	1,1,2-Trichloroethane	8.68		0.00	83	63676	11.73	29.3	D	
2	Tetrachloroethene (PCE)	8.70		0.00	164	88209	12.75	31.9	D	
2	2-Hexanone	8.91		0.00	57	35064	59.15	148	D	
2	1,3-Dichloropropane	8.84		0.00	76	141375	11.96	29.9	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Dibromochloromethane	9.06		0.00	129	72849	12.06	30.2	D	
2	1,2-Dibromoethane (EDB)	9.18	0.01	0.00	107	69980	11.54	28.9	D	
2	1-Chlorohexane	9.67		0.00	91	134851	10.52	26.3	D	
2	Chlorobenzene	9.68	0.01	0.00	112	313436	12.54	31.4	D	
2	Ethylbenzene	9.78		0.00	106	167967	12.31	30.8	D	
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	92797	11.84	29.6	D	
2	m,p-Xylenes	9.91		0.00	106	431259	25.63	64.1	D	
2	o-Xylene	10.31		0.00	106	209058	12.66	31.7	D	
2	Styrene	10.34	0.01	0.00	103	154498**m**	12.47	31.2	D	
2	Bromoform	10.54		0.00	173	36988	10.82	27.1	D	
2	Isopropylbenzene	10.68		0.00	105	526230	12.59	31.5	D	
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28761	29.87	74.7	D	
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	77488	11.28	28.2	D	
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	70801	34.24	85.6	D	
3	Bromobenzene	11.01		0.00	156	132923	12.40	31.0	D	
3	n-Propylbenzene	11.11		0.00	91	631732	12.57	31.4	D	
3	1,2,3-Trichloropropane	11.10		0.00	110	27312	11.48	28.7	D	
3	2-Chlorotoluene	11.20		0.00	91	371217	12.03	30.1	D	
3	1,3,5-Trimethylbenzene	11.30		0.00	105	443739	12.85	32.1	D	
3	4-Chlorotoluene	11.33		0.00	91	429329	12.11	30.3	D	
3	tert-Butylbenzene	11.62	0.01	0.00	119	403164	12.87	32.2	D	
3	1,2,4-Trimethylbenzene	11.68		0.00	105	443477	12.64	31.6	D	
3	sec-Butylbenzene	11.84		0.00	105	553107	12.54	31.4	D	
3	4-Isopropyltoluene	12.00		0.00	119	474277	13.07	32.7	D	
3	1,3-Dichlorobenzene	11.96		0.00	146	253141	12.33	30.8	D	
3	1,4-Dichlorobenzene	12.07		0.00	146	258102	12.22	30.6	D	
3	n-Butylbenzene	12.36		0.00	91	396810	12.75	31.9	D	
3	1,2-Dichlorobenzene	12.37		0.00	146	231782	12.13	30.3	D	
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8074	10.23	25.6	D	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	170782	12.39	31.0	D	
3	1,2,4-Trichlorobenzene	13.55		0.00	180	128319	12.09	30.2	D	
3	Hexachlorobutadiene	13.66		0.00	225	58938	12.55	31.4	D	
3	Naphthalene	13.78		0.00	128	200618	11.86	29.7	D	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	92102	12.07	30.2	D	

Prep Amount: 10 ml **Dilution:** 2.5
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376686				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.32	0.00	96	277885	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	112963	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	112066	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	60680	9.96	100	73-122	OK	
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	68181	9.50	95	59-127	OK	
1	Toluene-d8	8.10	0.00	0.00	98	279131	9.95	100	65-144	OK	
2	4-Bromofluorobenzene	10.88	0.00	0.00	95	101918	10.00	100	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	107713	11.38	28.5	D	
1	Chloromethane	1.62		0.00	50	127010	11.71	29.3	D	
1	Vinyl Chloride	1.71		0.00	62	126036	12.10	30.3	D	
1	1,3-Butadiene				54	0d		1.3	U	
1	Bromomethane	1.99	-0.01	0.00	96	67698	8.52	21.3	D	
1	Chloroethane	2.09		0.00	64	83913	14.17	35.4	D	
1	Dichlorofluoromethane (CFC 21)	2.29		0.00	67	209800	12.85	32.1	D	
1	Trichlorofluoromethane	2.30		0.00	101	159186	11.23	28.1	D	
1	Ethyl Ether	2.57		0.00	59	74658	12.38	31.0	D	
1	Acrolein	2.73	0.01	0.00	56	99602	209.29	523	D	
1	Trichlorotrifluoroethane	2.80		0.00	151	67723	12.91	32.3	D	
1	1,1-Dichloroethene	2.80	0.01	0.00	96	81612	13.42	33.6	D	
1	Acetone	2.87		0.00	43	78011	59.03	148	D	
1	Iodomethane	2.95		0.00	142	328048	62.42	156	D	

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Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	3.01		0.00	76	550627	26.60	66.5	D	
1	2-Propanol				45	0d		43	U	
1	3-Chloro-1-propene	3.18		0.00	76	150242	35.80	89.5	D	
1	Methyl Acetate				43	0d		0.95	U	
1	Acetonitrile	3.17		0.00	40	171292	442.17	1110	D	
1	Methylene Chloride	3.33		0.00	84	88157	10.06	25.2	D	
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	38195	102.52	256	D	
1	Acrylonitrile	3.62	0.01	0.00	53	87521	42.85	107	D	
1	Methyl tert-Butyl Ether	3.60	0.01	0.00	73	212178	11.22	28.1	D	
1	trans-1,2-Dichloroethene	3.62	0.01	0.00	96	95904	12.66	31.7	D	
1	n-Hexane	3.90		0.00	57	340744	42.74	107	D	
1	Diisopropyl Ether	4.16		0.00	45	626629	23.65	59.1	D	
1	1,1-Dichloroethane	4.14	0.01	0.00	63	163388	12.29	30.7	D	
1	Vinyl Acetate	4.16	0.01	0.00	86	71910	64.92	162	D	
1	Chloroprene	4.21	0.01	0.00	53	462198	34.26	85.7	D	
1	tert-Butyl Ethyl Ether	4.62	0.01	0.00	59	536065	23.72	59.3	D	
1	2,2-Dichloropropane	4.85		0.00	77	126886	11.72	29.3	D	
1	cis-1,2-Dichloroethene	4.86	0.01	0.00	96	104046	11.66	29.2	D	
1	2-Butanone (MEK)	4.88	0.01	0.00	72	32779	61.00	153	D	
1	Propionitrile	4.99	0.01	0.00	54	24221	33.97	84.9	D	
1	Ethyl Acetate	4.93		0.00	61	23392	30.01	75.0	D	
1	Methacrylonitrile	5.17		0.00	67	78770	32.40	81.0	D	
1	Bromochloromethane	5.18	0.01	0.00	128	46644	12.29	30.7	D	
1	Tetrahydrofuran				71	0d		2.4	U	
1	Chloroform	5.32		0.00	83	164931	11.73	29.3	D	
1	tert-Butyl Formate				59	0d		0.65	U	
1	1,1,1-Trichloroethane (TCA)	5.49		0.00	97	145900	12.49	31.2	D	
1	Carbon Tetrachloride	5.67	0.01	0.00	117	115690	11.72	29.3	D	
1	1,1-Dichloropropene	5.69		0.00	75	135452	12.79	32.0	D	
1	Cyclohexane				56	0d		0.90	U	
1	Isobutyl Alcohol	5.92		0.00	43	50585	283.55	709	D	
1	Benzene	5.94	0.01	0.00	78	407910	11.84	29.6	D	
1	1,2-Dichloroethane (EDC)	6.05		0.00	62	119994	11.05	27.6	D	
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	143480	18.56	46.4	D	
1	Trichloroethene (TCE)	6.73		0.00	95	2067070	257.34	643	ED	
1	1,2-Dichloropropane	7.05		0.00	63	96041	11.47	28.7	D	
1	Dibromomethane	7.15		0.00	93	51208	11.55	28.9	D	
1	Methyl Methacrylate	7.14		0.00	69	141901	35.31	88.3	D	
1	1,4-Dioxane	7.15	0.01	0.00	88	20006	345.88	865	D	
1	Bromodichloromethane	7.36		0.00	83	111428	11.49	28.7	D	
1	2-Nitropropane	7.64	0.01	0.00	41	35158	27.09	67.7	D	
1	Methylcyclohexane				83	0d		0.83	U	

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e: Result >= MRL, but MRL less than low point of ICAL
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Data File:	J:\MS18\DATA\092014\0920F007.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39	**Vial:**	6
Run Type:	DMS			**Dilution:**	2.5
Lab ID:	KWG1412906-2 -- K1409859-012DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Chloroethyl Vinyl Ether	7.70	0.01	0.00	63	1214	0.3000	0.750	JD	
1	cis-1,3-Dichloropropene	7.84		0.00	75	134879	11.47	28.7	D	
1	4-Methyl-2-pentanone (MIBK)	8.02	0.01	0.00	58	109033	60.99	152	D	
1	Toluene	8.18	0.01	0.00	92	277806	12.04	30.1	D	
2	n-Octane				85	0d		0.40	U	
2	trans-1,3-Dichloropropene	8.48	0.01	0.00	75	100900	10.62	26.6	D	
2	Ethyl Methacrylate	8.53		0.00	69	296962	38.53	96.3	D	
2	1,1,2-Trichloroethane	8.68		0.00	83	63676	11.73	29.3	D	
2	Tetrachloroethene (PCE)	8.70		0.00	164	88209	12.75	31.9	D	
2	2-Hexanone	8.91		0.00	57	35064	59.15	148	D	
2	1,3-Dichloropropane	8.84		0.00	76	141375	11.96	29.9	D	
2	Dibromochloromethane	9.06		0.00	129	72849	12.06	30.2	D	
2	1,2-Dibromoethane (EDB)	9.18	0.01	0.00	107	69980	11.54	28.9	D	
2	1-Chlorohexane	9.67		0.00	91	134851	10.52	26.3	D	
2	Chlorobenzene	9.68	0.01	0.00	112	313436	12.54	31.4	D	
2	Ethylbenzene	9.78		0.00	106	167967	12.31	30.8	D	
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	92797	11.84	29.6	D	
2	m,p-Xylenes	9.91		0.00	106	431259	25.63	64.1	D	
2	o-Xylene	10.31		0.00	106	209058	12.66	31.7	D	
2	Styrene	10.34	0.01	0.00	103	154498m	12.47	31.2	D	
2	Bromoform	10.54		0.00	173	36988	10.82	27.1	D	
2	Isopropylbenzene	10.68		0.00	105	526230	12.59	31.5	D	
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28761	29.87	74.7	D	
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	77488	11.28	28.2	D	
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	70801	34.24	85.6	D	
3	Bromobenzene	11.01		0.00	156	132923	12.40	31.0	D	
3	n-Propylbenzene	11.11		0.00	91	631732	12.57	31.4	D	
3	1,2,3-Trichloropropane	11.10		0.00	110	27312	11.48	28.7	D	
3	2-Chlorotoluene	11.20		0.00	91	371217	12.03	30.1	D	
3	1,3,5-Trimethylbenzene	11.30		0.00	105	443739	12.85	32.1	D	
3	4-Chlorotoluene	11.33		0.00	91	429329	12.11	30.3	D	
3	tert-Butylbenzene	11.62	0.01	0.00	119	403164	12.87	32.2	D	
3	1,2,4-Trimethylbenzene	11.68		0.00	105	443477	12.64	31.6	D	
3	sec-Butylbenzene	11.84		0.00	105	553107	12.54	31.4	D	
3	4-Isopropyltoluene	12.00		0.00	119	474277	13.07	32.7	D	
3	1,3-Dichlorobenzene	11.96		0.00	146	253141	12.33	30.8	D	
3	1,4-Dichlorobenzene	12.07		0.00	146	258102	12.22	30.6	D	
3	n-Butylbenzene	12.36		0.00	91	396810	12.75	31.9	D	
3	1,2-Dichlorobenzene	12.37		0.00	146	231782	12.13	30.3	D	
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8074	10.23	25.6	D	
3	1,3,5-Trichlorobenzene	13.06		0.00	180	170782	12.39	31.0	D	
3	1,2,4-Trichlorobenzene	13.55		0.00	180	128319	12.09	30.2	D	

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e: Result >= MRL, but MRL less than low point of ICAL
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Data File:	J:\MS18\DATA\092014\0920F007.D		
Acqu Date:	09/20/2014 10:14	**Quant Date:**	09/22/2014 09:39
Run Type:	DMS		
Lab ID:	KWG1412906-2 -- K1409859-012DMS		

Instrument:	GC-MS 18
Vial:	6
Dilution:	2.5
Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Hexachlorobutadiene	13.66		0.00	225	58938	12.55	31.4	D	
3	Naphthalene	13.78		0.00	128	200618	11.86	29.7	D	
3	1,2,3-Trichlorobenzene	13.97		0.00	180	92102	12.07	30.2	D	
	Benzyl Chloride				0	0		2.5	U	NR
	Isopropyl Acetate				0	0		50	U	NR
	Cyclohexanone				0	0		2.5	U	NR
	2-Ethoxyethanol				0	0		2.5	U	NR
	Bis(2-chloroethyl) Ether				0	0		50	U	NR
	beta-Pinene				0	0		2.5	U	NR
	1,1,2-Trifluoroethane				0	0		2.5	U	NR
	2,2,4-Trimethylpentane				0	0		2.5	U	NR
	Bis(chloromethyl) Ether				0	0		2.5	U	NR
	Amyl Acetate				0	0		50	U	NR
	Bromoethane				0	0		2.5	U	NR
	Pentachloroethane				0	0		13	U	NR
	1,1-Dichloropropane				0	0		2.5	U	NR
	alpha-Pinene				0	0		2.5	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		2.5	U	NR
	Nitrobenzene				0	0		50	U	NR

Prep Amount:	10 ml	**Dilution:**	2.5
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:24 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.32	96	277885	10.00	PPB		0.00
65) Chlorobenzene-d5	9.64	82	112963	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	112066	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	60680	9.96	PPB		0.00
Spiked Amount 10.000			Recovery =	99.60%			
48) 1,2-Dichloroethane-d4	5.95	65	68181	9.50	PPB		0.00
Spiked Amount 10.000			Recovery =	95.00%			
63) Toluene-d8	8.10	98	279131	9.95	PPB		0.00
Spiked Amount 10.000			Recovery =	99.50%			
85) 4-Bromofluorobenzene	10.88	95	101918	10.00	PPB		0.00
Spiked Amount 10.000			Recovery =	100.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.47	85	107713	11.38	PPB		97
3) Chloromethane	1.62	50	127010	11.71	PPB		99
4) Vinyl Chloride	1.71	62	126036	12.10	PPB		98
6) Bromomethane	1.99	96	67698	8.52	PPB		97
7) Chloroethane	2.09	64	83913	14.17	PPB		96
8) Dichlorofluoromethane	2.29	67	209800	12.85	PPB		99
9) Trichlorofluoromethane	2.30	101	159186	11.23	PPB		99
10) Ethyl Ether	2.57	59	74658	12.38	PPB		95
11) Acrolein	2.73	56	99602	209.29	PPB		92
12) Trichlorotrifluoroethane	2.80	151	67723	12.91	PPB		99
13) 1,1-Dichloroethene	2.80	96	81612	13.42	PPB		97
14) Acetone	2.87	43	78011	59.03	PPB		99
15) Iodomethane	2.95	142	328048	62.42	PPB		97
16) Carbon Disulfide	3.01	76	550627	26.60	PPB		98
18) 3-Chloro-1-propene	3.18	76	150242	35.80	PPB	#	47
20) Acetonitrile	3.17	40	171292	442.17	PPB	#	1
21) Methylene Chloride	3.33	84	88157	10.06	PPB		95
22) tert-Butyl Alcohol	3.46	59	38195	102.52	PPB		94
23) Acrylonitrile	3.62	53	87521	42.85	PPB		98
24) Methyl tert-Butyl Ether	3.60	73	212178	11.22	PPB		99
25) trans-1,2-Dichloroethene	3.62	96	95904	12.66	PPB		94
26) Hexane	3.90	57	340744	42.74	PPB		99
27) Diisopropyl Ether	4.16	45	626629	23.65	PPB		99
28) 1,1-Dichloroethane	4.14	63	163388	12.29	PPB		98
29) Vinyl Acetate	4.16	86	71910	64.92	PPB	#	80
30) Chloroprene	4.21	53	462198	34.26	PPB		97
31) tert-Butyl Ethyl Ether	4.62	59	536065	23.72	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:24 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
32)	2,2-Dichloropropane	4.85	77	126886	11.72	PPB	98
33)	cis-1,2-Dichloroethene	4.86	96	104046	11.66	PPB	93
34)	2-Butanone	4.88	72	32779	61.00	PPB	99
35)	Propionitrile	4.99	54	24221	33.97	PPB	92
36)	Ethyl Acetate	4.93	61	23392	30.01	PPB	98
37)	Methacrylonitrile	5.17	67	78770	32.40	PPB	94
38)	Bromochloromethane	5.18	128	46644	12.29	PPB	96
40)	Chloroform	5.32	83	164931	11.73	PPB	97
42)	1,1,1-Trichloroethane	5.49	97	145900	12.49	PPB	95
44)	Carbon Tetrachloride	5.67	117	115690	11.72	PPB	99
45)	1,1-Dichloropropene	5.69	75	135452	12.79	PPB	99
47)	Isobutyl Alcohol	5.92	43	50585	283.55	PPB	97
49)	Benzene	5.94	78	407910	11.84	PPB	98
50)	1,2-Dichloroethane	6.05	62	119994	11.05	PPB	99
51)	tert-Amyl Methyl Ether	6.11	55	143480	18.56	PPB	89
52)	Trichloroethene	6.73	95	2067070	257.34	PPB	98
53)	1,2-Dichloropropane	7.05	63	96041	11.47	PPB	97
54)	Dibromomethane	7.15	93	51208	11.55	PPB	96
55)	Methyl methacrylate	7.14	69	141901	35.31	PPB	93
56)	1,4-Dioxane	7.15	88	20006	345.88	PPB	83
57)	Bromodichloromethane	7.36	83	111428	11.49	PPB	98
58)	2-Nitropropane	7.64	41	35158	27.09	PPB	95
60)	2-Chloroethyl Vinyl Ether	7.70	63	1214	0.30	PPB	73
61)	cis-1,3-Dichloropropene	7.84	75	134879	11.47	PPB	98
62)	4-Methyl-2-pentanone (MIBK	8.02	58	109033	60.99	PPB	95
64)	Toluene	8.18	92	277806	12.04	PPB	99
67)	trans-1,3-Dichloropropene	8.48	75	100900	10.62	PPB	90
68)	Ethyl methacrylate	8.53	69	296962	38.53	PPB	98
69)	1,1,2-Trichloroethane	8.68	83	63676	11.73	PPB	94
70)	Tetrachloroethene	8.70	164	88209	12.75	PPB	97
71)	2-Hexanone	8.91	57	35064	59.15	PPB	96
72)	1,3-Dichloropropane	8.84	76	141375	11.96	PPB	97
73)	Dibromochloromethane	9.06	129	72849	12.06	PPB	97
74)	1,2-Dibromoethane (EDB)	9.18	107	69980	11.54	PPB	99
75)	1-Chlorohexane	9.67	91	134851	10.52	PPB	96
76)	Chlorobenzene	9.68	112	313436	12.54	PPB	99
77)	Ethylbenzene	9.78	106	167967	12.31	PPB	97
78)	1,1,1,2-Tetrachloroethane	9.78	131	92797	11.84	PPB	95
79)	m,p-Xylenes	9.91	106	431259	25.63	PPB	96
80)	o-Xylene	10.31	106	209058	12.66	PPB	94
81)	Styrene	10.34	103	154498m	12.47	PPB	

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:24 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	Bromoform	10.54	173	36988	10.82	PPB	98
83)	Isopropylbenzene	10.68	105	526230	12.59	PPB	99
84)	cis-1,4-Dichloro-2-butene	10.78	89	28761	29.87	PPB	95
87)	1,1,2,2-Tetrachloroethane	11.04	83	77488	11.28	PPB	97
88)	trans-1,4-Dichloro-2-buten	11.08	53	70801	34.24	PPB	99
89)	Bromobenzene	11.01	156	132923	12.40	PPB	93
90)	n-Propylbenzene	11.11	91	631732	12.57	PPB	99
91)	1,2,3-Trichloropropane	11.10	110	27312	11.48	PPB	93
92)	2-Chlorotoluene	11.20	91	371217	12.03	PPB	99
93)	1,3,5-Trimethylbenzene	11.30	105	443739	12.85	PPB	99
94)	4-Chlorotoluene	11.33	91	429329	12.11	PPB	99
95)	tert-Butylbenzene	11.62	119	403164	12.87	PPB	96
96)	1,2,4-Trimethylbenzene	11.68	105	443477	12.64	PPB	98
97)	sec-Butylbenzene	11.84	105	553107	12.54	PPB	100
98)	p-Isopropyltoluene	12.00	119	474277	13.07	PPB	100
99)	1,3-Dichlorobenzene	11.96	146	253141	12.33	PPB	99
100)	1,4-Dichlorobenzene	12.07	146	258102	12.22	PPB	98
101)	n-Butylbenzene	12.36	91	396810	12.75	PPB	99
102)	1,2-Dichlorobenzene	12.37	146	231782	12.13	PPB	99
103)	1,2-Dibromo-3-chloropropan	12.95	155	8074	10.23	PPB	97
104)	1,3,5-Trichlorobenzene	13.06	180	170782	12.39	PPB	98
105)	1,2,4-Trichlorobenzene	13.55	180	128319	12.09	PPB	95
106)	Hexachlorobutadiene	13.66	225	58938	12.55	PPB	100
107)	Naphthalene	13.78	128	200618	11.86	PPB	98
108)	1,2,3-Trichlorobenzene	13.97	180	92102	12.07	PPB	88

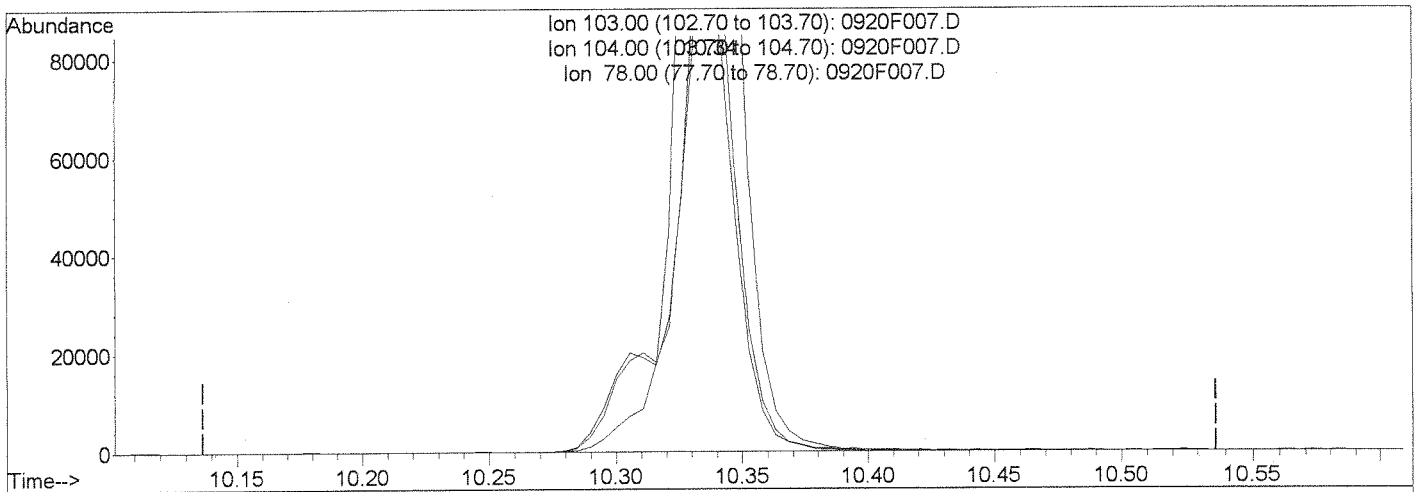
(#) = qualifier out of range (m) = manual integration

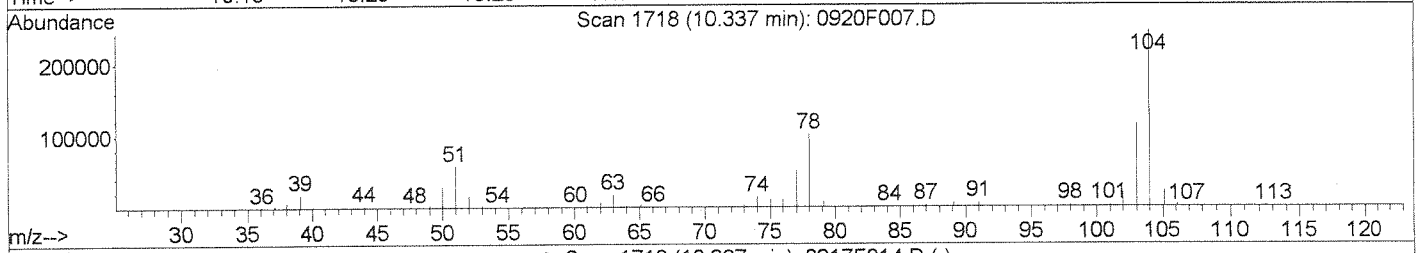
Quantitation Report (Qedit)

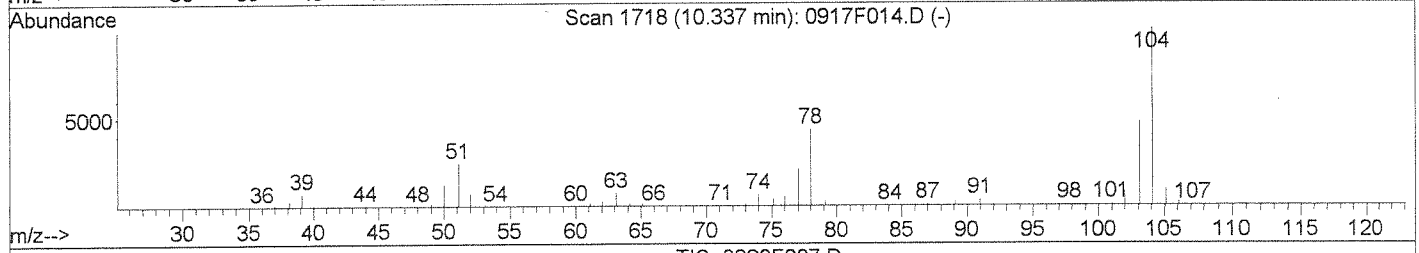
Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:39 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F007.D

(81) Styrene (T)

10.34min 14.57PPB

response 180495

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	213.73
78.00	91.60	88.26
0.00	0.00	0.00

Manual Integration:

Before

09/22/14

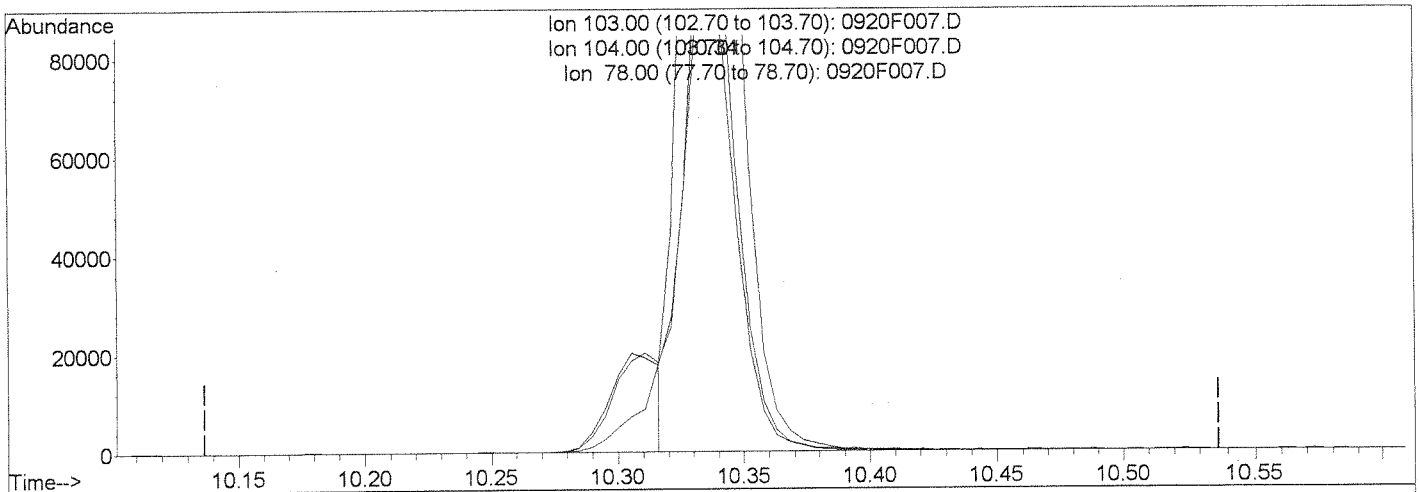
0920F007.D 091714MS18_8260.M Mon Sep 22 09:39:43 2014

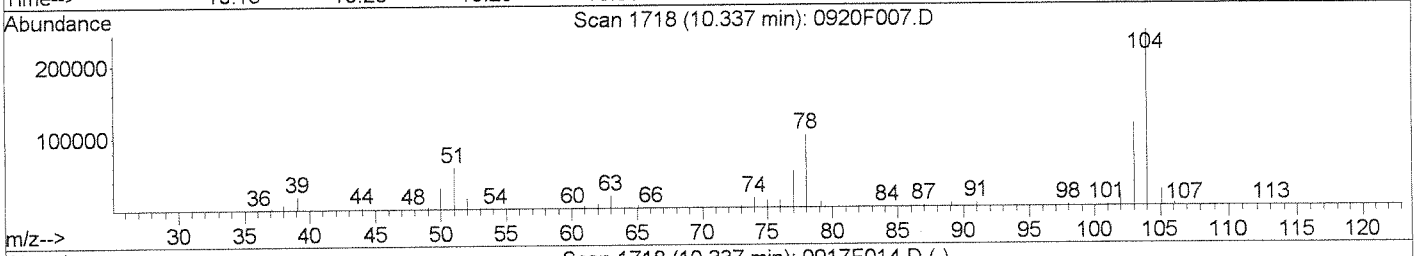
Quantitation Report (Qedit)

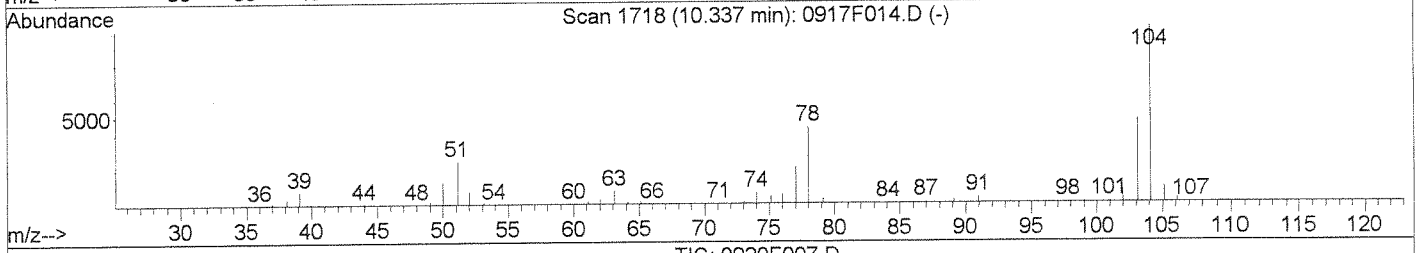
Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:39 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F007.D

(81) Styrene (T)

10.34min 12.47PPB m

response 154498

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	213.73
78.00	91.60	88.26
0.00	0.00	0.00

Manual Integration:

After

Shoulder

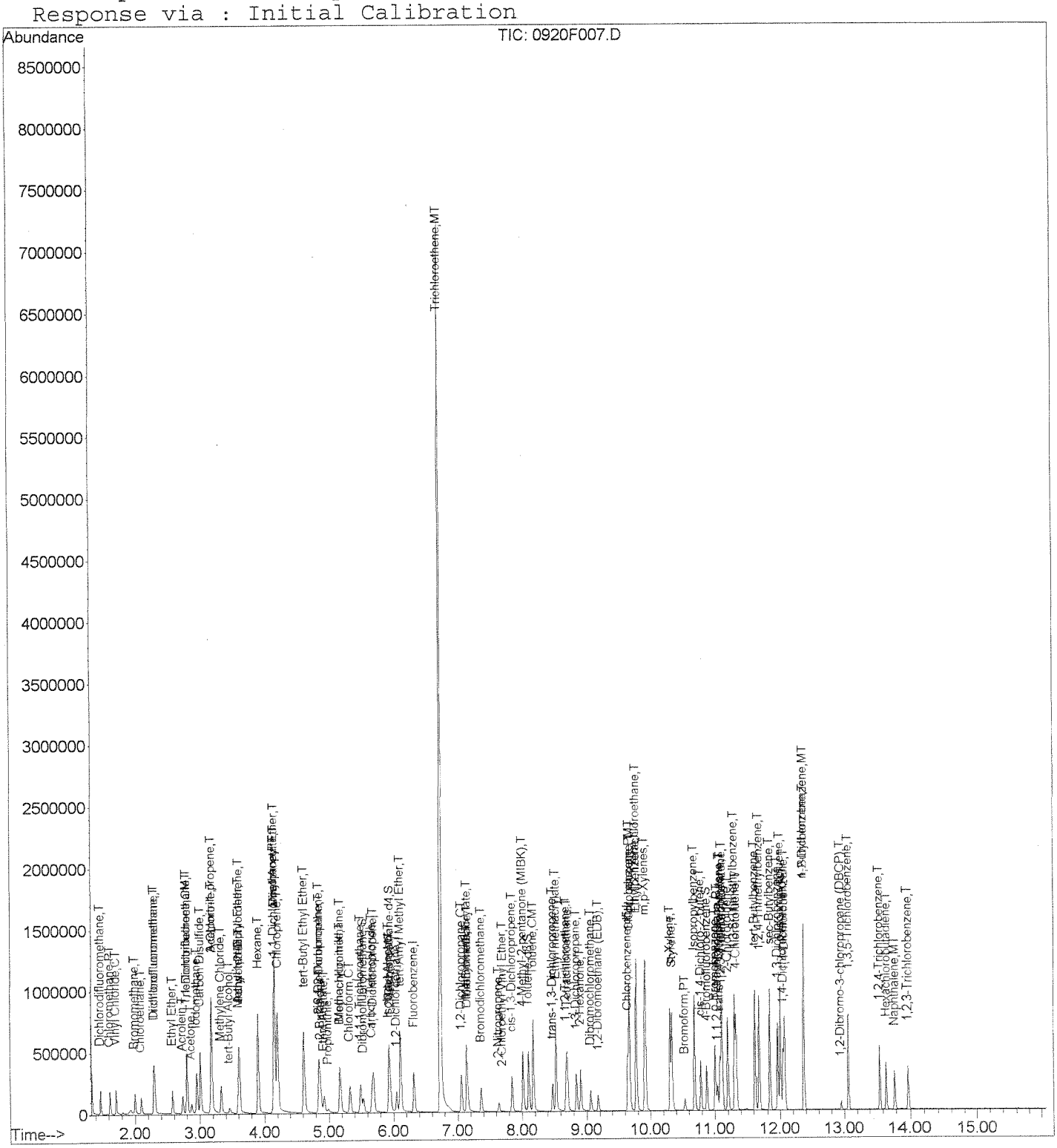
09/22/14

0920F007.D 091714MS18_8260.M Mon Sep 22 09:39:49 2014

Data File : J:\MS18\DATA\092014\0920F007.D
Acq On : 20 Sep 2014 10:14 am
Sample : K9859-012DMS 2.5X
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 9:39 2014

Vial: 6
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS24\DATA\091914\0919F012.D
Lab ID: K1410113-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 09/19/2014 14:18
Date Quantitated: 09/19/2014 15:30
Batch ID: KWG1412874
Analysis Method: 8260C
ListJoinID: LJ1459

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/19/14

Secondary Review: 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F012.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 14:18	**Quant Date:**	09/19/2014 15:30	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1410113-003			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**	09/17/2014	**Receive Date:**	09/18/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	K1410113
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376447				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO			**Calibration ID:**	CAL12826
Title:	Volatile Organic Compounds			**Report List ID:**	LJ1459
Tune Ref:	J:\MS24\DATA\091914\0919F003.D			**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D			**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.98	0.01	96	373641	50.00	OK
2	Chlorobenzene-d5	6.59	-0.01	82	146909	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	128655	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	92135	49.40	99	82-146	OK	
1	Toluene-d8	5.26	0.00	0.00	98	349111	48.36	97	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	124937	47.84	96	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzene				78	0		0.072	U	
1	Toluene				92	0		0.20	U	
2	Ethylbenzene				106	0		0.13	U	
2	m,p-Xylenes				106	0		0.14	U	
2	o-Xylene	7.20	-0.01	0.00	106	2217	0.7300	0.96	J	

Prep Amount:	5.072 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	74.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS24\DATA\091914\0919F012.D Vial: 11
Acq On : 19 Sep 2014 2:18 pm Operator: KR
Sample : K10113-003 Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 15:29:03 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	373641	50.00	PPB		0.00
61) Chlorobenzene-d5	6.59	82	146909	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	128655	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	92135	49.40	PPB		0.00
Spiked Amount 50.000			Recovery =	98.80%			
44) 1,2-Dichloroethane-d4	3.76	65	85339	45.68	PPB		0.00
Spiked Amount 50.000			Recovery =	91.36%			
59) Toluene-d8	5.26	98	349111	48.36	PPB		0.00
Spiked Amount 50.000			Recovery =	96.72%			
80) 4-Bromofluorobenzene	7.76	95	124937	47.84	PPB		0.00
Spiked Amount 50.000			Recovery =	95.68%			
Target Compounds							Qvalue
13) Acetone	1.96	43	5928	12.91	PPB		96
18) Acetonitrile	2.19	40	4658	52.87	PPB	#	61
19) Methylene Chloride	2.24	84	24818	12.58	PPB		98
22) Methyl tert-Butyl Ether	2.39	73	4865	0.98	PPB		92
24) Hexane	2.53	57	693	0.32	PPB		80
38) Cyclohexane	3.46	56	894	0.38	PPB	#	65
49) Methylcyclohexane	4.35	83	7477	2.90	PPB		96
66) 2-Hexanone	5.96	57	540	2.58	PPB	#	1
70) 1-Chlorohexane	6.59	91	616	0.27	PPB	#	40
75) o-Xylene	7.20	106	2217	0.73	PPB		99
78) Isopropylbenzene	7.57	105	2022	0.28	PPB		97
85) n-Propylbenzene	7.98	91	8863	1.06	PPB		95
87) 2-Chlorotoluene	8.10	91	2849	0.57	PPB		51
88) 1,3,5-Trimethylbenzene	8.17	105	20544	3.48	PPB		97
91) 1,2,4-Trimethylbenzene	8.55	105	4322	0.72	PPB		91
92) sec-Butylbenzene	8.70	105	11966	1.60	PPB		98
93) p-Isopropyltoluene	8.85	119	8067	1.29	PPB		96
96) n-Butylbenzene	9.25	91	25940	4.71	PPB	#	61
102) Naphthalene	11.03	128	10222	1.80	PPB		88

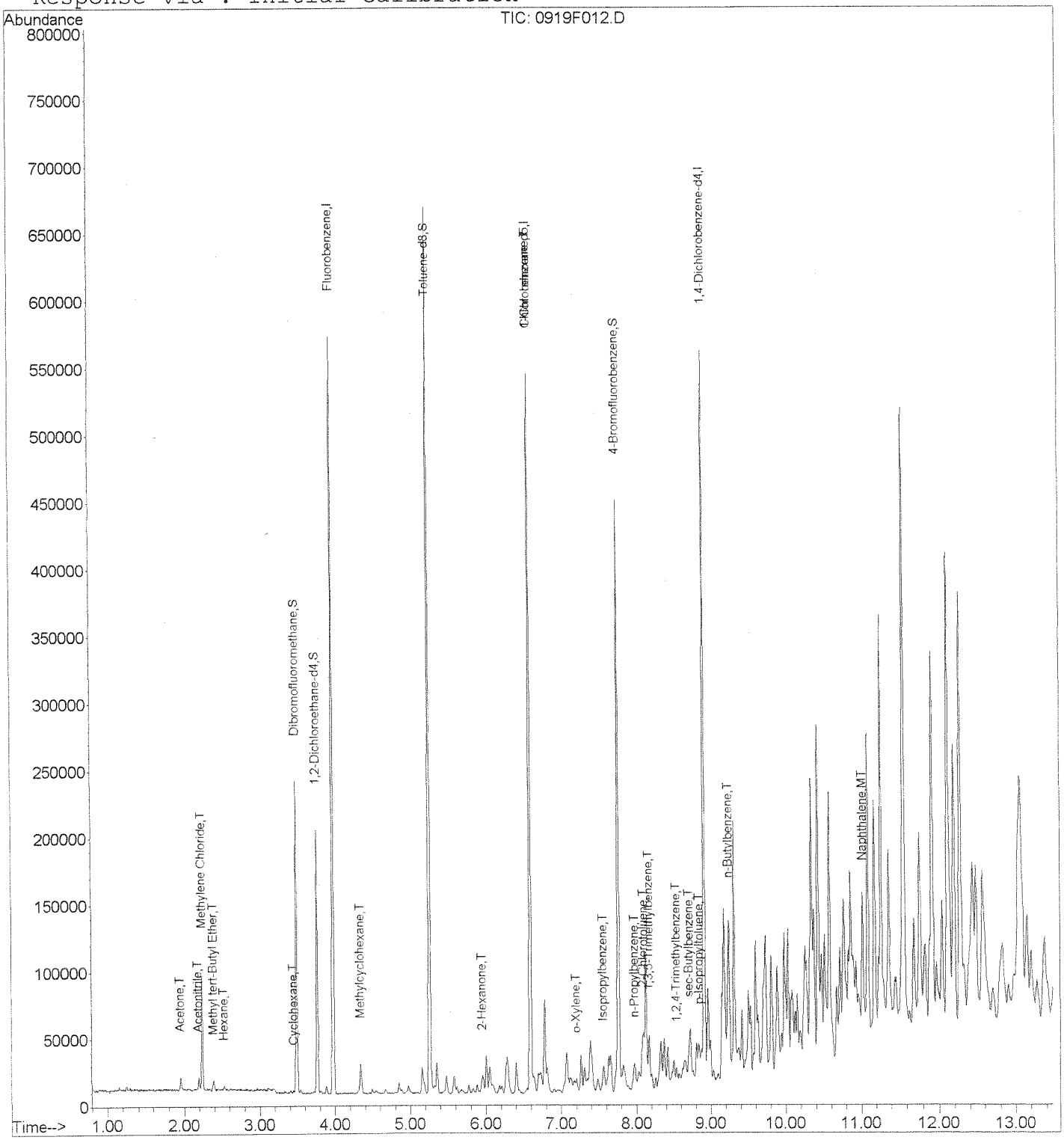
(#) = qualifier out of range (m) = manual integration

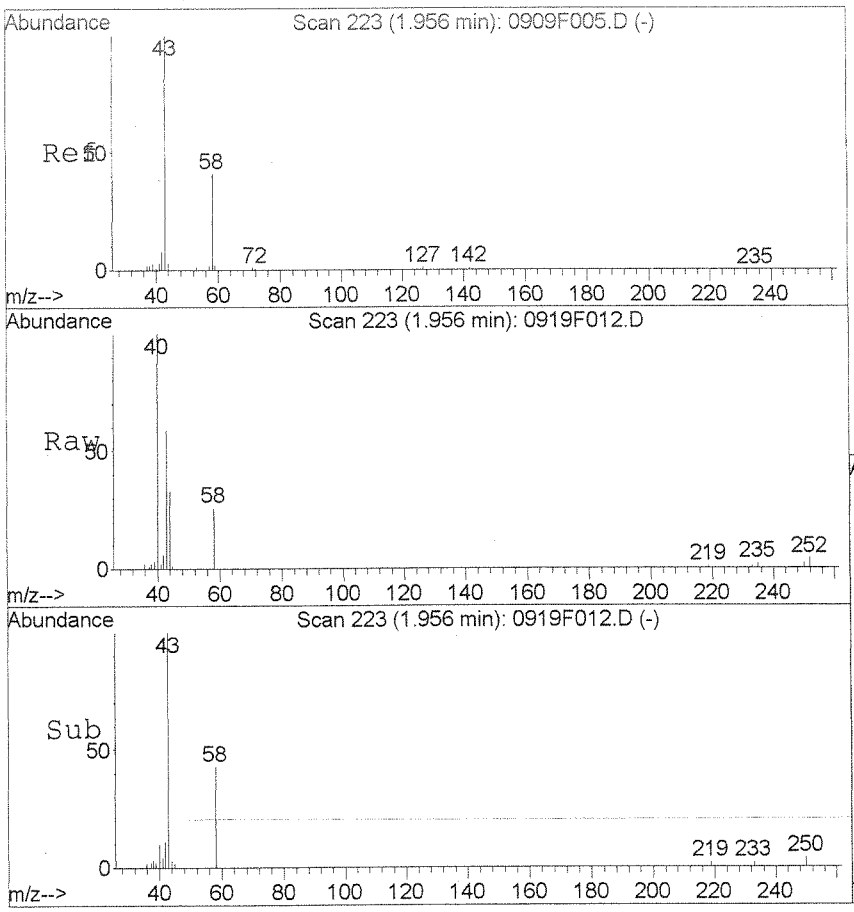
Data File : J:\MS24\DATA\091914\0919F012.D
Acq On : 19 Sep 2014 2:18 pm
Sample : K10113-003
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 15:30 2014

Vial: 11
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration

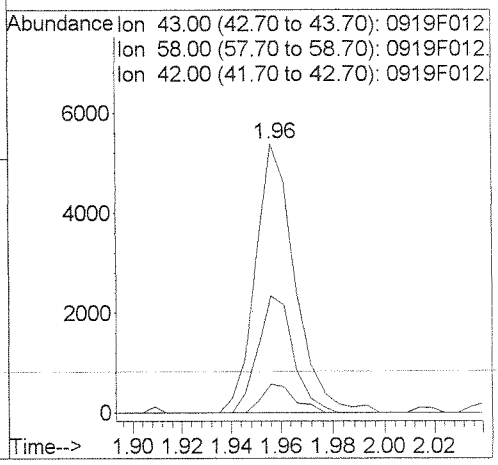


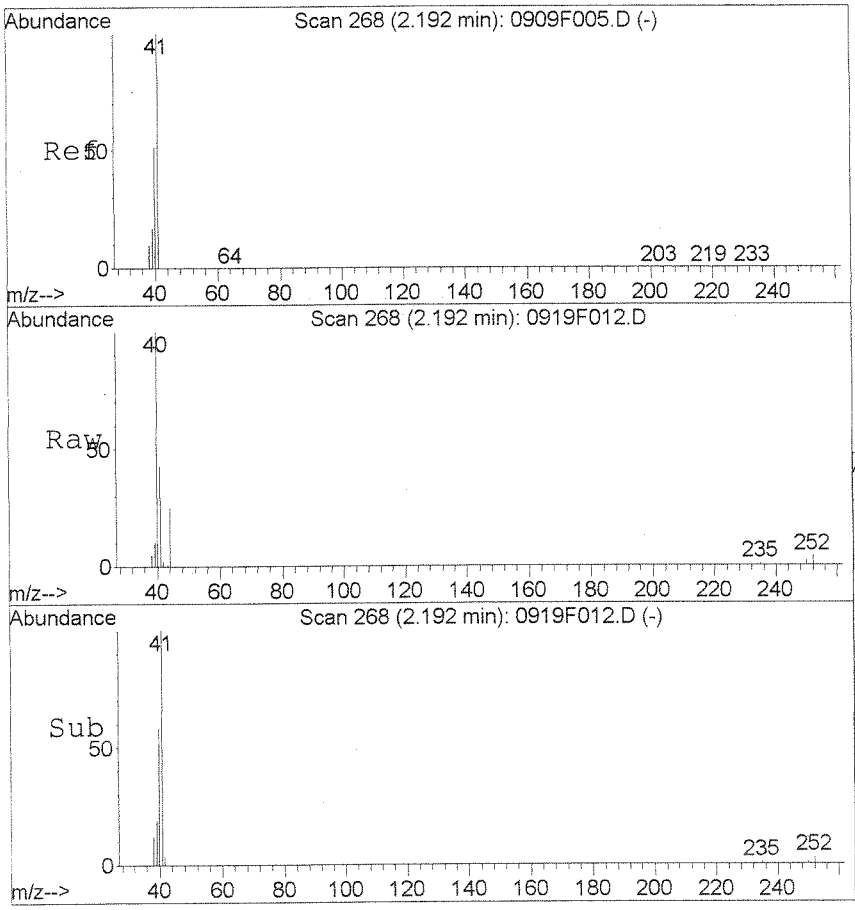


#13
Acetone
Concen: 12.91 PPB
RT: 1.96 min Scan# 223
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 43 Resp: 5928

Ion	Ratio	Lower	Upper
43	100		
58	43.5	11.3	71.3
42	10.7	0.0	37.7

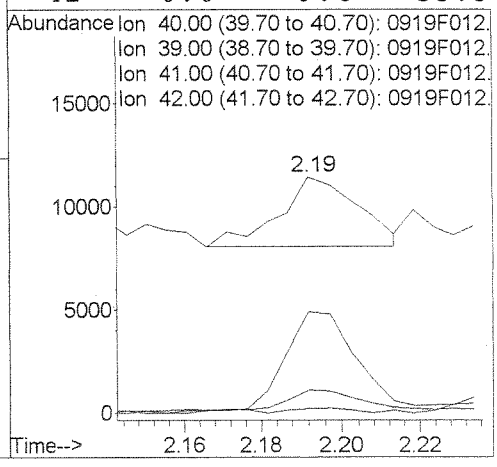


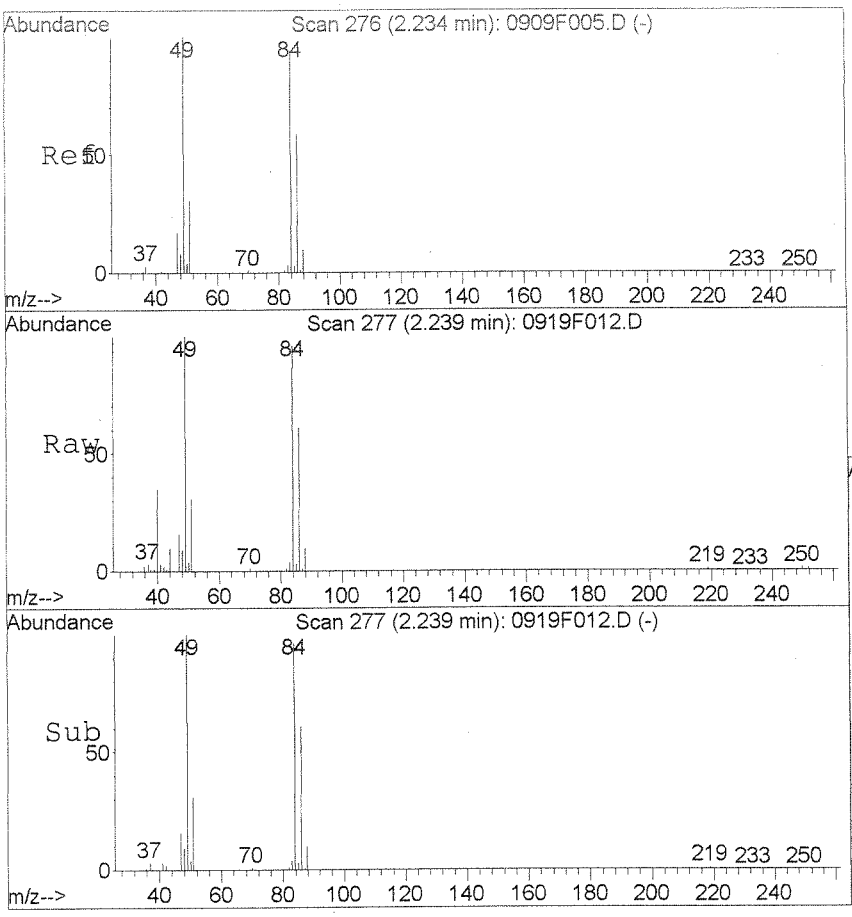


#18
Acetonitrile
Concen: 52.87 PPB
RT: 2.19 min Scan# 268
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 40 Resp: 4658

Ion	Ratio	Lower	Upper
40	100		
39	28.5	6.9	66.9
41	133.9	170.6	230.6#
42	0.0	0.0	35.5

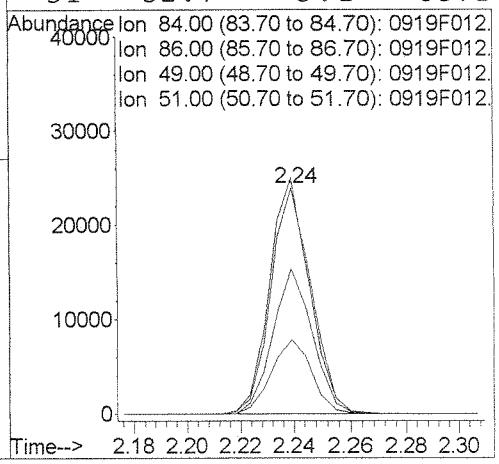


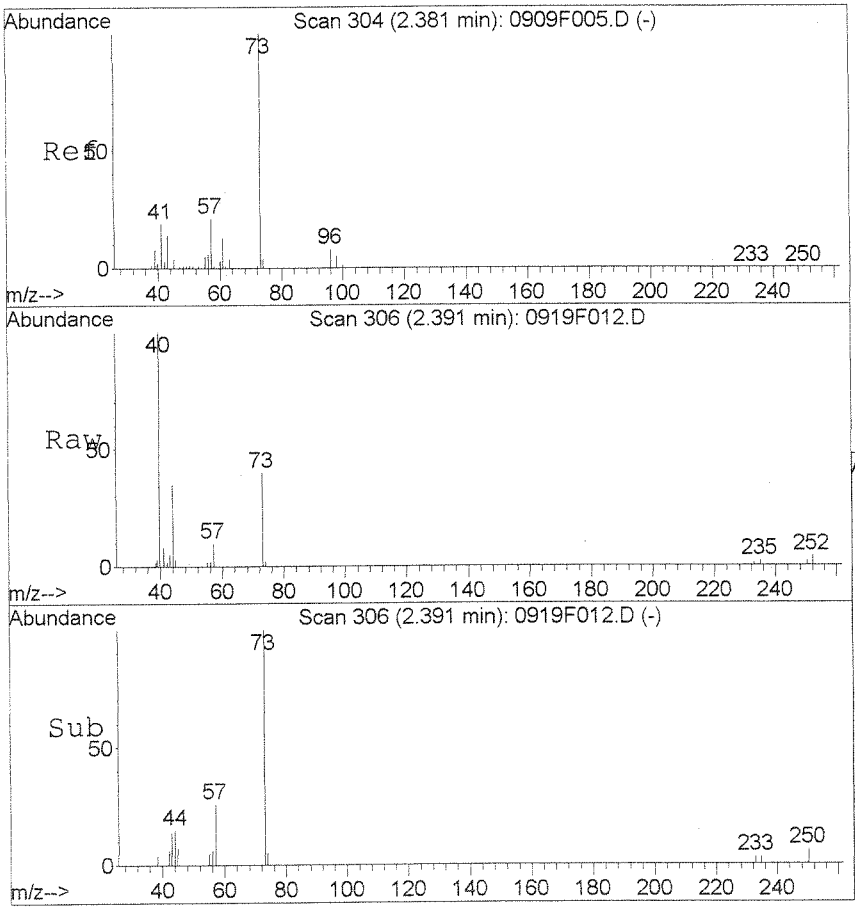


#19
Methylene Chloride
Concen: 12.58 PPB
RT: 2.24 min Scan# 277
Delta R.T. 0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 84 Resp: 24818

Ion	Ratio	Lower	Upper
84	100		
86	64.2	32.9	92.9
49	104.7	76.9	136.9
51	32.7	3.1	63.1

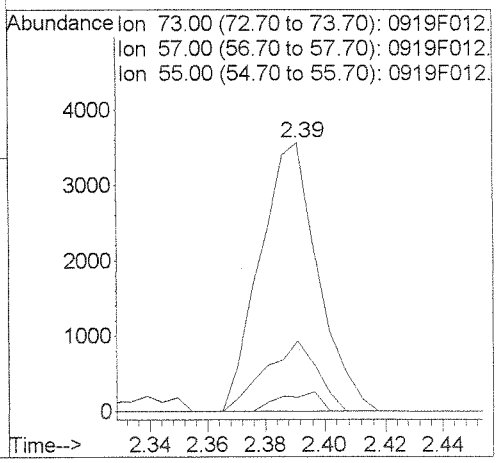


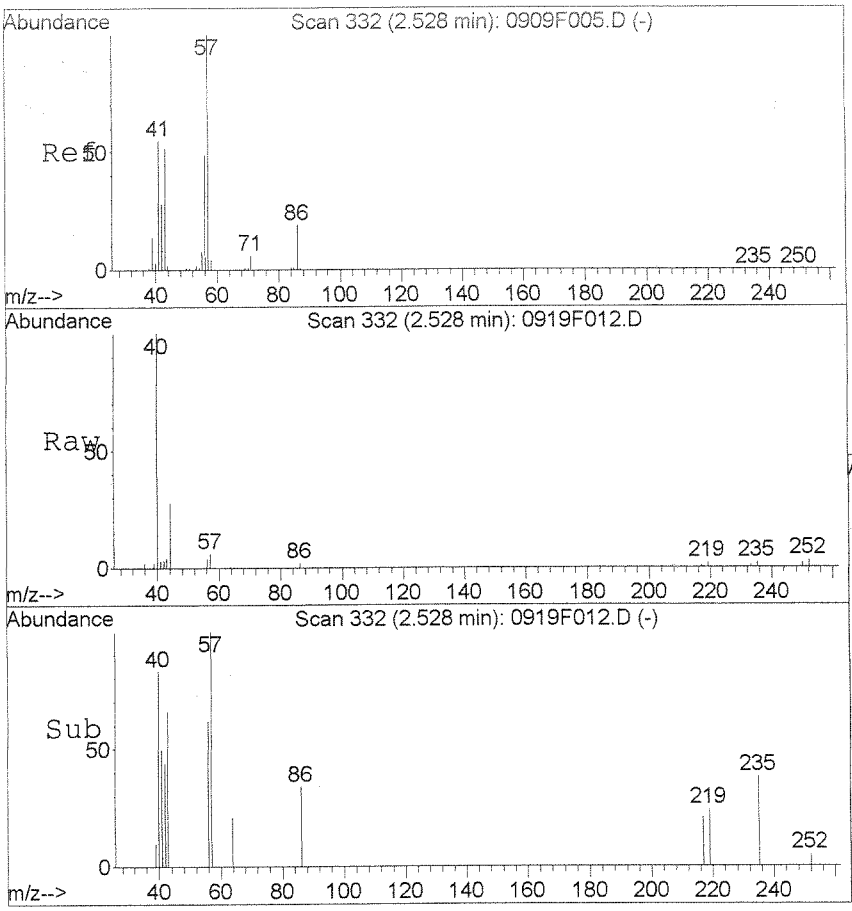


#22
Methyl tert-Butyl Ether
Concen: 0.98 PPB
RT: 2.39 min Scan# 306
Delta R.T. 0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 73 Resp: 4865

Ion	Ratio	Lower	Upper
73	100		
57	26.3	0.0	51.5
55	5.4	0.0	35.6

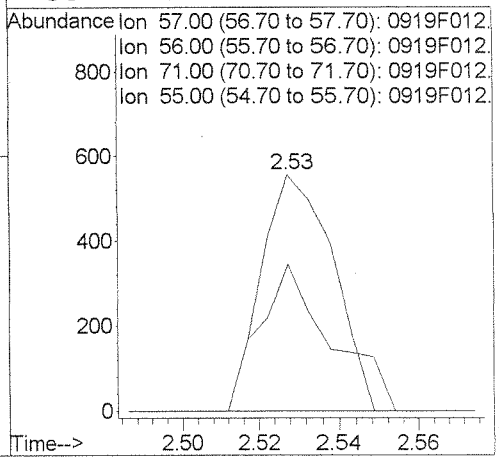


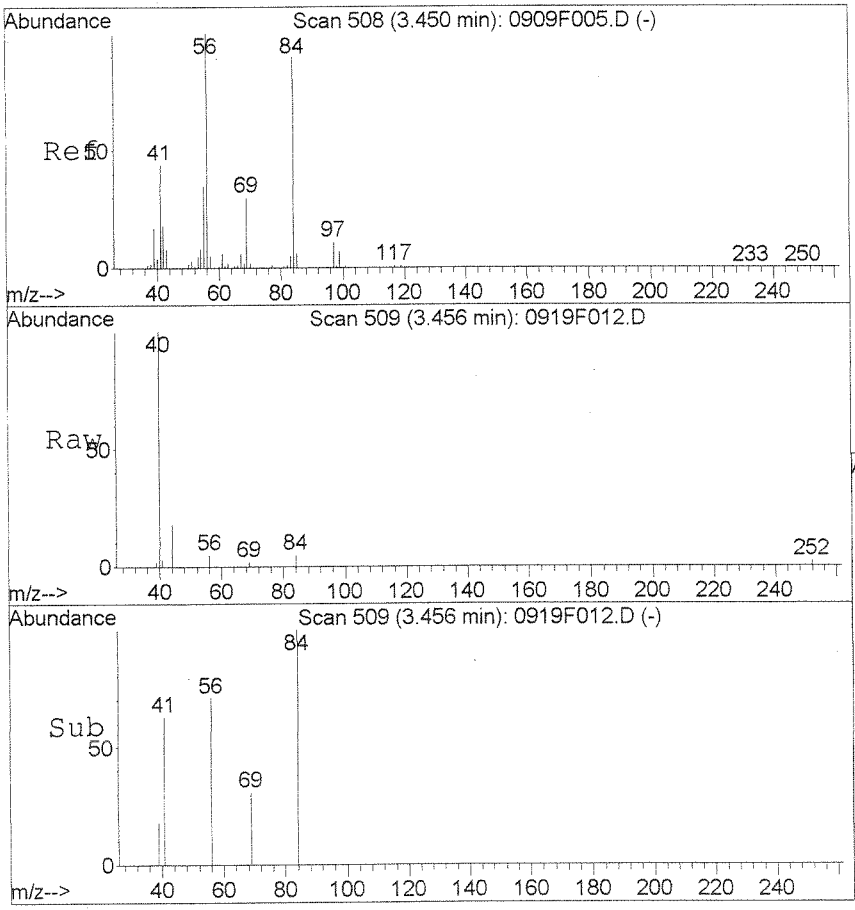


#24
Hexane
Concen: 0.32 PPB
RT: 2.53 min Scan# 332
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 57 Resp: 693

Ion	Ratio	Lower	Upper
57	100		
56	62.2	18.8	78.8
71	0.0	0.0	35.9
55	0.0	0.0	20.6

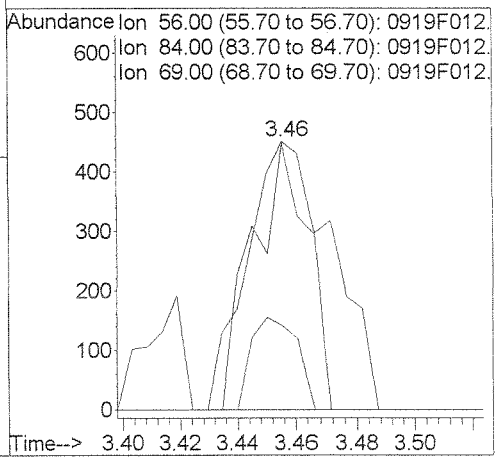


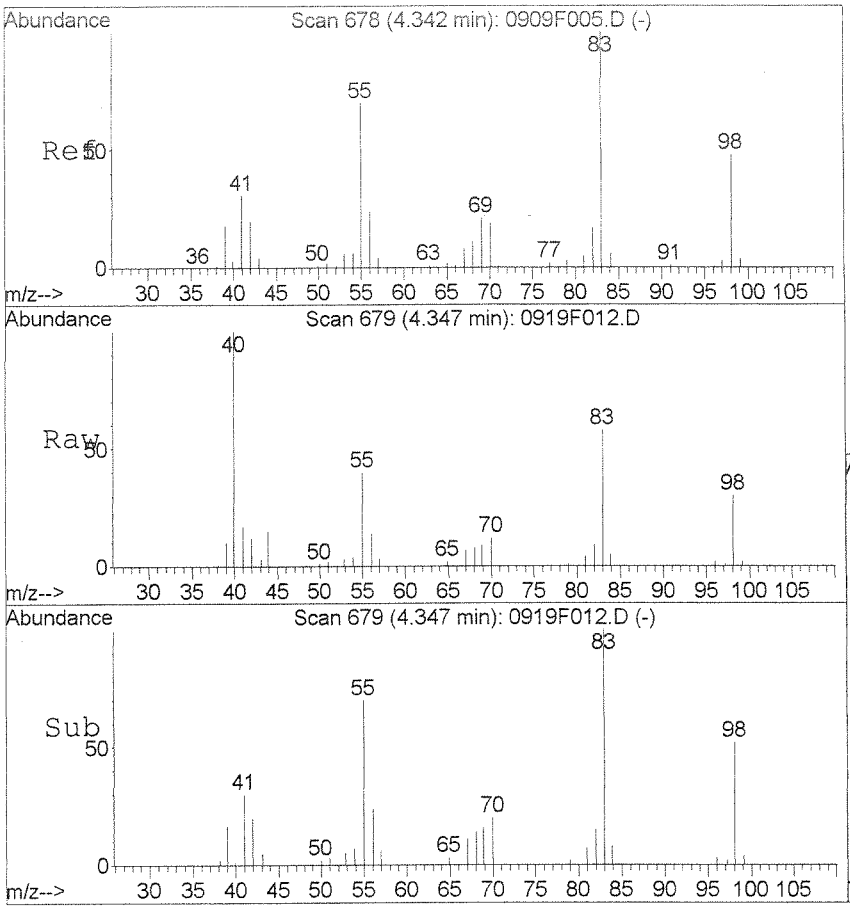


#38
Cyclohexane
Concen: 0.38 PPB
RT: 3.46 min Scan# 509
Delta R.T. 0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 56 Resp: 894

Ion	Ratio	Lower	Upper
56	100		
84	65.8	64.6	120.0
69	0.0	22.0	41.0#

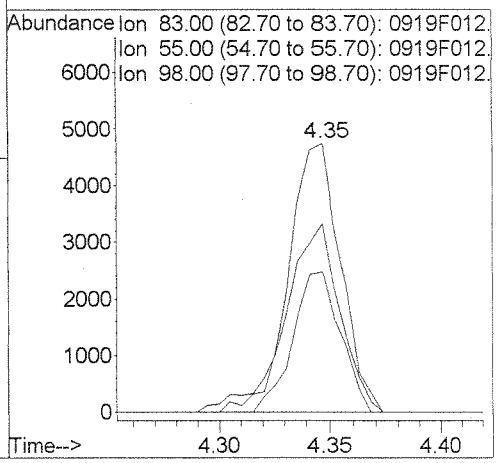


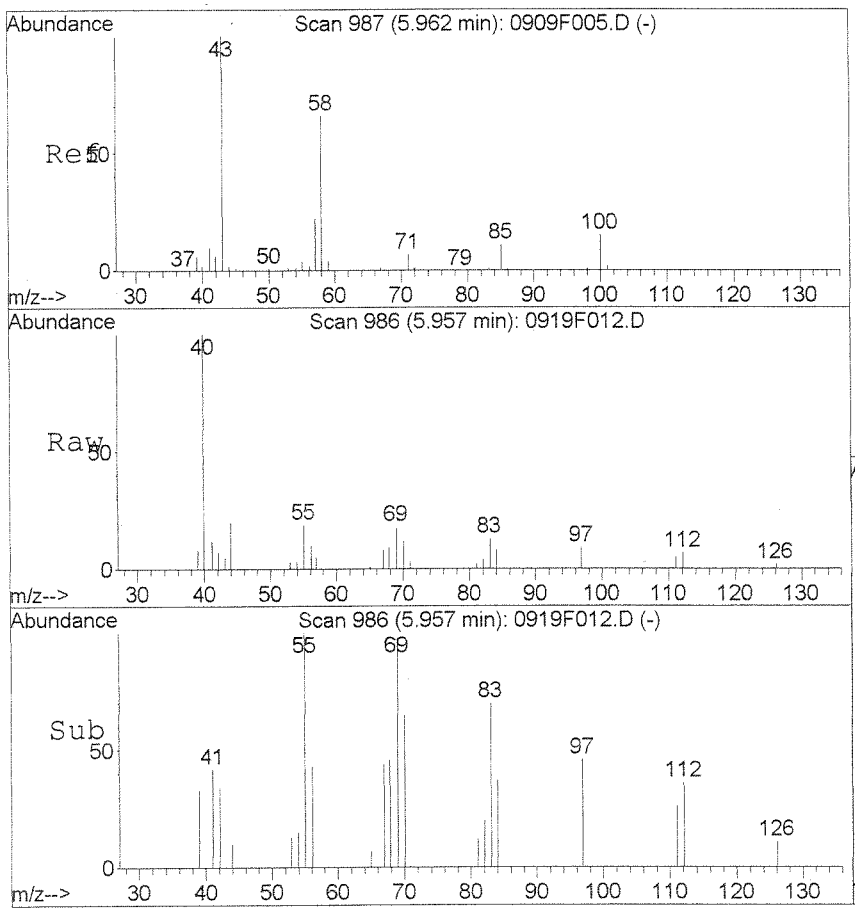


#49
Methylcyclohexane
Concen: 2.90 PPB
RT: 4.35 min Scan# 679
Delta R.T. 0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 83 Resp: 7477

Ion	Ratio	Lower	Upper
83	100		
55	75.1	49.6	92.0
98	48.0	34.2	63.4

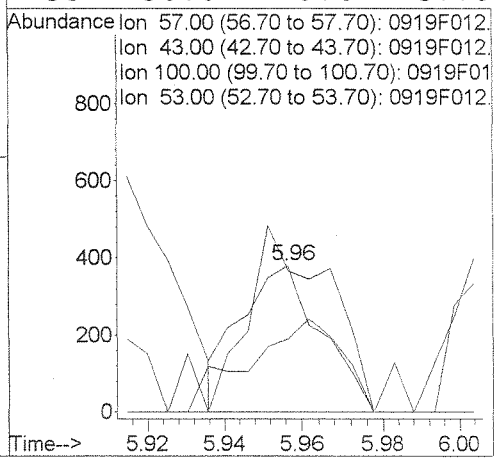


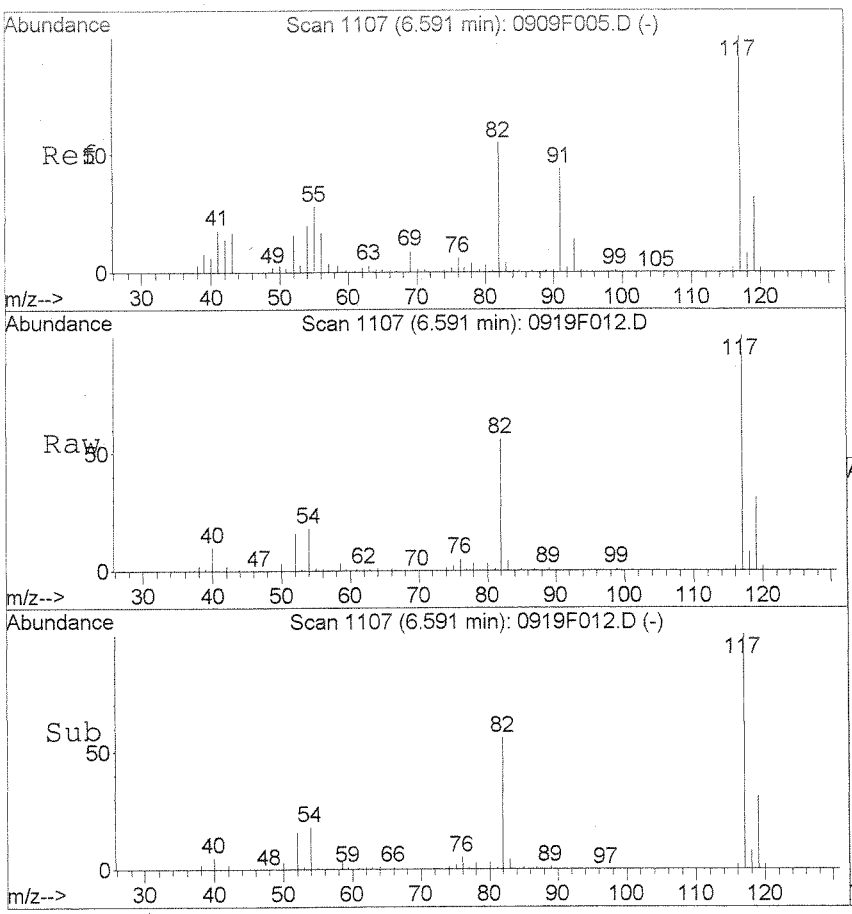


#66
2-Hexanone
Concen: 2.58 PPB
RT: 5.96 min Scan# 986
Delta R.T. -0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 57 Resp: 540

Ion	Ratio	Lower	Upper
57	100		
43	96.6	428.8	488.8#
100	0.0	39.5	99.5#
53	50.0	0.0	37.6#

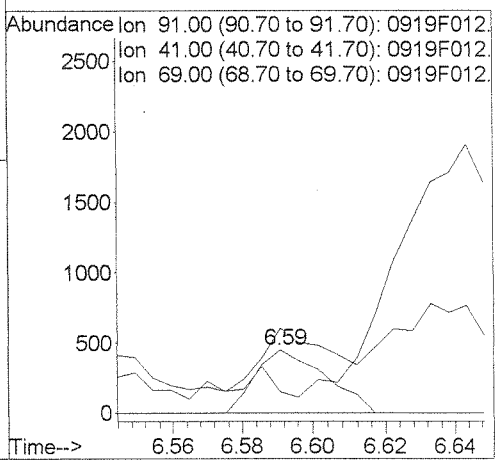


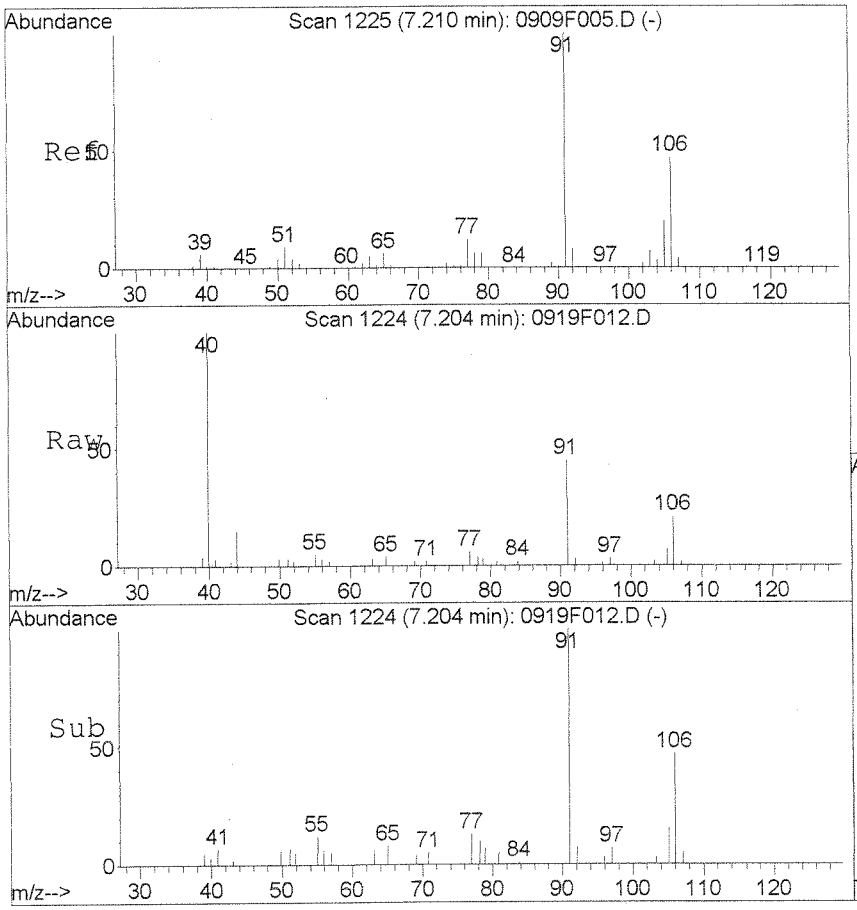


#70
1-Chlorohexane
Concen: 0.27 PPB
RT: 6.59 min Scan# 1107
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 91 Resp: 616

Ion	Ratio	Lower	Upper
91	100		
41	83.8	11.2	71.2#
69	0.0	0.0	49.8

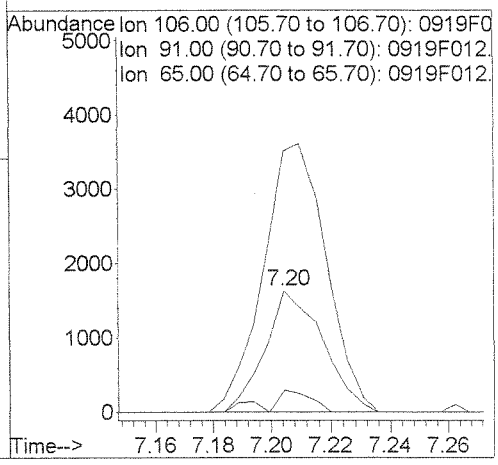


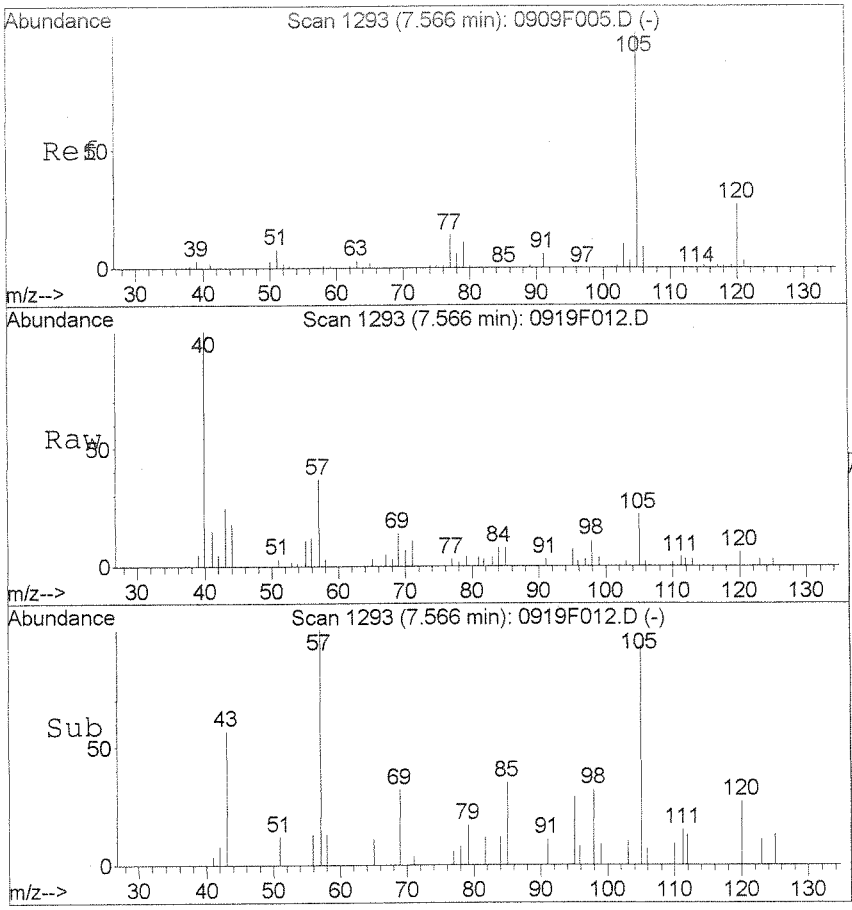


#75
o-Xylene
Concen: 0.73 PPB
RT: 7.20 min Scan# 1224
Delta R.T. -0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:106 Resp: 2217

Ion	Ratio	Lower	Upper
106	100		
91	215.0	183.9	243.9
65	18.2	0.0	43.0

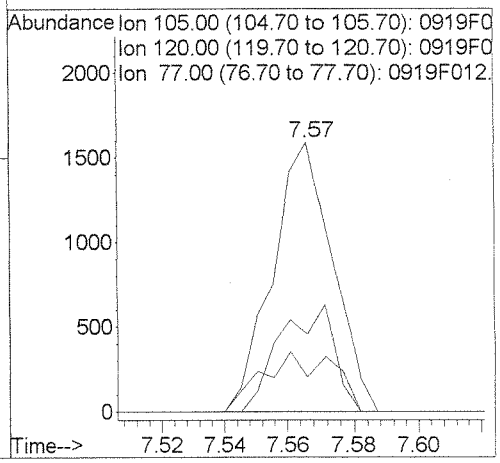


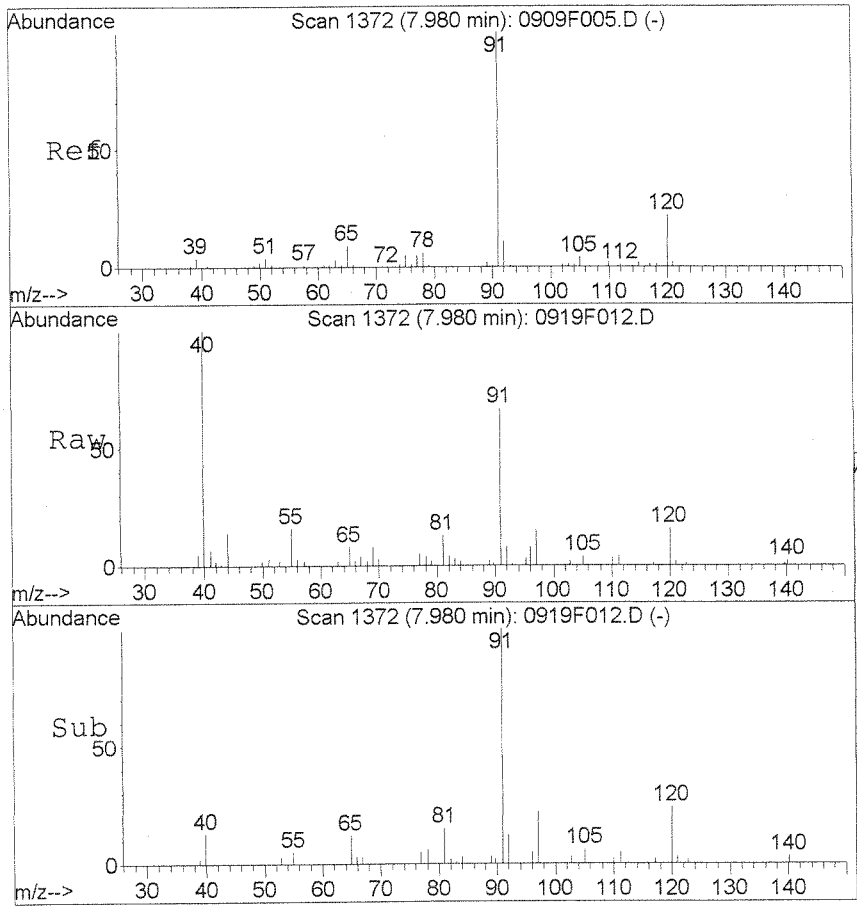


#78
Isopropylbenzene
Concen: 0.28 PPB
RT: 7.57 min Scan# 1293
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:105 Resp: 2022

Ion	Ratio	Lower	Upper
105	100		
120	28.8	0.0	56.5
77	13.0	0.0	43.6

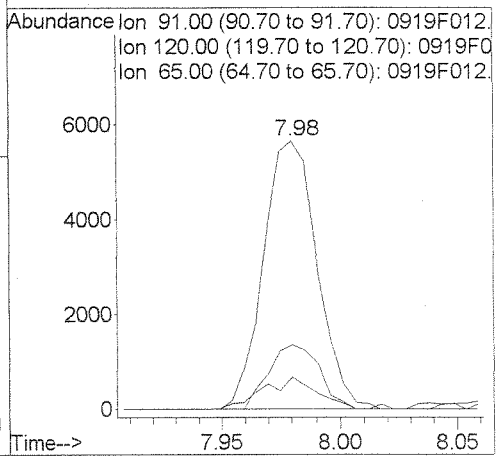


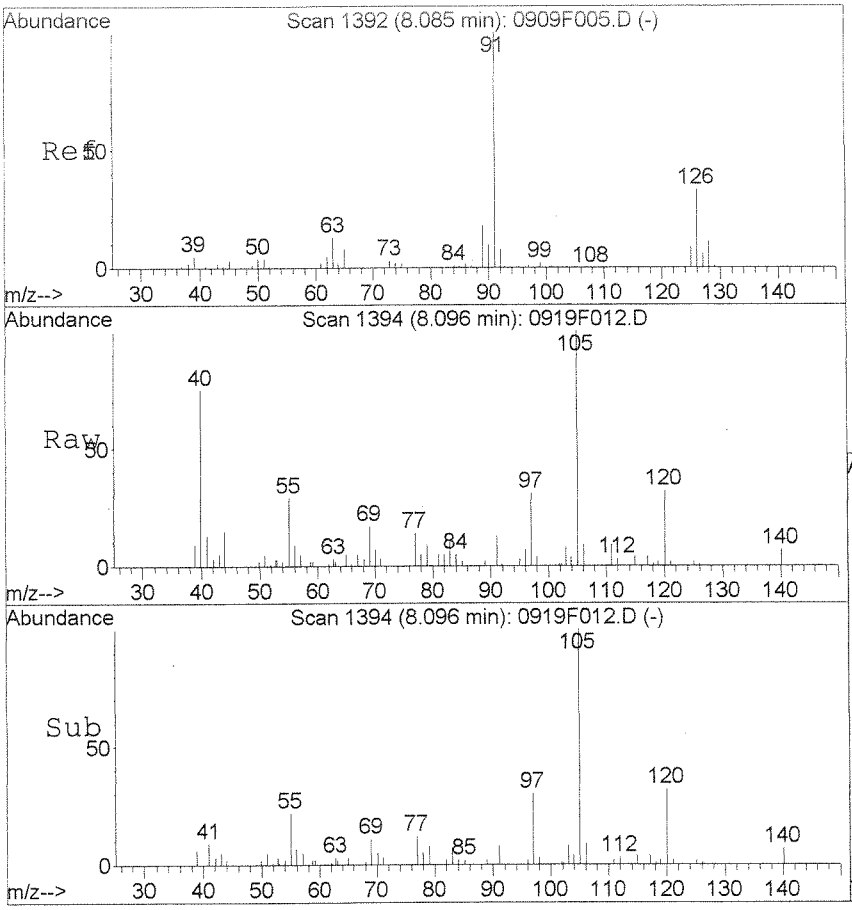


#85
n-Propylbenzene
Concen: 1.06 PPB
RT: 7.98 min Scan# 1372
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 91 Resp: 8863

Ion	Ratio	Lower	Upper
91	100		
120	24.0	0.0	52.1
65	12.0	0.0	38.8

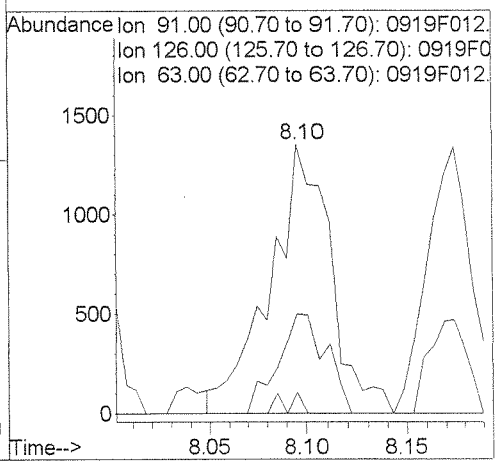


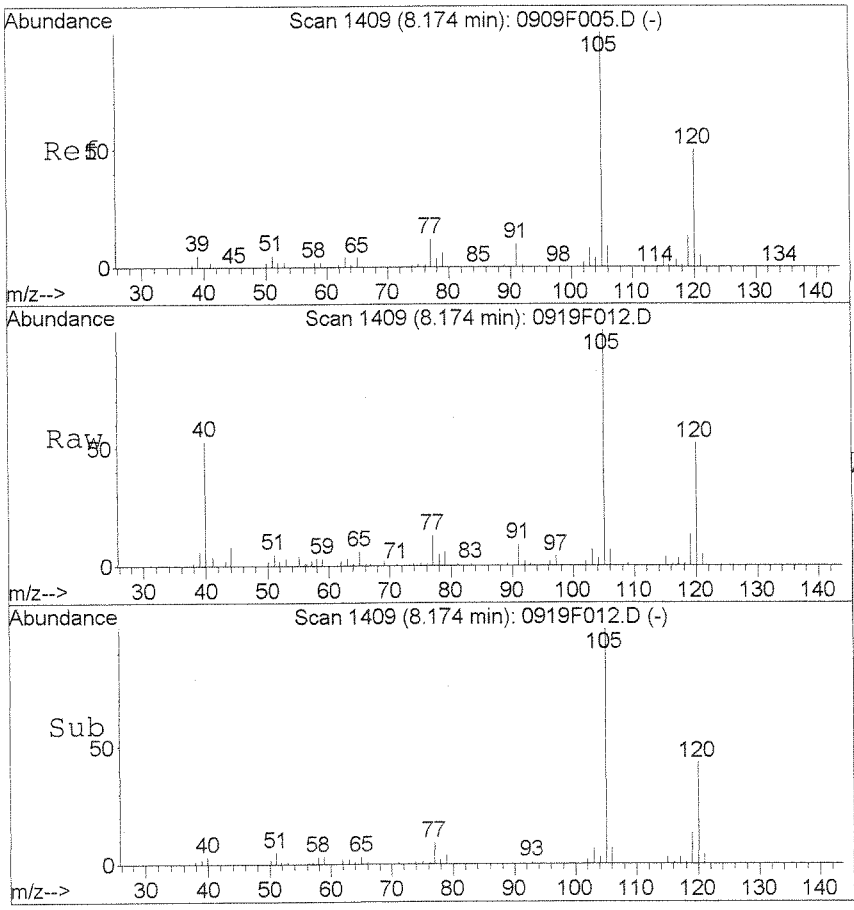


#87
2-Chlorotoluene
Concen: 0.57 PPB
RT: 8.10 min Scan# 1394
Delta R.T. 0.01 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 91 Resp: 2849

Ion	Ratio	Lower	Upper
91	100		
126	7.9	2.8	62.8
63	37.0	0.0	42.5

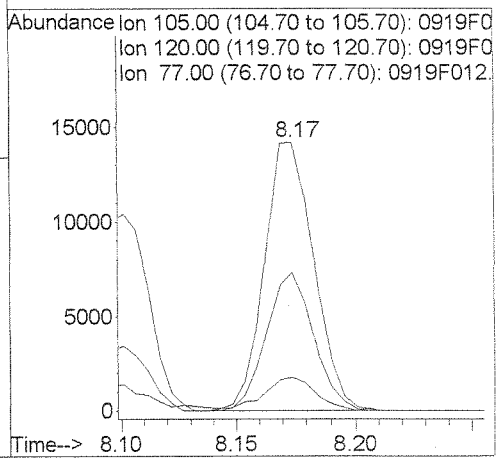


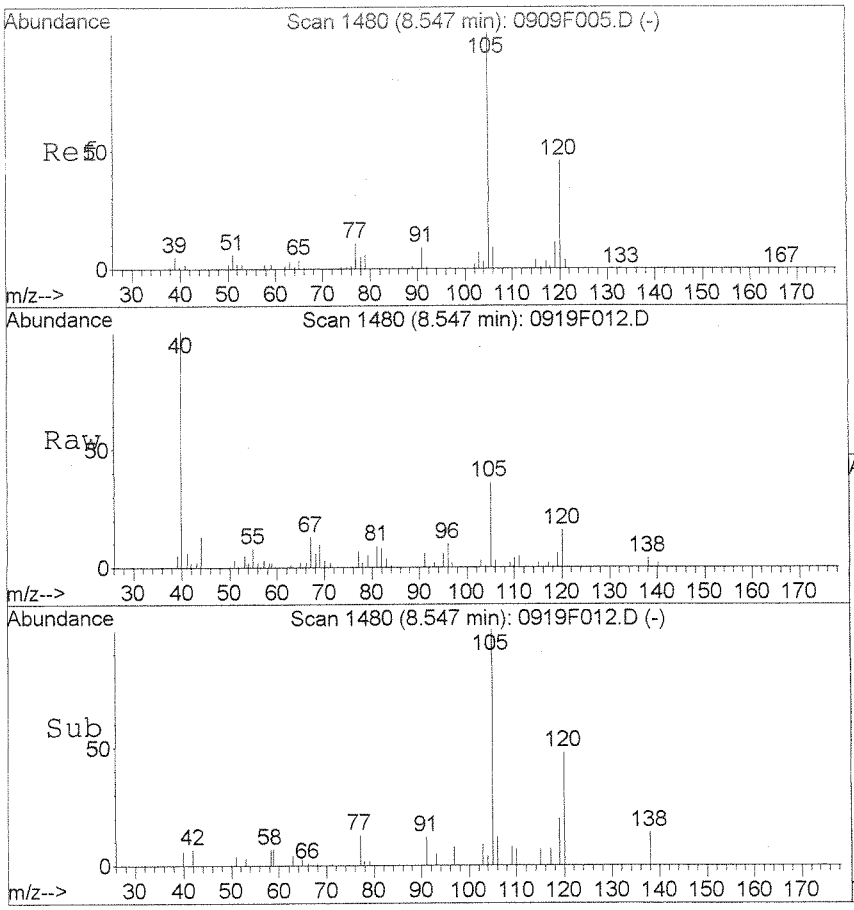


#88
1,3,5-Trimethylbenzene
Concen: 3.48 PPB
RT: 8.17 min Scan# 1409
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:105 Resp: 20544

Ion	Ratio	Lower	Upper
105	100		
120	51.5	19.7	79.7
77	12.5	0.0	41.6

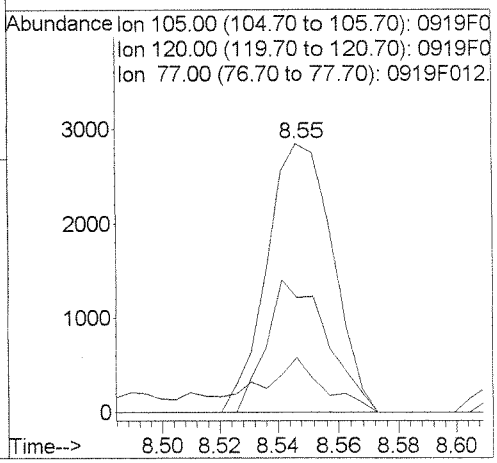


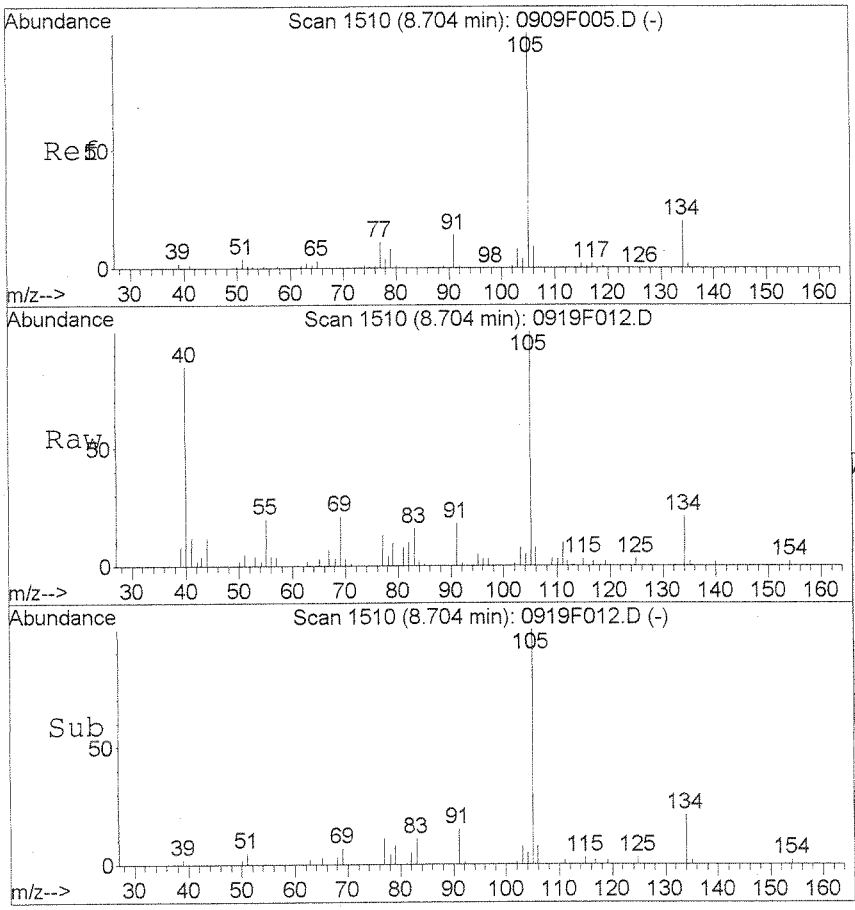


#91
1,2,4-Trimethylbenzene
Concen: 0.72 PPB
RT: 8.55 min Scan# 1480
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:105 Resp: 4322

Ion	Ratio	Lower	Upper
105	100		
120	42.7	15.9	75.9
77	20.4	0.0	41.2

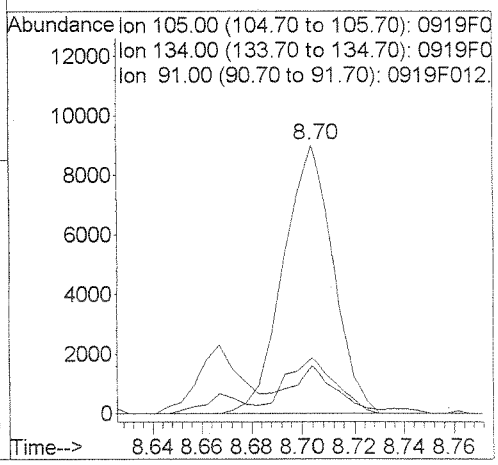


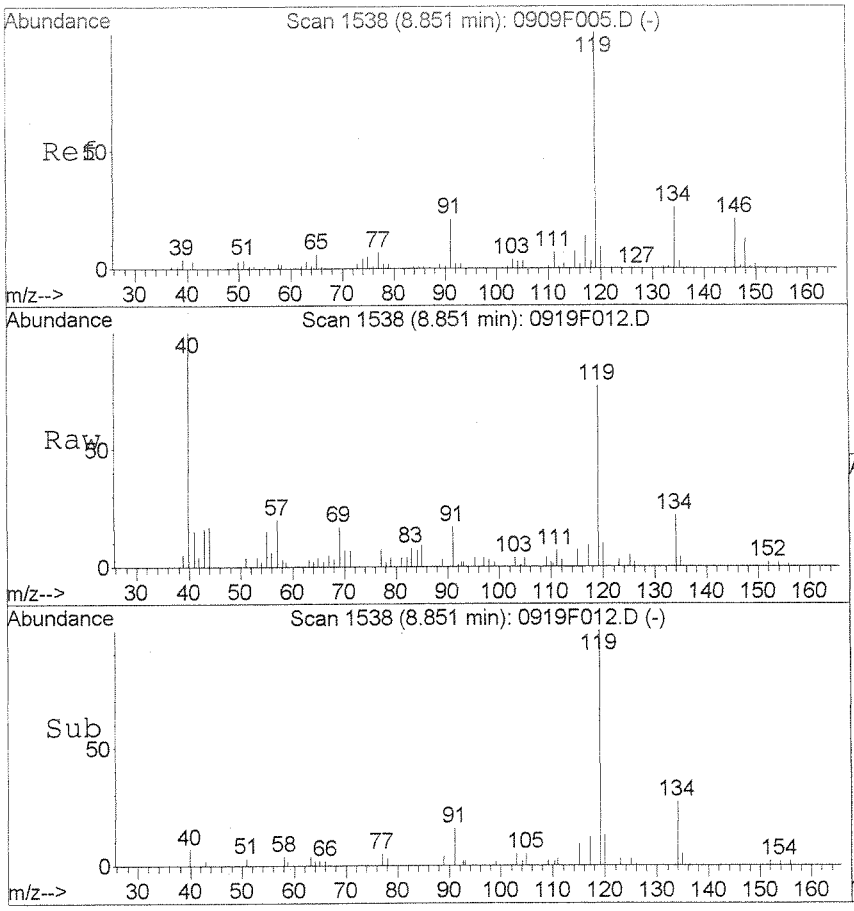


#92
sec-Butylbenzene
Concen: 1.60 PPB
RT: 8.70 min Scan# 1510
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:105 Resp: 11966

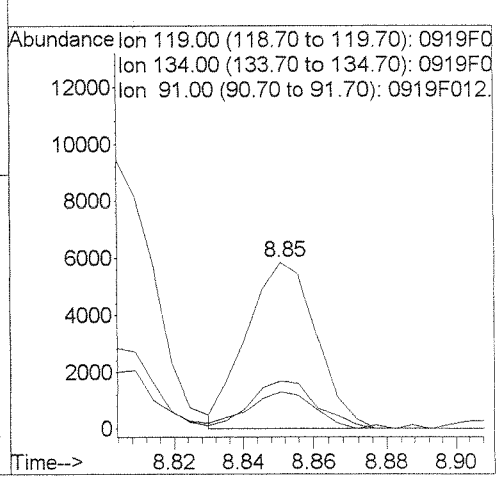
Ion	Ratio	Lower	Upper
105	100		
134	20.8	0.0	50.1
91	16.0	0.0	44.5

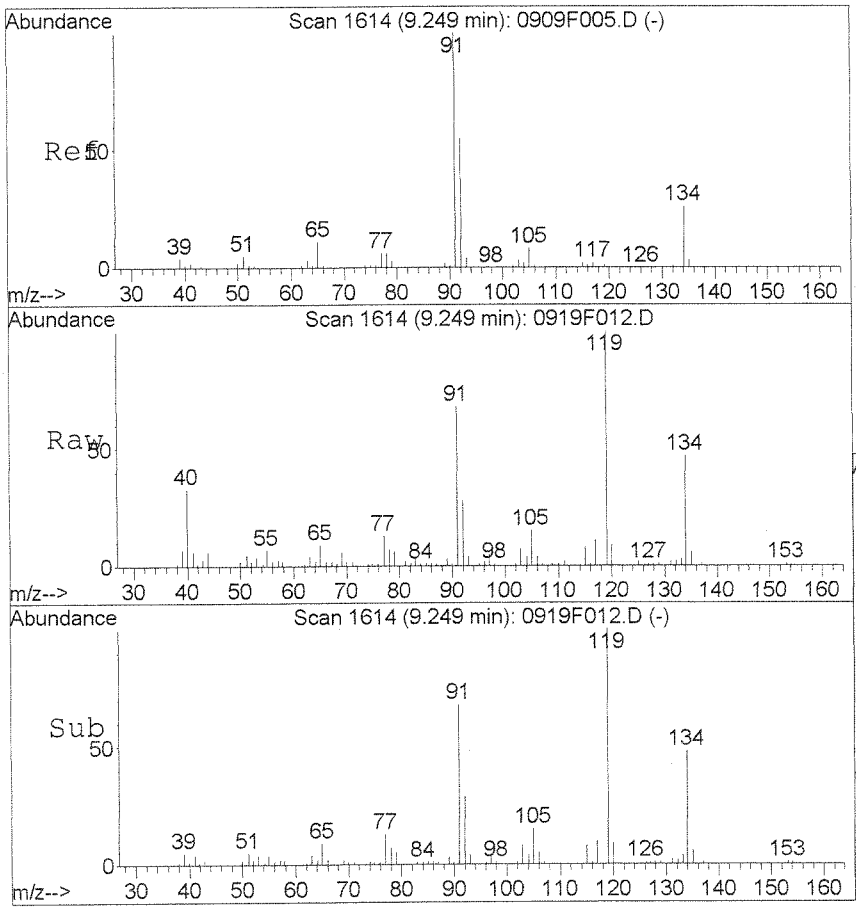




#93
p-Isopropyltoluene
Concen: 1.29 PPB
RT: 8.85 min Scan# 1538
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

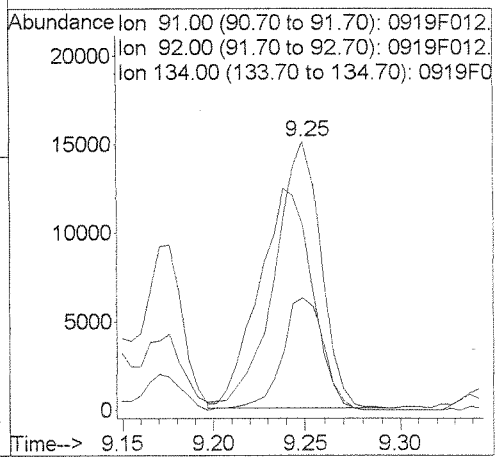
Tgt Ion:119	Resp:	8067	
Ion	Ratio	Lower	Upper
119	100		
134	28.8	0.0	56.2
91	22.2	0.0	50.8

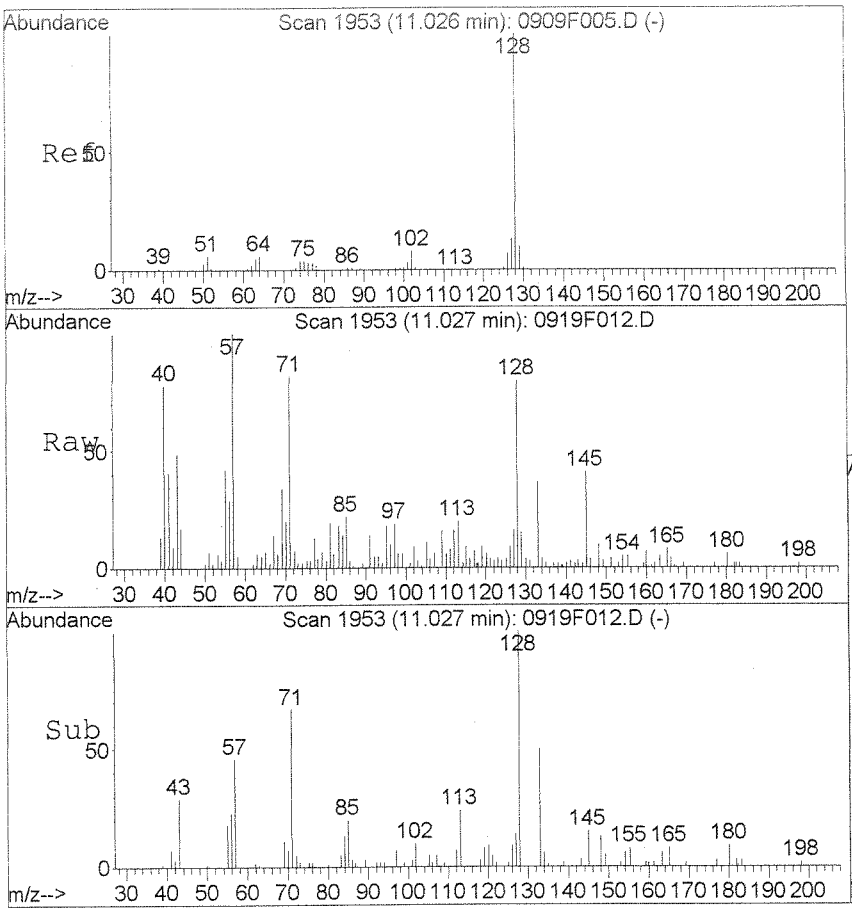




#96
n-Butylbenzene
Concen: 4.71 PPB
RT: 9.25 min Scan# 1614
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion: 91	Resp:	25940	
Ion	Ratio	Lower	Upper
91	100		
92	42.1	24.7	84.7
134	69.2	0.0	56.1#

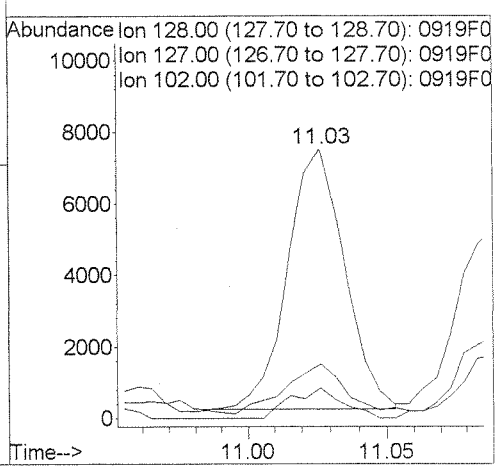




#102
Naphthalene
Concen: 1.80 PPB
RT: 11.03 min Scan# 1953
Delta R.T. 0.00 min
Lab File: 0919F012.D
Acq: 19 Sep 2014 2:18 pm

Tgt Ion:128 Resp: 10222

Ion	Ratio	Lower	Upper
128	100		
127	17.8	0.0	43.1
102	11.8	0.0	37.8



Exception Report

Data File: J:\MS24\DATA\091914\0919F007.D
Lab ID: KWG1412873-1 -- K1410113-003MS
RunType: MS
Matrix: SOIL

Date Acquired: 09/19/2014 12:35
Date Quantitated: 09/19/2014 13:35
Batch ID: KWG1412874
Analysis Method: 8260C
MethodJoinID: MJ120

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutanol	0.0098	0.01	NA	NF
	1,4-Dioxane	0.0028	0.01	NA	
Continuing Calibration Recovery	Dichlorodifluoromethane	-61.9	NA	20	↓ non ✓, RL/MB
	Chloromethane	-35.4	NA	20	Carry
	Vinyl Chloride	-25.3	NA	20	
	Bromomethane	-34.4	NA	20	
	Chloroethane	-26.6	NA	20	
	Acrolein	-37.4	NA	20	NF
	tert-Butyl Alcohol	-22.3	NA	20	
	n-Hexane	-21.0	NA	20	
	Vinyl Acetate	-26.8	NA	20	
	Bromoform	28.0	NA	20	Carry
Continuing Calibration Minimum RF	Dichlorodifluoromethane	0.0798	0.100	NA	NF

Primary Review: KA 9/19/14

Secondary Review: JA 9/19/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutanol	0.0086	0.01	NA	M-
	1,4-Dioxane	0.0025	0.01	NA	I

Primary Review: KA 9/19/14

Secondary Review: [illegible] 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F007.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:35	**Quant Date:**	09/19/2014 13:35	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412873-1 -- K1410113-003MS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376459				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO			**Calibration ID:**	CAL12826
Title:					
Tune Ref:	J:\MS24\DATA\091914\0919F003.D			**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	398793	50.00	OK
2	Chlorobenzene-d5	6.59	-0.01	82	152757	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	136285	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	97467	48.96	98	82-146	OK	
1	1,2-Dichloroethane-d4	3.76	0.00	0.00	65	89600	44.94	90	78-121	OK	
1	Toluene-d8	5.26	0.00	0.00	98	377394	48.98	98	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	130798	48.17	96	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	0.86	-0.01	0.00	85	77003	46.04	59.9		
1	Chloromethane	0.98	-0.01	0.00	50	78339	41.33	53.8		
1	Vinyl Chloride	1.05	-0.01	0.00	62	93128	45.99	59.8		
1	Bromomethane	1.27	-0.01	0.00	96	54841	35.79	46.5		
1	Chloroethane	1.35	-0.01	0.00	64	57278	48.57	63.2		
1	Dichlorofluoromethane (CFC 21)	1.50		0.00	67	140254	45.95	59.8		
1	Trichlorofluoromethane	1.49	-0.01	0.00	101	109428	44.71	58.1		
1	Diethyl Ether	1.71		0.00	59	65970	43.77	56.9		
1	Acrolein	1.84	-0.01	0.00	56	18971	61.42	79.9	J	
1	Trichlorotrifluoroethane	1.84	-0.01	0.00	151	58247	48.28	62.8		
1	1,1-Dichloroethene	1.86		0.00	96	75077	57.44	74.7		
1	Acetone	1.95		0.00	43	84120	176.91	230		
1	Iodomethane (Methyl Iodide)	1.97	-0.01	0.00	142	175399	112.17	146		
1	Carbon Disulfide	1.99	-0.01	0.00	76	589728	116.99	152		

U: Undetected at or above MDL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F007.D			Instrument:	MS24
Acqu Date:	09/19/2014 12:35	Quant Date:	09/19/2014 13:35	Vial:	6
Run Type:	MS			Dilution:	1.0
Lab ID:	KWG1412873-1 -- K1410113-003MS			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	3-Chloro-1-propene	2.12	-0.01	0.00	76	72625	71.85	93.4		
1	Methyl Acetate	2.16		0.00	43	47768	38.93	50.6		
1	Acetonitrile	2.19		0.00	40	67591	718.82	935		
1	Methylene Chloride	2.23		0.00	84	103659	49.24	64.0		
1	tert-Butyl Alcohol	2.32		0.00	59	76709	367.73	478		
1	Acrylonitrile	2.45	-0.01	0.00	53	67273	109.33	142		
1	Methyl tert-Butyl Ether	2.38		0.00	73	215537	40.56	52.7		
1	trans-1,2-Dichloroethene	2.39		0.00	96	87636	50.85	66.1		
1	n-Hexane	2.52	-0.01	0.00	57	169830	73.88	96.1		
1	Diisopropyl Ether	2.71	-0.01	0.00	45	445485	80.39	105		
1	1,1-Dichloroethane	2.71	-0.01	0.00	63	146787	46.32	60.2		
1	Vinyl Acetate	2.75		0.00	86	35639	91.66	119		
1	Chloroprene	2.75		0.00	53	160517	64.08	83.3		
1	tert-Butyl Ethyl Ether	2.97		0.00	59	452401	80.39	105		
1	2,2-Dichloropropane	3.11		0.00	77	104257	43.11	56.1		
1	cis-1,2-Dichloroethene	3.14		0.00	96	94071	46.14	60.0		
1	2-Butanone (MEK)	3.17		0.00	72	49114	204.61	266		
1	Propionitrile	3.27		0.00	54	17078	71.16	92.5		
1	Ethyl Acetate	3.13	-0.01	0.00	61	123355	51.67	67	JN	
1	Methacrylonitrile	3.35		0.00	67	53620	68.37	88.9		
1	Bromochloromethane	3.31		0.00	128	42055	41.89	54.5		
1	Chloroform	3.36	-0.01	0.00	83	140107	43.43	56.5		
1	Cyclohexane				56	0d		0.20	U	
1	1,1,1-Trichloroethane (TCA)	3.47		0.00	97	108118	44.85	58.3		
1	Carbon Tetrachloride	3.56		0.00	117	95481	48.16	62.6		
1	1,1-Dichloropropene	3.59		0.00	75	102625	49.93	64.9		
1	Isobutanol	3.73		0.00	43	38416	489.18	636		
1	Benzene	3.74		0.00	78	318968	44.24	57.5		
1	1,2-Dichloroethane (EDC)	3.82		0.00	62	84900	38.13	49.6		
1	tert-Amyl Methyl Ether	3.81	-0.01	0.00	55	107132	86.64	113		
1	Trichloroethene (TCE)	4.25		0.00	95	79466	44.64	58.1		
1	Methylcyclohexane				83	0d		0.15	U	
1	1,2-Dichloropropane	4.47		0.00	63	75303	41.37	53.8		
1	Dibromomethane	4.57		0.00	93	47167	42.55	55.3		
1	Methyl Methacrylate	4.55		0.00	69	88980	66.04	85.9		
1	1,4-Dioxane	4.57		0.00	88	13553	609.85	793		
1	Bromodichloromethane	4.69		0.00	83	104138	47.88	62.3		
1	2-Nitropropane	4.95		0.00	41	21416	64.84	84.3		
1	2-Chloroethyl Vinyl Ether	4.96		0.00	63	48268	44.86	58.3		
1	cis-1,3-Dichloropropene	5.08		0.00	75	121213	42.98	55.9		
1	4-Methyl-2-pentanone (MIBK)	5.21		0.00	58	137411	217.78	283		
1	Toluene	5.32		0.00	92	198575	43.51	56.6		
2	trans-1,3-Dichloropropene	5.58		0.00	75	96754	40.56	52.7		

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?: Insufficient information to determine acceptance
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Data File:	J:\MS24\DATA\091914\0919F007.D			Instrument:	MS24
Acqu Date:	09/19/2014 12:35	Quant Date:	09/19/2014 13:35	Vial:	6
Run Type:	MS			Dilution:	1.0
Lab ID:	KWG1412873-1 -- K1410113-003MS			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethyl Methacrylate	5.62		0.00	69	146534	64.03	83.3		
2	1,1,2-Trichloroethane	5.74	-0.01	0.00	83	60296	43.69	56.8		
2	Tetrachloroethene (PCE)	5.77		0.00	164	63753	46.72	60.8		
2	2-Hexanone	5.96		0.00	57	44398	204.16	266		
2	1,3-Dichloropropane	5.90		0.00	76	117150	41.98	54.6		
2	Dibromochloromethane	6.07		0.00	129	81960	51.22	66.6		
2	1,2-Dibromoethane (EDB)	6.18	-0.01	0.00	107	67631	41.85	54.4		
2	1-Chlorohexane	6.59		0.00	91	96672	41.21	53.6		
2	Chlorobenzene	6.62		0.00	112	217584	43.75	56.9		
2	Ethylbenzene	6.70		0.00	106	113498	45.04	58.6		
2	1,1,1,2-Tetrachloroethane	6.71		0.00	131	76128	46.40	60.3		
2	m,p-Xylenes	6.82		0.00	106	278430	89.01	116		
2	o-Xylene	7.21		0.00	106	135436	42.86	55.7		
2	Styrene	7.24		0.00	103	113106**m**	45.13	58.7		
2	Bromoform	7.44	0.01	0.00	173	55214	54.04	70.3		
2	Isopropylbenzene	7.56	-0.01	0.00	105	337414	44.37	57.7		
2	cis-1,4-Dichloro-2-butene	7.72		0.00	89	20442	79.65	104		
3	1,1,2,2-Tetrachloroethane	7.95		0.00	83	86880	44.65	58.1		
3	trans-1,4-Dichloro-2-butene	8.02		0.00	53	35891	78.00	101		
3	Bromobenzene	7.90		0.00	156	90790	44.69	58.1		
3	n-Propylbenzene	7.98		0.00	91	413279	46.82	60.9		
3	1,2,3-Trichloropropane	8.00		0.00	110	25348	40.11	52.2		
3	2-Chlorotoluene	8.09		0.00	91	240282	45.18	58.8		
3	1,3,5-Trimethylbenzene	8.17		0.00	105	278249	44.55	57.9		
3	4-Chlorotoluene	8.21		0.00	91	242754**m**	43.83	57.0		
3	tert-Butylbenzene	8.48		0.00	119	233633	43.83	57.0		
3	1,2,4-Trimethylbenzene	8.55		0.00	105	273105	42.67	55.5		
3	sec-Butylbenzene	8.70		0.00	105	341551	43.01	55.9		
3	4-Isopropyltoluene	8.85		0.00	119	288153	43.46	56.5		
3	1,3-Dichlorobenzene	8.84		0.00	146	165279	44.31	57.6		
3	1,4-Dichlorobenzene	8.93		0.00	146	165476	43.61	56.7		
3	n-Butylbenzene	9.25		0.00	91	269487	46.19	60.1		
3	1,2-Dichlorobenzene	9.30		0.00	146	154103	42.12	54.8		
3	1,2-Dibromo-3-chloropropane	10.07		0.00	155	13130	44.14	57.4		
3	1,2,4-Trichlorobenzene	10.80		0.00	180	99205	39.03	50.8		
3	Hexachlorobutadiene	10.91		0.00	225	45940	36.60	47.6		
3	Naphthalene	11.03		0.00	128	233944	38.82	50.5		
3	1,2,3-Trichlorobenzene	11.25	-0.01	0.00	180	91314	37.48	48.7		
	4-Vinyl-1-cyclohexene				0	0		6.6	U	NR
	Benzyl Chloride				0	0		6.6	U	NR
	1,3-Butadiene				0	0		1.4	U	NR
	2-Methylpentane				0	0		6.6	U	NR

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m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F007.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:35	**Quant Date:**	09/19/2014 13:35	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412873-1 -- K1410113-003MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
Cyclohexanone			0	0		6.6	U	NR
Tetrahydrofuran			0	0		6.6	U	NR
n-Heptane			0	0		6.6	U	NR
2,2-Dichloro-1,1,1-trifluoroethan			0	0		6.6	U	NR
1,1,2-Trifluoroethane			0	0		14	U	NR
2,2,4-Trimethylpentane			0	0		6.6	U	NR
Bis(chloromethyl) Ether			0	0		14	U	NR
Ethyl Alcohol			0	0		270	U	NR
2-Propanol			0	0		270	U	NR
Hexachloroethane			0	0		1.4	U	NR
n-Butyl Alcohol			0	0		330	U	NR
3-Methylpentane			0	0		6.6	U	NR
Methylcyclopentane			0	0		6.6	U	NR

Prep Amount:	5.133 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	74.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
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?: Insufficient information to determine acceptance
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c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F007.D Vial: 6
Acq On : 19 Sep 2014 12:35 pm Operator: KR
Sample : K10113-003MS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 13:28:27 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.97	96	398793	50.00	PPB		0.00
61) Chlorobenzene-d5	6.59	82	152757	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	136285	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	97467	48.96	PPB		0.00
Spiked Amount 50.000			Recovery =	97.92%			
44) 1,2-Dichloroethane-d4	3.76	65	89600	44.94	PPB		0.00
Spiked Amount 50.000			Recovery =	89.88%			
59) Toluene-d8	5.26	98	377394	48.98	PPB		0.00
Spiked Amount 50.000			Recovery =	97.96%			
80) 4-Bromofluorobenzene	7.76	95	130798	48.17	PPB		0.00
Spiked Amount 50.000			Recovery =	96.34%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.86	85	77003	46.04	PPB		99
3) Chloromethane	0.98	50	78339	41.33	PPB		100
4) Vinyl Chloride	1.05	62	93128	45.99	PPB		97
5) Bromomethane	1.27	96	54841	35.79	PPB		98
6) Chloroethane	1.35	64	57278	48.57	PPB		99
7) Dichlorofluoromethane	1.50	67	140254	45.95	PPB		96
8) Trichlorofluoromethane	1.49	101	109428	44.71	PPB		99
9) Ethyl Ether	1.71	59	65970	43.77	PPB		97
10) Acrolein	1.84	56	18971	61.42	PPB		98
11) Trichlorotrifluoroethane	1.84	151	58247	48.28	PPB		92
12) 1,1-Dichloroethene	1.86	96	75077	57.44	PPB		92
13) Acetone	1.95	43	84120	176.91	PPB		99
14) Iodomethane	1.97	142	175399	112.17	PPB		97
15) Carbon Disulfide	1.99	76	589728	116.99	PPB		99
16) 3-Chloro-1-propene	2.12	76	72625	71.85	PPB		94
17) Methyl Acetate	2.16	43	47768	38.93	PPB		98
18) Acetonitrile	2.19	40	67591	718.82	PPB		95
19) Methylene Chloride	2.23	84	103659	49.24	PPB		98
20) tert-Butyl Alcohol	2.32	59	76709	367.73	PPB		96
21) Acrylonitrile	2.45	53	67273	109.33	PPB		98
22) Methyl tert-Butyl Ether	2.38	73	215537	40.56	PPB		99
23) trans-1,2-Dichloroethene	2.39	96	87636	50.85	PPB		98
24) Hexane	2.52	57	169830	73.88	PPB		98
25) Diisopropyl Ether	2.71	45	445485	80.39	PPB		98
26) 1,1-Dichloroethane	2.71	63	146787	46.32	PPB		99
27) Vinyl Acetate	2.75	86	35639	91.66	PPB	#	91
28) Chloroprene	2.75	53	160517	64.08	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:28:27 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29) tert-Butyl Ethyl Ether	2.97	59	452401	80.39	PPB		99
30) 2,2-Dichloropropane	3.11	77	104257	43.11	PPB		98
31) cis-1,2-Dichloroethene	3.14	96	94071	46.14	PPB		98
32) 2-Butanone	3.17	72	49114	204.61	PPB	#	84
33) Propionitrile	3.27	54	17078	71.16	PPB		97
34) Ethyl Acetate	3.13	61	123355	51.67	PPB		100
35) Methacrylonitrile	3.35	67	53620	68.37	PPB		98
36) Bromochloromethane	3.31	128	42055	41.89	PPB		94
37) Chloroform	3.36	83	140107	43.43	PPB		99
39) 1,1,1-Trichloroethane	3.47	97	108118	44.85	PPB		99
41) Carbon Tetrachloride	3.56	117	95481	48.16	PPB		99
42) 1,1-Dichloropropene	3.59	75	102625	49.93	PPB		97
43) Isobutyl Alcohol	3.73	43	38416	489.18	PPB		97
45) Benzene	3.74	78	318968	44.24	PPB		99
46) 1,2-Dichloroethane	3.82	62	84900	38.13	PPB		98
47) tert-Amyl Methyl Ether	3.81	55	107132	86.64	PPB		88
48) Trichloroethene	4.25	95	79466	44.64	PPB		97
50) 1,2-Dichloropropane	4.47	63	75303	41.37	PPB		99
51) Dibromomethane	4.57	93	47167	42.55	PPB		97
52) Methyl methacrylate	4.55	69	88980	66.04	PPB		96
53) 1,4-Dioxane	4.57	88	13553	609.85	PPB		93
54) Bromodichloromethane	4.69	83	104138	47.88	PPB		98
55) 2-Nitropropane	4.95	41	21416	64.84	PPB	#	73
56) 2-Chloroethyl Vinyl Ether	4.96	63	48268	44.86	PPB		98
57) cis-1,3-Dichloropropene	5.08	75	121213	42.98	PPB		98
58) 4-Methyl-2-pentanone (MIBK	5.21	58	137411	217.78	PPB		98
60) Toluene	5.32	92	198575	43.51	PPB		99
62) trans-1,3-Dichloropropene	5.58	75	96754	40.56	PPB		99
63) Ethyl methacrylate	5.62	69	146534	64.03	PPB		98
64) 1,1,2-Trichloroethane	5.74	83	60296	43.69	PPB		98
65) Tetrachloroethene	5.77	164	63753	46.72	PPB		99
66) 2-Hexanone	5.96	57	44398	204.16	PPB		98
67) 1,3-Dichloropropane	5.90	76	117150	41.98	PPB		98
68) Dibromochloromethane	6.07	129	81960	51.22	PPB		98
69) 1,2-Dibromoethane (EDB)	6.18	107	67631	41.85	PPB		96
70) 1-Chlorohexane	6.59	91	96672	41.21	PPB		94
71) Chlorobenzene	6.62	112	217584	43.75	PPB		98
72) Ethylbenzene	6.70	106	113498	45.04	PPB		98
73) 1,1,1,2-Tetrachloroethane	6.71	131	76128	46.40	PPB		95
74) m,p-Xylenes	6.82	106	278430	89.01	PPB		97
75) o-Xylene	7.21	106	135436	42.86	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:28:27 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76)	Styrene	7.24	103	113106m	45.13	PPB	
77)	Bromoform	7.44	173	55214	54.04	PPB	98
78)	Isopropylbenzene	7.56	105	337414	44.37	PPB	98
79)	cis-1,4-Dichloro-2-butene	7.72	89	20442	79.65	PPB	94
82)	1,1,2,2-Tetrachloroethane	7.95	83	86880	44.65	PPB	96
83)	trans-1,4-Dichloro-2-buten	8.02	53	35891	78.00	PPB	86
84)	Bromobenzene	7.90	156	90790	44.69	PPB	95
85)	n-Propylbenzene	7.98	91	413279	46.82	PPB	98
86)	1,2,3-Trichloropropane	8.00	110	25348	40.11	PPB	94
87)	2-Chlorotoluene	8.09	91	240282	45.18	PPB	99
88)	1,3,5-Trimethylbenzene	8.17	105	278249	44.55	PPB	99
89)	4-Chlorotoluene	8.21	91	242754m	43.83	PPB	
90)	tert-Butylbenzene	8.48	119	233633	43.83	PPB	98
91)	1,2,4-Trimethylbenzene	8.55	105	273105	42.67	PPB	100
92)	sec-Butylbenzene	8.70	105	341551	43.01	PPB	100
93)	p-Isopropyltoluene	8.85	119	288153	43.46	PPB	99
94)	1,3-Dichlorobenzene	8.84	146	165279	44.31	PPB	98
95)	1,4-Dichlorobenzene	8.93	146	165476	43.61	PPB	97
96)	n-Butylbenzene	9.25	91	269487	46.19	PPB	99
97)	1,2-Dichlorobenzene	9.30	146	154103	42.12	PPB	96
98)	1,2-Dibromo-3-chloropropan	10.07	155	13130	44.14	PPB	96
99)	1,3,5-Trichlorobenzene	10.21	180	115400	41.62	PPB	94
100)	1,2,4-Trichlorobenzene	10.80	180	99205	39.03	PPB	98
101)	Hexachlorobutadiene	10.91	225	45940	36.60	PPB	99
102)	Naphthalene	11.03	128	233944	38.82	PPB	100
103)	1,2,3-Trichlorobenzene	11.25	180	91314	37.48	PPB	99

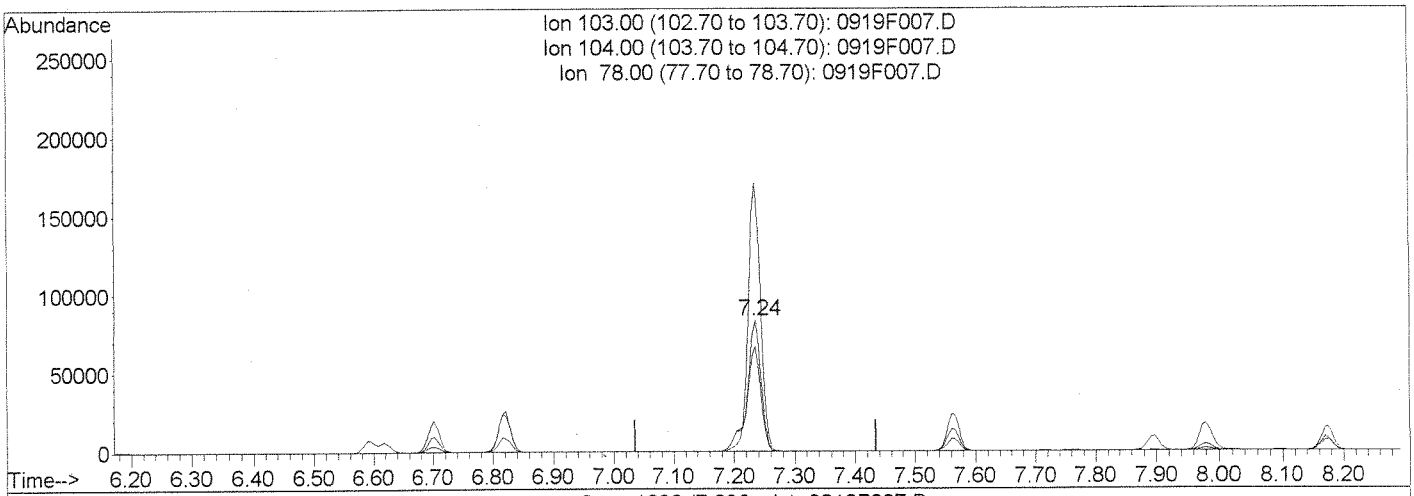
(#) = qualifier out of range (m) = manual integration

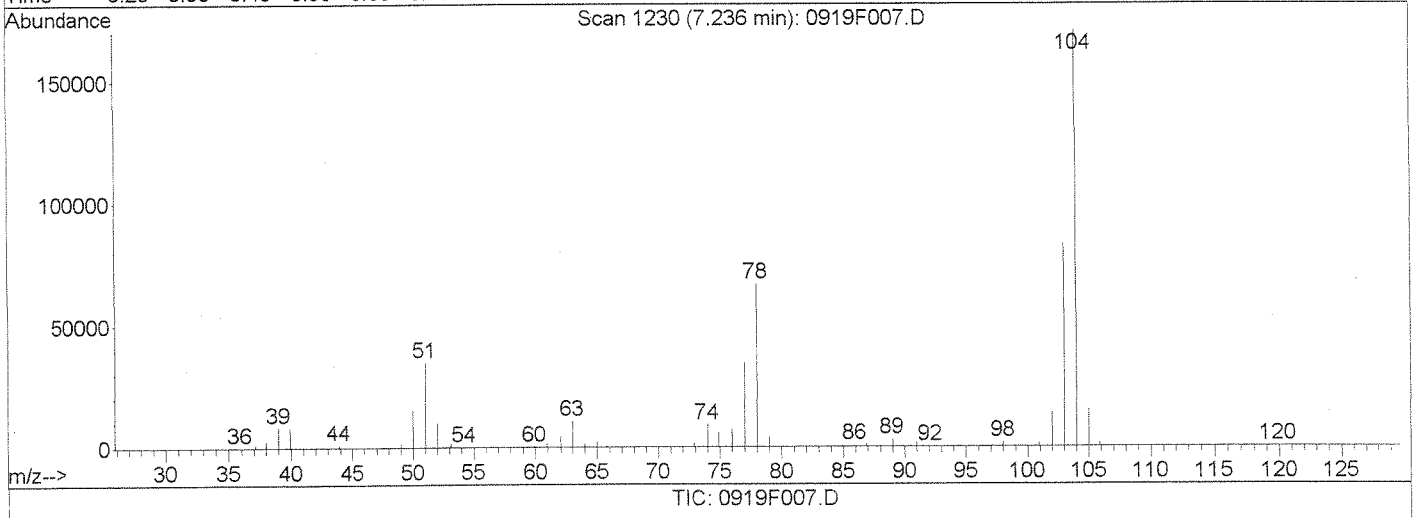
Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F007.D

(76) Styrene (T)

7.24min 52.43PPB

response 131391

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	204.82
78.00	79.00	80.09
0.00	0.00	0.00

Manual Integration:

Before

09/19/14

09/19/14

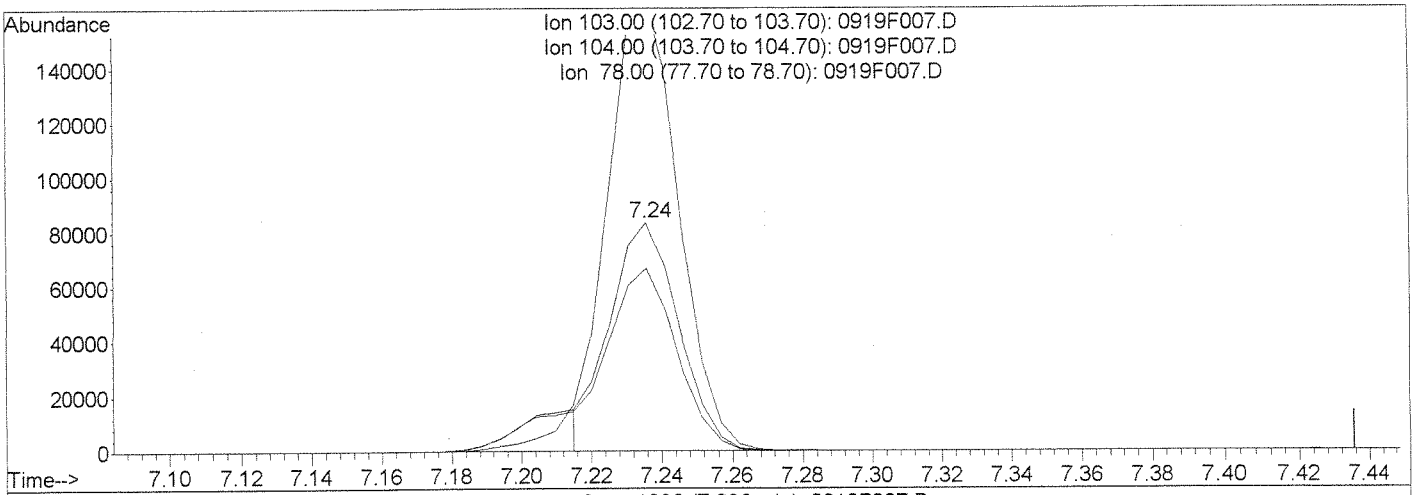
0919F007.D 100713MS24SOIL.M Fri Sep 19 13:35:20 2014

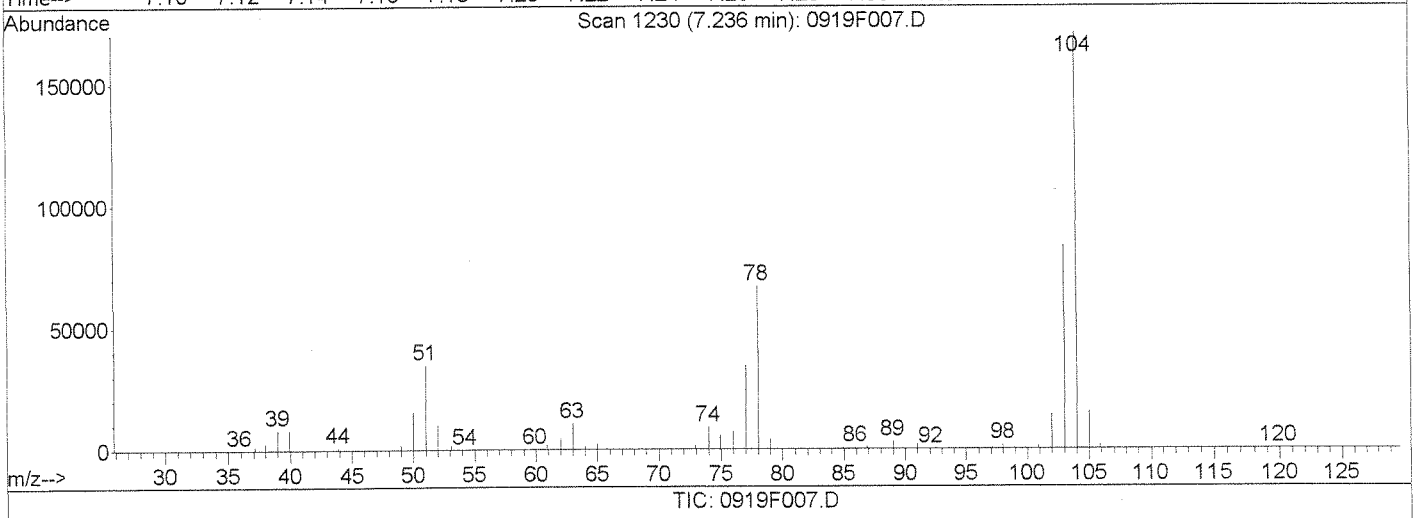
Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F007.D

(76) Styrene (T)

7.24min 45.13PPB m

response 113106

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	204.82
78.00	79.00	80.09
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

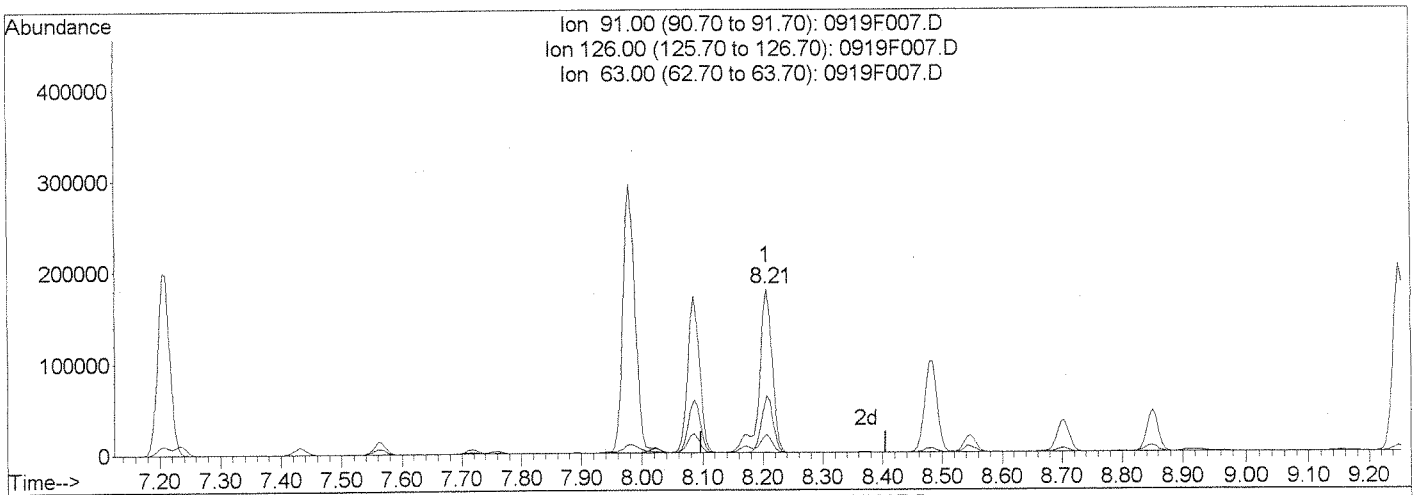
09/19/14

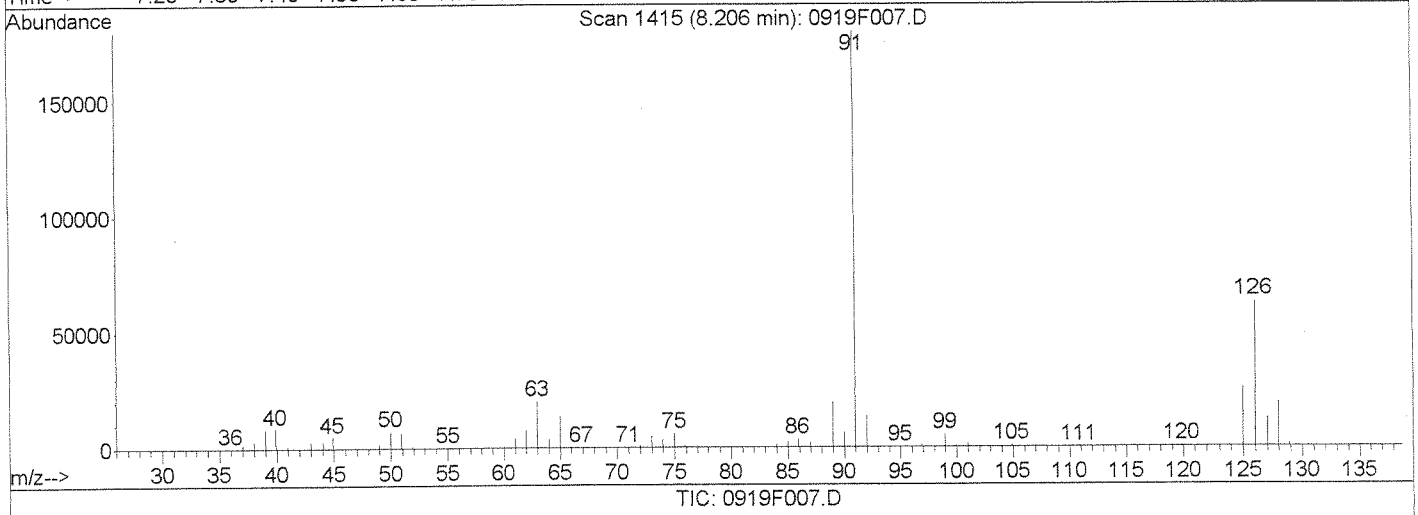
0919F007.D 100713MS24SOIL.M Fri Sep 19 13:35:25 2014

Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F007.D

(89) 4-Chlorotoluene (T)

8.21min 49.61PPB

response 274776

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.84
63.00	10.90	11.14
0.00	0.00	0.00

Manual Integration:

Before

09/19/14

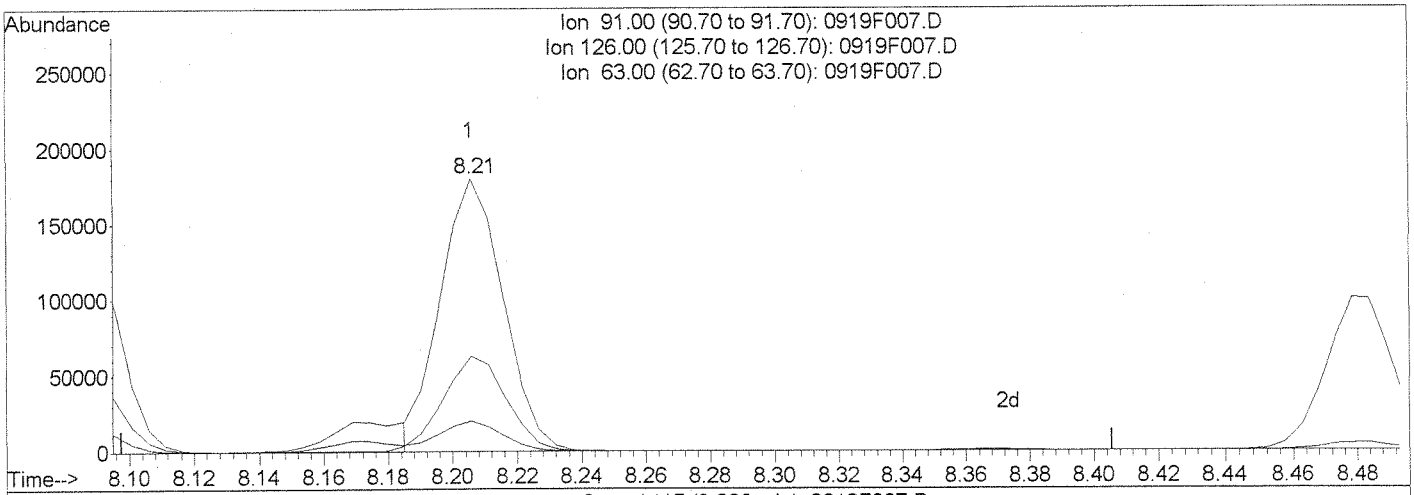
0919F007.D 100713MS24SOIL.M Fri Sep 19 13:35:28 2014

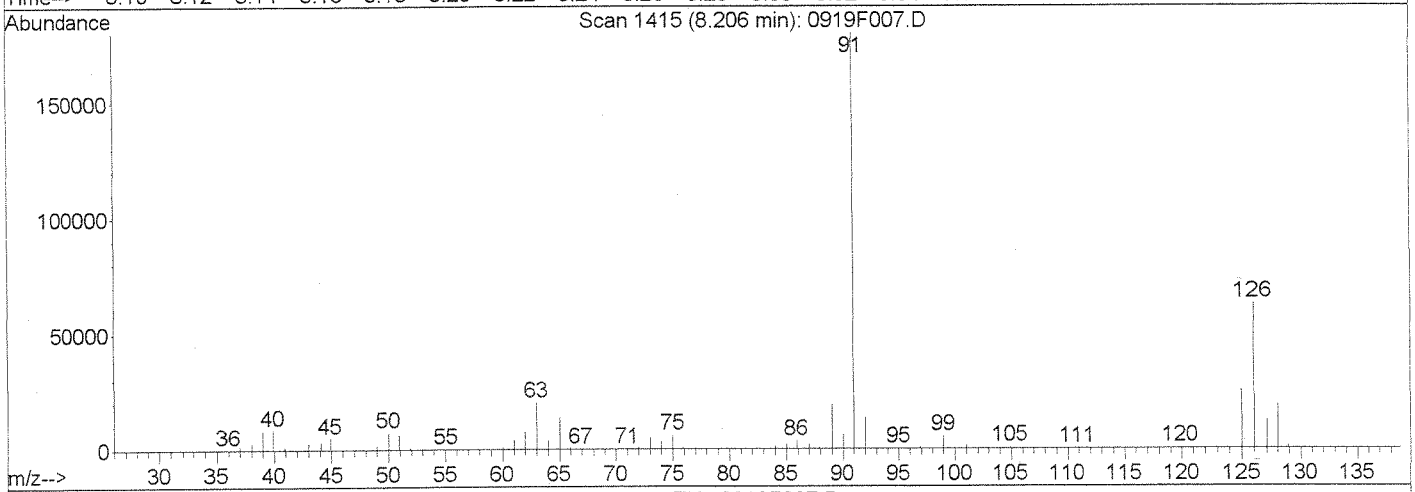
Data File : J:\MS24\DATA\091914\0919F007.D
Acq On : 19 Sep 2014 12:35 pm
Sample : K10113-003MS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35 2014

Vial: 6
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F007.D

(89) 4-Chlorotoluene (T)

8.21min 43.83PPB m

response 242754

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.84
63.00	10.90	11.14
0.00	0.00	0.00

Manual Integration:

After

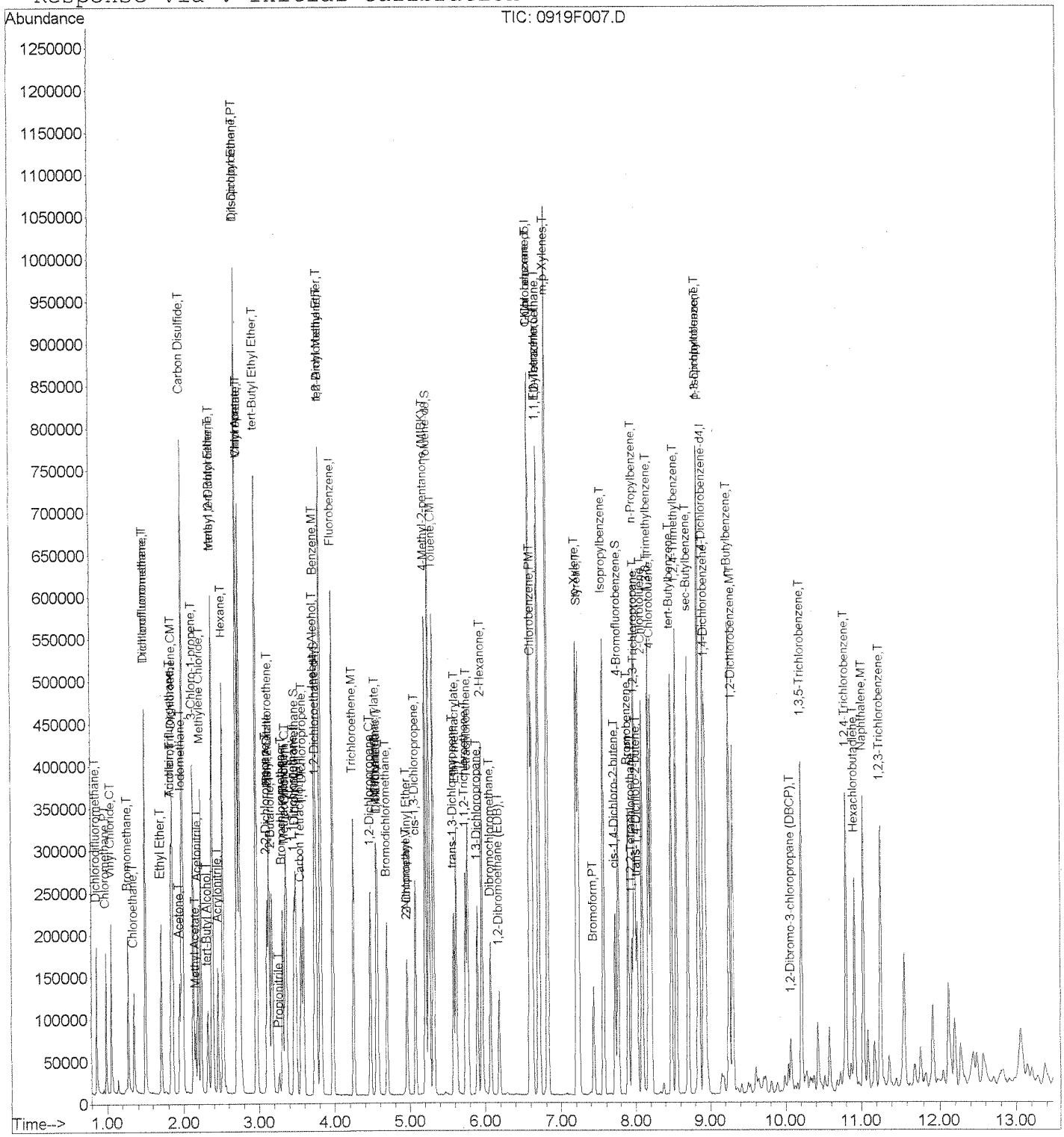
Baseline correction

09/19/14

0919F007.D 100713MS24SOIL.M Fri Sep 19 13:35:33 2014

Data File : J:\MS24\DATA\091914\0919F007.D Vial: 6
Acq On : 19 Sep 2014 12:35 pm Operator: KR
Sample : K10113-003MS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS24\DATA\091914\0919F008.D
Lab ID: KWG1412873-2 -- K1410113-003DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 09/19/2014 12:56
Date Quantitated: 09/19/2014 13:36
Batch ID: KWG1412874
Analysis Method: 8260C
MethodJoinID: MJ120

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutanol	0.0098	0.01	NA	NF
	1,4-Dioxane	0.0028	0.01	NA	
Continuing Calibration Recovery	Dichlorodifluoromethane	-61.9	NA	20	Reanalyze, may CAOK
	Chloromethane	-35.4	NA	20	
	Vinyl Chloride	-25.3	NA	20	
	Bromomethane	-34.4	NA	20	
	Chloroethane	-26.6	NA	20	
	Acrolein	-37.4	NA	20	NF
	tert-Butyl Alcohol	-22.3	NA	20	
	n-Hexane	-21.0	NA	20	
	Vinyl Acetate	-26.8	NA	20	
	Bromoform	28.0	NA	20	CAOK
Continuing Calibration Minimum RF	Dichlorodifluoromethane	0.0798	0.100	NA	NF

Primary Review: KA 9/19/14

Secondary Review: 9/19/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutanol	0.0086	0.01	NA	N
	1,4-Dioxane	0.0025	0.01	NA	L

Primary Review: 9/19/14

Secondary Review: 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F008.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:56	**Quant Date:**	09/19/2014 13:36	**Vial:**	7
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1412873-2 -- K1410113-003DMS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376460				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO			**Calibration ID:**	CAL12826
Title:					
Tune Ref:	J:\MS24\DATA\091914\0919F003.D			**Method ID:**	MJ120
MB Ref:	J:\MS24\DATA\091914\0919F011.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	393608	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	154576	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	139613	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	101829	51.83	104	82-146	OK	
1	1,2-Dichloroethane-d4	3.76	0.00	0.00	65	90374	45.92	92	78-121	OK	
1	Toluene-d8	5.26	0.00	0.00	98	374458	49.24	98	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	132497	48.22	96	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	0.86	-0.01	0.00	85	71764	43.48	57.7		
1	Chloromethane	0.99		0.00	50	74691	39.92	53.0		
1	Vinyl Chloride	1.05	-0.01	0.00	62	89890	44.97	59.7		
1	Bromomethane	1.28		0.00	96	53919	35.66	47.3		
1	Chloroethane	1.35	-0.01	0.00	64	54563	46.88	62.2		
1	Dichlorofluoromethane (CFC 21)	1.50		0.00	67	133570	44.34	58.8		
1	Trichlorofluoromethane	1.50		0.00	101	103207	42.73	56.7		
1	Diethyl Ether	1.71		0.00	59	63291	42.55	56.5		
1	Acrolein	1.84	-0.01	0.00	56	17384	57.02	75.7	J	
1	Trichlorotrifluoroethane	1.84	-0.01	0.00	151	54928	46.13	61.2		
1	1,1-Dichloroethene	1.86		0.00	96	71948	55.77	74.0		
1	Acetone	1.95		0.00	43	84381	179.89	239		
1	Iodomethane (Methyl Iodide)	1.97	-0.01	0.00	142	169227	109.65	146		
1	Carbon Disulfide	1.99	-0.01	0.00	76	556581	111.87	148		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F008.D			Instrument:	MS24
Acqu Date:	09/19/2014 12:56	Quant Date:	09/19/2014 13:36	Vial:	7
Run Type:	DMS			Dilution:	1.0
Lab ID:	KWG1412873-2 -- K1410113-003DMS			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	3-Chloro-1-propene	2.13		0.00	76	68367	68.52	90.9		
1	Methyl Acetate	2.16		0.00	43	51027	42.13	55.9		
1	Acetonitrile	2.19		0.00	40	64469	694.65	922		
1	Methylene Chloride	2.23		0.00	84	98708	47.50	63.0		
1	tert-Butyl Alcohol	2.32		0.00	59	78862	383.03	508		
1	Acrylonitrile	2.45	-0.01	0.00	53	65236	107.42	143		
1	Methyl tert-Butyl Ether	2.38		0.00	73	208430	39.74	52.7		
1	trans-1,2-Dichloroethene	2.39		0.00	96	83308	48.98	65.0		
1	n-Hexane	2.52	-0.01	0.00	57	159873	70.47	93.5		
1	Diisopropyl Ether	2.71	-0.01	0.00	45	424392	77.59	103		
1	1,1-Dichloroethane	2.72		0.00	63	138022	44.13	58.6		
1	Vinyl Acetate	2.75		0.00	86	28164	73.39	97.4		
1	Chloroprene	2.75		0.00	53	152650	61.74	81.9		
1	tert-Butyl Ethyl Ether	2.97		0.00	59	430618	77.53	103		
1	2,2-Dichloropropane	3.11		0.00	77	97117	40.68	54.0		
1	cis-1,2-Dichloroethene	3.14		0.00	96	90682	45.07	59.8		
1	2-Butanone (MEK)	3.17		0.00	72	47583	200.84	267		
1	Propionitrile	3.27		0.00	54	16000	67.55	89.6		
1	Ethyl Acetate	3.14		0.00	61	116088	49.27	65	JN	
1	Methacrylonitrile	3.35		0.00	67	52471	67.79	90.0		
1	Bromochloromethane	3.31		0.00	128	41552	41.94	55.7		
1	Chloroform	3.37		0.00	83	135807	42.65	56.6		
1	Cyclohexane				56	0d		0.20	U	
1	1,1,1-Trichloroethane (TCA)	3.47		0.00	97	108398	45.56	60.5		
1	Carbon Tetrachloride	3.56		0.00	117	93205	47.63	63.2		
1	1,1-Dichloropropene	3.59		0.00	75	103079	50.81	67.4		
1	Isobutanol	3.73		0.00	43	42108	543.26	721		
1	Benzene	3.74		0.00	78	305584	42.94	57.0		
1	1,2-Dichloroethane (EDC)	3.82		0.00	62	81925	37.28	49.5		
1	tert-Amyl Methyl Ether	3.82		0.00	55	101566	83.22	110		
1	Trichloroethene (TCE)	4.25		0.00	95	75037	42.70	56.7		
1	Methylcyclohexane				83	0d		0.15	U	
1	1,2-Dichloropropane	4.47		0.00	63	72671	40.45	53.7		
1	Dibromomethane	4.57		0.00	93	45471	41.56	55.2		
1	Methyl Methacrylate	4.55		0.00	69	90532	68.08	90.4		
1	1,4-Dioxane	4.57		0.00	88	15590	710.76	943		
1	Bromodichloromethane	4.69		0.00	83	99056	46.14	61.2		
1	2-Nitropropane	4.95		0.00	41	21979	67.42	89.5		
1	2-Chloroethyl Vinyl Ether	4.96		0.00	63	47795	45.00	59.7		
1	cis-1,3-Dichloropropene	5.08		0.00	75	115770	41.59	55.2		
1	4-Methyl-2-pentanone (MIBK)	5.21		0.00	58	135136	216.99	288		
1	Toluene	5.32		0.00	92	188754	41.91	55.6		
2	trans-1,3-Dichloropropene	5.58		0.00	75	93969	38.93	51.7		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F008.D			Instrument:	MS24
Acqu Date:	09/19/2014 12:56	Quant Date:	09/19/2014 13:36	Vial:	7
Run Type:	DMS			Dilution:	1.0
Lab ID:	KWG1412873-2 -- K1410113-003DMS			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethyl Methacrylate	5.62		0.00	69	140257	60.56	80.4		
2	1,1,2-Trichloroethane	5.74	-0.01	0.00	83	57382	41.09	54.5		
2	Tetrachloroethene (PCE)	5.77		0.00	164	61003	44.18	58.6		
2	2-Hexanone	5.96		0.00	57	42784	194.43	258		
2	1,3-Dichloropropane	5.90		0.00	76	113000	40.02	53.1		
2	Dibromochloromethane	6.07		0.00	129	77600	47.92	63.6		
2	1,2-Dibromoethane (EDB)	6.18	-0.01	0.00	107	67012	40.98	54.4		
2	1-Chlorohexane	6.59		0.00	91	91156	38.40	51.0		
2	Chlorobenzene	6.62		0.00	112	207547	41.24	54.7		
2	Ethylbenzene	6.70		0.00	106	105149	41.24	54.7		
2	1,1,1,2-Tetrachloroethane	6.71		0.00	131	71863	43.29	57.5		
2	m,p-Xylenes	6.82		0.00	106	260127	82.18	109		
2	o-Xylene	7.21		0.00	106	129985	40.65	53.9		
2	Styrene	7.24		0.00	103	107814**m**	42.51	56.4		
2	Bromoform	7.43		0.00	173	53012	51.28	68.1		
2	Isopropylbenzene	7.56	-0.01	0.00	105	321521	41.79	55.5		
2	cis-1,4-Dichloro-2-butene	7.72		0.00	89	21020	80.94	107		
3	1,1,2,2-Tetrachloroethane	7.95		0.00	83	84771	42.53	56.4		
3	trans-1,4-Dichloro-2-butene	8.02		0.00	53	35081	74.42	98.8		
3	Bromobenzene	7.90		0.00	156	84757	40.73	54.1		
3	n-Propylbenzene	7.98		0.00	91	387636	42.87	56.9		
3	1,2,3-Trichloropropane	8.00		0.00	110	26134	40.37	53.6		
3	2-Chlorotoluene	8.09		0.00	91	229619	42.15	55.9		
3	1,3,5-Trimethylbenzene	8.17		0.00	105	272015	42.52	56.4		
3	4-Chlorotoluene	8.21		0.00	91	229153**m**	40.39	53.6		
3	tert-Butylbenzene	8.48		0.00	119	220615	40.40	53.6		
3	1,2,4-Trimethylbenzene	8.55		0.00	105	252921	38.57	51.2		
3	sec-Butylbenzene	8.70		0.00	105	323535	39.77	52.8		
3	4-Isopropyltoluene	8.85		0.00	119	271141	39.92	53.0		
3	1,3-Dichlorobenzene	8.83	-0.01	0.00	146	157173	41.13	54.6		
3	1,4-Dichlorobenzene	8.93		0.00	146	159128	40.94	54.3		
3	n-Butylbenzene	9.25		0.00	91	266967	44.67	59.3		
3	1,2-Dichlorobenzene	9.30		0.00	146	145795	38.90	51.6		
3	1,2-Dibromo-3-chloropropane	10.07		0.00	155	13359	43.84	58.2		
3	1,2,4-Trichlorobenzene	10.80		0.00	180	91958	35.31	46.9		
3	Hexachlorobutadiene	10.91		0.00	225	40789	31.73	42.1		
3	Naphthalene	11.03		0.00	128	229366	37.15	49.3		
3	1,2,3-Trichlorobenzene	11.25	-0.01	0.00	180	84443	33.84	44.9		
	4-Vinyl-1-cyclohexene				0	0		6.7	U	NR
	Benzyl Chloride				0	0		6.7	U	NR
	1,3-Butadiene				0	0		1.4	U	NR
	2-Methylpentane				0	0		6.7	U	NR

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F008.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:56	**Quant Date:**	09/19/2014 13:36	**Vial:**	7
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1412873-2 -- K1410113-003DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
Cyclohexanone			0	0		6.7	U	NR
Tetrahydrofuran			0	0		6.7	U	NR
n-Heptane			0	0		6.7	U	NR
2,2-Dichloro-1,1,1-trifluoroethan			0	0		6.7	U	NR
1,1,2-Trifluoroethane			0	0		14	U	NR
2,2,4-Trimethylpentane			0	0		6.7	U	NR
Bis(chloromethyl) Ether			0	0		14	U	NR
Ethyl Alcohol			0	0		270	U	NR
2-Propanol			0	0		270	U	NR
Hexachloroethane			0	0		1.4	U	NR
n-Butyl Alcohol			0	0		340	U	NR
3-Methylpentane			0	0		6.7	U	NR
Methylcyclopentane			0	0		6.7	U	NR

Prep Amount:	5.030 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	74.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35:46 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	3.97	96	393608	50.00	PPB	0.00
61) Chlorobenzene-d5	6.60	82	154576	50.00	PPB	0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	139613	50.00	PPB	0.00
System Monitoring Compounds						
40) Dibromofluoromethane	3.49	113	101829	51.83	PPB	0.00
Spiked Amount 50.000			Recovery =	103.66%		
44) 1,2-Dichloroethane-d4	3.76	65	90374	45.92	PPB	0.00
Spiked Amount 50.000			Recovery =	91.84%		
59) Toluene-d8	5.26	98	374458	49.24	PPB	0.00
Spiked Amount 50.000			Recovery =	98.48%		
80) 4-Bromofluorobenzene	7.76	95	132497	48.22	PPB	0.00
Spiked Amount 50.000			Recovery =	96.44%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	71764	43.48	PPB	100
3) Chloromethane	0.99	50	74691	39.92	PPB	99
4) Vinyl Chloride	1.05	62	89890	44.97	PPB	99
5) Bromomethane	1.28	96	53919	35.66	PPB	95
6) Chloroethane	1.35	64	54563	46.88	PPB	98
7) Dichlorofluoromethane	1.50	67	133570	44.34	PPB	97
8) Trichlorofluoromethane	1.50	101	103207	42.73	PPB	97
9) Ethyl Ether	1.71	59	63291	42.55	PPB	99
10) Acrolein	1.84	56	17384	57.02	PPB	98
11) Trichlorotrifluoroethane	1.84	151	54928	46.13	PPB	98
12) 1,1-Dichloroethene	1.86	96	71948	55.77	PPB	99
13) Acetone	1.95	43	84381	179.89	PPB	98
14) Iodomethane	1.97	142	169227	109.65	PPB	99
15) Carbon Disulfide	1.99	76	556581	111.87	PPB	100
16) 3-Chloro-1-propene	2.13	76	68367	68.52	PPB	96
17) Methyl Acetate	2.16	43	51027	42.13	PPB	99
18) Acetonitrile	2.19	40	64469	694.65	PPB	99
19) Methylene Chloride	2.23	84	98708	47.50	PPB	95
20) tert-Butyl Alcohol	2.32	59	78862	383.03	PPB	99
21) Acrylonitrile	2.45	53	65236	107.42	PPB	99
22) Methyl tert-Butyl Ether	2.38	73	208430	39.74	PPB	99
23) trans-1,2-Dichloroethene	2.39	96	83308	48.98	PPB	98
24) Hexane	2.52	57	159873	70.47	PPB	97
25) Diisopropyl Ether	2.71	45	424392	77.59	PPB	98
26) 1,1-Dichloroethane	2.72	63	138022	44.13	PPB	97
27) Vinyl Acetate	2.75	86	28164	73.39	PPB	92
28) Chloroprene	2.75	53	152650	61.74	PPB	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35:46 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29) tert-Butyl Ethyl Ether	2.97	59	430618	77.53	PPB		99
30) 2,2-Dichloropropane	3.11	77	97117	40.68	PPB		98
31) cis-1,2-Dichloroethene	3.14	96	90682	45.07	PPB		99
32) 2-Butanone	3.17	72	47583	200.84	PPB		87
33) Propionitrile	3.27	54	16000	67.55	PPB		98
34) Ethyl Acetate	3.14	61	116088	49.27	PPB		100
35) Methacrylonitrile	3.35	67	52471	67.79	PPB		98
36) Bromochloromethane	3.31	128	41552	41.94	PPB		95
37) Chloroform	3.37	83	135807	42.65	PPB		100
39) 1,1,1-Trichloroethane	3.47	97	108398	45.56	PPB		98
41) Carbon Tetrachloride	3.56	117	93205	47.63	PPB		99
42) 1,1-Dichloropropene	3.59	75	103079	50.81	PPB		99
43) Isobutyl Alcohol	3.73	43	42108	543.26	PPB		97
45) Benzene	3.74	78	305584	42.94	PPB		98
46) 1,2-Dichloroethane	3.82	62	81925	37.28	PPB		97
47) tert-Amyl Methyl Ether	3.82	55	101566	83.22	PPB	#	81
48) Trichloroethene	4.25	95	75037	42.70	PPB		97
50) 1,2-Dichloropropane	4.47	63	72671	40.45	PPB		98
51) Dibromomethane	4.57	93	45471	41.56	PPB		97
52) Methyl methacrylate	4.55	69	90532	68.08	PPB		97
53) 1,4-Dioxane	4.57	88	15590	710.76	PPB		99
54) Bromodichloromethane	4.69	83	99056	46.14	PPB		94
55) 2-Nitropropane	4.95	41	21979	67.42	PPB		86
56) 2-Chloroethyl Vinyl Ether	4.96	63	47795	45.00	PPB		98
57) cis-1,3-Dichloropropene	5.08	75	115770	41.59	PPB		99
58) 4-Methyl-2-pentanone (MIBK	5.21	58	135136	216.99	PPB		99
60) Toluene	5.32	92	188754	41.91	PPB		99
62) trans-1,3-Dichloropropene	5.58	75	93969	38.93	PPB		99
63) Ethyl methacrylate	5.62	69	140257	60.56	PPB		94
64) 1,1,2-Trichloroethane	5.74	83	57382	41.09	PPB		97
65) Tetrachloroethene	5.77	164	61003	44.18	PPB		97
66) 2-Hexanone	5.96	57	42784	194.43	PPB		99
67) 1,3-Dichloropropane	5.90	76	113000	40.02	PPB		99
68) Dibromochloromethane	6.07	129	77600	47.92	PPB		98
69) 1,2-Dibromoethane (EDB)	6.18	107	67012	40.98	PPB		98
70) 1-Chlorohexane	6.59	91	91156	38.40	PPB		96
71) Chlorobenzene	6.62	112	207547	41.24	PPB		98
72) Ethylbenzene	6.70	106	105149	41.24	PPB		98
73) 1,1,1,2-Tetrachloroethane	6.71	131	71863	43.29	PPB		99
74) m,p-Xylenes	6.82	106	260127	82.18	PPB		97
75) o-Xylene	7.21	106	129985	40.65	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:35:46 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76) Styrene	7.24	103	107814m	42.51	PPB	
77) Bromoform	7.43	173	53012	51.28	PPB	97
78) Isopropylbenzene	7.56	105	321521	41.79	PPB	98
79) cis-1,4-Dichloro-2-butene	7.72	89	21020	80.94	PPB	97
82) 1,1,2,2-Tetrachloroethane	7.95	83	84771	42.53	PPB	95
83) trans-1,4-Dichloro-2-buten	8.02	53	35081	74.42	PPB	85
84) Bromobenzene	7.90	156	84757	40.73	PPB	98
85) n-Propylbenzene	7.98	91	387636	42.87	PPB	99
86) 1,2,3-Trichloropropane	8.00	110	26134	40.37	PPB	95
87) 2-Chlorotoluene	8.09	91	229619	42.15	PPB	97
88) 1,3,5-Trimethylbenzene	8.17	105	272015	42.52	PPB	99
89) 4-Chlorotoluene	8.21	91	229153m	40.39	PPB	
90) tert-Butylbenzene	8.48	119	220615	40.40	PPB	97
91) 1,2,4-Trimethylbenzene	8.55	105	252921	38.57	PPB	100
92) sec-Butylbenzene	8.70	105	323535	39.77	PPB	100
93) p-Isopropyltoluene	8.85	119	271141	39.92	PPB	98
94) 1,3-Dichlorobenzene	8.83	146	157173	41.13	PPB	98
95) 1,4-Dichlorobenzene	8.93	146	159128	40.94	PPB	99
96) n-Butylbenzene	9.25	91	266967	44.67	PPB	98
97) 1,2-Dichlorobenzene	9.30	146	145795	38.90	PPB	99
98) 1,2-Dibromo-3-chloropropan	10.07	155	13359	43.84	PPB	95
99) 1,3,5-Trichlorobenzene	10.21	180	106572	37.52	PPB	97
100) 1,2,4-Trichlorobenzene	10.80	180	91958	35.31	PPB	99
101) Hexachlorobutadiene	10.91	225	40789	31.73	PPB	94
102) Naphthalene	11.03	128	229366	37.15	PPB	99
103) 1,2,3-Trichlorobenzene	11.25	180	84443	33.84	PPB	95

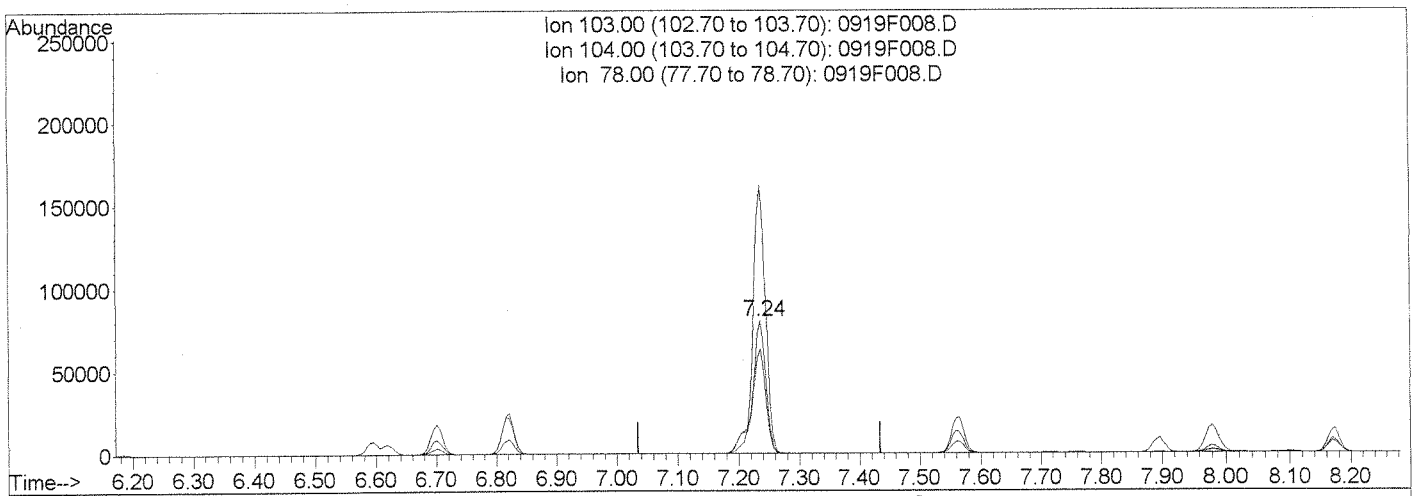
(#) = qualifier out of range (m) = manual integration

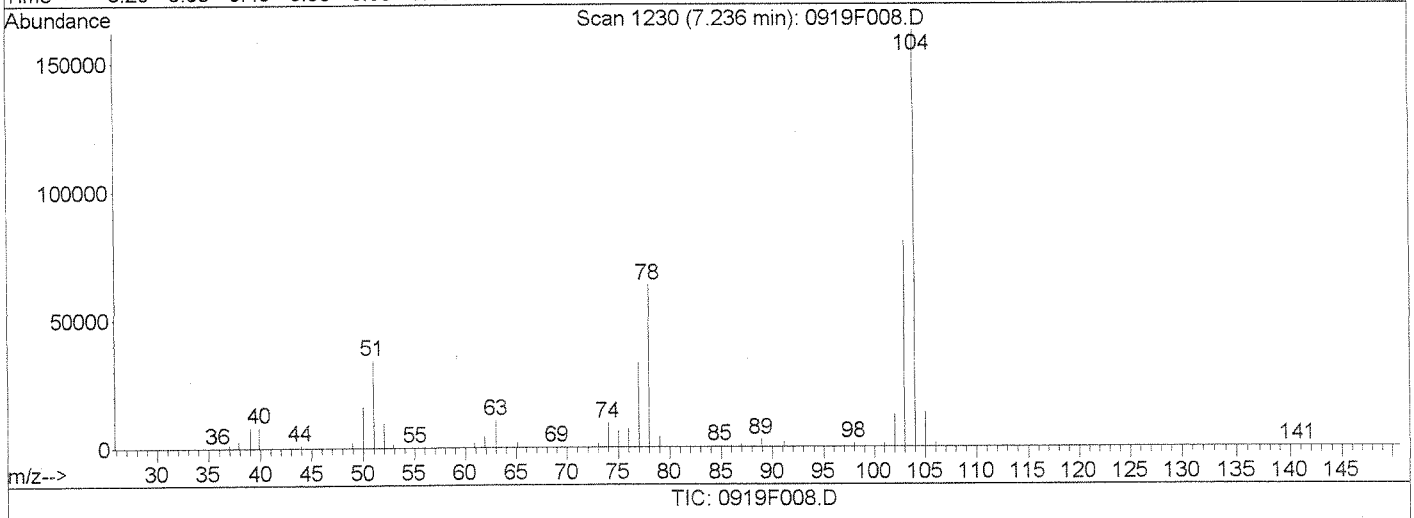
Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:36 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F008.D

(76) Styrene (T)

7.24min 49.16PPB

response 124678

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	202.80
78.00	79.00	78.87
0.00	0.00	0.00

Manual Integration:

Before

09/19/14

0919F008.D 100713MS24SOIL.M Fri Sep 19 13:36:03 2014

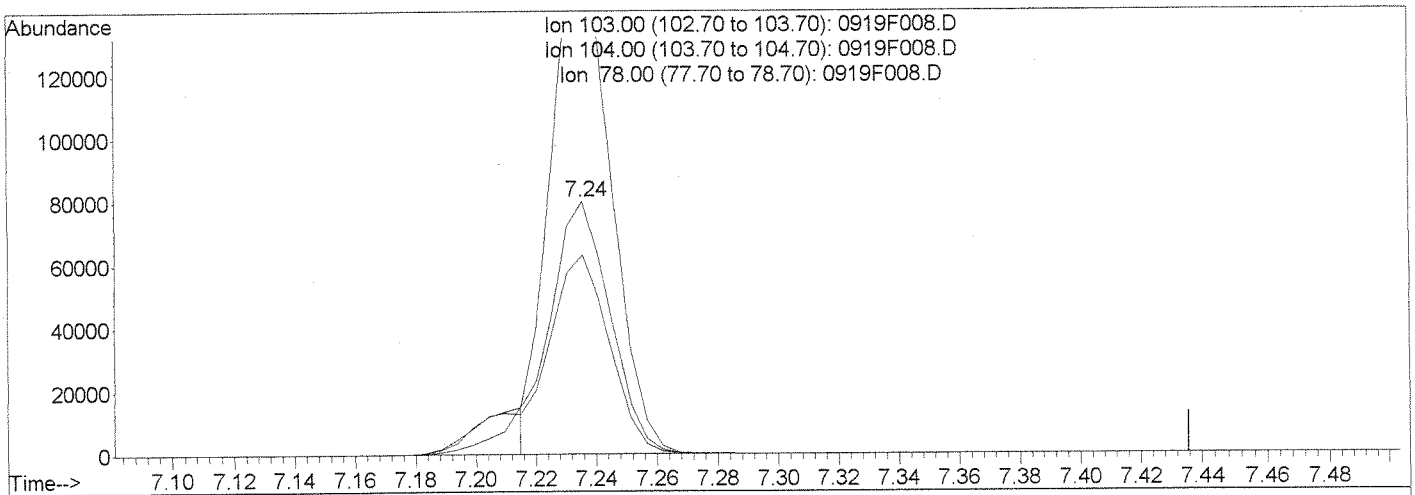
Quantitation Report (Quan)

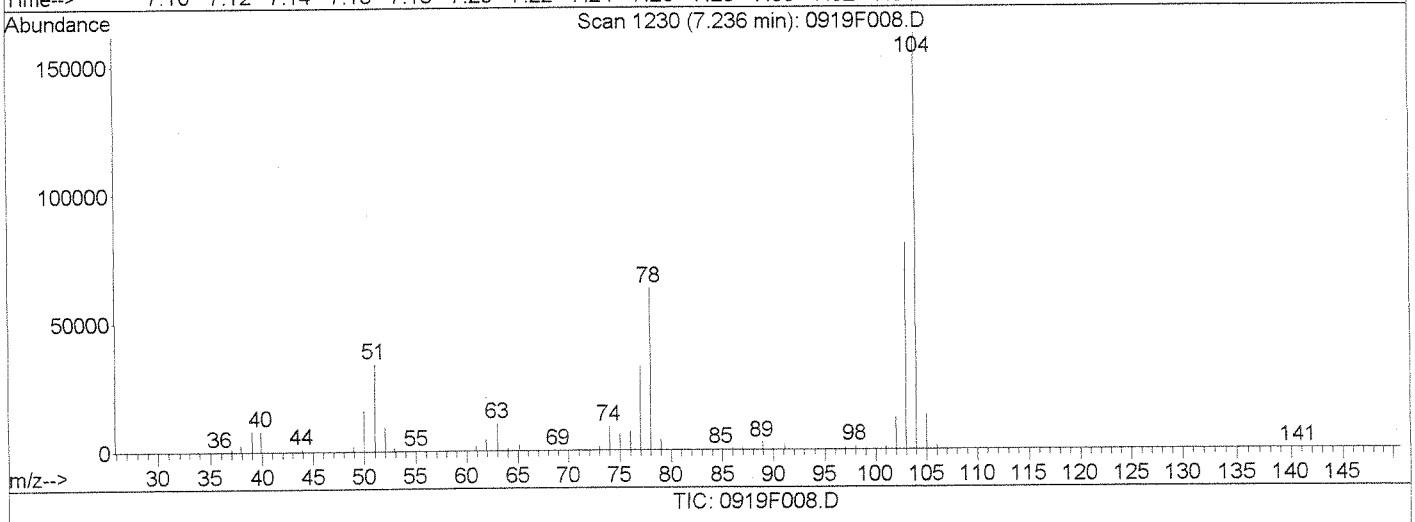
Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:36 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F008.D

(76) Styrene (T)

7.24min 42.51PPB m

response 107814

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	202.80
78.00	79.00	78.87
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

09/19/14

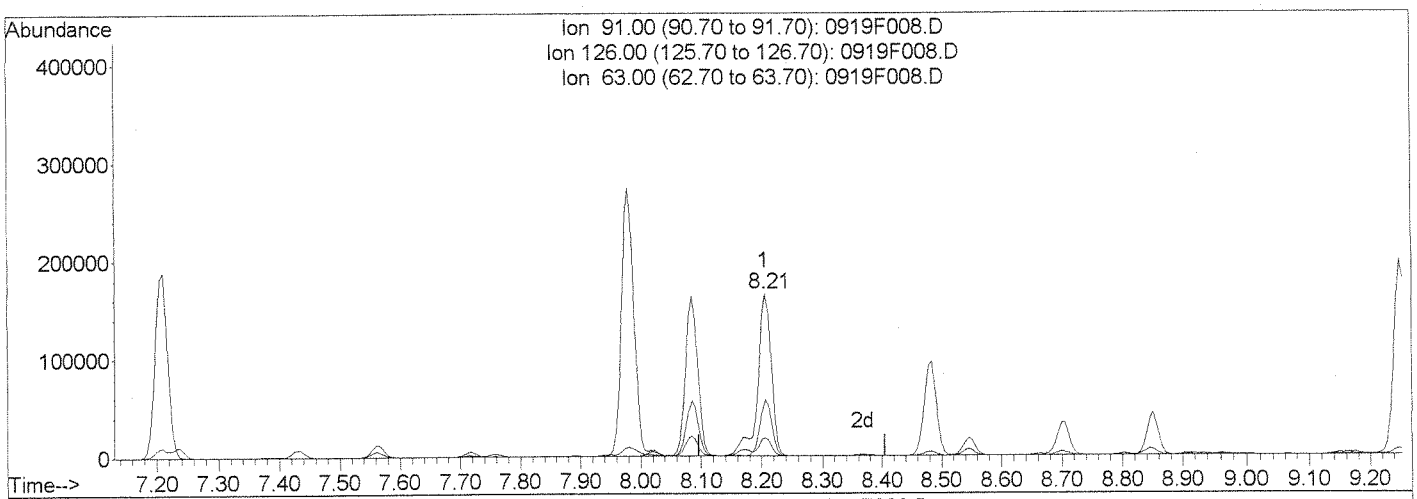
0919F008.D 100713MS24SOIL.M Fri Sep 19 13:36:09 2014

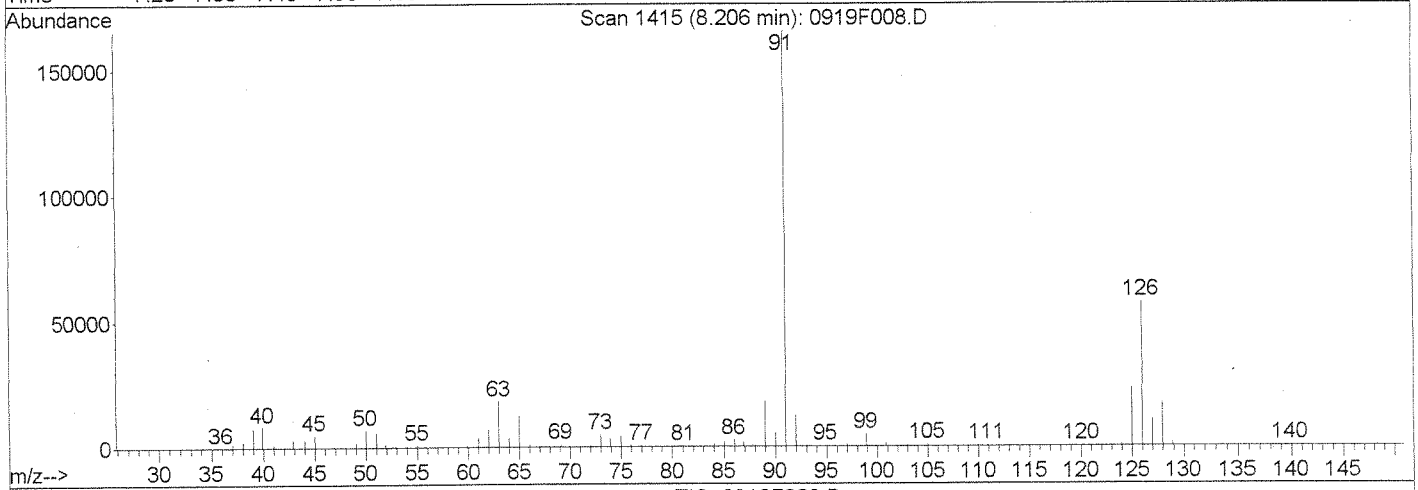
Data File : J:\MS24\DATA\091914\0919F008.D
Acq On : 19 Sep 2014 12:56 pm
Sample : K10113-003DMS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 13:36 2014

Vial: 7
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F008.D

(89) 4-Chlorotoluene (T)

8.21min 45.96PPB

response 260756

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.71
63.00	10.90	11.06
0.00	0.00	0.00

Manual Integration:

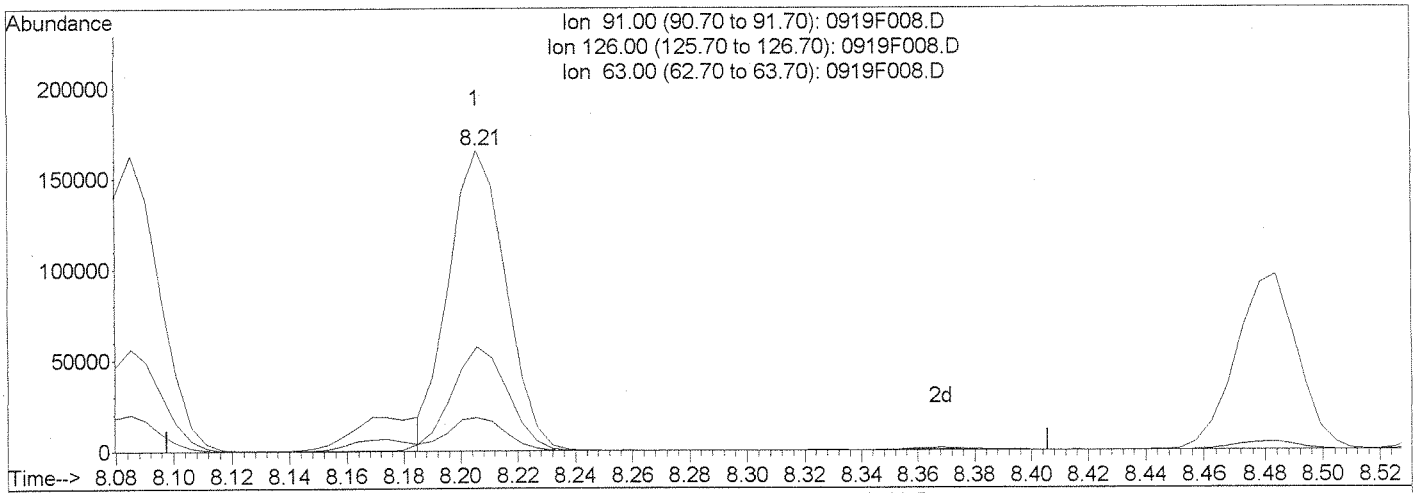
Before

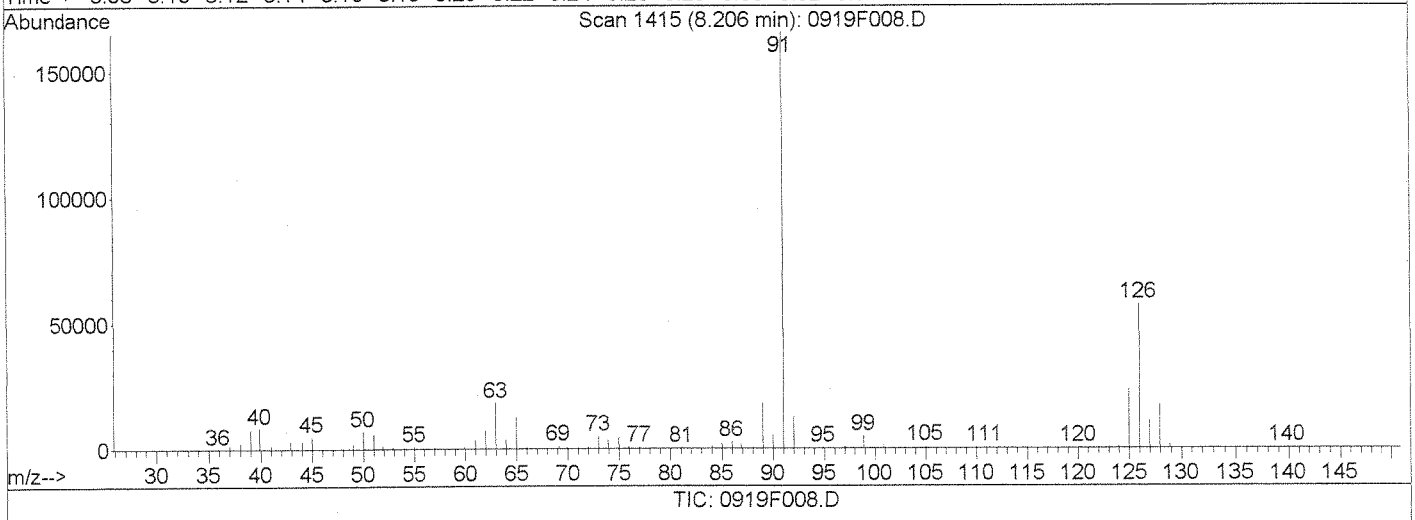
09/19/14

0919F008.D 100713MS24SOIL.M Fri Sep 19 13:36:16 2014

Data File : J:\MS24\DATA\091914\0919F008.D Vial: 7
Acq On : 19 Sep 2014 12:56 pm Operator: KR
Sample : K10113-003DMS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 13:36 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F008.D

(89) 4-Chlorotoluene (T)

8.21min 40.39PPB m

response 229153

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.71
63.00	10.90	11.06
0.00	0.00	0.00

Manual Integration:

After

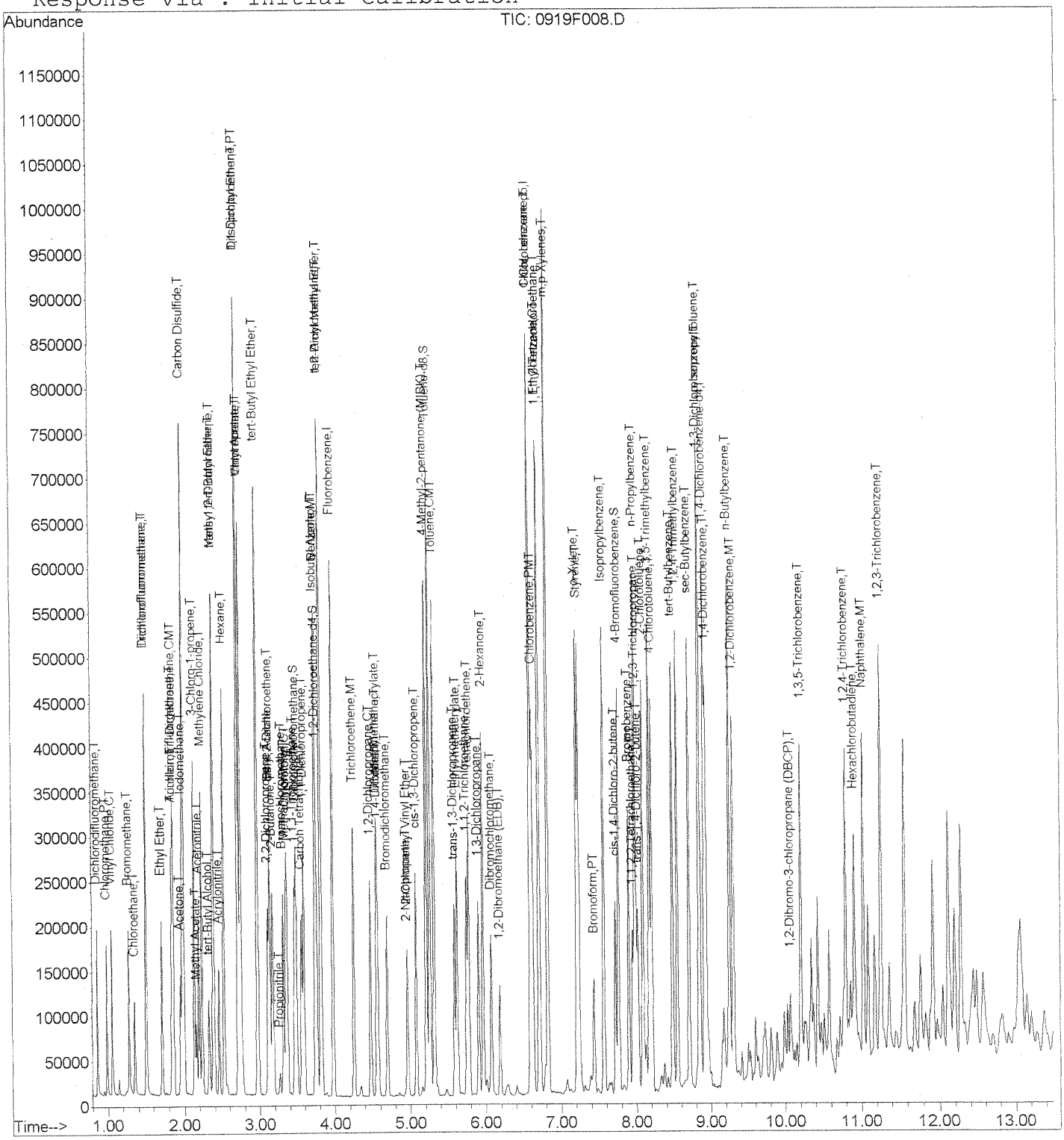
Baseline correction

09/19/14

0919F008.D 100713MS24SOIL.M Fri Sep 19 13:36:21 2014

Data File : J:\MS24\DATA\091914\0919F008.D Vial: 7
Acq On : 19 Sep 2014 12:56 pm Operator: KR
Sample : K10113-003DMS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 13:36 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS18\DATA\092014\0920F005.D
Lab ID: KWG1412906-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/20/2014 09:32
Date Quantitated: 09/20/2014 10:06
Batch ID: KWG1412905
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutyl Alcohol	0.0064	0.01	NA	NT
	1,4-Dioxane	0.0021	0.01	NA	
Second Source ICAL Verification	Acrolein	62.6	NA	30	
Continuing Calibration Recovery	Bromomethane	-27.4	NA	20	CCV okay
	Acrolein	-61.7	NA	20	NT
	tert-Amyl Methyl Ether	43.7	NA	20	
Continuing Calibration Minimum RF	Acrolein	0.0066	0.01	NA	
	Isobutyl Alcohol	0.0058	0.01	NA	
	1,4-Dioxane	0.0022	0.01	NA	

Primary Review: 9/23/14

Secondary Review: 9/24/14

Printed: 09/23/2014 12:13:26
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376687				

Quant Method:	J:\MS18\METHODS\091714MS18_8	**Calibration ID:**	CAL13556
Title:			
Tune Ref:	J:\MS18\DATA\092014\0920F003.D	**Method ID:**	MJ1093
MB Ref:	J:\MS18\DATA\092014\0920F010.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.31	-0.01	96	317387	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	129393	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	131373	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	70133	10.07	101	85-115	OK	
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	76515	9.33	93	70-120	OK	
1	Toluene-d8	8.10	0.00	0.00	98	317409	9.90	99	85-120	OK	
2	4-Bromofluorobenzene	10.87	-0.01	0.00	95	117689	10.08	101	75-120	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	98979	9.15	9.15		
1	Chloromethane	1.62		0.00	50	116274	9.39	9.39		
1	Vinyl Chloride	1.71		0.00	62	117577	9.88	9.88		
1	Bromomethane	1.99	-0.01	0.00	96	68338	7.53	7.53		
1	Chloroethane	2.09		0.00	64	79142	11.70	11.7		
1	Trichlorofluoromethane	2.30		0.00	101	143138	8.84	8.84		
1	Acrolein	2.72		0.00	56	88890	163.54	164		
1	Trichlorotrifluoroethane	2.80		0.00	151	61211	10.22	10.2		
1	1,1-Dichloroethene	2.79		0.00	96	77354	11.14	11.1		
1	Acetone	2.87		0.00	43	74114	49.10	49.1		
1	Iodomethane	2.94	-0.01	0.00	142	323288	54.78	54.8		
1	Carbon Disulfide	3.00	-0.01	0.00	76	517895	21.90	21.9		
1	3-Chloro-1-propene	3.18		0.00	76	146295	30.52	30.5		
1	Acetonitrile	3.17		0.00	40	169547	383.19	383		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.33		0.00	84	86391	8.63	8.63		
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	35781	84.09	84.1		
1	Acrylonitrile	3.60	-0.01	0.00	53	83804	35.93	35.9		
1	Methyl tert-Butyl Ether	3.59		0.00	73	192398	8.91	8.91		
1	trans-1,2-Dichloroethene	3.60	-0.01	0.00	96	90608	10.47	10.5		
1	Diisopropyl Ether	4.15	-0.01	0.00	45	604937	19.99	20.0		
1	1,1-Dichloroethane	4.13		0.00	63	160313	10.56	10.6		
1	Vinyl Acetate	4.14	-0.01	0.00	86	59338	46.90	46.9		
1	Chloroprene	4.20		0.00	53	459230	29.81	29.8		
1	tert-Butyl Ethyl Ether	4.61		0.00	59	507928	19.67	19.7		
1	2,2-Dichloropropane	4.84	-0.01	0.00	77	117240	9.48	9.48		
1	cis-1,2-Dichloroethene	4.85		0.00	96	102454	10.05	10.1		
1	2-Butanone (MEK)	4.87		0.00	72	30624	49.90	49.9		
1	Propionitrile	4.98		0.00	54	23640	29.03	29.0		
1	Ethyl Acetate	4.92	-0.01	0.00	61	20342	22.85	22.9		
1	Methacrylonitrile	5.17		0.00	67	75424	27.17	27.2		
1	Bromochloromethane	5.17		0.00	128	45425	10.48	10.5		
1	Chloroform	5.32		0.00	83	157713	9.82	9.82		
1	1,1,1-Trichloroethane (TCA)	5.48	-0.01	0.00	97	130434	9.78	9.78		
1	Carbon Tetrachloride	5.66		0.00	117	108027	9.58	9.58		
1	1,1-Dichloropropene	5.69		0.00	75	125305	10.36	10.4		
1	Isobutyl Alcohol	5.91	-0.01	0.00	43	50634	248.50	249		
1	Benzene	5.93		0.00	78	391900	9.96	9.96		
1	1,2-Dichloroethane (EDC)	6.04	-0.01	0.00	62	119981	9.67	9.67		
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	137872	15.62	15.6		
1	Trichloroethene (TCE)	6.73		0.00	95	90877	9.91	9.91		
1	1,2-Dichloropropane	7.05		0.00	63	92044	9.63	9.63		
1	Dibromomethane	7.15		0.00	93	49201	9.72	9.72		
1	Methyl Methacrylate	7.13	-0.01	0.00	69	135307	29.48	29.5		
1	1,4-Dioxane	7.14		0.00	88	17506	264.99	265		
1	Bromodichloromethane	7.36		0.00	83	105511	9.53	9.53		
1	2-Nitropropane	7.63		0.00	41	33605	22.67	22.7		
1	2-Chloroethyl Vinyl Ether	7.69		0.00	63	46038	9.98	9.98		
1	cis-1,3-Dichloropropene	7.84		0.00	75	129729	9.66	9.66		
1	4-Methyl-2-pentanone (MIBK)	8.01		0.00	58	101259	49.60	49.6		
1	Toluene	8.17		0.00	92	257486	9.77	9.77		
2	trans-1,3-Dichloropropene	8.47		0.00	75	95081	8.73	8.73		
2	Ethyl Methacrylate	8.52	-0.01	0.00	69	276669	31.34	31.3		
2	1,1,2-Trichloroethane	8.67	-0.01	0.00	83	60199	9.68	9.68		
2	Tetrachloroethene (PCE)	8.70		0.00	164	84298	10.64	10.6		
2	2-Hexanone	8.91		0.00	57	34043	50.14	50.1		
2	1,3-Dichloropropane	8.84		0.00	76	133877	9.88	9.88		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Dibromochloromethane	9.06		0.00	129	69833	10.09	10.1		
2	1,2-Dibromoethane (EDB)	9.17		0.00	107	66718	9.60	9.60		
2	1-Chlorohexane	9.66	-0.01	0.00	91	121436	8.27	8.27		
2	Chlorobenzene	9.67		0.00	112	300427	10.49	10.5		
2	Ethylbenzene	9.77	-0.01	0.00	106	159476	10.21	10.2		
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	88657	9.88	9.88		
2	m,p-Xylenes	9.91		0.00	106	401776	20.84	20.8		
2	o-Xylene	10.31		0.00	106	195724	10.35	10.4		
2	Styrene	10.33		0.00	103	154303**m**	10.87	10.9		
2	Bromoform	10.53	-0.01	0.00	173	33839	8.76	8.76		
2	Isopropylbenzene	10.68		0.00	105	490595	10.25	10.3		
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28998	26.38	26.4		
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	72595	9.01	9.01		
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	68136	28.11	28.1		
3	Bromobenzene	11.00	-0.01	0.00	156	126787	10.09	10.1		
3	n-Propylbenzene	11.11		0.00	91	586672	9.96	9.96		
3	1,2,3-Trichloropropane	11.09	-0.01	0.00	110	25342	9.09	9.09		
3	2-Chlorotoluene	11.20		0.00	91	354461	9.80	9.80		
3	1,3,5-Trimethylbenzene	11.30		0.00	105	411959	10.17	10.2		
3	4-Chlorotoluene	11.33		0.00	91	373275**m**	8.98	8.98		
3	tert-Butylbenzene	11.61		0.00	119	372835	10.15	10.2		
3	1,2,4-Trimethylbenzene	11.68		0.00	105	412258	10.02	10.0		
3	sec-Butylbenzene	11.84		0.00	105	504796	9.76	9.76		
3	4-Isopropyltoluene	12.00		0.00	119	440205	10.35	10.4		
3	1,3-Dichlorobenzene	11.96		0.00	146	240116	9.97	9.97		
3	1,4-Dichlorobenzene	12.07		0.00	146	250226	10.11	10.1		
3	n-Butylbenzene	12.36		0.00	91	363194	9.95	9.95		
3	1,2-Dichlorobenzene	12.37		0.00	146	222352	9.92	9.92		
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8018	8.66	8.66		
3	1,3,5-Trichlorobenzene	13.06		0.00	180	161409	9.99	9.99		
3	1,2,4-Trichlorobenzene	13.55		0.00	180	119977	9.64	9.64		
3	Hexachlorobutadiene	13.66		0.00	225	52767	9.59	9.59		
3	Naphthalene	13.78		0.00	128	186254	9.39	9.39		
3	1,2,3-Trichlorobenzene	13.97		0.00	180	87333	9.76	9.76		

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412905	**Prep Lot:**	KWG1412906	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376687				

Quant Method:	J:\MS18\METHODS\091714MS18_8			**Calibration ID:**	CAL13556
Title:					
Tune Ref:	J:\MS18\DATA\092014\0920F003.D			**Method ID:**	MJ119
MB Ref:	J:\MS18\DATA\092014\0920F010.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.31	-0.01	96	317387	10.00	OK
2	Chlorobenzene-d5	9.64	0.00	82	129393	10.00	OK
3	1,4-Dichlorobenzene-d4	12.05	0.00	152	131373	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.53	0.00	0.00	113	70133	10.07	101	73-122	OK	
1	1,2-Dichloroethane-d4	5.95	0.00	0.00	65	76515	9.33	93	59-127	OK	
1	Toluene-d8	8.10	0.00	0.00	98	317409	9.90	99	65-144	OK	
2	4-Bromofluorobenzene	10.87	-0.01	0.00	95	117689	10.08	101	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.47		0.00	85	98979	9.15	9.15		
1	Chloromethane	1.62		0.00	50	116274	9.39	9.39		
1	Vinyl Chloride	1.71		0.00	62	117577	9.88	9.88		
1	1,3-Butadiene				54	0d		0.50	U	
1	Bromomethane	1.99	-0.01	0.00	96	68338	7.53	7.53		
1	Chloroethane	2.09		0.00	64	79142	11.70	11.7		
1	Dichlorofluoromethane (CFC 21	2.29		0.00	67	206817	11.09	11.1		
1	Trichlorofluoromethane	2.30		0.00	101	143138	8.84	8.84		
1	Ethyl Ether	2.57		0.00	59	68926	10.01	10.0		
1	Acrolein	2.72		0.00	56	88890	163.54	164		
1	Trichlorotrifluoroethane	2.80		0.00	151	61211	10.22	10.2		
1	1,1-Dichloroethene	2.79		0.00	96	77354	11.14	11.1		
1	Acetone	2.87		0.00	43	74114	49.10	49.1		
1	Iodomethane	2.94	-0.01	0.00	142	323288	54.78	54.8		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F005.D		
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06
Run Type:	LCS		
Lab ID:	KWG1412906-3		

Instrument:	GC-MS 18
Vial:	5
Dilution:	1.0
Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	3.00	-0.01	0.00	76	517895	21.90	21.9		
1	2-Propanol				45	0d		17	U	
1	3-Chloro-1-propene	3.18		0.00	76	146295	30.52	30.5		
1	Methyl Acetate				43	0d		0.38	U	
1	Acetonitrile	3.17		0.00	40	169547	383.19	383		
1	Methylene Chloride	3.33		0.00	84	86391	8.63	8.63		
1	tert-Butyl Alcohol	3.46	0.01	0.00	59	35781	84.09	84.1		
1	Acrylonitrile	3.60	-0.01	0.00	53	83804	35.93	35.9		
1	Methyl tert-Butyl Ether	3.59		0.00	73	192398	8.91	8.91		
1	trans-1,2-Dichloroethene	3.60	-0.01	0.00	96	90608	10.47	10.5		
1	n-Hexane	3.90		0.00	57	341388	37.49	37.5		
1	Diisopropyl Ether	4.15	-0.01	0.00	45	604937	19.99	20.0		
1	1,1-Dichloroethane	4.13		0.00	63	160313	10.56	10.6		
1	Vinyl Acetate	4.14	-0.01	0.00	86	59338	46.90	46.9		
1	Chloroprene	4.20		0.00	53	459230	29.81	29.8		
1	tert-Butyl Ethyl Ether	4.61		0.00	59	507928	19.67	19.7		
1	2,2-Dichloropropane	4.84	-0.01	0.00	77	117240	9.48	9.48		
1	cis-1,2-Dichloroethene	4.85		0.00	96	102454	10.05	10.1		
1	2-Butanone (MEK)	4.87		0.00	72	30624	49.90	49.9		
1	Propionitrile	4.98		0.00	54	23640	29.03	29.0		
1	Ethyl Acetate	4.92	-0.01	0.00	61	20342	22.85	22.9		
1	Methacrylonitrile	5.17		0.00	67	75424	27.17	27.2		
1	Bromochloromethane	5.17		0.00	128	45425	10.48	10.5		
1	Tetrahydrofuran				71	0d		0.94	U	
1	Chloroform	5.32		0.00	83	157713	9.82	9.82		
1	tert-Butyl Formate				59	0d		0.26	U	
1	1,1,1-Trichloroethane (TCA)	5.48	-0.01	0.00	97	130434	9.78	9.78		
1	Carbon Tetrachloride	5.66		0.00	117	108027	9.58	9.58		
1	1,1-Dichloropropene	5.69		0.00	75	125305	10.36	10.4		
1	Cyclohexane				56	0d		0.36	U	
1	Isobutyl Alcohol	5.91	-0.01	0.00	43	50634	248.50	249		
1	Benzene	5.93		0.00	78	391900	9.96	9.96		
1	1,2-Dichloroethane (EDC)	6.04	-0.01	0.00	62	119981	9.67	9.67		
1	tert-Amyl Methyl Ether	6.11	-0.02	0.00	55	137872	15.62	15.6		
1	Trichloroethene (TCE)	6.73		0.00	95	90877	9.91	9.91		
1	1,2-Dichloropropane	7.05		0.00	63	92044	9.63	9.63		
1	Dibromomethane	7.15		0.00	93	49201	9.72	9.72		
1	Methyl Methacrylate	7.13	-0.01	0.00	69	135307	29.48	29.5		
1	1,4-Dioxane	7.14		0.00	88	17506	264.99	265		
1	Bromodichloromethane	7.36		0.00	83	105511	9.53	9.53		
1	2-Nitropropane	7.63		0.00	41	33605	22.67	22.7		
1	Methylcyclohexane				83	0d		0.33	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Chloroethyl Vinyl Ether	7.69		0.00	63	46038	9.98	9.98		
1	cis-1,3-Dichloropropene	7.84		0.00	75	129729	9.66	9.66		
1	4-Methyl-2-pentanone (MIBK)	8.01		0.00	58	101259	49.60	49.6		
1	Toluene	8.17		0.00	92	257486	9.77	9.77		
2	n-Octane				85	0d		0.16	U	
2	trans-1,3-Dichloropropene	8.47		0.00	75	95081	8.73	8.73		
2	Ethyl Methacrylate	8.52	-0.01	0.00	69	276669	31.34	31.3		
2	1,1,2-Trichloroethane	8.67	-0.01	0.00	83	60199	9.68	9.68		
2	Tetrachloroethene (PCE)	8.70		0.00	164	84298	10.64	10.6		
2	2-Hexanone	8.91		0.00	57	34043	50.14	50.1		
2	1,3-Dichloropropane	8.84		0.00	76	133877	9.88	9.88		
2	Dibromochloromethane	9.06		0.00	129	69833	10.09	10.1		
2	1,2-Dibromoethane (EDB)	9.17		0.00	107	66718	9.60	9.60		
2	1-Chlorohexane	9.66	-0.01	0.00	91	121436	8.27	8.27		
2	Chlorobenzene	9.67		0.00	112	300427	10.49	10.5		
2	Ethylbenzene	9.77	-0.01	0.00	106	159476	10.21	10.2		
2	1,1,1,2-Tetrachloroethane	9.78		0.00	131	88657	9.88	9.88		
2	m,p-Xylenes	9.91		0.00	106	401776	20.84	20.8		
2	o-Xylene	10.31		0.00	106	195724	10.35	10.4		
2	Styrene	10.33		0.00	103	154303m	10.87	10.9		
2	Bromoform	10.53	-0.01	0.00	173	33839	8.76	8.76		
2	Isopropylbenzene	10.68		0.00	105	490595	10.25	10.3		
2	cis-1,4-Dichloro-2-butene	10.78		0.00	89	28998	26.38	26.4		
3	1,1,2,2-Tetrachloroethane	11.04		0.00	83	72595	9.01	9.01		
3	trans-1,4-Dichloro-2-butene	11.08		0.00	53	68136	28.11	28.1		
3	Bromobenzene	11.00	-0.01	0.00	156	126787	10.09	10.1		
3	n-Propylbenzene	11.11		0.00	91	586672	9.96	9.96		
3	1,2,3-Trichloropropane	11.09	-0.01	0.00	110	25342	9.09	9.09		
3	2-Chlorotoluene	11.20		0.00	91	354461	9.80	9.80		
3	1,3,5-Trimethylbenzene	11.30		0.00	105	411959	10.17	10.2		
3	4-Chlorotoluene	11.33		0.00	91	373275m	8.98	8.98		
3	tert-Butylbenzene	11.61		0.00	119	372835	10.15	10.2		
3	1,2,4-Trimethylbenzene	11.68		0.00	105	412258	10.02	10.0		
3	sec-Butylbenzene	11.84		0.00	105	504796	9.76	9.76		
3	4-Isopropyltoluene	12.00		0.00	119	440205	10.35	10.4		
3	1,3-Dichlorobenzene	11.96		0.00	146	240116	9.97	9.97		
3	1,4-Dichlorobenzene	12.07		0.00	146	250226	10.11	10.1		
3	n-Butylbenzene	12.36		0.00	91	363194	9.95	9.95		
3	1,2-Dichlorobenzene	12.37		0.00	146	222352	9.92	9.92		
3	1,2-Dibromo-3-chloropropane	12.95		0.00	155	8018	8.66	8.66		
3	1,3,5-Trichlorobenzene	13.06		0.00	180	161409	9.99	9.99		
3	1,2,4-Trichlorobenzene	13.55		0.00	180	119977	9.64	9.64		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS18\DATA\092014\0920F005.D			**Instrument:**	GC-MS 18
Acqu Date:	09/20/2014 09:32	**Quant Date:**	09/20/2014 10:06	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412906-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Hexachlorobutadiene	13.66		0.00	225	52767	9.59	9.59		
3	Naphthalene	13.78		0.00	128	186254	9.39	9.39		
3	1,2,3-Trichlorobenzene	13.97		0.00	180	87333	9.76	9.76		
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:03:18 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.31	96	317387	10.00	PPB		-0.01
65) Chlorobenzene-d5	9.64	82	129393	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	131373	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	70133	10.07	PPB		0.00
Spiked Amount 10.000			Recovery =	100.70%			
48) 1,2-Dichloroethane-d4	5.95	65	76515	9.33	PPB		-0.01
Spiked Amount 10.000			Recovery =	93.30%			
63) Toluene-d8	8.10	98	317409	9.90	PPB		0.00
Spiked Amount 10.000			Recovery =	99.00%			
85) 4-Bromofluorobenzene	10.87	95	117689	10.08	PPB		0.00
Spiked Amount 10.000			Recovery =	100.80%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.47	85	98979	9.15	PPB		98
3) Chloromethane	1.62	50	116274	9.39	PPB		99
4) Vinyl Chloride	1.71	62	117577	9.88	PPB		100
6) Bromomethane	1.99	96	68338	7.53	PPB		98
7) Chloroethane	2.09	64	79142	11.70	PPB		97
8) Dichlorofluoromethane	2.29	67	206817	11.09	PPB		99
9) Trichlorofluoromethane	2.30	101	143138	8.84	PPB		98
10) Ethyl Ether	2.57	59	68926	10.01	PPB		98
11) Acrolein	2.72	56	88890	163.54	PPB		97
12) Trichlorotrifluoroethane	2.80	151	61211	10.22	PPB		97
13) 1,1-Dichloroethene	2.79	96	77354	11.14	PPB		99
14) Acetone	2.87	43	74114	49.10	PPB		98
15) Iodomethane	2.94	142	323288	54.78	PPB		97
16) Carbon Disulfide	3.00	76	517895	21.90	PPB		99
18) 3-Chloro-1-propene	3.18	76	146295	30.52	PPB	#	36
20) Acetonitrile	3.17	40	169547	383.19	PPB	#	1
21) Methylene Chloride	3.33	84	86391	8.63	PPB		98
22) tert-Butyl Alcohol	3.46	59	35781	84.09	PPB		97
23) Acrylonitrile	3.60	53	83804	35.93	PPB		99
24) Methyl tert-Butyl Ether	3.59	73	192398	8.91	PPB		96
25) trans-1,2-Dichloroethene	3.60	96	90608	10.47	PPB		90
26) Hexane	3.90	57	341388	37.49	PPB		100
27) Diisopropyl Ether	4.15	45	604937	19.99	PPB		98
28) 1,1-Dichloroethane	4.13	63	160313	10.56	PPB		99
29) Vinyl Acetate	4.14	86	59338	46.90	PPB	#	92
30) Chloroprene	4.20	53	459230	29.81	PPB		97
31) tert-Butyl Ethyl Ether	4.61	59	507928	19.67	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:03:18 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	2,2-Dichloropropane	4.84	77	117240	9.48	PPB		99
33)	cis-1,2-Dichloroethene	4.85	96	102454	10.05	PPB		92
34)	2-Butanone	4.87	72	30624	49.90	PPB		99
35)	Propionitrile	4.98	54	23640	29.03	PPB		88
36)	Ethyl Acetate	4.92	61	20342	22.85	PPB		97
37)	Methacrylonitrile	5.17	67	75424	27.17	PPB		93
38)	Bromochloromethane	5.17	128	45425	10.48	PPB		94
40)	Chloroform	5.32	83	157713	9.82	PPB		93
42)	1,1,1-Trichloroethane	5.48	97	130434	9.78	PPB		97
44)	Carbon Tetrachloride	5.66	117	108027	9.58	PPB		94
45)	1,1-Dichloropropene	5.69	75	125305	10.36	PPB		96
47)	Isobutyl Alcohol	5.91	43	50634	248.50	PPB		93
49)	Benzene	5.93	78	391900	9.96	PPB		99
50)	1,2-Dichloroethane	6.04	62	119981	9.67	PPB		98
51)	tert-Amyl Methyl Ether	6.11	55	137872	15.62	PPB	#	87
52)	Trichloroethene	6.73	95	90877	9.91	PPB		94
53)	1,2-Dichloropropane	7.05	63	92044	9.63	PPB		95
54)	Dibromomethane	7.15	93	49201	9.72	PPB		94
55)	Methyl methacrylate	7.13	69	135307	29.48	PPB		92
56)	1,4-Dioxane	7.14	88	17506	264.99	PPB		99
57)	Bromodichloromethane	7.36	83	105511	9.53	PPB		99
58)	2-Nitropropane	7.63	41	33605	22.67	PPB		95
60)	2-Chloroethyl Vinyl Ether	7.69	63	46038	9.98	PPB		97
61)	cis-1,3-Dichloropropene	7.84	75	129729	9.66	PPB		98
62)	4-Methyl-2-pentanone (MIBK	8.01	58	101259	49.60	PPB		93
64)	Toluene	8.17	92	257486	9.77	PPB		99
67)	trans-1,3-Dichloropropene	8.47	75	95081	8.73	PPB		94
68)	Ethyl methacrylate	8.52	69	276669	31.34	PPB		99
69)	1,1,2-Trichloroethane	8.67	83	60199	9.68	PPB		95
70)	Tetrachloroethene	8.70	164	84298	10.64	PPB		99
71)	2-Hexanone	8.91	57	34043	50.14	PPB		98
72)	1,3-Dichloropropane	8.84	76	133877	9.88	PPB		97
73)	Dibromochloromethane	9.06	129	69833	10.09	PPB		99
74)	1,2-Dibromoethane (EDB)	9.17	107	66718	9.60	PPB		100
75)	1-Chlorohexane	9.66	91	121436	8.27	PPB		95
76)	Chlorobenzene	9.67	112	300427	10.49	PPB		97
77)	Ethylbenzene	9.77	106	159476	10.21	PPB		98
78)	1,1,1,2-Tetrachloroethane	9.78	131	88657	9.88	PPB		97
79)	m,p-Xylenes	9.91	106	401776	20.84	PPB		97
80)	o-Xylene	10.31	106	195724	10.35	PPB		94
81)	Styrene	10.33	103	154303m	10.87	PPB		

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:03:18 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
82)	Bromoform	10.53	173	33839	8.76	PPB		96
83)	Isopropylbenzene	10.68	105	490595	10.25	PPB		98
84)	cis-1,4-Dichloro-2-butene	10.78	89	28998	26.38	PPB		94
87)	1,1,2,2-Tetrachloroethane	11.04	83	72595	9.01	PPB		96
88)	trans-1,4-Dichloro-2-buten	11.08	53	68136	28.11	PPB		97
89)	Bromobenzene	11.00	156	126787	10.09	PPB		97
90)	n-Propylbenzene	11.11	91	586672	9.96	PPB		98
91)	1,2,3-Trichloropropane	11.09	110	25342	9.09	PPB	#	76
92)	2-Chlorotoluene	11.20	91	354461	9.80	PPB		99
93)	1,3,5-Trimethylbenzene	11.30	105	411959	10.17	PPB		97
94)	4-Chlorotoluene	11.33	91	373275m	8.98	PPB		
95)	tert-Butylbenzene	11.61	119	372835	10.15	PPB		99
96)	1,2,4-Trimethylbenzene	11.68	105	412258	10.02	PPB		98
97)	sec-Butylbenzene	11.84	105	504796	9.76	PPB		99
98)	p-Isopropyltoluene	12.00	119	440205	10.35	PPB		99
99)	1,3-Dichlorobenzene	11.96	146	240116	9.97	PPB		98
100)	1,4-Dichlorobenzene	12.07	146	250226	10.11	PPB		99
101)	n-Butylbenzene	12.36	91	363194	9.95	PPB		97
102)	1,2-Dichlorobenzene	12.37	146	222352	9.92	PPB		98
103)	1,2-Dibromo-3-chloropropan	12.95	155	8018	8.66	PPB		97
104)	1,3,5-Trichlorobenzene	13.06	180	161409	9.99	PPB		97
105)	1,2,4-Trichlorobenzene	13.55	180	119977	9.64	PPB		100
106)	Hexachlorobutadiene	13.66	225	52767	9.59	PPB		99
107)	Naphthalene	13.78	128	186254	9.39	PPB		99
108)	1,2,3-Trichlorobenzene	13.97	180	87333	9.76	PPB		96

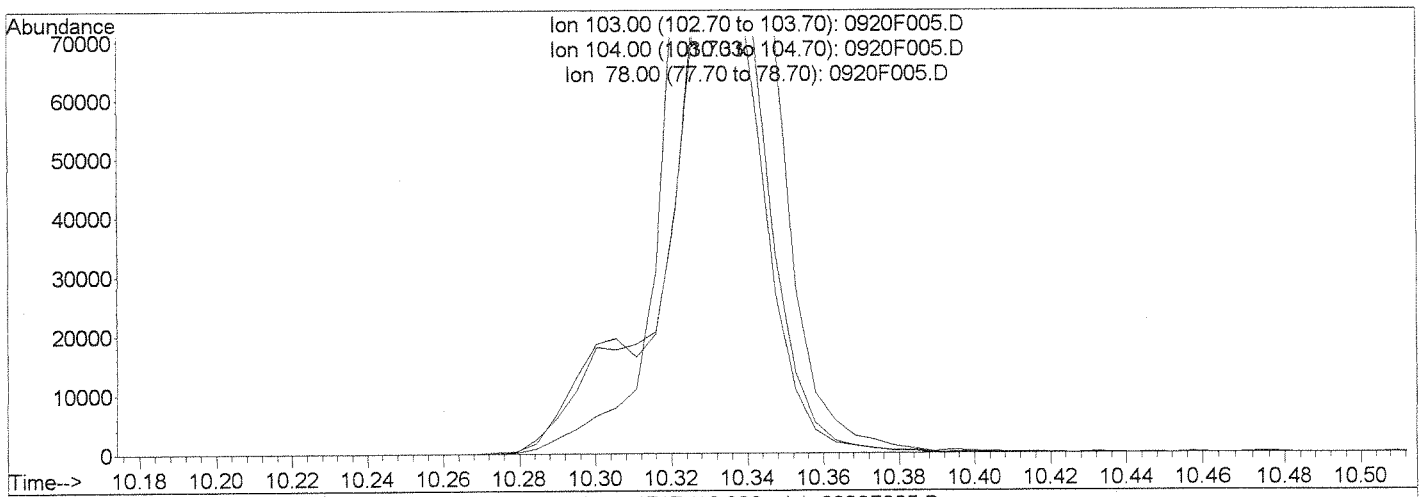
(#) = qualifier out of range (m) = manual integration

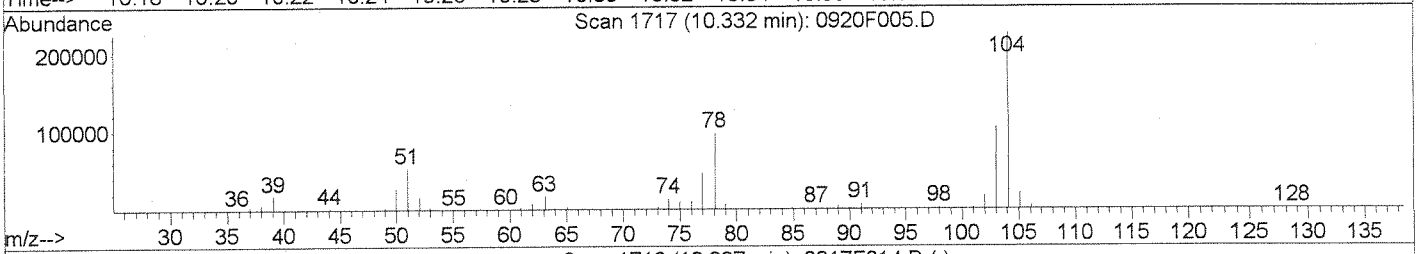
Quantitation Report (Quan)

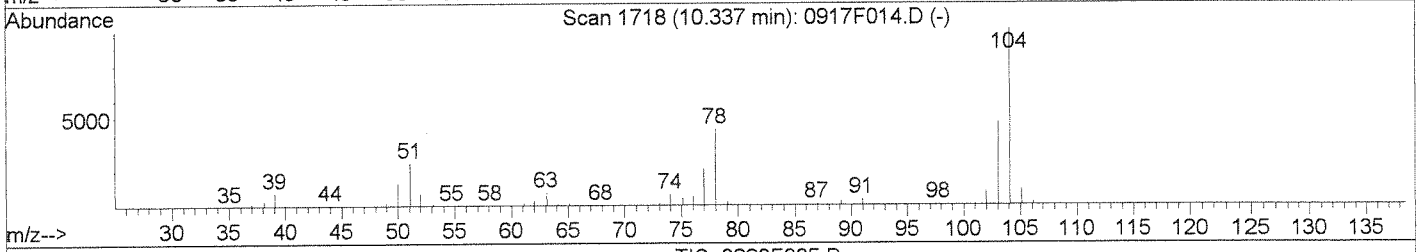
Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:05 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F005.D

(81) Styrene (T)

10.33min 12.08PPB

response 171513

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	216.70
78.00	91.60	93.39
0.00	0.00	0.00

Manual Integration:

Before

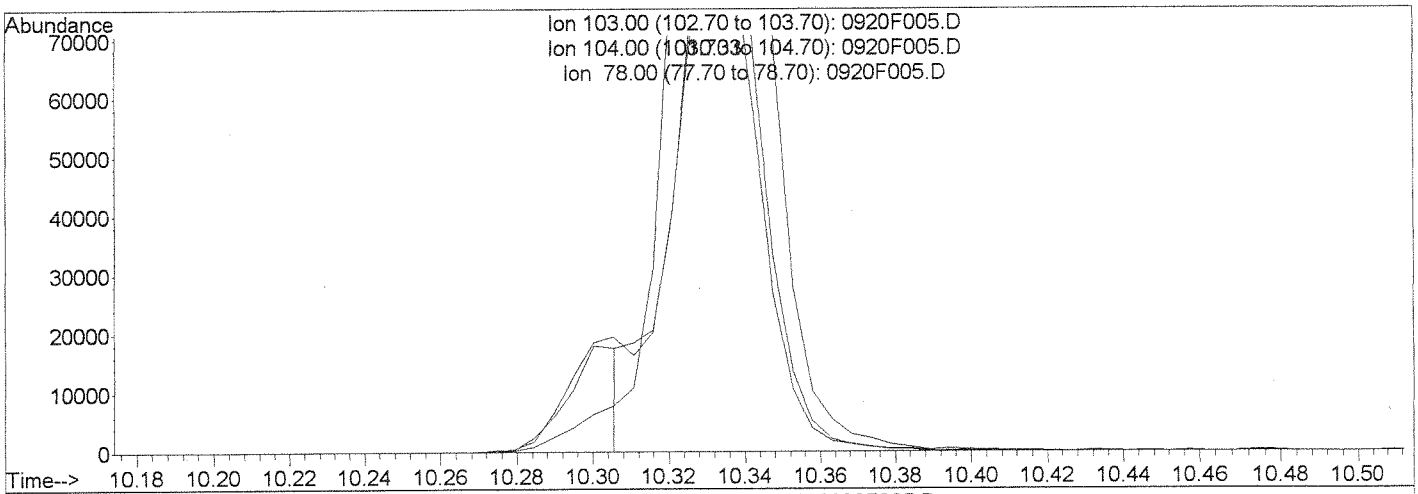
09/20/14

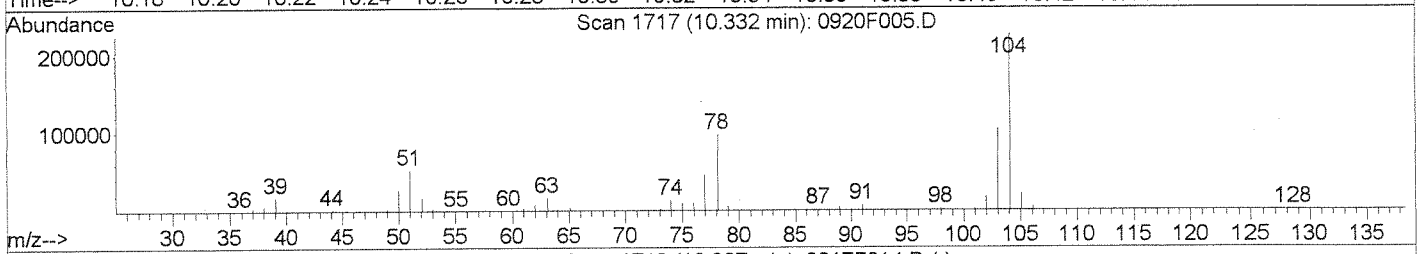
0920F005.D 091714MS18_8260.M Sat Sep 20 10:05:47 2014

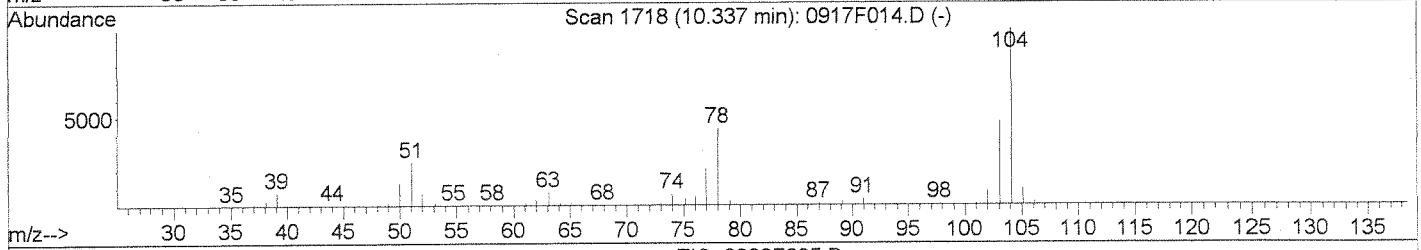
Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:05 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F005.D

(81) Styrene (T)

10.33min 10.87PPB m

response 154303

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	216.70
78.00	91.60	93.39
0.00	0.00	0.00

Manual Integration:

After

Shoulder

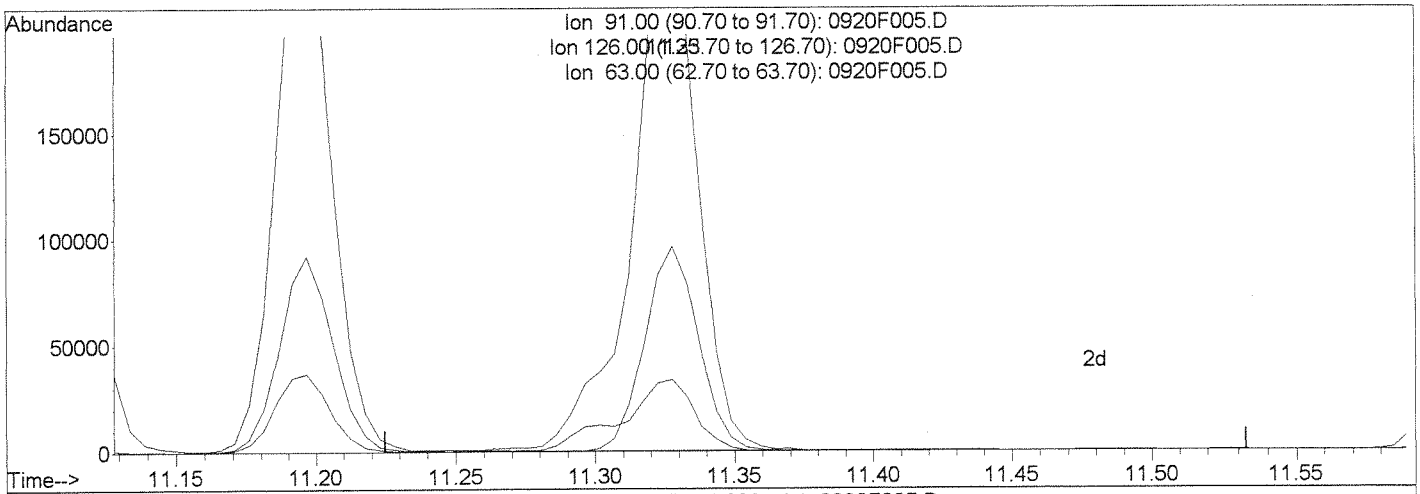
09/20/14

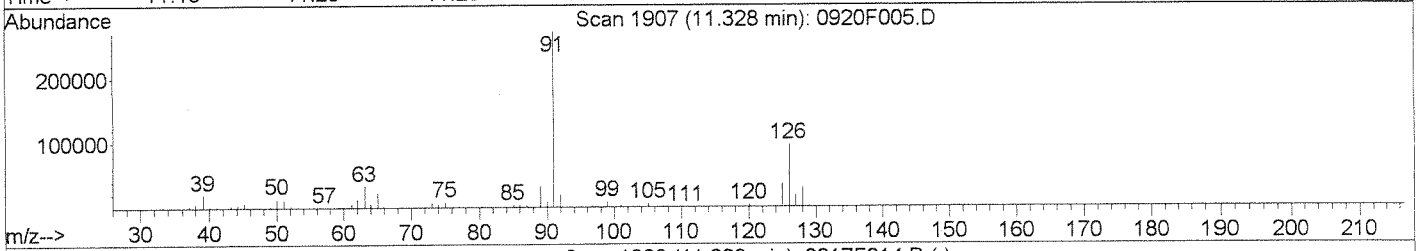
0920F005.D 091714MS18_8260.M Sat Sep 20 10:05:51 2014

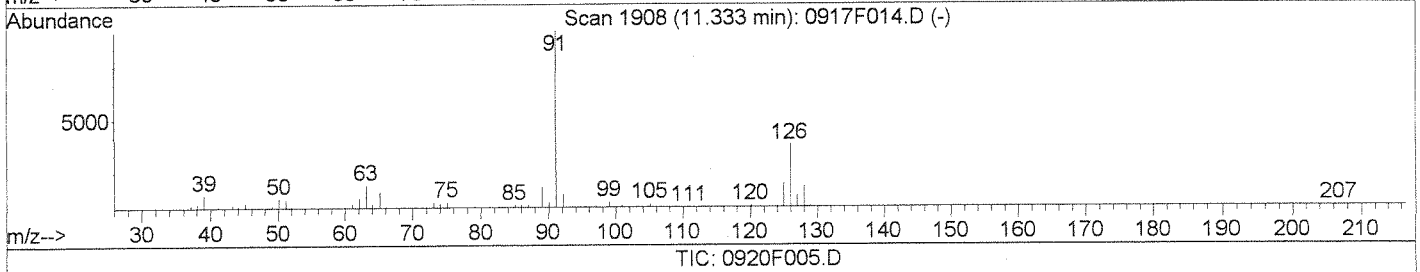
Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:05 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F005.D

(94) 4-Chlorotoluene (T)

11.33min 9.73PPB

response 404419

Ion	Exp%	Act%
91.00	100	100
126.00	35.30	35.43
63.00	12.80	12.34
0.00	0.00	0.00

Manual Integration:

Before

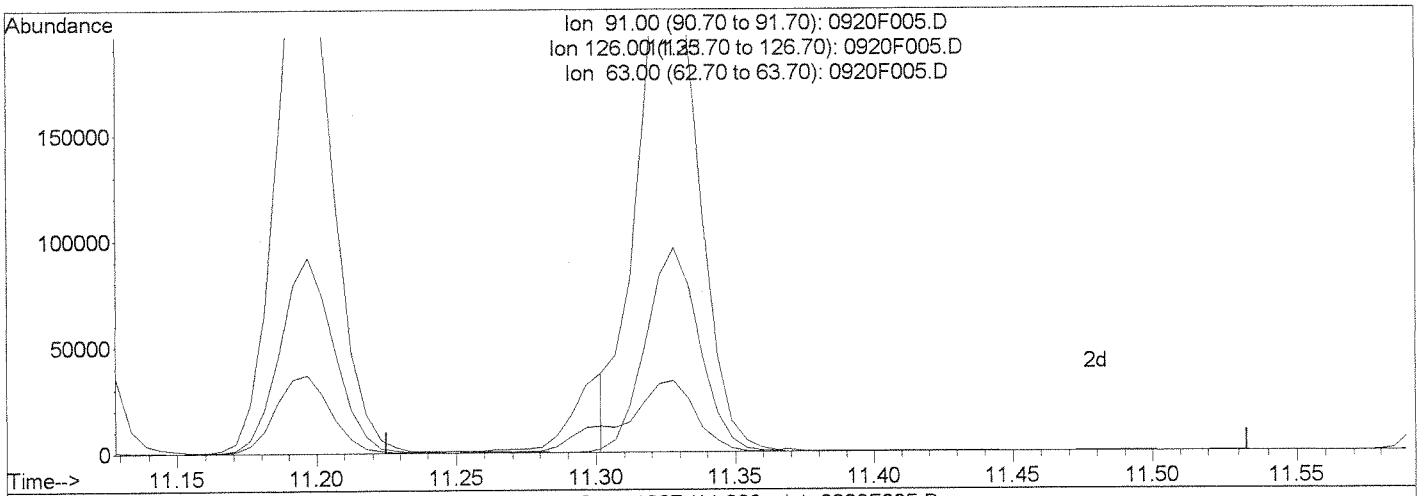
09/20/14

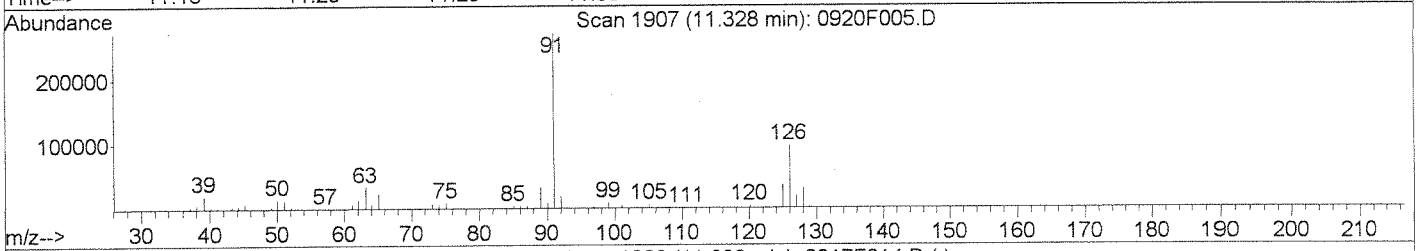
0920F005.D 091714MS18_8260.M Sat Sep 20 10:06:01 2014

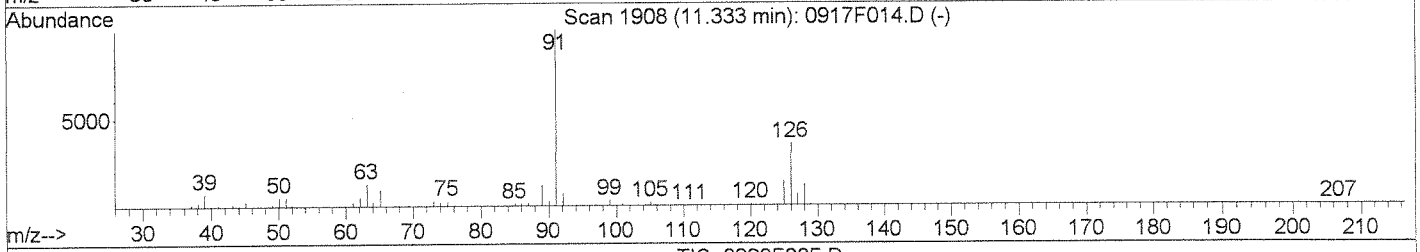
Data File : J:\MS18\DATA\092014\0920F005.D
Acq On : 20 Sep 2014 9:32 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 10:06 2014

Vial: 5
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F005.D

(94) 4-Chlorotoluene (T)

11.33min 8.98PPB m

response 373275

Ion	Exp%	Act%
91.00	100	100
126.00	35.30	35.41
63.00	12.80	12.33
0.00	0.00	0.00

Manual Integration:

After

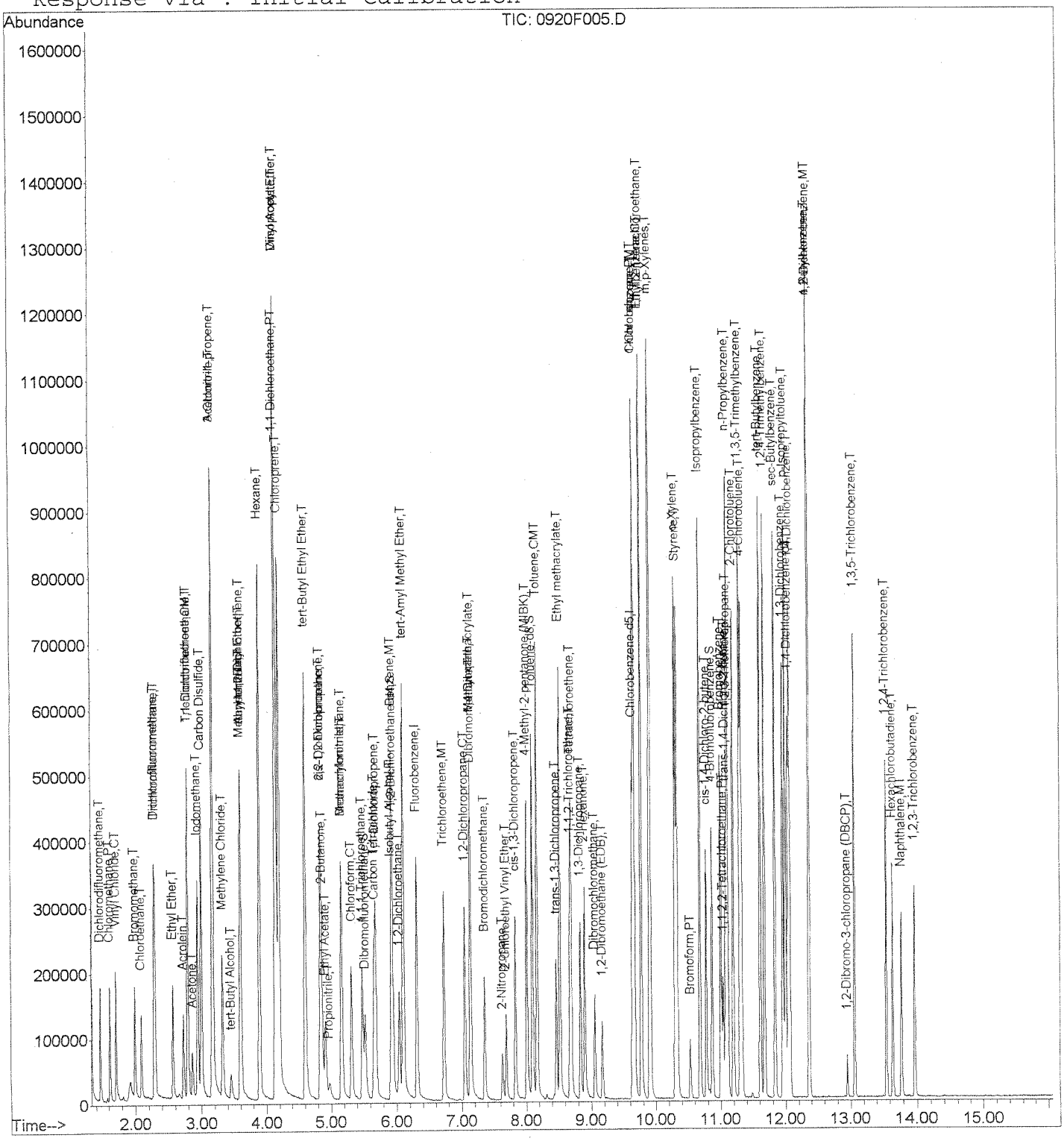
Shoulder

09/20/14

0920F005.D 091714MS18_8260.M Sat Sep 20 10:06:06 2014

Data File : J:\MS18\DATA\092014\0920F005.D Vial: 5
Acq On : 20 Sep 2014 9:32 am Operator: GH
Sample : 8260 LCS Inst : GC-MS 18
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 20 10:06 2014 Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS13\DATA\092014\0920F004.D
Lab ID: KWG1412904-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/20/2014 09:24
Date Quantitated: 09/20/2014 09:52
Batch ID: KWG1412900
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0050	0.01	NA	NT
	Acetonitrile	0.0095	0.01	NA	
	tert-Butyl Alcohol	0.0067	0.01	NA	
	tert-Butyl Formate	0.0091	0.01	NA	
	Isobutyl Alcohol	0.0035	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	
Second Source ICAL Verification	Iodomethane	55.8	NA	30	
Continuing Calibration Recovery	Bromomethane	-27.3	NA	20	CCV Okay
	Naphthalene	-26.1	NA	20	"
Continuing Calibration Minimum RF	2-Propanol	0.0044	0.01	NA	NT
	Acetonitrile	0.0093	0.01	NA	
	tert-Butyl Alcohol	0.0056	0.01	NA	
	tert-Butyl Formate	0.0095	0.01	NA	

Primary Review: 9/24/14

Secondary Review: 9/25/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutyl Alcohol	0.0033	0.01	NA	NT
	1,4-Dioxane	0.0010	0.01	NA	J
Std MRL Unsupported by ICAL	tert-Butyl Formate	5.0	0.50	NA	J

Primary Review: 9/24/14

Secondary Review: 9/25/14

Printed: 09/24/2014 14:14:30

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS13\DATA\092014\0920F004.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 09:24	**Quant Date:**	09/20/2014 09:52	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412904-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/20/2014

Analysis Lot:	KWG1412900	**Prep Lot:**	KWG1412904	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/20/2014		
Prep Ref:	1376669				

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:			
Tune Ref:	J:\MS13\DATA\092014\0920F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS13\DATA\092014\0920F008.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	510804	10.00	OK
2	Chlorobenzene-d5	12.02	-0.01	82	199111	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	168909	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.09	0.00	0.00	113	106299	9.76	98	73-122	OK	
1	1,2-Dichloroethane-d4	5.64	0.00	0.00	65	106660	9.99	100	59-127	OK	
1	Toluene-d8	9.30	0.00	0.00	98	498558	10.06	101	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	164492	10.16	102	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.17		0.00	85	150530	10.46	10.5		
1	Chloromethane	1.31		0.00	50	169651	8.45	8.45		
1	Vinyl Chloride	1.39		0.00	62	159633	9.99	9.99		
1	Bromomethane	1.64	-0.01	0.00	96	68136	7.60	7.60		
1	Chloroethane	1.73		0.00	64	97972	11.03	11.0		
1	Dichlorofluoromethane (CFC 21	1.90		0.00	67	264495	11.65	11.7		
1	Trichlorofluoromethane	1.90		0.00	101	185934	9.31	9.31		
1	Ethyl Ether	2.16		0.00	59	79113	9.55	9.55		
1	Acrolein	2.34		0.00	56	106676	93.58	93.6		
1	Trichlorotrifluoroethane	2.34		0.00	151	93883	10.83	10.8		
1	1,1-Dichloroethene	2.37		0.00	96	109664	11.11	11.1		
1	Acetone	2.48	0.01	0.00	43	98220	54.87	54.9		
1	Iodomethane	2.53		0.00	142	378246	48.79	48.8		
1	Carbon Disulfide	2.55	-0.01	0.00	76	788436	21.21	21.2		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F004.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 09:24	**Quant Date:**	09/20/2014 09:52	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412904-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Propanol				45	0d		17	U	
1	3-Chloro-1-propene	2.74		0.00	76	217537	32.43	32.4		
1	Acetonitrile	2.82		0.00	40	154340	316.78	317		
1	Methyl Acetate				43	0d		0.38	U	
1	Methylene Chloride	2.89		0.00	84	111613	8.21	8.21		
1	tert-Butyl Alcohol	3.00		0.00	59	27222	80.11	80.1		
1	Acrylonitrile	3.23		0.00	53	102278	38.06	38.1		
1	Methyl tert-Butyl Ether	3.10	-0.01	0.00	73	185429	8.49	8.49		
1	trans-1,2-Dichloroethene	3.13		0.00	96	125039	10.46	10.5		
1	n-Hexane	3.35		0.00	57	687314	42.32	42.3		
1	Diisopropyl Ether	3.65	-0.01	0.00	45	785705	20.95	21.0		
1	1,1-Dichloroethane	3.66		0.00	63	229528	10.37	10.4		
1	Vinyl Acetate	3.71	-0.01	0.00	86	62054	58.39	58.4		
1	Chloroprene	3.71	-0.01	0.00	53	690508	36.46	36.5		
1	tert-Butyl Ethyl Ether	4.10	-0.01	0.00	59	501331	19.87	19.9		
1	2,2-Dichloropropane	4.35		0.00	77	108053	9.35	9.35		
1	cis-1,2-Dichloroethene	4.40		0.00	96	133140	10.03	10.0		
1	2-Butanone (MEK)	4.46		0.00	72	37292	53.05	53.1		
1	Propionitrile	4.65		0.00	54	27737	29.06	29.1		
1	Ethyl Acetate	4.50		0.00	61	24377	26.54	26.5		
1	Methacrylonitrile	4.81		0.00	67	96952	30.94	30.9		
1	Bromochloromethane	4.74		0.00	128	53364	9.58	9.58		
1	Tetrahydrofuran				71	0d		0.94	U	
1	Chloroform	4.85		0.00	83	218057	9.95	9.95		
1	tert-Butyl Formate				59	0d		0.26	U	
1	1,1,1-Trichloroethane (TCA)	5.03		0.00	97	174852	10.21	10.2		
1	Cyclohexane				56	0d		0.36	U	
1	Carbon Tetrachloride	5.21		0.00	117	164284	10.80	10.8		
1	1,1-Dichloropropene	5.28	-0.01	0.00	75	176427	11.11	11.1		
1	Isobutyl Alcohol	5.66	0.01	0.00	43	52076	281.14	281		
1	Benzene	5.59		0.00	78	529700	9.95	9.95		
1	1,2-Dichloroethane (EDC)	5.77		0.00	62	141612	9.64	9.64		
1	tert-Amyl Methyl Ether	5.78		0.00	55	229431	22.87	22.9		
1	Trichloroethene (TCE)	6.73		0.00	95	128577	10.11	10.1		
1	Methylcyclohexane				83	0d		0.33	U	
1	1,2-Dichloropropane	7.24		0.00	63	121097	9.02	9.02		
1	Dibromomethane	7.46		0.00	93	55211	9.21	9.21		
1	Methyl Methacrylate	7.54		0.00	69	152999	29.75	29.8		
1	1,4-Dioxane	7.50	-0.01	0.00	88	18410	322.20	322		
1	Bromodichloromethane	7.81		0.00	83	152040	9.49	9.49		
1	2-Nitropropane	8.49		0.00	43	54385	29.59	29.6		
1	2-Chloroethyl Vinyl Ether	8.58	-0.01	0.00	63	38707	8.85	8.85		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F004.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 09:24	**Quant Date:**	09/20/2014 09:52	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412904-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	8.82		0.00	75	161136	9.14	9.14		
1	4-Methyl-2-pentanone (MIBK)	9.28		0.00	58	113043	45.74	45.7		
1	Toluene	9.46		0.00	92	333264	9.83	9.83		
2	n-Octane				85	0d		0.16	U	
2	trans-1,3-Dichloropropene	10.24	0.01	0.00	75	107323	7.97	7.97		
2	Ethyl Methacrylate	10.40		0.00	69	296050	31.45	31.5		
2	1,1,2-Trichloroethane	10.55		0.00	83	71451	9.09	9.09		
2	Tetrachloroethene (PCE)	10.53		0.00	164	107465	9.98	9.98		
2	2-Hexanone	11.05		0.00	57	35768	49.60	49.6		
2	1,3-Dichloropropane	10.85		0.00	76	152161	9.33	9.33		
2	Dibromochloromethane	11.15	-0.01	0.00	129	98314	9.42	9.42		
2	1,2-Dibromoethane (EDB)	11.31		0.00	107	76263	9.09	9.09		
2	1-Chlorohexane	12.10		0.00	91	147359	10.05	10.1		
2	Chlorobenzene	12.07		0.00	112	345779	9.39	9.39		
2	Ethylbenzene	12.23		0.00	106	196720	10.02	10.0		
2	1,1,1,2-Tetrachloroethane	12.24		0.00	131	109063	9.42	9.42		
2	m,p-Xylenes	12.42		0.00	106	492747	20.47	20.5		
2	o-Xylene	12.95	-0.01	0.00	106	228537	10.22	10.2		
2	Styrene	13.00		0.00	103	188401	10.23	10.2		
2	Bromoform	13.24		0.00	173	56319	9.72	9.72		
2	Isopropylbenzene	13.45		0.00	105	597490	10.36	10.4		
2	cis-1,4-Dichloro-2-butene	13.67	0.01	0.00	89	34791	31.31	31.3		
3	1,1,2,2-Tetrachloroethane	13.96	0.01	0.00	83	89192	9.14	9.14		
3	trans-1,4-Dichloro-2-butene	14.04		0.00	53	78016	31.42	31.4		
3	Bromobenzene	13.82		0.00	156	141865	9.48	9.48		
3	n-Propylbenzene	13.96		0.00	91	725675	10.26	10.3		
3	1,2,3-Trichloropropane	13.99		0.00	110	25708	8.95	8.95		
3	2-Chlorotoluene	14.06		0.00	91	451781	10.26	10.3		
3	1,3,5-Trimethylbenzene	14.20		0.00	105	509637	10.50	10.5		
3	4-Chlorotoluene	14.22		0.00	91	502849	9.92	9.92		
3	tert-Butylbenzene	14.56		0.00	119	420128	10.56	10.6		
3	1,2,4-Trimethylbenzene	14.64		0.00	105	503172	10.34	10.3		
3	sec-Butylbenzene	14.82		0.00	105	595396	10.29	10.3		
3	4-Isopropyltoluene	15.00		0.00	119	513866	10.69	10.7		
3	1,3-Dichlorobenzene	14.96		0.00	146	281159	9.63	9.63		
3	1,4-Dichlorobenzene	15.07		0.00	146	282498	9.31	9.31		
3	n-Butylbenzene	15.46		0.00	91	437791	10.20	10.2		
3	1,2-Dichlorobenzene	15.49		0.00	146	254339	9.52	9.52		
3	1,2-Dibromo-3-chloropropane	16.38		0.00	155	11591	8.81	8.81		
3	1,3,5-Trichlorobenzene	16.54		0.00	180	180298	9.83	9.83		
3	1,2,4-Trichlorobenzene	17.22		0.00	180	135216	9.08	9.08		
3	Hexachlorobutadiene	17.35		0.00	225	75813	9.74	9.74		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092014\0920F004.D			**Instrument:**	MS13
Acqu Date:	09/20/2014 09:24	**Quant Date:**	09/20/2014 09:52	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412904-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	17.47		0.00	128	191999	7.27	7.27		
3	1,2,3-Trichlorobenzene	17.73		0.00	180	114591	9.06	9.06		
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ800

Data File:	J:\MS13\DATA\092014\0920F004.D	**Instrument:**	MS13
Lab ID:	KWG1412904-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC FP	**Acqu Date:**	09/20/2014 09:24
Matrix:	WATER	**Quant Date:**	09/20/2014 09:52

Parameter Name	Lab Control Spike Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	10.5	10.0	105	32-124
Chloromethane	8.45	10.0	85	34-130
Vinyl Chloride	9.99	10.0	100	55-123
Bromomethane	7.60	10.0	76	35-113
Chloroethane	11.0	10.0	110	58-134
Trichlorofluoromethane	9.31	10.0	93	52-141
1,1-Dichloroethene	11.1	10.0	111	66-129
Acetone	54.9	50.0	110	68-135
Carbon Disulfide	21.2	20.0	106	46-144
Methylene Chloride	8.21	10.0	82	71-122
trans-1,2-Dichloroethene	10.5	10.0	105	67-125
1,1-Dichloroethane	10.4	10.0	104	68-132
2,2-Dichloropropane	9.35	10.0	94	37-145
cis-1,2-Dichloroethene	10.0	10.0	100	71-118
2-Butanone (MEK)	53.1	50.0	106	71-149
Bromochloromethane	9.58	10.0	96	75-131
Chloroform	9.95	10.0	100	70-129
1,1,1-Trichloroethane (TCA)	10.2	10.0	102	59-136
Carbon Tetrachloride	10.8	10.0	108	55-140
1,1-Dichloropropene	11.1	10.0	111	59-134
Benzene	9.95	10.0	100	69-124
1,2-Dichloroethane (EDC)	9.64	10.0	96	56-142
Trichloroethene (TCE)	10.1	10.0	101	67-128
1,2-Dichloropropane	9.02	10.0	90	67-126
Dibromomethane	9.21	10.0	92	69-128
Bromodichloromethane	9.49	10.0	95	63-129
cis-1,3-Dichloropropene	9.14	10.0	91	62-132
4-Methyl-2-pentanone (MIBK	45.7	50.0	91	64-134
Toluene	9.83	10.0	98	69-124
trans-1,3-Dichloropropene	7.97	10.0	80	59-125
1,1,2-Trichloroethane	9.09	10.0	91	74-118
Tetrachloroethene (PCE)	9.98	10.0	100	62-126
2-Hexanone	49.6	50.0	99	59-131
1,3-Dichloropropane	9.33	10.0	93	75-116
Dibromochloromethane	9.42	10.0	94	67-126
1,2-Dibromoethane (EDB)	9.09	10.0	91	74-118
Chlorobenzene	9.39	10.0	94	72-116
Ethylbenzene	10.0	10.0	100	67-121
1,1,1,2-Tetrachloroethane	9.42	10.0	94	66-124
m,p-Xylenes	20.5	20.0	102	69-121
o-Xylene	10.2	10.0	102	71-119
Styrene	10.2	10.0	102	74-121
Bromoform	9.72	10.0	97	52-144
Isopropylbenzene	10.4	10.0	104	67-129
1,1,2,2-Tetrachloroethane	9.14	10.0	91	70-127

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ800

Data File:	J:\MS13\DATA\092014\0920F004.D	**Instrument:**	MS13
Lab ID:	KWG1412904-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC FP	**Acqu Date:**	09/20/2014 09:24
Matrix:	WATER	**Quant Date:**	09/20/2014 09:52

Parameter Name	Lab Control Spike Result	Expected	%Rec	%Rec Limits
Bromobenzene	9.48	10.0	95	72-116
n-Propylbenzene	10.3	10.0	103	61-124
1,2,3-Trichloropropane	8.95	10.0	90	69-123
2-Chlorotoluene	10.3	10.0	103	55-131
1,3,5-Trimethylbenzene	10.5	10.0	105	62-126
4-Chlorotoluene	9.92	10.0	99	66-121
tert-Butylbenzene	10.6	10.0	106	61-127
1,2,4-Trimethylbenzene	10.3	10.0	103	63-122
sec-Butylbenzene	10.3	10.0	103	59-128
4-Isopropyltoluene	10.7	10.0	107	61-128
1,3-Dichlorobenzene	9.63	10.0	96	70-116
1,4-Dichlorobenzene	9.31	10.0	93	73-115
n-Butylbenzene	10.2	10.0	102	55-130
1,2-Dichlorobenzene	9.52	10.0	95	72-115
1,2-Dibromo-3-chloropropane	8.81	10.0	88	55-132
1,2,4-Trichlorobenzene	9.08	10.0	91	58-126
Hexachlorobutadiene	9.74	10.0	97	57-119
Naphthalene	7.27	10.0	73	64-126
1,2,3-Trichlorobenzene	9.06	10.0	91	68-120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Data File : J:\MS13\DATA\092014\0920F004.D Vial: 4
Acq On : 20 Sep 2014 9:24 am Operator: GH
Sample : 8260 LCS Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 20 09:51:46 2014 Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.11	96	510804	10.00	PPB		0.00
64) Chlorobenzene-d5	12.02	82	199111	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	168909	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.09	113	106299	9.76	PPB		0.00
Spiked Amount 10.000			Recovery = 97.60%				
47) 1,2-Dichloroethane-d4	5.64	65	106660	9.99	PPB		0.00
Spiked Amount 10.000			Recovery = 99.90%				
62) Toluene-d8	9.30	98	498558	10.06	PPB		0.00
Spiked Amount 10.000			Recovery = 100.60%				
84) 4-Bromofluorobenzene	13.68	95	164492	10.16	PPB		0.00
Spiked Amount 10.000			Recovery = 101.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	150530	10.46	PPB		99
3) Chloromethane	1.31	50	169651	8.45	PPB		100
4) Vinyl Chloride	1.39	62	159633	9.99	PPB		98
5) Bromomethane	1.64	96	68136	7.60	PPB		99
6) Chloroethane	1.73	64	97972	11.03	PPB		99
7) Dichlorofluoromethane	1.90	67	264495	11.65	PPB		98
8) Trichlorofluoromethane	1.90	101	185934	9.31	PPB		98
9) Ethyl Ether	2.16	59	79113	9.55	PPB		94
10) Acrolein	2.34	56	106676	93.58	PPB		100
11) Trichlorotrifluoroethane	2.34	151	93883	10.83	PPB		97
12) 1,1-Dichloroethene	2.37	96	109664	11.11	PPB		92
13) Acetone	2.48	43	98220	54.87	PPB		94
14) Iodomethane	2.53	142	378246	48.79	PPB		95
15) Carbon Disulfide	2.55	76	788436	21.21	PPB		99
17) 3-Chloro-1-propene	2.74	76	217537	32.43	PPB	#	77
18) Acetonitrile	2.82	40	154340	316.78	PPB		98
20) Methylene Chloride	2.89	84	111613	8.21	PPB		90
21) tert-Butyl Alcohol	3.00	59	27222	80.11	PPB		86
22) Acrylonitrile	3.23	53	102278	38.06	PPB		95
23) Methyl tert-Butyl Ether	3.10	73	185429	8.49	PPB		97
24) trans-1,2-Dichloroethene	3.13	96	125039	10.46	PPB		98
25) Hexane	3.35	57	687314	42.32	PPB		99
26) Diisopropyl Ether	3.65	45	785705	20.95	PPB		92
27) 1,1-Dichloroethane	3.66	63	229528	10.37	PPB		98
28) Vinyl Acetate	3.71	86	62054	58.39	PPB	#	31
29) Chloroprene	3.71	53	690508	36.46	PPB		90
30) tert-Butyl Ethyl Ether	4.10	59	501331	19.87	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092014\0920F004.D
Acq On : 20 Sep 2014 9:24 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 09:51:46 2014

Vial: 4
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	2,2-Dichloropropane	4.35	77	108053	9.35	PPB		98
32)	cis-1,2-Dichloroethene	4.40	96	133140	10.03	PPB		94
33)	2-Butanone	4.46	72	37292	53.05	PPB	#	75
34)	Propionitrile	4.65	54	27737	29.06	PPB		96
35)	Ethyl Acetate	4.50	61	24377	26.54	PPB		96
36)	Methacrylonitrile	4.81	67	96952	30.94	PPB		88
37)	Bromochloromethane	4.74	128	53364	9.58	PPB		90
39)	Chloroform	4.85	83	218057	9.95	PPB		97
41)	1,1,1-Trichloroethane	5.03	97	174852	10.21	PPB		89
44)	Carbon Tetrachloride	5.21	117	164284	10.80	PPB		95
45)	1,1-Dichloropropene	5.28	75	176427	11.11	PPB		96
46)	Isobutyl Alcohol	5.66	43	52076	281.14	PPB		96
48)	Benzene	5.59	78	529700	9.95	PPB		95
49)	1,2-Dichloroethane	5.77	62	141612	9.64	PPB		97
50)	tert-Amyl Methyl Ether	5.78	55	229431	22.87	PPB	#	13
51)	Trichloroethene	6.73	95	128577	10.11	PPB		91
53)	1,2-Dichloropropane	7.24	63	121097	9.02	PPB		94
54)	Dibromomethane	7.46	93	55211	9.21	PPB		94
55)	Methyl methacrylate	7.54	69	152999	29.75	PPB		96
56)	1,4-Dioxane	7.50	88	18410	322.20	PPB		96
57)	Bromodichloromethane	7.81	83	152040	9.49	PPB		98
58)	2-Nitropropane	8.49	43	54385	29.59	PPB		95
59)	2-Chloroethyl Vinyl Ether	8.58	63	38707	8.85	PPB		96
60)	cis-1,3-Dichloropropene	8.82	75	161136	9.14	PPB		94
61)	4-Methyl-2-pentanone (MIBK	9.28	58	113043	45.74	PPB	#	49
63)	Toluene	9.46	92	333264	9.83	PPB		97
66)	trans-1,3-Dichloropropene	10.24	75	107323	7.97	PPB		95
67)	Ethyl methacrylate	10.40	69	296050	31.45	PPB		89
68)	1,1,2-Trichloroethane	10.55	83	71451	9.09	PPB		97
69)	Tetrachloroethene	10.53	164	107465	9.98	PPB		99
70)	2-Hexanone	11.05	57	35768	49.60	PPB	#	73
71)	1,3-Dichloropropane	10.85	76	152161	9.33	PPB		97
72)	Dibromochloromethane	11.15	129	98314	9.42	PPB		95
73)	1,2-Dibromoethane (EDB)	11.31	107	76263	9.09	PPB		100
74)	1-Chlorohexane	12.10	91	147359	10.05	PPB		79
75)	Chlorobenzene	12.07	112	345779	9.39	PPB		96
76)	Ethylbenzene	12.23	106	196720	10.02	PPB		97
77)	1,1,1,2-Tetrachloroethane	12.24	131	109063	9.42	PPB		98
78)	m,p-Xylenes	12.42	106	492747	20.47	PPB		98
79)	o-Xylene	12.95	106	228537	10.22	PPB		98
80)	Styrene	13.00	103	188401	10.23	PPB		96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092014\0920F004.D
Acq On : 20 Sep 2014 9:24 am
Sample : 8260 LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 20 09:51:46 2014

Vial: 4
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

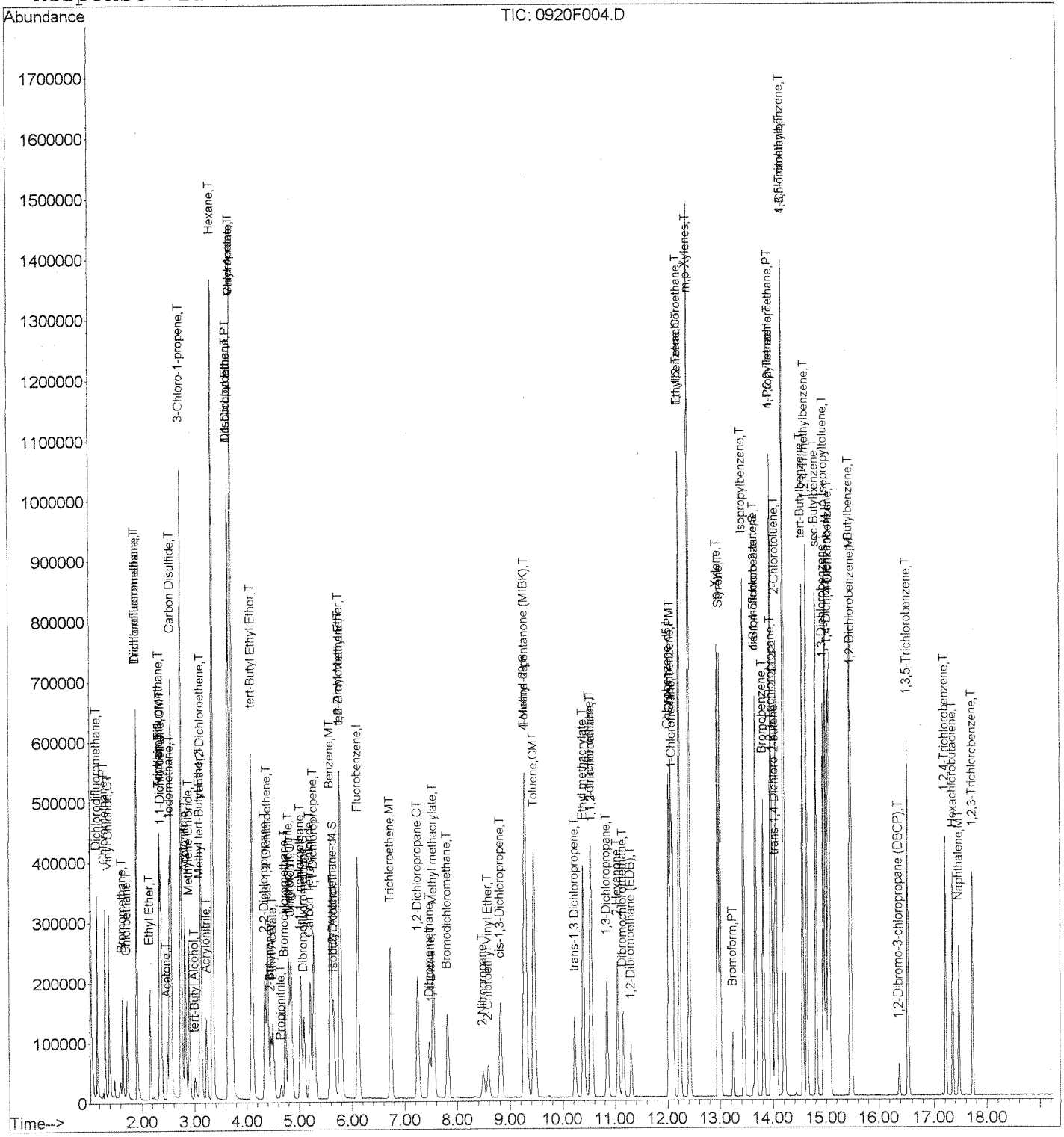
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
81)	Bromoform	13.24	173	56319	9.72	PPB		95
82)	Isopropylbenzene	13.45	105	597490	10.36	PPB		96
83)	cis-1,4-Dichloro-2-butene	13.67	89	34791	31.31	PPB	#	83
86)	1,1,2,2-Tetrachloroethane	13.96	83	89192	9.14	PPB		99
87)	trans-1,4-Dichloro-2-buten	14.04	53	78016	31.42	PPB		94
88)	Bromobenzene	13.82	156	141865	9.48	PPB		94
89)	n-Propylbenzene	13.96	91	725675	10.26	PPB		98
90)	1,2,3-Trichloropropane	13.99	110	25708	8.95	PPB		90
91)	2-Chlorotoluene	14.06	91	451781	10.26	PPB		95
92)	1,3,5-Trimethylbenzene	14.20	105	509637	10.50	PPB		97
93)	4-Chlorotoluene	14.22	91	502849	9.92	PPB		92
94)	tert-Butylbenzene	14.56	119	420128	10.56	PPB		97
95)	1,2,4-Trimethylbenzene	14.64	105	503172	10.34	PPB		99
96)	sec-Butylbenzene	14.82	105	595396	10.29	PPB		98
97)	p-Isopropyltoluene	15.00	119	513866	10.69	PPB		98
98)	1,3-Dichlorobenzene	14.96	146	281159	9.63	PPB		99
99)	1,4-Dichlorobenzene	15.07	146	282498	9.31	PPB		99
100)	n-Butylbenzene	15.46	91	437791	10.20	PPB		98
101)	1,2-Dichlorobenzene	15.49	146	254339	9.52	PPB		98
102)	1,2-Dibromo-3-chloropropan	16.38	155	11591	8.81	PPB		88
103)	1,3,5-Trichlorobenzene	16.54	180	180298	9.83	PPB		98
104)	1,2,4-Trichlorobenzene	17.22	180	135216	9.08	PPB		97
105)	Hexachlorobutadiene	17.35	225	75813	9.74	PPB		98
106)	Naphthalene	17.47	128	191999	7.27	PPB		98
107)	1,2,3-Trichlorobenzene	17.73	180	114591	9.06	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092014\0920F004.D Vial: 4
Acq On : 20 Sep 2014 9:24 am Operator: GH
Sample : 8260 LCS Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 20 9:52 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS13\DATA\092214\0922F005.D
Lab ID: KWG1412938-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/22/2014 10:23
Date Quantitated: 09/22/2014 10:52
Batch ID: KWG1412934
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0050	0.01	NA	NF
	Acetonitrile	0.0095	0.01	NA	
	tert-Butyl Alcohol	0.0067	0.01	NA	
	tert-Butyl Formate	0.0091	0.01	NA	
	Isobutyl Alcohol	0.0035	0.01	NA	✓ LCS only
	1,4-Dioxane	0.0011	0.01	NA	NF
Second Source ICAL Verification	Iodomethane	55.8	NA	30	I
Continuing Calibration Recovery	Dichlorodifluoromethane	24.6	NA	20	OU
	Bromomethane	-28.2	NA	20	
	Trichlorofluoromethane	22.0	NA	20	
	n-Hexane	22.7	NA	20	
	Chloroprene	28.9	NA	20	
	Carbon Tetrachloride	22.7	NA	20	

Primary Review: JRH 9/25/14
Secondary Review: 9/25/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Naphthalene	-22.5	NA	20	OK
Continuing Calibration Minimum RF	2-Propanol	0.0043	0.01	NA	NT
	Acetonitrile	0.0100	0.01	NA	"
	tert-Butyl Alcohol	0.0053	0.01	NA	"
	Isobutyl Alcohol	0.0033	0.01	NA	LCS miss
	1,4-Dioxane	0.0011	0.01	NA	NT
Std MRL Unsupported by ICAL	tert-Butyl Formate	5.0	0.50	NA	"

Primary Review: _____

Secondary Review: _____ 9/12/2014

Quantitation Report

Data File:	J:\MS13\DATA\092214\0922F005.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 10:23	**Quant Date:**	09/22/2014 10:52	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412938-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**		**Receive Date:**	09/25/2014

Analysis Lot:	KWG1412934	**Prep Lot:**	KWG1412938	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/22/2014		
Prep Ref:	1376912				

Quant Method:	J:\MS13\METHODS\091014MS13_8	**Calibration ID:**	CAL13540
Title:			
Tune Ref:	J:\MS13\DATA\092214\0922F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS13\DATA\092214\0922F009.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.11	0.00	96	489557	10.00	OK
2	Chlorobenzene-d5	12.02	0.00	82	192505	10.00	OK
3	1,4-Dichlorobenzene-d4	15.05	0.00	152	166640	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.10	0.00	0.00	113	102638	9.84	98	73-122	OK	
1	1,2-Dichloroethane-d4	5.64	-0.01	0.00	65	100507	9.83	98	59-127	OK	
1	Toluene-d8	9.29	-0.01	0.00	98	480307	10.11	101	65-144	OK	
2	4-Bromofluorobenzene	13.68	0.00	0.00	95	159219	10.17	102	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.17		0.00	85	128776	9.34	9.34		
1	Chloromethane	1.31		0.00	50	150597	7.82	7.82		
1	Vinyl Chloride	1.39		0.00	62	145327	9.49	9.49		
1	Bromomethane	1.64	-0.01	0.00	96	59407	6.92	6.92		
1	Chloroethane	1.73		0.00	64	89295	10.49	10.5		
1	Dichlorofluoromethane (CFC 21	1.90		0.00	67	237007	10.90	10.9		
1	Trichlorofluoromethane	1.90		0.00	101	169166	8.84	8.84		
1	Ethyl Ether	2.16		0.00	59	73340	9.24	9.24		
1	Acrolein	2.34		0.00	56	104996	96.10	96.1		
1	Trichlorotrifluoroethane	2.34		0.00	151	85594	10.30	10.3		
1	1,1-Dichloroethene	2.37		0.00	96	102384	10.82	10.8		
1	Acetone	2.48	0.01	0.00	43	90131	52.53	52.5		
1	Iodomethane	2.53		0.00	142	305511	41.12	41.1		
1	Carbon Disulfide	2.55	-0.01	0.00	76	720882	20.24	20.2		

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m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS13\DATA\092214\0922F005.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 10:23	**Quant Date:**	09/22/2014 10:52	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412938-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2-Propanol				45	0d		17	U	
1	3-Chloro-1-propene	2.74		0.00	76	199117	30.97	31.0		
1	Acetonitrile	2.82		0.00	40	141405	302.82	303		
1	Methyl Acetate				43	0d		0.38	U	
1	Methylene Chloride	2.89		0.00	84	104782	8.04	8.04		
1	tert-Butyl Alcohol	3.00		0.00	59	26077	80.07	80.1		
1	Acrylonitrile	3.23		0.00	53	96153	37.33	37.3		
1	Methyl tert-Butyl Ether	3.11		0.00	73	170855	8.16	8.16		
1	trans-1,2-Dichloroethene	3.13		0.00	96	114265	9.98	9.98		
1	n-Hexane	3.35		0.00	57	614197	39.46	39.5		
1	Diisopropyl Ether	3.65		0.00	45	721238	20.06	20.1		
1	1,1-Dichloroethane	3.66		0.00	63	213139	10.05	10.1		
1	Vinyl Acetate	3.71		0.00	86	63066	61.92	61.9		
1	Chloroprene	3.71		0.00	53	633497	34.90	34.9		
1	tert-Butyl Ethyl Ether	4.11	0.01	0.00	59	458145	18.95	19.0		
1	2,2-Dichloropropane	4.35		0.00	77	102897	9.29	9.29		
1	cis-1,2-Dichloroethene	4.40		0.00	96	124063	9.75	9.75		
1	2-Butanone (MEK)	4.46		0.00	72	32138	47.70	47.7		
1	Propionitrile	4.65		0.00	54	26314	28.77	28.8		
1	Ethyl Acetate	4.50		0.00	61	22375	25.42	25.4		
1	Methacrylonitrile	4.81		0.00	67	88650	29.52	29.5		
1	Bromochloromethane	4.73	-0.01	0.00	128	49587	9.29	9.29		
1	Tetrahydrofuran				71	0d		0.94	U	
1	Chloroform	4.85		0.00	83	203053	9.66	9.66		
1	tert-Butyl Formate				59	0d		0.26	U	
1	1,1,1-Trichloroethane (TCA)	5.03		0.00	97	160747	9.79	9.79		
1	Cyclohexane				56	0		0.36	U	
1	Carbon Tetrachloride	5.21		0.00	117	152513	10.46	10.5		
1	1,1-Dichloropropene	5.29	0.01	0.00	75	161399	10.61	10.6		
1	Isobutyl Alcohol	5.65		0.00	43	48200	271.77	272		
1	Benzene	5.59		0.00	78	489289	9.59	9.59		
1	1,2-Dichloroethane (EDC)	5.77		0.00	62	132054	9.38	9.38		
1	tert-Amyl Methyl Ether	5.78		0.00	55	212788	22.13	22.1		
1	Trichloroethene (TCE)	6.73		0.00	95	117597	9.65	9.65		
1	Methylcyclohexane				83	0		0.33	U	
1	1,2-Dichloropropane	7.24		0.00	63	114279	8.88	8.88		
1	Dibromomethane	7.46		0.00	93	52757	9.19	9.19		
1	Methyl Methacrylate	7.54		0.00	69	141048	28.62	28.6		
1	1,4-Dioxane	7.50	-0.01	0.00	88	16588	302.91	303		
1	Bromodichloromethane	7.81		0.00	83	144659	9.43	9.43		
1	2-Nitropropane	8.49		0.00	43	50610	28.73	28.7		
1	2-Chloroethyl Vinyl Ether	8.58		0.00	63	33845	8.07	8.07		

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Data File:	J:\MS13\DATA\092214\0922F005.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 10:23	**Quant Date:**	09/22/2014 10:52	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412938-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	8.82		0.00	75	152678	9.03	9.03		
1	4-Methyl-2-pentanone (MIBK)	9.27		0.00	58	105614	44.59	44.6		
1	Toluene	9.46		0.00	92	310626	9.56	9.56		
2	n-Octane				85	0d		0.16	U	
2	trans-1,3-Dichloropropene	10.23		0.00	75	101675	7.81	7.81		
2	Ethyl Methacrylate	10.40	0.01	0.00	69	275820	30.31	30.3		
2	1,1,2-Trichloroethane	10.55		0.00	83	68089	8.96	8.96		
2	Tetrachloroethene (PCE)	10.53		0.00	164	97650	9.38	9.38		
2	2-Hexanone	11.05		0.00	57	30145	43.23	43.2		
2	1,3-Dichloropropane	10.85		0.00	76	141459	8.97	8.97		
2	Dibromochloromethane	11.15	-0.01	0.00	129	93867	9.30	9.30		
2	1,2-Dibromoethane (EDB)	11.31		0.00	107	72793	8.98	8.98		
2	1-Chlorohexane	12.10		0.00	91	136920	9.66	9.66		
2	Chlorobenzene	12.07		0.00	112	329791	9.27	9.27		
2	Ethylbenzene	12.23		0.00	106	182094	9.59	9.59		
2	1,1,1,2-Tetrachloroethane	12.24		0.00	131	105050	9.38	9.38		
2	m,p-Xylenes	12.42		0.00	106	471035	20.24	20.2		
2	o-Xylene	12.96		0.00	106	216434	10.01	10.0		
2	Styrene	13.00		0.00	103	176952	9.94	9.94		
2	Bromoform	13.24		0.00	173	52158	9.32	9.32		
2	Isopropylbenzene	13.45		0.00	105	558847	10.02	10.0		
2	cis-1,4-Dichloro-2-butene	13.67		0.00	89	30035	27.96	28.0		
3	1,1,2,2-Tetrachloroethane	13.95		0.00	83	84589	8.79	8.79		
3	trans-1,4-Dichloro-2-butene	14.04		0.00	53	72429	29.57	29.6		
3	Bromobenzene	13.82		0.00	156	132120	8.95	8.95		
3	n-Propylbenzene	13.96		0.00	91	676536	9.70	9.70		
3	1,2,3-Trichloropropane	13.99		0.00	110	24197	8.54	8.54		
3	2-Chlorotoluene	14.06		0.00	91	422165	9.72	9.72		
3	1,3,5-Trimethylbenzene	14.20		0.00	105	480033	10.03	10.0		
3	4-Chlorotoluene	14.22		0.00	91	472091	9.44	9.44		
3	tert-Butylbenzene	14.56		0.00	119	389735	9.93	9.93		
3	1,2,4-Trimethylbenzene	14.64		0.00	105	471925	9.83	9.83		
3	sec-Butylbenzene	14.82		0.00	105	554319	9.71	9.71		
3	4-Isopropyltoluene	15.00		0.00	119	481900	10.16	10.2		
3	1,3-Dichlorobenzene	14.96		0.00	146	269877	9.37	9.37		
3	1,4-Dichlorobenzene	15.07		0.00	146	269210	8.99	8.99		
3	n-Butylbenzene	15.46		0.00	91	410919	9.70	9.70		
3	1,2-Dichlorobenzene	15.49		0.00	146	240348	9.12	9.12		
3	1,2-Dibromo-3-chloropropane	16.38		0.00	155	10666	8.21	8.21		
3	1,3,5-Trichlorobenzene	16.54		0.00	180	173045	9.56	9.56		
3	1,2,4-Trichlorobenzene	17.22		0.00	180	126510	8.62	8.62		
3	Hexachlorobutadiene	17.35		0.00	225	71121	9.26	9.26		

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Data File:	J:\MS13\DATA\092214\0922F005.D			**Instrument:**	MS13
Acqu Date:	09/22/2014 10:23	**Quant Date:**	09/22/2014 10:52	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412938-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	17.47		0.00	128	176902	6.79	6.79		
3	1,2,3-Trichlorobenzene	17.73		0.00	180	109984	8.81	8.81		
	Benzyl Chloride				0	0		1.0	U	NR
	Isopropyl Acetate				0	0		20	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Amyl Acetate				0	0		20	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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c: check for co-elution

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ15742

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

Parameter Name	Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Dichlorodifluoromethane	9.34	10.0	93	32-124
Chloromethane	7.82	10.0	78	34-130
Vinyl Chloride	9.49	10.0	95	55-123
Bromomethane	6.92	10.0	69	35-113
Chloroethane	10.5	10.0	105	58-134
Trichlorofluoromethane	8.84	10.0	88	52-141
Trichlorotrifluoroethane	10.3	10.0	103	56-141
1,1-Dichloroethene	10.8	10.0	108	66-129
Methylene Chloride	8.04	10.0	80	71-122
Methyl tert-Butyl Ether	8.16	10.0	82	54-126
trans-1,2-Dichloroethene	9.98	10.0	100	67-125
1,1-Dichloroethane	10.1	10.0	101	68-132
cis-1,2-Dichloroethene	9.75	10.0	98	71-118
Chloroform	9.66	10.0	97	70-129
1,1,1-Trichloroethane (TCA)	9.79	10.0	98	59-136
Carbon Tetrachloride	10.5	10.0	105	55-140
Benzene	9.59	10.0	96	69-124
1,2-Dichloroethane (EDC)	9.38	10.0	94	56-142
Trichloroethene (TCE)	9.65	10.0	97	67-128
1,2-Dichloropropane	8.88	10.0	89	67-126
Dibromomethane	9.19	10.0	92	69-128
Bromodichloromethane	9.43	10.0	94	63-129
cis-1,3-Dichloropropene	9.03	10.0	90	62-132
Toluene	9.56	10.0	96	69-124
trans-1,3-Dichloropropene	7.81	10.0	78	59-125
1,1,2-Trichloroethane	8.96	10.0	90	74-118
Tetrachloroethene (PCE)	9.38	10.0	94	62-126
Dibromochloromethane	9.30	10.0	93	67-126
Chlorobenzene	9.27	10.0	93	72-116
Ethylbenzene	9.59	10.0	96	67-121
1,1,1,2-Tetrachloroethane	9.38	10.0	94	66-124
m,p-Xylenes	20.2	20.0	101	69-121
o-Xylene	10.0	10.0	100	71-119
Bromoform	9.32	10.0	93	52-144
1,1,2,2-Tetrachloroethane	8.79	10.0	88	70-127
Bromobenzene	8.95	10.0	90	72-116
1,2,3-Trichloropropane	8.54	10.0	85	69-123
1,3-Dichlorobenzene	9.37	10.0	94	70-116
1,4-Dichlorobenzene	8.99	10.0	90	73-115
1,2-Dichlorobenzene	9.12	10.0	91	72-115

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ16480

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

Parameter Name	Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	7.82	10.0	78	34-130
Vinyl Chloride	9.49	10.0	95	55-123
1,1-Dichloroethene	10.8	10.0	108	66-129
Acetone	52.5	50.0	105	68-135
Carbon Disulfide	20.2	20.0	101	46-144
Methylene Chloride	8.04	10.0	80	71-122
trans-1,2-Dichloroethene	9.98	10.0	100	67-125
cis-1,2-Dichloroethene	9.75	10.0	98	71-118
2-Butanone (MEK)	47.7	50.0	95	71-149
Carbon Tetrachloride	10.5	10.0	105	55-140
Benzene	9.59	10.0	96	69-124
Trichloroethene (TCE)	9.65	10.0	97	67-128
4-Methyl-2-pentanone (MIBK	44.6	50.0	89	64-134
Toluene	9.56	10.0	96	69-124
Tetrachloroethene (PCE)	9.38	10.0	94	62-126
2-Hexanone	43.2	50.0	86	59-131
Dibromochloromethane	9.30	10.0	93	67-126
Ethylbenzene	9.59	10.0	96	67-121
m,p-Xylenes	20.2	20.0	101	69-121
o-Xylene	10.0	10.0	100	71-119
Styrene	9.94	10.0	99	74-121
Bromoform	9.32	10.0	93	52-144
1,2,4-Trichlorobenzene	8.62	10.0	86	58-126

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ1750

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

	Lab Control Spike			%Rec
Parameter Name	**Result**	**Expected**	**%Rec**	**Limits**
Acetone	52.5	50.0	105	68-135

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ2278

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

Parameter Name	Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	7.82	10.0	78	34-130
Vinyl Chloride	9.49	10.0	95	55-123
Bromomethane	6.92	10.0	69	35-113
Chloroethane	10.5	10.0	105	58-134
Trichlorofluoromethane	8.84	10.0	88	52-141
Acrolein	96.1	100	96	42-118
1,1-Dichloroethene	10.8	10.0	108	66-129
Acetone	52.5	50.0	105	68-135
Carbon Disulfide	20.2	20.0	101	46-144
Methylene Chloride	8.04	10.0	80	71-122
Acrylonitrile	37.3	40.0	93	65-129
trans-1,2-Dichloroethene	9.98	10.0	100	67-125
1,1-Dichloroethane	10.1	10.0	101	68-132
Vinyl Acetate	61.9	50.0	124	44-156
cis-1,2-Dichloroethene	9.75	10.0	98	71-118
2-Butanone (MEK)	47.7	50.0	95	71-149
Chloroform	9.66	10.0	97	70-129
1,1,1-Trichloroethane (TCA)	9.79	10.0	98	59-136
Carbon Tetrachloride	10.5	10.0	105	55-140
Isobutyl Alcohol	272	300	91	36-142
Benzene	9.59	10.0	96	69-124
1,2-Dichloroethane (EDC)	9.38	10.0	94	56-142
Trichloroethene (TCE)	9.65	10.0	97	67-128
1,2-Dichloropropane	8.88	10.0	89	67-126
Bromodichloromethane	9.43	10.0	94	63-129
2-Chloroethyl Vinyl Ether	8.07	10.0	81	61-126
cis-1,3-Dichloropropene	9.03	10.0	90	62-132
4-Methyl-2-pentanone (MIBK	44.6	50.0	89	64-134
Toluene	9.56	10.0	96	69-124
trans-1,3-Dichloropropene	7.81	10.0	78	59-125
1,1,2-Trichloroethane	8.96	10.0	90	74-118
Tetrachloroethene (PCE)	9.38	10.0	94	62-126
2-Hexanone	43.2	50.0	86	59-131
Dibromochloromethane	9.30	10.0	93	67-126
Chlorobenzene	9.27	10.0	93	72-116
Ethylbenzene	9.59	10.0	96	67-121
1,1,1,2-Tetrachloroethane	9.38	10.0	94	66-124
m,p-Xylenes	20.2	20.0	101	69-121
o-Xylene	10.0	10.0	100	71-119
Styrene	9.94	10.0	99	74-121
Bromoform	9.32	10.0	93	52-144
1,1,2,2-Tetrachloroethane	8.79	10.0	88	70-127
1,3-Dichlorobenzene	9.37	10.0	94	70-116
1,4-Dichlorobenzene	8.99	10.0	90	73-115
1,2-Dichlorobenzene	9.12	10.0	91	72-115

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ2278

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

	Lab Control Spike			%Rec
Parameter Name	**Result**	**Expected**	**%Rec**	**Limits**
1,3,5-Trichlorobenzene	9.56	10.0	96	63-118
1,2,4-Trichlorobenzene	8.62	10.0	86	58-126
1,2,3-Trichlorobenzene	8.81	10.0	88	68-120

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information *ListJoinID :* LJ971

Data File:	J:\MS13\DATA\092214\0922F005.D	**Instrument:**	MS13
Lab ID:	KWG1412938-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/L
Prod Code:	8260C VOC Unp	**Acqu Date:**	09/22/2014 10:23
Matrix:	WATER	**Quant Date:**	09/22/2014 10:52

Parameter Name	Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Vinyl Chloride	9.49	10.0	95	55-123
1,1-Dichloroethene	10.8	10.0	108	66-129
Methylene Chloride	8.04	10.0	80	71-122
trans-1,2-Dichloroethene	9.98	10.0	100	67-125
1,1-Dichloroethane	10.1	10.0	101	68-132
cis-1,2-Dichloroethene	9.75	10.0	98	71-118
Chloroform	9.66	10.0	97	70-129
1,1,1-Trichloroethane (TCA)	9.79	10.0	98	59-136
Benzene	9.59	10.0	96	69-124
Trichloroethene (TCE)	9.65	10.0	97	67-128
Toluene	9.56	10.0	96	69-124
Tetrachloroethene (PCE)	9.38	10.0	94	62-126
Chlorobenzene	9.27	10.0	93	72-116
Ethylbenzene	9.59	10.0	96	67-121
m,p-Xylenes	20.2	20.0	101	69-121
o-Xylene	10.0	10.0	100	71-119
Styrene	9.94	10.0	99	74-121
1,2-Dichlorobenzene	9.12	10.0	91	72-115

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Data File : J:\MS13\DATA\092214\0922F005.D Vial: 5
Acq On : 22 Sep 2014 10:23 Operator: GH
Sample : 8260 LCS WITH ACRO Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014 Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.11	96	489557	10.00	PPB		0.00
64) Chlorobenzene-d5	12.02	82	192505	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	166640	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.10	113	102638	9.84	PPB		0.00
Spiked Amount 10.000			Recovery = 98.40%				
47) 1,2-Dichloroethane-d4	5.64	65	100507	9.83	PPB		0.00
Spiked Amount 10.000			Recovery = 98.30%				
62) Toluene-d8	9.29	98	480307	10.11	PPB		-0.01
Spiked Amount 10.000			Recovery = 101.10%				
84) 4-Bromofluorobenzene	13.68	95	159219	10.17	PPB		0.00
Spiked Amount 10.000			Recovery = 101.70%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	128776	9.34	PPB		96
3) Chloromethane	1.31	50	150597	7.82	PPB		99
4) Vinyl Chloride	1.39	62	145327	9.49	PPB		98
5) Bromomethane	1.64	96	59407	6.92	PPB		97
6) Chloroethane	1.73	64	89295	10.49	PPB		99
7) Dichlorofluoromethane	1.90	67	237007	10.90	PPB		98
8) Trichlorofluoromethane	1.90	101	169166	8.84	PPB		99
9) Ethyl Ether	2.16	59	73340	9.24	PPB		96
10) Acrolein	2.34	56	104996	96.10	PPB		98
11) Trichlorotrifluoroethane	2.34	151	85594	10.30	PPB		97
12) 1,1-Dichloroethene	2.37	96	102384	10.82	PPB		97
13) Acetone	2.48	43	90131	52.53	PPB		95
14) Iodomethane	2.53	142	305511	41.12	PPB		96
15) Carbon Disulfide	2.55	76	720882	20.24	PPB		99
17) 3-Chloro-1-propene	2.74	76	199117	30.97	PPB	#	80
18) Acetonitrile	2.82	40	141405	302.82	PPB		93
20) Methylene Chloride	2.89	84	104782	8.04	PPB		93
21) tert-Butyl Alcohol	3.00	59	26077	80.07	PPB		90
22) Acrylonitrile	3.23	53	96153	37.33	PPB		90
23) Methyl tert-Butyl Ether	3.11	73	170855	8.16	PPB		97
24) trans-1,2-Dichloroethene	3.13	96	114265	9.98	PPB		97
25) Hexane	3.35	57	614197	39.46	PPB		98
26) Diisopropyl Ether	3.65	45	721238	20.06	PPB		93
27) 1,1-Dichloroethane	3.66	63	213139	10.05	PPB		100
28) Vinyl Acetate	3.71	86	63066	61.92	PPB	#	25
29) Chloroprene	3.71	53	633497	34.90	PPB		91
30) tert-Butyl Ethyl Ether	4.11	59	458145	18.95	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D
Acq On : 22 Sep 2014 10:23
Sample : 8260 LCS WITH ACRO
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014

Vial: 5
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	2,2-Dichloropropane	4.35	77	102897	9.29	PPB		97
32)	cis-1,2-Dichloroethene	4.40	96	124063	9.75	PPB		96
33)	2-Butanone	4.46	72	32138	47.70	PPB	#	71
34)	Propionitrile	4.65	54	26314	28.77	PPB		97
35)	Ethyl Acetate	4.50	61	22375	25.42	PPB		94
36)	Methacrylonitrile	4.81	67	88650	29.52	PPB		91
37)	Bromochloromethane	4.73	128	49587	9.29	PPB		94
39)	Chloroform	4.85	83	203053	9.66	PPB		98
41)	1,1,1-Trichloroethane	5.03	97	160747	9.79	PPB		95
44)	Carbon Tetrachloride	5.21	117	152513	10.46	PPB		99
45)	1,1-Dichloropropene	5.29	75	161399	10.61	PPB		97
46)	Isobutyl Alcohol	5.65	43	48200	271.77	PPB		92
48)	Benzene	5.59	78	489289	9.59	PPB		94
49)	1,2-Dichloroethane	5.77	62	132054	9.38	PPB		95
50)	tert-Amyl Methyl Ether	5.78	55	212788	22.13	PPB	#	11
51)	Trichloroethene	6.73	95	117597	9.65	PPB		93
53)	1,2-Dichloropropane	7.24	63	114279	8.88	PPB		93
54)	Dibromomethane	7.46	93	52757	9.19	PPB		98
55)	Methyl methacrylate	7.54	69	141048	28.62	PPB		93
56)	1,4-Dioxane	7.50	88	16588	302.91	PPB		86
57)	Bromodichloromethane	7.81	83	144659	9.43	PPB		98
58)	2-Nitropropane	8.49	43	50610	28.73	PPB		96
59)	2-Chloroethyl Vinyl Ether	8.58	63	33845	8.07	PPB		93
60)	cis-1,3-Dichloropropene	8.82	75	152678	9.03	PPB		93
61)	4-Methyl-2-pentanone (MIBK	9.27	58	105614	44.59	PPB	#	70
63)	Toluene	9.46	92	310626	9.56	PPB		96
66)	trans-1,3-Dichloropropene	10.23	75	101675	7.81	PPB		98
67)	Ethyl methacrylate	10.40	69	275820	30.31	PPB		91
68)	1,1,2-Trichloroethane	10.55	83	68089	8.96	PPB		93
69)	Tetrachloroethene	10.53	164	97650	9.38	PPB		97
70)	2-Hexanone	11.05	57	30145	43.23	PPB	#	65
71)	1,3-Dichloropropane	10.85	76	141459	8.97	PPB		97
72)	Dibromochloromethane	11.15	129	93867	9.30	PPB		97
73)	1,2-Dibromoethane (EDB)	11.31	107	72793	8.98	PPB		99
74)	1-Chlorohexane	12.10	91	136920	9.66	PPB		86
75)	Chlorobenzene	12.07	112	329791	9.27	PPB		97
76)	Ethylbenzene	12.23	106	182094	9.59	PPB		99
77)	1,1,1,2-Tetrachloroethane	12.24	131	105050	9.38	PPB		93
78)	m,p-Xylenes	12.42	106	471035	20.24	PPB		97
79)	o-Xylene	12.96	106	216434	10.01	PPB		99
80)	Styrene	13.00	103	176952	9.94	PPB		99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D
Acq On : 22 Sep 2014 10:23
Sample : 8260 LCS WITH ACRO
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014

Vial: 5
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

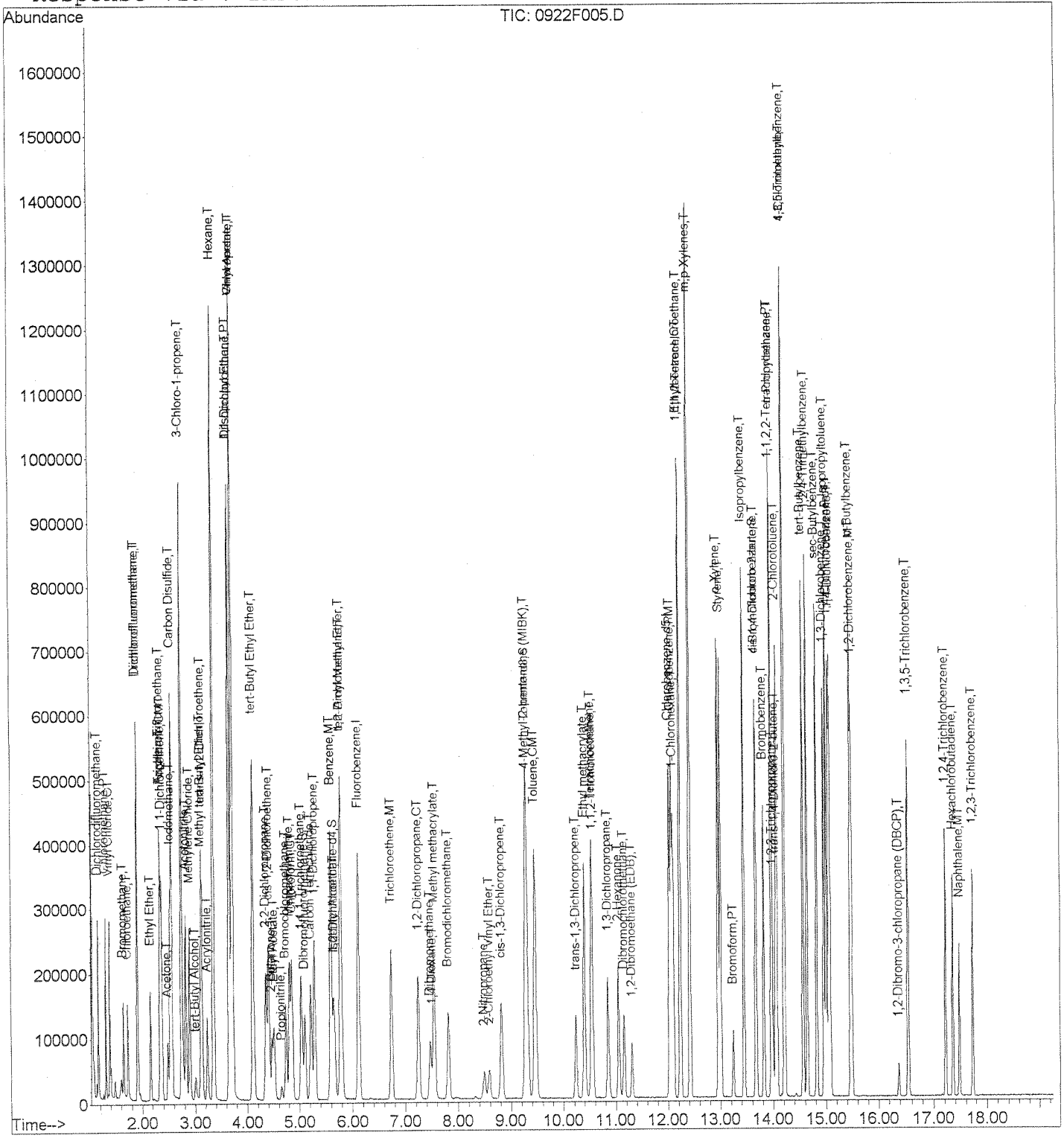
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
81)	Bromoform	13.24	173	52158	9.32	PPB		96
82)	Isopropylbenzene	13.45	105	558847	10.02	PPB		99
83)	cis-1,4-Dichloro-2-butene	13.67	89	30035	27.96	PPB	#	80
86)	1,1,2,2-Tetrachloroethane	13.95	83	84589	8.79	PPB		93
87)	trans-1,4-Dichloro-2-buten	14.04	53	72429	29.57	PPB		91
88)	Bromobenzene	13.82	156	132120	8.95	PPB		92
89)	n-Propylbenzene	13.96	91	676536	9.70	PPB		99
90)	1,2,3-Trichloropropane	13.99	110	24197	8.54	PPB		94
91)	2-Chlorotoluene	14.06	91	422165	9.72	PPB		96
92)	1,3,5-Trimethylbenzene	14.20	105	480033	10.03	PPB		98
93)	4-Chlorotoluene	14.22	91	472091	9.44	PPB		95
94)	tert-Butylbenzene	14.56	119	389735	9.93	PPB		96
95)	1,2,4-Trimethylbenzene	14.64	105	471925	9.83	PPB		99
96)	sec-Butylbenzene	14.82	105	554319	9.71	PPB		98
97)	p-Isopropyltoluene	15.00	119	481900	10.16	PPB		99
98)	1,3-Dichlorobenzene	14.96	146	269877	9.37	PPB		99
99)	1,4-Dichlorobenzene	15.07	146	269210	8.99	PPB		98
100)	n-Butylbenzene	15.46	91	410919	9.70	PPB		98
101)	1,2-Dichlorobenzene	15.49	146	240348	9.12	PPB		98
102)	1,2-Dibromo-3-chloropropan	16.38	155	10666	8.21	PPB		85
103)	1,3,5-Trichlorobenzene	16.54	180	173045	9.56	PPB		100
104)	1,2,4-Trichlorobenzene	17.22	180	126510	8.62	PPB		98
105)	Hexachlorobutadiene	17.35	225	71121	9.26	PPB		99
106)	Naphthalene	17.47	128	176902	6.79	PPB		98
107)	1,2,3-Trichlorobenzene	17.73	180	109984	8.81	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D Vial: 5
Acq On : 22 Sep 2014 10:23 Operator: GH
Sample : 8260 LCS WITH ACRO Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 10:52 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration



Data File : J:\MS13\DATA\092214\0922F005.D
Acq On : 22 Sep 2014 10:23 am
Sample : 8260 LCS WITH ACRO
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014

Vial: 5
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.11	96	489557	10.00	PPB		0.00
64) Chlorobenzene-d5	12.02	82	192505	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	166640	10.00	PPB		0.00
System Monitoring Compounds							
42) Dibromofluoromethane	5.10	113	102638	9.84	PPB		0.00
Spiked Amount 10.000			Recovery =	98.40%			
47) 1,2-Dichloroethane-d4	5.64	65	100507	9.83	PPB		0.00
Spiked Amount 10.000			Recovery =	98.30%			
62) Toluene-d8	9.29	98	480307	10.11	PPB		-0.01
Spiked Amount 10.000			Recovery =	101.10%			
84) 4-Bromofluorobenzene	13.68	95	159219	10.17	PPB		0.00
Spiked Amount 10.000			Recovery =	101.70%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.17	85	128776	9.34	PPB		96
3) Chloromethane	1.31	50	150597	7.82	PPB		99
4) Vinyl Chloride	1.39	62	145327	9.49	PPB		98
5) Bromomethane	1.64	96	59407	6.92	PPB		97
6) Chloroethane	1.73	64	89295	10.49	PPB		99
7) Dichlorofluoromethane	1.90	67	237007	10.90	PPB		98
8) Trichlorofluoromethane	1.90	101	169166	8.84	PPB		99
9) Ethyl Ether	2.16	59	73340	9.24	PPB		96
10) Acrolein	2.34	56	104996	96.10	PPB		98
11) Trichlorotrifluoroethane	2.34	151	85594	10.30	PPB		97
12) 1,1-Dichloroethene	2.37	96	102384	10.82	PPB		97
13) Acetone	2.48	43	90131	52.53	PPB		95
14) Iodomethane	2.53	142	305511	41.12	PPB		96
15) Carbon Disulfide	2.55	76	720882	20.24	PPB		99
17) 3-Chloro-1-propene	2.74	76	199117	30.97	PPB	#	80
18) Acetonitrile	2.82	40	141405	302.82	PPB		93
20) Methylene Chloride	2.89	84	104782	8.04	PPB		93
21) tert-Butyl Alcohol	3.00	59	26077	80.07	PPB		90
22) Acrylonitrile	3.23	53	96153	37.33	PPB		90
23) Methyl tert-Butyl Ether	3.11	73	170855	8.16	PPB		97
24) trans-1,2-Dichloroethene	3.13	96	114265	9.98	PPB		97
25) Hexane	3.35	57	614197	39.46	PPB		98
26) Diisopropyl Ether	3.65	45	721238	20.06	PPB		93
27) 1,1-Dichloroethane	3.66	63	213139	10.05	PPB		100
28) Vinyl Acetate	3.71	86	63066	61.92	PPB	#	25
29) Chloroprene	3.71	53	633497	34.90	PPB		91
30) tert-Butyl Ethyl Ether	4.11	59	458145	18.95	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D
Acq On : 22 Sep 2014 10:23 am
Sample : 8260 LCS WITH ACRO
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014

Vial: 5
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	2,2-Dichloropropane	4.35	77	102897	9.29	PPB		97
32)	cis-1,2-Dichloroethene	4.40	96	124063	9.75	PPB		96
33)	2-Butanone	4.46	72	32138	47.70	PPB	#	71
34)	Propionitrile	4.65	54	26314	28.77	PPB		97
35)	Ethyl Acetate	4.50	61	22375	25.42	PPB		94
36)	Methacrylonitrile	4.81	67	88650	29.52	PPB		91
37)	Bromochloromethane	4.73	128	49587	9.29	PPB		94
39)	Chloroform	4.85	83	203053	9.66	PPB		98
41)	1,1,1-Trichloroethane	5.03	97	160747	9.79	PPB		95
44)	Carbon Tetrachloride	5.21	117	152513	10.46	PPB		99
45)	1,1-Dichloropropene	5.29	75	161399	10.61	PPB		97
46)	Isobutyl Alcohol	5.65	43	48200	271.77	PPB		92
48)	Benzene	5.59	78	489289	9.59	PPB		94
49)	1,2-Dichloroethane	5.77	62	132054	9.38	PPB		95
50)	tert-Amyl Methyl Ether	5.78	55	212788	22.13	PPB	#	11
51)	Trichloroethene	6.73	95	117597	9.65	PPB		93
53)	1,2-Dichloropropane	7.24	63	114279	8.88	PPB		93
54)	Dibromomethane	7.46	93	52757	9.19	PPB		98
55)	Methyl methacrylate	7.54	69	141048	28.62	PPB		93
56)	1,4-Dioxane	7.50	88	16588	302.91	PPB		86
57)	Bromodichloromethane	7.81	83	144659	9.43	PPB		98
58)	2-Nitropropane	8.49	43	50610	28.73	PPB		96
59)	2-Chloroethyl Vinyl Ether	8.58	63	33845	8.07	PPB		93
60)	cis-1,3-Dichloropropene	8.82	75	152678	9.03	PPB		93
61)	4-Methyl-2-pentanone (MIBK	9.27	58	105614	44.59	PPB	#	70
63)	Toluene	9.46	92	310626	9.56	PPB		96
66)	trans-1,3-Dichloropropene	10.23	75	101675	7.81	PPB		98
67)	Ethyl methacrylate	10.40	69	275820	30.31	PPB		91
68)	1,1,2-Trichloroethane	10.55	83	68089	8.96	PPB		93
69)	Tetrachloroethene	10.53	164	97650	9.38	PPB		97
70)	2-Hexanone	11.05	57	30145	43.23	PPB	#	65
71)	1,3-Dichloropropane	10.85	76	141459	8.97	PPB		97
72)	Dibromochloromethane	11.15	129	93867	9.30	PPB		97
73)	1,2-Dibromoethane (EDB)	11.31	107	72793	8.98	PPB		99
74)	1-Chlorohexane	12.10	91	136920	9.66	PPB		86
75)	Chlorobenzene	12.07	112	329791	9.27	PPB		97
76)	Ethylbenzene	12.23	106	182094	9.59	PPB		99
77)	1,1,1,2-Tetrachloroethane	12.24	131	105050	9.38	PPB		93
78)	m,p-Xylenes	12.42	106	471035	20.24	PPB		97
79)	o-Xylene	12.96	106	216434	10.01	PPB		99
80)	Styrene	13.00	103	176952	9.94	PPB		99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D
Acq On : 22 Sep 2014 10:23 am
Sample : 8260 LCS WITH ACRO
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 10:51:20 2014

Vial: 5
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

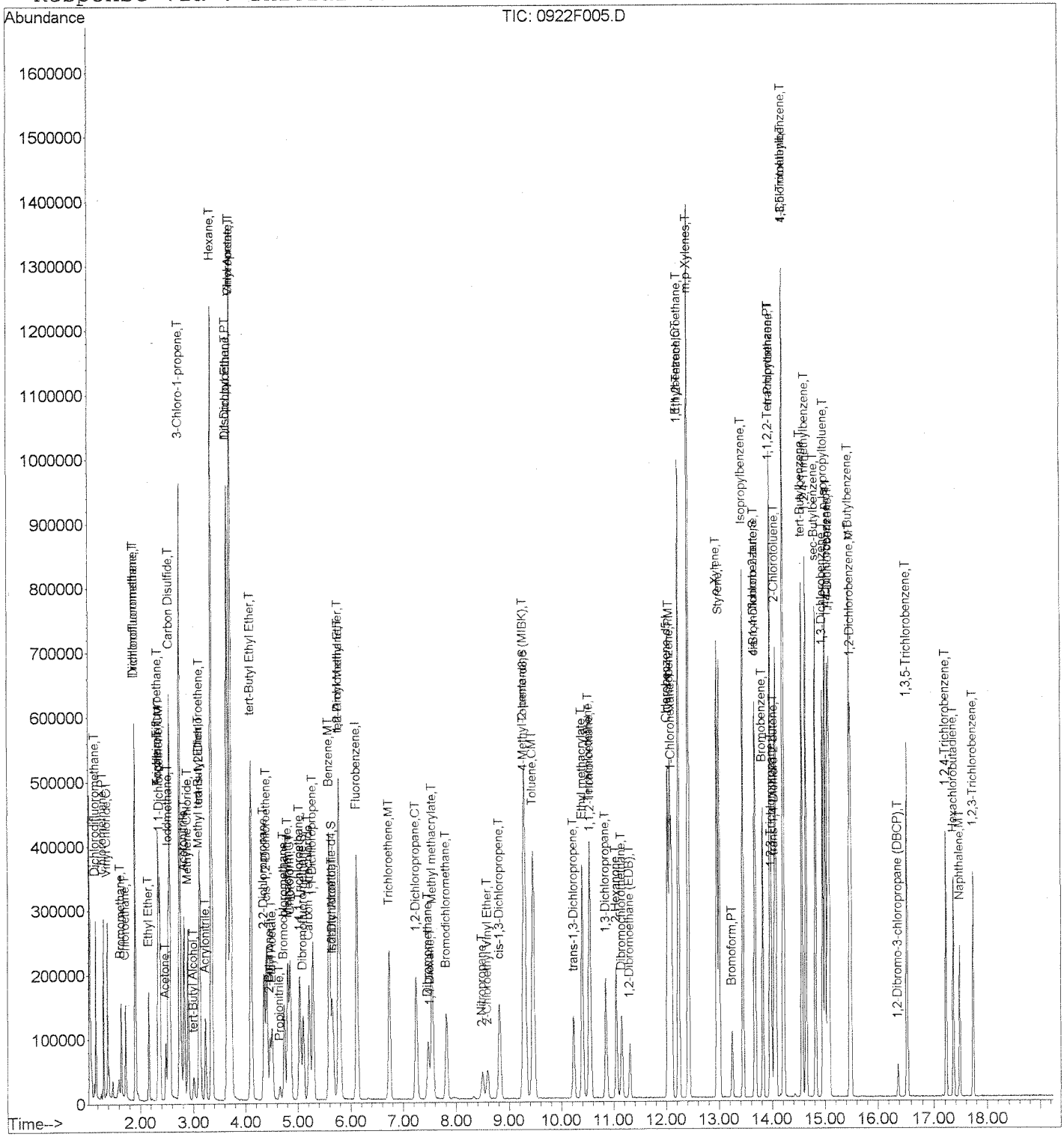
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
81)	Bromoform	13.24	173	52158	9.32	PPB		96
82)	Isopropylbenzene	13.45	105	558847	10.02	PPB		99
83)	cis-1,4-Dichloro-2-butene	13.67	89	30035	27.96	PPB	#	80
86)	1,1,2,2-Tetrachloroethane	13.95	83	84589	8.79	PPB		93
87)	trans-1,4-Dichloro-2-buten	14.04	53	72429	29.57	PPB		91
88)	Bromobenzene	13.82	156	132120	8.95	PPB		92
89)	n-Propylbenzene	13.96	91	676536	9.70	PPB		99
90)	1,2,3-Trichloropropane	13.99	110	24197	8.54	PPB		94
91)	2-Chlorotoluene	14.06	91	422165	9.72	PPB		96
92)	1,3,5-Trimethylbenzene	14.20	105	480033	10.03	PPB		98
93)	4-Chlorotoluene	14.22	91	472091	9.44	PPB		95
94)	tert-Butylbenzene	14.56	119	389735	9.93	PPB		96
95)	1,2,4-Trimethylbenzene	14.64	105	471925	9.83	PPB		99
96)	sec-Butylbenzene	14.82	105	554319	9.71	PPB		98
97)	p-Isopropyltoluene	15.00	119	481900	10.16	PPB		99
98)	1,3-Dichlorobenzene	14.96	146	269877	9.37	PPB		99
99)	1,4-Dichlorobenzene	15.07	146	269210	8.99	PPB		98
100)	n-Butylbenzene	15.46	91	410919	9.70	PPB		98
101)	1,2-Dichlorobenzene	15.49	146	240348	9.12	PPB		98
102)	1,2-Dibromo-3-chloropropan	16.38	155	10666	8.21	PPB		85
103)	1,3,5-Trichlorobenzene	16.54	180	173045	9.56	PPB		100
104)	1,2,4-Trichlorobenzene	17.22	180	126510	8.62	PPB		98
105)	Hexachlorobutadiene	17.35	225	71121	9.26	PPB		99
106)	Naphthalene	17.47	128	176902	6.79	PPB		98
107)	1,2,3-Trichlorobenzene	17.73	180	109984	8.81	PPB		97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F005.D Vial: 5
Acq On : 22 Sep 2014 10:23 am Operator: GH
Sample : 8260 LCS WITH ACRO Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 22 10:52 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS24\DATA\091914\0919F005.D
Lab ID: KWG1412873-3
RunType: LCS
Matrix: SOIL

Date Acquired: 09/19/2014 11:44
Date Quantitated: 09/19/2014 12:08
Batch ID: KWG1412874
Analysis Method: 8260C
MethodJoinID: MJ120

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutanol	0.0098	0.01	NA	NJ
	1,4-Dioxane	0.0028	0.01	NA	J
Continuing Calibration Recovery	Dichlorodifluoromethane	-61.9	NA	20	↓ RL ITMT, MRL
	Chloromethane	-35.4	NA	20	CWDIC
	Vinyl Chloride	-25.3	NA	20	
	Bromomethane	-34.4	NA	20	
	Chloroethane	-26.6	NA	20	
	Acrolein	-37.4	NA	20	NJ
	tert-Butyl Alcohol	-22.3	NA	20	
	n-Hexane	-21.0	NA	20	
	Vinyl Acetate	-26.8	NA	20	
	Bromoform	28.0	NA	20	CWDIC
Continuing Calibration Minimum RF	Dichlorodifluoromethane	0.0798	0.100	NA	MRL

Primary Review: 9/19/14

Secondary Review: 9/19/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutanol	0.0086	0.01	NA	N
	1,4-Dioxane	0.0025	0.01	NA	J

Primary Review: 9/19/14

Secondary Review: 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F005.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 11:44	**Quant Date:**	09/19/2014 12:08	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412873-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/19/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376461				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO			**Calibration ID:**	CAL12826
Title:					
Tune Ref:	J:\MS24\DATA\091914\0919F003.D			**Method ID:**	MJ120
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.96	-0.01	96	417857	50.00	OK
2	Chlorobenzene-d5	6.59	-0.01	82	159535	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	141883	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.47	-0.02	0.00	113	105022	50.35	101	82-146	OK	
1	1,2-Dichloroethane-d4	3.74	-0.02	0.00	65	93620	44.81	90	78-121	OK	
1	Toluene-d8	5.25	-0.01	0.00	98	396021	49.05	98	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	135325	47.72	95	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	0.82	-0.05	-0.01	85	75783	43.25	43.3		
1	Chloromethane	0.95	-0.04	-0.01	50	84727	42.66	42.7		
1	Vinyl Chloride	1.02	-0.04	-0.01	62	99293	46.79	46.8		
1	Bromomethane	1.24	-0.04	-0.01	96	59068	36.79	36.8		
1	Chloroethane	1.32	-0.04	-0.01	64	60391	48.87	48.9		
1	Dichlorofluoromethane (CFC 21	1.47	-0.03	-0.01	67	152188	47.58	47.6		
1	Trichlorofluoromethane	1.47	-0.03	-0.01	101	112798	43.99	44.0		
1	Diethyl Ether	1.68	-0.03	-0.01	59	75702	47.94	47.9		
1	Acrolein	1.81	-0.04	-0.01	56	26743	82.63	82.6	J	
1	Trichlorotrifluoroethane	1.81	-0.04	-0.01	151	58630	46.38	46.4		
1	1,1-Dichloroethene	1.83	-0.03	-0.01	96	77414	56.52	56.5		
1	Acetone	1.92	-0.03	-0.01	43	103469	208.91	209		
1	Iodomethane (Methyl Iodide)	1.95	-0.03	-0.01	142	189890	115.90	116		
1	Carbon Disulfide	1.96	-0.04	-0.01	76	617750	116.96	117		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F005.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 11:44	**Quant Date:**	09/19/2014 12:08	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412873-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	3-Chloro-1-propene	2.10	-0.03	-0.01	76	78000	73.64	73.6		
1	Methyl Acetate				43	0d		0.57	U	
1	Acetonitrile	2.16	-0.03	-0.01	40	83465	847.13	847		
1	Methylene Chloride	2.21	-0.02	0.00	84	97575	44.23	44.2		
1	tert-Butyl Alcohol	2.30	-0.02	0.00	59	90479	413.95	414		
1	Acrylonitrile	2.43	-0.03	-0.01	53	82513	127.98	128		
1	Methyl tert-Butyl Ether	2.35	-0.03	-0.01	73	248202	44.57	44.6		
1	trans-1,2-Dichloroethene	2.36	-0.03	-0.01	96	92615	51.29	51.3		
1	n-Hexane	2.50	-0.03	-0.01	57	179580	74.56	74.6		
1	Diisopropyl Ether	2.69	-0.03	-0.01	45	491739	84.68	84.7		
1	1,1-Dichloroethane	2.69	-0.03	-0.01	63	159018	47.89	47.9		
1	Vinyl Acetate	2.73	-0.02	0.00	86	62970	154.56	155		
1	Chloroprene	2.73	-0.02	0.00	53	168677	64.27	64.3		
1	tert-Butyl Ethyl Ether	2.95	-0.02	0.00	59	508436	86.23	86.2		
1	2,2-Dichloropropane	3.09	-0.02	0.00	77	106904	42.19	42.2		
1	cis-1,2-Dichloroethene	3.11	-0.03	-0.01	96	105199	49.25	49.3		
1	2-Butanone (MEK)	3.15	-0.02	0.00	72	60113	239.00	239		
1	Propionitrile	3.25	-0.02	0.00	54	20192	80.30	80.3		
1	Ethyl Acetate	3.11	-0.03	-0.01	61	133026	53.18	53	JN	
1	Methacrylonitrile	3.33	-0.02	0.00	67	66826	81.32	81.3		
1	Bromochloromethane	3.30	-0.01	0.00	128	49454	47.01	47.0		
1	Chloroform	3.35	-0.02	0.00	83	157768	46.67	46.7		
1	Cyclohexane				56	0d		0.15	U	
1	1,1,1-Trichloroethane (TCA)	3.45	-0.02	0.00	97	118613	46.96	47.0		
1	Carbon Tetrachloride	3.54	-0.02	0.00	117	100032	48.15	48.2		
1	1,1-Dichloropropene	3.58	-0.01	0.00	75	107838	50.07	50.1		
1	Isobutanol	3.72	-0.01	0.00	43	47869	581.75	582		
1	Benzene	3.73	-0.01	0.00	78	352790	46.70	46.7		
1	1,2-Dichloroethane (EDC)	3.81	-0.01	0.00	62	98685	42.30	42.3		
1	tert-Amyl Methyl Ether	3.80	-0.02	0.00	55	121967	94.14	94.1		
1	Trichloroethene (TCE)	4.24	-0.01	0.00	95	85101	45.62	45.6		
1	Methylcyclohexane				83	0d		0.11	U	
1	1,2-Dichloropropane	4.46	-0.01	0.00	63	85852	45.01	45.0		
1	Dibromomethane	4.56	-0.01	0.00	93	55505	47.79	47.8		
1	Methyl Methacrylate	4.54	-0.01	0.00	69	102900	72.89	72.9		
1	1,4-Dioxane	4.56	-0.01	0.00	88	16492	708.25	708		
1	Bromodichloromethane	4.68	-0.01	0.00	83	119064	52.24	52.2		
1	2-Nitropropane	4.94	-0.01	0.00	41	26698	77.14	77.1		
1	2-Chloroethyl Vinyl Ether	4.96		0.00	63	57500	51.00	51.0		
1	cis-1,3-Dichloropropene	5.07	-0.01	0.00	75	137621	46.57	46.6		
1	4-Methyl-2-pentanone (MIBK)	5.20	-0.01	0.00	58	164565	248.91	249		
1	Toluene	5.31	-0.01	0.00	92	216343	45.24	45.2		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F005.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 11:44	**Quant Date:**	09/19/2014 12:08	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412873-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	trans-1,3-Dichloropropene	5.58		0.00	75	111565	44.78	44.8		
2	Ethyl Methacrylate	5.62		0.00	69	187314	78.37	78.4		
2	1,1,2-Trichloroethane	5.74	-0.01	0.00	83	70051	48.61	48.6		
2	Tetrachloroethene (PCE)	5.77		0.00	164	67854	47.61	47.6		
2	2-Hexanone	5.95	-0.01	0.00	57	55125	242.72	243		
2	1,3-Dichloropropane	5.89	-0.01	0.00	76	135611	46.53	46.5		
2	Dibromochloromethane	6.07		0.00	129	93560	55.98	56.0		
2	1,2-Dibromoethane (EDB)	6.18	-0.01	0.00	107	81076	48.04	48.0		
2	1-Chlorohexane	6.59		0.00	91	103767	42.35	42.4		
2	Chlorobenzene	6.62		0.00	112	243193	46.82	46.8		
2	Ethylbenzene	6.70		0.00	106	122049	46.38	46.4		
2	1,1,1,2-Tetrachloroethane	6.71		0.00	131	85847	50.11	50.1		
2	m,p-Xylenes	6.82		0.00	106	305162	93.41	93.4		
2	o-Xylene	7.20	-0.01	0.00	106	150016	45.45	45.5		
2	Styrene	7.23	-0.01	0.00	103	124253**m**	47.47	47.5		
2	Bromoform	7.43		0.00	173	65538	61.42	61.4		
2	Isopropylbenzene	7.56	-0.01	0.00	105	372148	46.86	46.9		
2	cis-1,4-Dichloro-2-butene	7.71	-0.01	0.00	89	25150	93.83	93.8		
3	1,1,2,2-Tetrachloroethane	7.95		0.00	83	100713	49.72	49.7		
3	trans-1,4-Dichloro-2-butene	8.02		0.00	53	42227	88.14	88.1		
3	Bromobenzene	7.90		0.00	156	101984	48.22	48.2		
3	n-Propylbenzene	7.98		0.00	91	450673	49.04	49.0		
3	1,2,3-Trichloropropane	8.00		0.00	110	30316	46.08	46.1		
3	2-Chlorotoluene	8.09		0.00	91	271679	49.07	49.1		
3	1,3,5-Trimethylbenzene	8.17		0.00	105	307504	47.29	47.3		
3	4-Chlorotoluene	8.21		0.00	91	277441**m**	48.12	48.1		
3	tert-Butylbenzene	8.48		0.00	119	266010	47.93	47.9		
3	1,2,4-Trimethylbenzene	8.55		0.00	105	310907	46.66	46.7		
3	sec-Butylbenzene	8.70		0.00	105	392997	47.53	47.5		
3	4-Isopropyltoluene	8.85		0.00	119	330028	47.81	47.8		
3	1,3-Dichlorobenzene	8.83	-0.01	0.00	146	190068	48.95	49.0		
3	1,4-Dichlorobenzene	8.93		0.00	146	193307	48.93	48.9		
3	n-Butylbenzene	9.25		0.00	91	305799	50.35	50.4		
3	1,2-Dichlorobenzene	9.30		0.00	146	181595	47.67	47.7		
3	1,2-Dibromo-3-chloropropane	10.07		0.00	155	16400	52.96	53.0		
3	1,2,4-Trichlorobenzene	10.80		0.00	180	119110	45.01	45.0		
3	Hexachlorobutadiene	10.91		0.00	225	58722	44.94	44.9		
3	Naphthalene	11.03		0.00	128	281689	44.90	44.9		
3	1,2,3-Trichlorobenzene	11.25	-0.01	0.00	180	113287	44.67	44.7		
	4-Vinyl-1-cyclohexene				0	0		5.0	U	NR
	Benzyl Chloride				0	0		5.0	U	NR
	1,3-Butadiene				0	0		1.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F005.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 11:44	**Quant Date:**	09/19/2014 12:08	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412873-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT	RT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2-Methylpentane			0	0		5.0	U	NR
Cyclohexanone			0	0		5.0	U	NR
Tetrahydrofuran			0	0		5.0	U	NR
n-Heptane			0	0		5.0	U	NR
2,2-Dichloro-1,1,1-trifluoroethan			0	0		5.0	U	NR
1,1,2-Trifluoroethane			0	0		10	U	NR
2,2,4-Trimethylpentane			0	0		5.0	U	NR
Bis(chloromethyl) Ether			0	0		10	U	NR
Ethyl Alcohol			0	0		200	U	NR
2-Propanol			0	0		200	U	NR
Hexachloroethane			0	0		1.0	U	NR
n-Butyl Alcohol			0	0		250	U	NR
3-Methylpentane			0	0		5.0	U	NR
Methylcyclopentane			0	0		5.0	U	NR

Prep Amount:	5.00 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Lab Control Spike Summary Report

Lab Control Spike Information — *ListJoinID :* LJ1601

Data File:	J:\MS24\DATA\091914\0919F005.D	**Instrument:**	MS24
Lab ID:	KWG1412873-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Prod Code:	8260C VOC FP	**Acqu Date:**	09/19/2014 11:44
Matrix:	SOIL	**Quant Date:**	09/19/2014 12:08

Duplicate Lab Control Spike Information

Data File:	J:\MS24\DATA\091914\0919F006.D	**Instrument:**	MS24
Lab ID:	KWG1412873-4	**Dilution:**	1
Client ID:	Duplicate Lab Control Sample	**Units:**	ug/Kg
Prod Code:	8260C VOC FP	**Acqu Date:**	09/19/2014 12:05
Matrix:	SOIL	**Quant Date:**	09/19/2014 12:20

	LCS			DLCS					
Parameter Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	43.3	50.0	87	42.8	50.0	86	38-160	1	40
Chloromethane	42.7	50.0	85	41.3	50.0	83	37-146	3	40
Vinyl Chloride	46.8	50.0	94	44.5	50.0	89	54-127	5	40
Bromomethane	36.8	50.0	74	36.7	50.0	73	22-180	0	40
Chloroethane	48.9	50.0	98	47.1	50.0	94	51-122	4	40
Trichlorofluoromethane	44.0	50.0	88	41.8	50.0	84	51-140	5	40
1,1-Dichloroethene	56.5	50.0	113	55.8	50.0	112	64-152	1	40
Acetone	209	250	84	215	250	86	32-135	3	40
Carbon Disulfide	117	100	117	113	100	113	55-141	4	40
Methylene Chloride	44.2	50.0	88	44.0	50.0	88	65-122	0	40
trans-1,2-Dichloroethene	51.3	50.0	103	49.6	50.0	99	63-127	3	40
1,1-Dichloroethane	47.9	50.0	96	46.8	50.0	94	59-137	2	40
2,2-Dichloropropane	42.2	50.0	84	41.1	50.0	82	50-138	3	40
cis-1,2-Dichloroethene	49.3	50.0	99	48.8	50.0	98	62-138	1	40
2-Butanone (MEK)	239	250	96	240	250	96	54-116	0	40
Bromochloromethane	47.0	50.0	94	47.2	50.0	94	65-131	0	40
Chloroform	46.7	50.0	93	45.7	50.0	91	61-137	2	40
1,1,1-Trichloroethane (TCA)	47.0	50.0	94	45.7	50.0	91	59-146	3	40
Carbon Tetrachloride	48.2	50.0	96	48.3	50.0	97	51-135	0	40
1,1-Dichloropropene	50.1	50.0	100	51.4	50.0	103	52-142	3	40
Benzene	46.7	50.0	93	46.6	50.0	93	68-122	0	40
1,2-Dichloroethane (EDC)	42.3	50.0	85	42.3	50.0	85	65-121	0	40
Trichloroethene (TCE)	45.6	50.0	91	45.4	50.0	91	67-126	1	40
1,2-Dichloropropane	45.0	50.0	90	44.7	50.0	89	71-121	1	40
Dibromomethane	47.8	50.0	96	48.4	50.0	97	68-125	1	40
Bromodichloromethane	52.2	50.0	104	52.4	50.0	105	61-143	0	40
cis-1,3-Dichloropropene	46.6	50.0	93	46.4	50.0	93	58-138	0	40
4-Methyl-2-pentanone (MIBK	249	250	100	254	250	102	69-126	2	40
Toluene	45.2	50.0	90	44.4	50.0	89	75-117	2	40
trans-1,3-Dichloropropene	44.8	50.0	90	43.5	50.0	87	63-121	3	40
1,1,2-Trichloroethane	48.6	50.0	97	46.3	50.0	93	72-118	5	40
Tetrachloroethene (PCE)	47.6	50.0	95	45.7	50.0	91	66-126	4	40
2-Hexanone	243	250	97	238	250	95	67-121	2	40
1,3-Dichloropropane	46.5	50.0	93	45.1	50.0	90	72-118	3	40
Dibromochloromethane	56.0	50.0	112	55.4	50.0	111	69-120	1	40
1,2-Dibromoethane (EDB)	48.0	50.0	96	46.8	50.0	94	71-116	3	40
Chlorobenzene	46.8	50.0	94	45.2	50.0	90	70-116	4	40

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Lab Control Spike Summary Report

Lab Control Spike Information — *ListJoinID :* LJ1601

Data File:	J:\MS24\DATA\091914\0919F005.D	**Instrument:**	MS24
Lab ID:	KWG1412873-3	**Dilution:**	1
Client ID:	Lab Control Sample	**Units:**	ug/Kg
Prod Code:	8260C VOC FP	**Acqu Date:**	09/19/2014 11:44
Matrix:	SOIL	**Quant Date:**	09/19/2014 12:08

Duplicate Lab Control Spike Information

Data File:	J:\MS24\DATA\091914\0919F006.D	**Instrument:**	MS24
Lab ID:	KWG1412873-4	**Dilution:**	1
Client ID:	Duplicate Lab Control Sample	**Units:**	ug/Kg
Prod Code:	8260C VOC FP	**Acqu Date:**	09/19/2014 12:05
Matrix:	SOIL	**Quant Date:**	09/19/2014 12:20

	LCS			DLCS			%Rec		RPD
Parameter Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**Limits**	**RPD**	**Limit**
Ethylbenzene	46.4	50.0	93	45.0	50.0	90	70-118	3	40
1,1,1,2-Tetrachloroethane	50.1	50.0	100	48.9	50.0	98	71-119	2	40
m,p-Xylenes	93.4	100	93	90.1	100	90	69-127	4	40
o-Xylene	45.5	50.0	91	43.5	50.0	87	69-124	4	40
Styrene	47.5	50.0	95	46.8	50.0	94	62-135	1	40
Bromoform	61.4	50.0	123	59.8	50.0	120	62-134	3	40
Isopropylbenzene	46.9	50.0	94	45.0	50.0	90	67-133	4	40
1,1,2,2-Tetrachloroethane	49.7	50.0	99	48.0	50.0	96	60-128	3	40
Bromobenzene	48.2	50.0	96	46.3	50.0	93	71-124	4	40
n-Propylbenzene	49.0	50.0	98	46.2	50.0	92	57-143	6	40
1,2,3-Trichloropropane	46.1	50.0	92	45.8	50.0	92	53-134	1	40
2-Chlorotoluene	49.1	50.0	98	46.9	50.0	94	65-129	5	40
1,3,5-Trimethylbenzene	47.3	50.0	95	44.7	50.0	89	66-132	6	40
4-Chlorotoluene	48.1	50.0	96	44.7	50.0	89	51-134	7	40
tert-Butylbenzene	47.9	50.0	96	45.6	50.0	91	67-131	5	40
1,2,4-Trimethylbenzene	46.7	50.0	93	44.3	50.0	89	65-132	5	40
sec-Butylbenzene	47.5	50.0	95	44.7	50.0	89	55-146	6	40
4-Isopropyltoluene	47.8	50.0	96	45.0	50.0	90	61-132	6	40
1,3-Dichlorobenzene	49.0	50.0	98	47.0	50.0	94	69-128	4	40
1,4-Dichlorobenzene	48.9	50.0	98	46.6	50.0	93	69-125	5	40
n-Butylbenzene	50.4	50.0	101	47.6	50.0	95	53-139	6	40
1,2-Dichlorobenzene	47.7	50.0	95	46.3	50.0	93	67-124	3	40
1,2-Dibromo-3-chloropropane	53.0	50.0	106	51.9	50.0	104	55-127	2	40
1,2,4-Trichlorobenzene	45.0	50.0	90	44.2	50.0	88	57-136	2	40
Hexachlorobutadiene	44.9	50.0	90	44.9	50.0	90	54-140	0	40
Naphthalene	44.9	50.0	90	45.4	50.0	91	54-134	1	40
1,2,3-Trichlorobenzene	44.7	50.0	89	43.8	50.0	88	52-138	2	40

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F005.D Vial: 4
Acq On : 19 Sep 2014 11:44 am Operator: KR
Sample : SOIL LCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08:02 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	3.96	96	417857	50.00	PPB	-0.02
61) Chlorobenzene-d5	6.59	82	159535	50.00	PPB	0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	141883	50.00	PPB	0.00
System Monitoring Compounds						
40) Dibromofluoromethane	3.47	113	105022	50.35	PPB	-0.02
Spiked Amount 50.000			Recovery =	100.70%		
44) 1,2-Dichloroethane-d4	3.74	65	93620	44.81	PPB	-0.02
Spiked Amount 50.000			Recovery =	89.62%		
59) Toluene-d8	5.25	98	396021	49.05	PPB	0.00
Spiked Amount 50.000			Recovery =	98.10%		
80) 4-Bromofluorobenzene	7.76	95	135325	47.72	PPB	0.00
Spiked Amount 50.000			Recovery =	95.44%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.82	85	75783	43.25	PPB	98
3) Chloromethane	0.95	50	84727	42.66	PPB	99
4) Vinyl Chloride	1.02	62	99293	46.79	PPB	99
5) Bromomethane	1.24	96	59068	36.79	PPB	99
6) Chloroethane	1.32	64	60391	48.87	PPB	99
7) Dichlorofluoromethane	1.47	67	152188	47.58	PPB	99
8) Trichlorofluoromethane	1.47	101	112798	43.99	PPB	99
9) Ethyl Ether	1.68	59	75702	47.94	PPB	99
10) Acrolein	1.81	56	26743	82.63	PPB	98
11) Trichlorotrifluoroethane	1.81	151	58630	46.38	PPB	94
12) 1,1-Dichloroethene	1.83	96	77414	56.52	PPB	94
13) Acetone	1.92	43	103469	208.91	PPB	100
14) Iodomethane	1.95	142	189890	115.90	PPB	98
15) Carbon Disulfide	1.96	76	617750	116.96	PPB	100
16) 3-Chloro-1-propene	2.10	76	78000	73.64	PPB	95
18) Acetonitrile	2.16	40	83465	847.13	PPB	91
19) Methylene Chloride	2.21	84	97575	44.23	PPB	96
20) tert-Butyl Alcohol	2.30	59	90479	413.95	PPB	98
21) Acrylonitrile	2.43	53	82513	127.98	PPB	99
22) Methyl tert-Butyl Ether	2.35	73	248202	44.57	PPB	98
23) trans-1,2-Dichloroethene	2.36	96	92615	51.29	PPB	96
24) Hexane	2.50	57	179580	74.56	PPB	99
25) Diisopropyl Ether	2.69	45	491739	84.68	PPB	100
26) 1,1-Dichloroethane	2.69	63	159018	47.89	PPB	99
27) Vinyl Acetate	2.73	86	62970	154.56	PPB	99
28) Chloroprene	2.73	53	168677	64.27	PPB	99
29) tert-Butyl Ethyl Ether	2.95	59	508436	86.23	PPB	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F005.D
Acq On : 19 Sep 2014 11:44 am
Sample : SOIL LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08:02 2014

Vial: 4
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30) 2,2-Dichloropropane	3.09	77	106904	42.19	PPB		99
31) cis-1,2-Dichloroethene	3.11	96	105199	49.25	PPB		97
32) 2-Butanone	3.15	72	60113	239.00	PPB	#	73
33) Propionitrile	3.25	54	20192	80.30	PPB		97
34) Ethyl Acetate	3.11	61	133026	53.18	PPB		100
35) Methacrylonitrile	3.33	67	66826	81.32	PPB		96
36) Bromochloromethane	3.30	128	49454	47.01	PPB		93
37) Chloroform	3.35	83	157768	46.67	PPB		99
39) 1,1,1-Trichloroethane	3.45	97	118613	46.96	PPB		100
41) Carbon Tetrachloride	3.54	117	100032	48.15	PPB		98
42) 1,1-Dichloropropene	3.58	75	107838	50.07	PPB		99
43) Isobutyl Alcohol	3.72	43	47869	581.75	PPB		96
45) Benzene	3.73	78	352790	46.70	PPB		99
46) 1,2-Dichloroethane	3.81	62	98685	42.30	PPB		99
47) tert-Amyl Methyl Ether	3.80	55	121967	94.14	PPB	#	86
48) Trichloroethene	4.24	95	85101	45.62	PPB		97
50) 1,2-Dichloropropane	4.46	63	85852	45.01	PPB		98
51) Dibromomethane	4.56	93	55505	47.79	PPB		96
52) Methyl methacrylate	4.54	69	102900	72.89	PPB		97
53) 1,4-Dioxane	4.56	88	16492	708.25	PPB		88
54) Bromodichloromethane	4.68	83	119064	52.24	PPB		94
55) 2-Nitropropane	4.94	41	26698	77.14	PPB	#	70
56) 2-Chloroethyl Vinyl Ether	4.96	63	57500	51.00	PPB		98
57) cis-1,3-Dichloropropene	5.07	75	137621	46.57	PPB		97
58) 4-Methyl-2-pentanone (MIBK	5.20	58	164565	248.91	PPB		98
60) Toluene	5.31	92	216343	45.24	PPB		99
62) trans-1,3-Dichloropropene	5.58	75	111565	44.78	PPB		99
63) Ethyl methacrylate	5.62	69	187314	78.37	PPB		95
64) 1,1,2-Trichloroethane	5.74	83	70051	48.61	PPB		96
65) Tetrachloroethene	5.77	164	67854	47.61	PPB		98
66) 2-Hexanone	5.95	57	55125	242.72	PPB		99
67) 1,3-Dichloropropane	5.89	76	135611	46.53	PPB		99
68) Dibromochloromethane	6.07	129	93560	55.98	PPB		98
69) 1,2-Dibromoethane (EDB)	6.18	107	81076	48.04	PPB		99
70) 1-Chlorohexane	6.59	91	103767	42.35	PPB		99
71) Chlorobenzene	6.62	112	243193	46.82	PPB		97
72) Ethylbenzene	6.70	106	122049	46.38	PPB		97
73) 1,1,1,2-Tetrachloroethane	6.71	131	85847	50.11	PPB		94
74) m,p-Xylenes	6.82	106	305162	93.41	PPB		97
75) o-Xylene	7.20	106	150016	45.45	PPB		98
76) Styrene	7.23	103	124253m	47.47	PPB		

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F005.D
Acq On : 19 Sep 2014 11:44 am
Sample : SOIL LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08:02 2014

Vial: 4
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
77)	Bromoform	7.43	173	65538	61.42	PPB		99
78)	Isopropylbenzene	7.56	105	372148	46.86	PPB		98
79)	cis-1,4-Dichloro-2-butene	7.71	89	25150	93.83	PPB	#	85
82)	1,1,2,2-Tetrachloroethane	7.95	83	100713	49.72	PPB		94
83)	trans-1,4-Dichloro-2-buten	8.02	53	42227	88.14	PPB		84
84)	Bromobenzene	7.90	156	101984	48.22	PPB		95
85)	n-Propylbenzene	7.98	91	450673	49.04	PPB		98
86)	1,2,3-Trichloropropane	8.00	110	30316	46.08	PPB		98
87)	2-Chlorotoluene	8.09	91	271679	49.07	PPB		98
88)	1,3,5-Trimethylbenzene	8.17	105	307504	47.29	PPB		98
89)	4-Chlorotoluene	8.21	91	277441m	48.12	PPB		
90)	tert-Butylbenzene	8.48	119	266010	47.93	PPB		98
91)	1,2,4-Trimethylbenzene	8.55	105	310907	46.66	PPB		99
92)	sec-Butylbenzene	8.70	105	392997	47.53	PPB		99
93)	p-Isopropyltoluene	8.85	119	330028	47.81	PPB		99
94)	1,3-Dichlorobenzene	8.83	146	190068	48.95	PPB		98
95)	1,4-Dichlorobenzene	8.93	146	193307	48.93	PPB		99
96)	n-Butylbenzene	9.25	91	305799	50.35	PPB		99
97)	1,2-Dichlorobenzene	9.30	146	181595	47.67	PPB		98
98)	1,2-Dibromo-3-chloropropan	10.07	155	16400	52.96	PPB		97
99)	1,3,5-Trichlorobenzene	10.21	180	139856	48.45	PPB		96
100)	1,2,4-Trichlorobenzene	10.80	180	119110	45.01	PPB		97
101)	Hexachlorobutadiene	10.91	225	58722	44.94	PPB		98
102)	Naphthalene	11.03	128	281689	44.90	PPB		99
103)	1,2,3-Trichlorobenzene	11.25	180	113287	44.67	PPB		98

(#) = qualifier out of range (m) = manual integration

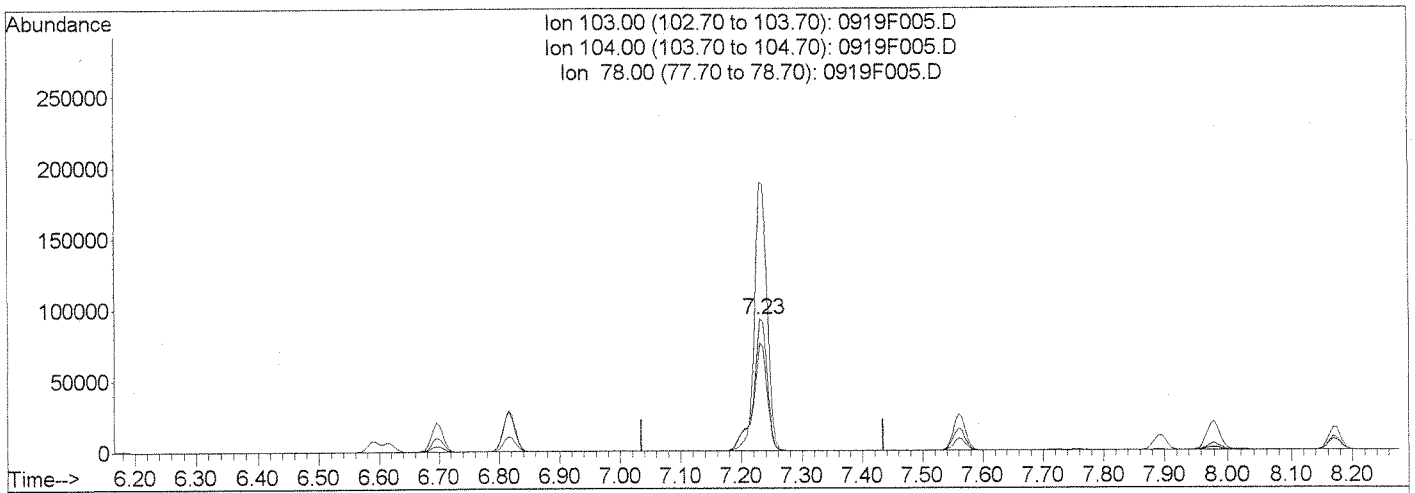
Quantitation Report (Quan)

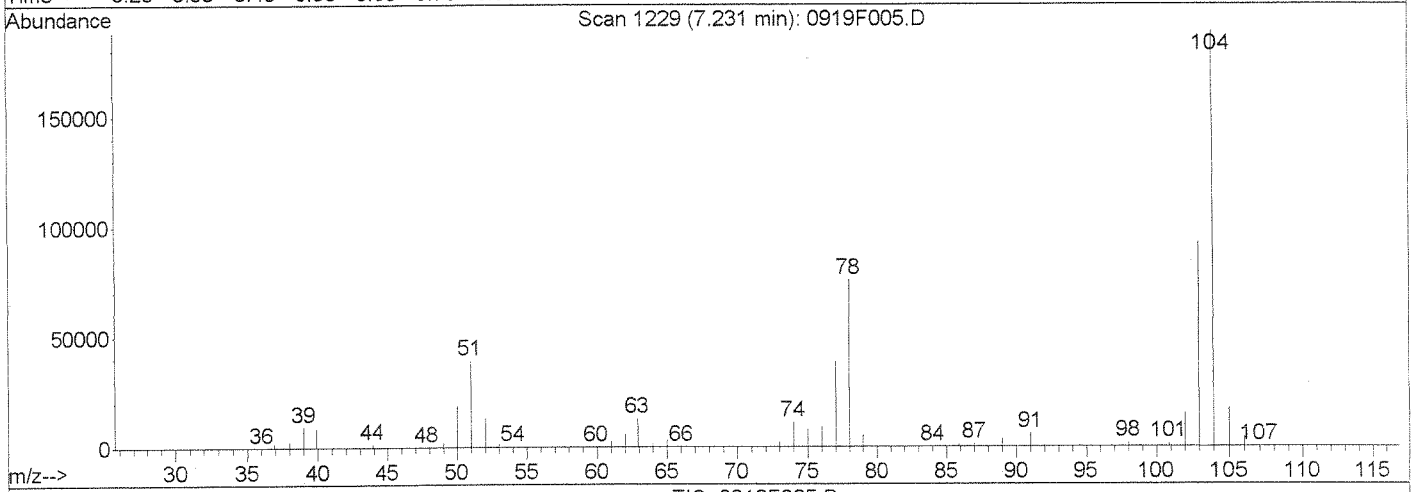
Data File : J:\MS24\DATA\091914\0919F005.D
Acq On : 19 Sep 2014 11:44 am
Sample : SOIL LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08 2014

Vial: 4
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F005.D

(76) Styrene (T)

7.23min 56.16PPB

response 146992

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	203.89
78.00	79.00	81.86
0.00	0.00	0.00

Manual Integration:

Before

09/19/14

0919F005.D 100713MS24SOIL.M Fri Sep 19 12:08:32 2014

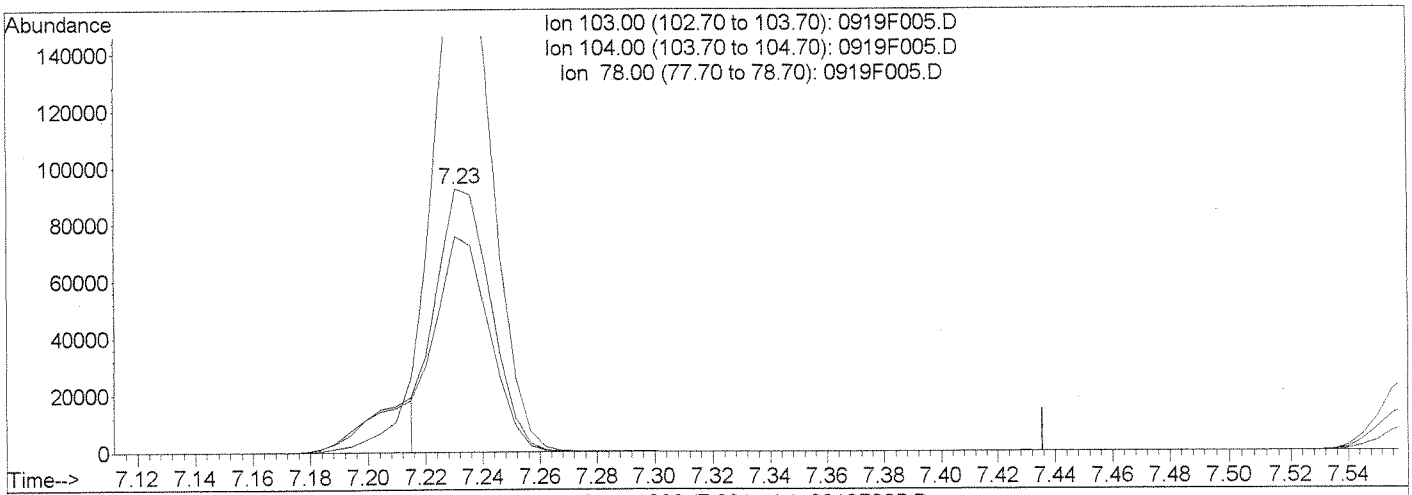
Quantitation Report (Quan)

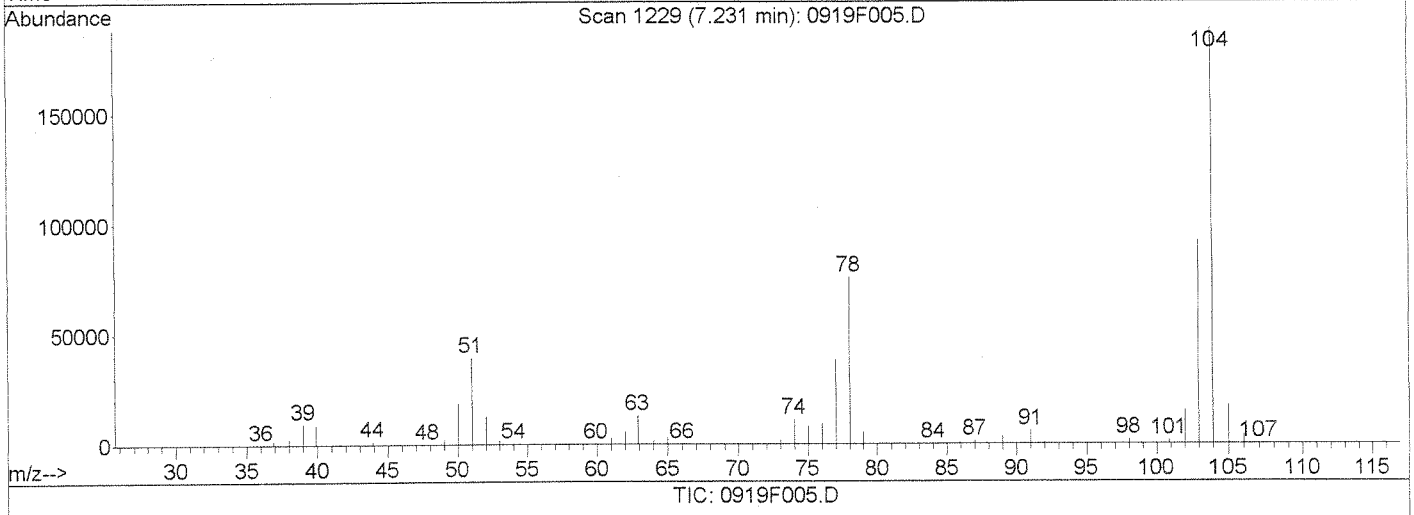
Data File : J:\MS24\DATA\091914\0919F005.D
Acq On : 19 Sep 2014 11:44 am
Sample : SOIL LCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08 2014

Vial: 4
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F005.D

(76) Styrene (T)

7.23min 47.47PPB m

response 124253

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	203.89
78.00	79.00	81.86
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

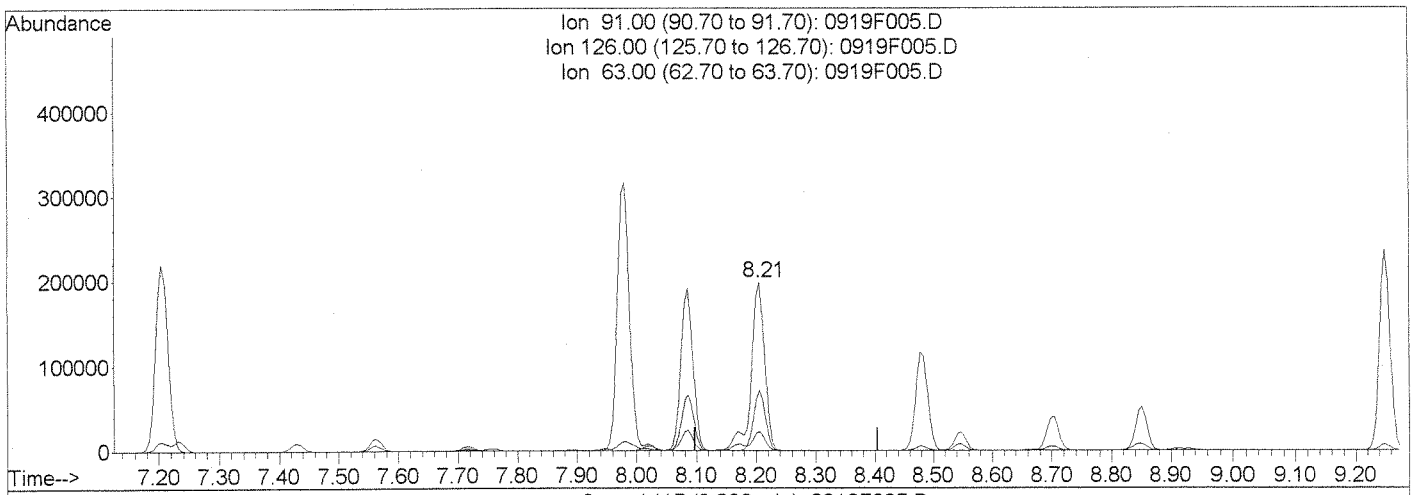
09/19/14

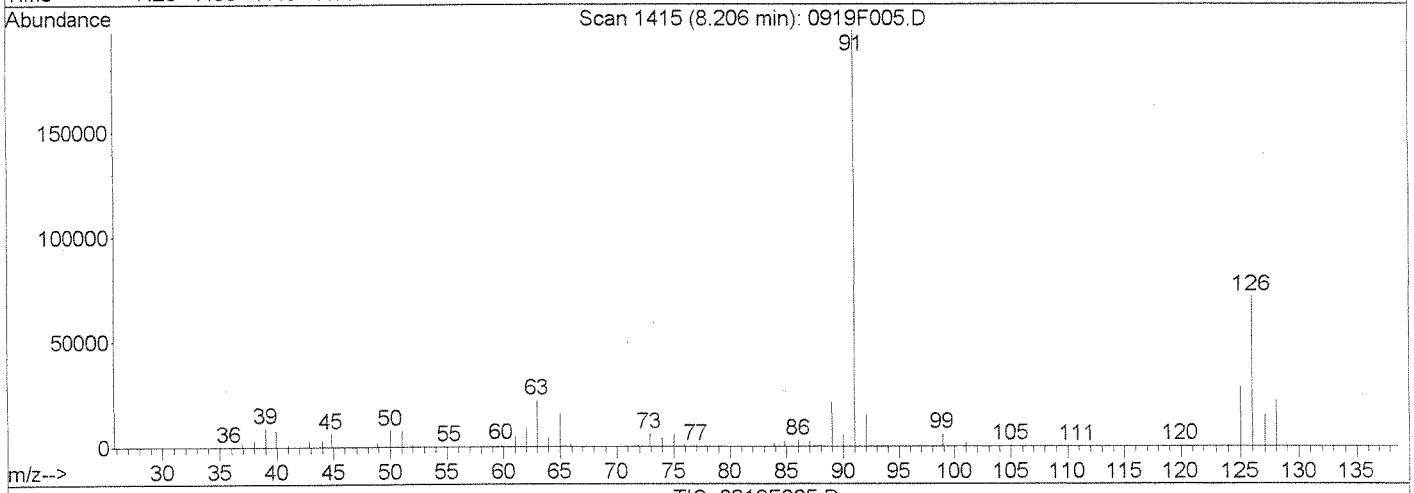
KR 9/19/14

0919F005.D 100713MS24SOIL.M Fri Sep 19 12:08:38 2014

Data File : J:\MS24\DATA\091914\0919F005.D Vial: 4
Acq On : 19 Sep 2014 11:44 am Operator: KR
Sample : SOIL LCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F005.D

(89) 4-Chlorotoluene (T)

8.21min 53.40PPB

response 307912

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	35.98
63.00	10.90	11.17
0.00	0.00	0.00

Manual Integration:

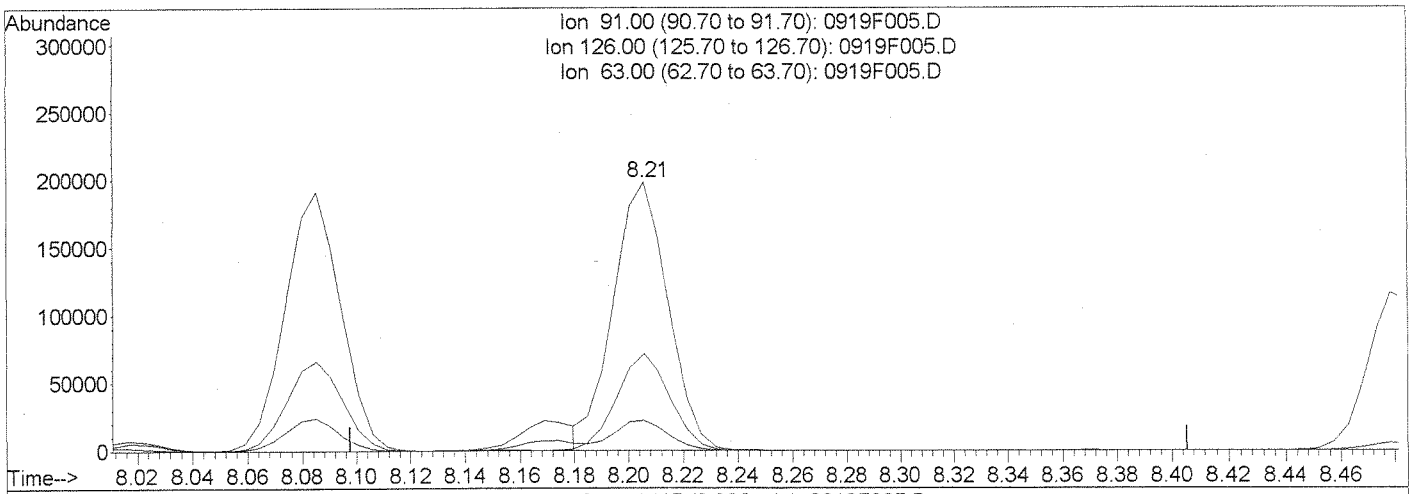
Before

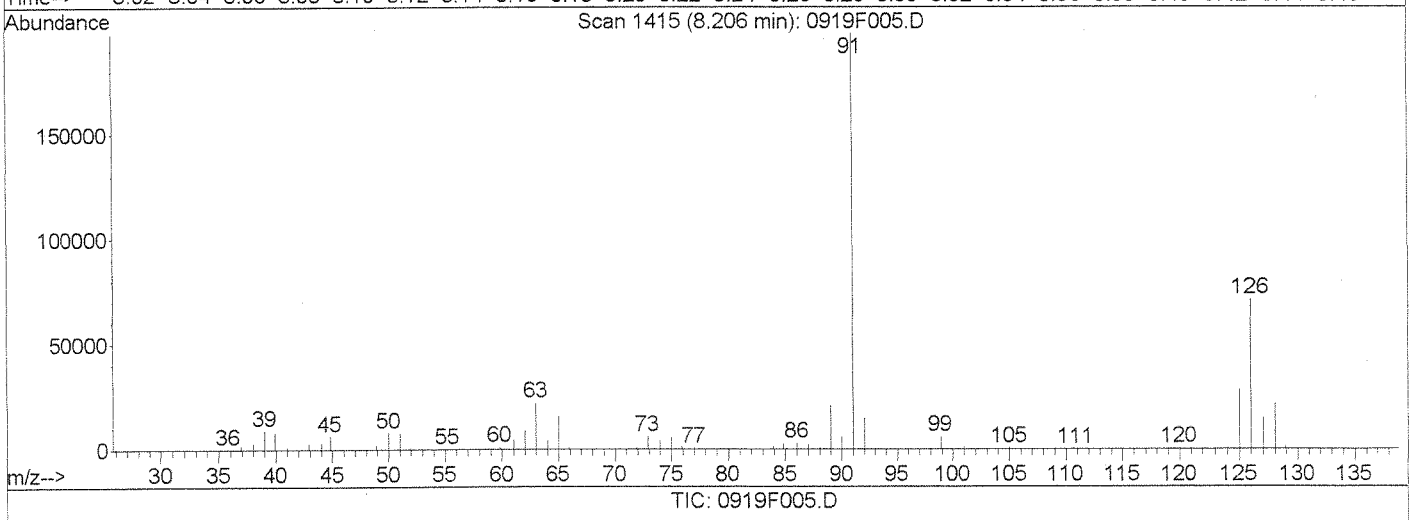
09/19/14

0919F005.D 100713MS24SOIL.M Fri Sep 19 12:08:42 2014

Data File : J:\MS24\DATA\091914\0919F005.D Vial: 4
Acq On : 19 Sep 2014 11:44 am Operator: KR
Sample : SOIL LCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F005.D

(89) 4-Chlorotoluene (T)

8.21min 48.12PPB m

response 277441

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	35.98
63.00	10.90	11.17
0.00	0.00	0.00

Manual Integration:

After

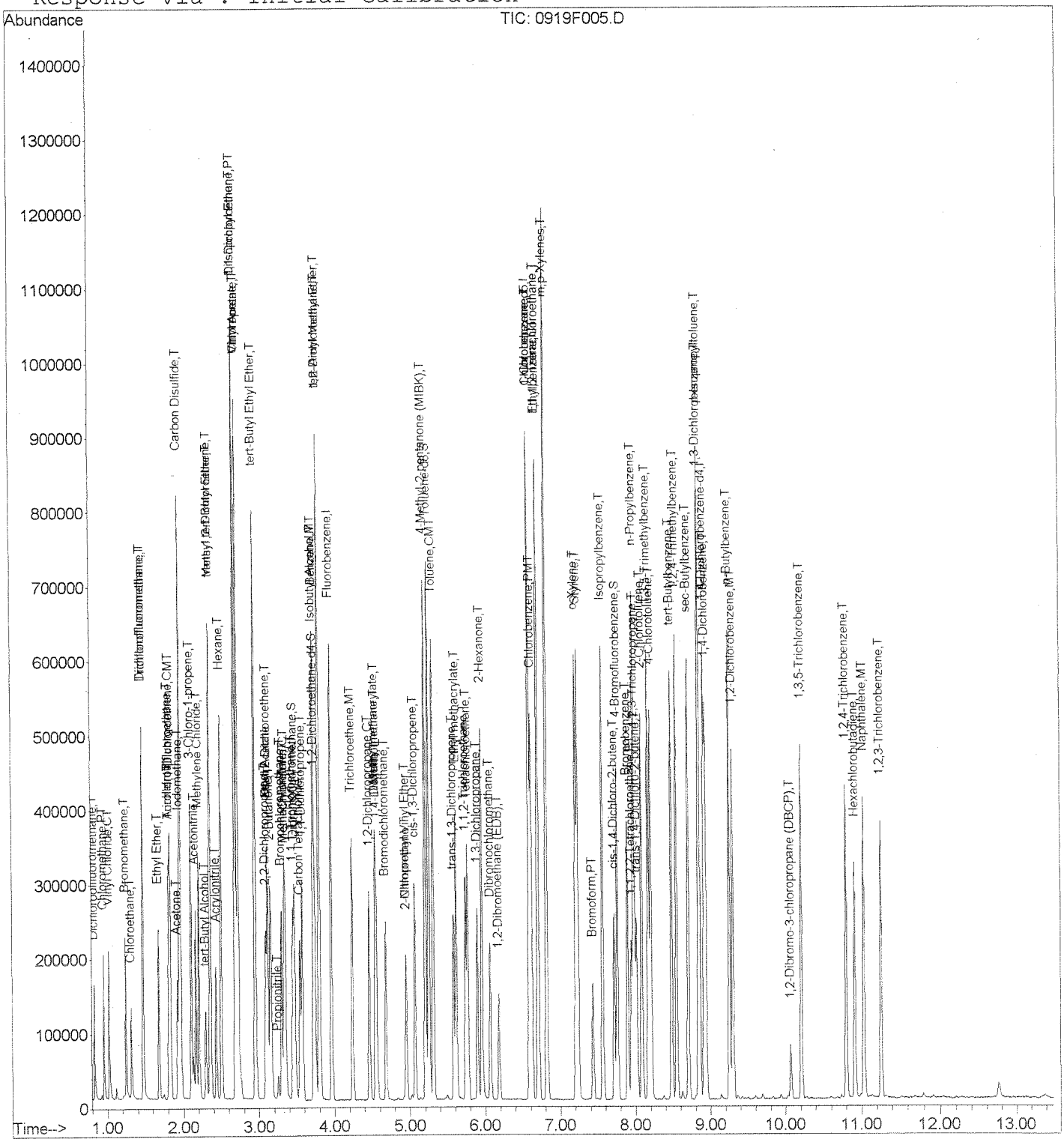
Baseline correction

09/19/14

0919F005.D 100713MS24SOIL.M Fri Sep 19 12:08:48 2014

Data File : J:\MS24\DATA\091914\0919F005.D Vial: 4
Acq On : 19 Sep 2014 11:44 am Operator: KR
Sample : SOIL LCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:08 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS24\DATA\091914\0919F006.D
Lab ID: KWG1412873-4
RunType: DLCS
Matrix: SOIL

Date Acquired: 09/19/2014 12:05
Date Quantitated: 09/19/2014 12:20
Batch ID: KWG1412874
Analysis Method: 8260C
MethodJoinID: MJ120

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Isobutanol	0.0098	0.01	NA	NF
	1,4-Dioxane	0.0028	0.01	NA	↓
Continuing Calibration Recovery	Dichlorodifluoromethane	-61.9	NA	20	↓ RR this group CCVOK
	Chloromethane	-35.4	NA	20	
	Vinyl Chloride	-25.3	NA	20	
	Bromomethane	-34.4	NA	20	
	Chloroethane	-26.6	NA	20	
	Acrolein	-37.4	NA	20	NF
	tert-Butyl Alcohol	-22.3	NA	20	
	n-Hexane	-21.0	NA	20	
	Vinyl Acetate	-26.8	NA	20	
	Bromoform	28.0	NA	20	CCVOK
Continuing Calibration Minimum RF	Dichlorodifluoromethane	0.0798	0.100	NA	MRL ✓

Primary Review: KW 9/19/14

Secondary Review: [illegible] 9/19/14

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Isobutanol	0.0086	0.01	NA	NJ
	1,4-Dioxane	0.0025	0.01	NA	

Primary Review: KA 9/9/14

Secondary Review: [signature] 9/19/14

Quantitation Report

Data File:	J:\MS24\DATA\091914\0919F006.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:05	**Quant Date:**	09/19/2014 12:20	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412873-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/19/2014

Analysis Lot:	KWG1412874	**Prep Lot:**	KWG1412873	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030A		
		Prep Date:	09/19/2014		
Prep Ref:	1376462				

Quant Method:	J:\MS24\METHODS\2010\100713MS24SO	**Calibration ID:**	CAL12826
Title:			
Tune Ref:	J:\MS24\DATA\091914\0919F003.D	**Method ID:**	MJ120
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	3.97	0.00	96	394904	50.00	OK
2	Chlorobenzene-d5	6.60	0.00	82	154005	50.00	OK
3	1,4-Dichlorobenzene-d4	8.91	0.00	152	137552	50.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	3.49	0.00	0.00	113	101024	51.25	103	82-146	OK	
1	1,2-Dichloroethane-d4	3.76	0.00	0.00	65	90519	45.84	92	78-121	OK	
1	Toluene-d8	5.26	0.00	0.00	98	378413	49.60	99	90-142	OK	
2	4-Bromofluorobenzene	7.76	0.00	0.00	95	131849	48.16	96	88-127	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	0.86	-0.01	0.00	85	70874	42.80	42.8		
1	Chloromethane	0.98	-0.01	0.00	50	77435	41.26	41.3		
1	Vinyl Chloride	1.05	-0.01	0.00	62	89304	44.53	44.5		
1	Bromomethane	1.27	-0.01	0.00	96	55613	36.66	36.7		
1	Chloroethane	1.35	-0.01	0.00	64	55003	47.10	47.1		
1	Dichlorofluoromethane (CFC 21	1.50		0.00	67	138368	45.78	45.8		
1	Trichlorofluoromethane	1.49	-0.01	0.00	101	101370	41.83	41.8		
1	Diethyl Ether	1.71		0.00	59	70938	47.53	47.5		
1	Acrolein	1.84	-0.01	0.00	56	25730	84.12	84.1	J	
1	Trichlorotrifluoroethane	1.84	-0.01	0.00	151	52813	44.21	44.2		
1	1,1-Dichloroethene	1.86		0.00	96	72209	55.79	55.8		
1	Acetone	1.95		0.00	43	100669	215.33	215		
1	Iodomethane (Methyl Iodide)	1.97	-0.01	0.00	142	179229	115.75	116		
1	Carbon Disulfide	1.99	-0.01	0.00	76	562187	112.62	113		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F006.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:05	**Quant Date:**	09/19/2014 12:20	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412873-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	3-Chloro-1-propene	2.12	-0.01	0.00	76	70467	70.40	70.4		
1	Methyl Acetate				43	0d		0.57	U	
1	Acetonitrile	2.19		0.00	40	76099	817.27	817		
1	Methylene Chloride	2.23		0.00	84	91747	44.01	44.0		
1	tert-Butyl Alcohol	2.32		0.00	59	86586	419.16	419		
1	Acrylonitrile	2.45	-0.01	0.00	53	78238	128.40	128		
1	Methyl tert-Butyl Ether	2.38		0.00	73	235688	44.79	44.8		
1	trans-1,2-Dichloroethene	2.39		0.00	96	84700	49.63	49.6		
1	n-Hexane	2.52	-0.01	0.00	57	161451	70.93	70.9		
1	Diisopropyl Ether	2.71	-0.01	0.00	45	459863	83.80	83.8		
1	1,1-Dichloroethane	2.71	-0.01	0.00	63	146775	46.77	46.8		
1	Vinyl Acetate	2.75		0.00	86	55987	145.41	145		
1	Chloroprene	2.75		0.00	53	153076	61.71	61.7		
1	tert-Butyl Ethyl Ether	2.97		0.00	59	476375	85.49	85.5		
1	2,2-Dichloropropane	3.11		0.00	77	98517	41.14	41.1		
1	cis-1,2-Dichloroethene	3.14		0.00	96	98417	48.75	48.8		
1	2-Butanone (MEK)	3.17		0.00	72	57016	239.87	240		
1	Propionitrile	3.27		0.00	54	19529	82.17	82.2		
1	Ethyl Acetate	3.14		0.00	61	124750	52.77	53	JN	
1	Methacrylonitrile	3.35		0.00	67	63701	82.02	82.0		
1	Bromochloromethane	3.31		0.00	128	46911	47.19	47.2		
1	Chloroform	3.37		0.00	83	146042	45.71	45.7		
1	Cyclohexane				56	0d		0.15	U	
1	1,1,1-Trichloroethane (TCA)	3.47		0.00	97	109189	45.74	45.7		
1	Carbon Tetrachloride	3.56		0.00	117	94762	48.27	48.3		
1	1,1-Dichloropropene	3.59		0.00	75	104659	51.42	51.4		
1	Isobutanol	3.73		0.00	43	51692	664.72	665		
1	Benzene	3.74		0.00	78	332396	46.56	46.6		
1	1,2-Dichloroethane (EDC)	3.82		0.00	62	93188	42.27	42.3		
1	tert-Amyl Methyl Ether	3.81	-0.01	0.00	55	112927	92.23	92.2		
1	Trichloroethene (TCE)	4.25		0.00	95	80022	45.39	45.4		
1	Methylcyclohexane				83	0d		0.11	U	
1	1,2-Dichloropropane	4.47		0.00	63	80628	44.73	44.7		
1	Dibromomethane	4.57		0.00	93	53110	48.39	48.4		
1	Methyl Methacrylate	4.55		0.00	69	97348	72.97	73.0		
1	1,4-Dioxane	4.57		0.00	88	16464	748.14	748		
1	Bromodichloromethane	4.69		0.00	83	112802	52.37	52.4		
1	2-Nitropropane	4.95		0.00	41	25617	78.32	78.3		
1	2-Chloroethyl Vinyl Ether	4.96		0.00	63	55186	51.79	51.8		
1	cis-1,3-Dichloropropene	5.08		0.00	75	129590	46.40	46.4		
1	4-Methyl-2-pentanone (MIBK)	5.21		0.00	58	158738	254.05	254		
1	Toluene	5.32		0.00	92	200481	44.36	44.4		

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F006.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:05	**Quant Date:**	09/19/2014 12:20	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412873-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	trans-1,3-Dichloropropene	5.58		0.00	75	104622	43.50	43.5		
2	Ethyl Methacrylate	5.62		0.00	69	176038	76.30	76.3		
2	1,1,2-Trichloroethane	5.74	-0.01	0.00	83	64343	46.25	46.3		
2	Tetrachloroethene (PCE)	5.77		0.00	164	62926	45.74	45.7		
2	2-Hexanone	5.96		0.00	57	52116	237.71	238		
2	1,3-Dichloropropane	5.90		0.00	76	126734	45.05	45.1		
2	Dibromochloromethane	6.07		0.00	129	89400	55.42	55.4		
2	1,2-Dibromoethane (EDB)	6.18	-0.01	0.00	107	76230	46.79	46.8		
2	1-Chlorohexane	6.59		0.00	91	94477	39.95	40.0		
2	Chlorobenzene	6.62		0.00	112	226546	45.18	45.2		
2	Ethylbenzene	6.70		0.00	106	114240	44.97	45.0		
2	1,1,1,2-Tetrachloroethane	6.71		0.00	131	80838	48.88	48.9		
2	m,p-Xylenes	6.82		0.00	106	284233	90.12	90.1		
2	o-Xylene	7.21		0.00	106	138632	43.51	43.5		
2	Styrene	7.24		0.00	103	118345**m**	46.84	46.8		
2	Bromoform	7.43		0.00	173	61567	59.77	59.8		
2	Isopropylbenzene	7.57		0.00	105	344583	44.95	45.0		
2	cis-1,4-Dichloro-2-butene	7.72		0.00	89	24302	93.92	93.9		
3	1,1,2,2-Tetrachloroethane	7.95		0.00	83	94290	48.01	48.0		
3	trans-1,4-Dichloro-2-butene	8.02		0.00	53	40007	86.14	86.1		
3	Bromobenzene	7.90		0.00	156	94936	46.30	46.3		
3	n-Propylbenzene	7.98		0.00	91	411187	46.15	46.2		
3	1,2,3-Trichloropropane	8.00		0.00	110	29214	45.80	45.8		
3	2-Chlorotoluene	8.09		0.00	91	251723	46.90	46.9		
3	1,3,5-Trimethylbenzene	8.17		0.00	105	281454	44.65	44.7		
3	4-Chlorotoluene	8.21		0.00	91	250088**m**	44.74	44.7		
3	tert-Butylbenzene	8.48		0.00	119	245196	45.58	45.6		
3	1,2,4-Trimethylbenzene	8.55		0.00	105	286336	44.32	44.3		
3	sec-Butylbenzene	8.70		0.00	105	357845	44.65	44.7		
3	4-Isopropyltoluene	8.85		0.00	119	300940	44.97	45.0		
3	1,3-Dichlorobenzene	8.84		0.00	146	176980	47.01	47.0		
3	1,4-Dichlorobenzene	8.93		0.00	146	178571	46.63	46.6		
3	n-Butylbenzene	9.25		0.00	91	280077	47.56	47.6		
3	1,2-Dichlorobenzene	9.30		0.00	146	171075	46.32	46.3		
3	1,2-Dibromo-3-chloropropane	10.07		0.00	155	15582	51.90	51.9		
3	1,2,4-Trichlorobenzene	10.80		0.00	180	113306	44.17	44.2		
3	Hexachlorobutadiene	10.91		0.00	225	56825	44.86	44.9		
3	Naphthalene	11.03		0.00	128	276033	45.38	45.4		
3	1,2,3-Trichlorobenzene	11.25	-0.01	0.00	180	107771	43.83	43.8		
	4-Vinyl-1-cyclohexene				0	0		5.0	U	NR
	Benzyl Chloride				0	0		5.0	U	NR
	1,3-Butadiene				0	0		1.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS24\DATA\091914\0919F006.D			**Instrument:**	MS24
Acqu Date:	09/19/2014 12:05	**Quant Date:**	09/19/2014 12:20	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412873-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT	RT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2-Methylpentane			0	0		5.0	U	NR
Cyclohexanone			0	0		5.0	U	NR
Tetrahydrofuran			0	0		5.0	U	NR
n-Heptane			0	0		5.0	U	NR
2,2-Dichloro-1,1,1-trifluoroethan			0	0		5.0	U	NR
1,1,2-Trifluoroethane			0	0		10	U	NR
2,2,4-Trimethylpentane			0	0		5.0	U	NR
Bis(chloromethyl) Ether			0	0		10	U	NR
Ethyl Alcohol			0	0		200	U	NR
2-Propanol			0	0		200	U	NR
Hexachloroethane			0	0		1.0	U	NR
n-Butyl Alcohol			0	0		250	U	NR
3-Methylpentane			0	0		5.0	U	NR
Methylcyclopentane			0	0		5.0	U	NR

Prep Amount:	5.00 g	**Dilution:**	1.0
Prep Final Vol:	5.0 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS24\DATA\091914\0919F006.D Vial: 5
Acq On : 19 Sep 2014 12:05 pm Operator: KR
Sample : SOIL DLCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:19:59 2014 Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	3.97	96	394904	50.00	PPB	0.00
61) Chlorobenzene-d5	6.60	82	154005	50.00	PPB	0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	137552	50.00	PPB	0.00
System Monitoring Compounds						
40) Dibromofluoromethane	3.49	113	101024	51.25	PPB	0.00
Spiked Amount 50.000			Recovery =	102.50%		
44) 1,2-Dichloroethane-d4	3.76	65	90519	45.84	PPB	0.00
Spiked Amount 50.000			Recovery =	91.68%		
59) Toluene-d8	5.26	98	378413	49.60	PPB	0.00
Spiked Amount 50.000			Recovery =	99.20%		
80) 4-Bromofluorobenzene	7.76	95	131849	48.16	PPB	0.00
Spiked Amount 50.000			Recovery =	96.32%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.86	85	70874	42.80	PPB	98
3) Chloromethane	0.98	50	77435	41.26	PPB	96
4) Vinyl Chloride	1.05	62	89304	44.53	PPB	98
5) Bromomethane	1.27	96	55613	36.66	PPB	100
6) Chloroethane	1.35	64	55003	47.10	PPB	99
7) Dichlorofluoromethane	1.50	67	138368	45.78	PPB	97
8) Trichlorofluoromethane	1.49	101	101370	41.83	PPB	99
9) Ethyl Ether	1.71	59	70938	47.53	PPB	99
10) Acrolein	1.84	56	25730	84.12	PPB	98
11) Trichlorotrifluoroethane	1.84	151	52813	44.21	PPB	93
12) 1,1-Dichloroethene	1.86	96	72209	55.79	PPB	95
13) Acetone	1.95	43	100669	215.33	PPB	98
14) Iodomethane	1.97	142	179229	115.75	PPB	97
15) Carbon Disulfide	1.99	76	562187	112.62	PPB	100
16) 3-Chloro-1-propene	2.12	76	70467	70.40	PPB	90
18) Acetonitrile	2.19	40	76099	817.27	PPB	98
19) Methylene Chloride	2.23	84	91747	44.01	PPB	99
20) tert-Butyl Alcohol	2.32	59	86586	419.16	PPB	98
21) Acrylonitrile	2.45	53	78238	128.40	PPB	100
22) Methyl tert-Butyl Ether	2.38	73	235688	44.79	PPB	98
23) trans-1,2-Dichloroethene	2.39	96	84700	49.63	PPB	99
24) Hexane	2.52	57	161451	70.93	PPB	98
25) Diisopropyl Ether	2.71	45	459863	83.80	PPB	99
26) 1,1-Dichloroethane	2.71	63	146775	46.77	PPB	100
27) Vinyl Acetate	2.75	86	55987	145.41	PPB	95
28) Chloroprene	2.75	53	153076	61.71	PPB	98
29) tert-Butyl Ethyl Ether	2.97	59	476375	85.49	PPB	99

(#) = qualifier out of range (m) = manual integration
0919F006.D 100713MS24SOIL.M Fri Sep 19 12:20:37 2014 Page 1

Data File : J:\MS24\DATA\091914\0919F006.D
Acq On : 19 Sep 2014 12:05 pm
Sample : SOIL DLCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:19:59 2014

Vial: 5
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	2,2-Dichloropropane	3.11	77	98517	41.14	PPB		99
31)	cis-1,2-Dichloroethene	3.14	96	98417	48.75	PPB		95
32)	2-Butanone	3.17	72	57016	239.87	PPB	#	78
33)	Propionitrile	3.27	54	19529	82.17	PPB		97
34)	Ethyl Acetate	3.14	61	124750	52.77	PPB		100
35)	Methacrylonitrile	3.35	67	63701	82.02	PPB		95
36)	Bromochloromethane	3.31	128	46911	47.19	PPB		89
37)	Chloroform	3.37	83	146042	45.71	PPB		99
39)	1,1,1-Trichloroethane	3.47	97	109189	45.74	PPB		96
41)	Carbon Tetrachloride	3.56	117	94762	48.27	PPB		99
42)	1,1-Dichloropropene	3.59	75	104659	51.42	PPB		98
43)	Isobutyl Alcohol	3.73	43	51692	664.72	PPB		98
45)	Benzene	3.74	78	332396	46.56	PPB		98
46)	1,2-Dichloroethane	3.82	62	93188	42.27	PPB		98
47)	tert-Amyl Methyl Ether	3.81	55	112927	92.23	PPB	#	80
48)	Trichloroethene	4.25	95	80022	45.39	PPB		98
50)	1,2-Dichloropropane	4.47	63	80628	44.73	PPB		98
51)	Dibromomethane	4.57	93	53110	48.39	PPB		96
52)	Methyl methacrylate	4.55	69	97348	72.97	PPB		96
53)	1,4-Dioxane	4.57	88	16464	748.14	PPB		92
54)	Bromodichloromethane	4.69	83	112802	52.37	PPB		98
55)	2-Nitropropane	4.95	41	25617	78.32	PPB	#	76
56)	2-Chloroethyl Vinyl Ether	4.96	63	55186	51.79	PPB		97
57)	cis-1,3-Dichloropropene	5.08	75	129590	46.40	PPB		99
58)	4-Methyl-2-pentanone (MIBK	5.21	58	158738	254.05	PPB		98
60)	Toluene	5.32	92	200481	44.36	PPB		99
62)	trans-1,3-Dichloropropene	5.58	75	104622	43.50	PPB		97
63)	Ethyl methacrylate	5.62	69	176038	76.30	PPB		97
64)	1,1,2-Trichloroethane	5.74	83	64343	46.25	PPB		97
65)	Tetrachloroethene	5.77	164	62926	45.74	PPB		96
66)	2-Hexanone	5.96	57	52116	237.71	PPB		95
67)	1,3-Dichloropropane	5.90	76	126734	45.05	PPB		98
68)	Dibromochloromethane	6.07	129	89400	55.42	PPB		98
69)	1,2-Dibromoethane (EDB)	6.18	107	76230	46.79	PPB		98
70)	1-Chlorohexane	6.59	91	94477	39.95	PPB		99
71)	Chlorobenzene	6.62	112	226546	45.18	PPB		97
72)	Ethylbenzene	6.70	106	114240	44.97	PPB		96
73)	1,1,1,2-Tetrachloroethane	6.71	131	80838	48.88	PPB		98
74)	m,p-Xylenes	6.82	106	284233	90.12	PPB		96
75)	o-Xylene	7.21	106	138632	43.51	PPB		97
76)	Styrene	7.24	103	118345m	46.84	PPB		

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F006.D
Acq On : 19 Sep 2014 12:05 pm
Sample : SOIL DLCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:19:59 2014

Vial: 5
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

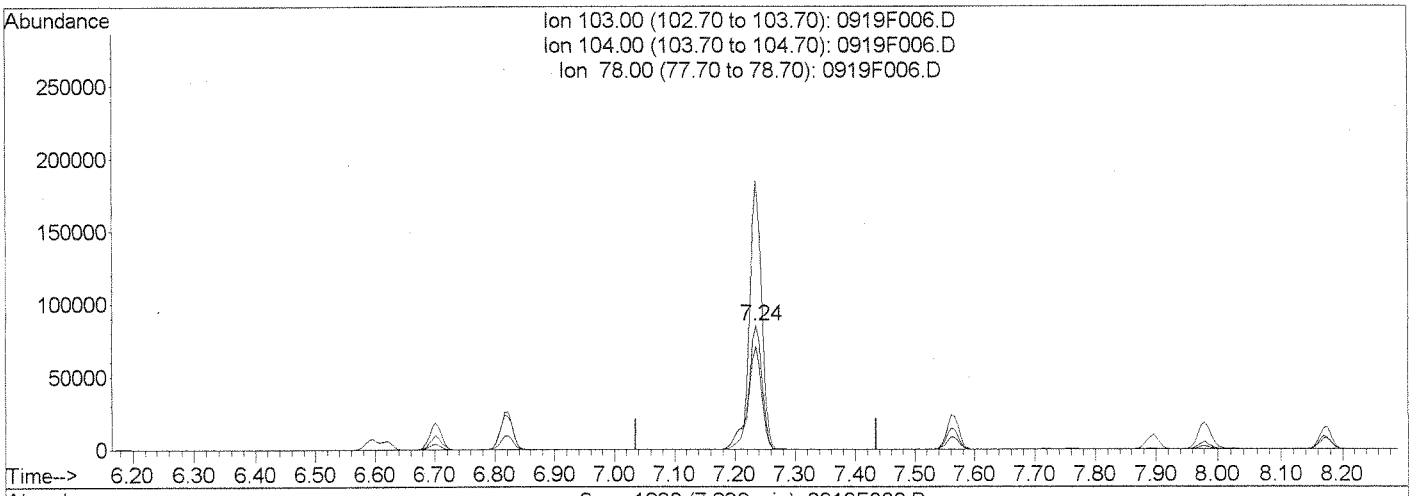
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77)	Bromoform	7.43	173	61567	59.77	PPB	98
78)	Isopropylbenzene	7.57	105	344583	44.95	PPB	99
79)	cis-1,4-Dichloro-2-butene	7.72	89	24302	93.92	PPB	90
82)	1,1,2,2-Tetrachloroethane	7.95	83	94290	48.01	PPB	97
83)	trans-1,4-Dichloro-2-buten	8.02	53	40007	86.14	PPB	86
84)	Bromobenzene	7.90	156	94936	46.30	PPB	99
85)	n-Propylbenzene	7.98	91	411187	46.15	PPB	98
86)	1,2,3-Trichloropropane	8.00	110	29214	45.80	PPB	98
87)	2-Chlorotoluene	8.09	91	251723	46.90	PPB	97
88)	1,3,5-Trimethylbenzene	8.17	105	281454	44.65	PPB	97
89)	4-Chlorotoluene	8.21	91	250088m	44.74	PPB	
90)	tert-Butylbenzene	8.48	119	245196	45.58	PPB	97
91)	1,2,4-Trimethylbenzene	8.55	105	286336	44.32	PPB	99
92)	sec-Butylbenzene	8.70	105	357845	44.65	PPB	99
93)	p-Isopropyltoluene	8.85	119	300940	44.97	PPB	99
94)	1,3-Dichlorobenzene	8.84	146	176980	47.01	PPB	99
95)	1,4-Dichlorobenzene	8.93	146	178571	46.63	PPB	99
96)	n-Butylbenzene	9.25	91	280077	47.56	PPB	100
97)	1,2-Dichlorobenzene	9.30	146	171075	46.32	PPB	99
98)	1,2-Dibromo-3-chloropropan	10.07	155	15582	51.90	PPB	91
99)	1,3,5-Trichlorobenzene	10.21	180	127888	45.70	PPB	97
100)	1,2,4-Trichlorobenzene	10.80	180	113306	44.17	PPB	99
101)	Hexachlorobutadiene	10.91	225	56825	44.86	PPB	100
102)	Naphthalene	11.03	128	276033	45.38	PPB	98
103)	1,2,3-Trichlorobenzene	11.25	180	107771	43.83	PPB	97

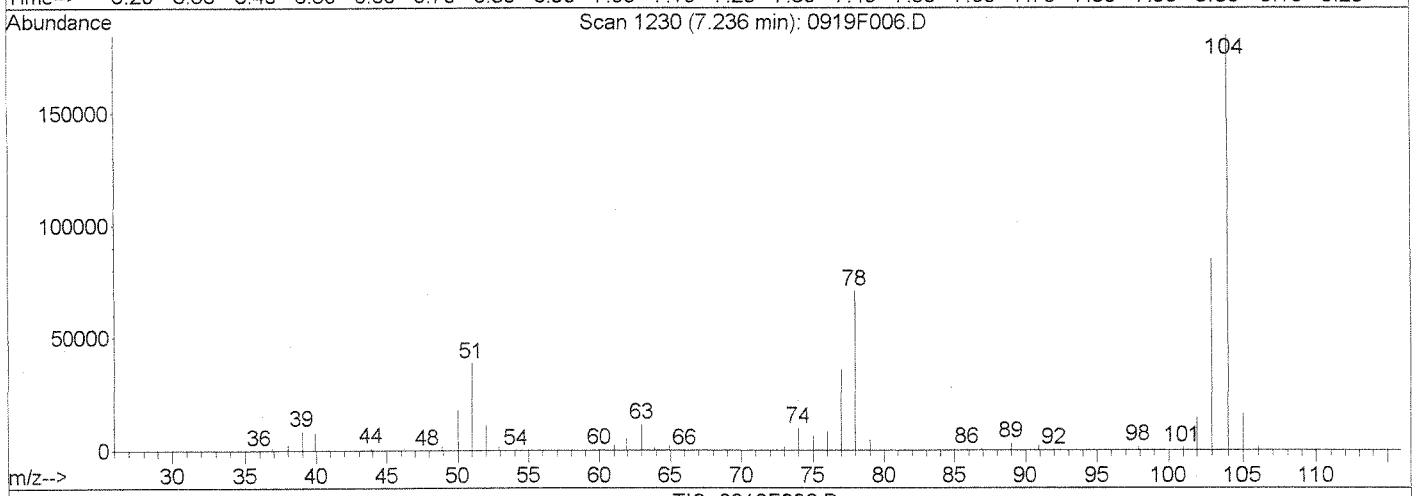
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS24\DATA\091914\0919F006.D Vial: 5
Acq On : 19 Sep 2014 12:05 pm Operator: KR
Sample : SOIL DLCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:20 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F006.D

(76) Styrene (T)

7.24min 54.16PPB

response 136849

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	217.31
78.00	79.00	82.99
0.00	0.00	0.00

Manual Integration:

Before

09/19/14

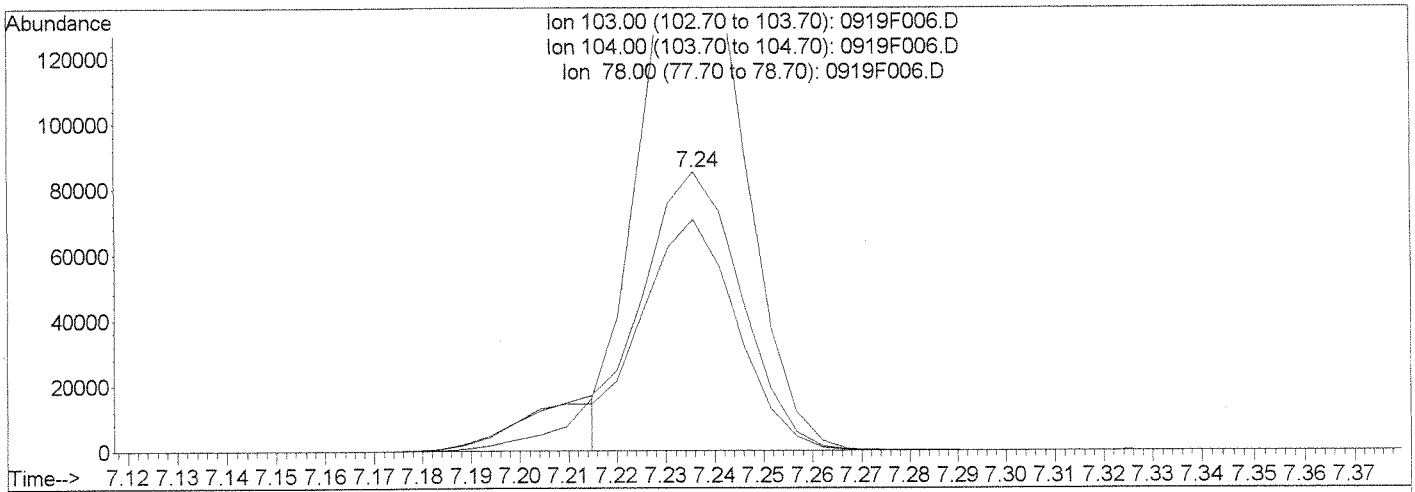
0919F006.D 100713MS24SOIL.M Fri Sep 19 12:20:19 2014

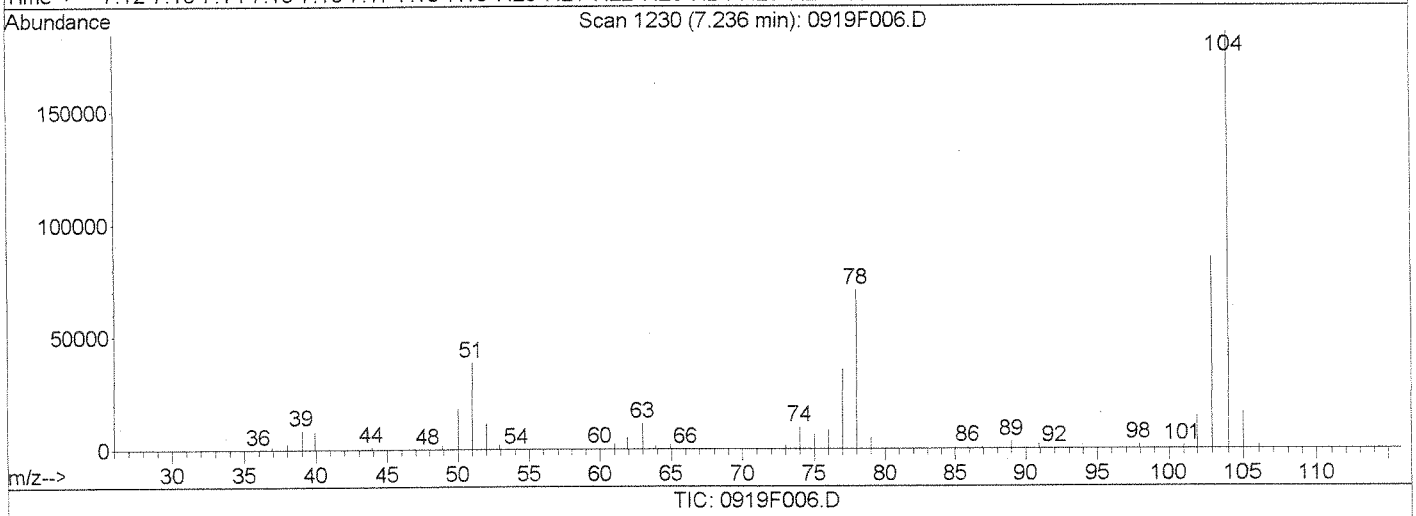
Quantitation Report (Qedit)

Data File : J:\MS24\DATA\091914\0919F006.D
Acq On : 19 Sep 2014 12:05 pm
Sample : SOIL DLCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:20 2014

Vial: 5
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Single Level Calibration





TIC: 0919F006.D

(76) Styrene (T)

7.24min 46.84PPB m

response 118345

Ion	Exp%	Act%
103.00	100	100
104.00	207.00	217.31
78.00	79.00	82.99
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

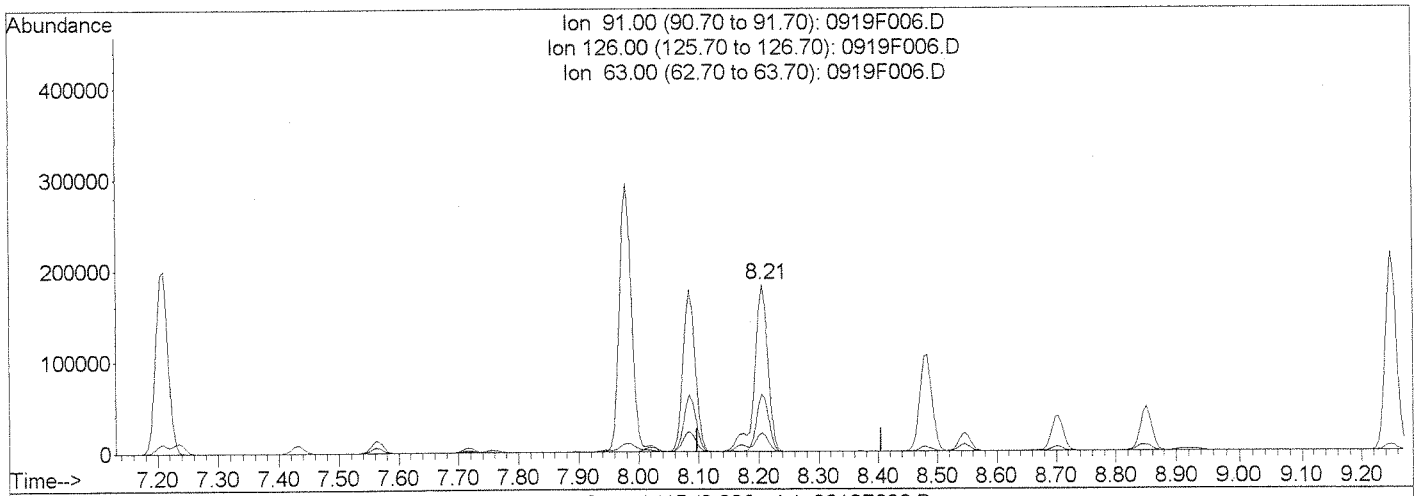
09/19/14

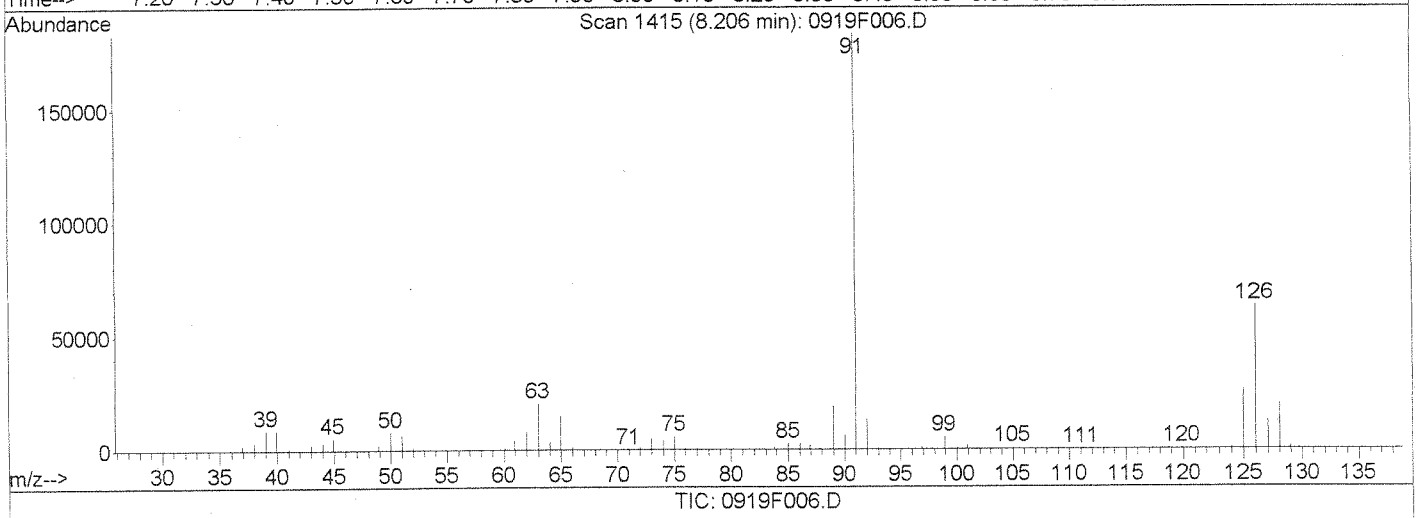
0919F006.D 100713MS24SOIL.M Fri Sep 19 12:20:24 2014

Data File : J:\MS24\DATA\091914\0919F006.D
Acq On : 19 Sep 2014 12:05 pm
Sample : SOIL DLCS
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 12:20 2014

Vial: 5
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F006.D

(89) 4-Chlorotoluene (T)

8.21min 50.73PPB

response 283568

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.45
63.00	10.90	11.16
0.00	0.00	0.00

Manual Integration:

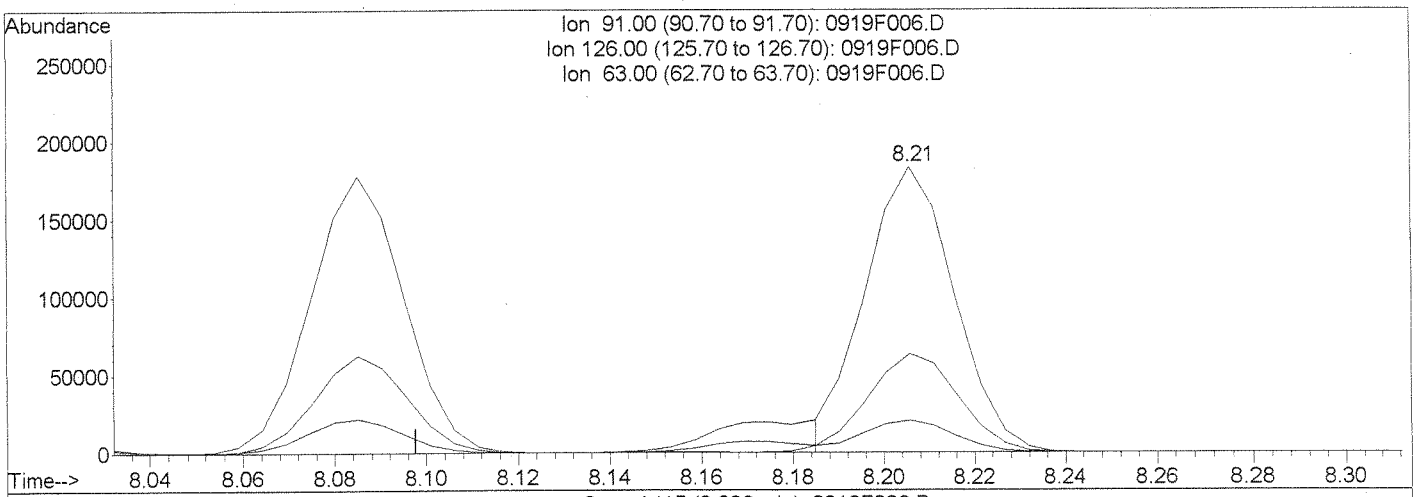
Before

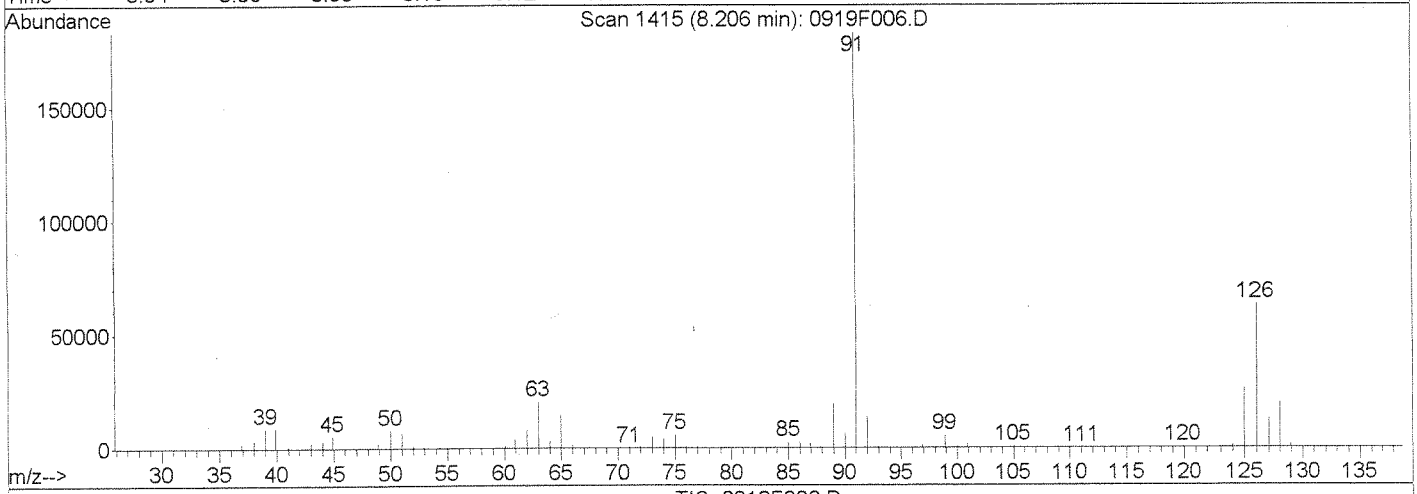
09/19/14

0919F006.D 100713MS24SOIL.M Fri Sep 19 12:20:27 2014

Data File : J:\MS24\DATA\091914\0919F006.D Vial: 5
Acq On : 19 Sep 2014 12:05 pm Operator: KR
Sample : SOIL DLCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:20 2014 Quant Results File: temp.res

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Multiple Level Calibration





TIC: 0919F006.D

(89) 4-Chlorotoluene (T)

8.21min 44.74PPB m

response 250088

Ion	Exp%	Act%
91.00	100	100
126.00	34.50	34.45
63.00	10.90	11.16
0.00	0.00	0.00

Manual Integration:

After

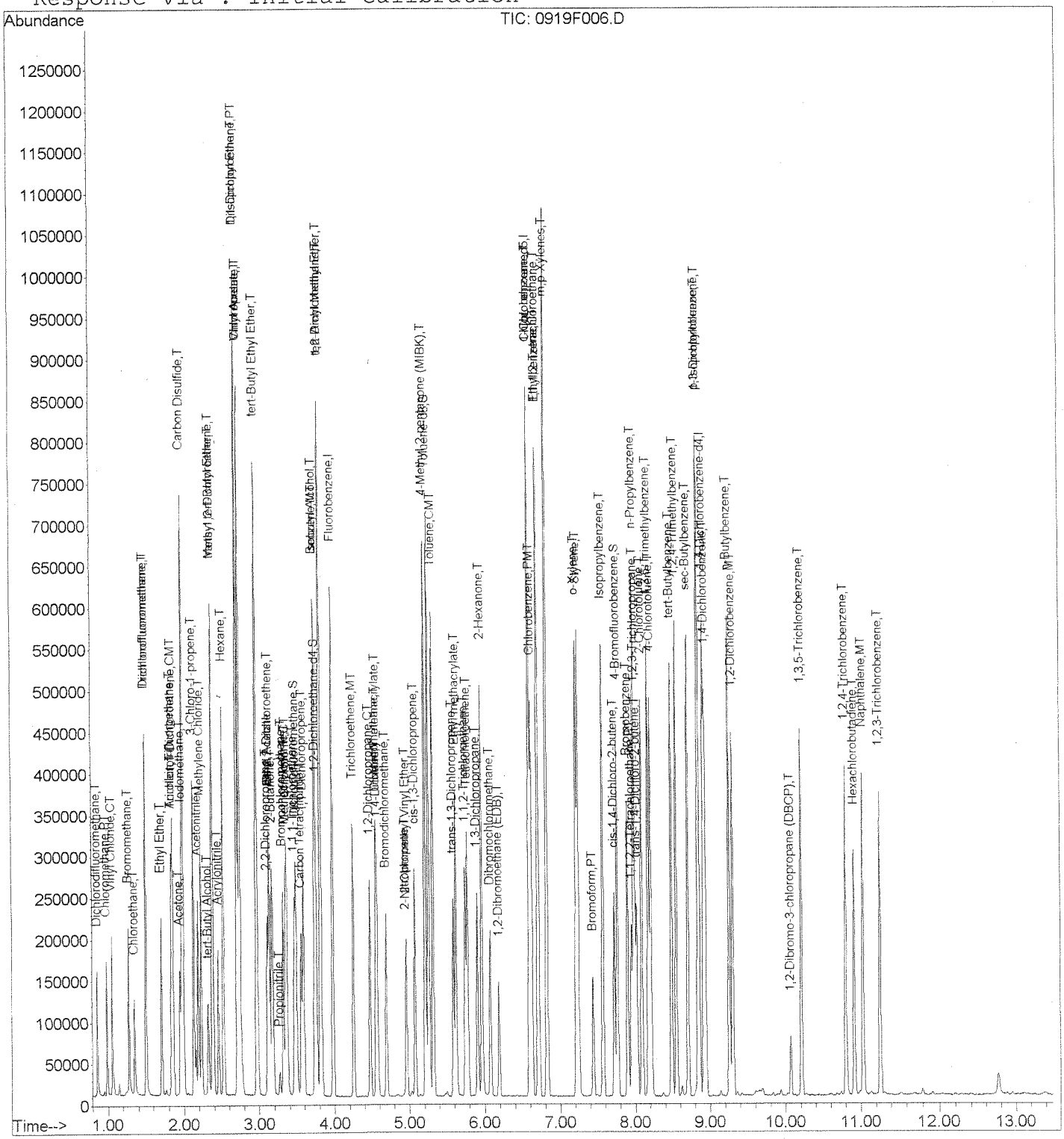
Baseline correction

09/19/14

0919F006.D 100713MS24SOIL.M Fri Sep 19 12:20:32 2014

Data File : J:\MS24\DATA\091914\0919F006.D Vial: 5
Acq On : 19 Sep 2014 12:05 pm Operator: KR
Sample : SOIL DLCS Inst : MS24
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 19 12:20 2014 Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration



Date: 9/19/14

By: KL

IS/SS Std. ID: 76VOA-9A 9/16

CCV Std ID: 76VOA 73B 9/13

MS/DMS/LCS/ICV Std ID: 76VOA-38B 9/16 | 2B 9/14 | 3C 9/14

BFB Std. ID: 76VOA-4B 9/11 | 38 9/15 | 3C 9/14

ALS Environmental
Injection Log
MS24 - Agilent 5975

Tune File: tishame

New Tune: NO

412208

ICAL Date: 10/3/13 Cal 12326

Second RV: 9/19/14 3-16 9/24/14

LIMS ID: KWG1412874 / 12873

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	0919F003	8260.M	1µL+5mL		
2	CCV	4		25µL 5mL		
3	LCS	5		5-150/10/10/10µL - 5mL		
4	DLCS	6				
5	K10113-3MS	7				
6	L 3DMS	8				
7	IB	9				
8	MRL	10		1µL-5mL		
9	MB	11				
10	K10113-3	12				
11	8	13				
12	12	14				
13	15	15				
14	16	16				
15	IB	17				
16	K9921-4	18				
17	5	19				
18	6	20				
19	7	21				
20	8	22				
21	9	23				
22	10	24				
23	11	45				
24						
25						
26						
27						

ALS Laboratory

Service Request No.: 10113, 9921 Analysis: 8260 -

Analyst: KR Date: 9/19/14

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
10113 - 3	5.072				5.0			
8	5.095							
12	5.197							
15	5.196							
16	5.145							
3 MS	5.133							
3 DMS	5.030							
K9921 - 4	6.77	35.57	42.44	0.1				
5	5.05	35.78	40.93					
6	4.49	31.02	35.61					
7	4.70	35.36	40.16					
8	3.51	35.31	38.92					
9	5.75	34.52	40.37					
10	2.30	35.38	38.78					
11	5.65	35.30	41.05					
LCS	5.000							
DLCS	5.000							
MB	5.000							

Start Time: 11:24 Stop Time: 11:40 Reviewed by and date: 9/19/14

P&T MeOH Lot No (Mid-levels only).: —

Comments: _____

Final Volume MeOH and Water = mL of solvent + ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode ony = 0.1g

Data File : J:\MS24\DATA\091914\0919F010.D
Acq On : 19 Sep 2014 1:37 pm
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:30:47 2014

Vial: 9
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

KR 9/19/14 JM 9/19/14

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	3.98	96	396865	50.00	PPB		0.00
61) Chlorobenzene-d5	6.60	82	150208	50.00	PPB		0.00
81) 1,4-Dichlorobenzene-d4	8.91	152	136691	50.00	PPB		0.00
System Monitoring Compounds							
40) Dibromofluoromethane	3.49	113	96202	48.56	PPB		0.00
Spiked Amount 50.000			Recovery =	97.12%			
44) 1,2-Dichloroethane-d4	3.76	65	89499	45.10	PPB		0.00
Spiked Amount 50.000			Recovery =	90.20%			
59) Toluene-d8	5.26	98	365581	47.68	PPB		0.00
Spiked Amount 50.000			Recovery =	95.36%			
80) 4-Bromofluorobenzene	7.76	95	130044	48.70	PPB		0.00
Spiked Amount 50.000			Recovery =	97.40%			
Target Compounds				JV=2.0			Qvalue
2) Dichlorodifluoromethane	0.87	85	838	0.50	PPB		87
3) Chloromethane	0.99	50	2202	~~1.17~~	PPB		98
4) Vinyl Chloride	1.06	62	2314	1.15	PPB		95
5) Bromomethane	1.29	96	2439	1.60	PPB		91
6) Chloroethane	1.36	64	1502	1.28	PPB		93
7) Dichlorofluoromethane	1.51	67	4607	1.52	PPB		97
8) Trichlorofluoromethane	1.51	101	3501	1.44	PPB		95
9) Ethyl Ether	1.72	59	2919	1.95	PPB		90
10) Acrolein	1.85	56	2167	7.05	PPB		91
11) Trichlorotrifluoroethane	1.85	151	1314	1.09	PPB		94
12) 1,1-Dichloroethene	1.87	96	2127	1.64	PPB		98
13) Acetone	1.96	43	6610	13.56	PPB		99
14) Iodomethane	1.98	142	2117	1.36	PPB		92
15) Carbon Disulfide	2.00	76	7525	1.50	PPB		100
16) 3-Chloro-1-propene	2.13	76	1525	1.52	PPB		93
17) Methyl Acetate	2.16	43	3562	2.92	PPB	#	89
18) Acetonitrile	2.20	40	10766	115.05	PPB	#	72
19) Methylene Chloride	2.24	84	13312	6.35	PPB		92
20) tert-Butyl Alcohol	2.33	59	3120	15.03	PPB		93
21) Acrylonitrile	2.46	53	3323	5.43	PPB		89
22) Methyl tert-Butyl Ether	2.39	73	29007	5.48	PPB		97
23) trans-1,2-Dichloroethene	2.40	96	3183	1.86	PPB		87
24) Hexane	2.53	57	3075	1.34	PPB		90
25) Diisopropyl Ether	2.72	45	12491	2.26	PPB		96
26) 1,1-Dichloroethane	2.72	63	5695	1.81	PPB		95
27) Vinyl Acetate	2.75	86	754	1.95	PPB		94
28) Chloroprene	2.75	53	6992	2.80	PPB		95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F010.D
Acq On : 19 Sep 2014 1:37 pm
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:30:47 2014

Vial: 9
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
29) tert-Butyl Ethyl Ether	2.98	59	12898	2.30	PPB		97
30) 2,2-Dichloropropane	3.11	77	3386	1.41	PPB		96
31) cis-1,2-Dichloroethene	3.14	96	4703	2.32	PPB		92
32) 2-Butanone	3.17	72	1583	6.63	PPB		93
33) Propionitrile	3.27	54	1543	6.46	PPB		97
34) Ethyl Acetate	3.14	61	5764	2.43	PPB		98
35) Methacrylonitrile	3.35	67	4133	5.30	PPB		96
36) Bromochloromethane	3.32	128	2302	2.30	PPB		81
37) Chloroform	3.37	83	6195	1.93	PPB		89
38) Cyclohexane	3.45	56	3026	1.23	PPB		87
39) 1,1,1-Trichloroethane	3.47	97	4021	1.68	PPB		97
41) Carbon Tetrachloride	3.56	117	3101	1.57	PPB		92
42) 1,1-Dichloropropene	3.60	75	3293	1.61	PPB		92
43) Isobutyl Alcohol	3.73	43	3516	44.99	PPB		95
45) Benzene	3.74	78	14109	1.97	PPB		80
46) 1,2-Dichloroethane	3.82	62	5245	2.37	PPB		89
47) tert-Amyl Methyl Ether	3.82	55	3398	2.76	PPB		97
48) Trichloroethene	4.25	95	3367	1.90	PPB		97
49) Methylcyclohexane	4.34	83	3429	1.25	PPB		97
50) 1,2-Dichloropropane	4.48	63	4260	2.35	PPB		93
51) Dibromomethane	4.57	93	2717	2.46	PPB	#	82
52) Methyl methacrylate	4.56	69	3109	2.32	PPB		83
53) 1,4-Dioxane	4.57	88	1116	50.46	PPB		99
54) Bromodichloromethane	4.69	83	6040	2.79	PPB		93
55) 2-Nitropropane	4.95	41	2420	7.36	PPB		95
56) 2-Chloroethyl Vinyl Ether	4.97	63	2584	2.41	PPB		94
57) cis-1,3-Dichloropropene	5.08	75	7156	2.55	PPB		91
58) 4-Methyl-2-pentanone (MIBK	5.21	58	3072	4.89	PPB		91
60) Toluene	5.32	92	9101	2.00	PPB		89
62) trans-1,3-Dichloropropene	5.58	75	5931	2.53	PPB		91
63) Ethyl methacrylate	5.62	69	5308	2.36	PPB		95
64) 1,1,2-Trichloroethane	5.74	83	3801	2.80	PPB		93
65) Tetrachloroethene	5.78	164	2519	1.88	PPB		95
66) 2-Hexanone	5.96	57	987	4.62	PPB	#	74
67) 1,3-Dichloropropane	5.90	76	7857	2.86	PPB		99
68) Dibromochloromethane	6.07	129	5042	3.20	PPB		96
69) 1,2-Dibromoethane (EDB)	6.19	107	4391	2.76	PPB		75
70) 1-Chlorohexane	6.59	91	3852	1.67	PPB		82
71) Chlorobenzene	6.62	112	11947	2.44	PPB		97
72) Ethylbenzene	6.71	106	5407	2.18	PPB		92
73) 1,1,1,2-Tetrachloroethane	6.71	131	4237	2.63	PPB		94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F010.D
Acq On : 19 Sep 2014 1:37 pm
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:30:47 2014

Vial: 9
Operator: KR
Inst : MS24
Multiplr: 1.00
Quant Results File: 100713MS24SOIL.

Quant Method : J:\MS24\M...\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration
DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) m,p-Xylenes	6.82	106	12369	4.02	PPB	95
75) o-Xylene	7.21	106	6794	2.19	PPB	93
76) Styrene	7.24	103	6774	2.75	PPB	91
77) Bromoform	7.43	173	3678	3.66	PPB	95
78) Isopropylbenzene	7.57	105	14632	1.96	PPB	97
79) cis-1,4-Dichloro-2-butene	7.72	89	1338	5.30	PPB	89
82) 1,1,2,2-Tetrachloroethane	7.95	83	5846	3.00	PPB	92
83) trans-1,4-Dichloro-2-buten	8.01	53	1173	2.54	PPB	84
84) Bromobenzene	7.90	156	5363	2.63	PPB	95
85) n-Propylbenzene	7.98	91	17931	2.03	PPB	100
86) 1,2,3-Trichloropropane	8.00	110	1870	2.95	PPB	95
87) 2-Chlorotoluene	8.09	91	12045	2.26	PPB	90
88) 1,3,5-Trimethylbenzene	8.17	105	12404	1.98	PPB	94
89) 4-Chlorotoluene	8.21	91	14391	2.59	PPB	98
90) tert-Butylbenzene	8.48	119	10392	1.94	PPB	93
91) 1,2,4-Trimethylbenzene	8.55	105	12854	2.00	PPB	90
92) sec-Butylbenzene	8.70	105	15016	1.89	PPB	98
93) p-Isopropyltoluene	8.85	119	12292	1.85	PPB	98
94) 1,3-Dichlorobenzene	8.84	146	9226	2.47	PPB	98
95) 1,4-Dichlorobenzene	8.93	146	9631	2.53	PPB	96
96) n-Butylbenzene	9.25	91	11689	2.00	PPB	98
97) 1,2-Dichlorobenzene	9.30	146	9156	2.49	PPB	95
98) 1,2-Dibromo-3-chloropropan	10.06	155	902	3.02	PPB	75
99) 1,3,5-Trichlorobenzene	10.20	180	6265	2.25	PPB	93
100) 1,2,4-Trichlorobenzene	10.80	180	6086	2.39	PPB	96
101) Hexachlorobutadiene	10.91	225	2677	2.13	PPB	87
102) Naphthalene	11.03	128	17728	2.93	PPB	98
103) 1,2,3-Trichlorobenzene	11.26	180	6397	2.62	PPB	94

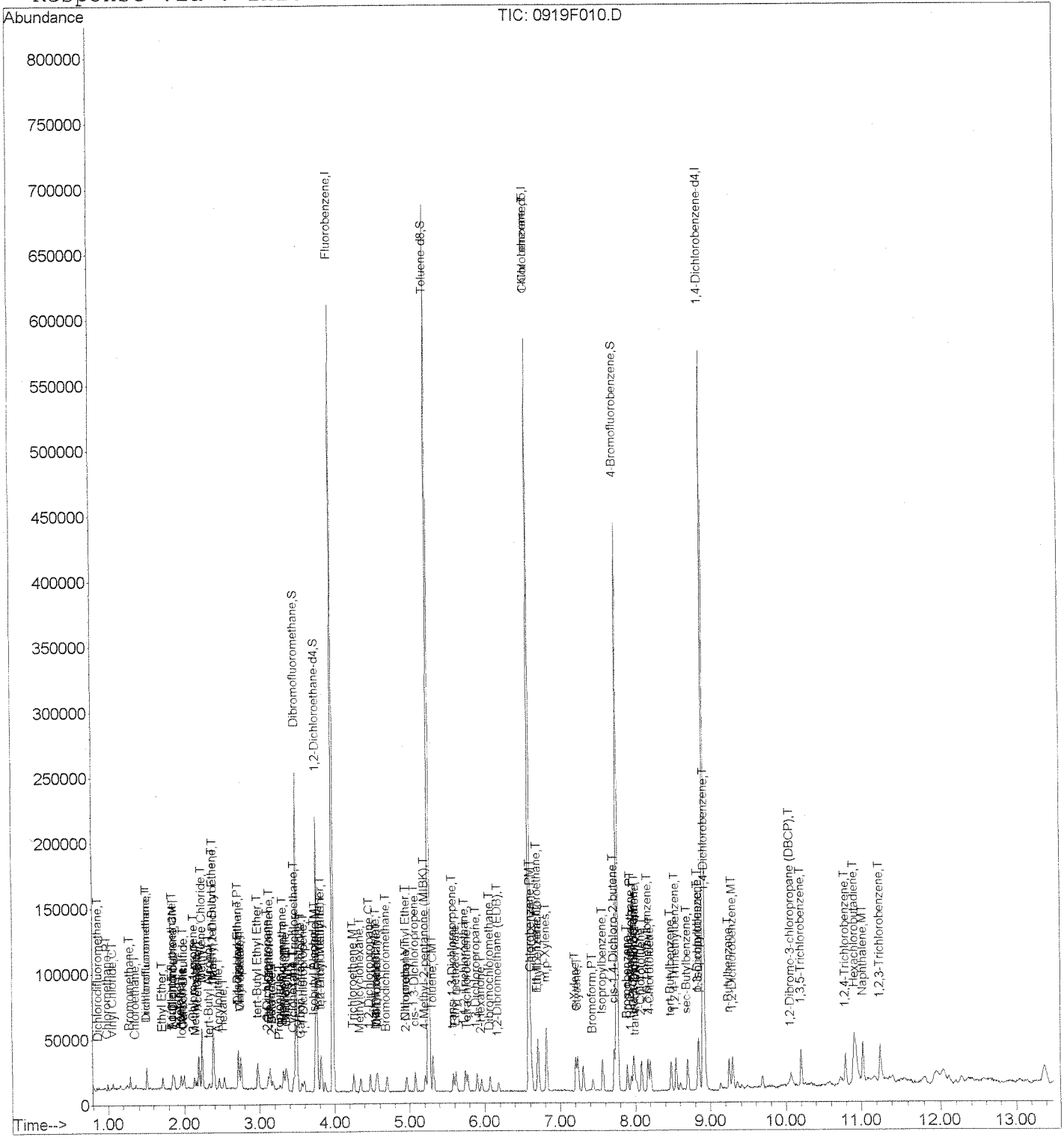
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS24\DATA\091914\0919F010.D
Acq On : 19 Sep 2014 1:37 pm
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 19 14:30 2014

Vial: 9
Operator: KR
Inst : MS24
Multiplr: 1.00

Quant Results File: 100713MS24SO

Method : J:\MS24\METHODS\2010\100713MS24SOIL.M (RTE Integrator)
Title : VOA MS24 EPA Method 8260B
Last Update : Wed Sep 10 09:19:43 2014
Response via : Initial Calibration



412328

Date: 9/20/14

ALS Environmental
Injection Log
MS18 - Agilent 5973

Tune File: BFB.U

By: YH

New Tune: No

IS/SS Std. ID: 76VOA-25D 10/10/14

CCV Std ID: 76VOA-28A/37A 9/24/14

ICAL Date: 9/17/14 Cal 13556

MS/DMS/LCS/ICV Std ID: 76VOA-35B/36B/36C/38C/36D 9/24/14

Second RV: 9/24/14

BFB Std. ID: 76VOA-04B 9/24/14

LIMS ID: LW6141290S(A)/12906(P)

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Primer	0920F001	8260.M			
2	BFB	2		4.4µl→44ml		failed
3	BFB	3		↓		
4	8260 CCV	4		5/10µl→50ml		
5	8260 LCS	5		10/50/5/5/7.5µl→50ml		
6	9859-12MS	6		2.5x 20ml→50ml	—	
7	↓ 12DMS	7		↓ ↓	—	
8	1B	8				
9	MRL	9		0.25/0.5µl→50ml		
10	MB	10				
11	9859-14 TB	11			—	54400
12	9825-22 TB	12			—	54447
13	1	13			—	
14	2	14			—	
15	3	15			—	
16	4	16			—	
17	5	17			—	
18	9921-12 6	18 19			6	
19	13	19 20			6	
20	14	20 21			6	
21	15	21 22			6	
22	16	22 23			6	
23	17	23 24			6	
24	9859-B	25			—	
25	9	26			—	
26	10	27			—	
27	11	28			—	

Date: 9/20/14

By: HH

IS/SS Std. ID:

CCV Std ID:

MS/DMS/LCS/ICV Std ID:

BFB Std. ID:

ALS Environmental
Injection Log
MS18 - Agilent 5973

Tune File: BFB.U

New Tune: NO

ICAL Date:

See pg 7

Second RV:

LIMS ID:

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	9859-12DL	0920F029	B260.M	50x 1ml→50ml	—	
2	13DL	30	↓	↓	—	
3	12Base	31		2.5x 20ml→50ml	—	
4	13Base	32	↓	↓	—	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14			HH 9/23/14			
15						
16						
17						
18						
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20						
21						
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23						
24						
25						
26						
27						

Quantitation Report (QT Reviewed)

Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:50 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

9/22/14 9/22/14

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.32	96	311420	10.00	PPB		0.00
65) Chlorobenzene-d5	9.64	82	125117	10.00	PPB		0.00
86) 1,4-Dichlorobenzene-d4	12.05	152	122739	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.53	113	63731	9.33	PPB		0.00
Spiked Amount 10.000			Recovery =	93.30%			
48) 1,2-Dichloroethane-d4	5.95	65	76818	9.55	PPB		0.00
Spiked Amount 10.000			Recovery =	95.50%			
63) Toluene-d8	8.10	98	303575	9.65	PPB		0.00
Spiked Amount 10.000			Recovery =	96.50%			
85) 4-Bromofluorobenzene	10.88	95	110143	9.76	PPB		0.00
Spiked Amount 10.000			Recovery =	97.60%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.47	85	4125	0.39	PPB		82
3) Chloromethane	1.62	50	5692	0.47	PPB		97
4) Vinyl Chloride	1.71	62	5034	0.43	PPB		86
5) 1,3-Butadiene	1.75	54	4649	0.44	PPB		93
6) Bromomethane	1.99	96	3343	0.38	PPB		80
7) Chloroethane	2.09	64	2969	0.45	PPB		82
8) Dichlorofluoromethane	2.29	67	7936	0.43	PPB		95
9) Trichlorofluoromethane	2.31	101	7465	0.47	PPB		91
10) Ethyl Ether	2.57	59	3038	0.45	PPB		85
11) Acrolein	2.73	56	2186	4.10	PPB		98
12) Trichlorotrifluoroethane	2.80	151	2636	0.45	PPB		77
13) 1,1-Dichloroethene	2.80	96	3002	0.44	PPB		94
14) Acetone	2.87	43	12644	8.54	PPB		97
15) Iodomethane	2.95	142	10155	1.99	PPB		93
16) Carbon Disulfide	3.01	76	8905	0.38	PPB		96
17) 2-Propanol (Isopropyl Alco	3.02	45	5873	20.01	PPB		75
18) 3-Chloro-1-propene	3.18	76	1992	0.42	PPB	#	84
19) Methyl Acetate	3.19	43	3315	0.52	PPB		79
20) Acetonitrile	3.17	40	8047	18.54	PPB	#	82
21) Methylene Chloride	3.33	84	5377	0.55	PPB		91
22) tert-Butyl Alcohol	3.47	59	986	2.36	PPB	#	50
23) Acrylonitrile	3.61	53	3811	1.67	PPB		96
24) Methyl tert-Butyl Ether	3.60	73	16739	0.79	PPB		99
25) trans-1,2-Dichloroethene	3.62	96	3849	0.45	PPB		85
26) Hexane	3.90	57	4965	0.56	PPB		90
27) Diisopropyl Ether	4.16	45	12257	0.41	PPB		93
28) 1,1-Dichloroethane	4.14	63	6618	0.44	PPB		94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:50 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	Vinyl Acetate	4.16	86	962	0.77 PPB	#	13
30)	Chloroprene	4.21	53	22246	1.47 PPB		99
31)	tert-Butyl Ethyl Ether	4.62	59	9940	0.39 PPB		88
32)	2,2-Dichloropropane	4.85	77	4798	0.40 PPB		90
33)	cis-1,2-Dichloroethene	4.86	96	4387	0.44 PPB		85
34)	2-Butanone	4.87	72	4087	6.79 PPB	#	45
35)	Propionitrile	5.00	54	1462	1.83 PPB		61
36)	Ethyl Acetate	4.93	61	899	1.03 PPB	#	58
37)	Methacrylonitrile	5.17	67	4252	1.56 PPB		83
38)	Bromochloromethane	5.17	128	1867m	0.44 PPB		
40)	Chloroform	5.33	83	6512	0.41 PPB		80
41)	tert-Butyl Formate	5.36	59	1134	0.25 PPB		90
42)	1,1,1-Trichloroethane	5.49	97	5231	0.40 PPB		93
44)	Carbon Tetrachloride	5.67	117	3969	0.36 PPB		77
45)	1,1-Dichloropropene	5.70	75	5631	0.47 PPB		93
46)	Cyclohexane	5.54	56	7531	0.45 PPB		89
47)	Isobutyl Alcohol	6.11	43	4248	21.25 PPB		70
49)	Benzene	5.94	78	16469	0.43 PPB	#	22
50)	1,2-Dichloroethane	6.05	62	5200	0.43 PPB		95
51)	tert-Amyl Methyl Ether	6.11	55	5635	0.65 PPB	#	37
52)	Trichloroethene	6.73	95	5053	0.56 PPB		89
53)	1,2-Dichloropropane	7.05	63	3800	0.41 PPB		80
54)	Dibromomethane	7.15	93	1814	0.37 PPB		83
55)	Methyl methacrylate	7.14	69	1452	0.32 PPB		91
56)	1,4-Dioxane	7.15	88	1114	17.19 PPB	#	54
57)	Bromodichloromethane	7.36	83	4408	0.41 PPB		88
58)	2-Nitropropane	7.64	41	2384	1.64 PPB		90
59)	Methyl Cyclohexane	6.97	83	7070	0.46 PPB		92
60)	2-Chloroethyl Vinyl Ether	7.69	63	1549	0.34 PPB		92
61)	cis-1,3-Dichloropropene	7.84	75	4460	0.34 PPB		93
62)	4-Methyl-2-pentanone (MIBK	8.02	58	12481	6.23 PPB		95
64)	Toluene	8.18	92	11064	0.43 PPB		97
66)	n-Octane	8.32	85	1676	0.49 PPB		91
67)	trans-1,3-Dichloropropene	8.48	75	3268	0.31 PPB		86
68)	Ethyl methacrylate	8.53	69	2994	0.35 PPB		81
69)	1,1,2-Trichloroethane	8.67	83	2472	0.41 PPB		78
70)	Tetrachloroethene	8.71	164	3574	0.47 PPB		93
71)	2-Hexanone	8.91	57	3976	6.06 PPB	#	66
72)	1,3-Dichloropropane	8.84	76	5908	0.45 PPB		94
73)	Dibromochloromethane	9.07	129	2210	0.33 PPB		84
74)	1,2-Dibromoethane (EDB)	9.18	107	2717	0.40 PPB		84

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 08:52:50 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8260

Quant Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration
DataAcq Meth : 8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75)	1-Chlorohexane	9.67	91	5952	0.42	PPB		92
76)	Chlorobenzene	9.68	112	13344	0.48	PPB		92
77)	Ethylbenzene	9.78	106	6703	0.44	PPB	#	78
78)	1,1,1,2-Tetrachloroethane	9.78	131	3012	0.35	PPB		89
79)	m,p-Xylenes	9.92	106	15959	0.86	PPB		84
80)	o-Xylene	10.31	106	7472	0.41	PPB		90
81)	Styrene	10.34	103	4951m	0.36	PPB		
82)	Bromoform	10.54	173	1193	0.34	PPB		83
83)	Isopropylbenzene	10.69	105	19140	0.41	PPB		97
84)	cis-1,4-Dichloro-2-butene	10.78	89	1005	0.97	PPB	#	61
87)	1,1,2,2-Tetrachloroethane	11.04	83	2965	0.39	PPB		89
88)	trans-1,4-Dichloro-2-buten	11.08	53	1023m	0.45	PPB		
89)	Bromobenzene	11.01	156	4922	0.42	PPB		92
90)	n-Propylbenzene	11.11	91	22182	0.40	PPB		99
91)	1,2,3-Trichloropropane	11.10	110	1136	0.44	PPB	#	76
92)	2-Chlorotoluene	11.20	91	15006	0.44	PPB		90
93)	1,3,5-Trimethylbenzene	11.30	105	14430	0.38	PPB		99
94)	4-Chlorotoluene	11.33	91	16869	0.43	PPB		94
95)	tert-Butylbenzene	11.62	119	14643	0.43	PPB		95
96)	1,2,4-Trimethylbenzene	11.68	105	15042	0.39	PPB		97
97)	sec-Butylbenzene	11.84	105	19912	0.41	PPB		99
98)	p-Isopropyltoluene	12.00	119	15565	0.39	PPB		96
99)	1,3-Dichlorobenzene	11.97	146	10659	0.47	PPB		97
100)	1,4-Dichlorobenzene	12.07	146	11579	0.50	PPB		90
101)	n-Butylbenzene	12.36	91	14284	0.42	PPB		97
102)	1,2-Dichlorobenzene	12.38	146	10299	0.49	PPB		88
103)	1,2-Dibromo-3-chloropropan	12.95	155	258m	0.30	PPB		
104)	1,3,5-Trichlorobenzene	13.06	180	7855	0.52	PPB		98
105)	1,2,4-Trichlorobenzene	13.56	180	5888	0.51	PPB		78
106)	Hexachlorobutadiene	13.66	225	2711	0.53	PPB		91
107)	Naphthalene	13.78	128	8076	0.44	PPB		96
108)	1,2,3-Trichlorobenzene	13.97	180	4293	0.51	PPB		93

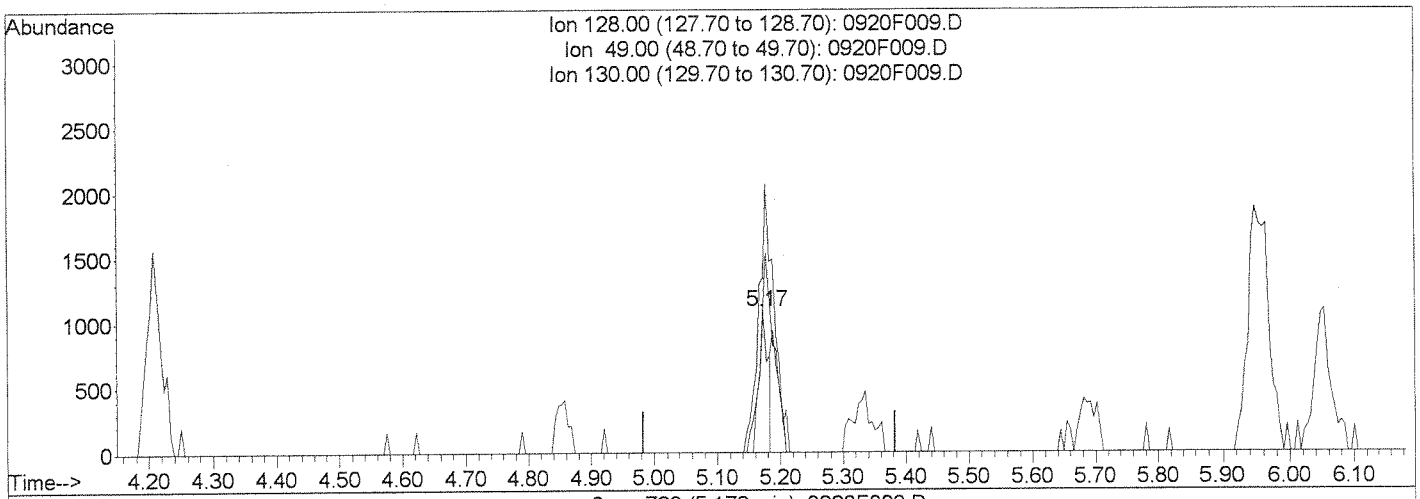
(#) = qualifier out of range (m) = manual integration

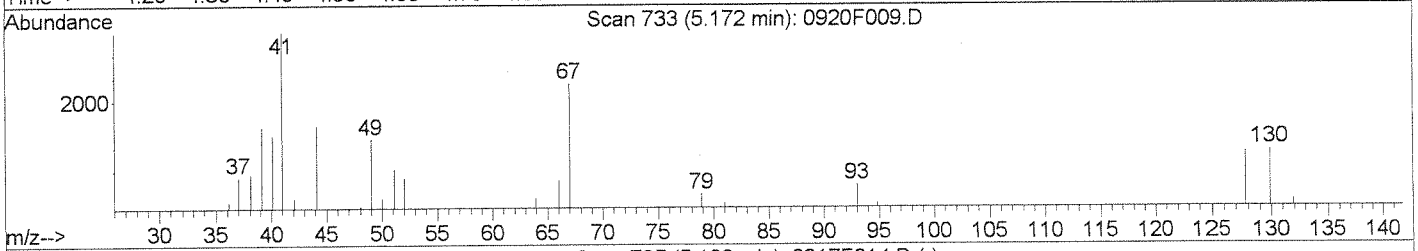
Quantitation Report (Qedit)

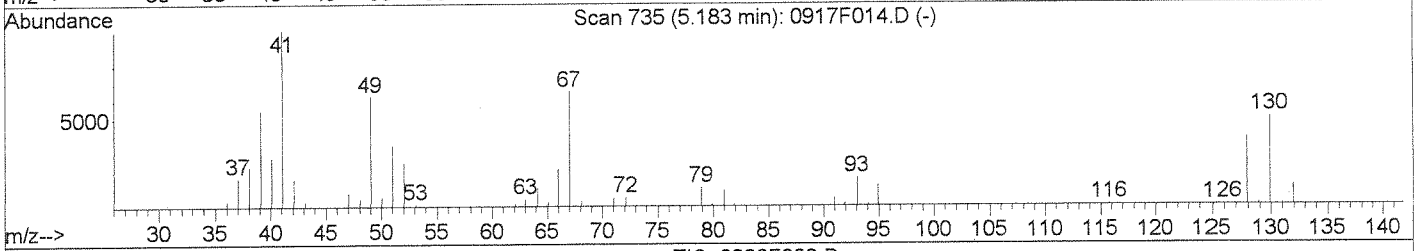
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 8:52 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F009.D

(38) Bromochloromethane (T)

5.17min 0.26PPB

response 1107

Ion	Exp%	Act%
128.00	100	100
49.00	163.90	100.74#
130.00	131.30	88.97#
0.00	0.00	0.00

Manual Integration:

Before

09/22/14

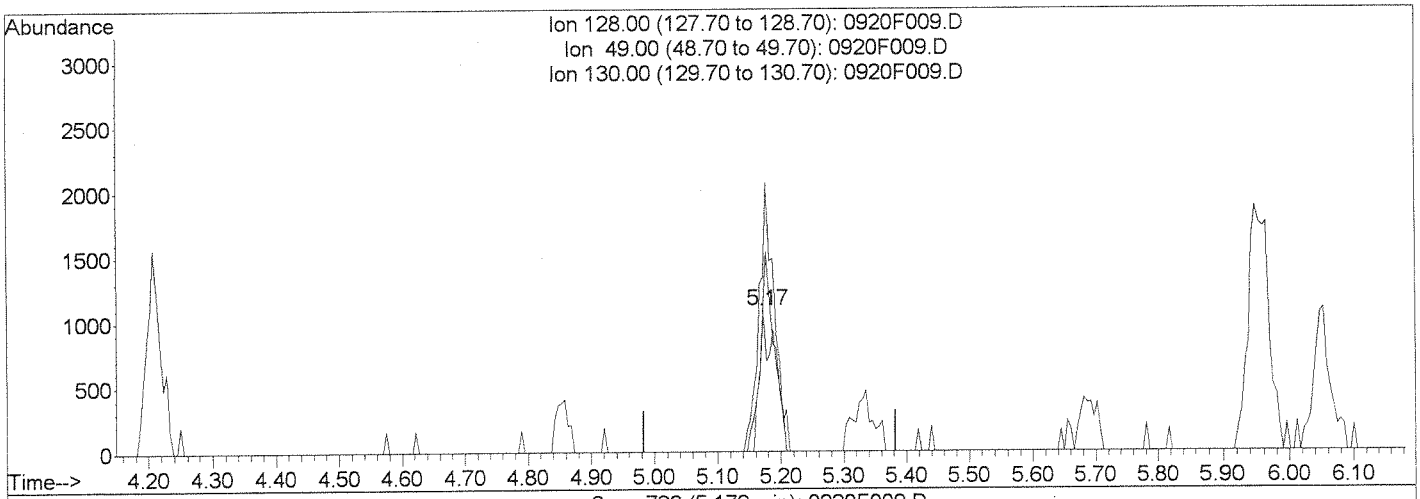
0920F009.D 091714MS18_8260.M Mon Sep 22 14:30:59 2014

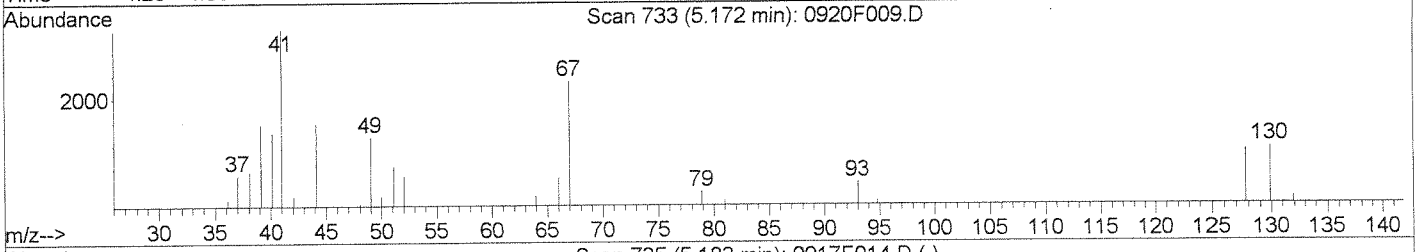
Quantitation Report (Qedit)

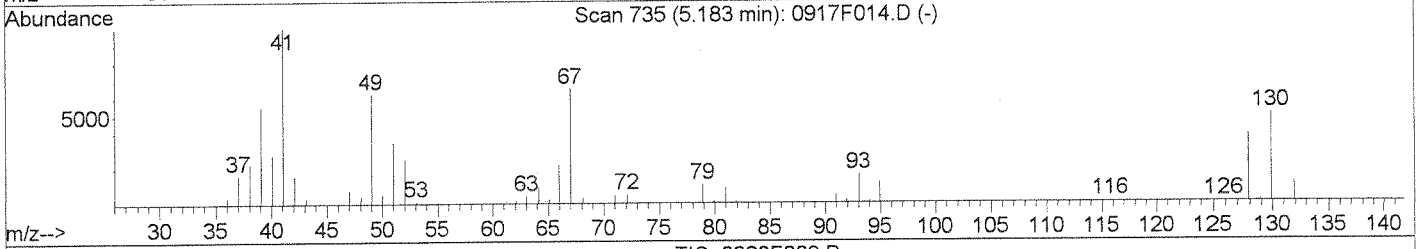
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:31 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F009.D

(38) Bromochloromethane (T)

5.17min 0.44PPB m

response 1867

Ion	Exp%	Act%
128.00	100	100
49.00	163.90	123.25#
130.00	131.30	103.13
0.00	0.00	0.00

Manual Integration:

After

Split peak

09/22/14

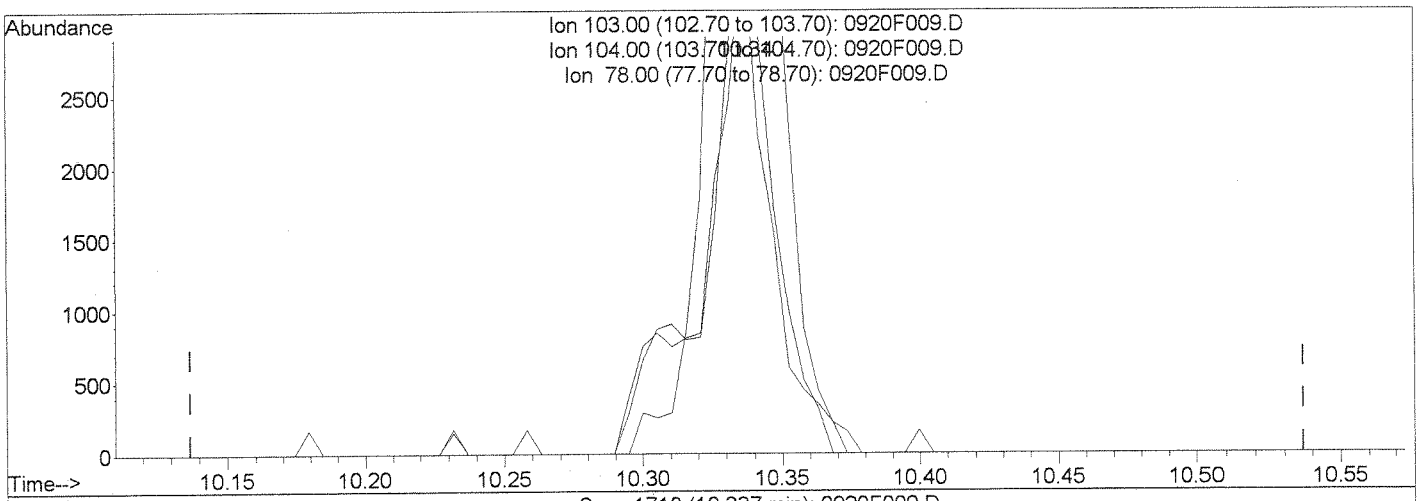
0920F009.D 091714MS18_8260.M Mon Sep 22 14:31:05 2014

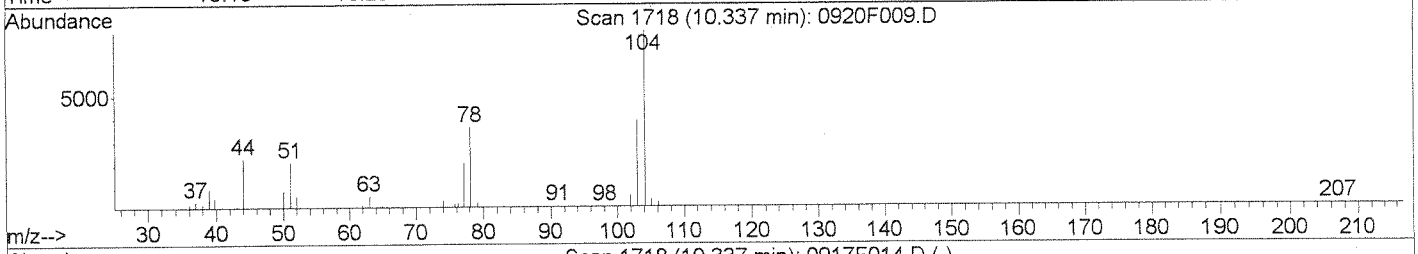
Quantitation Report (Qedit)

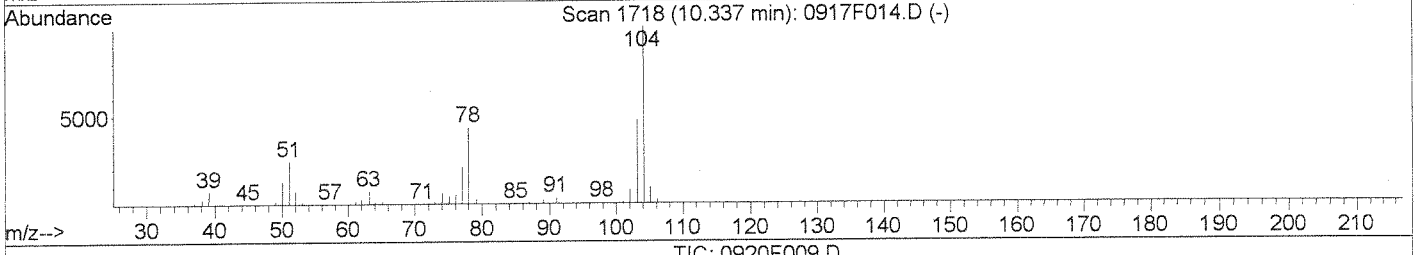
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:31 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F009.D

(81) Styrene (T)

10.34min 0.44PPB

response 6050

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	200.80
78.00	91.60	93.09
0.00	0.00	0.00

Manual Integration:

Before

09/22/14

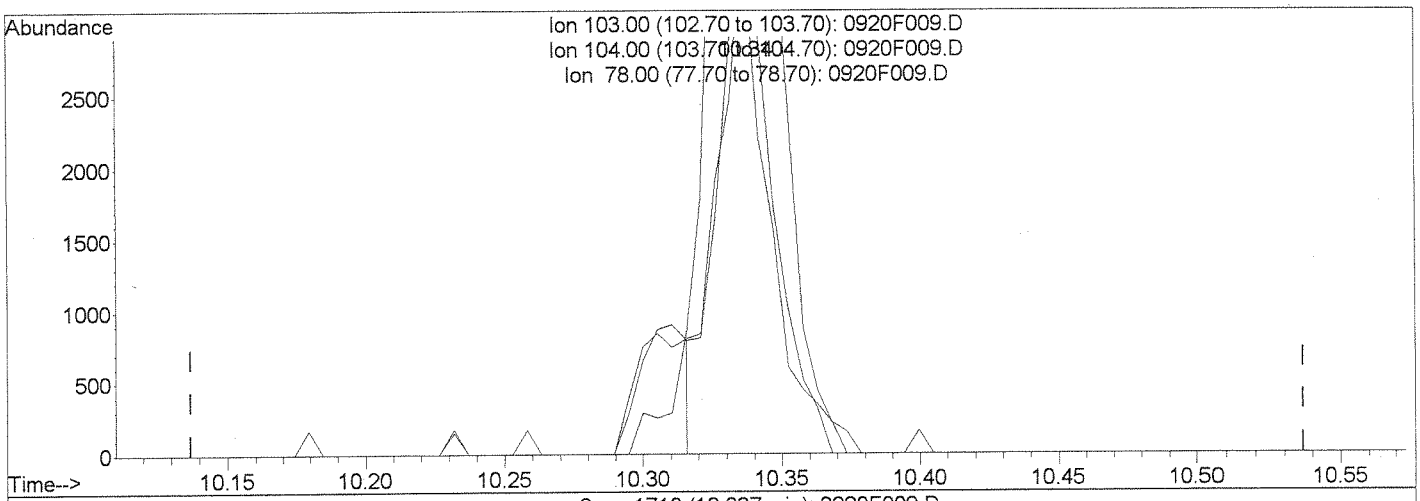
0920F009.D 091714MS18_8260.M Mon Sep 22 14:31:35 2014

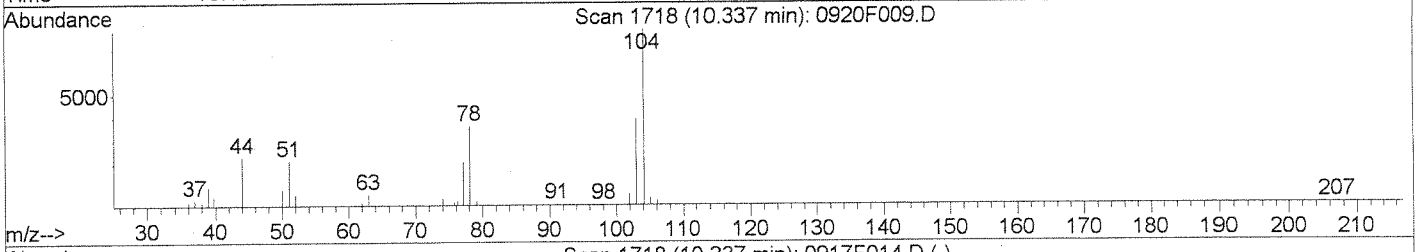
Quantitation Report (Qedit)

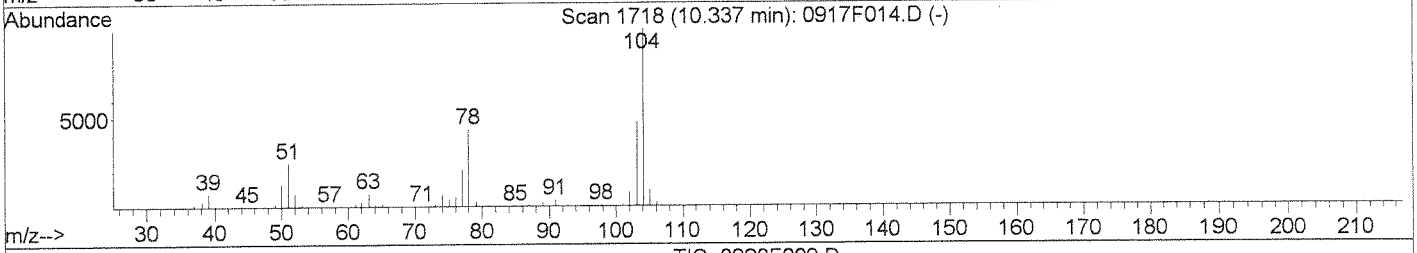
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:31 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Multiple Level Calibration







TIC: 0920F009.D

(81) Styrene (T)

10.34min 0.36PPB m

response 4951

Ion	Exp%	Act%
103.00	100	100
104.00	211.50	200.80
78.00	91.60	93.09
0.00	0.00	0.00

Manual Integration:

After

Shoulder

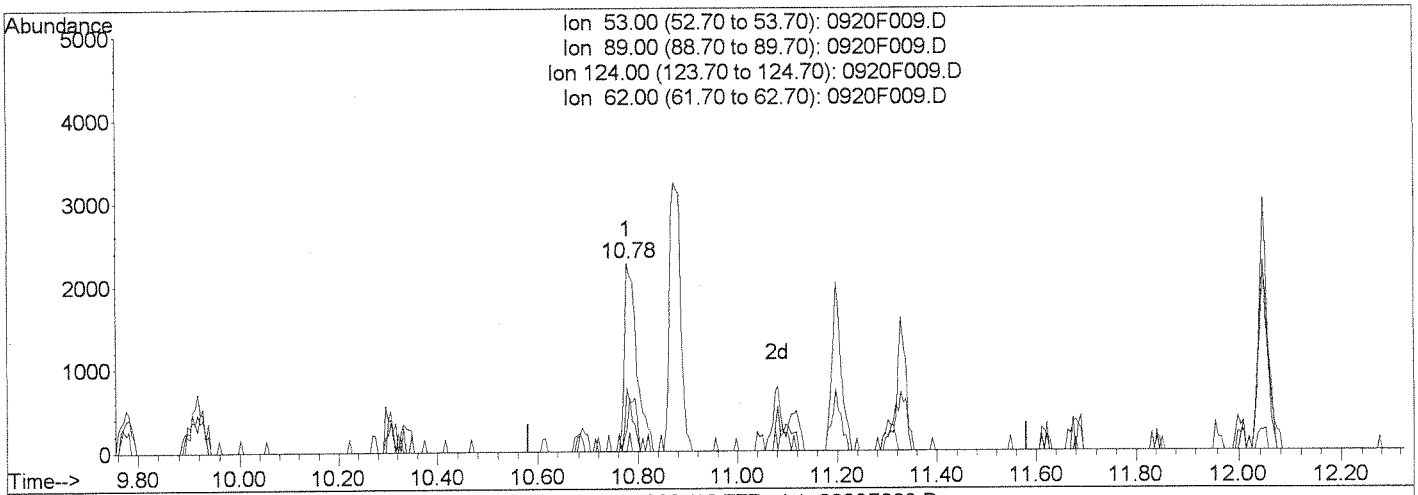
09/22/14

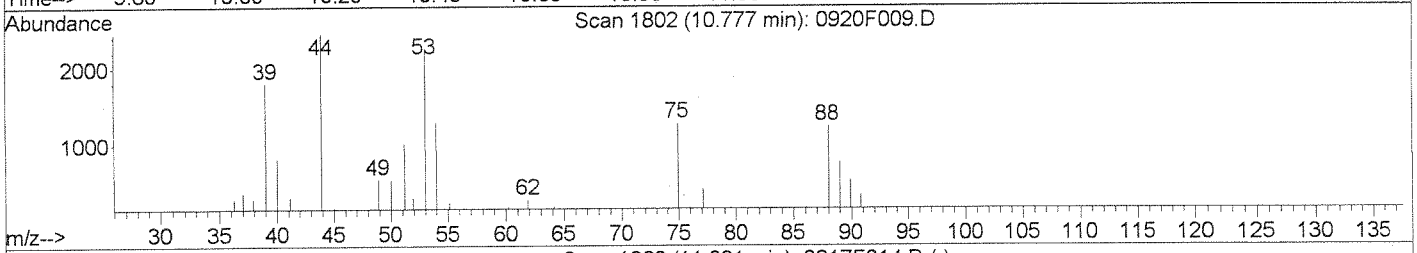
0920F009.D 091714MS18_8260.M Mon Sep 22 14:31:40 2014

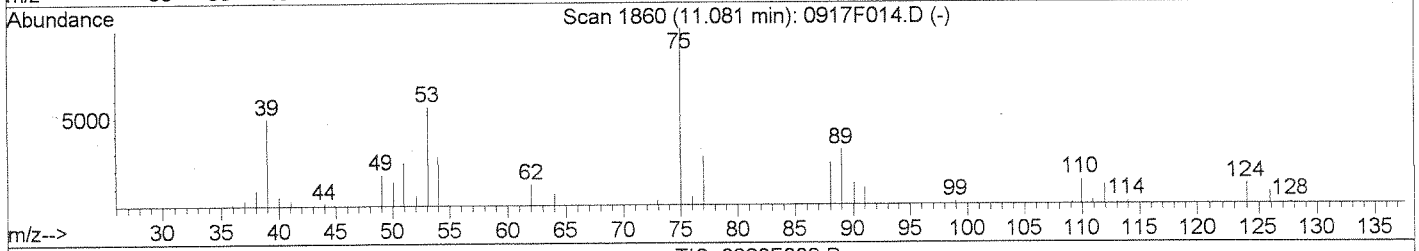
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:31 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Single Level Calibration







TIC: 0920F009.D

(88) trans-1,4-Dichloro-2-butene (T)

10.78min 1.71PPB

response 3877

Ion	Exp%	Act%
53.00	100	100
89.00	55.70	33.52
124.00	20.80	0.00
62.00	33.00	11.97

Manual Integration:

Before

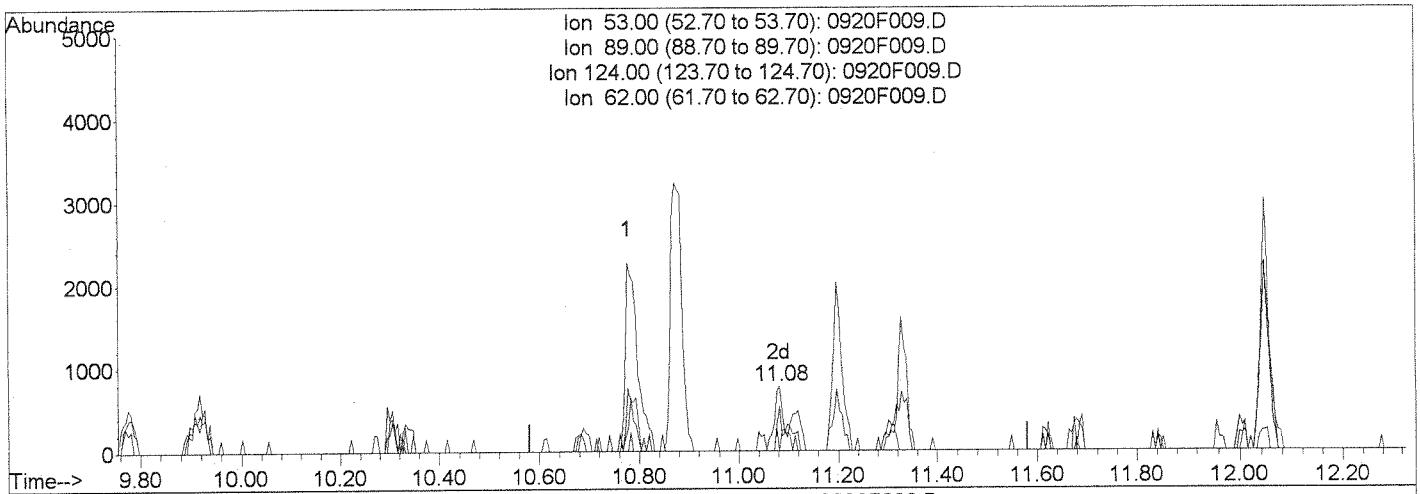
09/22/14

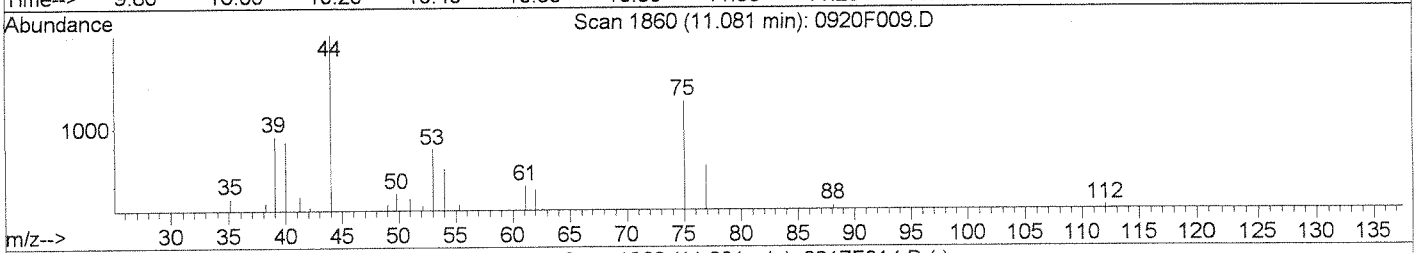
0920F009.D 091714MS18_8260.M Mon Sep 22 14:31:48 2014

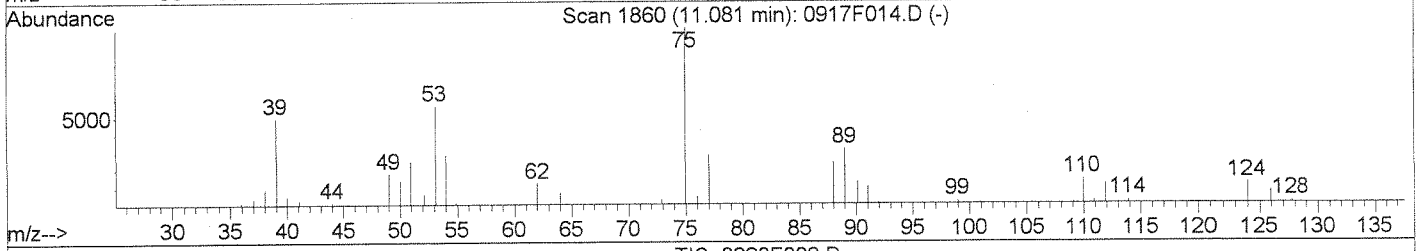
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:31 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Single Level Calibration







TIC: 0920F009.D

(88) trans-1,4-Dichloro-2-butene (T)

11.08min 0.45PPB m

response 1023

Ion	Exp%	Act%
53.00	100	100
89.00	55.70	0.00#
124.00	20.80	0.00
62.00	33.00	46.98

Manual Integration:

After

WRT

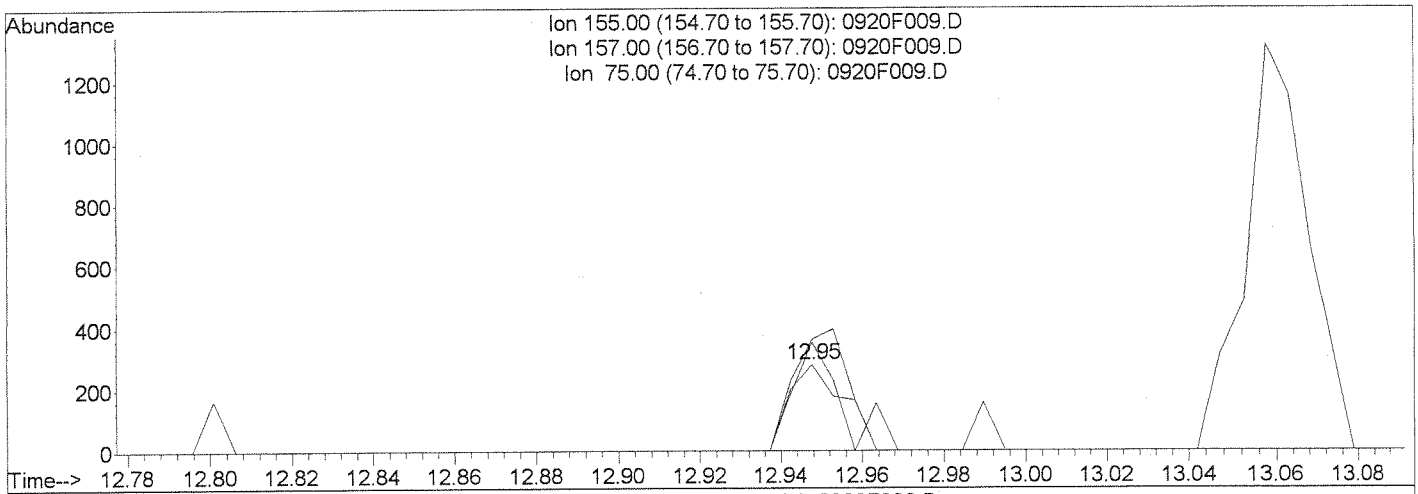
09/22/14

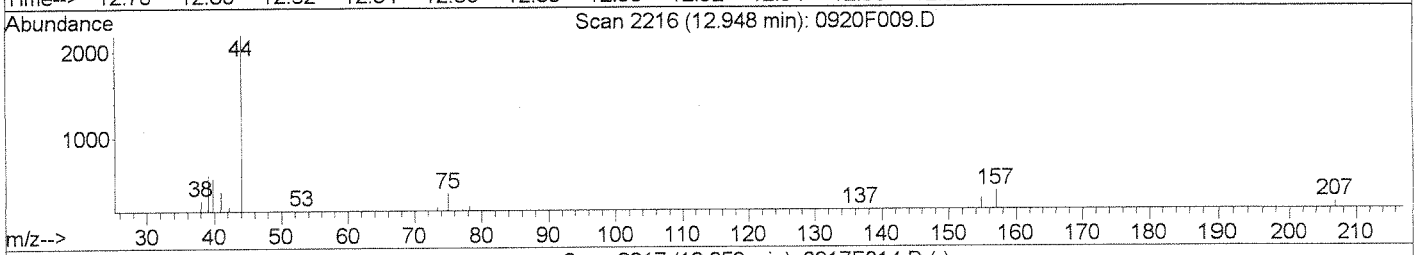
0920F009.D 091714MS18_8260.M Mon Sep 22 14:31:52 2014

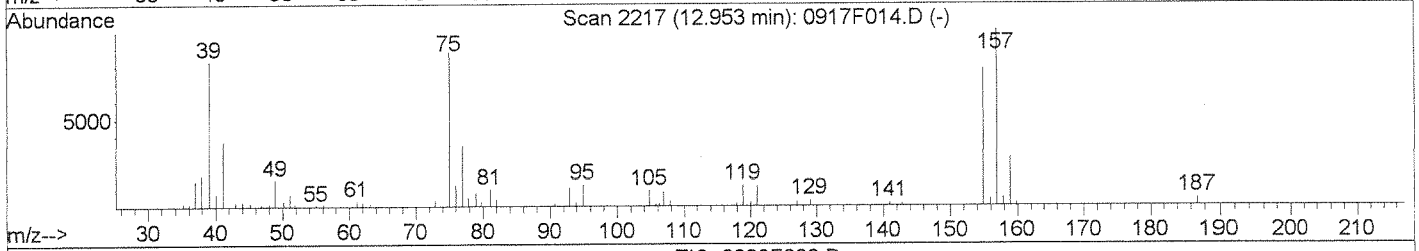
Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:32 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Single Level Calibration







TIC: 0920F009.D

(103) 1,2-Dibromo-3-chloropropane (DBCP) (T)

12.95min 0.30PPB m

response 258

Ion	Exp%	Act%
155.00	100	100
157.00	128.40	129.39
75.00	115.20	126.16
0.00	0.00	0.00

Manual Integration:

After

Missed peak

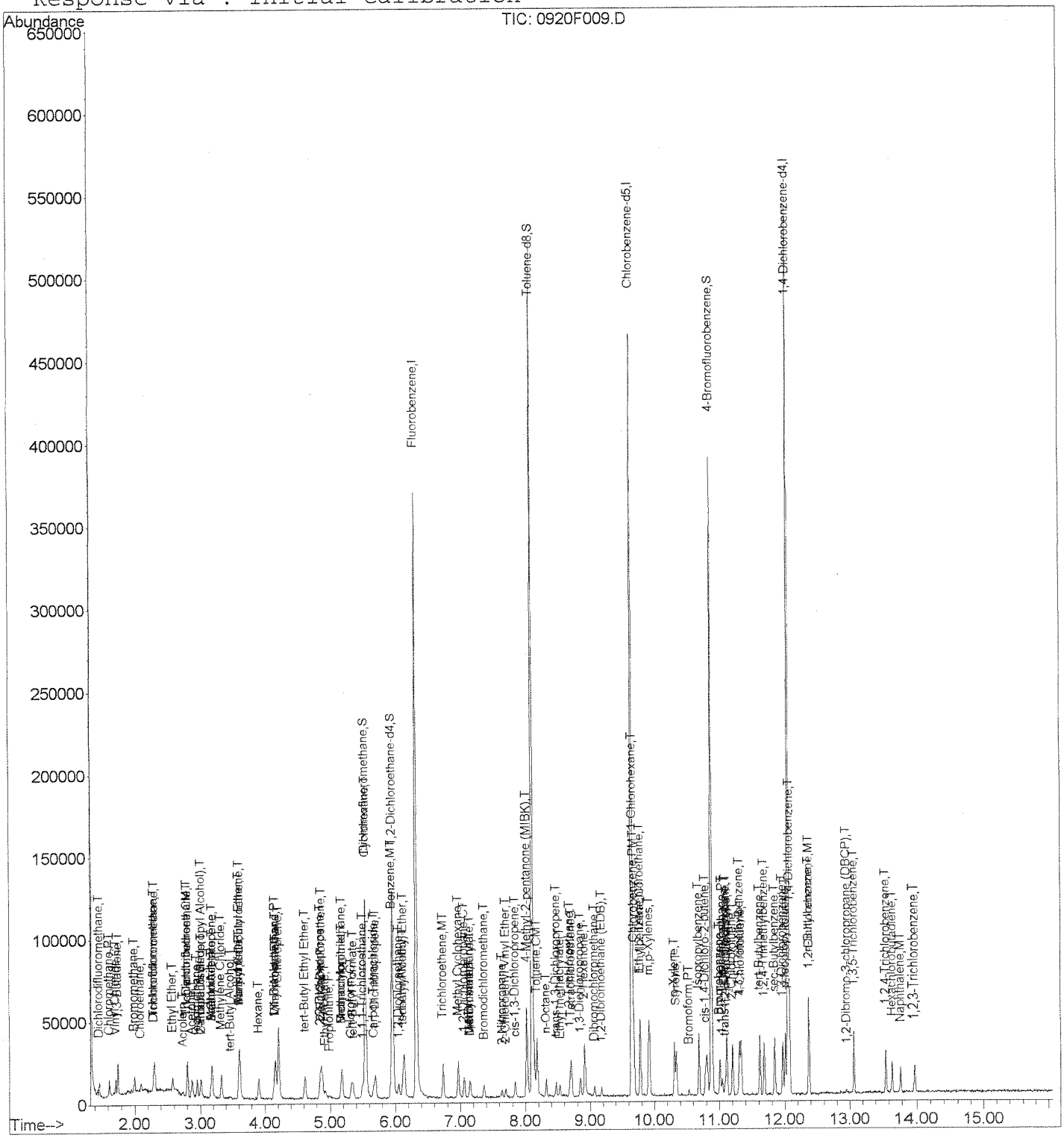
09/22/14

0920F009.D 091714MS18_8260.M Mon Sep 22 14:32:07 2014

Data File : J:\MS18\DATA\092014\0920F009.D
Acq On : 20 Sep 2014 10:57 am
Sample : MRL
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 22 14:32 2014

Vial: 8
Operator: GH
Inst : GC-MS 18
Multiplr: 1.00
Quant Results File: 091714MS18_8

Method : J:\MS18\METHODS\091714MS18_8260.M (RTE Integrator)
Title : VOA MS18 EPA Method 8260B
Last Update : Thu Sep 18 12:23:33 2014
Response via : Initial Calibration



Date: 9/20/14

By: JM

IS/SS Std. ID: 76VOA.27A 10/10/14

CCV Std ID: 76VOA.28A/37A 9/24/14

MS/DMS/LCS/ICV Std ID: 76VOA.38B/36B/36C/38C/36D 9/24/14

BFB Std. ID: 76VOA.04B 9/21/14

ALS Environmental
Injection Log
MS13 - Agilent 5973

Tune File: BFB1.4

New Tune: NO

Run: 412329

ICAL Date: 9/10/14 Cal 13540

Second RV: JM 9/25/14

LIMS ID: KWG1412700(A)/12904(P)

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Primer	0920F001	8260W5.M			
2	BFB	2		4.4µl→44ml		
3	B260 CCV	3		5/10µl→5ml		
4	B260 LCS	4		10/50/5/5/5µl→5ml		
5	9691-1MS	5		8/40/4/4/4µl→4ml	–	
6	1DMS	6		〃	–	
7	1B	7				
8	1MB	8				
9	10061-13TB	9			–	54448
10	9691-6TB	10			–	54439
11	9921-19TB	11			–	54216
12	9727-7	12			–	
13	9747-4Bdup	13		20× 2.5ml→5ml	–	
14	9921-18	14			–	
15	9626-1	15			–	
16	9691-1	16			–	
17	2	17			–	
18	3	18			–	
19	4	19			–	
20	9727-8	20			–	
21	9	21			–	
22	10	22			–	
23	11	23			–	
24	12	24			–	
25	13	25			–	
26	14	26			–	
27						

Date: 9/22/14

By: YY

IS/SS Std. ID: 76VOA·27A 10/10/14

CCV Std ID: 76VOA·38A/~~37A~~ 40A 9/24/14 (37A on 9/22/14)

MS/DMS/LCS/ICV Std ID: 76VOA·38B/36B/36C/38C/36D 9/24/14

BFB Std. ID: 76VOA·39F 10/20/14

ALS Environmental
Injection Log
MS13 - Agilent 5973

Tune File: BFB1.U

New Tune: NO

Run: 4/2455

ICAL Date: 9/10/14 Cal13540

Second RV: 9/25/14

LIMS ID: KWG 14MS38P/KWG1409YA

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Primer	0922F001	8260MS.m	NO		
2	BFB	2				4.7µL→50mL
3	B260 CCV	3				5/10µL→50mL
4	B260 LCS	4				(NR) 10/5/5/5/7.5µL→50mL (on 9/24/14)
5	B260 LCS w/Hexo	5				10/5/5/5/7.5µL→50mL
6	10061-9MS	6			7	8/40/4/4/6µL→40mL
7	" -9DMS	7			7	"
8	IB	8				
9	MB	9				
10	9691-12TB	10			✓	54440
11	9921-1B	11			7	
12	9747-4Base	12		50mL→50mL	✓	
13	10061-9	13		NO	7	
14	" 10	14			7	
15	" 11	15			7	
16	9691-B	16			✓	
17	" 9	17			✓	
18	" 11	18			✓	
19	9825-7	19			✓	
20	" 8	20			✓	
21	" 9	21			✓	
22	" 10	22			✓	
23	" 11	23			✓	
24	" 12	24			✓	
25	" 13	25			✓	
26	" 14	26			✓	
27	" 15	27			✓	

Quantitation Report (Not Reviewed)

Data File : J:\MS13\DATA\092214\0922F008.D
Acq On : 22 Sep 2014 11:44
Sample : IB
Misc :
MS Integration Params: rteint.p
Quant Time: Sep 25 11:34:43 2014

Vial: 7
Operator: GH
Inst : MS13
Multiplr: 1.00
Quant Results File: 091014MS13_8260

Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

9/25/14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.11	96	476534	10.00	PPB	0.00
64) Chlorobenzene-d5	12.03	82	186743	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	15.05	152	153559	10.00	PPB	0.00
System Monitoring Compounds						
42) Dibromofluoromethane	5.10	113	100854	9.93	PPB	0.00
Spiked Amount 10.000			Recovery =	99.30%		
47) 1,2-Dichloroethane-d4	5.64	65	101959	10.24	PPB	0.00
Spiked Amount 10.000			Recovery =	102.40%		
62) Toluene-d8	9.30	98	450591	9.75	PPB	0.00
Spiked Amount 10.000			Recovery =	97.50%		
84) 4-Bromofluorobenzene	13.68	95	143644	9.46	PPB	0.00
Spiked Amount 10.000			Recovery =	94.60%		
Target Compounds						Qvalue
6) Chloroethane	1.60	64	1237	0.15	PPB	# 46
13) Acetone	2.48	43	2327	1.39	PPB	95
15) Carbon Disulfide	2.56	76	8363	0.24	PPB	92
17) 3-Chloro-1-propene	2.56	76	8363	1.34	PPB	# 1
18) Acetonitrile	2.82	40	2410	5.30	PPB	# 29
20) Methylene Chloride	2.90	84	1431	0.11	PPB	# 73
21) tert-Butyl Alcohol	3.01	59	852	2.69	PPB	67
25) Hexane	3.35	57	1011	0.07	PPB	89
29) Chloroprene	3.71	53	516	0.03	PPB	# 33
56) 1,4-Dioxane	7.51	88	909	17.05	PPB	85
61) 4-Methyl-2-pentanone (MIBK	9.30	58	3843	1.67	PPB	# 1
74) 1-Chlorohexane	12.22	91	1089	0.08	PPB	# 36
75) Chlorobenzene	12.07	112	606	0.02	PPB	# 29
78) m,p-Xylenes	12.42	106	764	0.03	PPB	85
82) Isopropylbenzene	13.45	105	1217	0.02	PPB	85
89) n-Propylbenzene	13.96	91	1509	0.02	PPB	64
91) 2-Chlorotoluene	14.06	91	918	0.02	PPB	86
92) 1,3,5-Trimethylbenzene	14.20	105	1184	0.03	PPB	79
93) 4-Chlorotoluene	14.22	91	1101	0.02	PPB	92
94) tert-Butylbenzene	14.56	119	985	0.03	PPB	71
95) 1,2,4-Trimethylbenzene	14.63	105	1196	0.03	PPB	86
96) sec-Butylbenzene	14.83	105	1980	0.04	PPB	85
97) p-Isopropyltoluene	15.00	119	1451	0.03	PPB	80
98) 1,3-Dichlorobenzene	14.96	146	1077	0.04	PPB	80
99) 1,4-Dichlorobenzene	15.08	146	1111	0.04	PPB	71
100) n-Butylbenzene	15.46	91	2289	0.06	PPB	86
101) 1,2-Dichlorobenzene	15.49	146	1167	0.05	PPB	75

not detected

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F008.D Vial: 7
Acq On : 22 Sep 2014 11:44 Operator: GH
Sample : IB Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 25 11:34:43 2014 Quant Results File: 091014MS13_8260

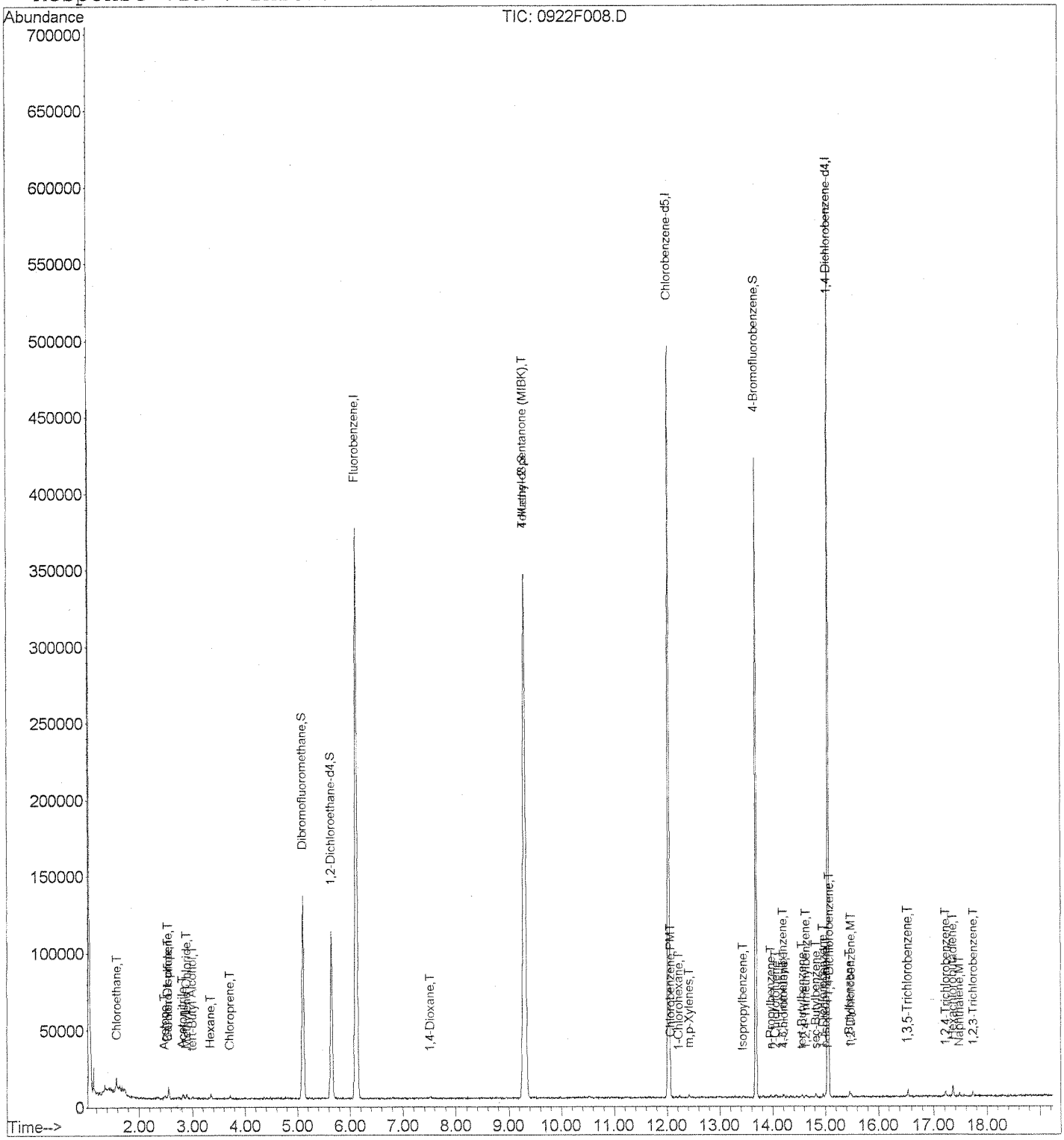
Quant Method : J:\MS13\M...\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration
DataAcq Meth : 8260W5

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
103) 1,3,5-Trichlorobenzene	16.54	180	1303	0.08	PPB	71
104) 1,2,4-Trichlorobenzene	17.22	180	1482	0.11	PPB	65
105) Hexachlorobutadiene	17.35	225	1832	0.26	PPB	82
106) Naphthalene	17.47	128	2220	0.09	PPB	91
107) 1,2,3-Trichlorobenzene	17.74	180	1353	0.12	PPB	82

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS13\DATA\092214\0922F008.D Vial: 7
Acq On : 22 Sep 2014 11:44 Operator: GH
Sample : IB Inst : MS13
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 25 11:34 2014 Quant Results File: 091014MS13_8

Method : J:\MS13\METHODS\091014MS13_8260W.M (RTE Integrator)
Title : VOA MS13 EPA Method 8260B
Last Update : Thu Sep 11 10:11:11 2014
Response via : Initial Calibration



Date: 9/26/13

By: KM

IS/SS Std. ID: 76WA 458 10/26

CCV Std ID: 76WA - 457 10/3

MS/DMS/LCS/ICV Std ID: 76WA-~~3c 0916 736c 44~~ 458 10/3 / 76c 10/3 / 439 10/1 / 430 10/2

BFB Std. ID: 76WA 39c 10/0

ALS Environmental
Injection Log
MS24 - Agilent 5975

Tune File: tune.u

New Tune: ~~No~~ Yes

413364

KM 9/26/13

ICAL Date: 10/7/13 Cal 1020

Second RV: MK 9/27/13

LIMS ID: KWG14131~~43~~62 | 13140

KM 9/27

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	0926F0048	8260.m	1mL 5mL		
2	CCV	~~Error~~ 59		25mL 5mL		
3	LCS	10		50/25/5/2	5mL	
4	DMS	11		1		
5	ID	12				
6	MB	13		1mL 5mL		
7	MD	14				
8	K10484-1	15				
9	-2	16				
10	-3	17				
11	ID	18				
12	K9821-8R	19				
13	-10R	20				
14	K10193-1	21				
15	-2	22				
16	-3	23				
17	-4	24				
18	K10233-2	25				
19	-3	26				
20	K10083-1	27				
21	-2	28				
22	-3	29				
23	-4	30				
24	-5	31				
25	K10193-1MS	32				
26	-1DMS	33				
27						

ALS Laboratory

Service Request No.: K9921, 10193, 10003, 10237, 10704 Analysis: 8260 LL

Analyst: KR Date: 9/26/14

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
K9921-BR	4.57	0.1	35.53	40.15	5.0			
10R	3.64		35.25	39.39				
K10193-1	5.31		35.21	40.62				
1MS	5.45		34.17	39.72				
1DMS	5.18		37.55	39.63				
2	5.21		34.99	40.30				
3	5.45		35.09	41.14				
4	5.07		34.77	40.74				
K10003-1	5.138							
2	5.090							
3	5.007							
4	5.030							
5	5.012							
10237-2	5.17	0.1	35.00	40.27				
3	4.79		35.31	40.23				
10704-1	1.054							
2	1.104							
3	1.000							
LCS	5.00							
DLCS	5.00							
MB	5.00							

Start Time: 1255 Stop Time: 1:20 Reviewed by and date: 10/2/14

P&T MeOH Lot No (Mid-levels only).: _____

Comments: _____

Final Volume MeOH and Water = mL of solvent + ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode ony = 0.1g

Semi-Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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Exception Report

Data File: J:\MS07\DATA\100114\1001F015.D
Lab ID: K1409921-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 04:37
Date Quantitated: 10/02/2014 17:08
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 02 2014 TRT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F015.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 04:37	**Quant Date:**	10/02/2014 17:08	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-004			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376325	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	70352	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	253951	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	128928	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	243704	40.00	OK
5	Chrysene-d12	20.98	0.00	240	234254	40.00	OK
6	Perylene-d12	24.13	0.01	264	220732	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.74	0.01	0.00	99	147754	62.10	41	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	86279	40.54	41	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	194715	40.04	40	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	115411	86.05	57	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	329488	64.36	64	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.019	U	
1	2-Methylphenol				107	0		0.017	U	
1	4-Methylphenol				107	0		0.017	U	
2	2,4-Dimethylphenol				122	0		0.015	U	
2	Hexachlorobutadiene				225	0		0.014	U	
3	Diethyl Phthalate				149	0d		0.014	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.14	U	
4	Hexachlorobenzene				284	0		0.015	U	
4	Fluoranthene	18.54		0.00	202	1127m	0.1700	0.011	U	
5	Pyrene	18.89		0.00	202	1332	0.1900	0.014	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F015.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 04:37	**Quant Date:**	10/02/2014 17:08	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-004			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	764**m**	0.2400	0.016	U	
5	Chrysene	21.02	-0.01	0.00	228	1304	0.2200	0.012	U	
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	998**m**	0.2400	0.019	U	
6	Di-n-octyl Phthalate				149	0		0.024	U	

Prep Amount:	40.337 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	78.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:22 2014 Quant Results File: 093014BNC7.RES

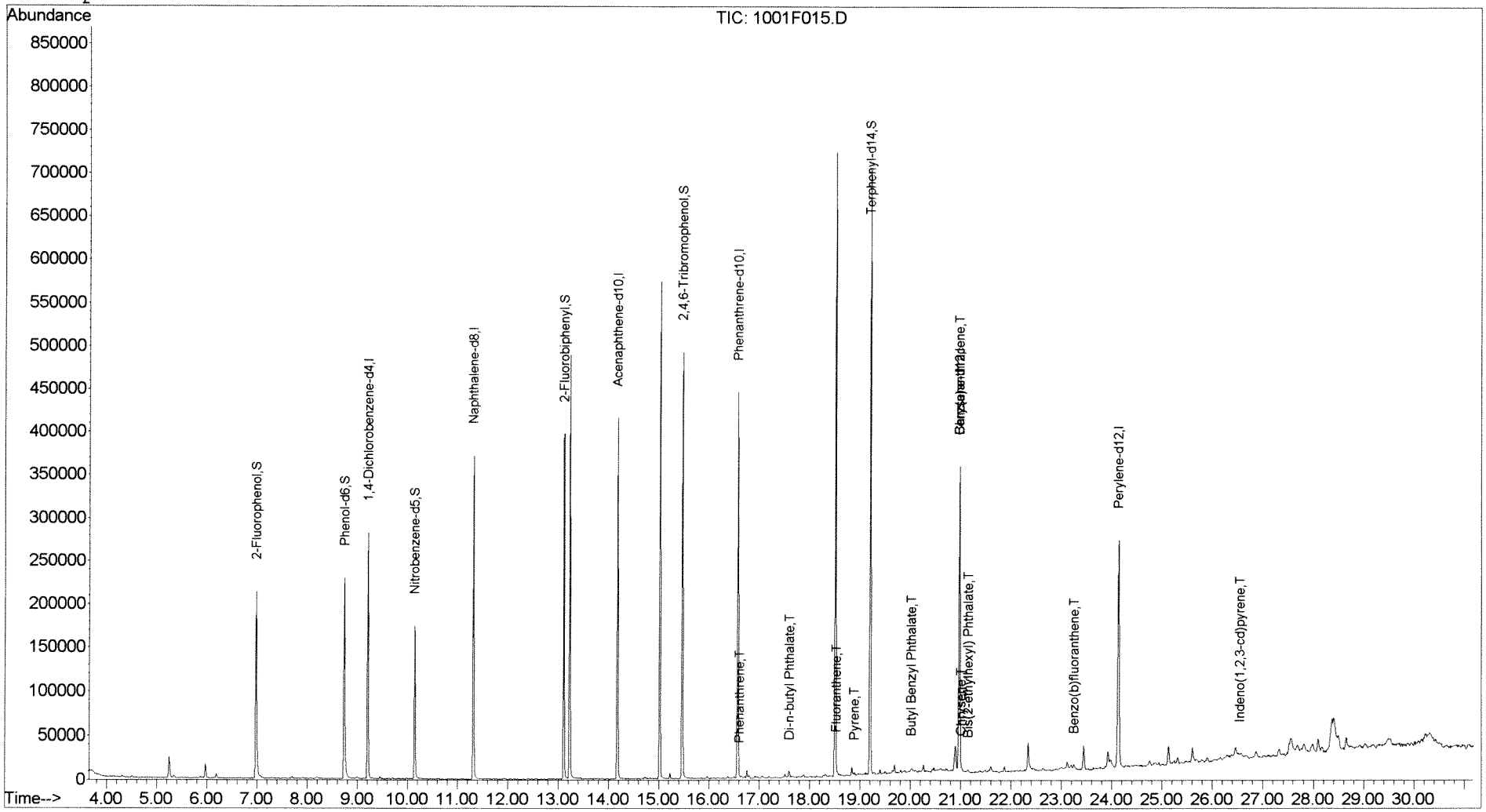
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	70352	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	253951	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	128928	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	243704	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	234254	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	220732	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	116929	57.94	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 38.63%			
7) Phenol-d6	8.74	99	147754	62.10	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 41.40%			
19) Nitrobenzene-d5	10.14	82	86279	40.54	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 40.54%			
38) 2-Fluorobiphenyl	13.11	172	194715	40.04	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 40.04%#			
59) 2,4,6-Tribromophenol	15.47	330	115411	86.05	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 57.37%			
71) Terphenyl-d14	19.20	244	329488	64.36	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 64.36%			
Target Compounds						Qvalue
63) Phenanthrene	16.62	178	626	0.11	ug/ml	79
66) Di-n-butyl Phthalate	17.61	149	1719	0.23	ug/ml	93
67) Fluoranthene	18.54	202	1127m	0.17	ug/ml	
70) Pyrene	18.89	202	1332	0.19	ug/ml	94
72) Butyl Benzyl Phthalate	20.03	149	764m	0.24	ug/ml	
74) Benz(a)anthracene	20.98	228	1416	0.24	ug/ml	51
75) Chrysene	21.02	228	1304	0.22	ug/ml	76
76) Bis(2-ethylhexyl) Phthalat	21.15	149	998m	0.24	ug/ml	
79) Benzo(b)fluoranthene	23.26	252	1881	0.35	ug/ml	70
82) Indeno(1,2,3-cd)pyrene	26.55	276	654	0.14	ug/ml	62

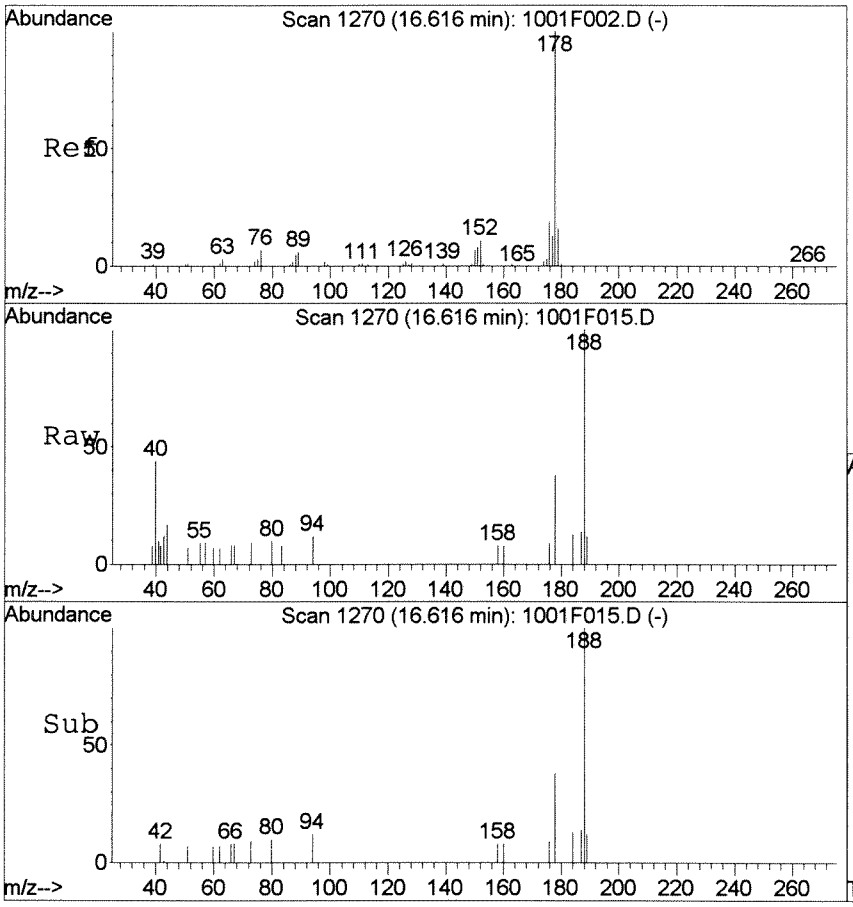
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 17:08 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



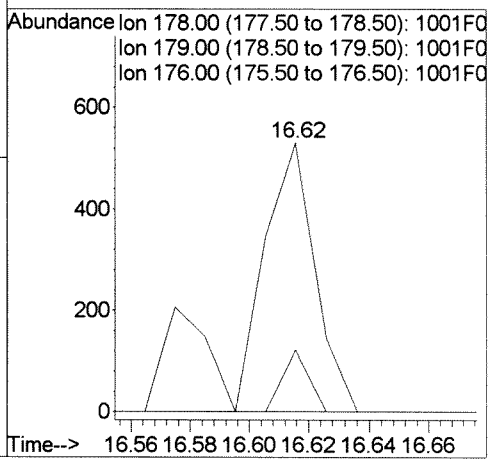
2503

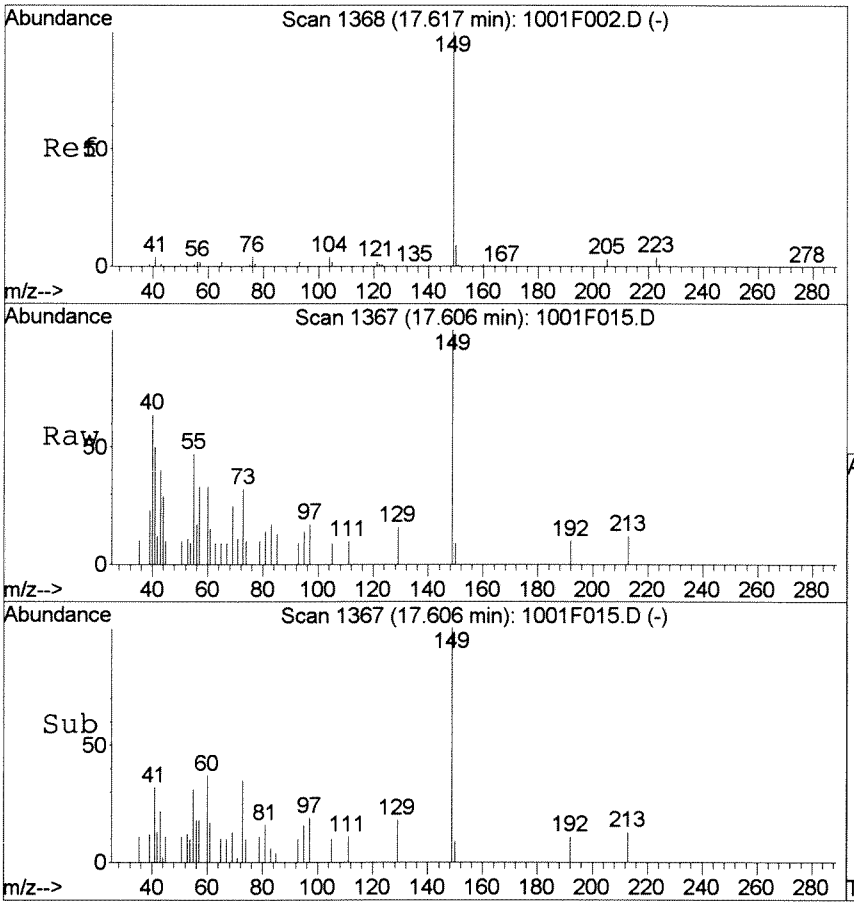


#63
Phenanthrene
Concen: 0.11 ug/ml
RT: 16.62 min Scan# 1270
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:178 Resp: 626

Ion	Ratio	Lower	Upper
178	100		
179	0.0	0.0	45.5
176	23.0	0.0	49.1

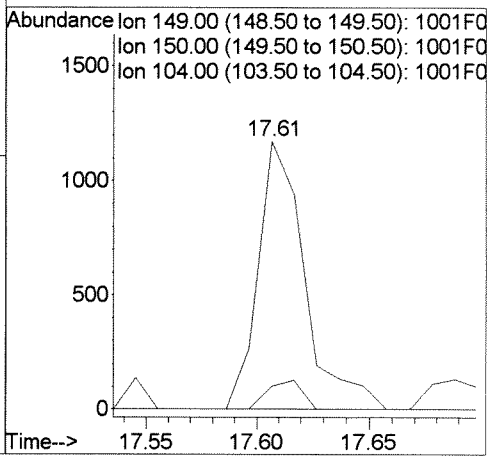


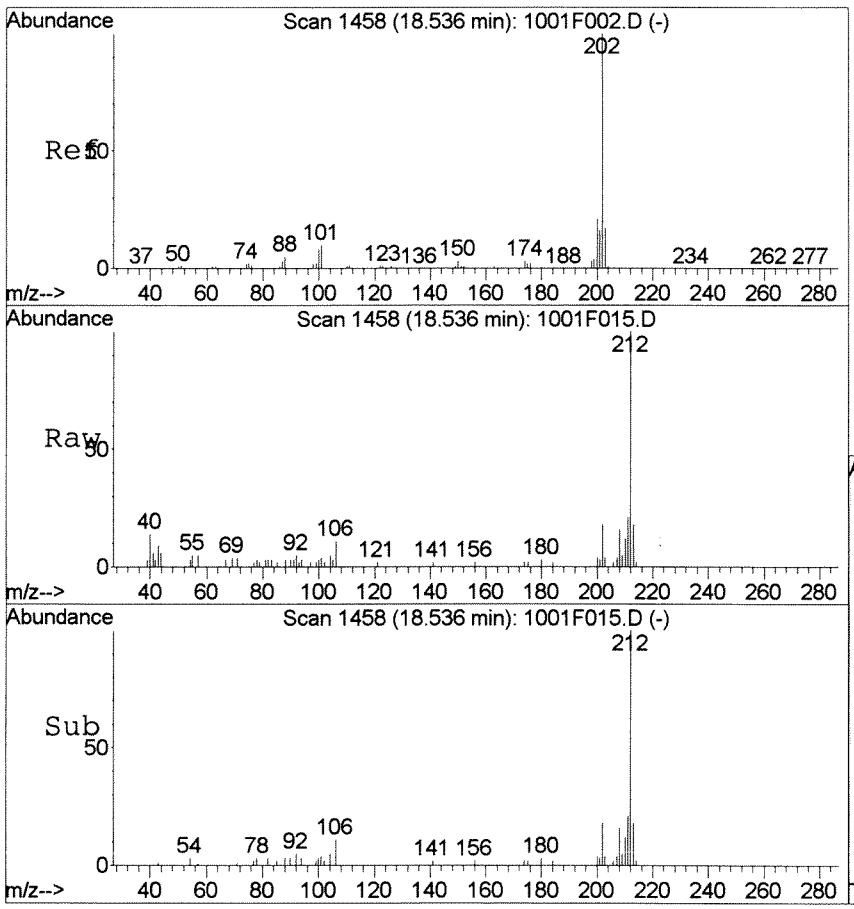


#66
Di-n-butyl Phthalate
Concen: 0.23 ug/ml
RT: 17.61 min Scan# 1367
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:149 Resp: 1719

Ion	Ratio	Lower	Upper
149	100		
150	8.6	0.0	39.3
104	0.0	0.0	35.1

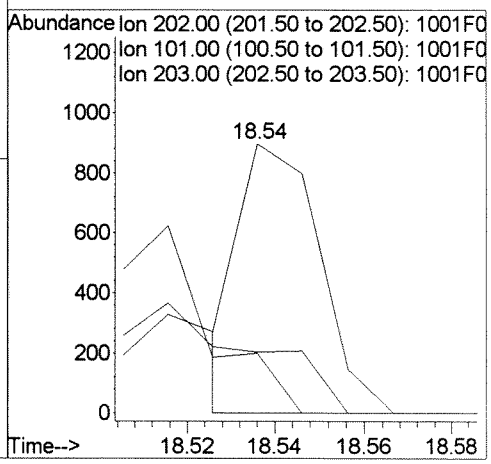


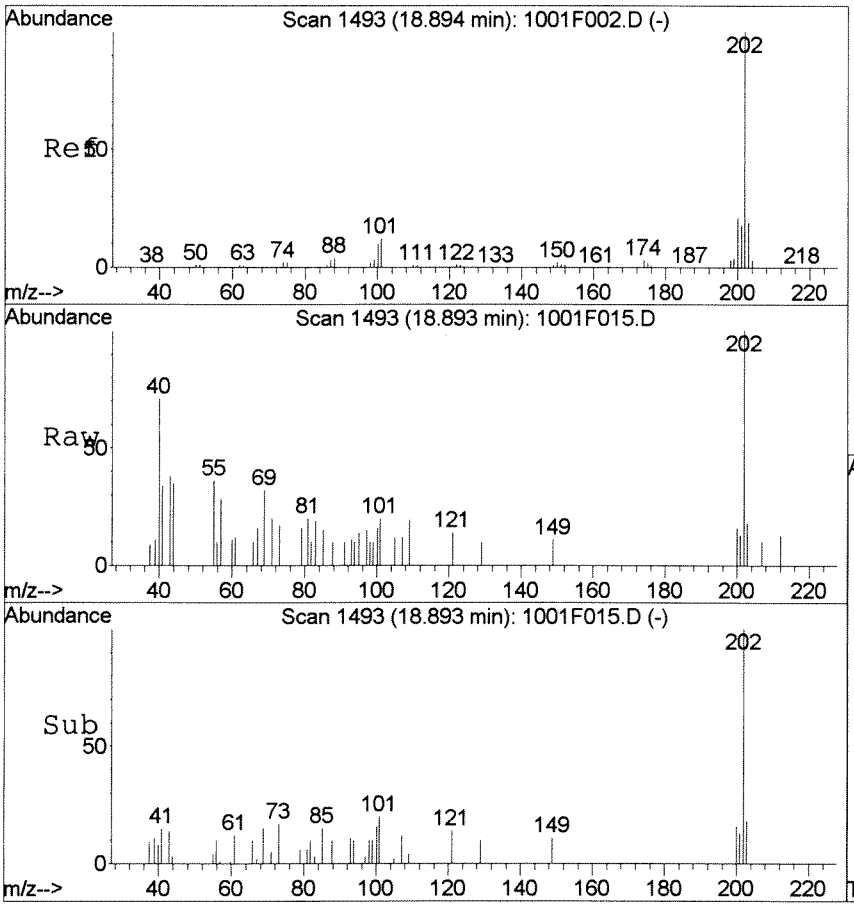


#67
Fluoranthene
Concen: 0.17 ug/ml m
RT: 18.54 min Scan# 1458
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:202 Resp: 1127

Ion	Ratio	Lower	Upper
202	100		
101	22.2	0.0	39.2
203	22.7	0.0	47.5

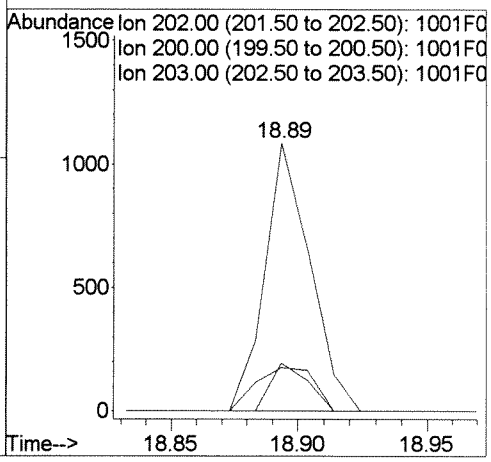


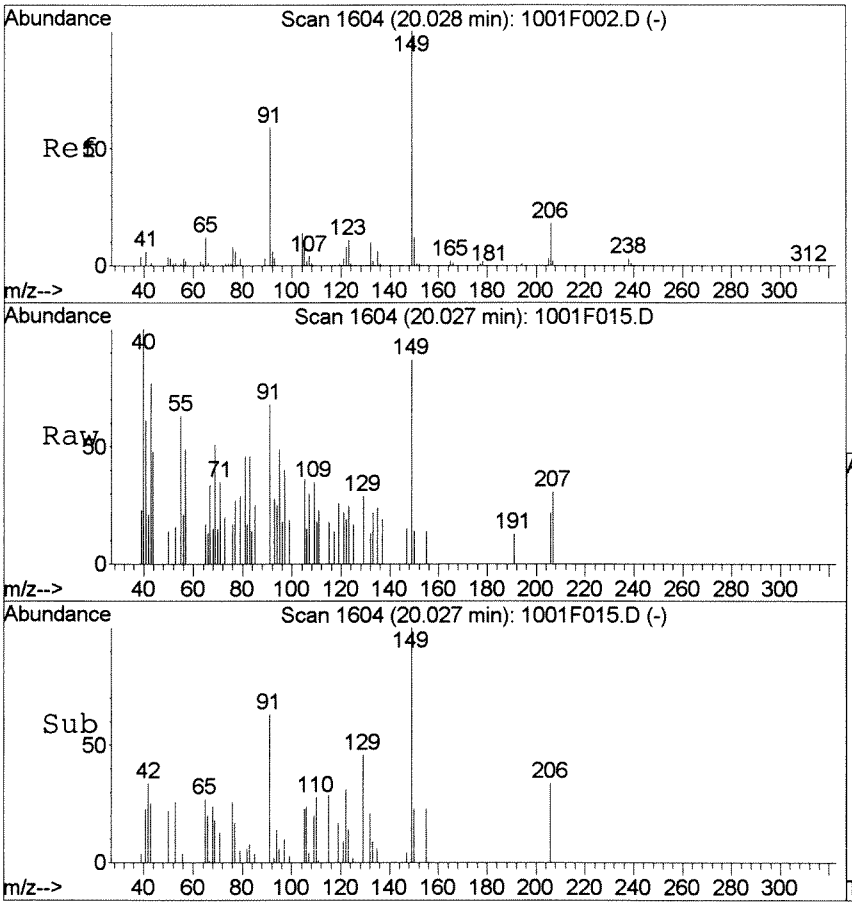


#70
Pyrene
Concen: 0.19 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:202 Resp: 1332

Ion	Ratio	Lower	Upper
202	100		
200	16.2	0.0	50.7
203	17.9	0.0	49.2

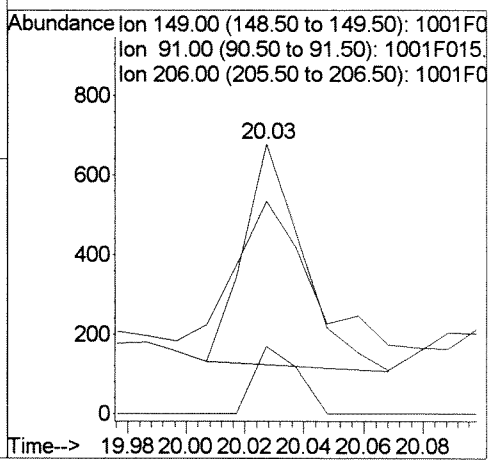


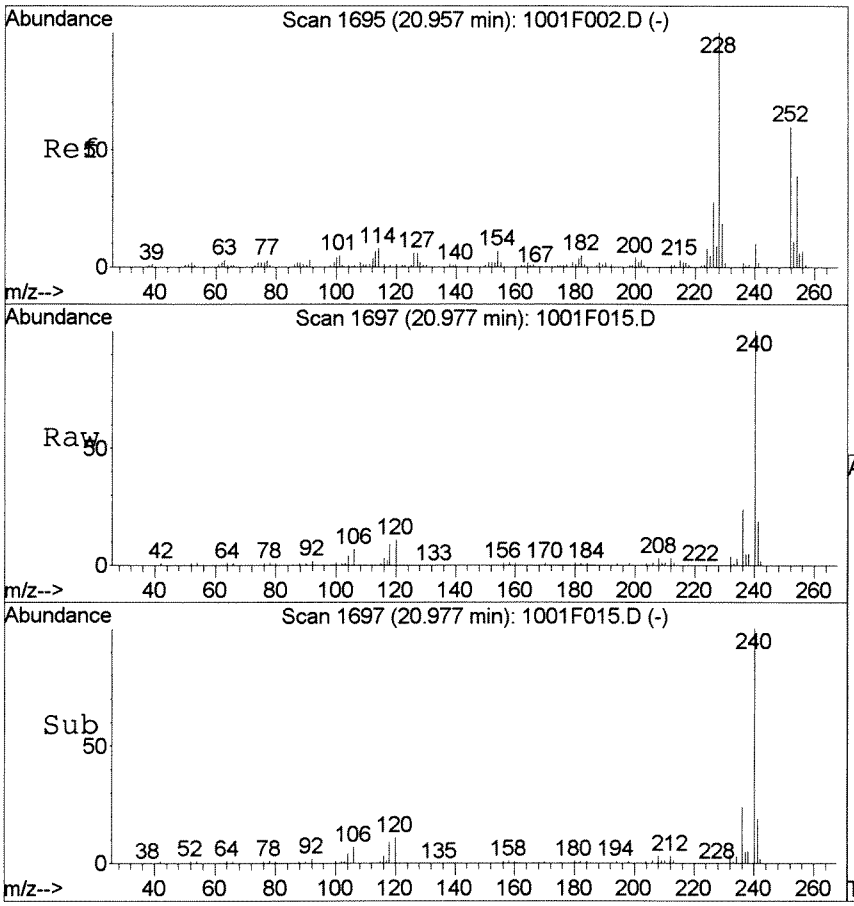


#72
Butyl Benzyl Phthalate
Concen: 0.24 ug/ml m
RT: 20.03 min Scan# 1604
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:149 Resp: 764

Ion	Ratio	Lower	Upper
149	100		
91	78.8	28.0	88.0
206	24.9	0.0	46.9

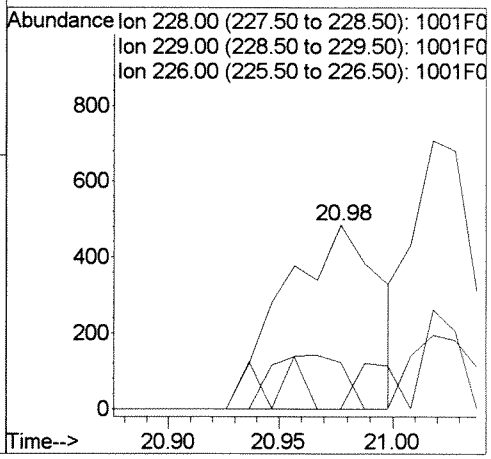


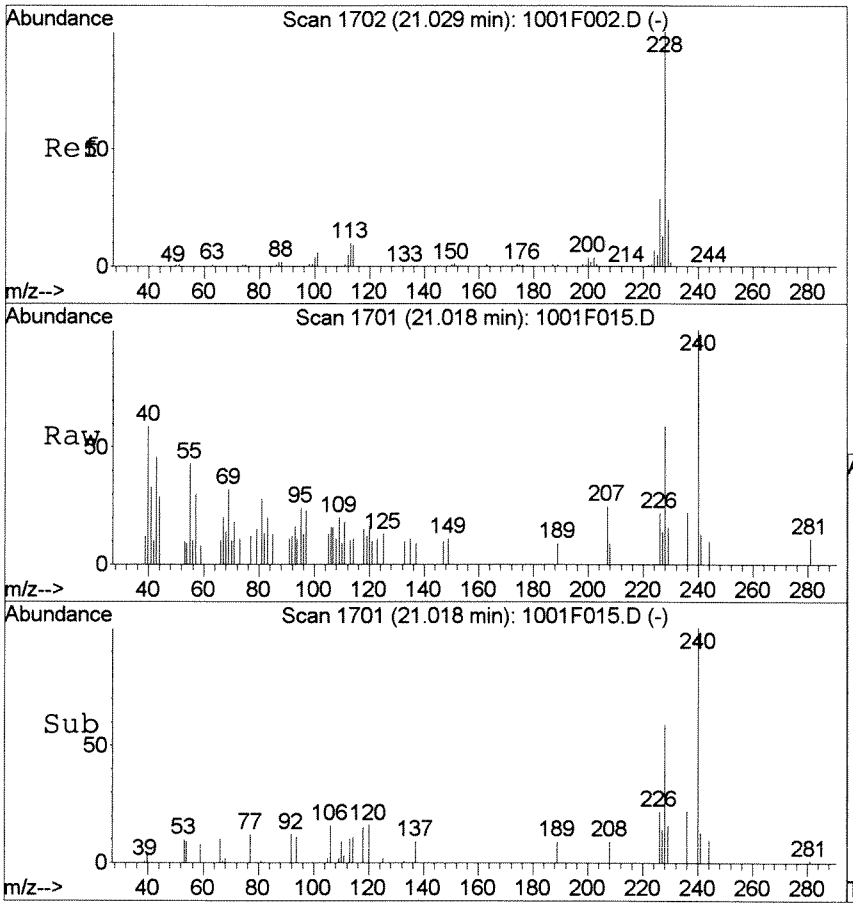


#74
Benz(a)anthracene
Concen: 0.24 ug/ml
RT: 20.98 min Scan# 1697
Delta R.T. 0.02 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:228 Resp: 1416

Ion	Ratio	Lower	Upper
228	100		
229	38.4	0.0	49.0
226	0.0	0.0	57.3

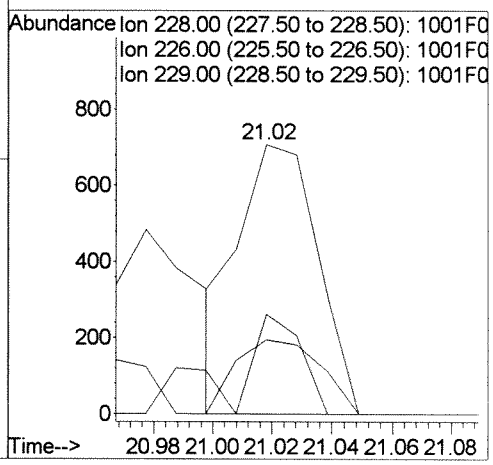


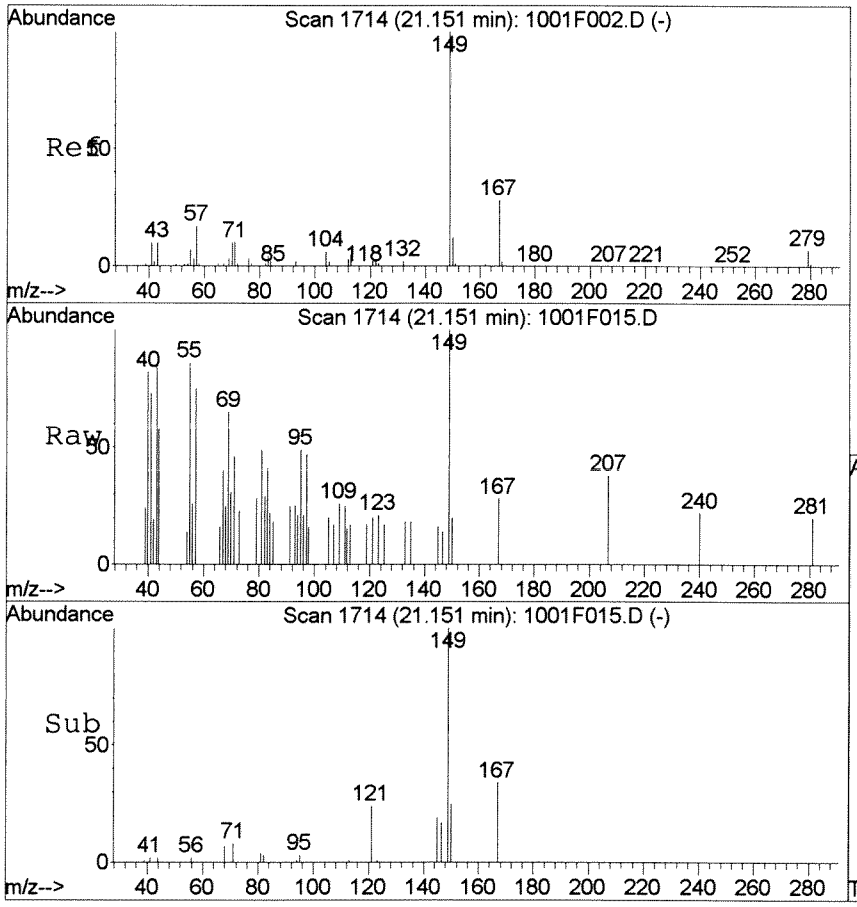


#75
Chrysene
Concen: 0.22 ug/ml
RT: 21.02 min Scan# 1701
Delta R.T. -0.01 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:228 Resp: 1304

Ion	Ratio	Lower	Upper
228	100		
226	37.7	0.0	59.3
229	35.7	0.0	49.2

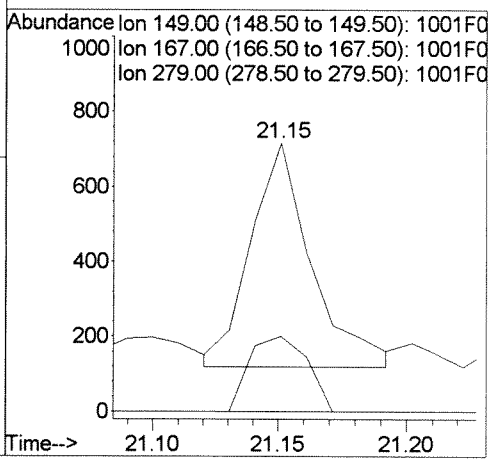


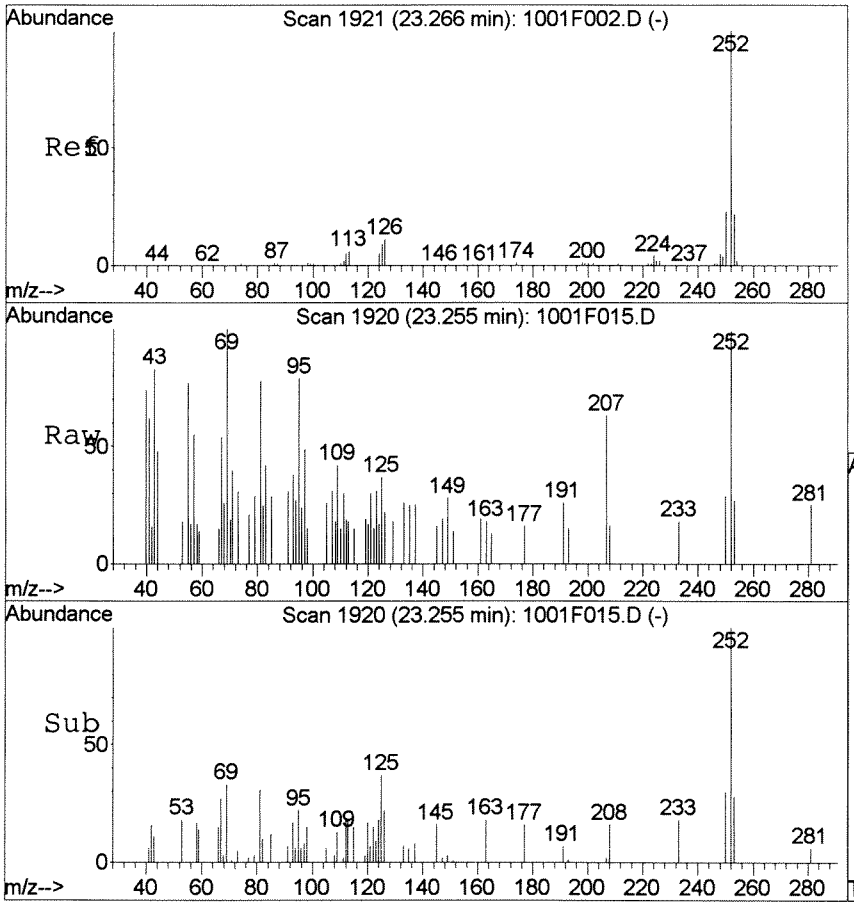


#76
Bis(2-ethylhexyl) Phthalate
Concen: 0.24 ug/ml m
RT: 21.15 min Scan# 1714
Delta R.T. -0.00 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:149 Resp: 998

Ion	Ratio	Lower	Upper
149	100		
167	27.9	0.0	57.7
279	0.0	0.0	36.6

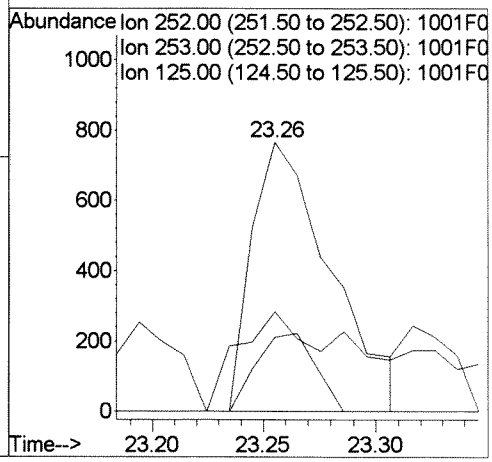


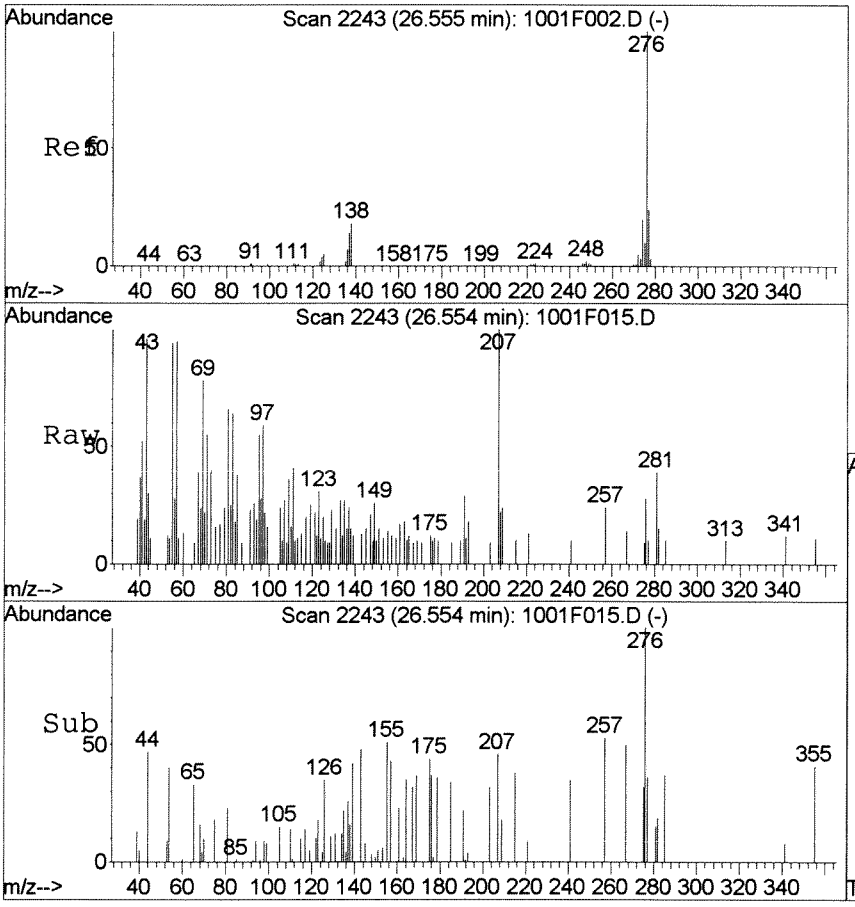


#79
Benzo(b)fluoranthene
Concen: 0.35 ug/ml
RT: 23.26 min Scan# 1920
Delta R.T. -0.01 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:252 Resp: 1881

Ion	Ratio	Lower	Upper
252	100		
253	30.7	0.0	51.9
125	30.5	0.0	39.2

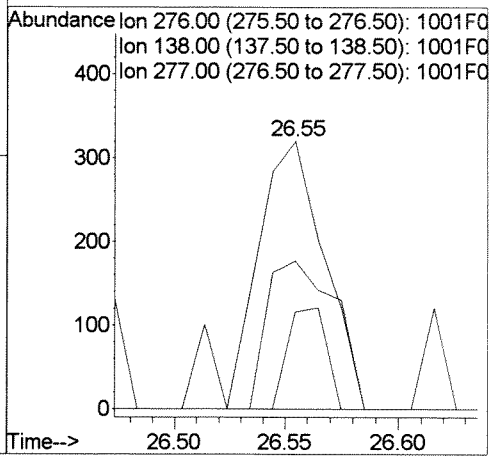




#82
Indeno(1,2,3-cd)pyrene
Concen: 0.14 ug/ml
RT: 26.55 min Scan# 2243
Delta R.T. -0.01 min
Lab File: 1001F015.D
Acq: 2 Oct 2014 4:37 am

Tgt Ion:276 Resp: 654

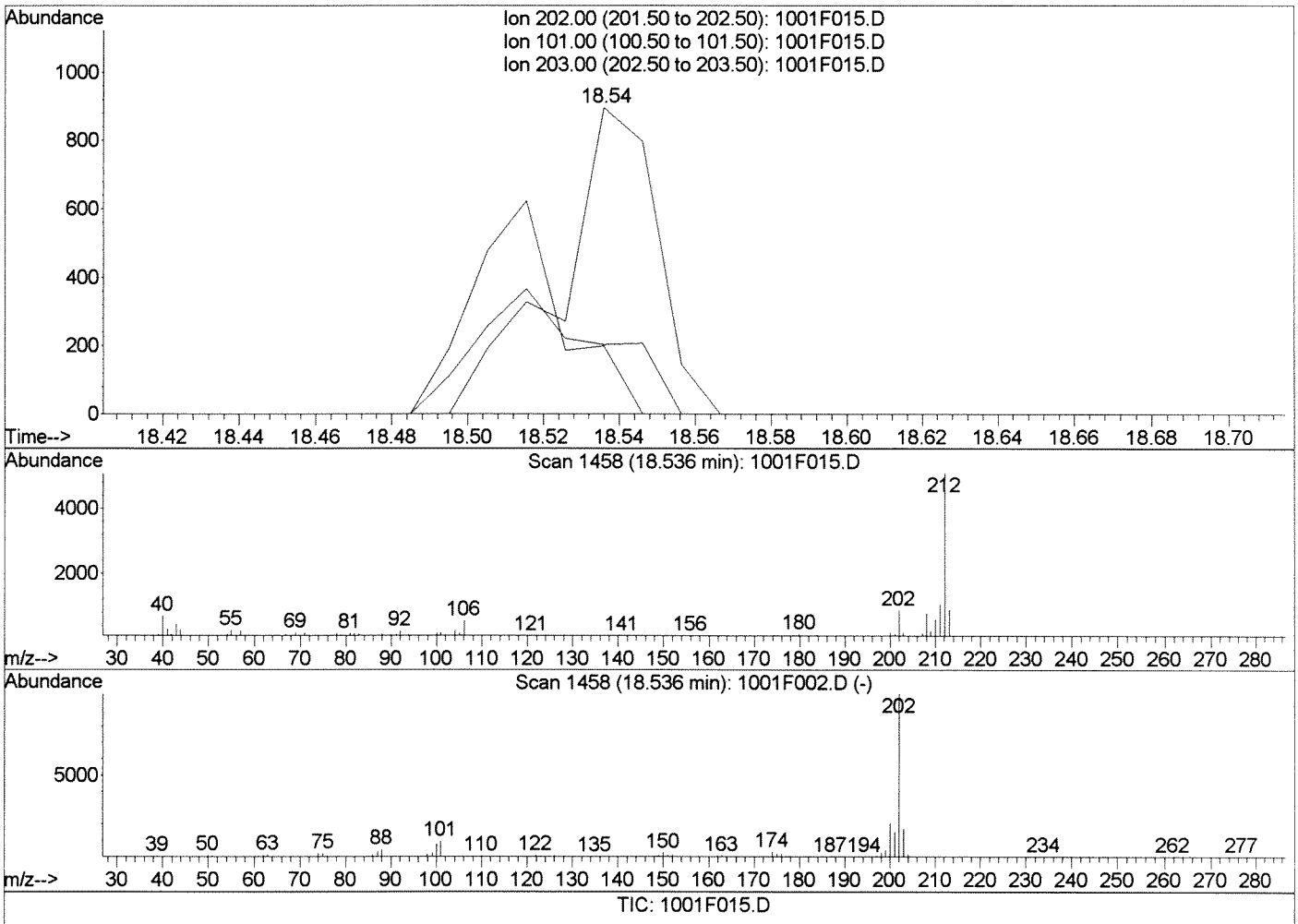
Ion	Ratio	Lower	Upper
276	100		
138	39.5	0.0	46.3
277	36.3	0.0	53.1



Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:37 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F015.D

(67) Fluoranthene (T)

18.54min 0.24ug/ml

response 1612

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	22.21
203.00	17.50	22.66
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

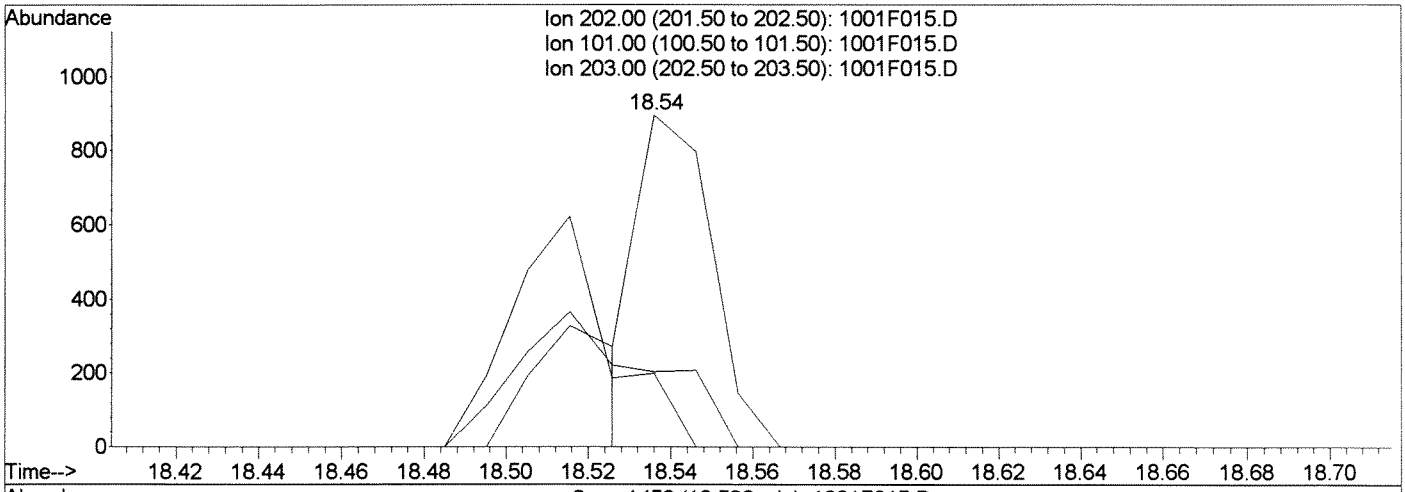
10/3/14

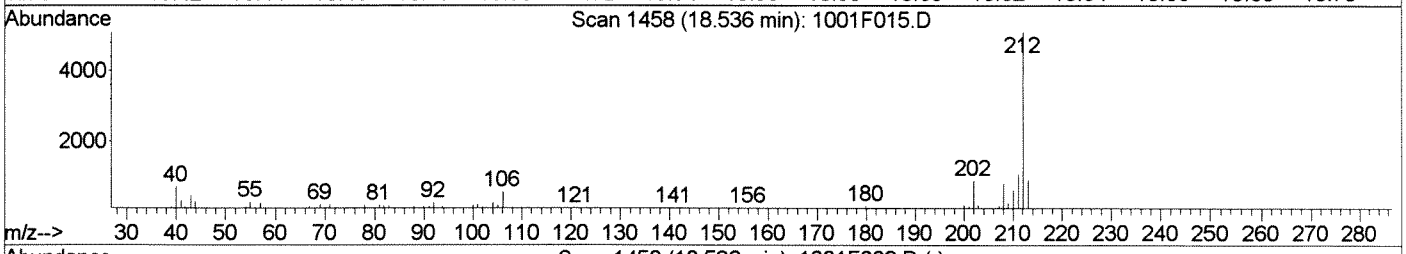
1001F015.D 093014BNC7.M Thu Oct 02 14:37:21 2014

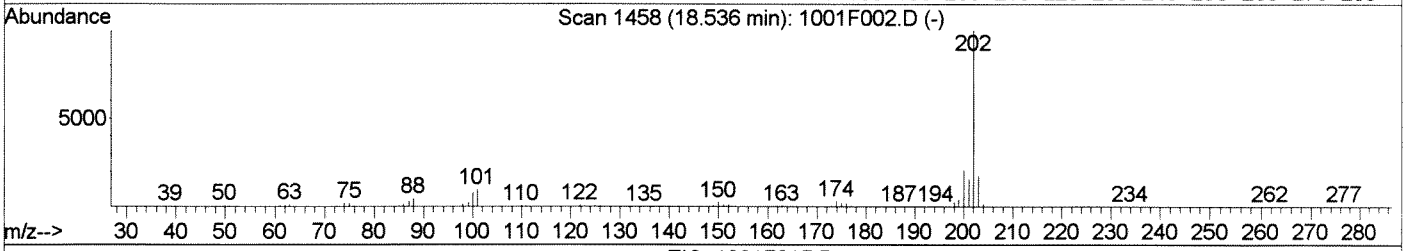
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:37 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F015.D

(67) Fluoranthene (T)

18.54min 0.17ug/ml m

response 1127

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	22.21
203.00	17.50	22.66
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

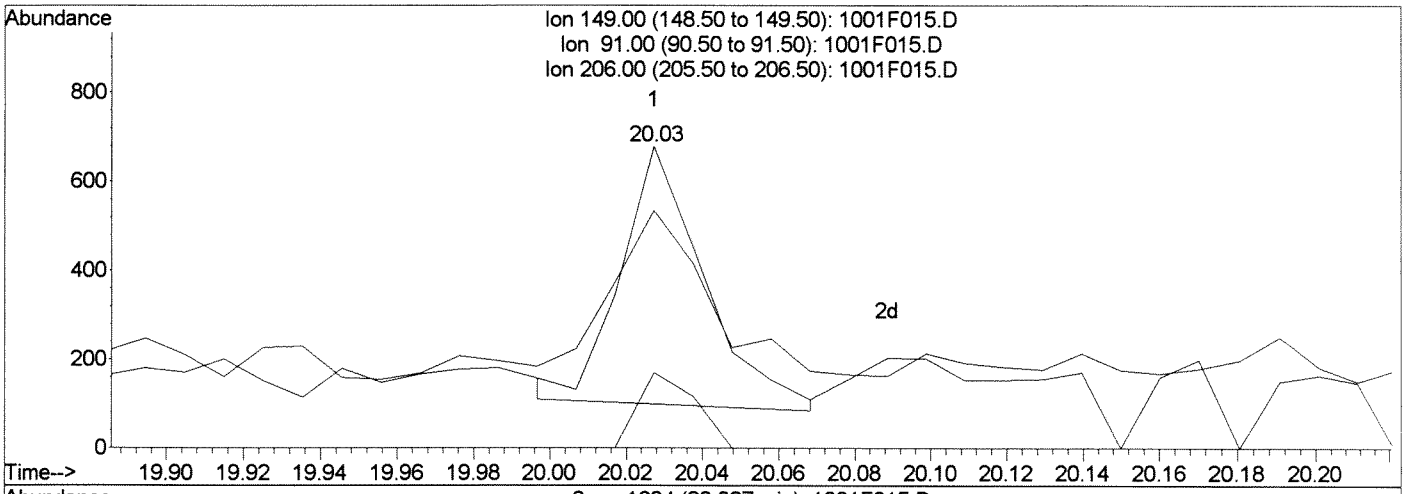
TRJ

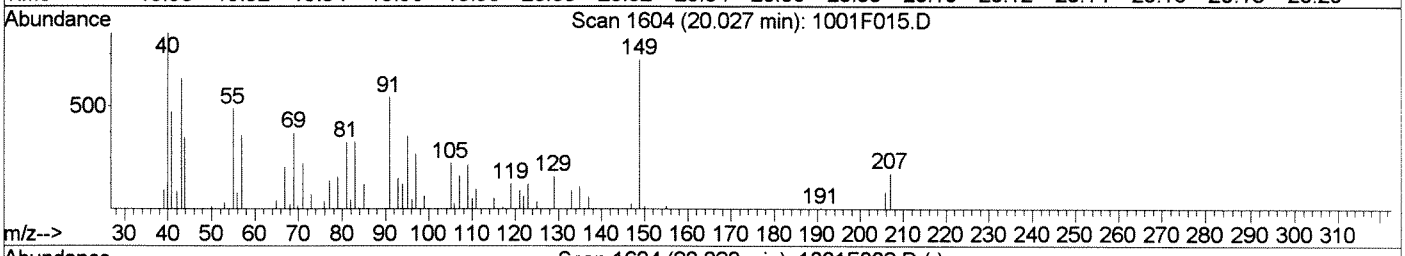
1001F015.D 093014BNC7.M Thu Oct 02 14:37:36 2014

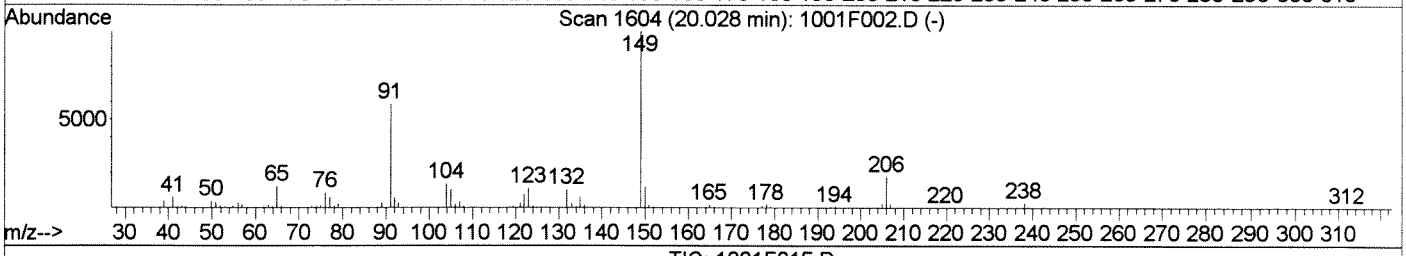
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:37 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F015.D

(72) Butyl Benzyl Phthalate (T)

20.03min 0.27ug/ml

response 864

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	65.32
206.00	16.90	31.01
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

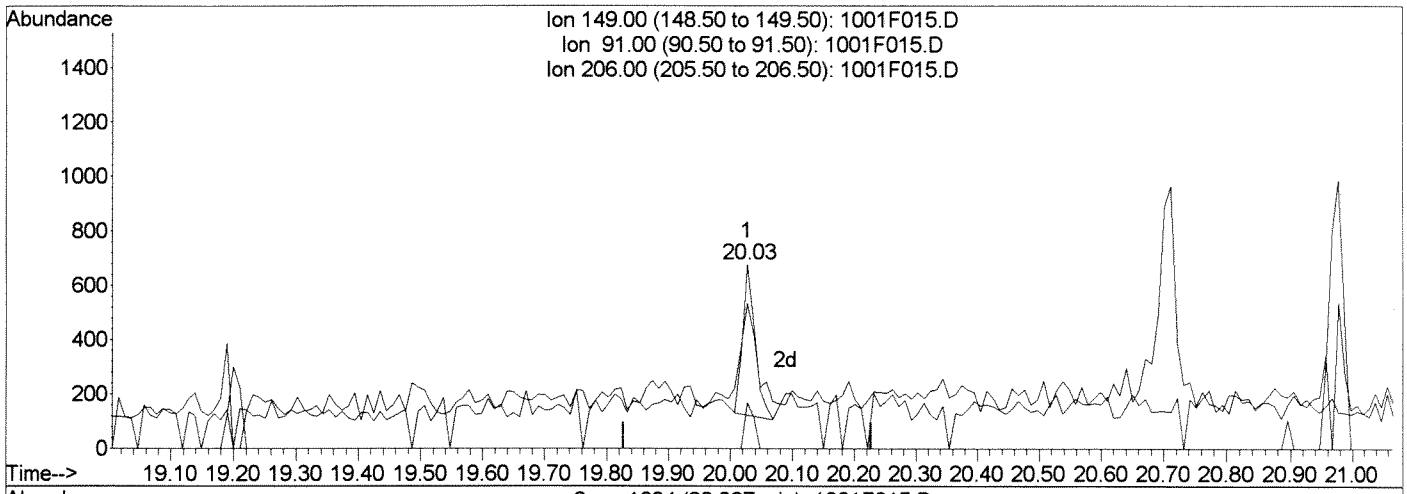
TRT

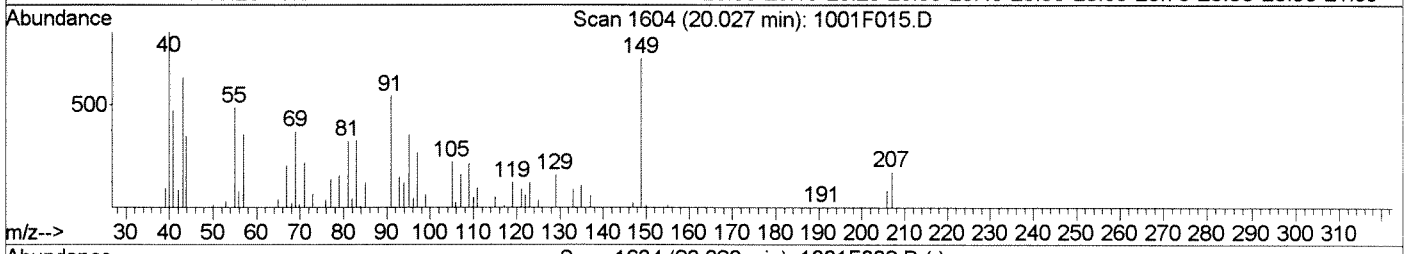
1001F015.D 093014BNC7.M Thu Oct 02 14:37:58 2014

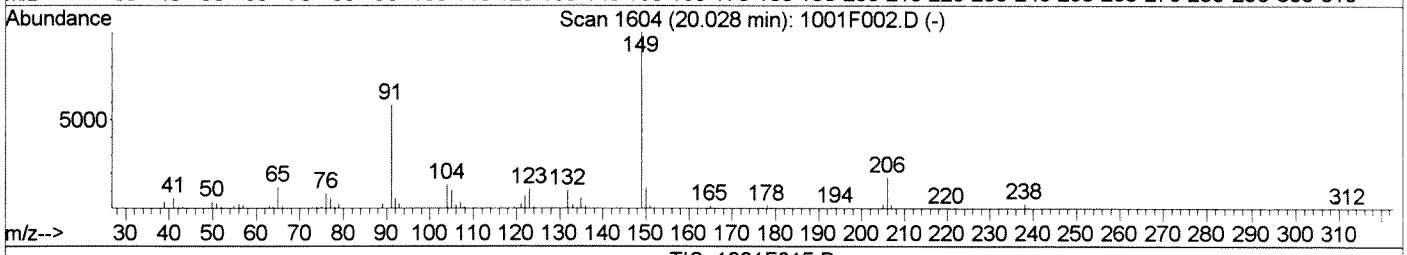
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 17:08 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F015.D

(72) Butyl Benzyl Phthalate (T)

20.03min 0.24ug/ml m

response 764

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	78.76
206.00	16.90	24.93
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

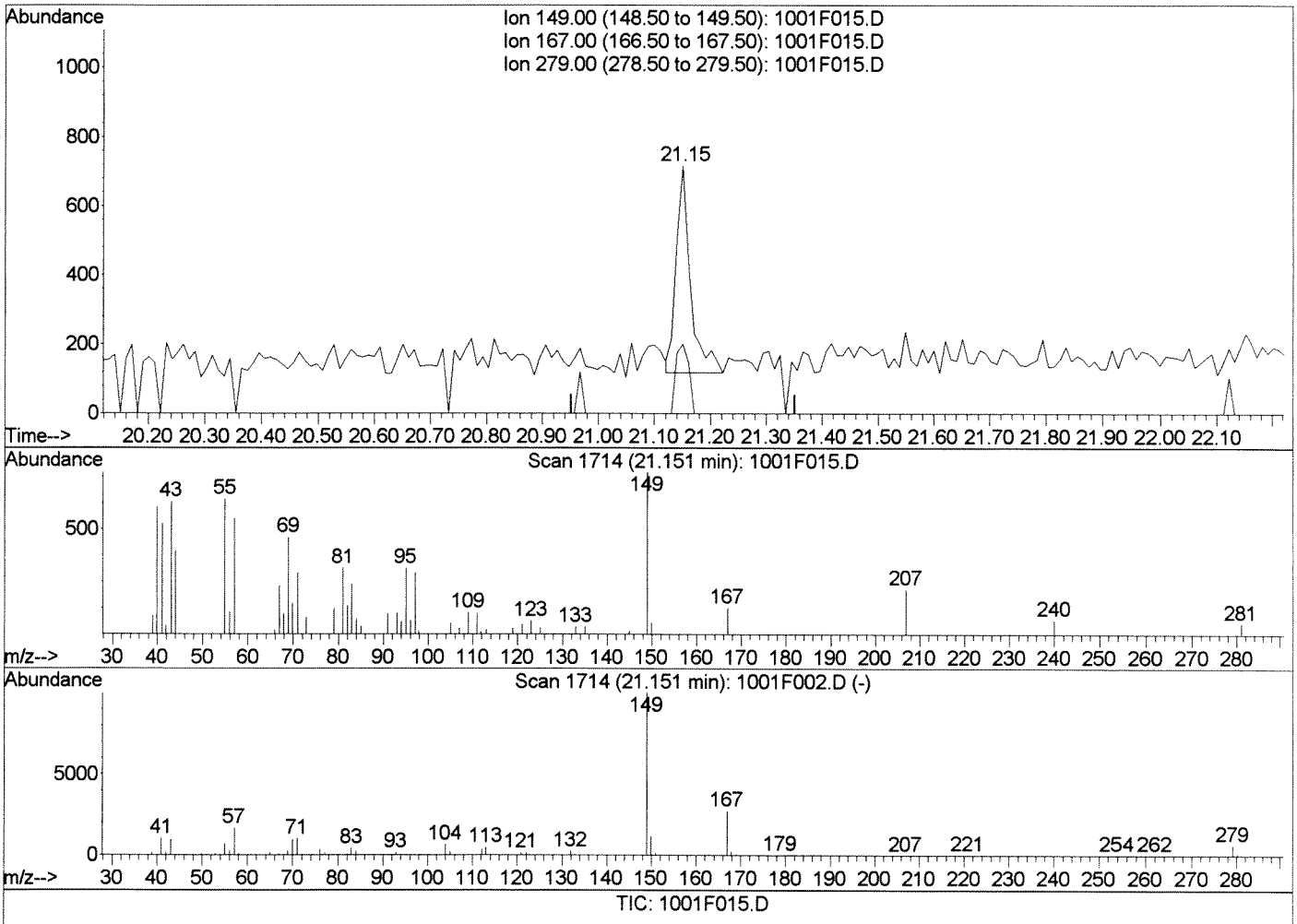
TR

1001F015.D 093014BNC7.M Thu Oct 02 17:09:46 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:38 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F015.D

(76) Bis(2-ethylhexyl) Phthalate (T)

21.15min 0.25ug/ml

response 1058

Ion	Exp%	Act%
149.00	100	100
167.00	27.70	34.39
279.00	6.60	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

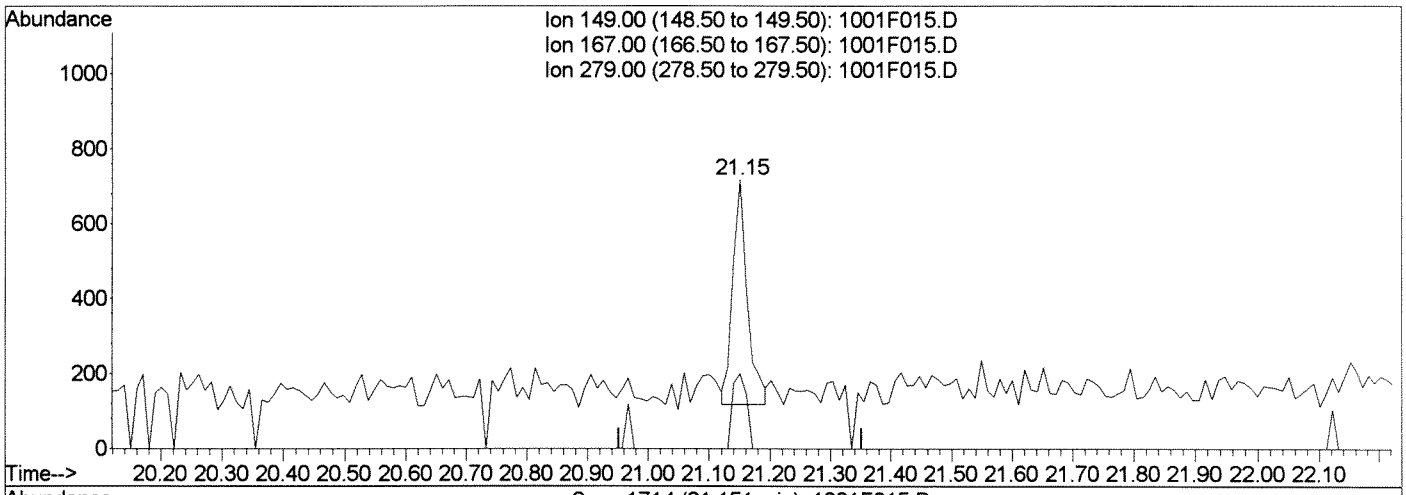
TRT

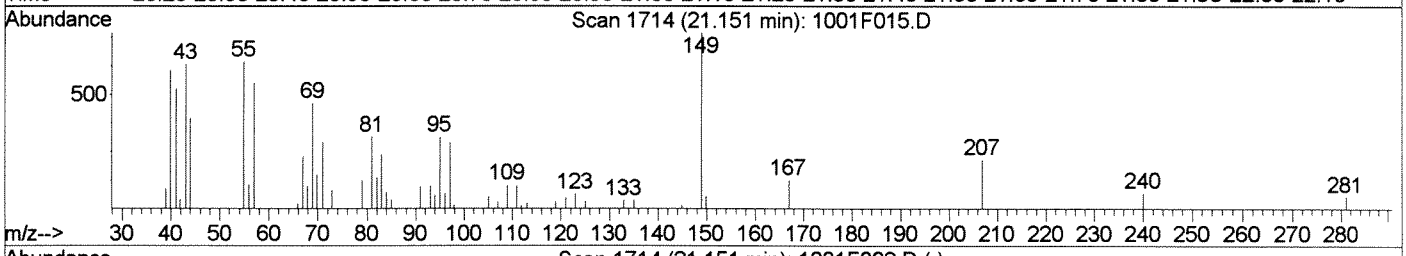
1001F015.D 093014BNC7.M Thu Oct 02 14:39:03 2014

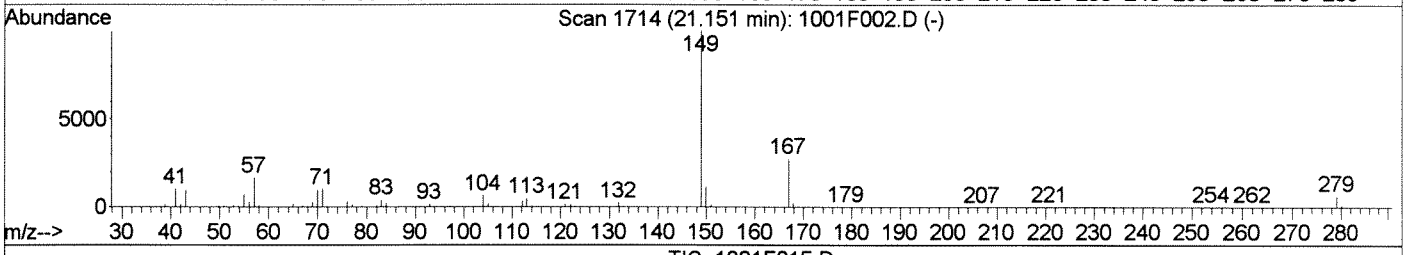
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F015.D Vial: 15
Acq On : 2 Oct 2014 4:37 am Operator: T. THOMAS
Sample : K1409921-004 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:39 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F015.D

(76) Bis(2-ethylhexyl) Phthalate (T)

21.15min 0.24ug/ml m

response 998

Ion	Exp%	Act%
149.00	100	100
167.00	27.70	27.93
279.00	6.60	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TR

1001F015.D 093014BNC7.M Thu Oct 02 14:39:22 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F014.D
Lab ID: K1409921-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 03:57
Date Quantitated: 10/02/2014 14:35
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 02 2014 JRT

Secondary Review: CO 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F014.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 03:57	**Quant Date:**	10/02/2014 14:35	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-005			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376326	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	72829	40.00	OK
2	Naphthalene-d8	11.32	0.01	136	261124	40.00	OK
3	Acenaphthene-d10	14.18	0.01	164	124718	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	223508	40.00	OK
5	Chrysene-d12	20.98	0.00	240	227260	40.00	OK
6	Perylene-d12	24.13	0.01	264	202986	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.73	0.00	0.00	99	173554	70.46	47	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	105105	47.71	48	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	231224	49.15	49	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	121381	98.68	66	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	325892	65.62	66	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0d		0.023	U	
1	2-Methylphenol				107	0		0.020	U	
1	4-Methylphenol				107	0		0.020	U	
2	2,4-Dimethylphenol				122	0		0.018	U	
2	Hexachlorobutadiene				225	0		0.017	U	
3	Diethyl Phthalate				149	0d		0.017	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.17	U	
4	Hexachlorobenzene				284	0		0.018	U	
4	Fluoranthene	18.54		0.00	202	9798	1.60	0.063	J	
5	Pyrene	18.89		0.00	202	8529	1.27	0.050	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F014.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 03:57	**Quant Date:**	10/02/2014 14:35	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-005			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	8908	2.88	0.11	J	
5	Chrysene	21.02	-0.01	0.00	228	15605	2.76	0.11	J	
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	21051	5.17	0.20	J	
6	Di-n-octyl Phthalate	22.60	0.01	0.00	149	2472	0.3700	0.029	U	

Prep Amount:	40.481 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	63.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F014.D Vial: 14
Acq On : 2 Oct 2014 3:57 am Operator: T. THOMAS
Sample : K1409921-005 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:21 2014 Quant Results File: 093014BNC7.RES

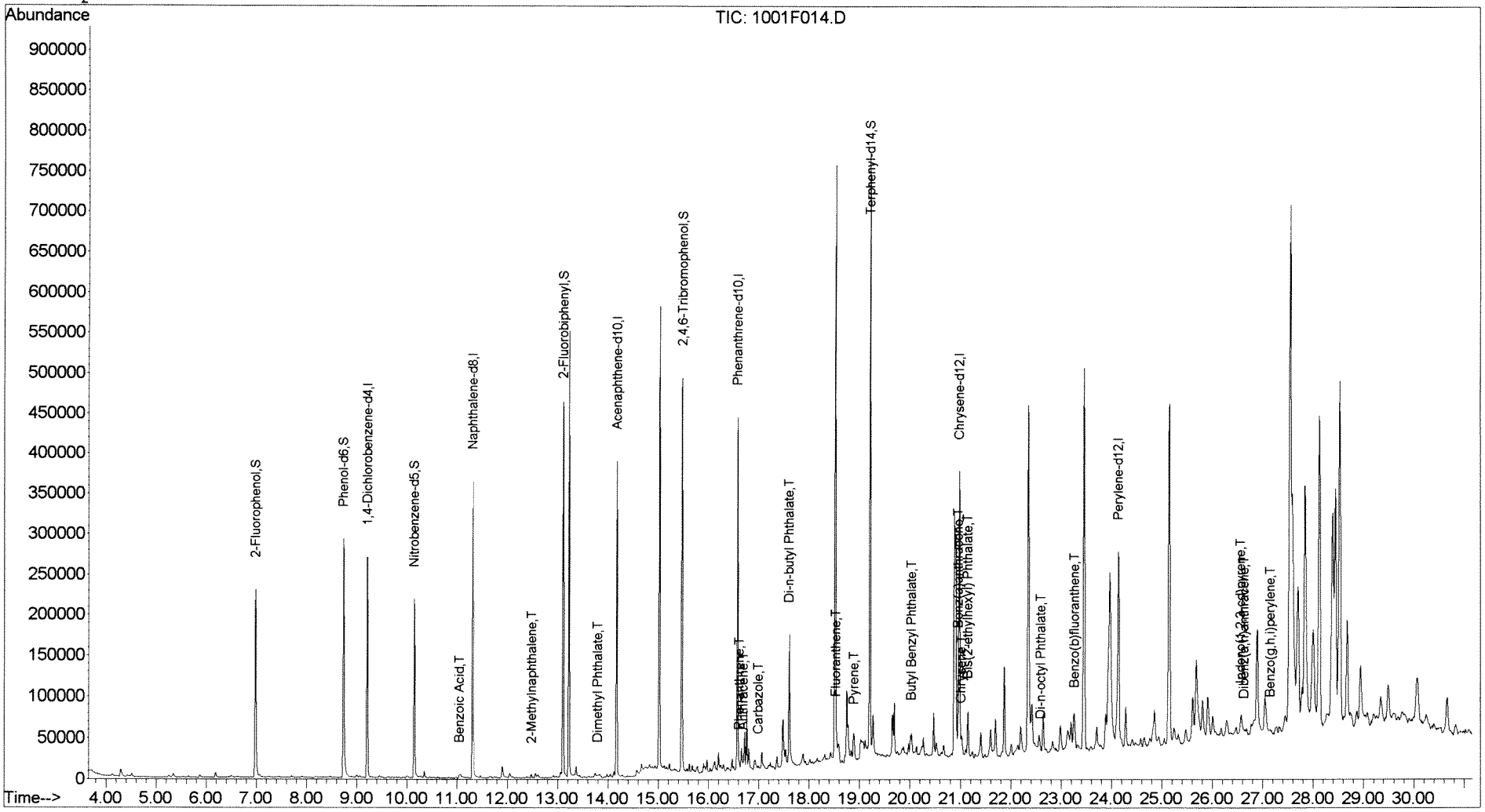
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

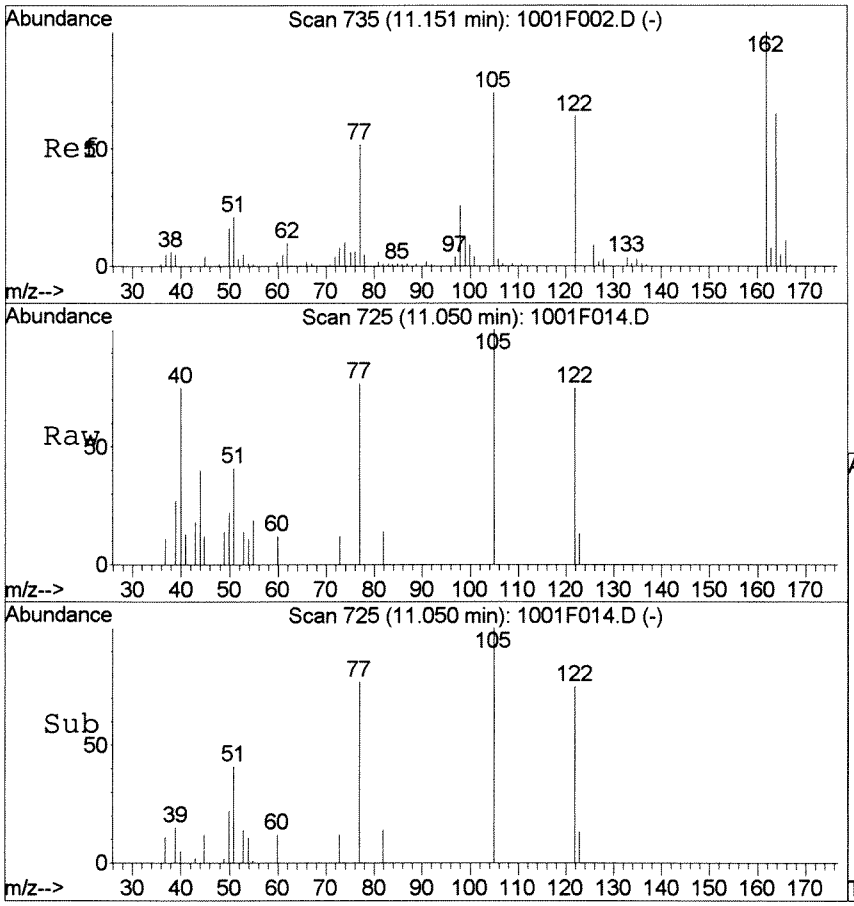
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	72829	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	261124	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.18	164	124718	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	223508	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	227260	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	202986	40.00	ug/ml	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	127369	60.97	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 40.65%			
7) Phenol-d6	8.73	99	173554	70.46	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 46.97%			
19) Nitrobenzene-d5	10.14	82	105105	47.71	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 47.71%			
38) 2-Fluorobiphenyl	13.11	172	231224	49.15	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 49.15%			
59) 2,4,6-Tribromophenol	15.47	330	121381	98.68	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 65.79%			
71) Terphenyl-d14	19.20	244	325892	65.62	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 65.62%			
Target Compounds						Qvalue
27) Benzoic Acid	11.05	122	2141	1.86	ug/ml	86
33) 2-Methylnaphthalene	12.49	142	392m	0.10	ug/ml	
42) Dimethyl Phthalate	13.80	163	1120	0.24	ug/ml	93
63) Phenanthrene	16.62	178	4738	0.87	ug/ml	99
64) Anthracene	16.70	178	955	0.17	ug/ml	98
65) Carbazole	16.99	167	1017	0.19	ug/ml	97
66) Di-n-butyl Phthalate	17.61	149	5085	0.73	ug/ml	94
67) Fluoranthene	18.54	202	9798	1.60	ug/ml	93
70) Pyrene	18.89	202	8529	1.27	ug/ml	98
72) Butyl Benzyl Phthalate	20.03	149	8908	2.88	ug/ml	98
74) Benz(a)anthracene	20.96	228	4675	0.82	ug/ml	93
75) Chrysene	21.02	228	15605	2.76	ug/ml	97
76) Bis(2-ethylhexyl) Phthalat	21.15	149	21051	5.17	ug/ml	97
78) Di-n-octyl Phthalate	22.60	149	2472	0.37	ug/ml	82
79) Benzo(b)fluoranthene	23.27	252	22831	4.62	ug/ml	95
82) Indeno(1,2,3-cd)pyrene	26.57	276	4731m	1.09	ug/ml	
83) Dibenz(a,h)anthracene	26.64	278	1567	0.35	ug/ml	81
84) Benzo(g,h,i)perylene	27.15	276	4557	0.96	ug/ml	81

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F014.D Vial: 14
Acq On : 2 Oct 2014 3:57 am Operator: T. THOMAS
Sample : K1409921-005 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:35 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

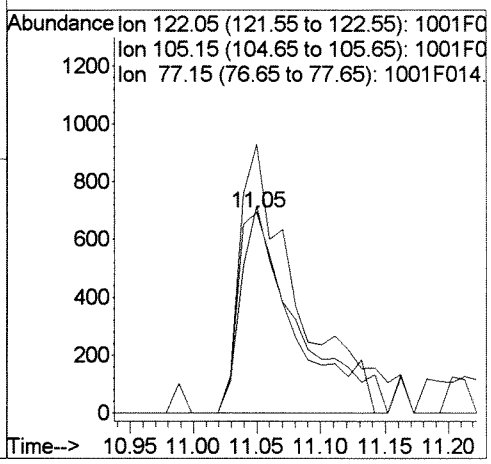


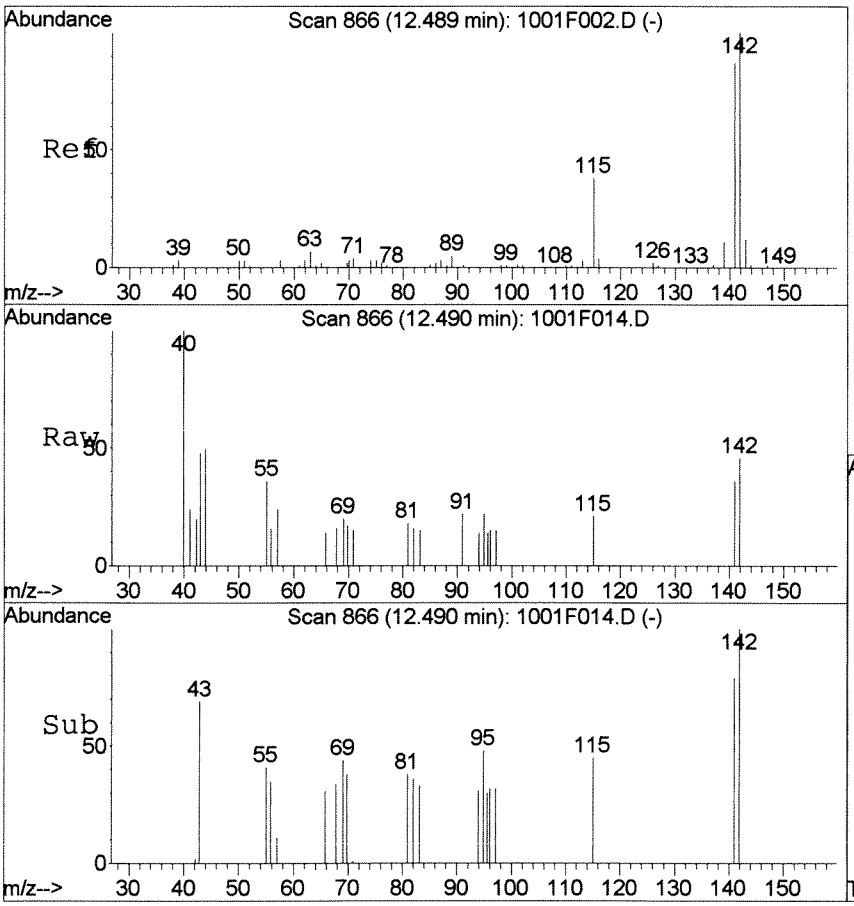


#27
Benzoic Acid
Concen: 1.86 ug/ml
RT: 11.05 min Scan# 725
Delta R.T. -0.10 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:122 Resp: 2141

Ion	Ratio	Lower	Upper
122	100		
105	126.2	90.4	150.4
77	103.3	50.1	110.1

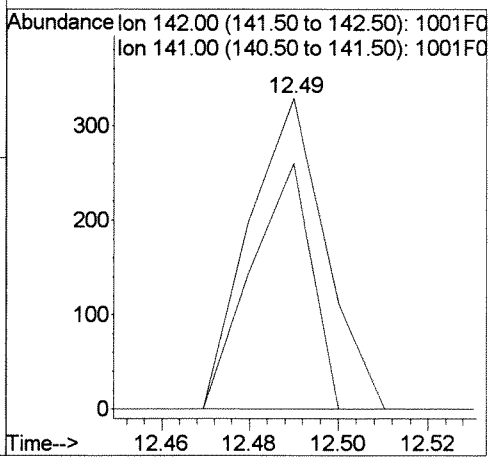


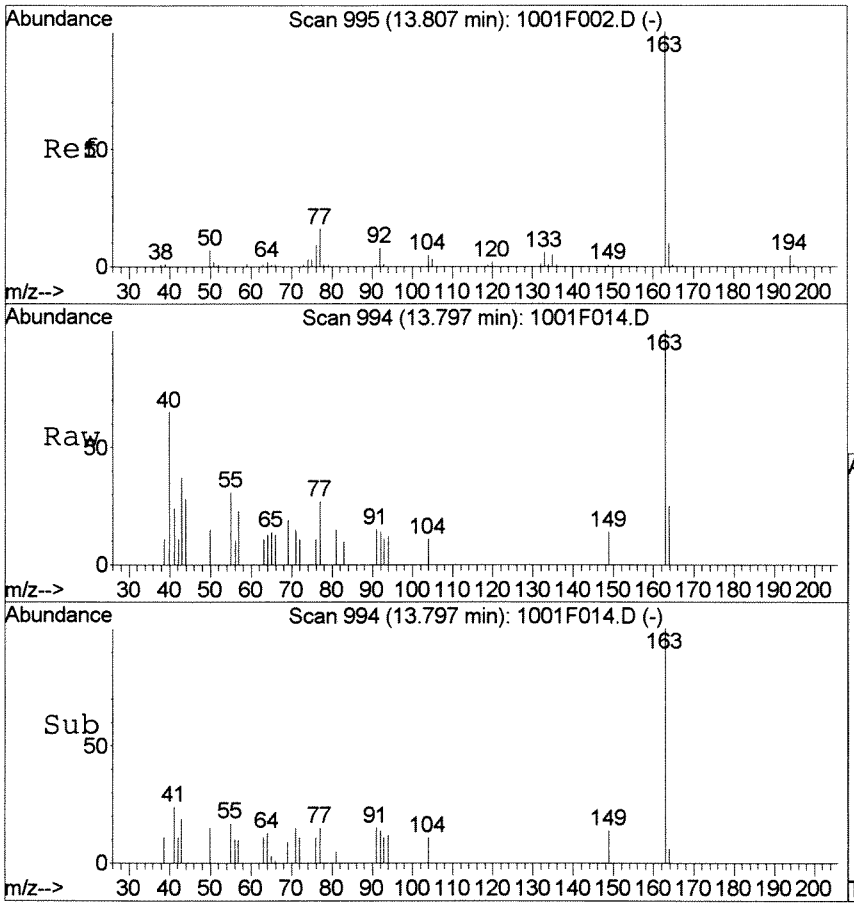


#33
2-Methylnaphthalene
Concen: 0.10 ug/ml m
RT: 12.49 min Scan# 866
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:142 Resp: 392

Ion	Ratio	Lower	Upper
142	100		
141	79.0	58.7	118.7

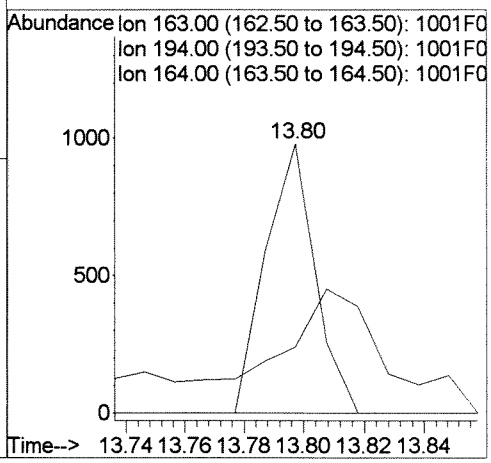


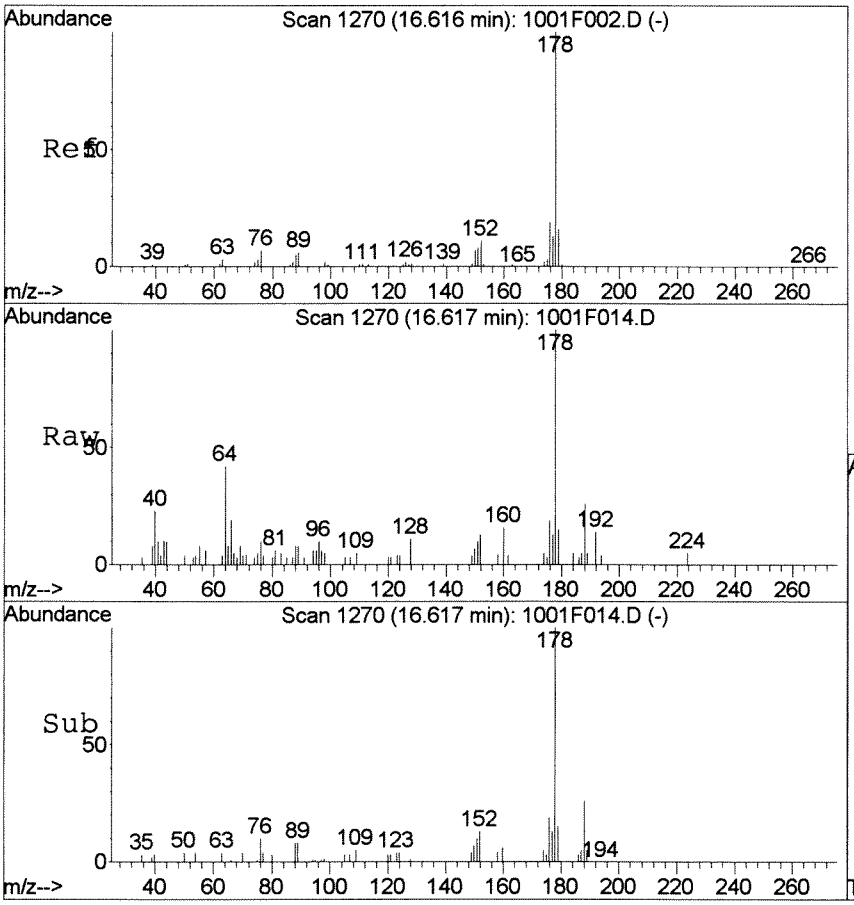


#42
Dimethyl Phthalate
Concen: 0.24 ug/ml
RT: 13.80 min Scan# 994
Delta R.T. -0.01 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:163 Resp: 1120

Ion	Ratio	Lower	Upper
163	100		
194	0.0	0.0	34.6
164	11.2	0.0	39.9

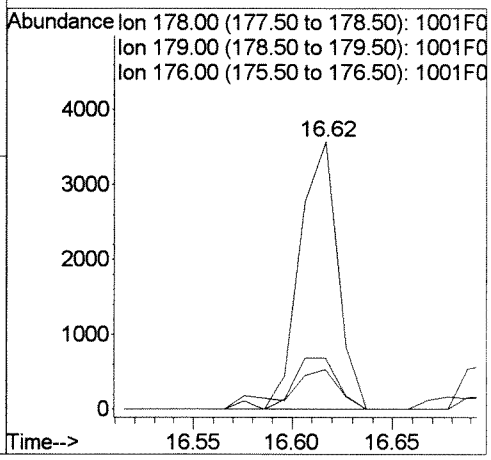


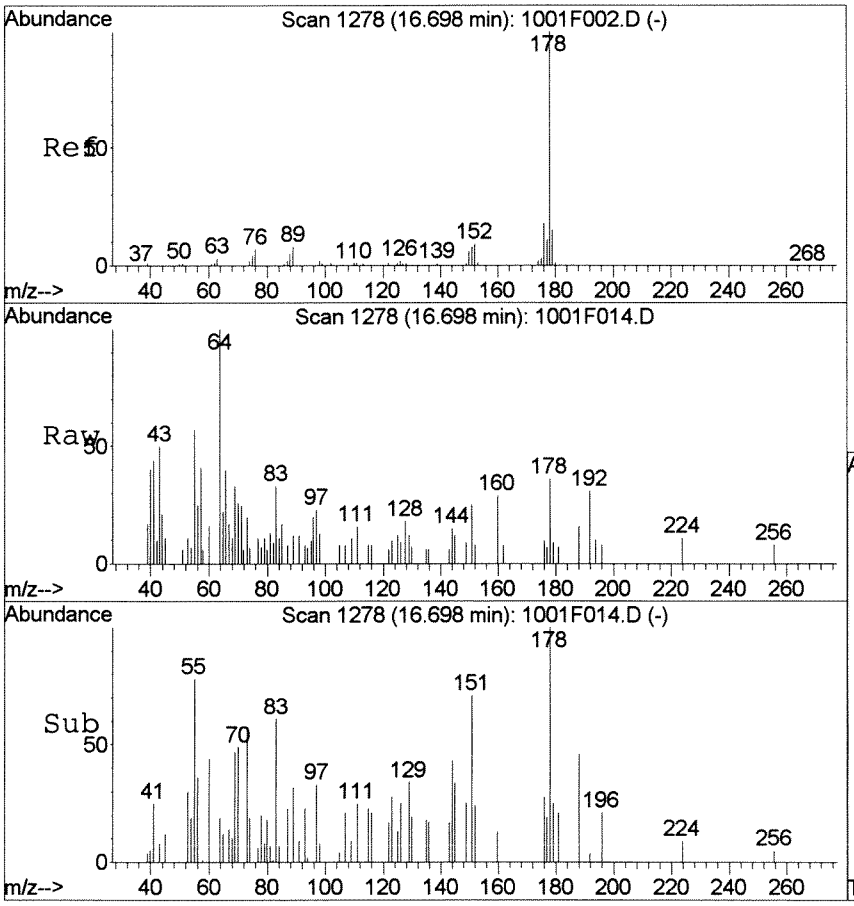


#63
Phenanthrene
Concen: 0.87 ug/ml
RT: 16.62 min Scan# 1270
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:178 Resp: 4738

Ion	Ratio	Lower	Upper
178	100		
179	14.8	0.0	45.5
176	19.2	0.0	49.1

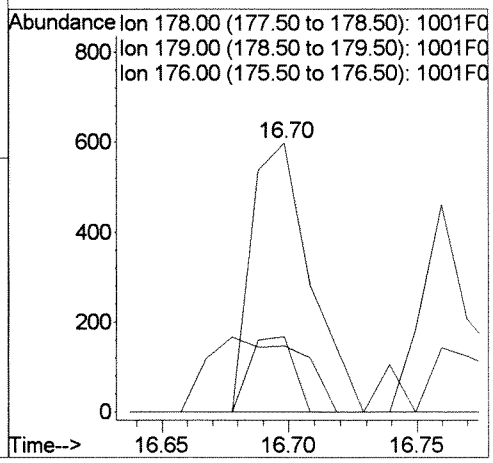


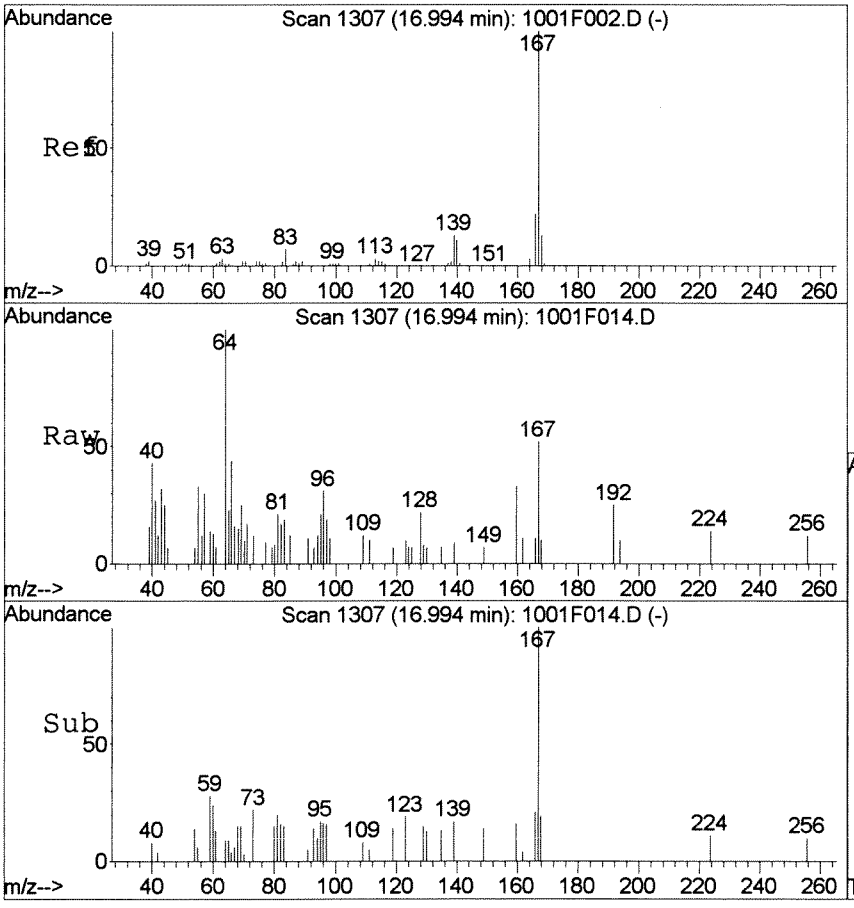


#64
Anthracene
Concen: 0.17 ug/ml
RT: 16.70 min Scan# 1278
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:178 Resp: 955

Ion	Ratio	Lower	Upper
178	100		
179	14.5	0.0	45.6
176	19.2	0.0	48.8

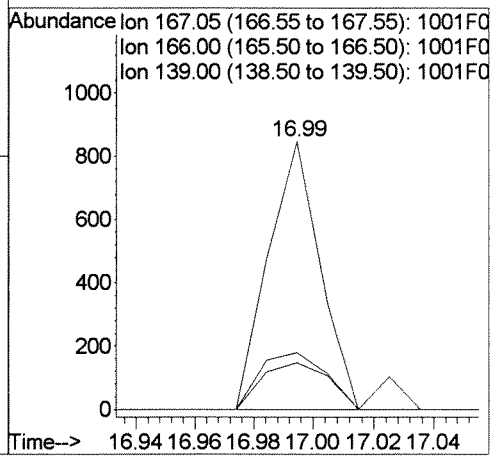


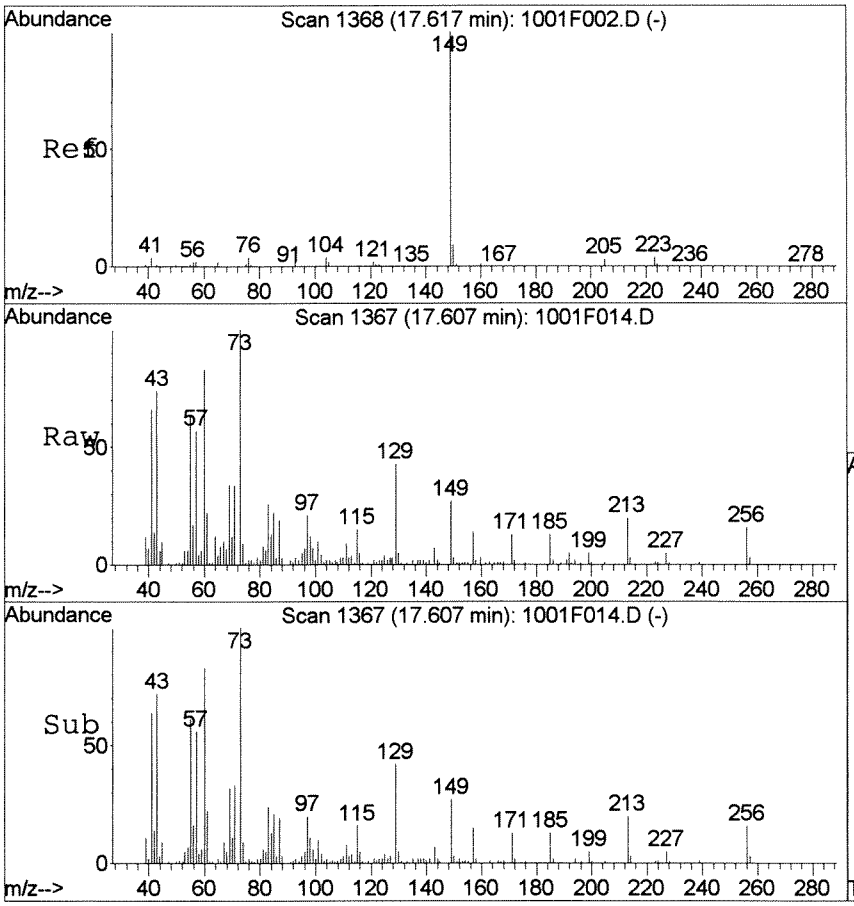


#65
Carbazole
Concen: 0.19 ug/ml
RT: 16.99 min Scan# 1307
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:167 Resp: 1017

Ion	Ratio	Lower	Upper
167	100		
166	21.1	0.0	51.6
139	11.3	0.0	43.3

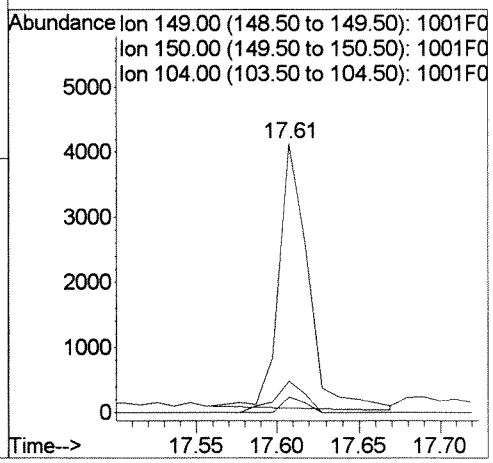


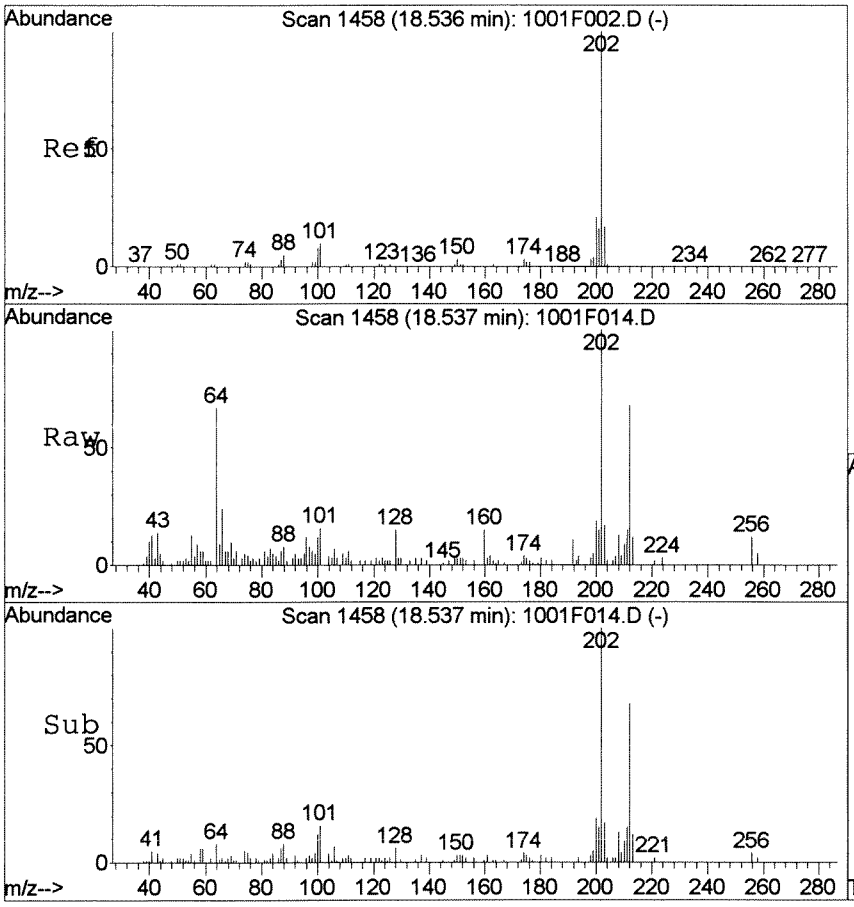


#66
Di-n-butyl Phthalate
Concen: 0.73 ug/ml
RT: 17.61 min Scan# 1367
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:149 Resp: 5085

Ion	Ratio	Lower	Upper
149	100		
150	12.0	0.0	39.3
104	6.0	0.0	35.1

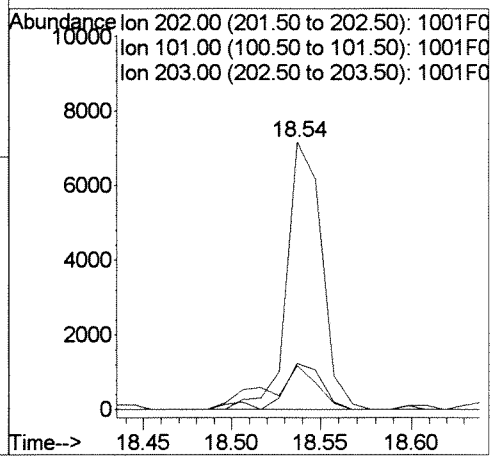


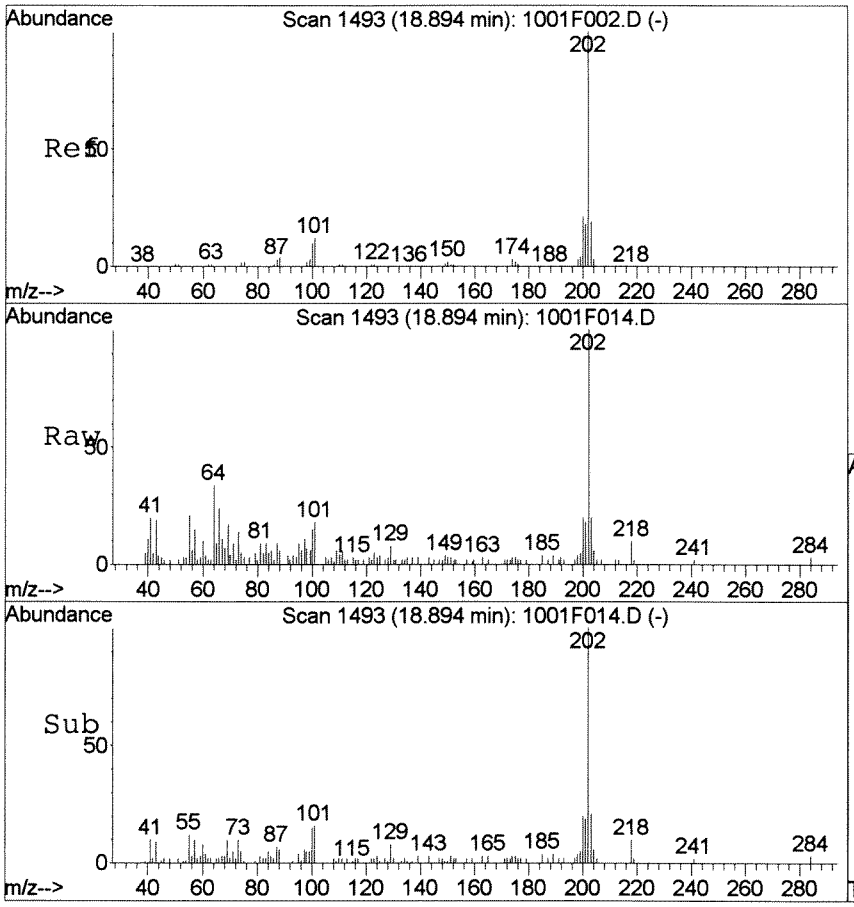


#67
Fluoranthene
Concen: 1.60 ug/ml
RT: 18.54 min Scan# 1458
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:202 Resp: 9798

Ion	Ratio	Lower	Upper
202	100		
101	16.4	0.0	39.2
203	17.3	0.0	47.5

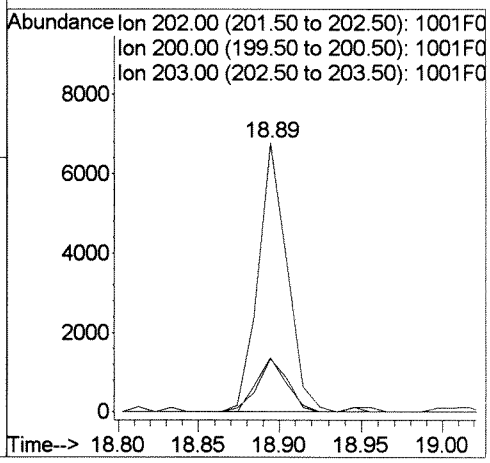


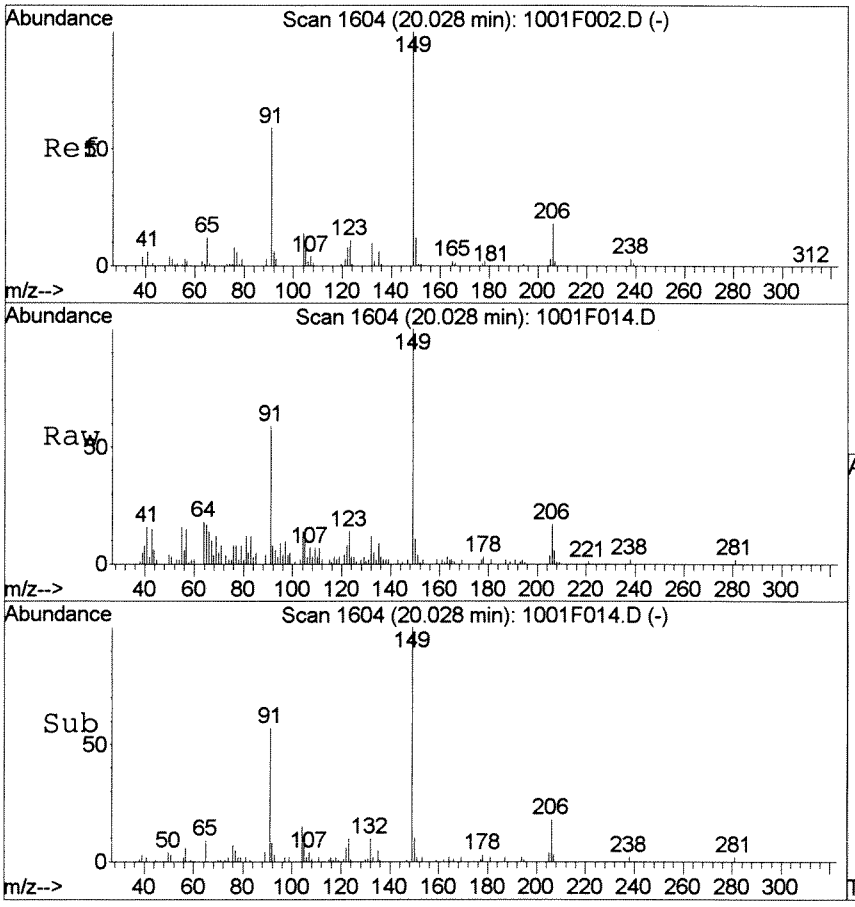


#70
Pyrene
Concen: 1.27 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:202 Resp: 8529

Ion	Ratio	Lower	Upper
202	100		
200	19.7	0.0	50.7
203	20.2	0.0	49.2

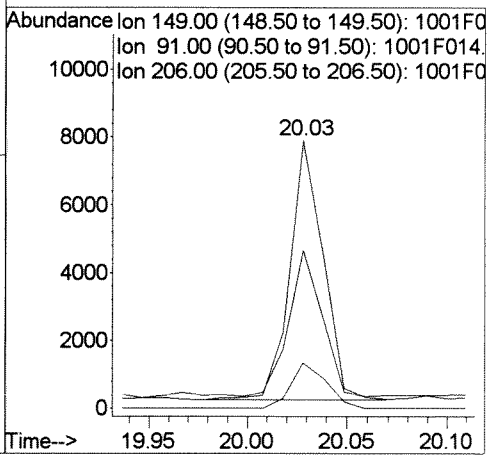


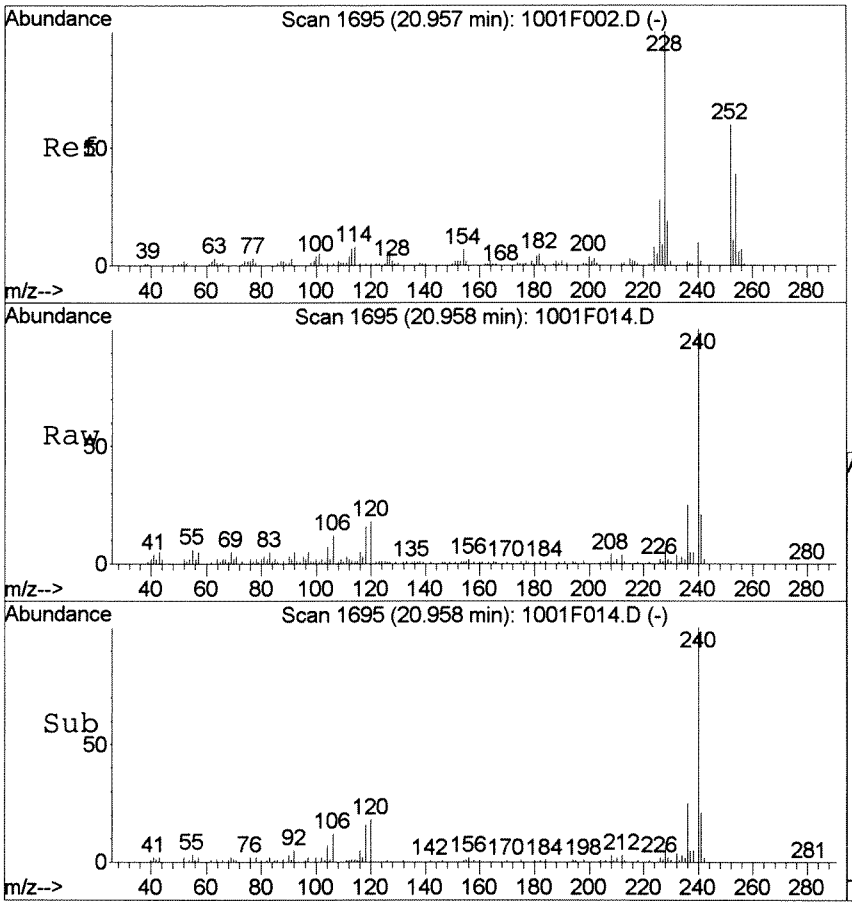


#72
Butyl Benzyl Phthalate
Concen: 2.88 ug/ml
RT: 20.03 min Scan# 1604
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:149 Resp: 8908

Ion	Ratio	Lower	Upper
149	100		
91	56.0	28.0	88.0
206	17.6	0.0	46.9

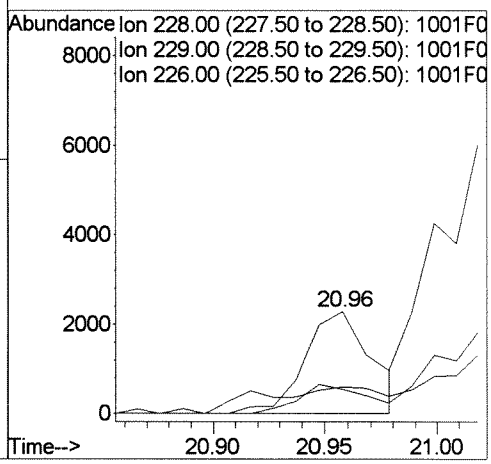


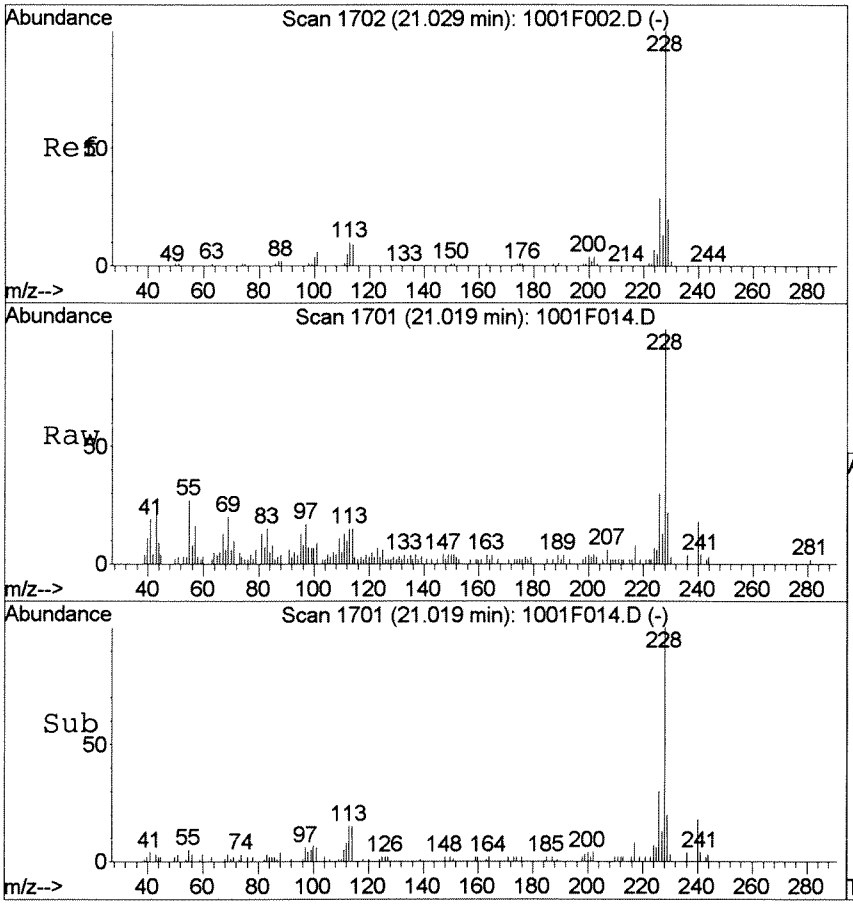


#74
Benz(a)anthracene
Concen: 0.82 ug/ml
RT: 20.96 min Scan# 1695
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:228 Resp: 4675

Ion	Ratio	Lower	Upper
228	100		
229	22.4	0.0	49.0
226	23.7	0.0	57.3

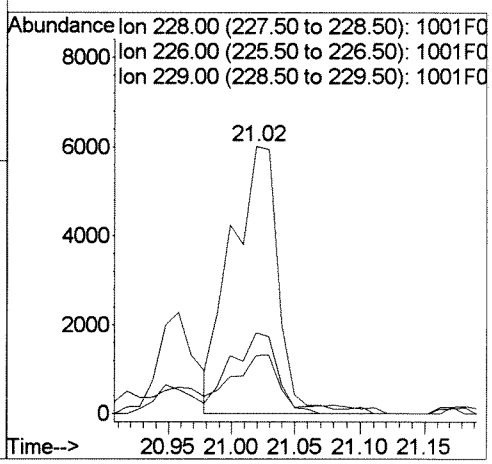


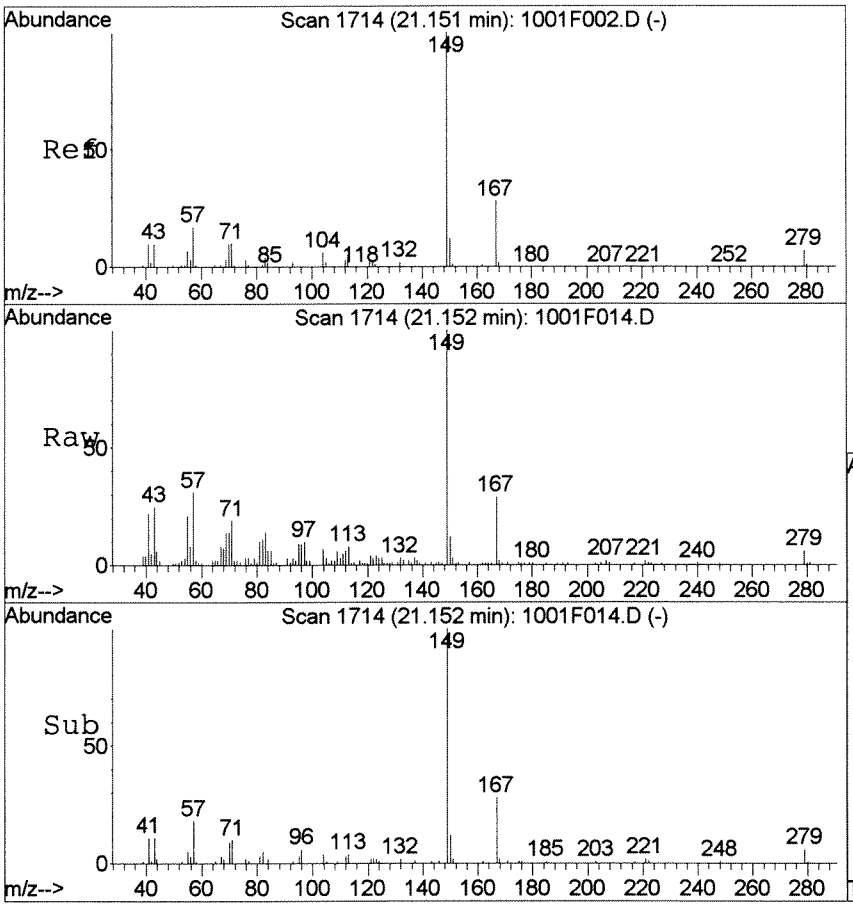


#75
Chrysene
Concen: 2.76 ug/ml
RT: 21.02 min Scan# 1701
Delta R.T. -0.01 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:228 Resp: 15605

Ion	Ratio	Lower	Upper
228	100		
226	30.8	0.0	59.3
229	20.3	0.0	49.2

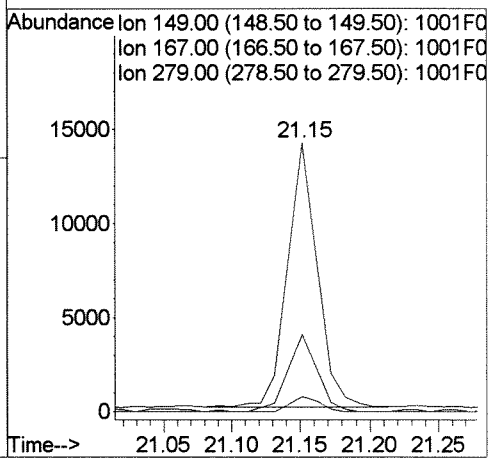


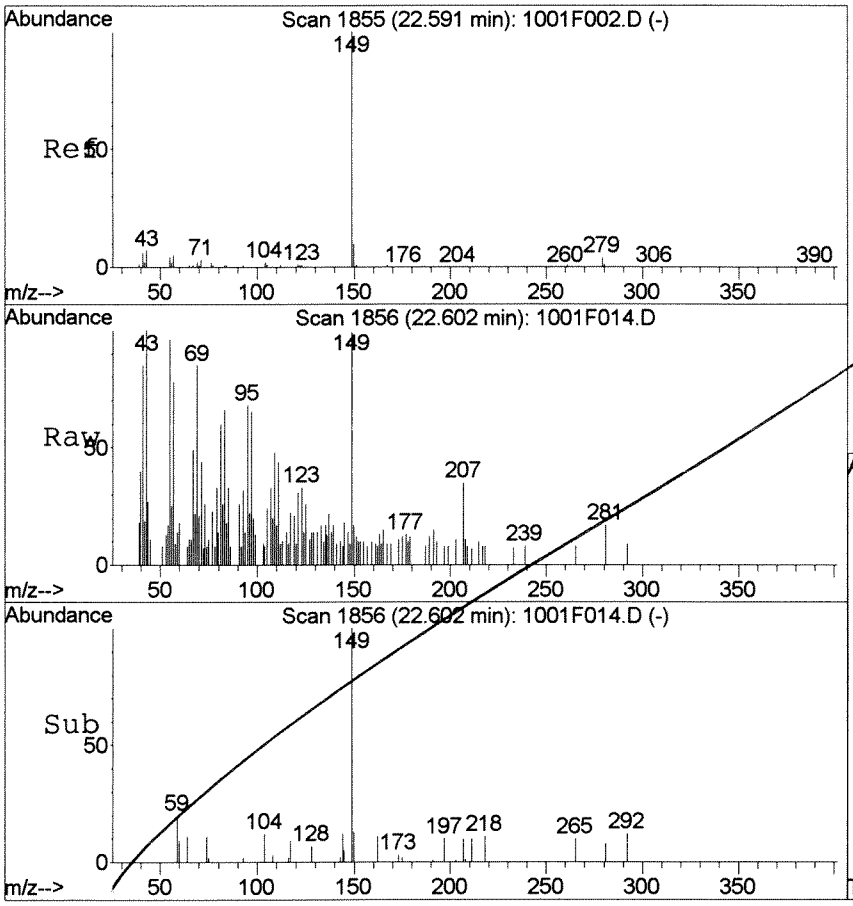


#76
Bis(2-ethylhexyl) Phthalate
Concen: 5.17 ug/ml
RT: 21.15 min Scan# 1714
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:149 Resp: 21051

Ion	Ratio	Lower	Upper
149	100		
167	29.2	0.0	57.7
279	5.8	0.0	36.6

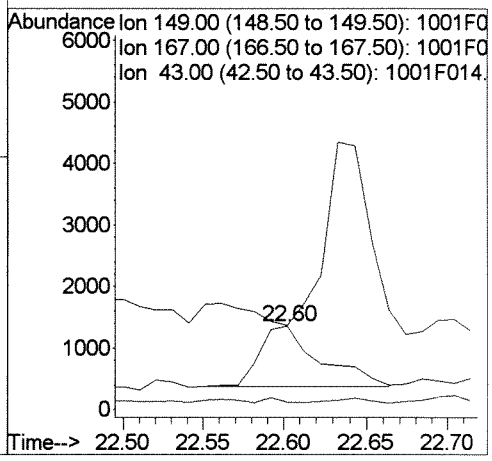


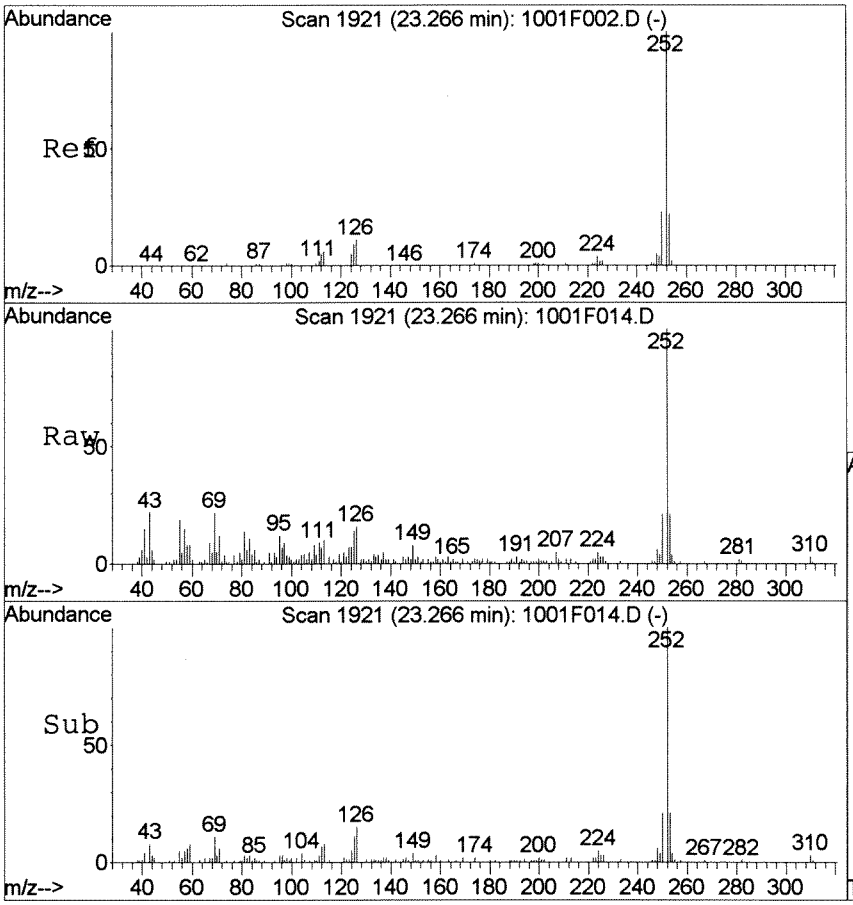


#78
Di-n-octyl Phthalate
Concen: 0.37 ug/ml
RT: 22.60 min Scan# 1856
Delta R.T. 0.01 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:149 Resp: 2472

Ion	Ratio	Lower	Upper
149	100		
167	0.0	0.0	31.4
43	0.0	0.0	37.1

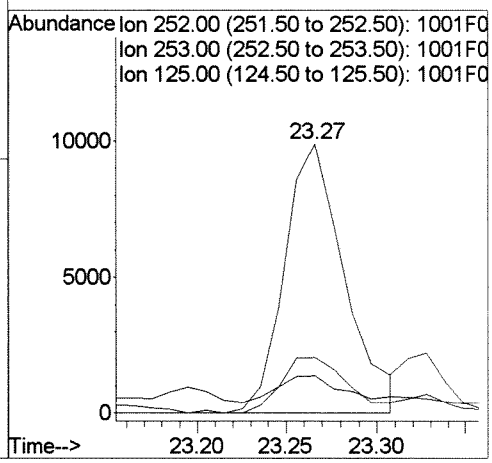


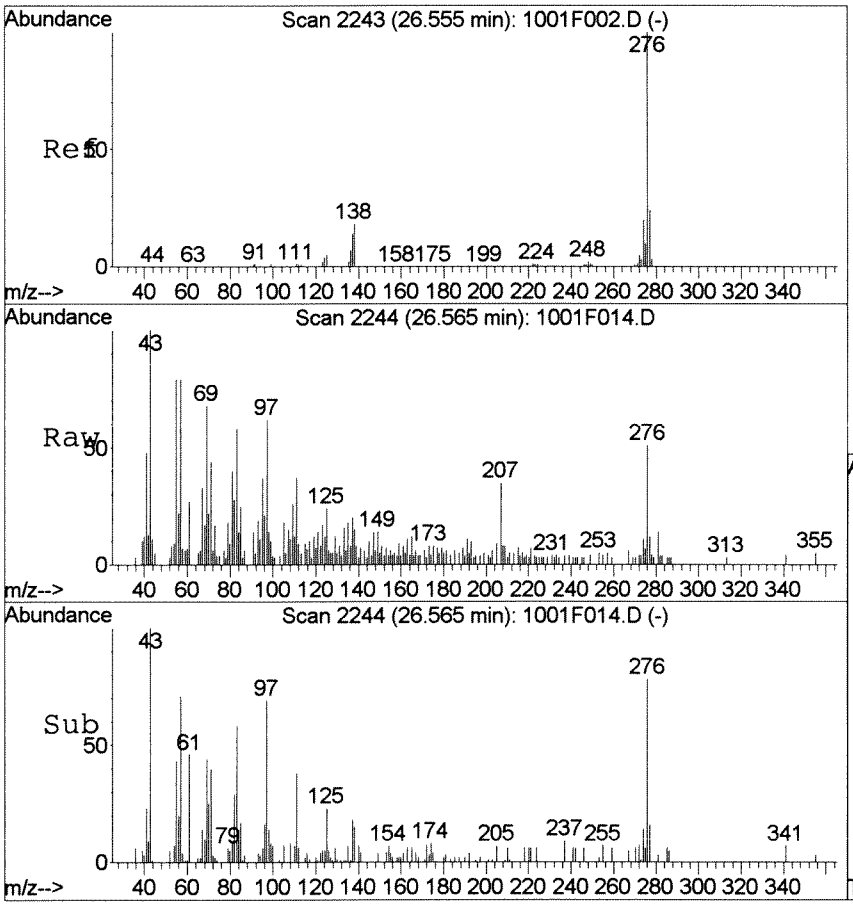


#79
Benzo(b)fluoranthene
Concen: 4.62 ug/ml
RT: 23.27 min Scan# 1921
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:252 Resp: 22831

Ion	Ratio	Lower	Upper
252	100		
253	19.7	0.0	51.9
125	7.4	0.0	39.2

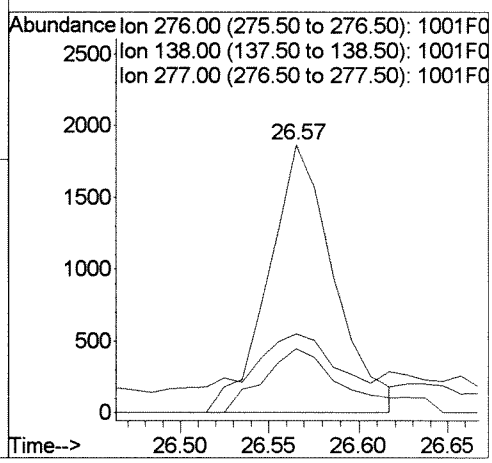


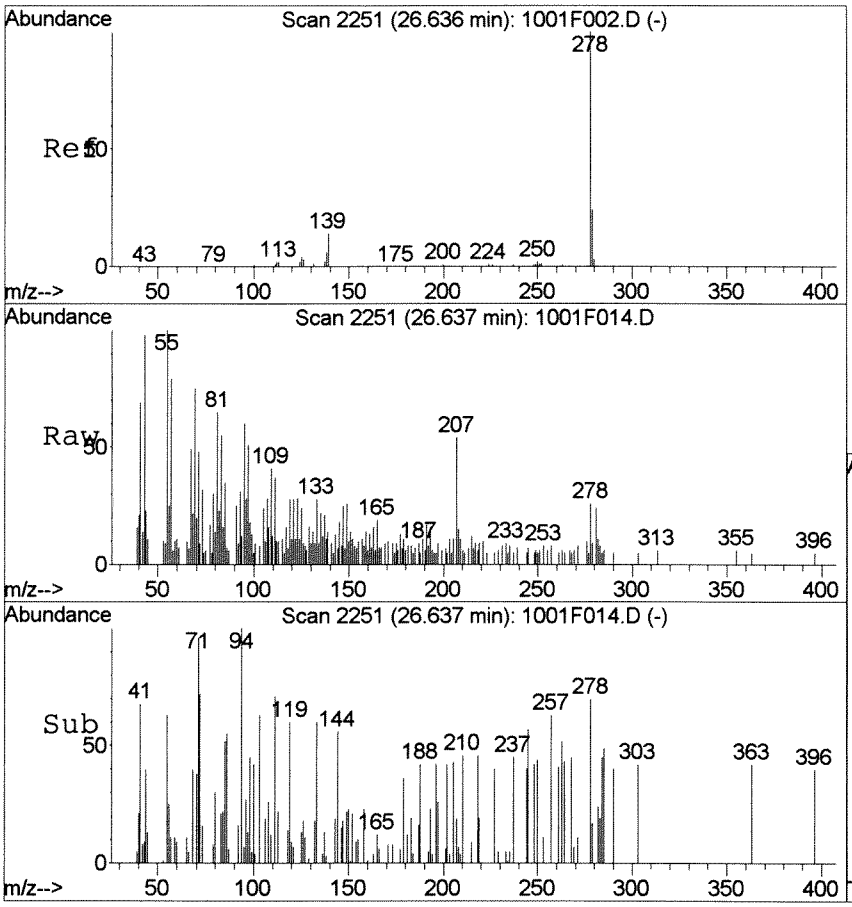


#82
Indeno(1,2,3-cd)pyrene
Concen: 1.09 ug/ml m
RT: 26.57 min Scan# 2244
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:276 Resp: 4731

Ion	Ratio	Lower	Upper
276	100		
138	29.4	0.0	46.3
277	23.9	0.0	53.1

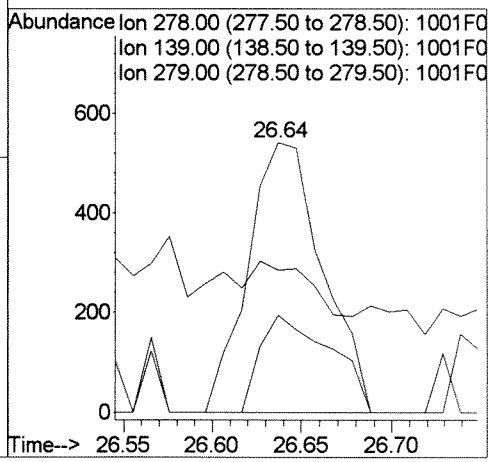


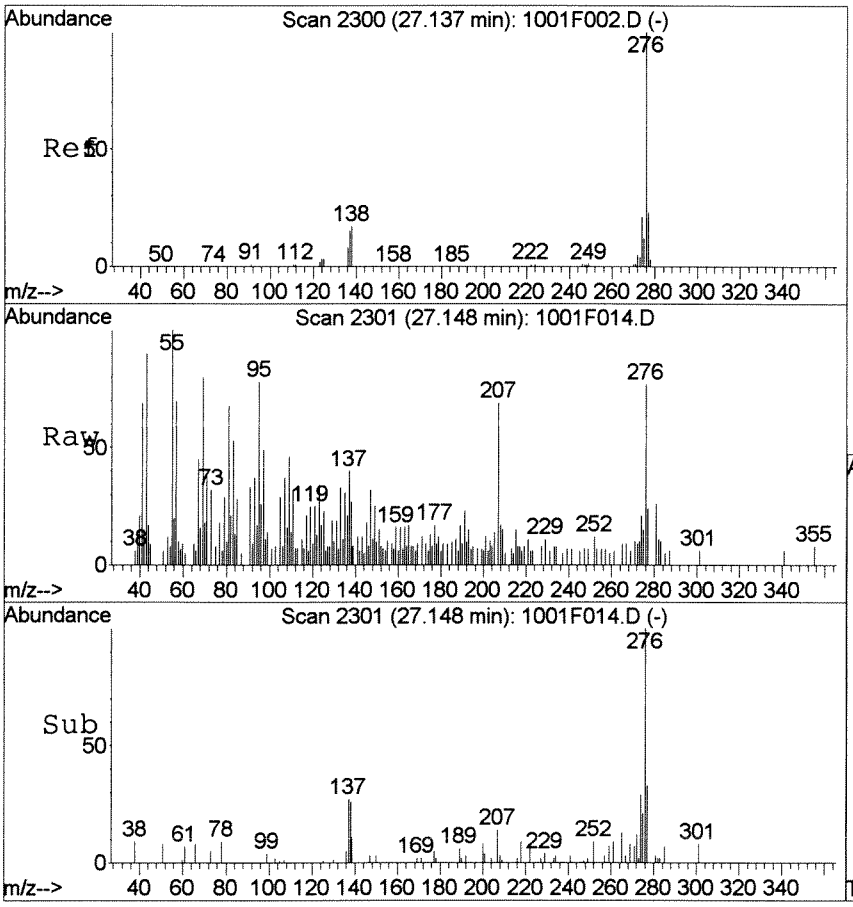


#83
Dibenz(a,h)anthracene
Concen: 0.35 ug/ml
RT: 26.64 min Scan# 2251
Delta R.T. -0.01 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:278 Resp: 1567

Ion	Ratio	Lower	Upper
278	100		
139	10.3	0.0	43.0
279	35.9	0.0	53.5

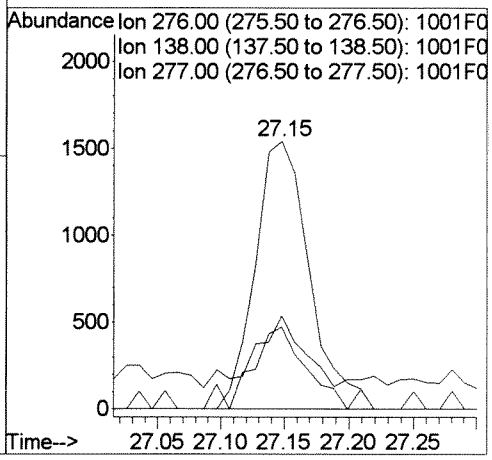




#84
Benzo(g,h,i)perylene
Concen: 0.96 ug/ml
RT: 27.15 min Scan# 2301
Delta R.T. 0.00 min
Lab File: 1001F014.D
Acq: 2 Oct 2014 3:57 am

Tgt Ion:276 Resp: 4557

Ion	Ratio	Lower	Upper
276	100		
138	26.3	0.0	46.4
277	30.6	0.0	53.1



Exception Report

Data File: J:\MS07\DATA\100114\1001F013.D
Lab ID: K1409921-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 03:16
Date Quantitated: 10/02/2014 14:31
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 0 2 2014 TRN

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F013.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 03:16	**Quant Date:**	10/03/2014 10:01	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-006			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376327	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	75122	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	259583	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	129829	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	231547	40.00	OK
5	Chrysene-d12	20.98	0.00	240	224947	40.00	OK
6	Perylene-d12	24.13	0.01	264	215148	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.74	0.01	0.00	99	138813	54.64	36	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	79173	34.84	35	29-116	OK	
3	2-Fluorobiphenyl	13.10	-0.01	0.00	172	185240	37.83	38	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	104761	82.21	55	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	287952	58.58	59	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.019	U	
1	2-Methylphenol				107	0		0.017	U	
1	4-Methylphenol				107	0		0.017	U	
2	2,4-Dimethylphenol				122	0		0.015	U	
2	Hexachlorobutadiene				225	0		0.014	U	
3	Diethyl Phthalate				149	0d		0.014	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.14	U	
4	Hexachlorobenzene				284	0		0.015	U	
4	Fluoranthene	18.54		0.00	202	5899	0.9300	0.031	J	
5	Pyrene	18.89		0.00	202	5224	0.7800	0.026	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F013.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 03:16	**Quant Date:**	10/03/2014 10:01	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-006			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	1329**m**	0.4300	0.016	U	
5	Chrysene	21.03		0.00	228	3031	0.5400	0.018	J	
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	8746	2.17	0.072	J	
6	Di-n-octyl Phthalate				149	0**d**		0.024	U	

Prep Amount:	40.372 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	74.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F013.D Vial: 13
Acq On : 2 Oct 2014 3:16 am Operator: T. THOMAS
Sample : K1409921-006 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:19 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

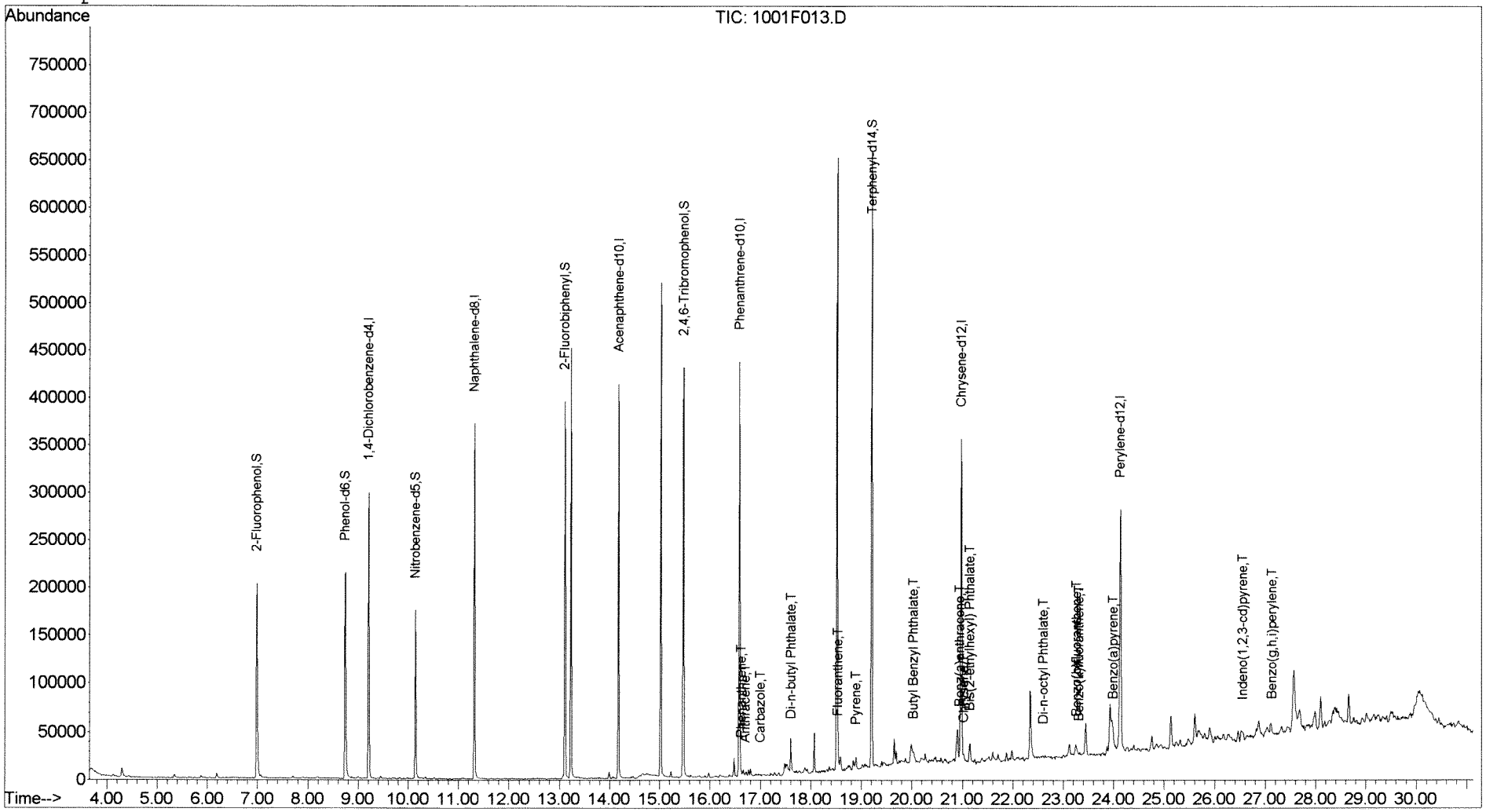
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	75122	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	259583	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	129829	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	231547	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	224947	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	215148	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	102027	47.35	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 31.57%			
7) Phenol-d6	8.74	99	138813	54.64	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 36.43%			
19) Nitrobenzene-d5	10.14	82	79173	34.84	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 34.84%#			
38) 2-Fluorobiphenyl	13.10	172	185240	37.83	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 37.83%#			
59) 2,4,6-Tribromophenol	15.47	330	104761	82.21	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 54.81%			
71) Terphenyl-d14	19.20	244	287952	58.58	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 58.58%			
Target Compounds						Qvalue
63) Phenanthrene	16.62	178	2407m	0.43	ug/ml	
64) Anthracene	16.70	178	582	0.10	ug/ml	72
65) Carbazole	16.99	167	827	0.15	ug/ml	87
66) Di-n-butyl Phthalate	17.61	149	2442	0.34	ug/ml	91
67) Fluoranthene	18.54	202	5899	0.93	ug/ml	93
70) Pyrene	18.89	202	5224	0.78	ug/ml	97
72) Butyl Benzyl Phthalate	20.03	149	1329m	0.43	ug/ml	
74) Benz(a)anthracene	20.95	228	3066	0.54	ug/ml	82
75) Chrysene	21.03	228	3031	0.54	ug/ml	90
76) Bis(2-ethylhexyl) Phthalat	21.15	149	8746	2.17	ug/ml	93
~~78) Di-n-octyl Phthalate~~	~~22.60~~	~~149~~	~~1470m~~	~~0.21~~	~~ug/ml~~	
79) Benzo(b)fluoranthene	23.27	252	4014	0.77	ug/ml	95
80) Benzo(k)fluoranthene	23.32	252	1199	0.23	ug/ml	96
81) Benzo(a)pyrene	23.99	252	2154	0.42	ug/ml	80
82) Indeno(1,2,3-cd)pyrene	26.55	276	1892m	0.41	ug/ml	
84) Benzo(g,h,i)perylene	27.14	276	2133	0.42	ug/ml	89

10/3/14

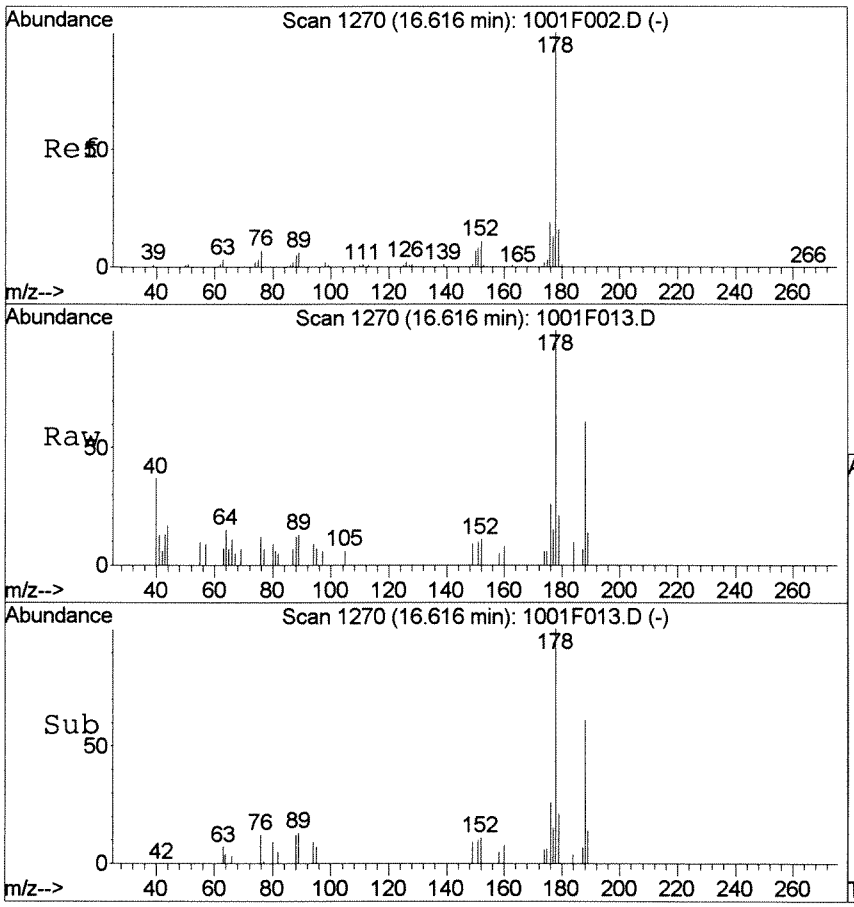
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F013.D Vial: 13
Acq On : 2 Oct 2014 3:16 am Operator: T. THOMAS
Sample : K1409921-006 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:31 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



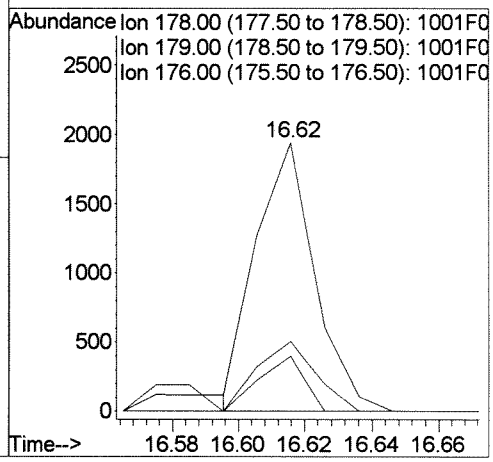
2533

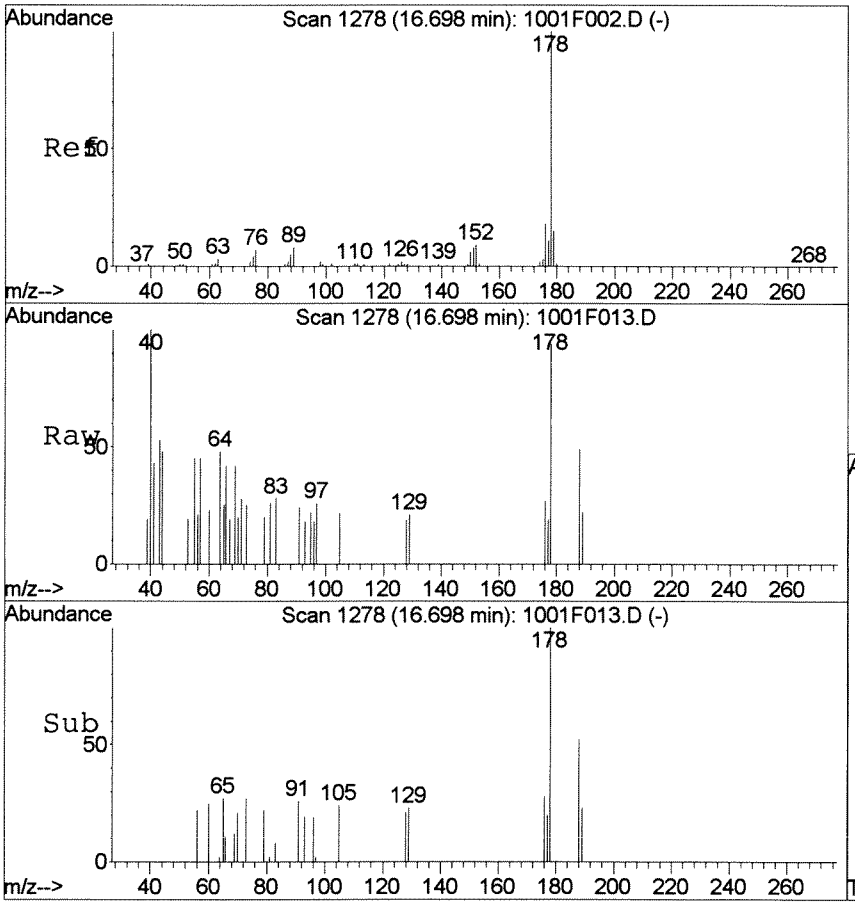


#63
Phenanthrene
Concen: 0.43 ug/ml m
RT: 16.62 min Scan# 1270
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:178 Resp: 2407

Ion	Ratio	Lower	Upper
178	100		
179	20.5	0.0	45.5
176	26.0	0.0	49.1

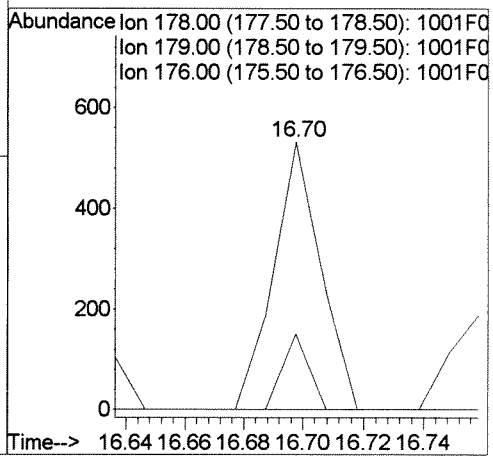


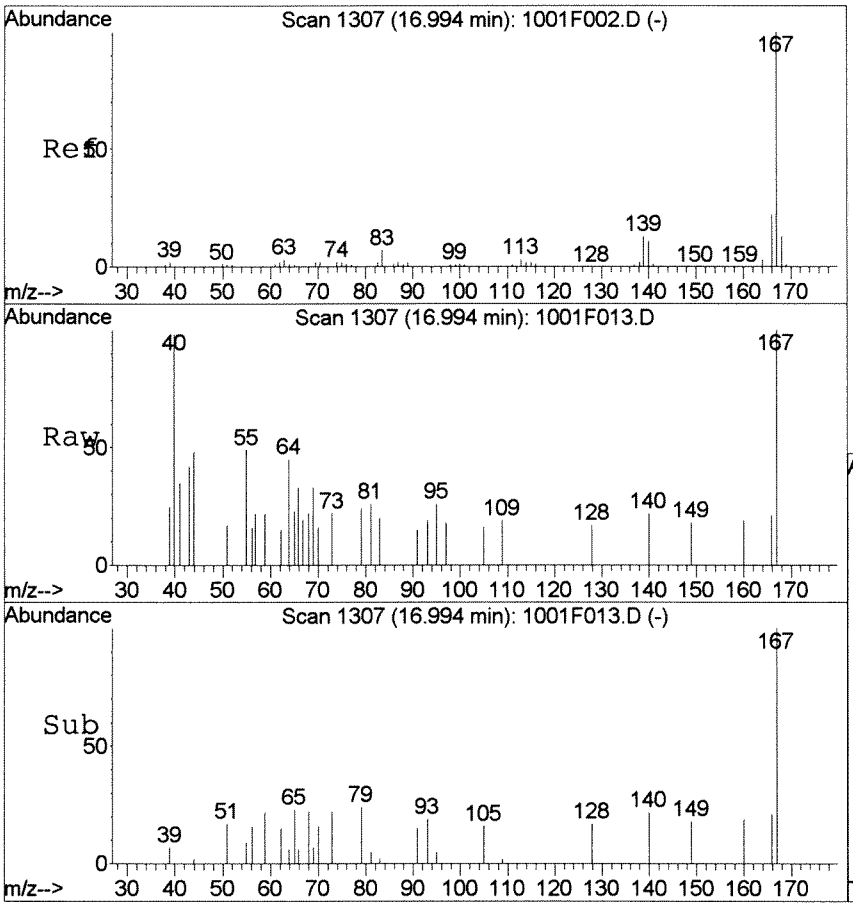


#64
Anthracene
Concen: 0.10 ug/ml
RT: 16.70 min Scan# 1278
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:178 Resp: 582

Ion	Ratio	Lower	Upper
178	100		
179	0.0	0.0	45.6
176	28.4	0.0	48.8

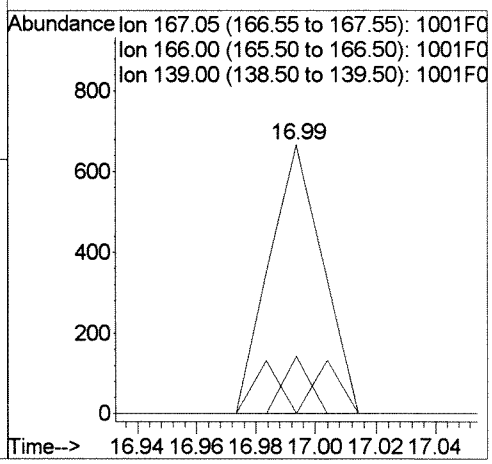


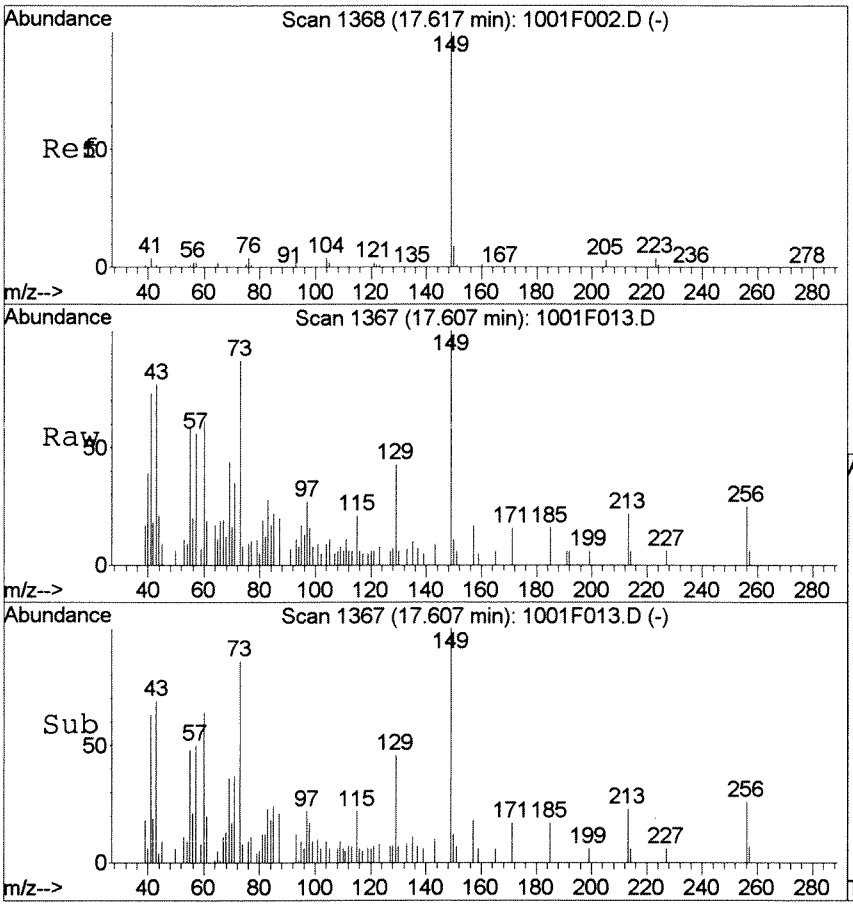


#65
Carbazole
Concen: 0.15 ug/ml
RT: 16.99 min Scan# 1307
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:167 Resp: 827

Ion	Ratio	Lower	Upper
167	100		
166	21.4	0.0	51.6
139	0.0	0.0	43.3

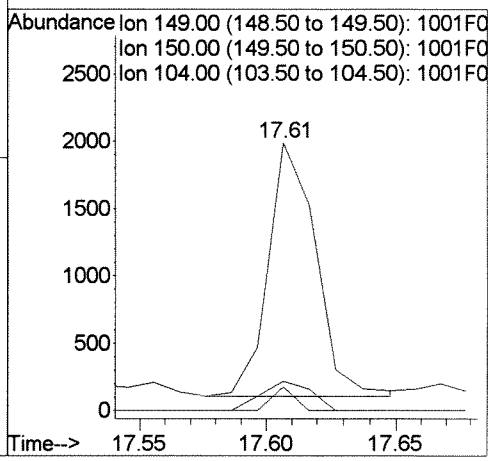


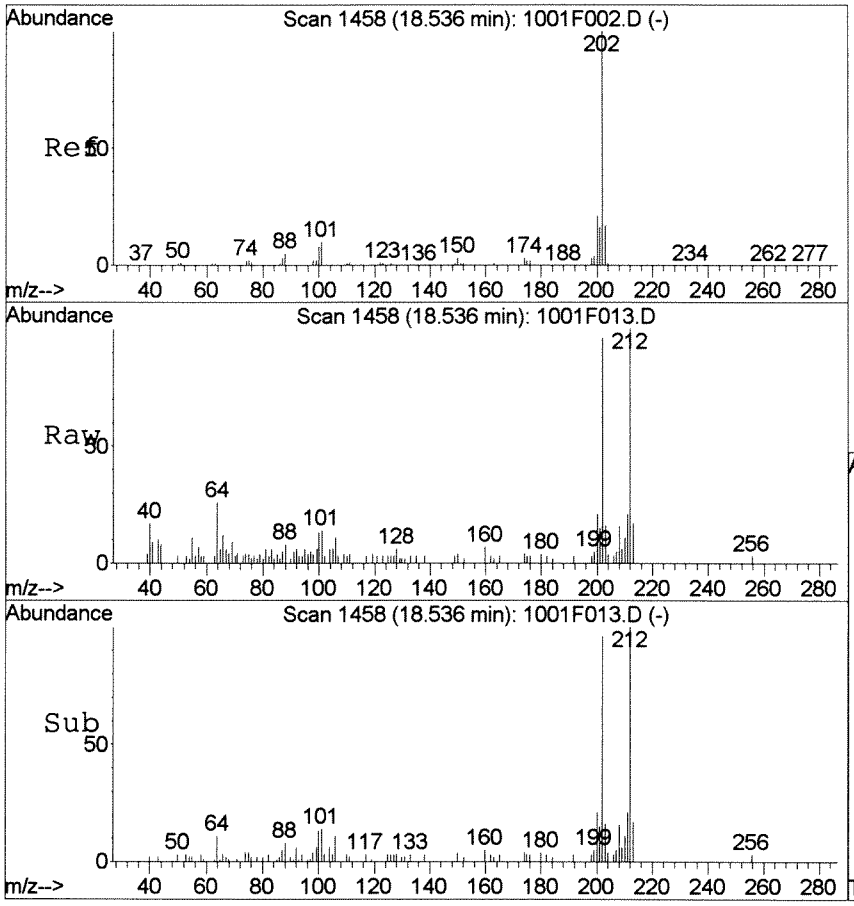


#66
Di-n-butyl Phthalate
Concen: 0.34 ug/ml
RT: 17.61 min Scan# 1367
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:149 Resp: 2442

Ion	Ratio	Lower	Upper
149	100		
150	11.7	0.0	39.3
104	9.4	0.0	35.1

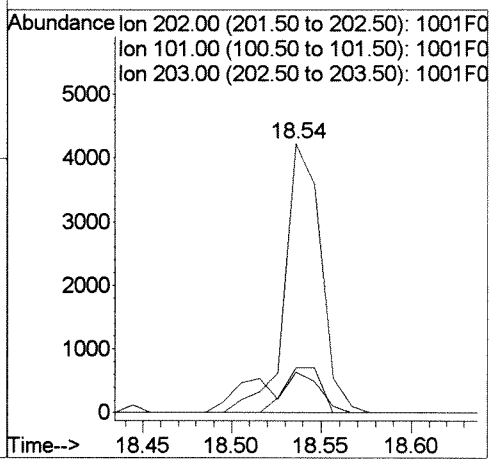


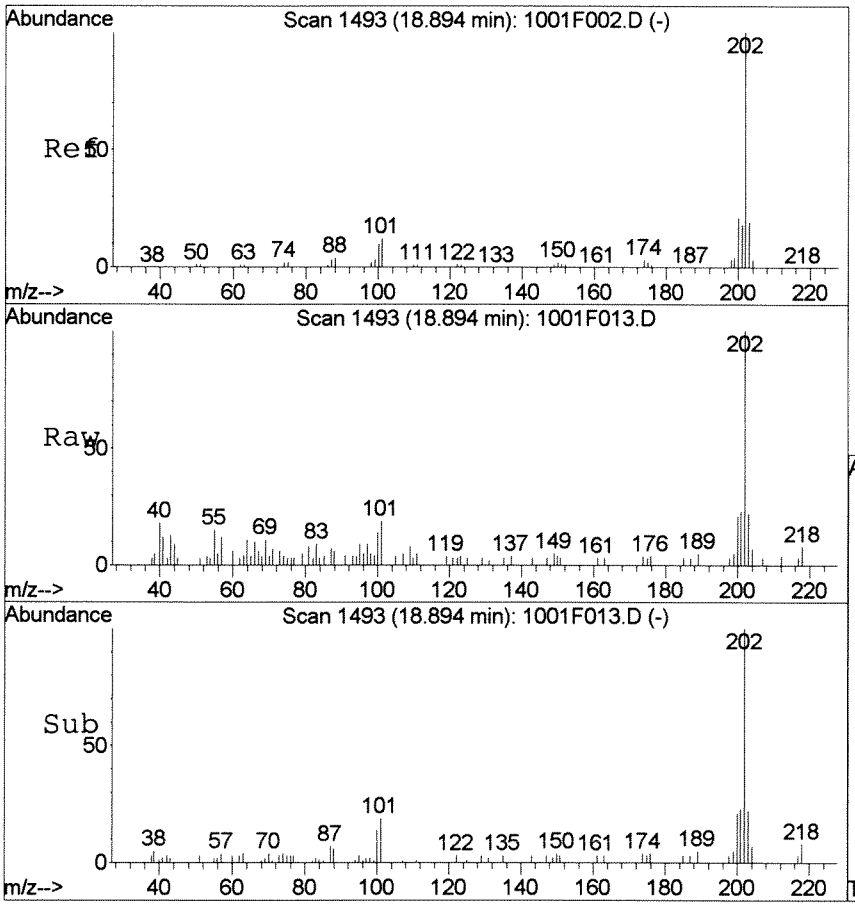


#67
Fluoranthene
Concen: 0.93 ug/ml
RT: 18.54 min Scan# 1458
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:202 Resp: 5899

Ion	Ratio	Lower	Upper
202	100		
101	15.1	0.0	39.2
203	16.7	0.0	47.5

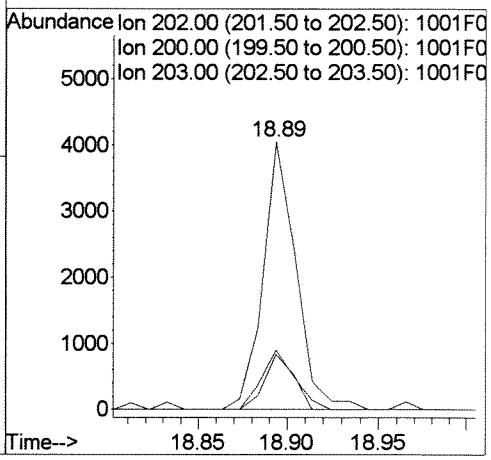


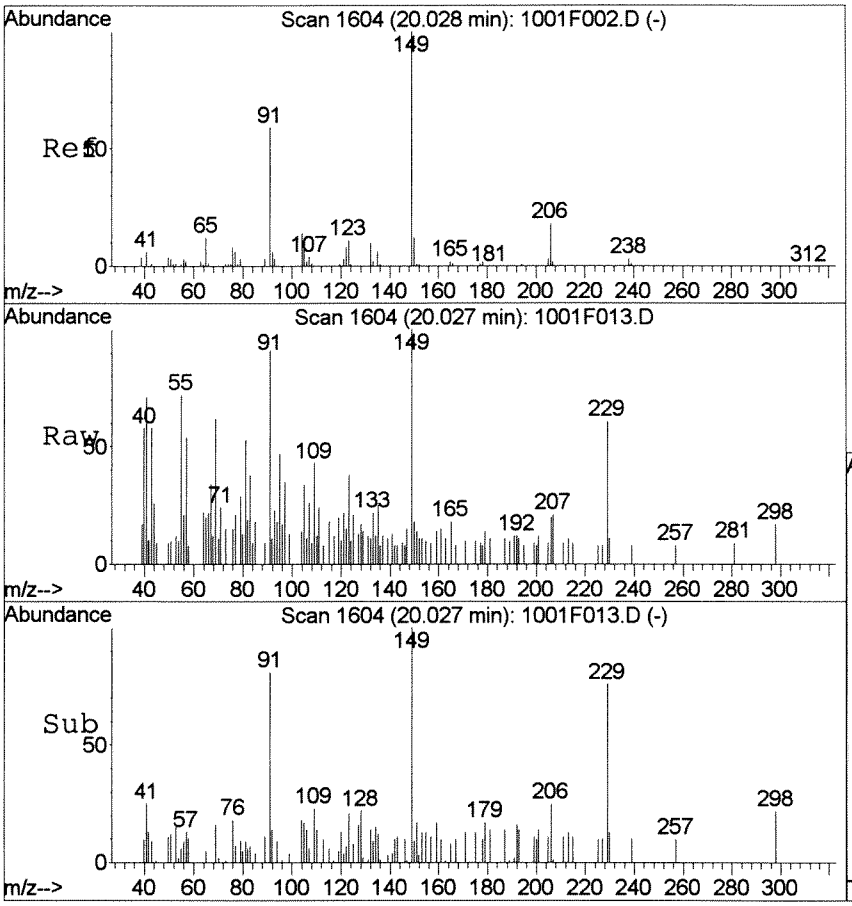


#70
Pyrene
Concen: 0.78 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:202 Resp: 5224

Ion	Ratio	Lower	Upper
202	100		
200	20.6	0.0	50.7
203	22.3	0.0	49.2

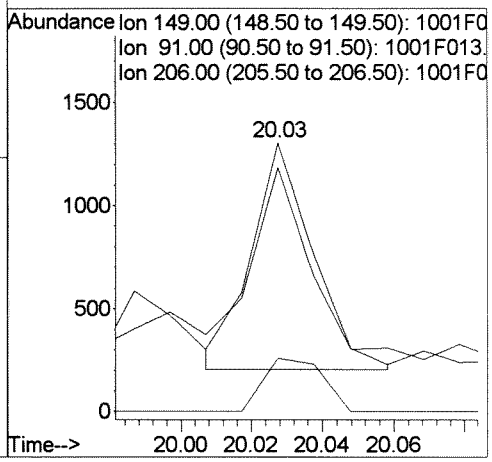


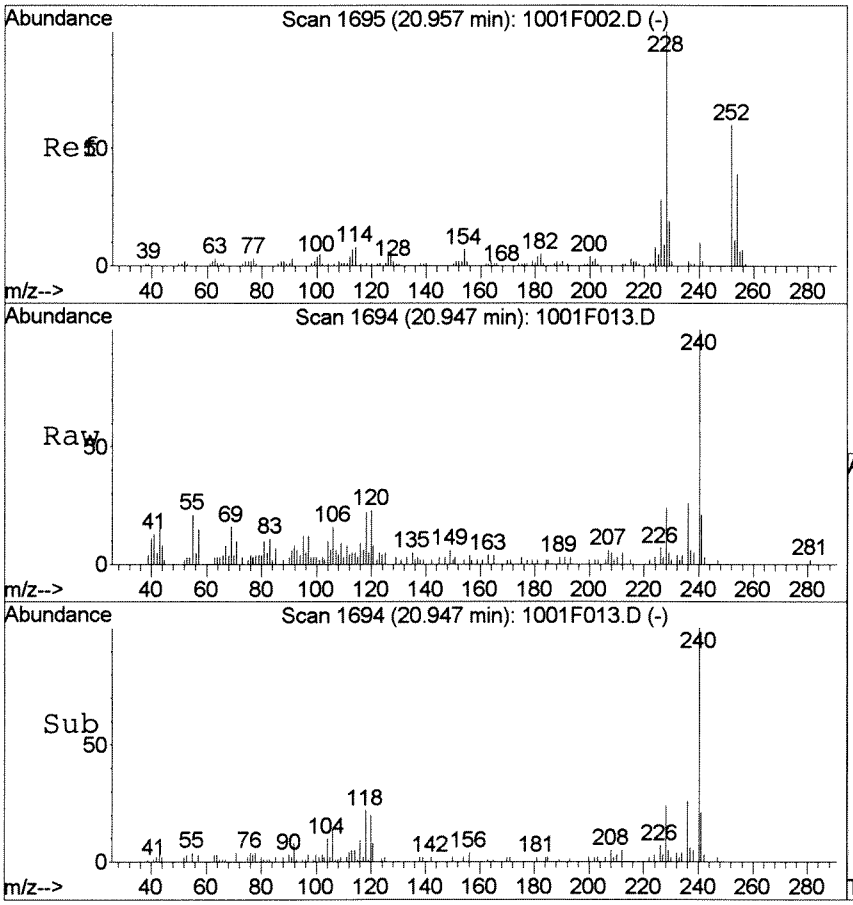


#72
Butyl Benzyl Phthalate
Concen: 0.43 ug/ml m
RT: 20.03 min Scan# 1604
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:149 Resp: 1329

Ion	Ratio	Lower	Upper
149	100		
91	90.8	28.0	88.0#
206	19.8	0.0	46.9

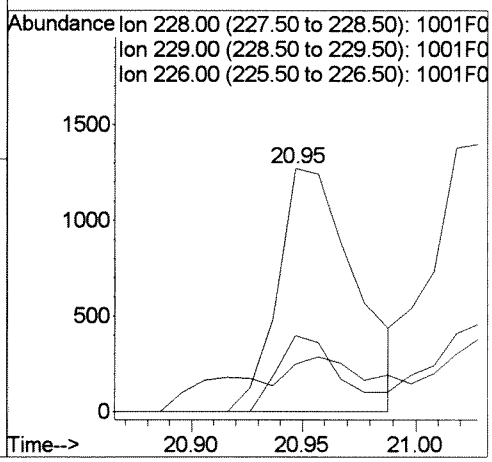


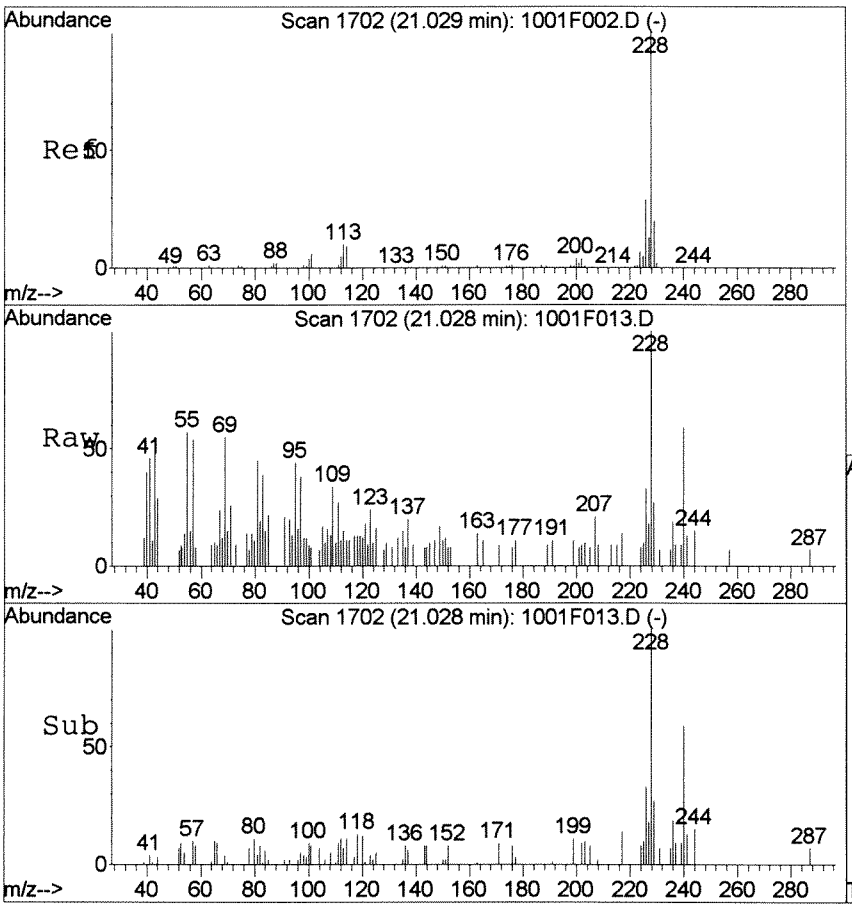


#74
Benz(a)anthracene
Concen: 0.54 ug/ml
RT: 20.95 min Scan# 1694
Delta R.T. -0.01 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:228 Resp: 3066

Ion	Ratio	Lower	Upper
228	100		
229	6.6	0.0	49.0
226	32.9	0.0	57.3

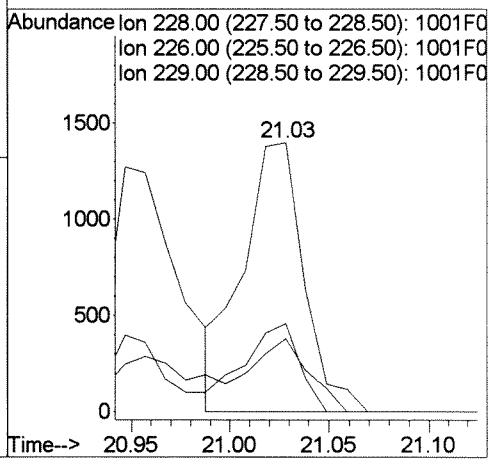


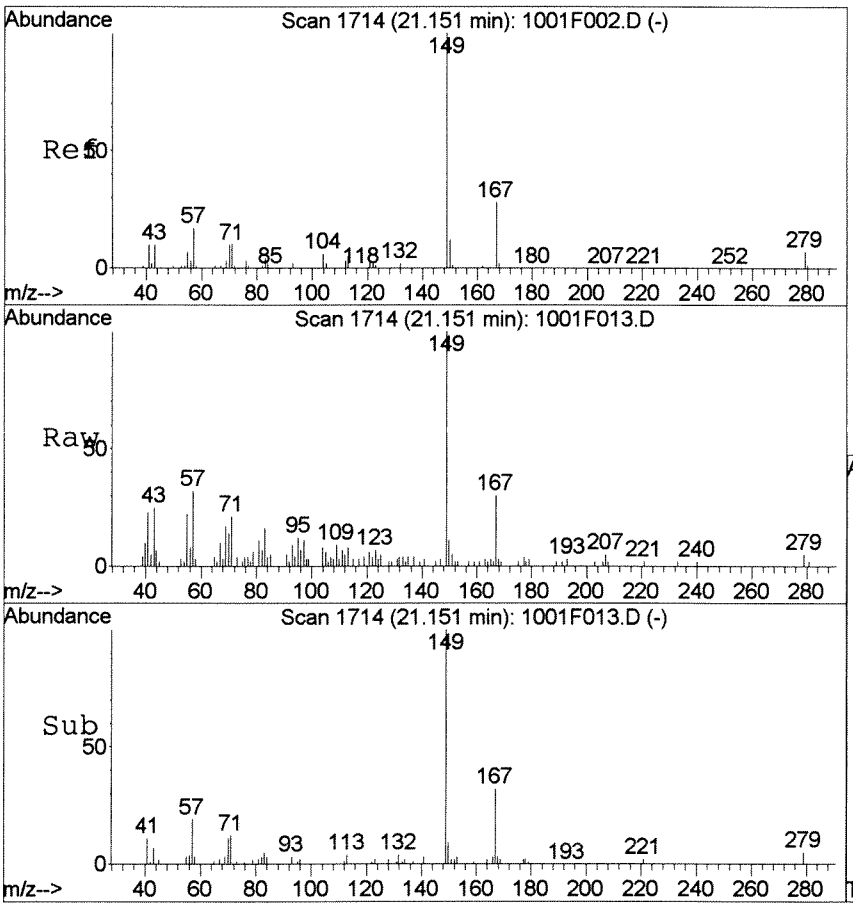


#75
Chrysene
Concen: 0.54 ug/ml
RT: 21.03 min Scan# 1702
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:228 Resp: 3031

Ion	Ratio	Lower	Upper
228	100		
226	34.5	0.0	59.3
229	24.1	0.0	49.2

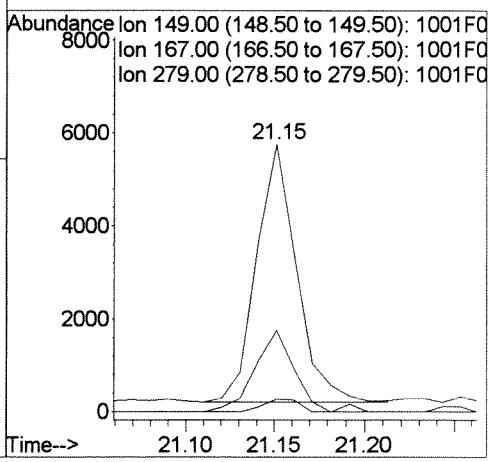


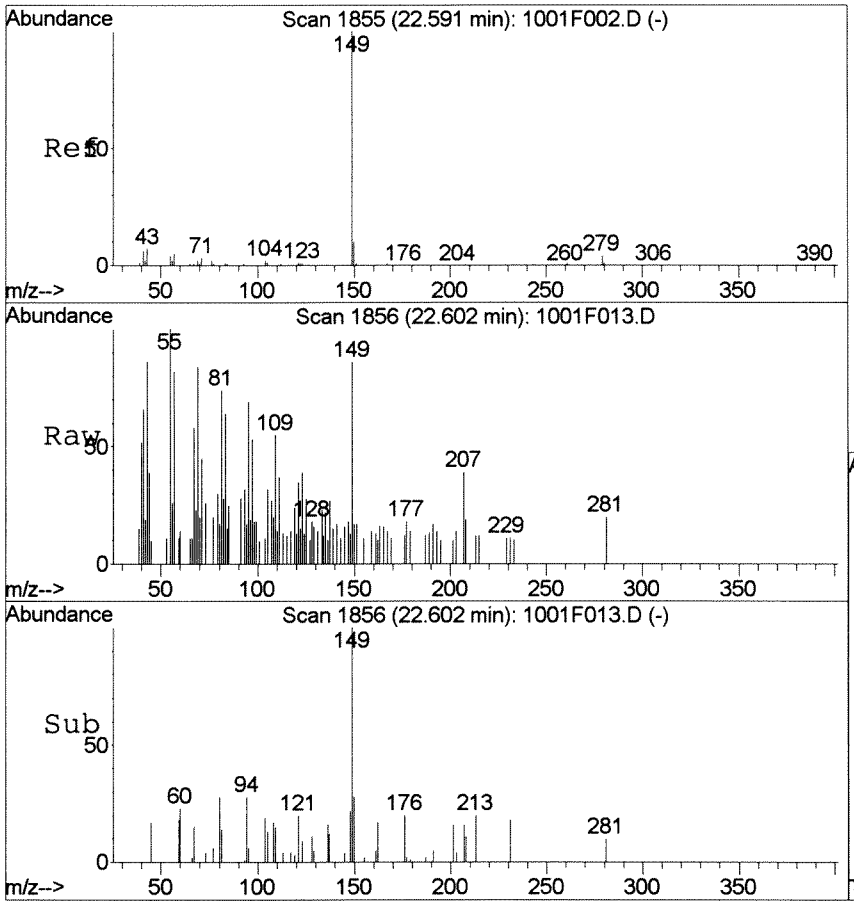


#76
Bis(2-ethylhexyl) Phthalate
Concen: 2.17 ug/ml
RT: 21.15 min Scan# 1714
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:149 Resp: 8746

Ion	Ratio	Lower	Upper
149	100		
167	31.7	0.0	57.7
279	5.0	0.0	36.6

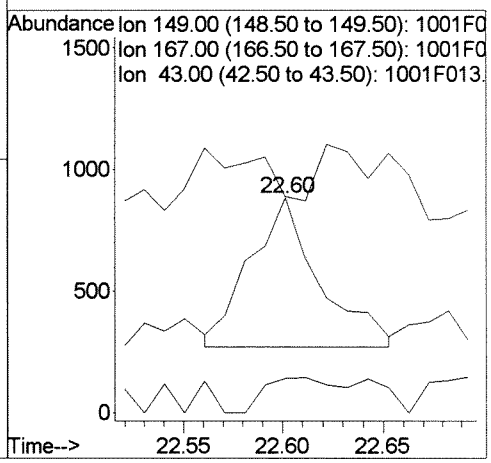


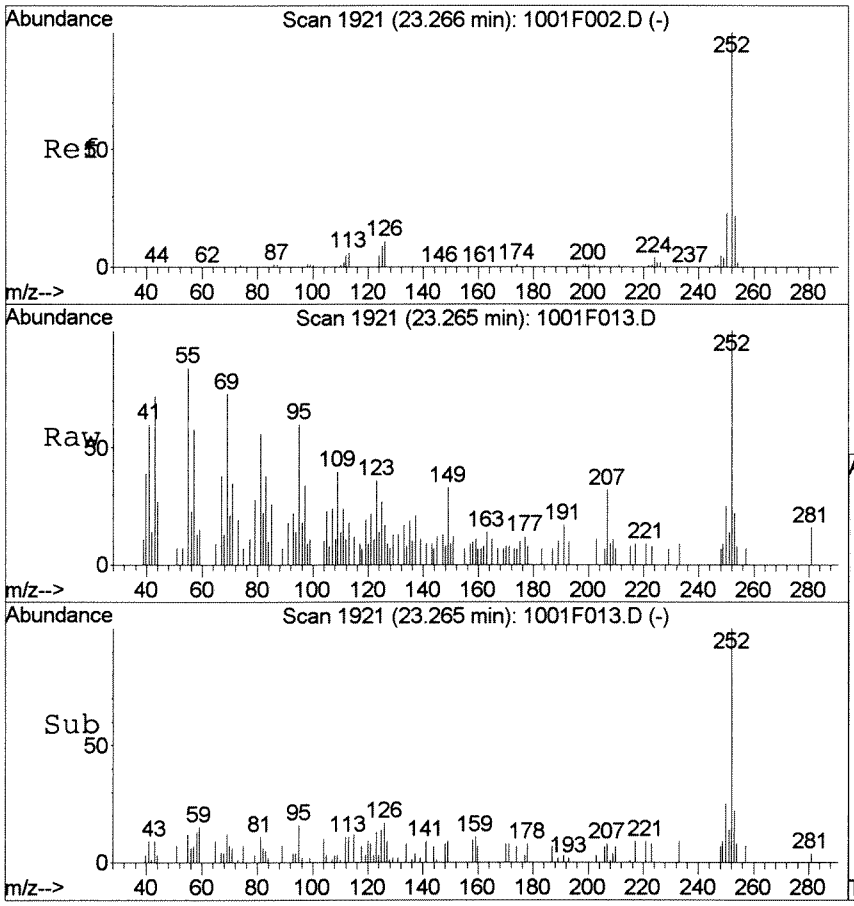


#78
Di-n-octyl Phthalate
Concen: 0.21 ug/ml m
RT: 22.60 min Scan# 1856
Delta R.T. 0.01 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:149 Resp: 1470

Ion	Ratio	Lower	Upper
149	100		
167	16.0	0.0	31.4
43	100.6	0.0	37.1#

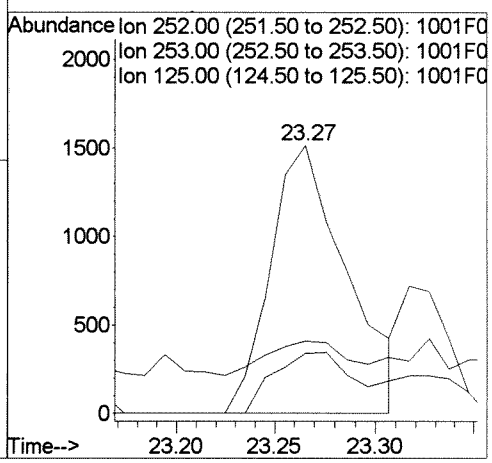


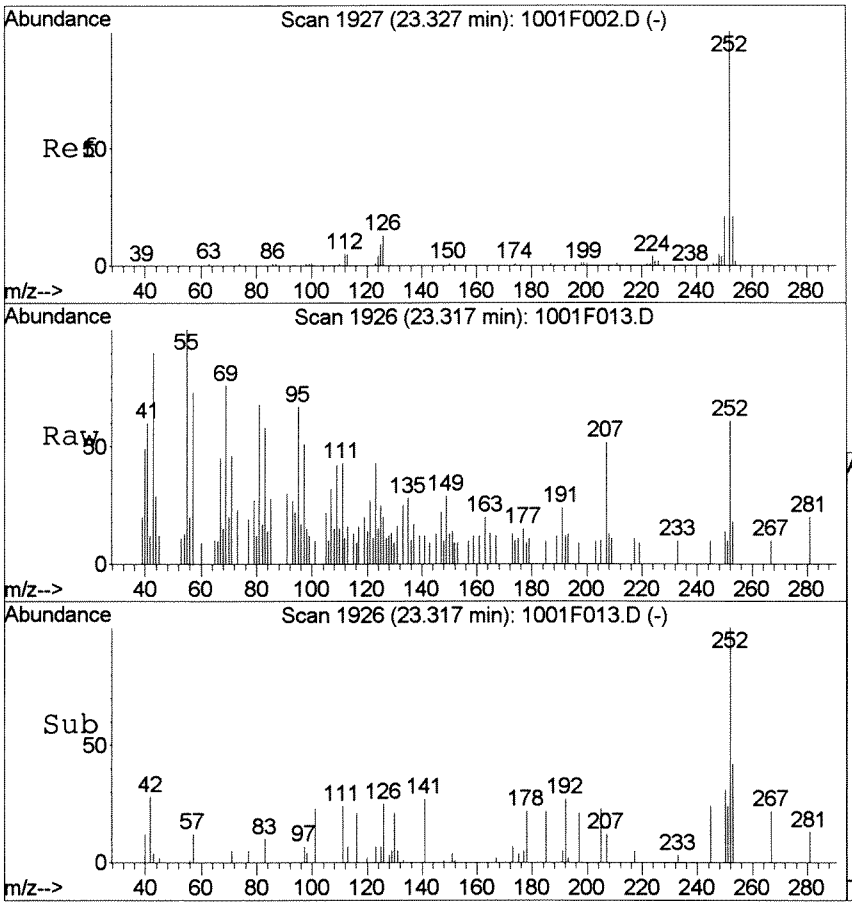


#79
Benzo(b)fluoranthene
Concen: 0.77 ug/ml
RT: 23.27 min Scan# 1921
Delta R.T. -0.00 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:252 Resp: 4014

Ion	Ratio	Lower	Upper
252	100		
253	19.1	0.0	51.9
125	10.2	0.0	39.2

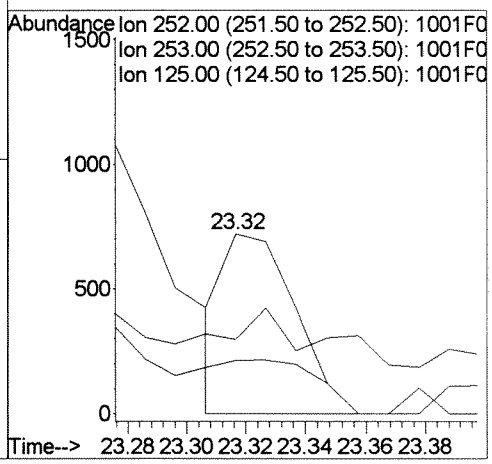


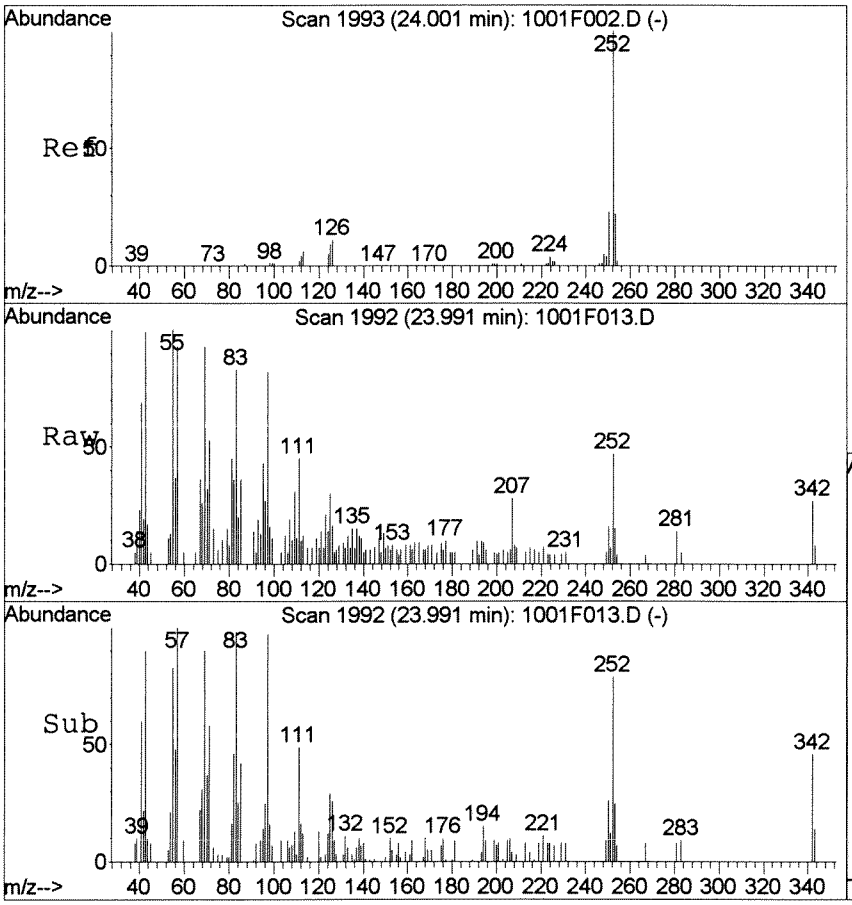


#80
Benzo(k)fluoranthene
Concen: 0.23 ug/ml
RT: 23.32 min Scan# 1926
Delta R.T. -0.02 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:252 Resp: 1199

Ion	Ratio	Lower	Upper
252	100		
253	23.8	0.0	51.3
125	8.0	0.0	38.4

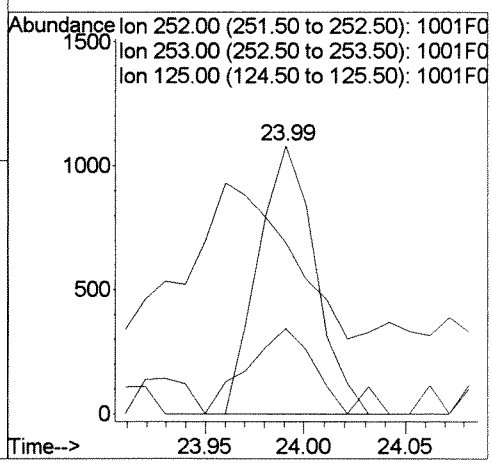


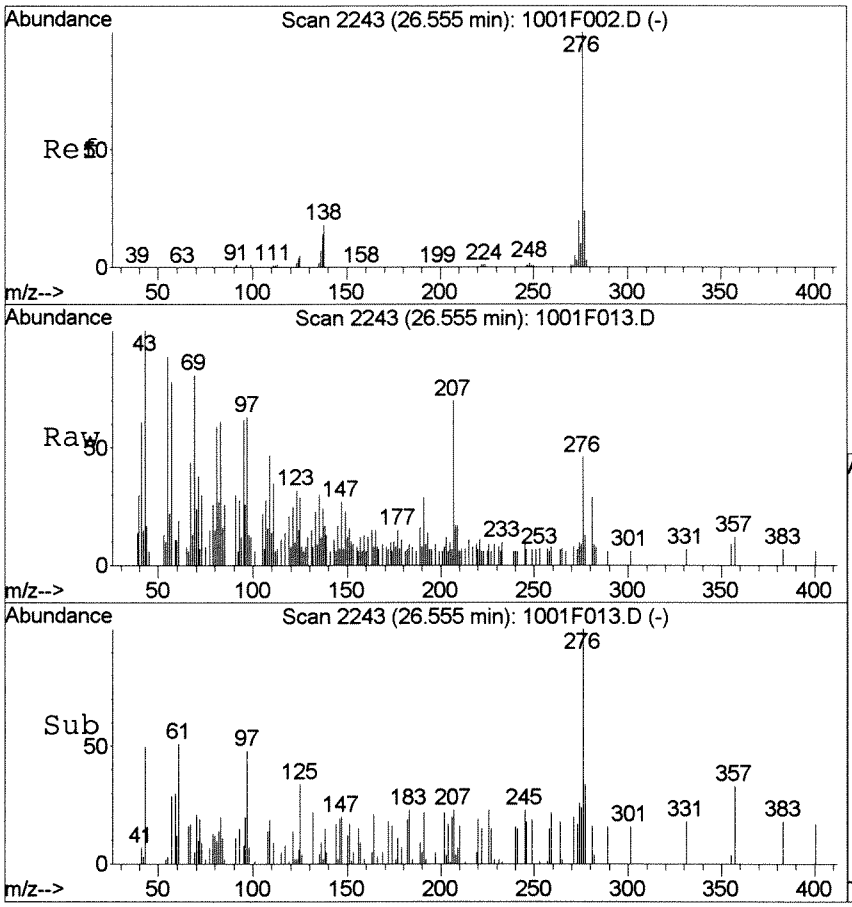


#81
Benzo(a)pyrene
Concen: 0.42 ug/ml
RT: 23.99 min Scan# 1992
Delta R.T. -0.01 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:252 Resp: 2154

Ion	Ratio	Lower	Upper
252	100		
253	31.8	0.0	51.1
125	14.6	0.0	39.6

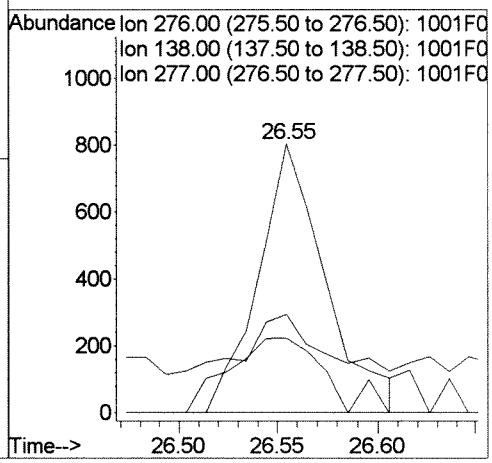


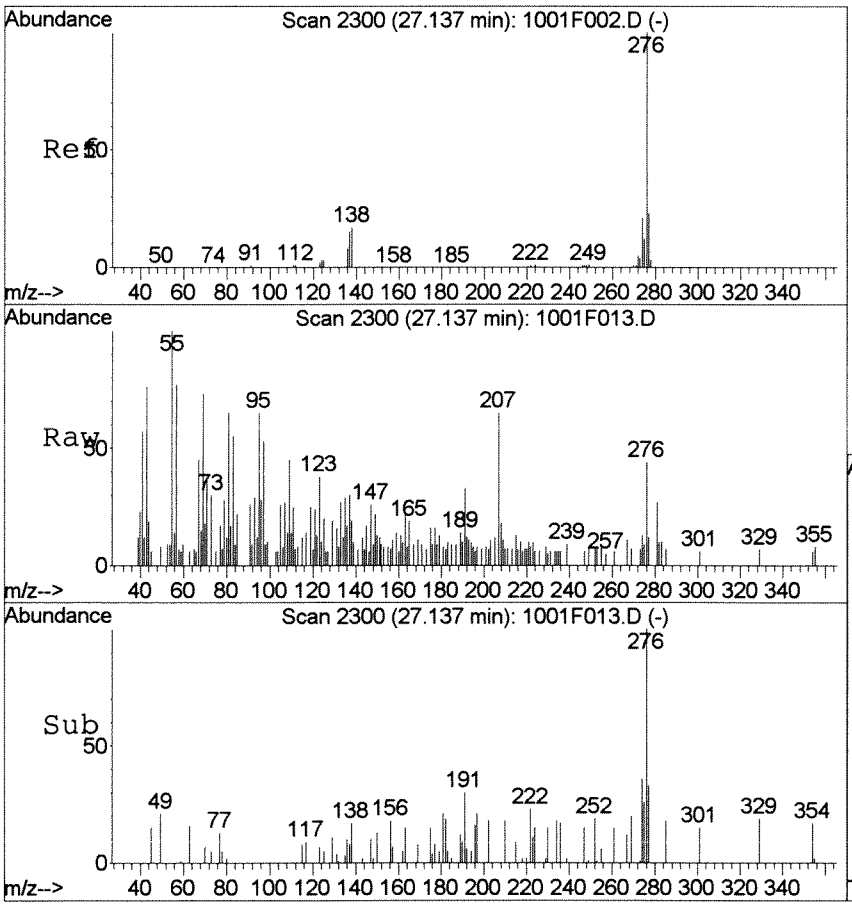


#82
Indeno(1,2,3-cd)pyrene
Concen: 0.41 ug/ml m
RT: 26.55 min Scan# 2243
Delta R.T. -0.01 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:276 Resp: 1892

Ion	Ratio	Lower	Upper
276	100		
138	36.6	0.0	46.3
277	27.7	0.0	53.1

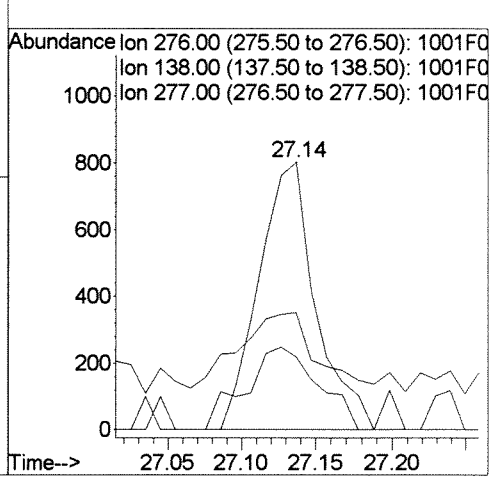




#84
Benzo(g,h,i)perylene
Concen: 0.42 ug/ml
RT: 27.14 min Scan# 2300
Delta R.T. -0.01 min
Lab File: 1001F013.D
Acq: 2 Oct 2014 3:16 am

Tgt Ion:276 Resp: 2133

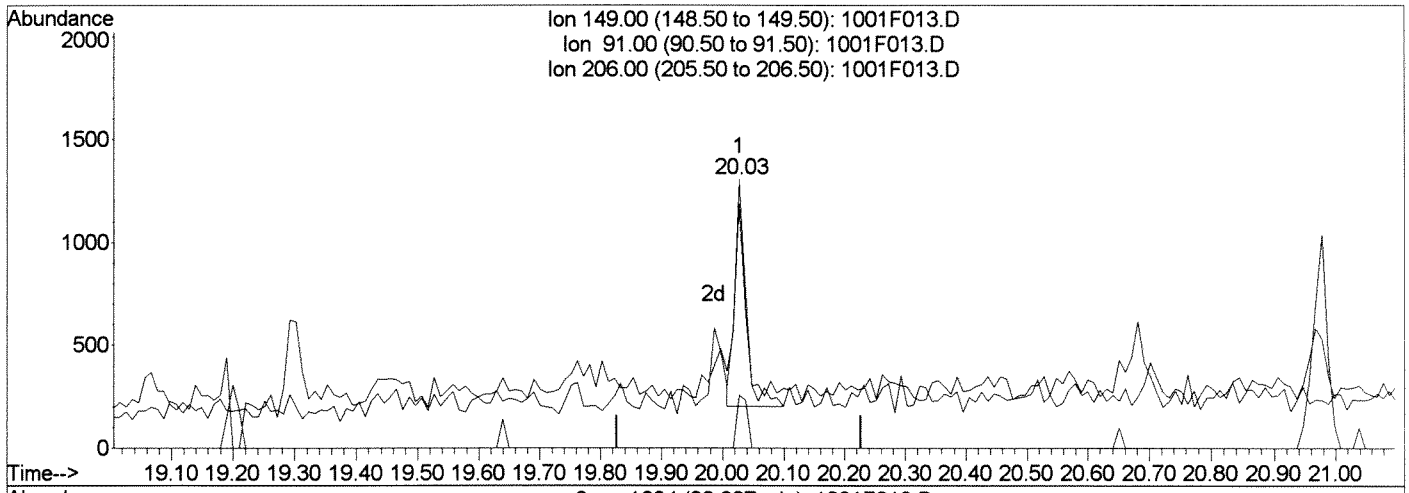
Ion	Ratio	Lower	Upper
276	100		
138	23.4	0.0	46.4
277	19.8	0.0	53.1

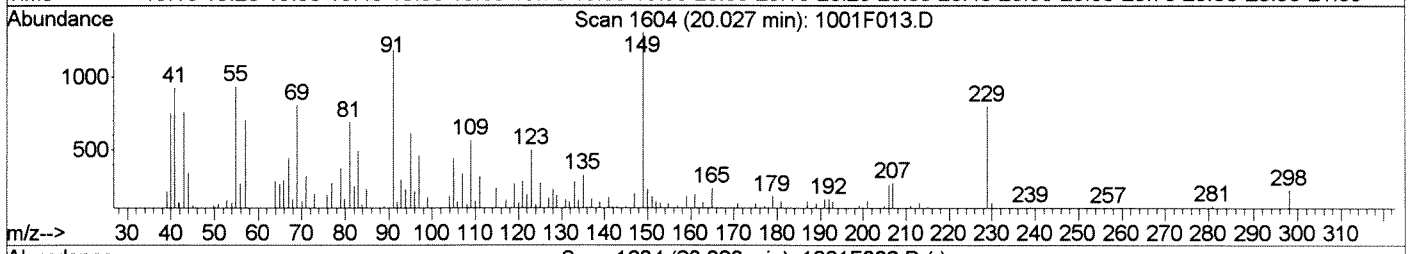


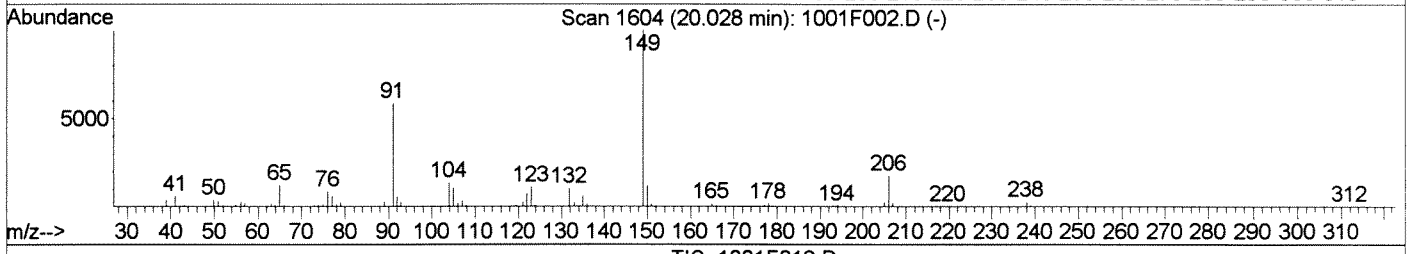
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F013.D Vial: 13
Acq On : 2 Oct 2014 3:16 am Operator: T. THOMAS
Sample : K1409921-006 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:28 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F013.D

(72) Butyl Benzyl Phthalate (T)

20.03min 0.47ug/ml

response 1434

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	81.02
206.00	16.90	24.49
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

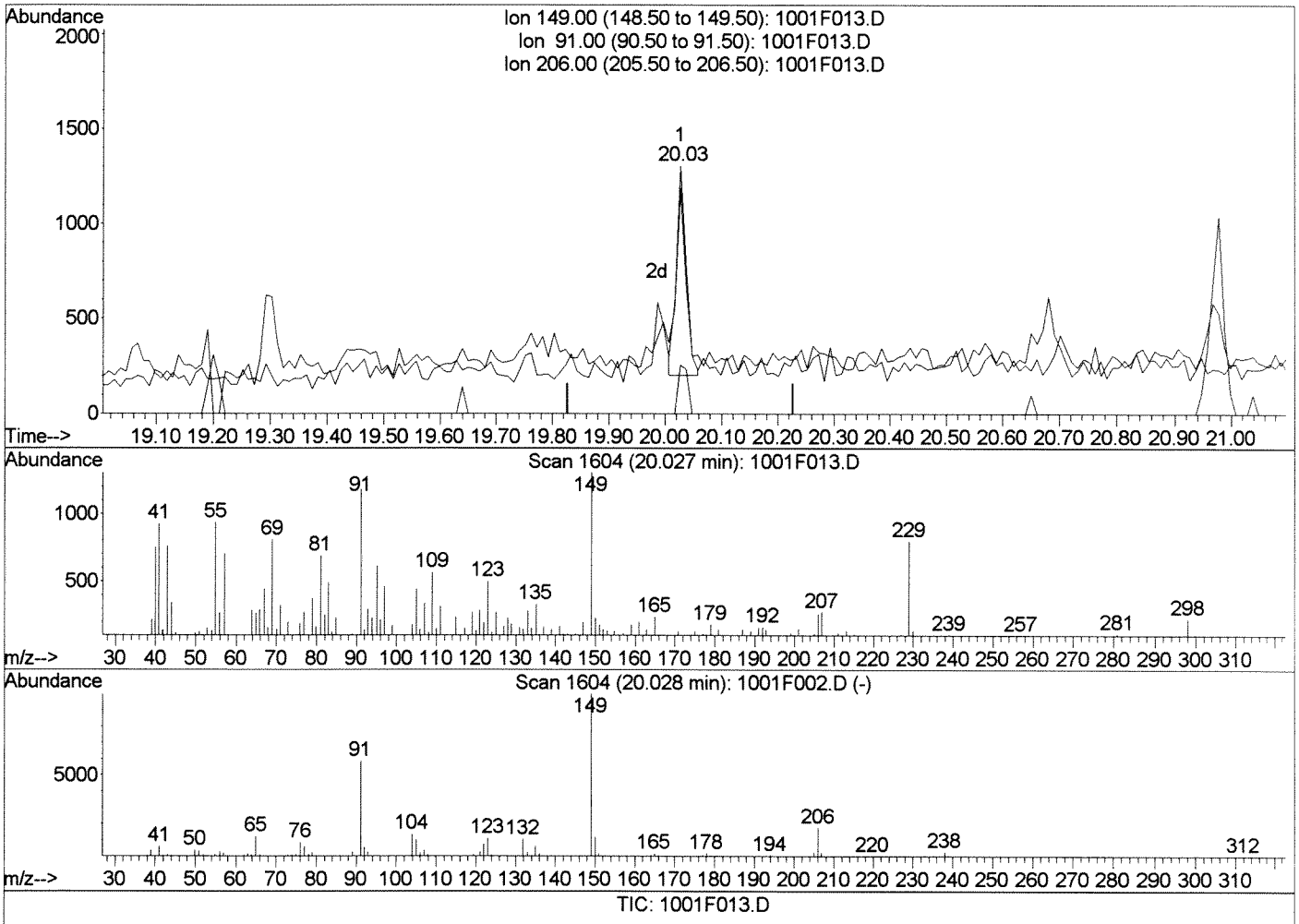
10/3/14

1001F013.D 093014BNC7.M Thu Oct 02 14:29:19 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F013.D Vial: 13
Acq On : 2 Oct 2014 3:16 am Operator: T. THOMAS
Sample : K1409921-006 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:29 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F013.D

(72) Butyl Benzyl Phthalate (T)

20.03min 0.43ug/ml m

response 1329

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	90.81#
206.00	16.90	19.75
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TRT

1001F013.D 093014BNC7.M Thu Oct 02 14:29:44 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F012.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 02:36
Date Quantitated: 10/02/2014 14:26
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Bis(2-ethylhexyl) Phthalate	327.03	NA	200	*

* Dilute & reanalyze

OCT 02 2014 TRT
Primary Review: _____

Secondary Review: 10/3/14

Printed: 10/02/2014 20:48:31
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F012.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 02:36	**Quant Date:**	10/02/2014 14:26	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376328	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	76412	40.00	OK
2	Naphthalene-d8	11.32	0.01	136	253580	40.00	OK
3	Acenaphthene-d10	14.18	0.01	164	123260	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	219494	40.00	OK
5	Chrysene-d12	20.98	0.00	240	219970	40.00	OK
6	Perylene-d12	24.15	0.03	264	207469	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.73	0.00	0.00	99	170840	66.11	44	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	97945	42.38	42	29-116	OK	
3	2-Fluorobiphenyl	13.10	-0.01	0.00	172	217493	46.78	47	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	131471	108.84	73	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	341045	70.95	71	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0**d**		0.023	U	
1	2-Methylphenol				107	0		0.021	U	
1	4-Methylphenol	10.02	0.01	0.00	107	1601	0.6800	0.027	J	
2	2,4-Dimethylphenol				122	0		0.018	U	
2	Hexachlorobutadiene				225	0		0.017	U	
3	Diethyl Phthalate	14.94	-0.02	0.00	149	859	0.1800	0.017	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.17	U	
4	Hexachlorobenzene				284	0		0.018	U	
4	Fluoranthene	18.55	0.01	0.00	202	37390**m**	6.22	0.25	J	
5	Pyrene	18.89		0.00	202	47687	7.32	0.29	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F012.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 02:36	**Quant Date:**	10/02/2014 14:26	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	35604**m**	11.90	0.47		
5	Chrysene	21.03		0.00	228	169226	30.95	1.2		
5	Bis(2-ethylhexyl) Phthalate	21.18	0.03	0.00	149	1287820	327.03	13	E	NR
6	Di-n-octyl Phthalate				149	0**d**		0.029	U	

Prep Amount:	40.408 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	62.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:18 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	76412	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	253580	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.18	164	123260	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	219494	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	219970	40.00	ug/ml	0.00
77) Perylene-d12	24.15	264	207469	40.00	ug/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	109742	50.07	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 33.38%			
7) Phenol-d6	8.73	99	170840	66.11	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 44.07%			
19) Nitrobenzene-d5	10.14	82	97945	42.38	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 42.38%			
38) 2-Fluorobiphenyl	13.10	172	217493	46.78	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 46.78%			
59) 2,4,6-Tribromophenol	15.47	330	131471	108.84	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 72.56%			
71) Terphenyl-d14	19.20	244	341045	70.95	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 70.95%			
Target Compounds						Qvalue
18) 4-Methylphenol	10.02	107	1601	0.68	ug/ml	92
27) Benzoic Acid	11.05	122	2412	2.16	ug/ml	95
29) Naphthalene	11.35	128	1263	0.22	ug/ml	96
33) 2-Methylnaphthalene	12.49	142	767	0.21	ug/ml	99
41) Acenaphthylene	13.94	152	1373	0.23	ug/ml	94
42) Dimethyl Phthalate	13.80	163	1612	0.36	ug/ml	73
47) Dibenzofuran	14.51	168	877	0.16	ug/ml	80
51) Fluorene	15.06	166	771	0.19	ug/ml	95
53) Diethyl Phthalate	14.94	149	859	0.18	ug/ml	80
63) Phenanthrene	16.62	178	15185	2.84	ug/ml	97
64) Anthracene	16.70	178	5383	0.99	ug/ml	96
65) Carbazole	16.99	167	12894	2.48	ug/ml	98
66) Di-n-butyl Phthalate	17.61	149	18035	2.64	ug/ml	98
67) Fluoranthene	18.55	202	37390m	6.22	ug/ml	
70) Pyrene	18.89	202	47687	7.32	ug/ml	98
72) Butyl Benzyl Phthalate	20.03	149	35604m	11.90	ug/ml	
74) Benz(a)anthracene	20.96	228	30437	5.48	ug/ml	97
75) Chrysene	21.03	228	169226	30.95	ug/ml	100
76) Bis(2-ethylhexyl) Phthalat	21.18	149	1287820	327.03	ug/ml	98
79) Benzo(b)fluoranthene	23.28	252	108904	21.55	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:18 2014 Quant Results File: 093014BNC7.RES

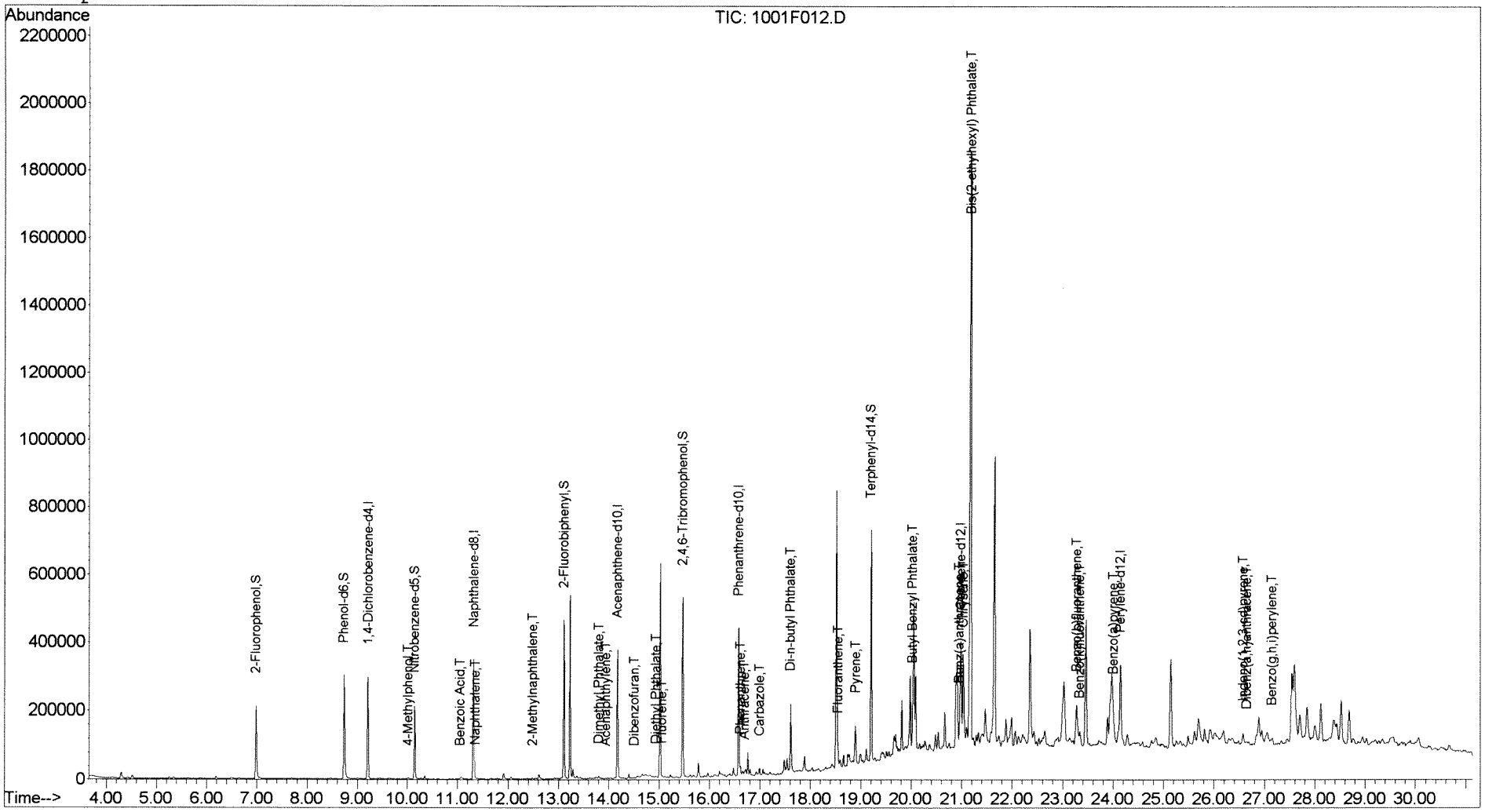
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

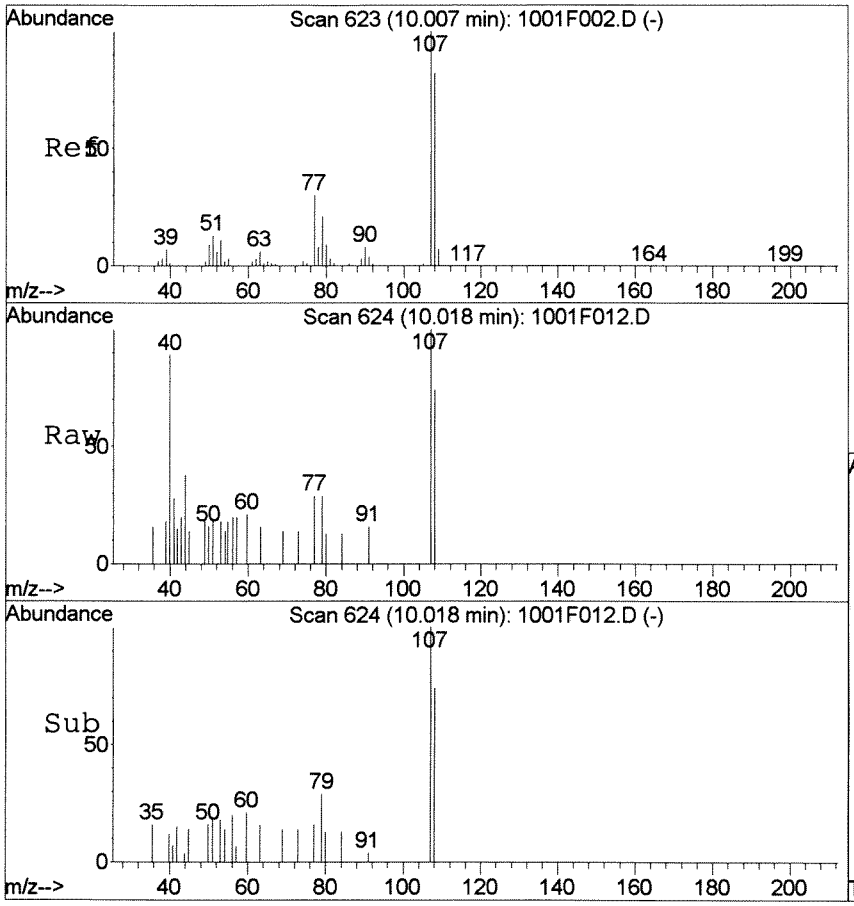
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
80)	Benzo(k)fluoranthene	23.34	252	25666	5.19	ug/ml	100
81)	Benzo(a)pyrene	24.00	252	17499	3.57	ug/ml	83
82)	Indeno(1,2,3-cd)pyrene	26.58	276	21368m	4.83	ug/ml	
83)	Dibenz(a,h)anthracene	26.65	278	6378	1.40	ug/ml	94
84)	Benzo(g,h,i)perylene	27.15	276	24736	5.10	ug/ml	93

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:26 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

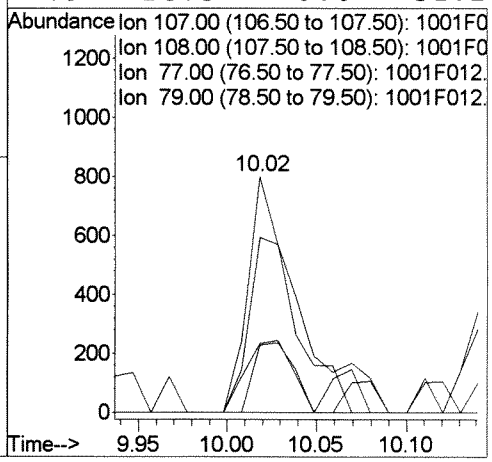


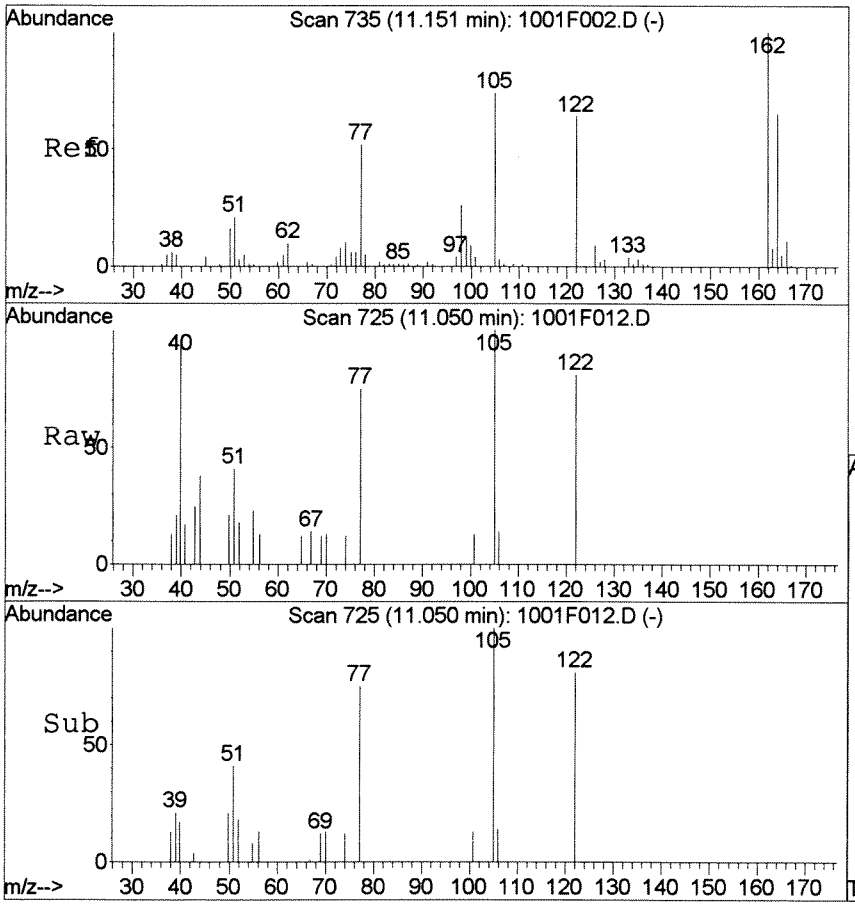


#18
4-Methylphenol
Concen: 0.68 ug/ml
RT: 10.02 min Scan# 624
Delta R.T. 0.01 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:107 Resp: 1601

Ion	Ratio	Lower	Upper
107	100		
108	74.1	52.1	112.1
77	29.3	0.0	60.0
79	28.5	0.0	51.2

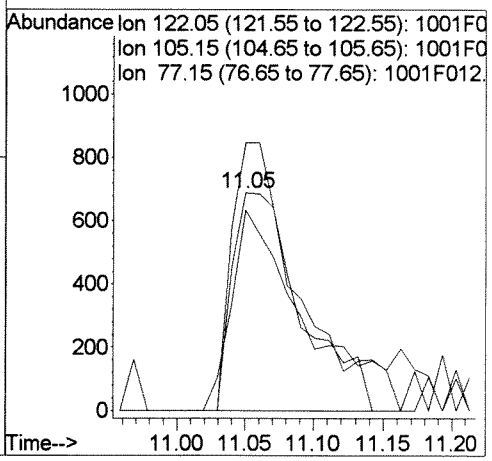


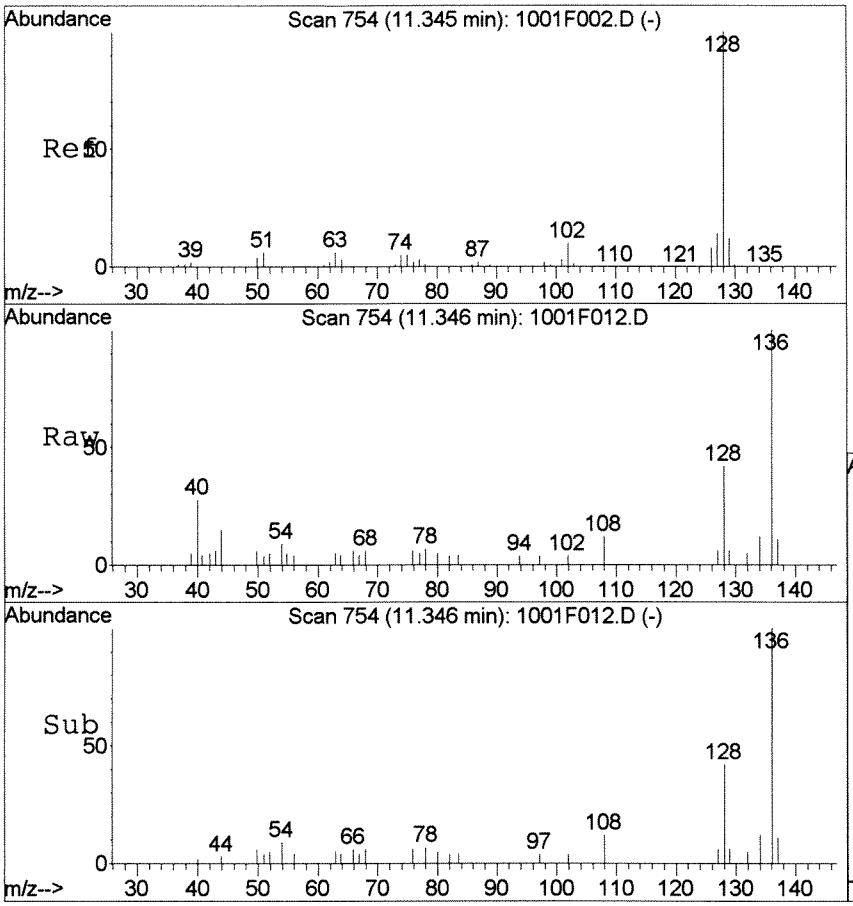


#27
Benzoic Acid
Concen: 2.16 ug/ml
RT: 11.05 min Scan# 725
Delta R.T. -0.10 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:122 Resp: 2412

Ion	Ratio	Lower	Upper
122	100		
105	113.7	90.4	150.4
77	82.7	50.1	110.1

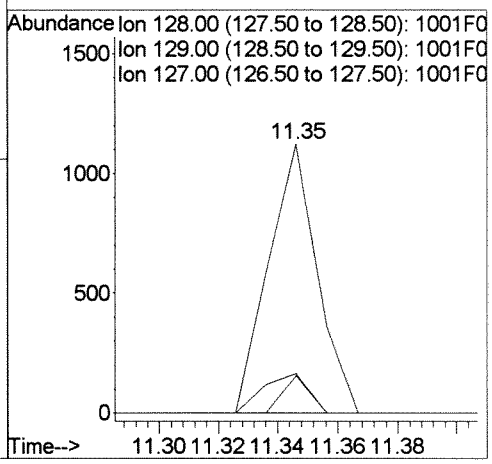


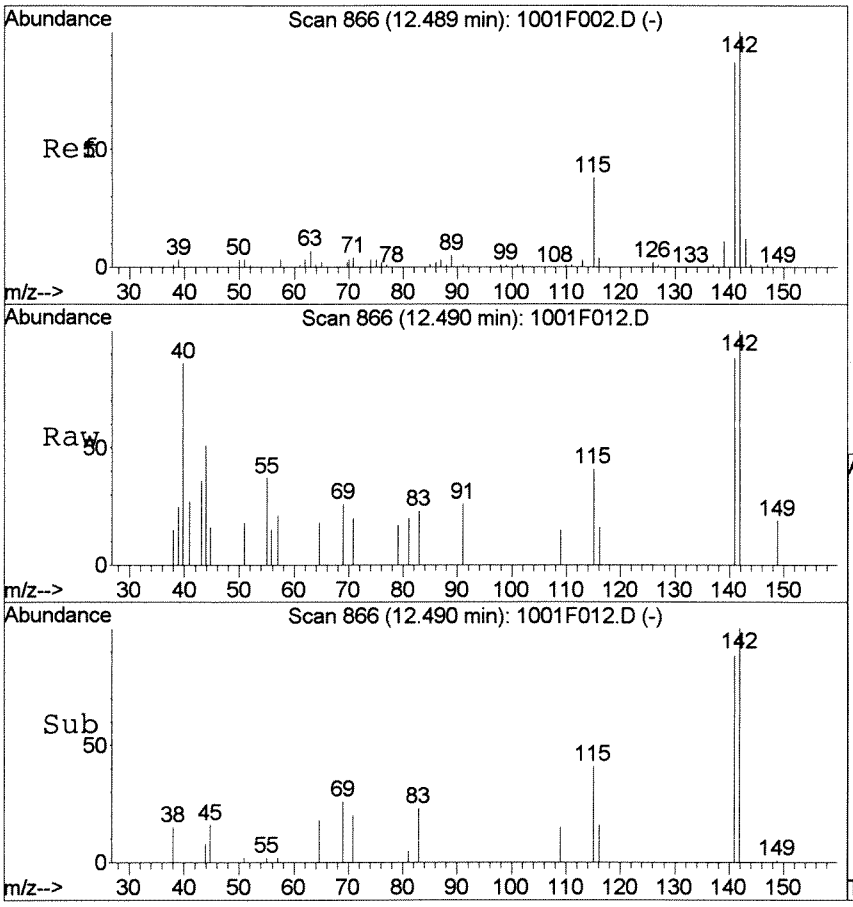


#29
Naphthalene
Concen: 0.22 ug/ml
RT: 11.35 min Scan# 754
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:128 Resp: 1263

Ion	Ratio	Lower	Upper
128	100		
129	13.9	0.0	41.2
127	14.7	0.0	44.0

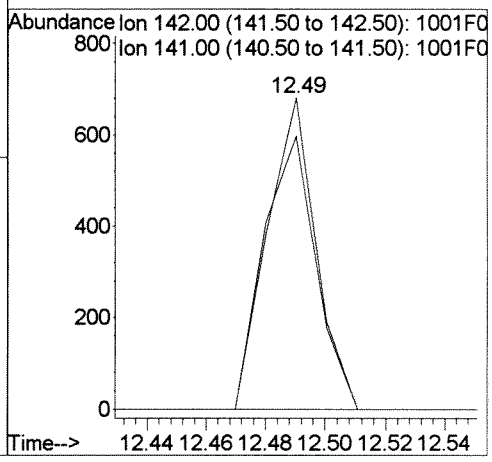


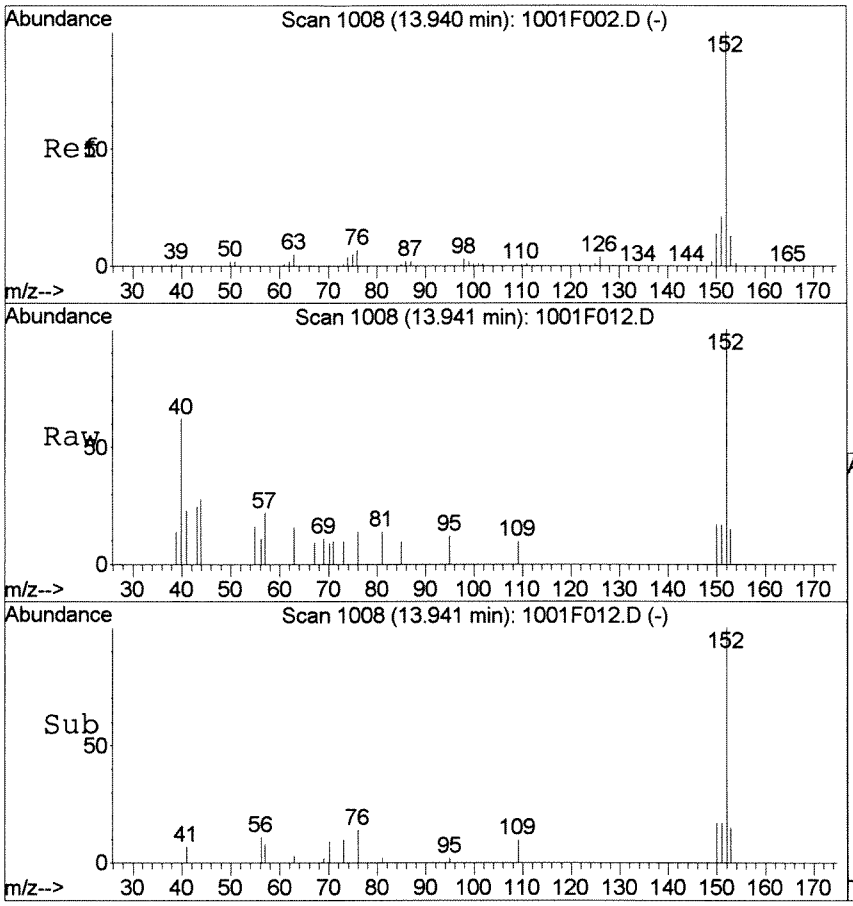


#33
2-Methylnaphthalene
Concen: 0.21 ug/ml
RT: 12.49 min Scan# 866
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:142 Resp: 767

Ion	Ratio	Lower	Upper
142	100		
141	87.7	58.7	118.7

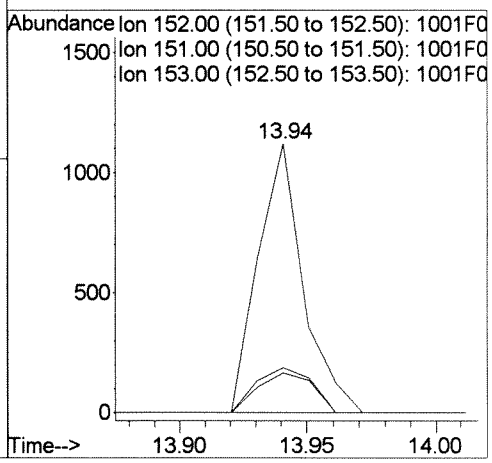


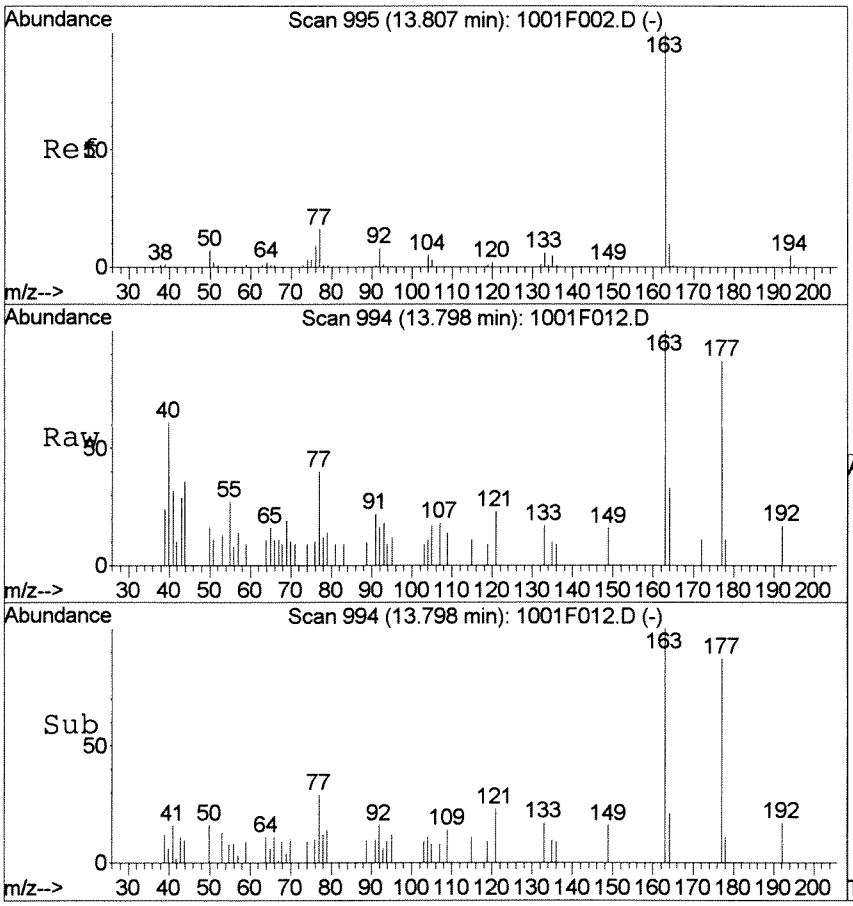


#41
Acenaphthylene
Concen: 0.23 ug/ml
RT: 13.94 min Scan# 1008
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:152 Resp: 1373

Ion	Ratio	Lower	Upper
152	100		
151	16.7	0.0	50.3
153	14.8	0.0	43.2

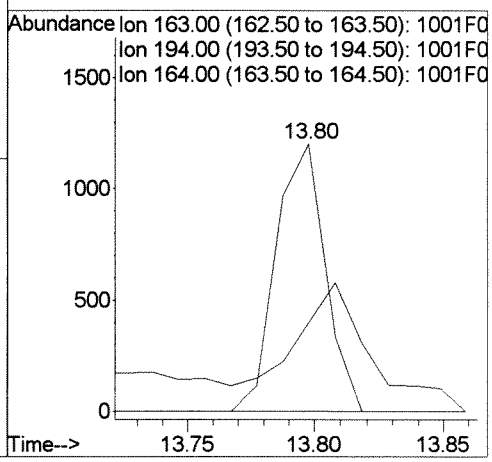


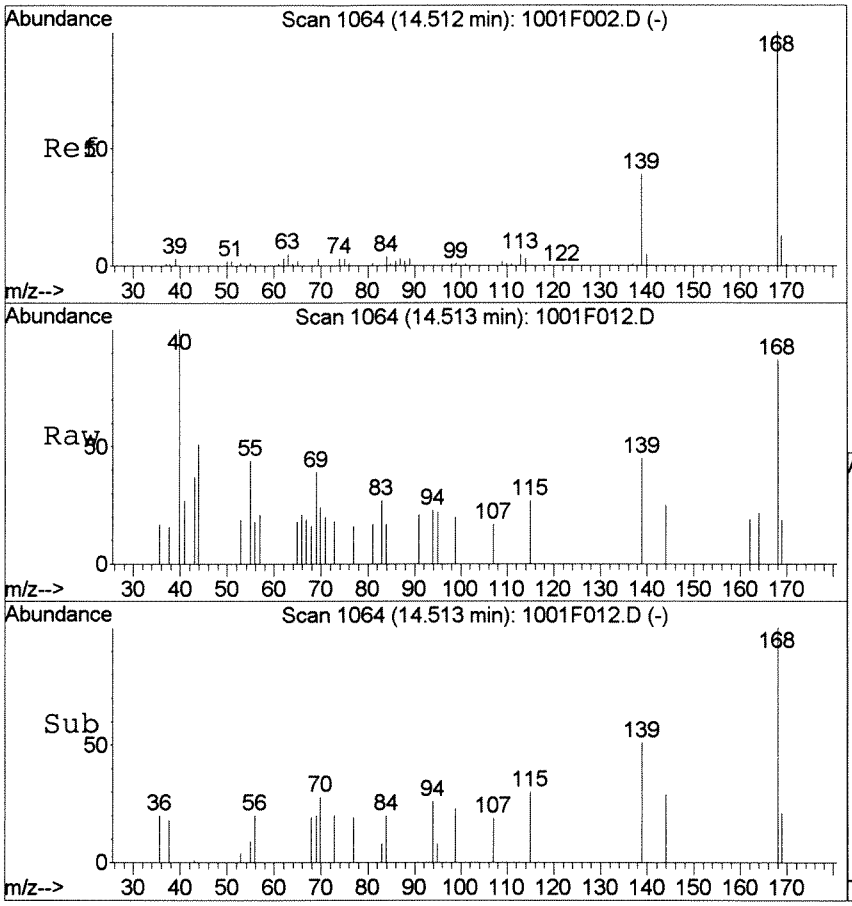


#42
Dimethyl Phthalate
Concen: 0.36 ug/ml
RT: 13.80 min Scan# 994
Delta R.T. -0.01 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:163 Resp: 1612

Ion	Ratio	Lower	Upper
163	100		
194	0.0	0.0	34.6
164	22.0	0.0	39.9

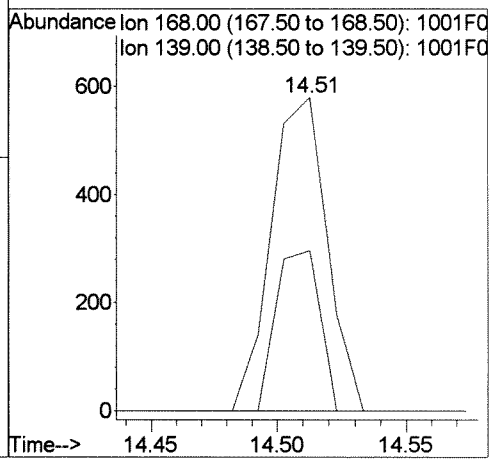


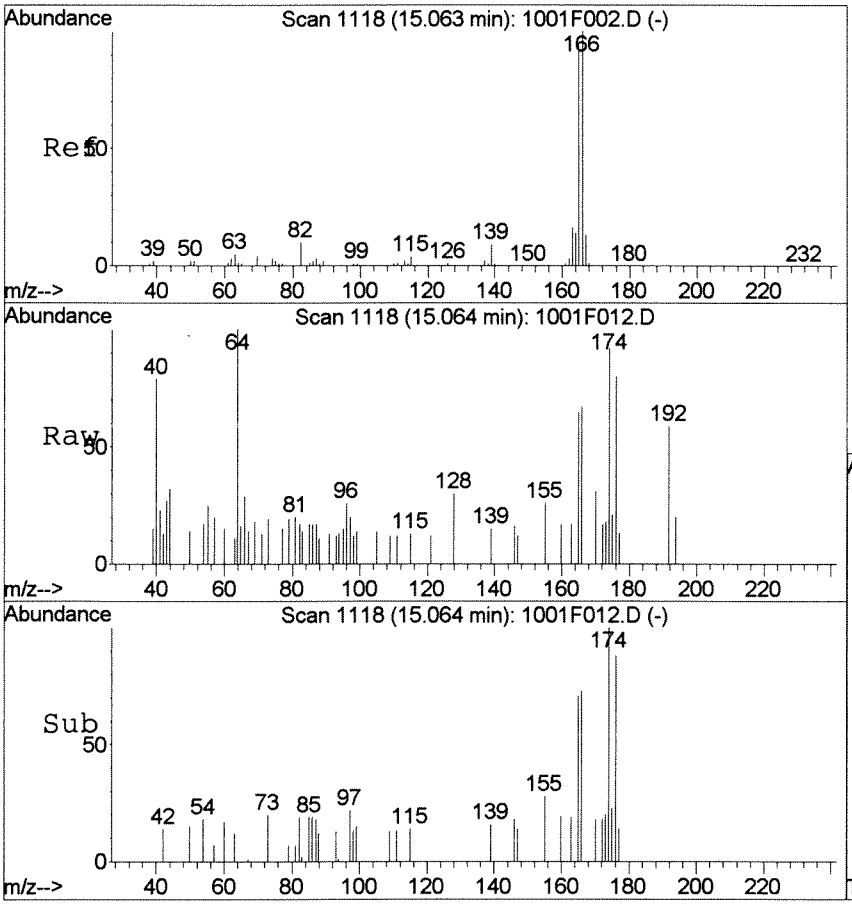


#47
Dibenzofuran
Concen: 0.16 ug/ml
RT: 14.51 min Scan# 1064
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:168 Resp: 877

Ion	Ratio	Lower	Upper
168	100		
139	51.1	8.8	68.8

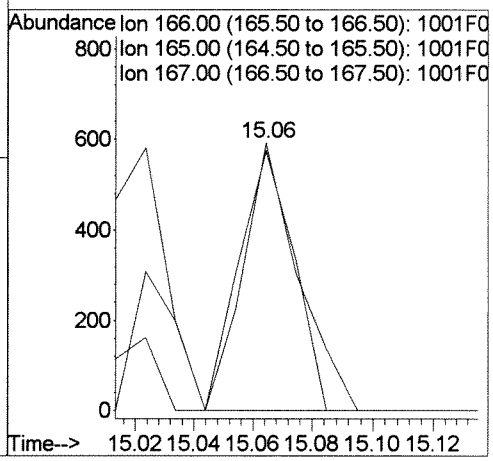


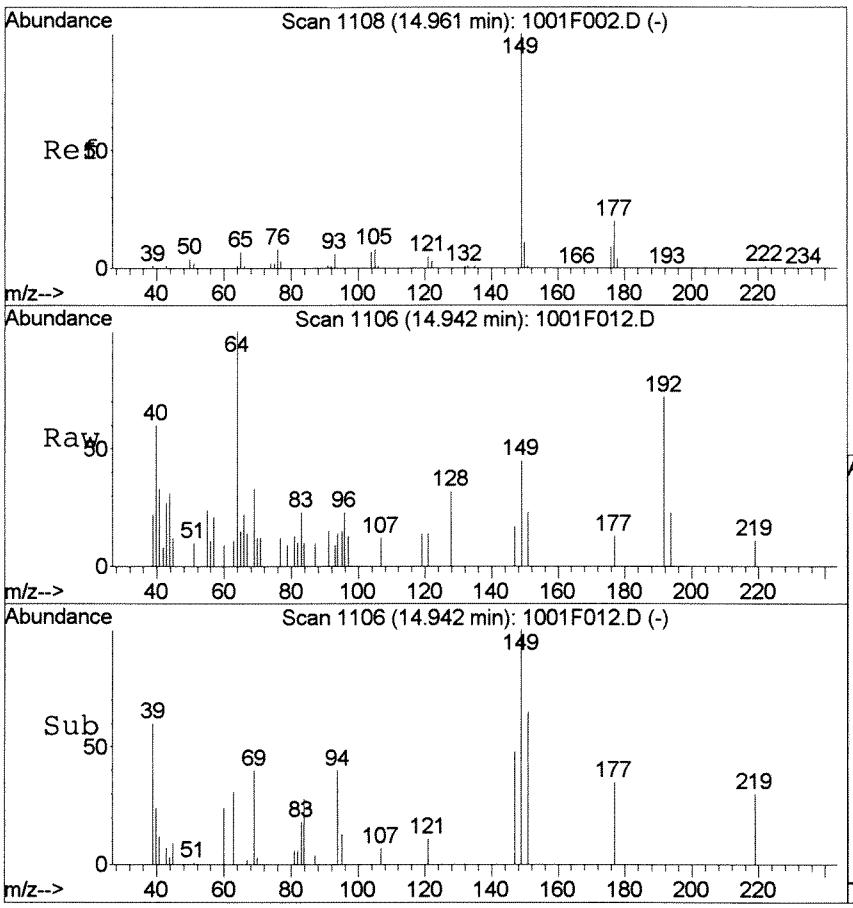


#51
Fluorene
Concen: 0.19 ug/ml
RT: 15.06 min Scan# 1118
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:166 Resp: 771

Ion	Ratio	Lower	Upper
166	100		
165	97.1	65.9	125.9
167	0.0	0.0	43.4

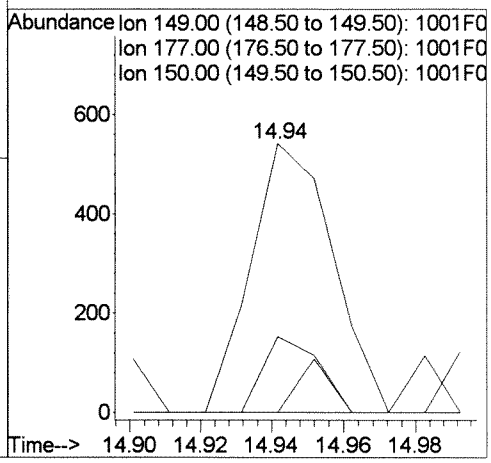


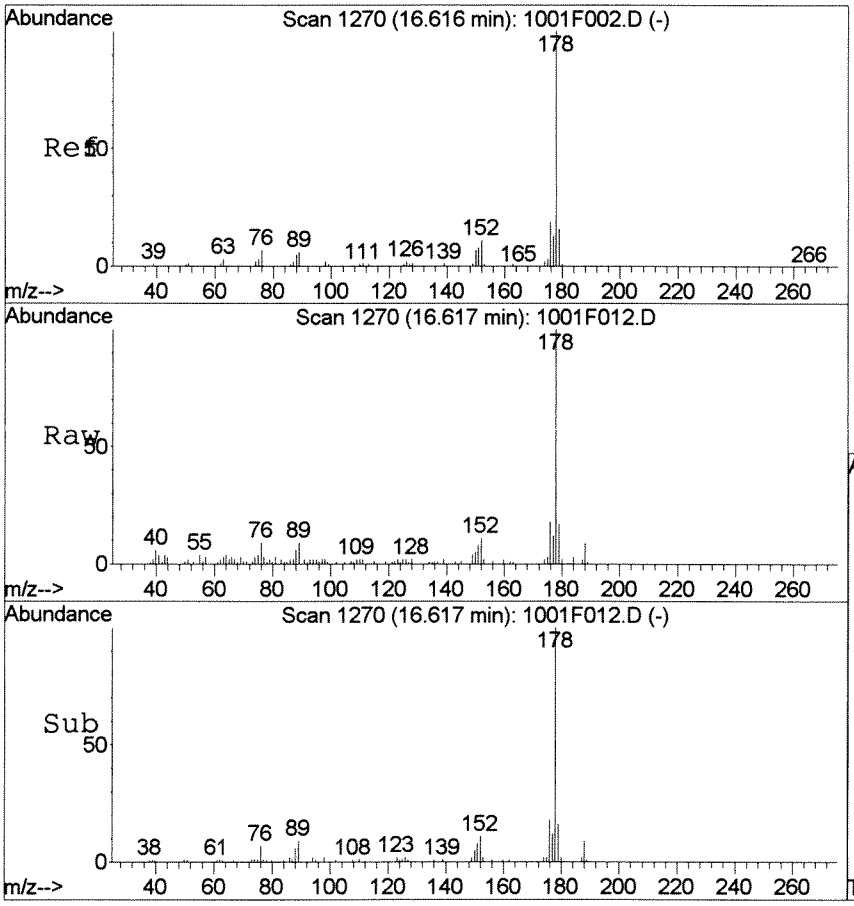


#53
Diethyl Phthalate
Concen: 0.18 ug/ml
RT: 14.94 min Scan# 1106
Delta R.T. -0.02 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:149 Resp: 859

Ion	Ratio	Lower	Upper
149	100		
177	28.0	0.0	50.8
150	0.0	0.0	41.3

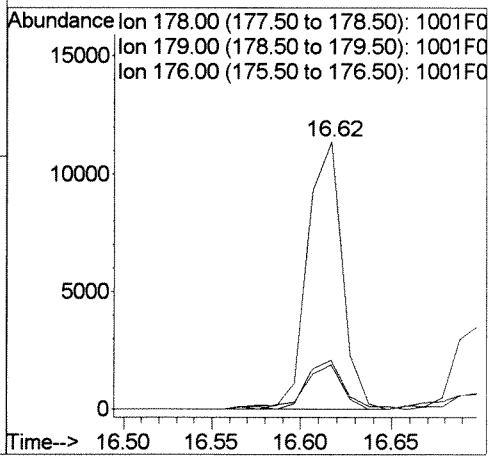


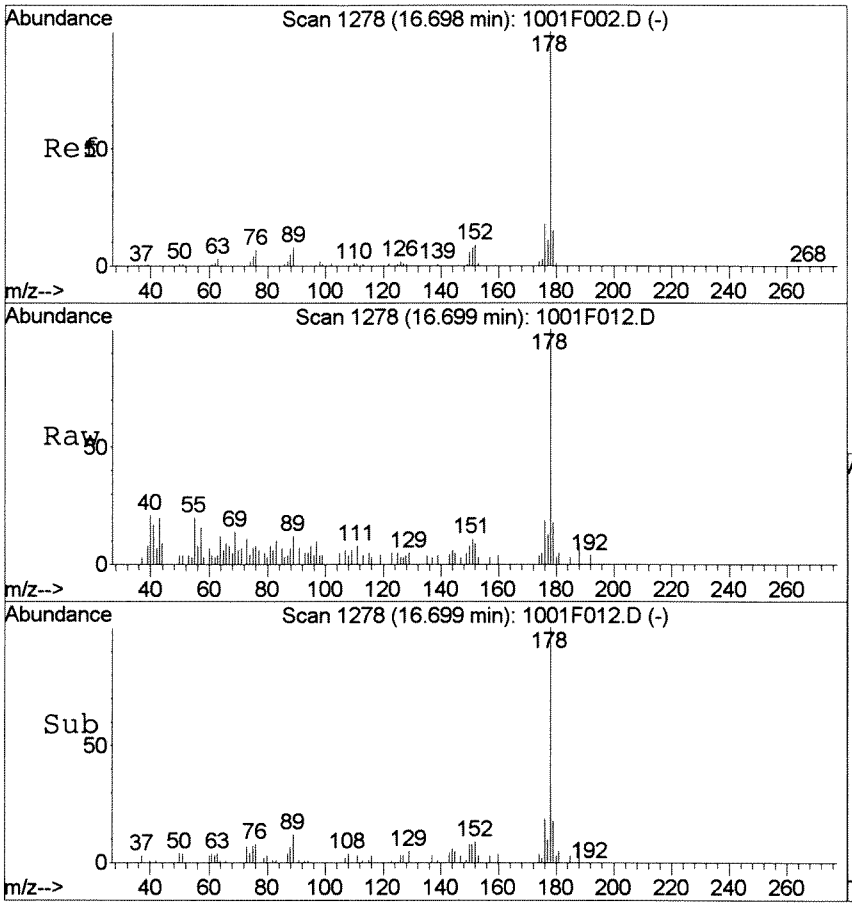


#63
Phenanthrene
Concen: 2.84 ug/ml
RT: 16.62 min Scan# 1270
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:178 Resp: 15185

Ion	Ratio	Lower	Upper
178	100		
179	16.7	0.0	45.5
176	17.8	0.0	49.1

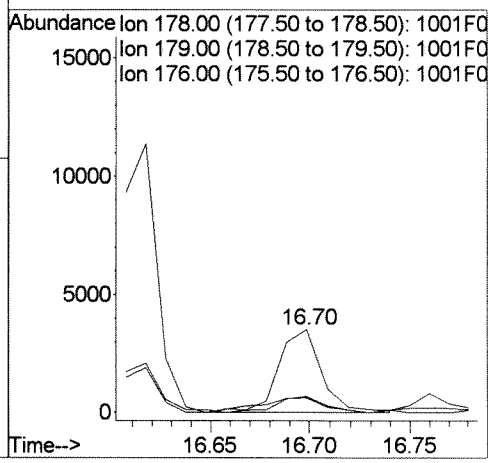


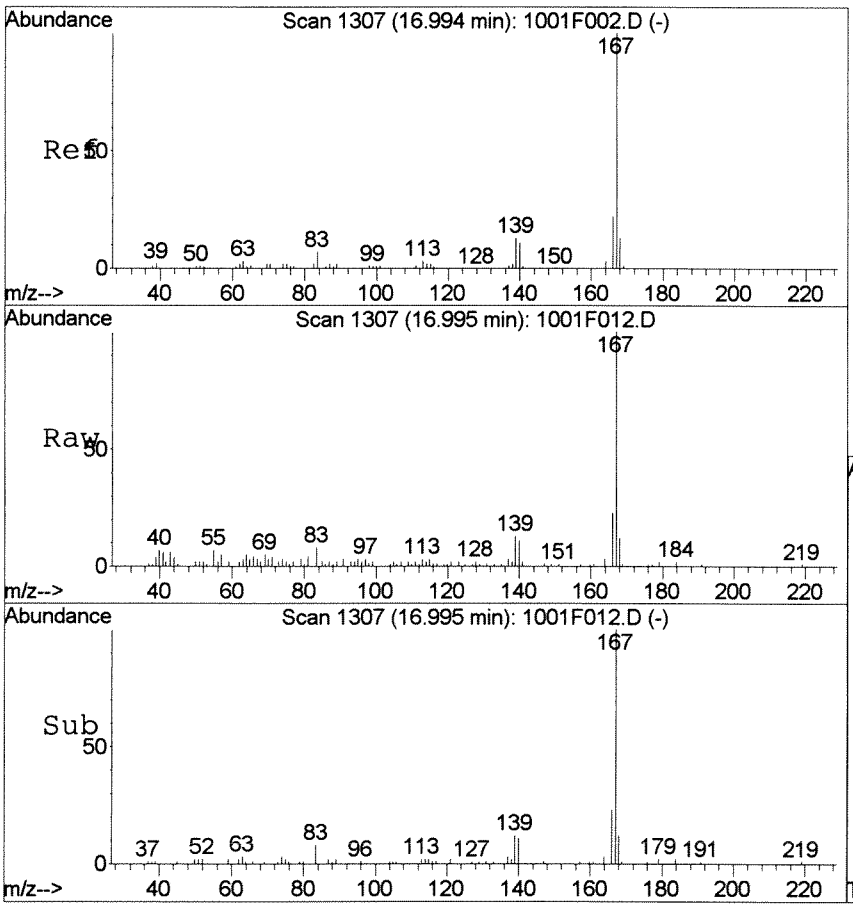


#64
Anthracene
Concen: 0.99 ug/ml
RT: 16.70 min Scan# 1278
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:178 Resp: 5383

Ion	Ratio	Lower	Upper
178	100		
179	16.6	0.0	45.6
176	16.3	0.0	48.8

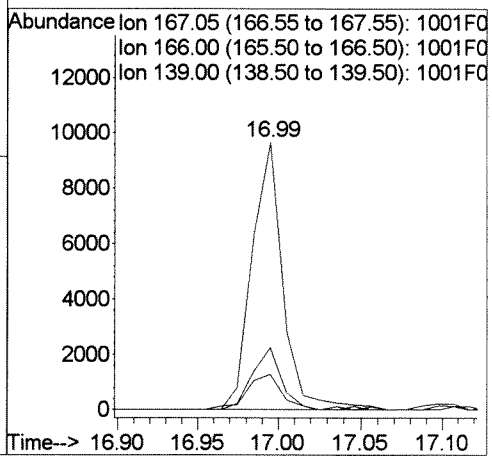


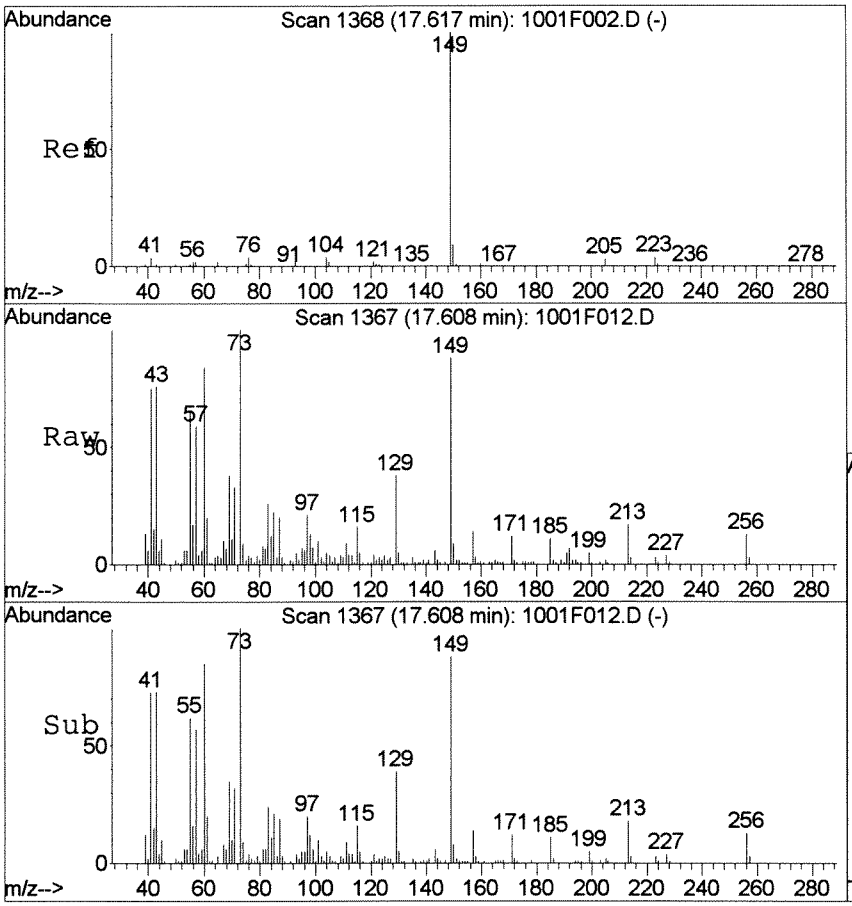


#65
Carbazole
Concen: 2.48 ug/ml
RT: 16.99 min Scan# 1307
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:167 Resp: 12894

Ion	Ratio	Lower	Upper
167	100		
166	23.2	0.0	51.6
139	13.2	0.0	43.3

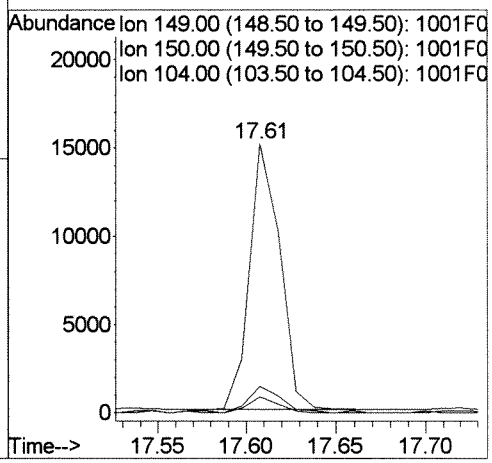


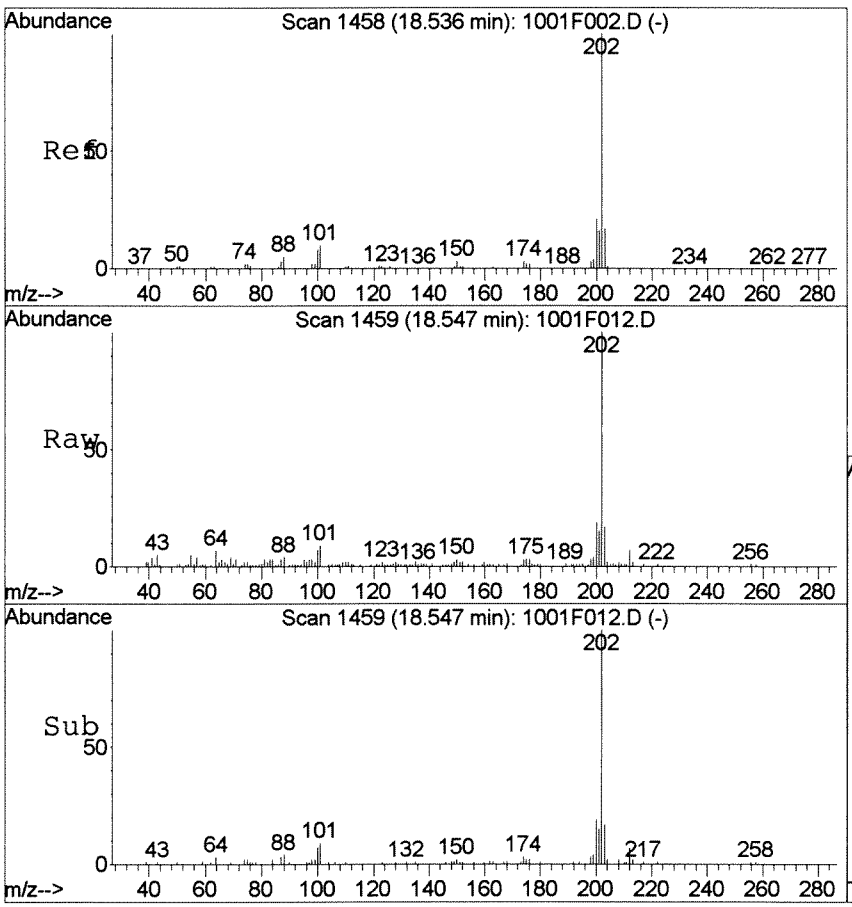


#66
Di-n-butyl Phthalate
Concen: 2.64 ug/ml
RT: 17.61 min Scan# 1367
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:149 Resp: 18035

Ion	Ratio	Lower	Upper
149	100		
150	9.6	0.0	39.3
104	6.1	0.0	35.1

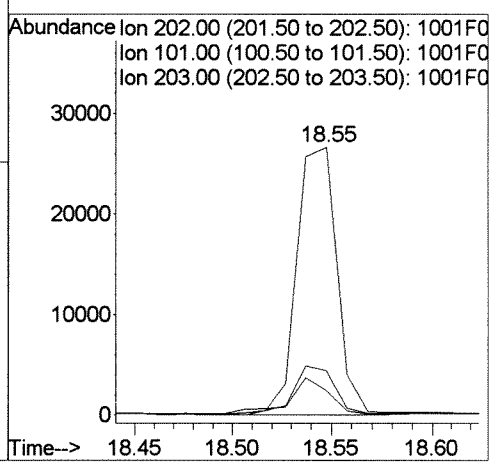


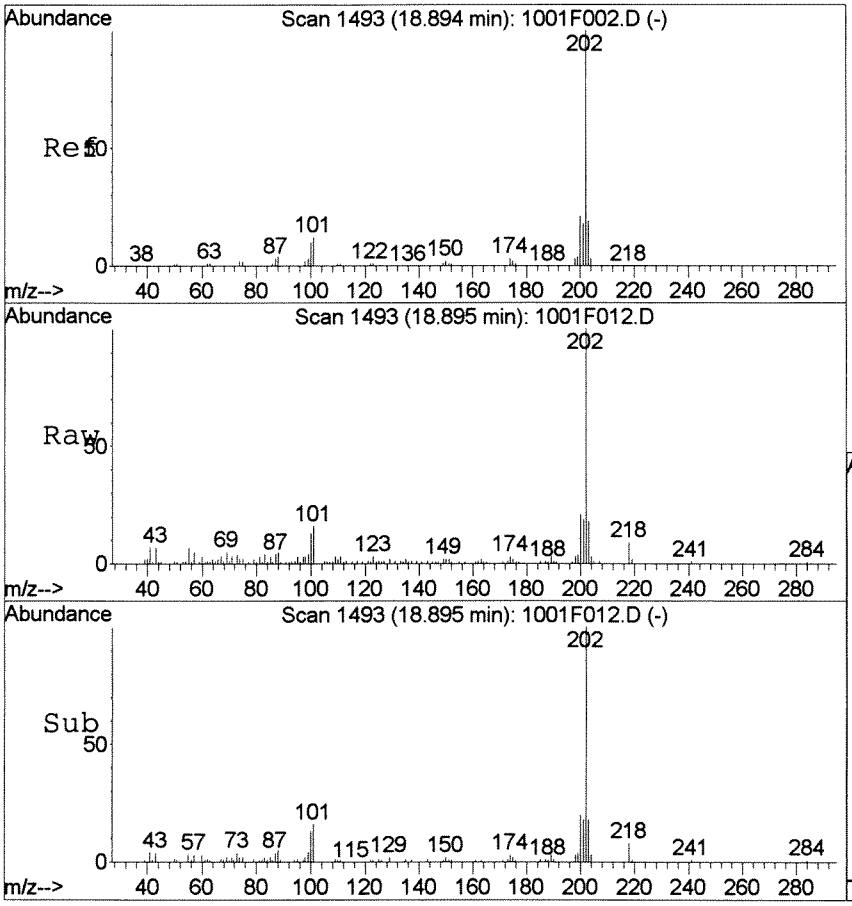


#67
Fluoranthene
Concen: 6.22 ug/ml m
RT: 18.55 min Scan# 1459
Delta R.T. 0.01 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:202 Resp: 37390

Ion	Ratio	Lower	Upper
202	100		
101	9.3	0.0	39.2
203	16.7	0.0	47.5

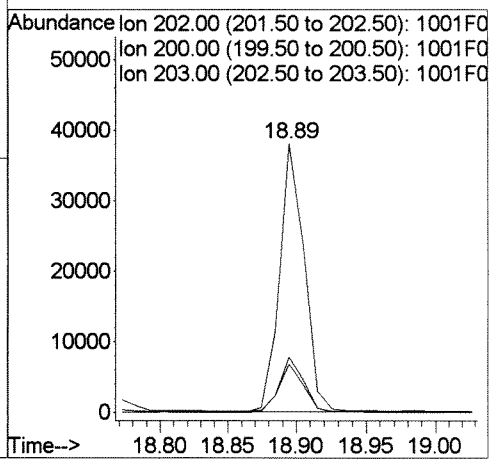


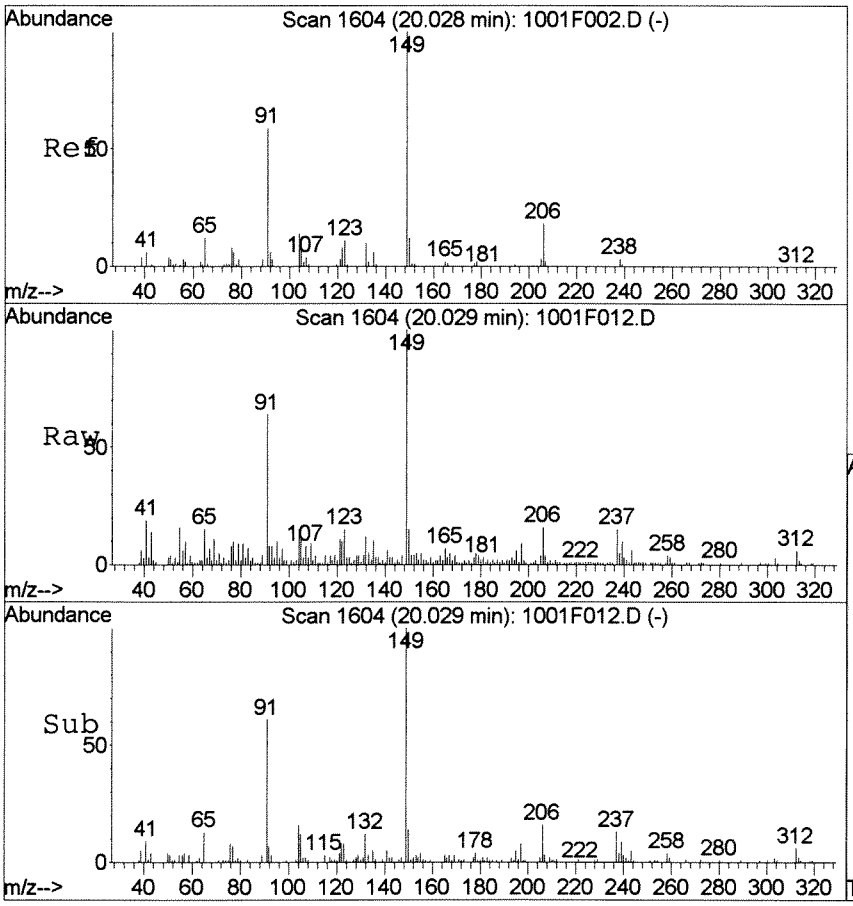


#70
Pyrene
Concen: 7.32 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:202 Resp: 47687

Ion	Ratio	Lower	Upper
202	100		
200	20.7	0.0	50.7
203	17.5	0.0	49.2

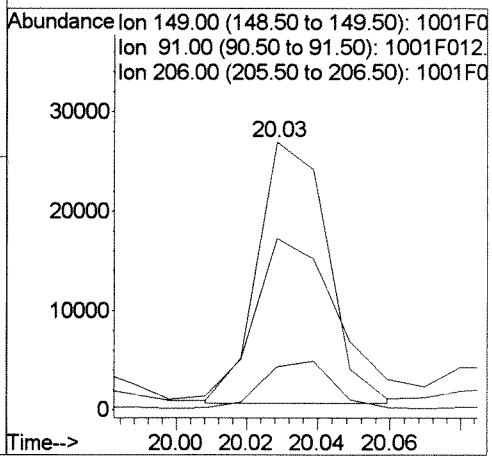


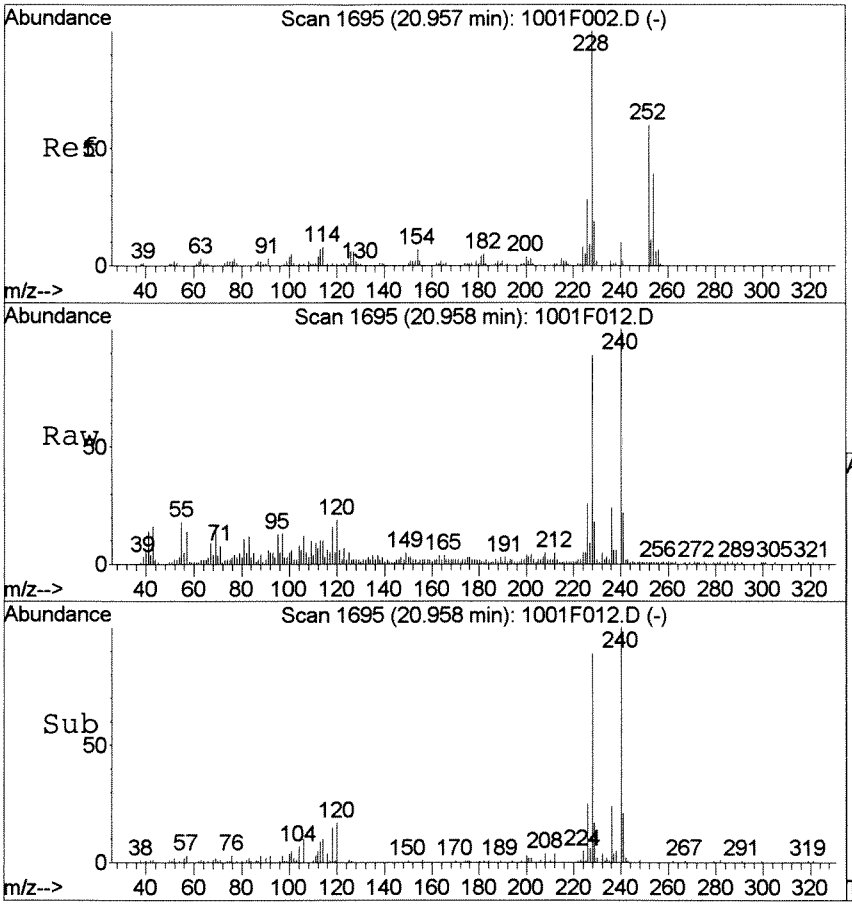


#72
Butyl Benzyl Phthalate
Concen: 11.90 ug/ml m
RT: 20.03 min Scan# 1604
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:149 Resp: 35604

Ion	Ratio	Lower	Upper
149	100		
91	64.1	28.0	88.0
206	16.1	0.0	46.9

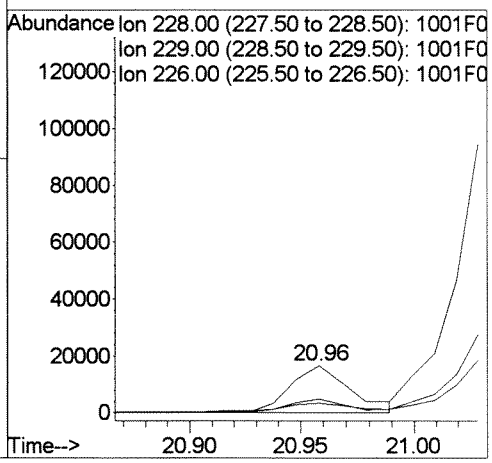


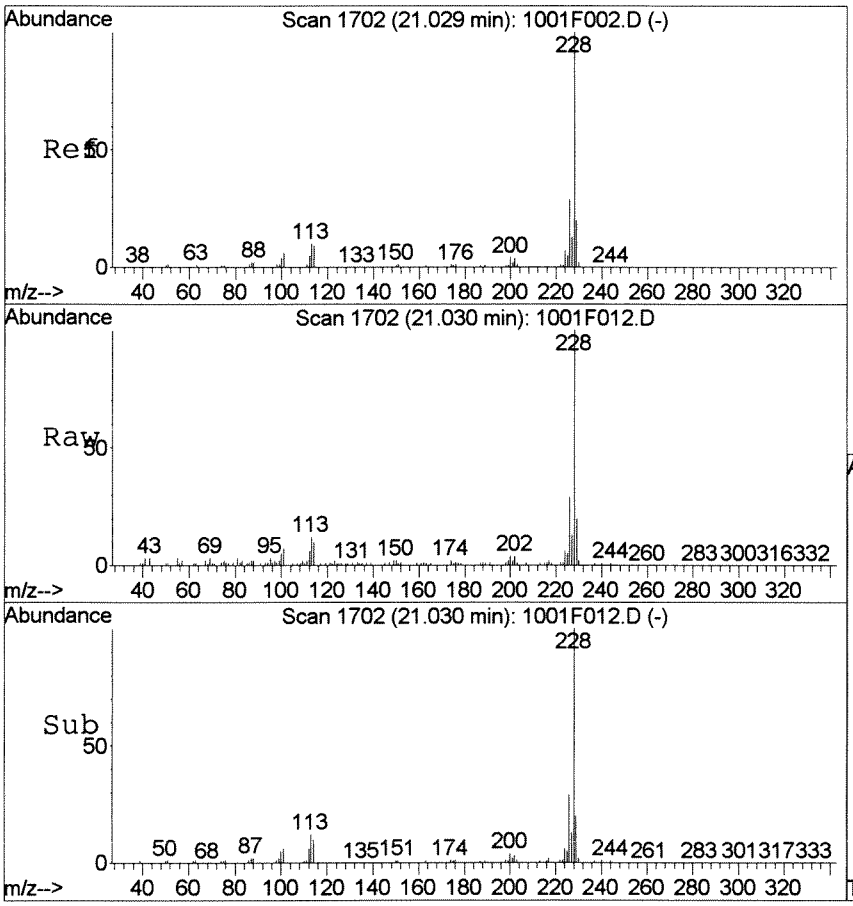


#74
Benz(a)anthracene
Concen: 5.48 ug/ml
RT: 20.96 min Scan# 1695
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:228 Resp: 30437

Ion	Ratio	Lower	Upper
228	100		
229	17.6	0.0	49.0
226	29.0	0.0	57.3

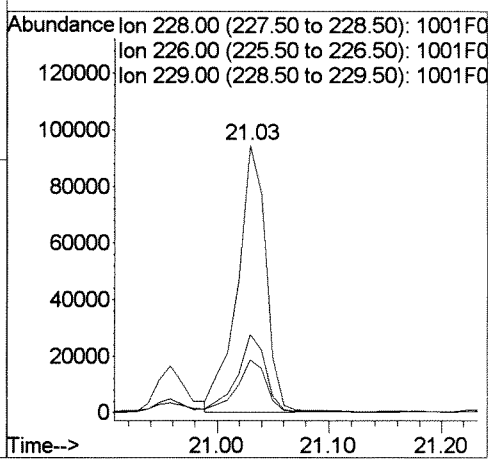


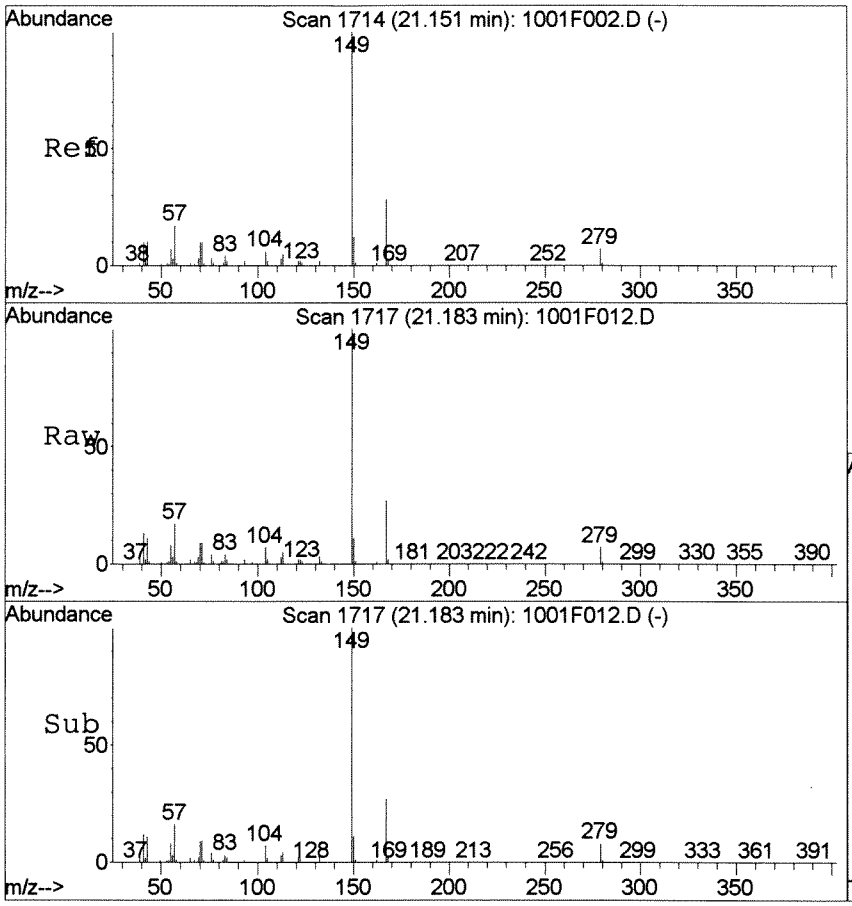


#75
Chrysene
Concen: 30.95 ug/ml
RT: 21.03 min Scan# 1702
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:228 Resp: 169226

Ion	Ratio	Lower	Upper
228	100		
226	29.2	0.0	59.3
229	19.2	0.0	49.2

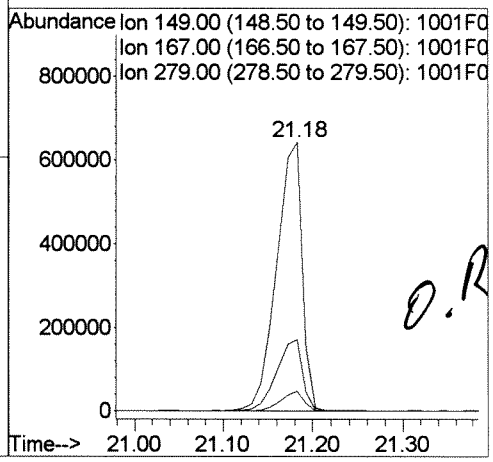




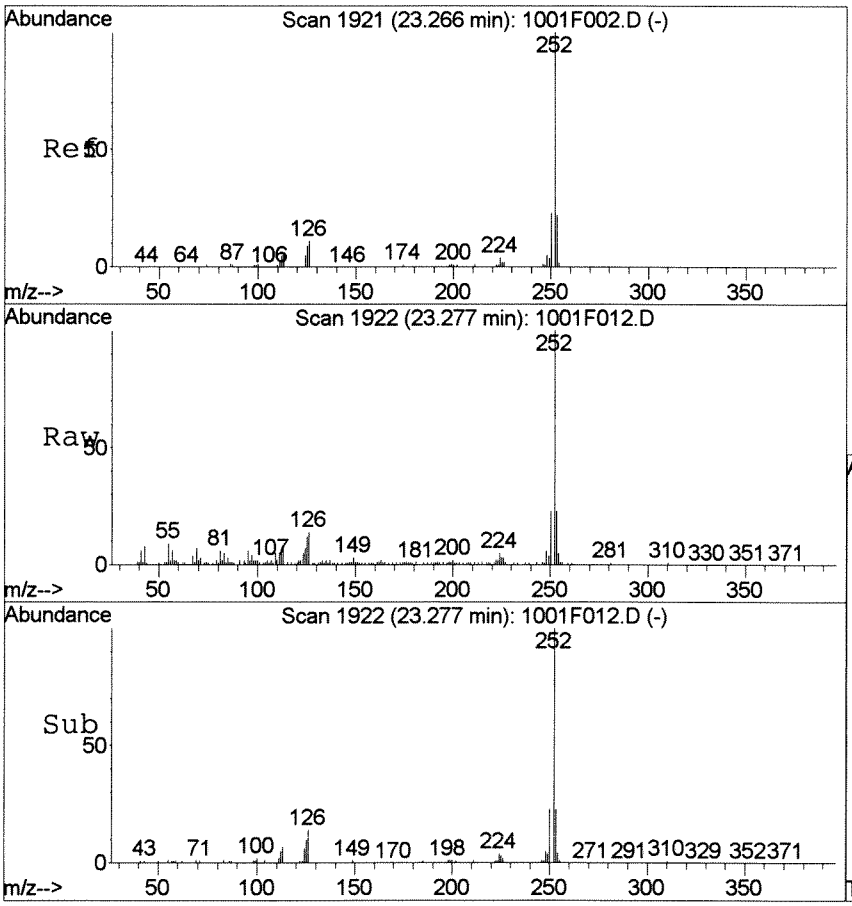
#76
Bis(2-ethylhexyl) Phthalate
Concen: 327.03 ug/ml
RT: 21.18 min Scan# 1717
Delta R.T. 0.03 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:149 Resp: 1287820

Ion	Ratio	Lower	Upper
149	100		
167	26.7	0.0	57.7
279	7.5	0.0	36.6



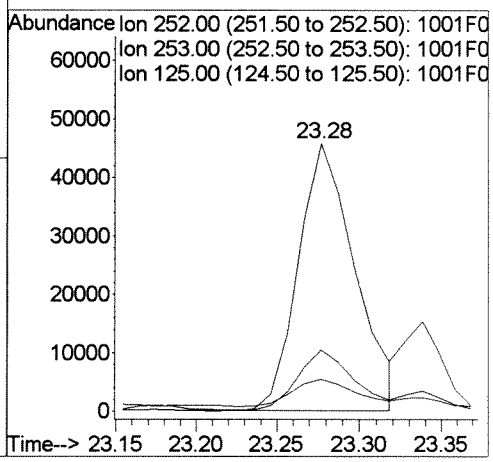
O.R.

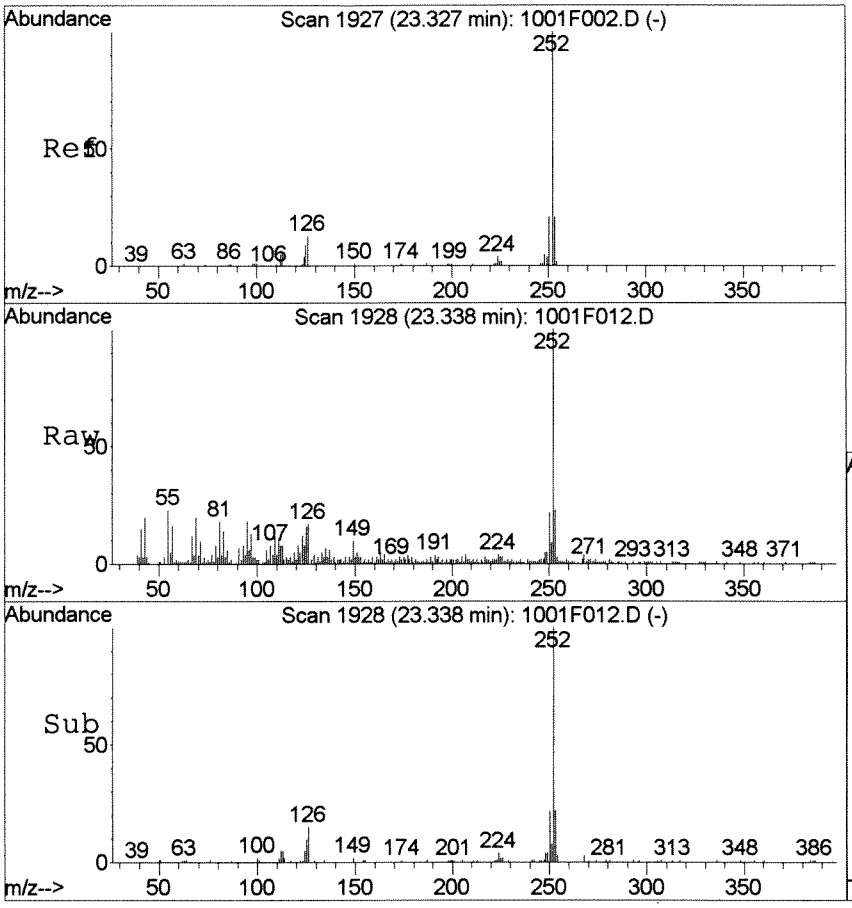


#79
Benzo(b)fluoranthene
Concen: 21.55 ug/ml
RT: 23.28 min Scan# 1922
Delta R.T. 0.01 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:252 Resp: 108904

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	51.9
125	9.9	0.0	39.2

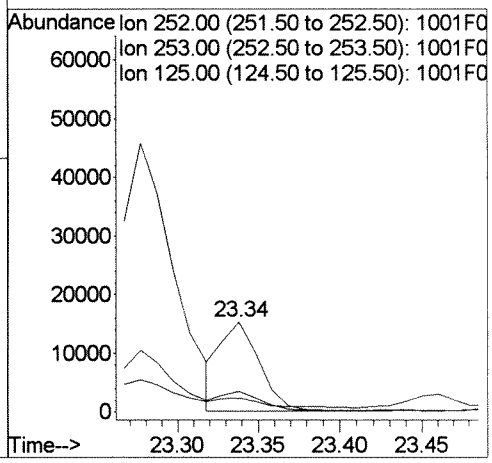


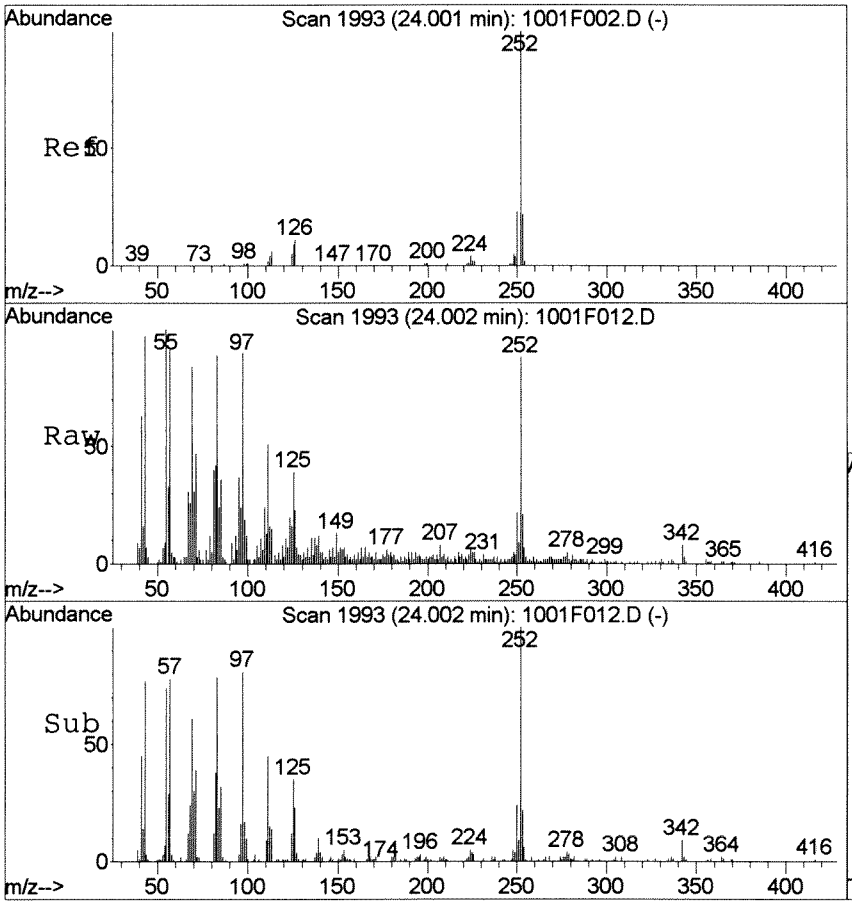


#80
Benzo(k)fluoranthene
Concen: 5.19 ug/ml
RT: 23.34 min Scan# 1928
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:252 Resp: 25666

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.3
125	8.7	0.0	38.4

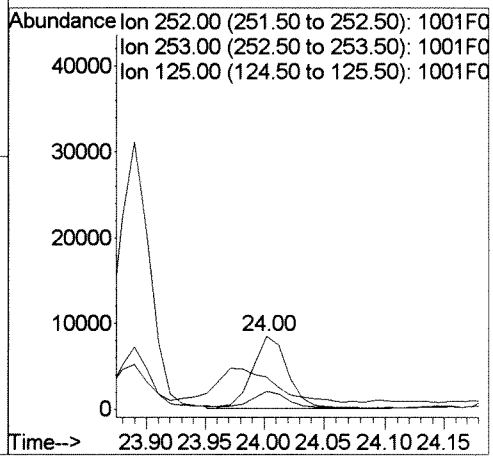


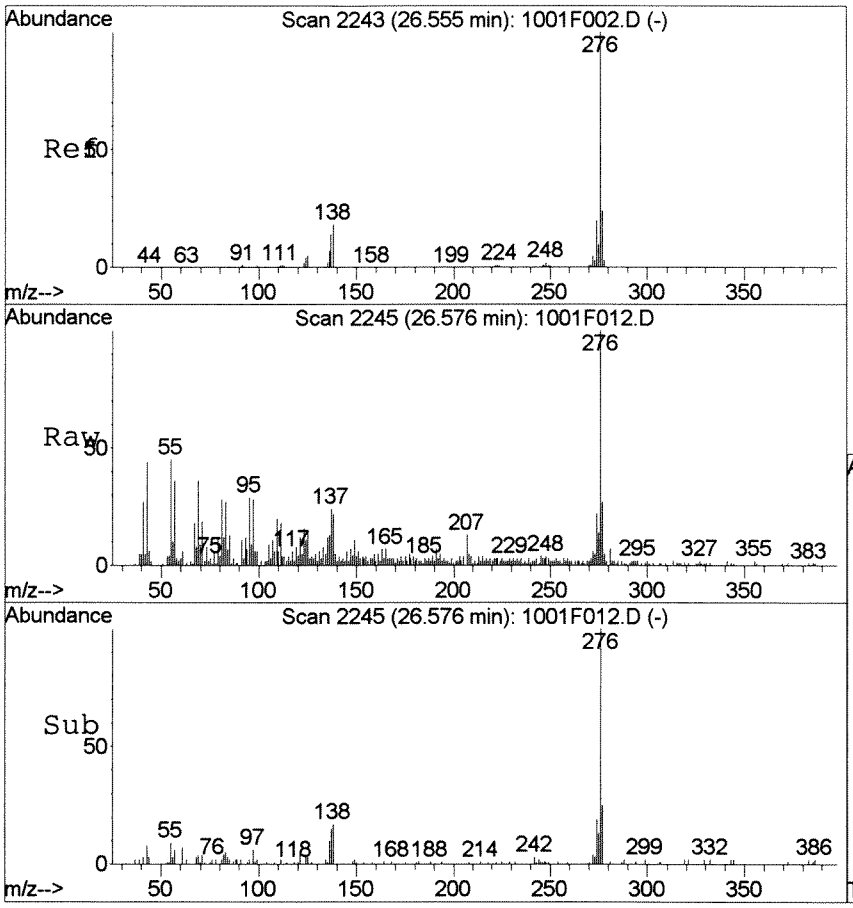


#81
Benzo(a)pyrene
Concen: 3.57 ug/ml
RT: 24.00 min Scan# 1993
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:252 Resp: 17499

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.1
125	28.4	0.0	39.6

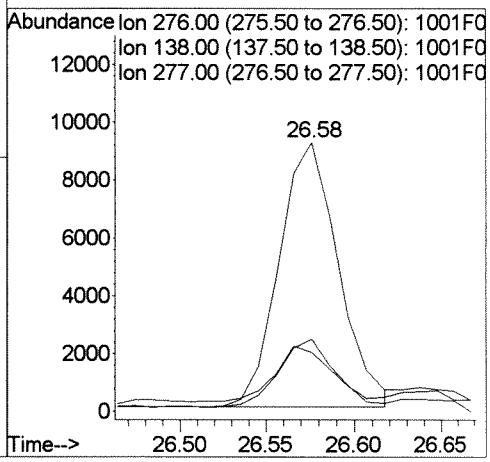


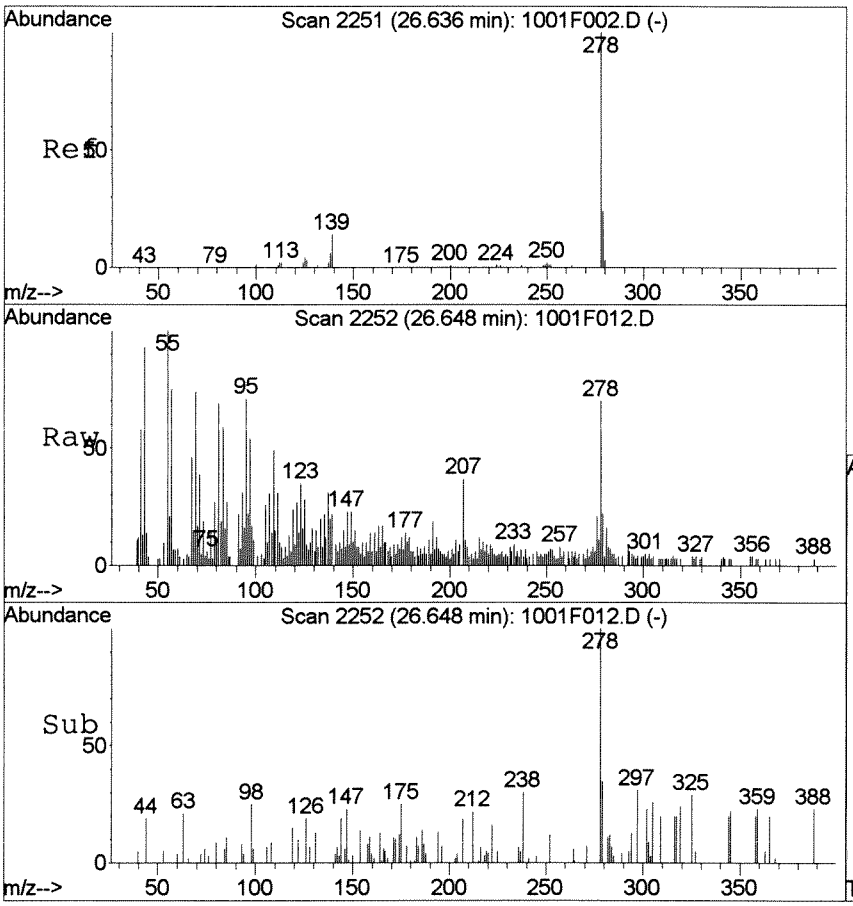


#82
Indeno(1,2,3-cd)pyrene
Concen: 4.83 ug/ml m
RT: 26.58 min Scan# 2245
Delta R.T. 0.01 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:276 Resp: 21368

Ion	Ratio	Lower	Upper
276	100		
138	22.0	0.0	46.3
277	26.9	0.0	53.1

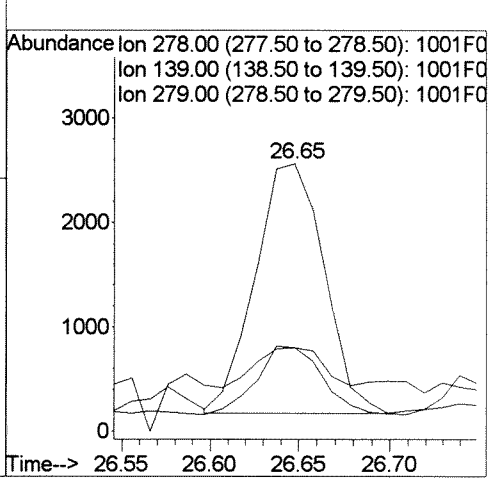


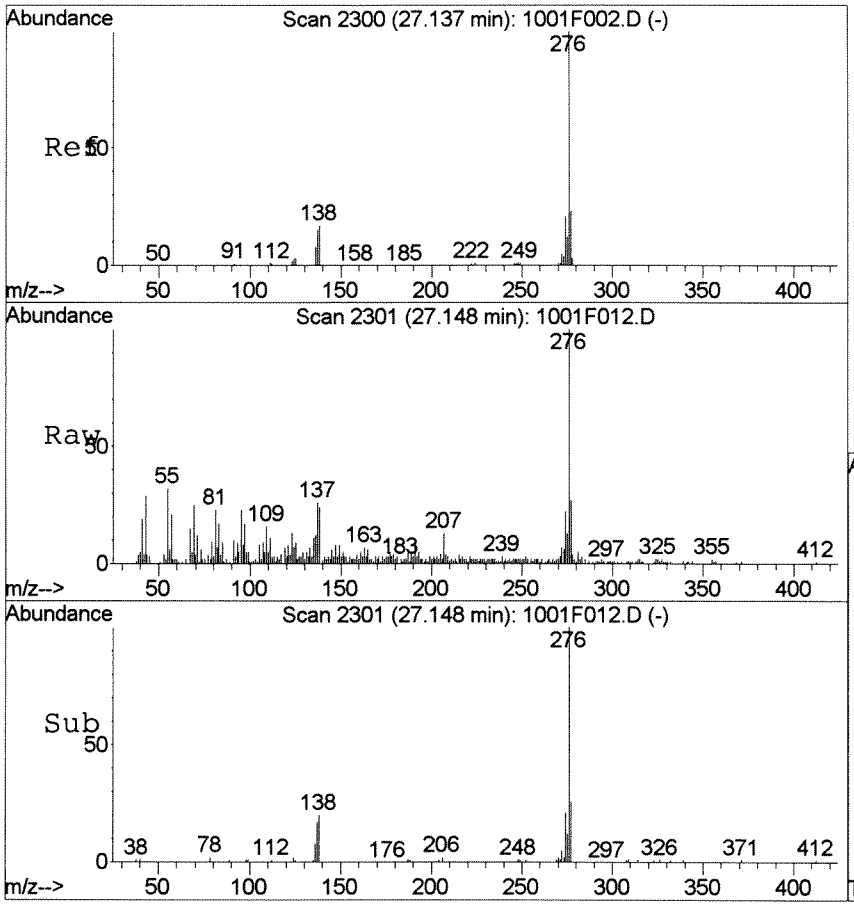


#83
Dibenz(a,h)anthracene
Concen: 1.40 ug/ml
RT: 26.65 min Scan# 2252
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:278 Resp: 6378

Ion	Ratio	Lower	Upper
278	100		
139	14.3	0.0	43.0
279	26.9	0.0	53.5

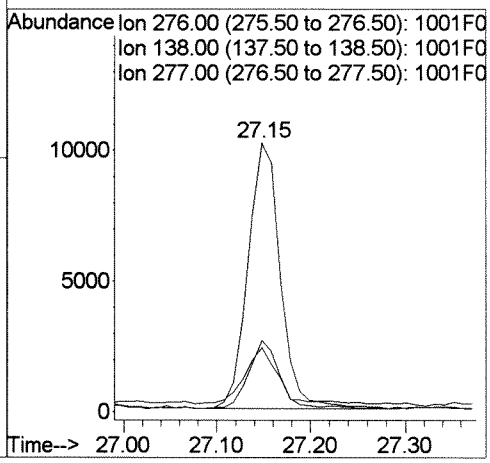




#84
Benzo(g,h,i)perylene
Concen: 5.10 ug/ml
RT: 27.15 min Scan# 2301
Delta R.T. 0.00 min
Lab File: 1001F012.D
Acq: 2 Oct 2014 2:36 am

Tgt Ion:276 Resp: 24736

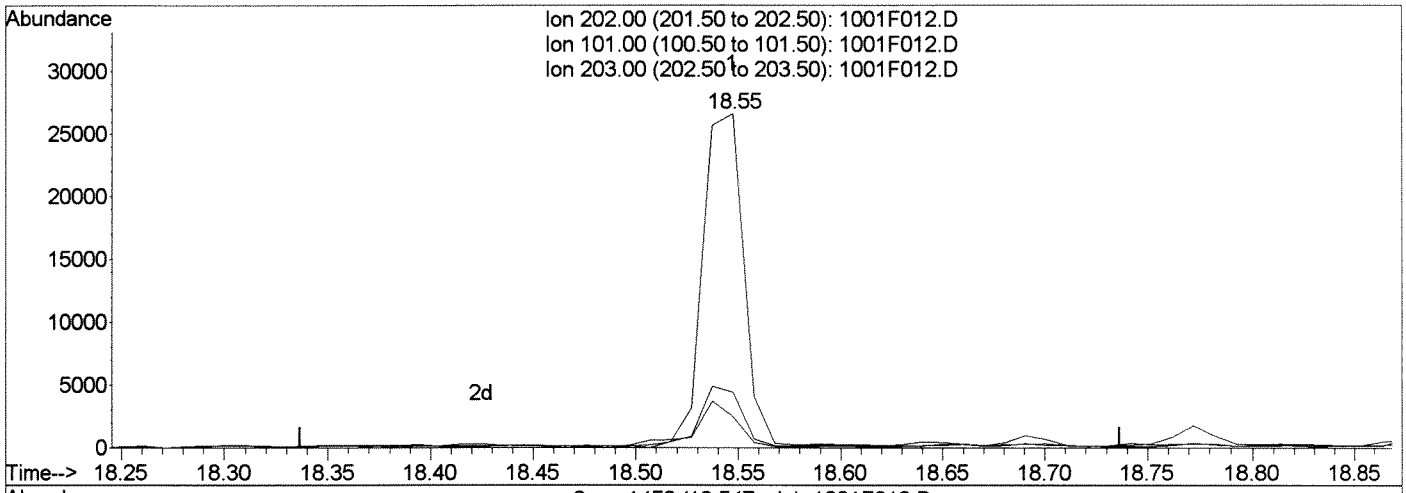
Ion	Ratio	Lower	Upper
276	100		
138	20.9	0.0	46.4
277	25.6	0.0	53.1

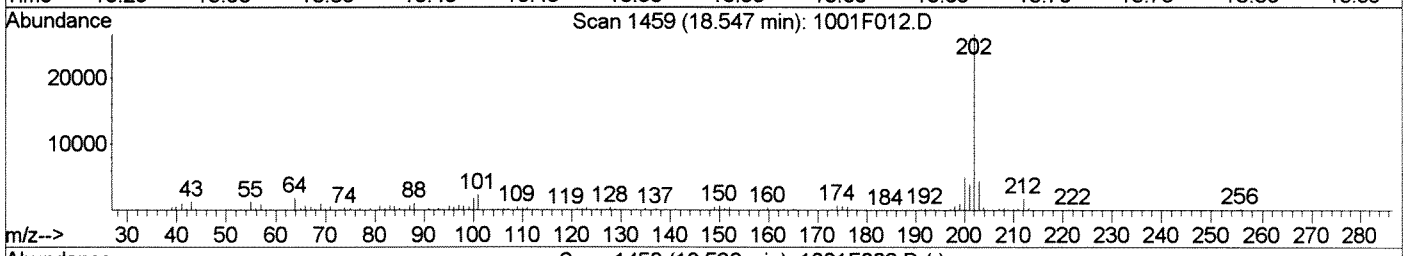


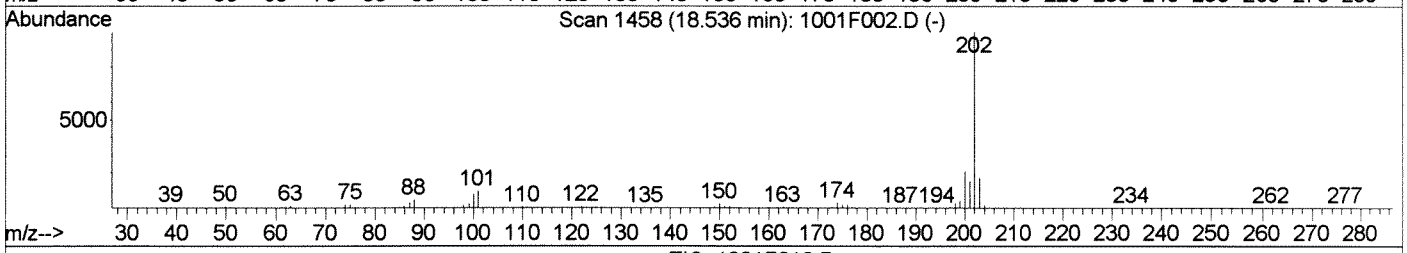
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:21 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F012.D

(67) Fluoranthene (T)

18.55min 6.37ug/ml

response 38314

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	8.77
203.00	17.50	15.60
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

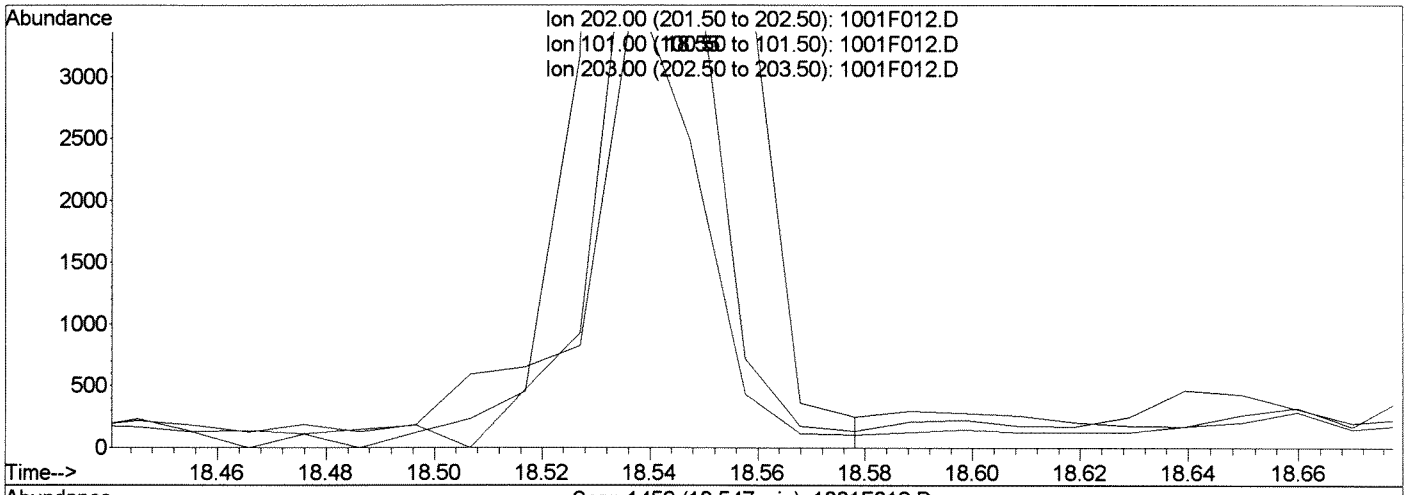
TRT

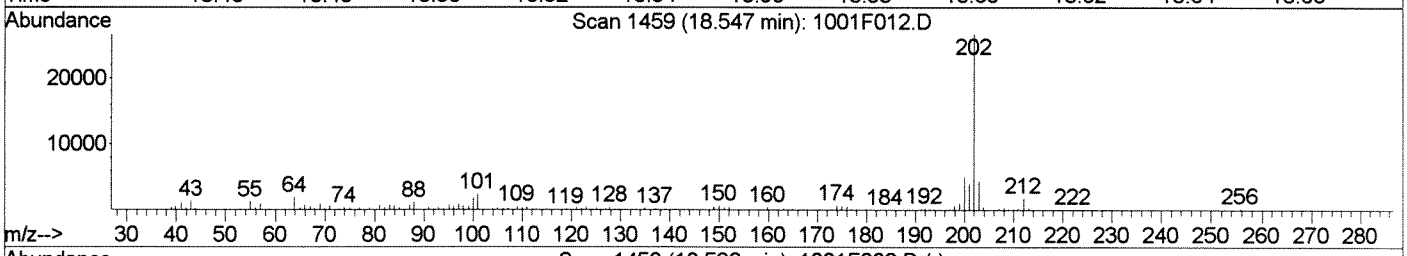
1001F012.D 093014BNC7.M Thu Oct 02 14:22:29 2014

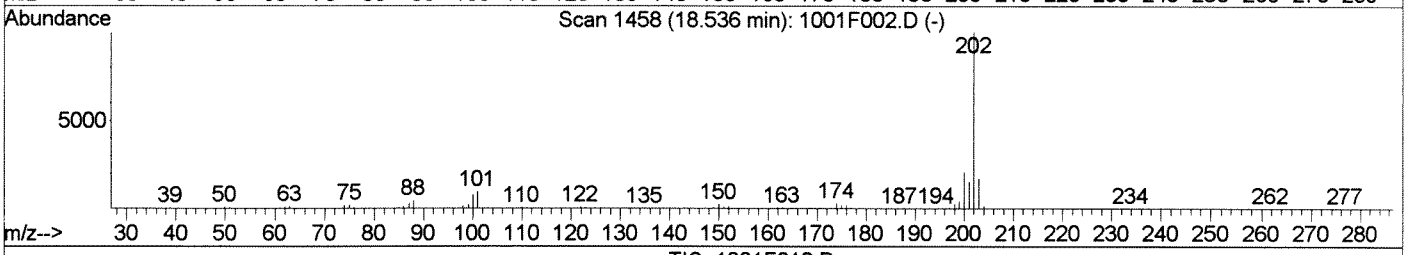
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:22 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F012.D

(67) Fluoranthene (T)

18.55min 6.22ug/ml m

response 37390

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	9.32
203.00	17.50	16.66
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

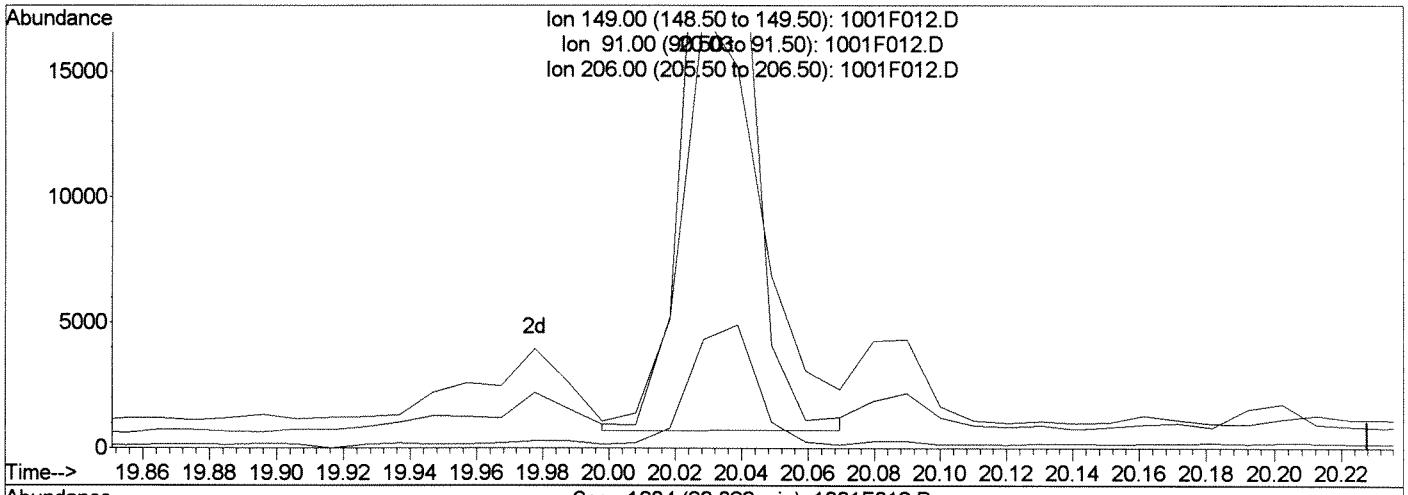
TPT

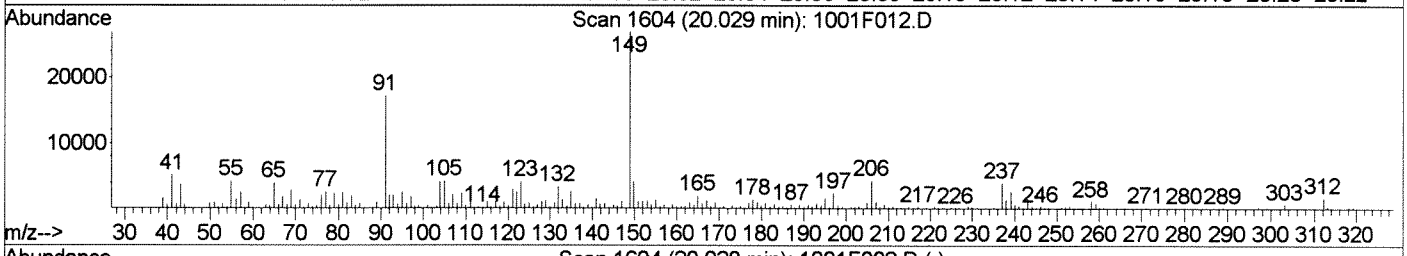
1001F012.D 093014BNC7.M Thu Oct 02 14:22:59 2014

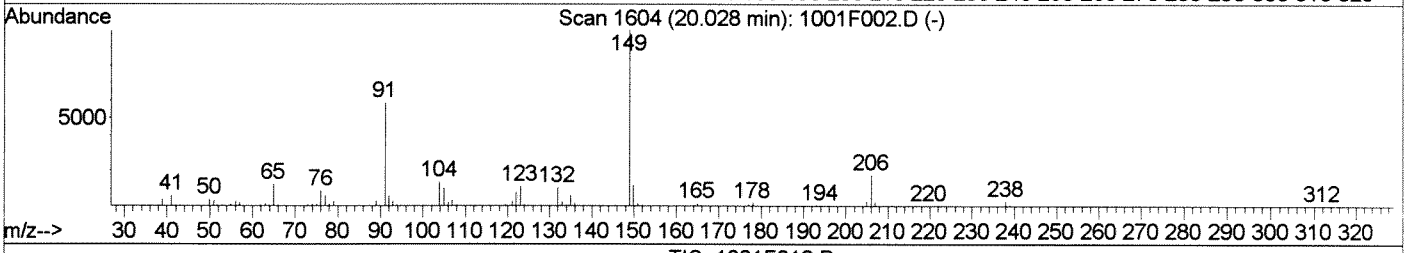
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:22 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F012.D

(72) Butyl Benzyl Phthalate (T)

20.03min 12.04ug/ml

response 36023

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	60.17
206.00	16.90	16.17
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

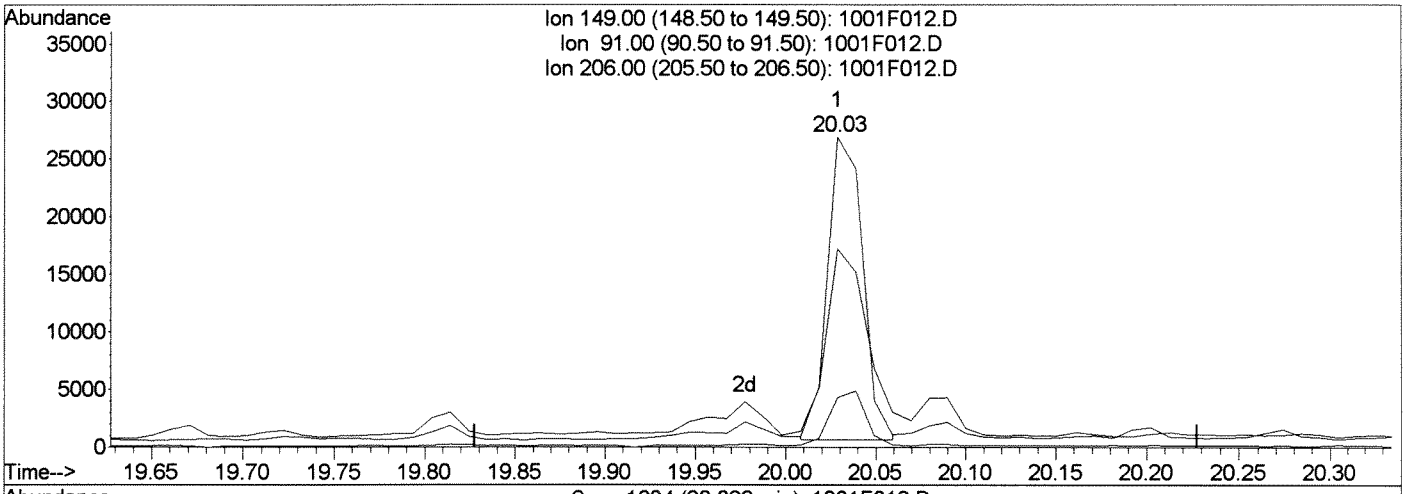
TRT

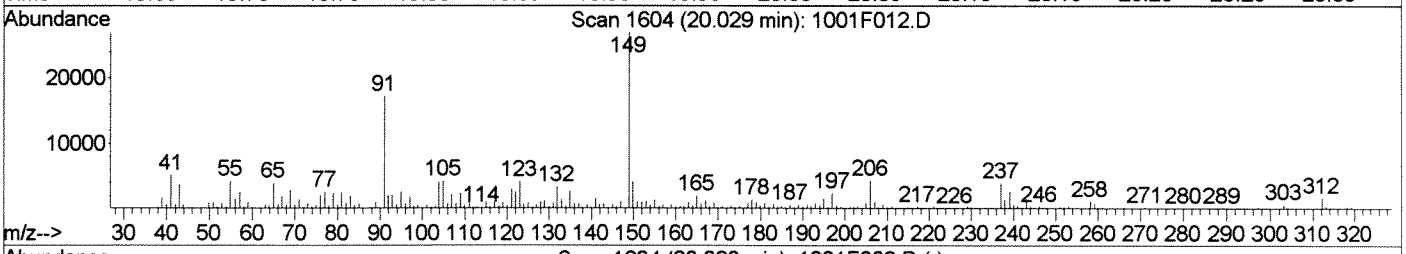
1001F012.D 093014BNC7.M Thu Oct 02 14:23:26 2014

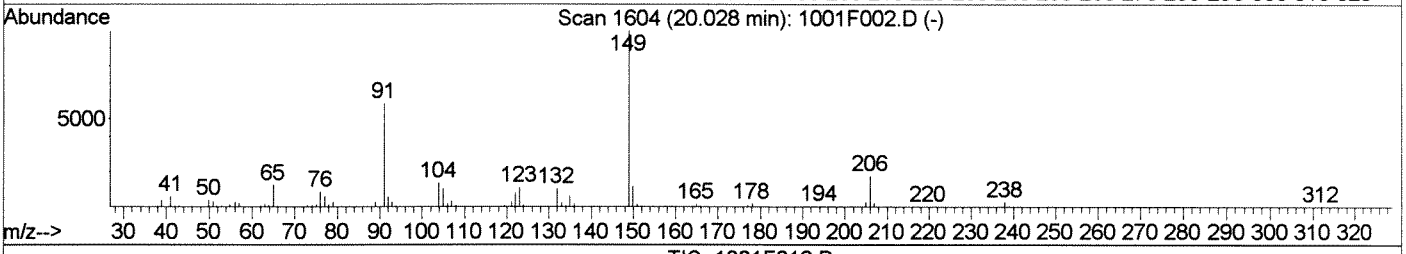
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F012.D Vial: 12
Acq On : 2 Oct 2014 2:36 am Operator: T. THOMAS
Sample : K1409921-007 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:24 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F012.D

(72) Butyl Benzyl Phthalate (T)

20.03min 11.90ug/ml m

response 35604

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	64.06
206.00	16.90	16.06
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TAT

1001F012.D 093014BNC7.M Thu Oct 02 14:24:12 2014

Exception Report

Data File: J:\MS07\DATA\100314\1003F014.D
Lab ID: K1409921-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/03/2014 23:00
Date Quantitated: 10/06/2014 13:18
Batch ID: KWG1413542
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Bis(2-ethylhexyl)phthalate only

OCT 06 2014 TRT

Primary Review: _____

Secondary Review: 10/10/14

Printed: 10/06/2014 16:17:12
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100314\1003F014.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 23:00	**Quant Date:**	10/06/2014 13:18	**Vial:**	14
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413542	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376328	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100314\1003A002.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.22	0.00	152	48171	40.00	OK
2	Naphthalene-d8	11.32	-0.01	136	173860	40.00	OK
3	Acenaphthene-d10	14.18	-0.01	164	96703	40.00	OK
4	Phenanthrene-d10	16.59	0.00	188	145891	40.00	OK
5	Chrysene-d12	20.99	-0.01	240	152927	40.00	OK
6	Perylene-d12	24.15	-0.01	264	146734	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.75	-0.01	0.00	99	22275	13.67	46	26-106	OK	NR
1	Nitrobenzene-d5	10.14	-0.03	0.00	82	13380	9.18	46	29-116	OK	NR
3	2-Fluorobiphenyl	13.12	-0.01	0.00	172	35837	9.83	49	32-104	OK	NR
4	2,4,6-Tribromophenol	15.48	-0.01	0.00	330	14981	18.66	62	20-123	OK	NR
5	Terphenyl-d14	19.21	-0.01	0.00	244	44380	13.28	66	37-133	OK	NR

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.12	U	NR
1	2-Methylphenol				107	0		0.11	U	NR
1	4-Methylphenol				107	0		0.11	U	NR
2	2,4-Dimethylphenol				122	0		0.089	U	NR
2	Hexachlorobutadiene				225	0		0.084	U	NR
3	Diethyl Phthalate				149	0		0.084	U	NR
3	2-Methyl-4,6-dinitrophenol				198	0		0.84	U	NR
4	Hexachlorobenzene				284	0		0.089	U	NR
4	Fluoranthene	18.54	-0.02	0.00	202	4543	1.14	0.23	JD	NR
5	Pyrene	18.90	-0.02	0.00	202	5489	1.21	0.24	JD	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100314\1003F014.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 23:00	**Quant Date:**	10/06/2014 13:18	**Vial:**	14
Run Type:	SMPL			**Dilution:**	5.0
Lab ID:	K1409921-007			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.04	-0.01	0.00	149	4440**m**	2.13	0.42	JD	NR
5	Chrysene	21.03	-0.02	0.00	228	22230	5.85	1.2	JD	NR
5	Bis(2-ethylhexyl) Phthalate	21.17		0.00	149	199577	72.90	14	D	
6	Di-n-octyl Phthalate				149	0**d**		0.15	U	NR

Prep Amount:	40.408 g	**Dilution:**	5.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	62.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100314\1003F014.D Vial: 14
Acq On : 3 Oct 2014 11:00 pm Operator: T. THOMAS
Sample : K1409921-007 5X Inst : MS07
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Oct 06 12:38:43 2014 Quant Results File: 093014BNC7.RES

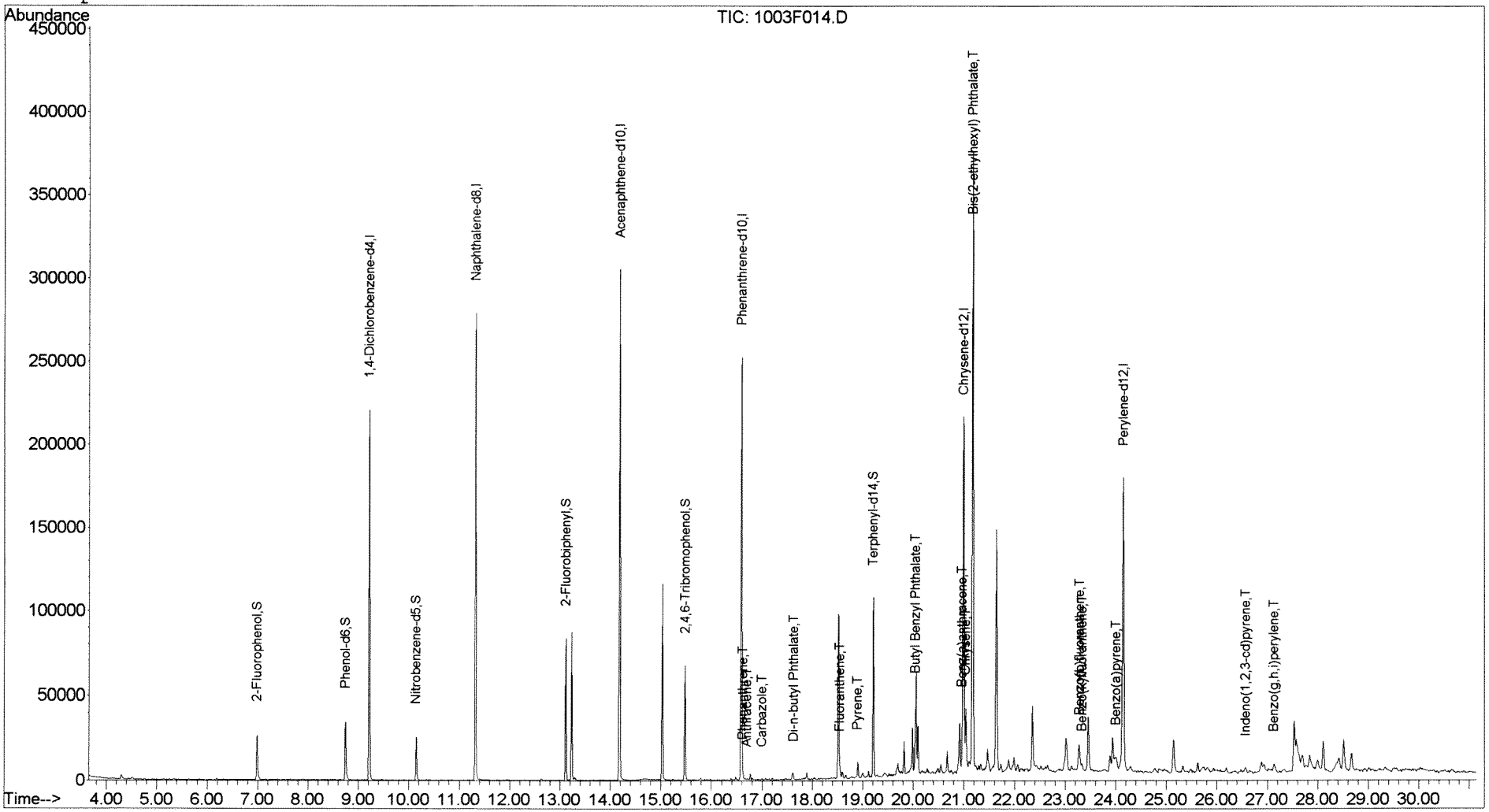
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.22	152	48171	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	173860	40.00	ug/ml	-0.01
34) Acenaphthene-d10	14.18	164	96703	40.00	ug/ml	-0.01
58) Phenanthrene-d10	16.59	188	145891	40.00	ug/ml	0.00
68) Chrysene-d12	20.99	240	152927	40.00	ug/ml	-0.01
77) Perylene-d12	24.15	264	146734	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.99	112	13106	9.48	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 6.32%#			
7) Phenol-d6	8.75	99	22275	13.67	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 9.11%#			
19) Nitrobenzene-d5	10.14	82	13380	9.18	ug/ml	-0.02
Spiked Amount 100.000	Range 35 - 114		Recovery = 9.18%#			
38) 2-Fluorobiphenyl	13.12	172	35837	9.83	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 9.83%#			
59) 2,4,6-Tribromophenol	15.48	330	14981	18.66	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 12.44%			
71) Terphenyl-d14	19.21	244	44380	13.28	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery = 13.28%#			
Target Compounds						Qvalue
63) Phenanthrene	16.62	178	1848	0.52	ug/ml	92
64) Anthracene	16.70	178	456m	0.13	ug/ml	
65) Carbazole	17.00	167	897	0.26	ug/ml	86
66) Di-n-butyl Phthalate	17.62	149	2250	0.50	ug/ml	93
67) Fluoranthene	18.54	202	4543	1.14	ug/ml	93
70) Pyrene	18.90	202	5489	1.21	ug/ml	94
72) Butyl Benzyl Phthalate	20.04	149	4440m	2.13	ug/ml	
74) Benz(a)anthracene	20.96	228	4194	1.09	ug/ml	96
75) Chrysene	21.03	228	22230	5.85	ug/ml	97
76) Bis(2-ethylhexyl) Phthalat	21.17	149	199577	72.90	ug/ml	97
79) Benzo(b)fluoranthene	23.28	252	14382m	4.02	ug/ml	
80) Benzo(k)fluoranthene	23.33	252	3897m	1.11	ug/ml	
81) Benzo(a)pyrene	24.01	252	2377	0.69	ug/ml	93
82) Indeno(1,2,3-cd)pyrene	26.57	276	2634m	0.84	ug/ml	
84) Benzo(g,h,i)perylene	27.13	276	3314	0.97	ug/ml	85

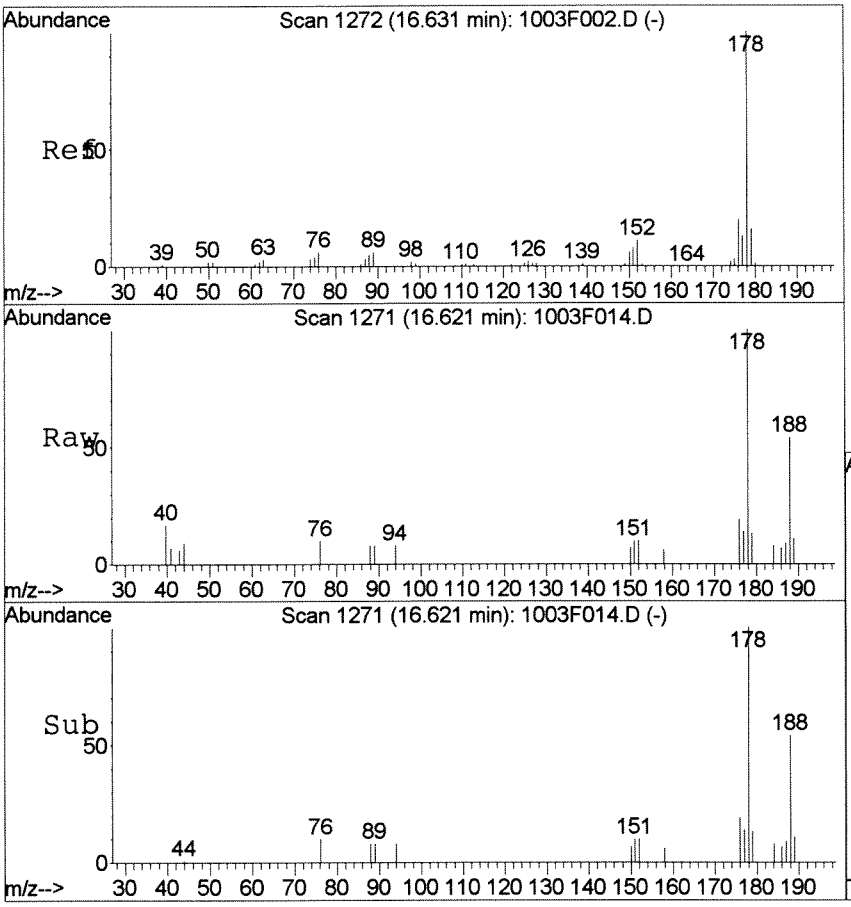
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100314\1003F014.D Vial: 14
Acq On : 3 Oct 2014 11:00 pm Operator: T. THOMAS
Sample : K1409921-007 5X Inst : MS07
Misc : Multiplr: 5.00
MS Integration Params: RTEINT.P
Quant Time: Oct 6 13:18 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration



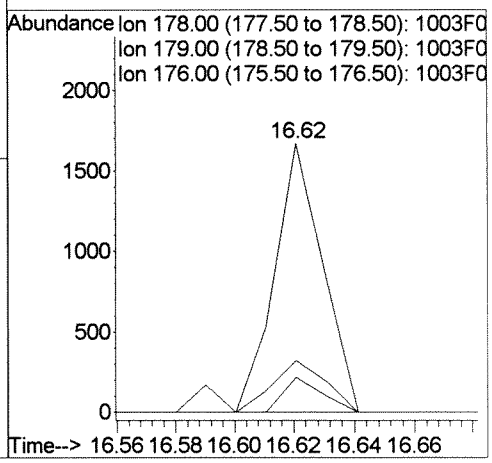
2571

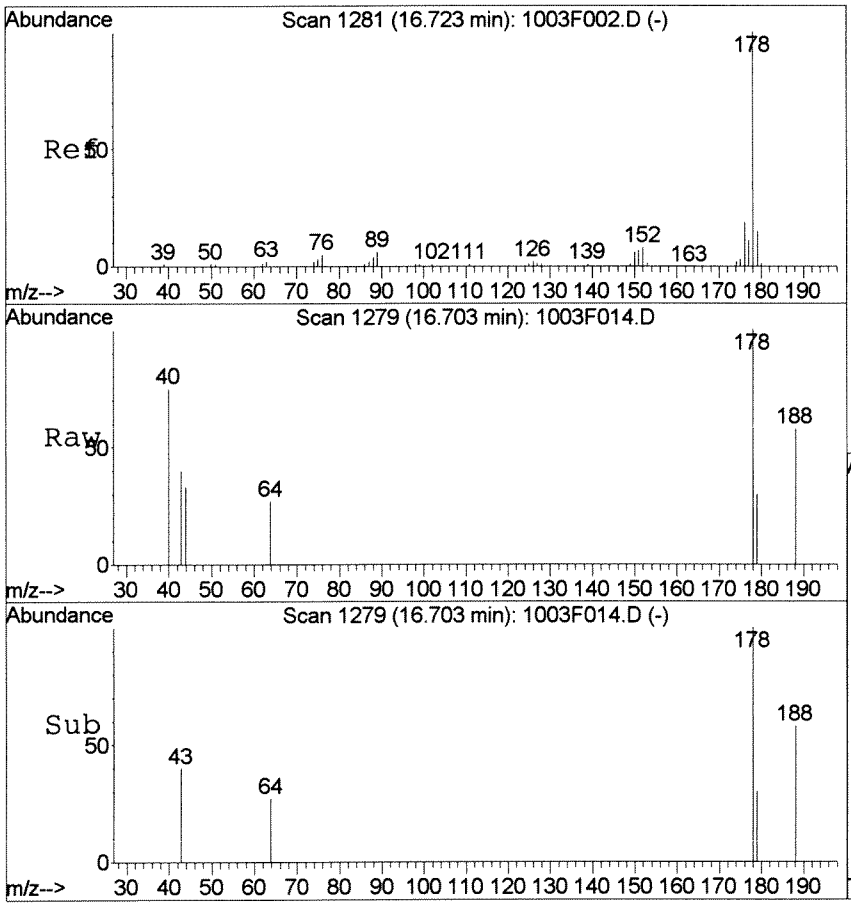


#63
Phenanthrene
Concen: 0.52 ug/ml
RT: 16.62 min Scan# 1271
Delta R.T. -0.01 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:178 Resp: 1848

Ion	Ratio	Lower	Upper
178	100		
179	8.0	0.0	45.5
176	19.3	0.0	49.1

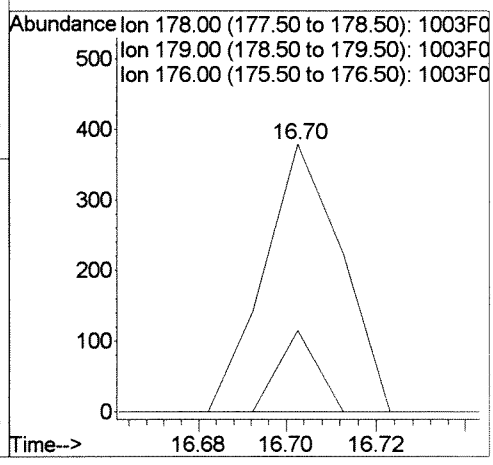


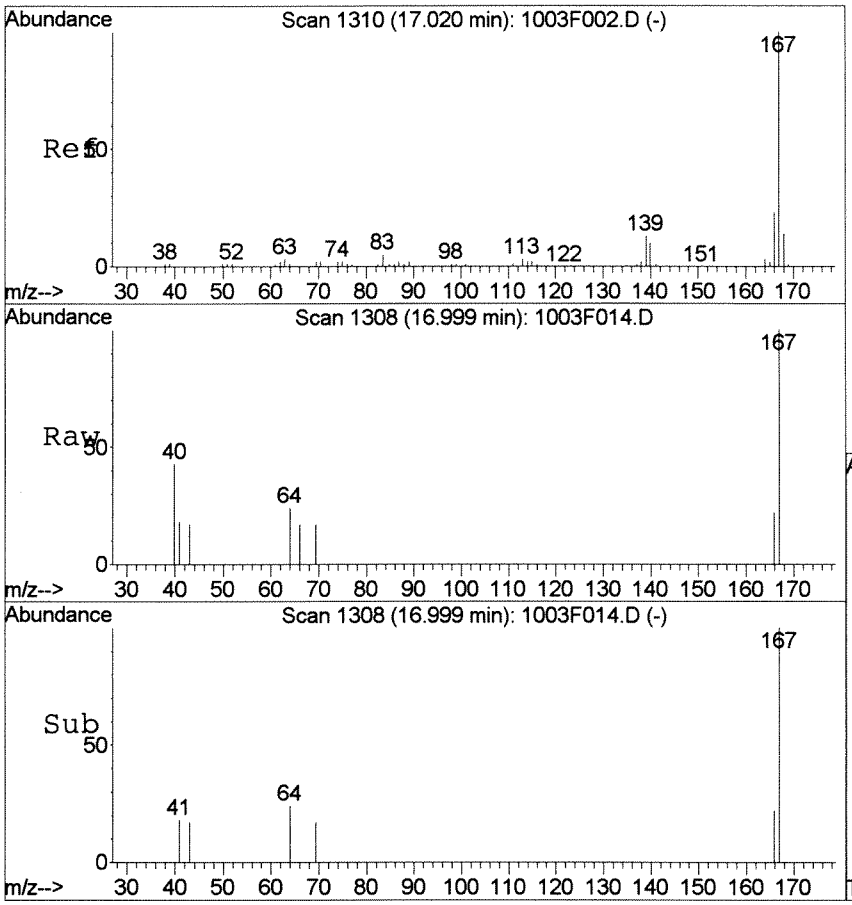


#64
Anthracene
Concen: 0.13 ug/ml m
RT: 16.70 min Scan# 1279
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:178 Resp: 456

Ion	Ratio	Lower	Upper
178	100		
179	30.3	0.0	45.6
176	0.0	0.0	48.8

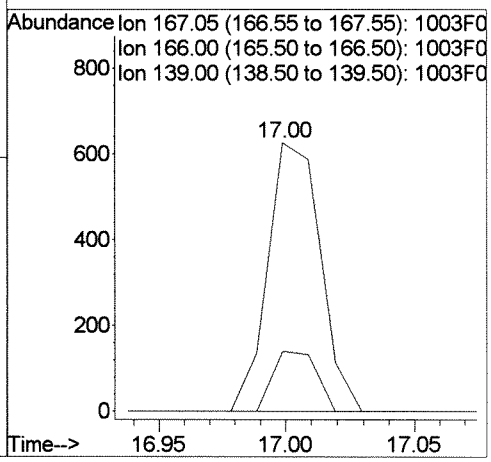


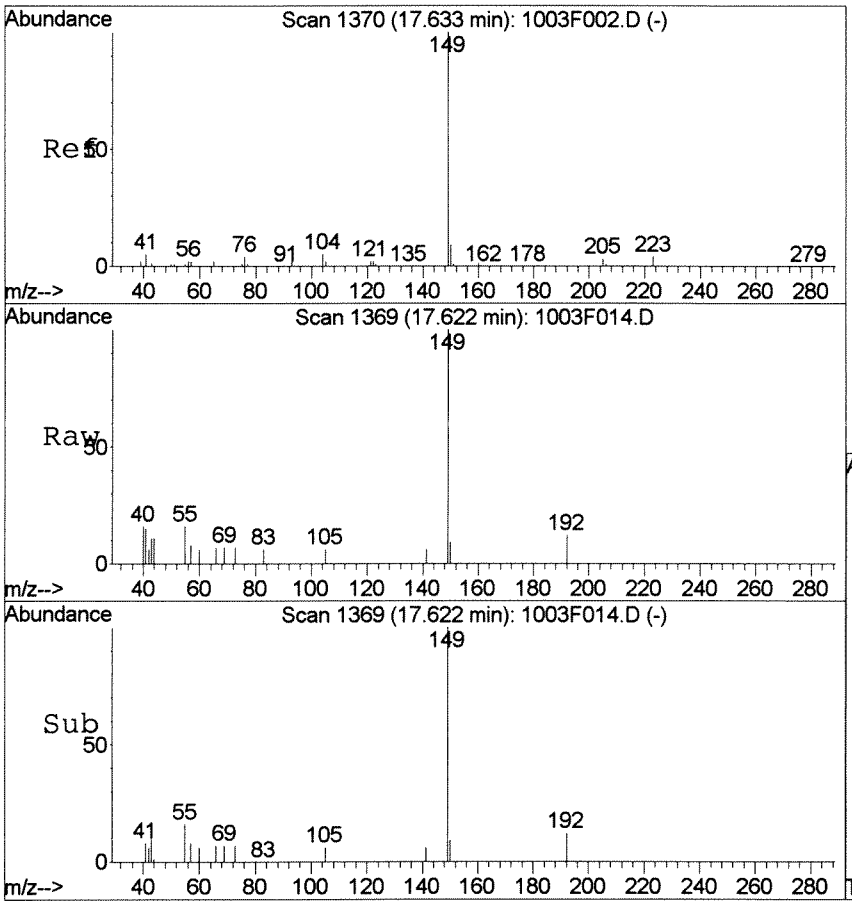


#65
Carbazole
Concen: 0.26 ug/ml
RT: 17.00 min Scan# 1308
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:167 Resp: 897

Ion	Ratio	Lower	Upper
167	100		
166	22.4	0.0	51.6
139	0.0	0.0	43.3

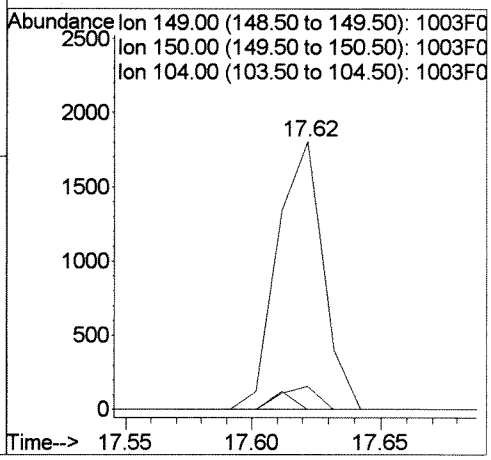


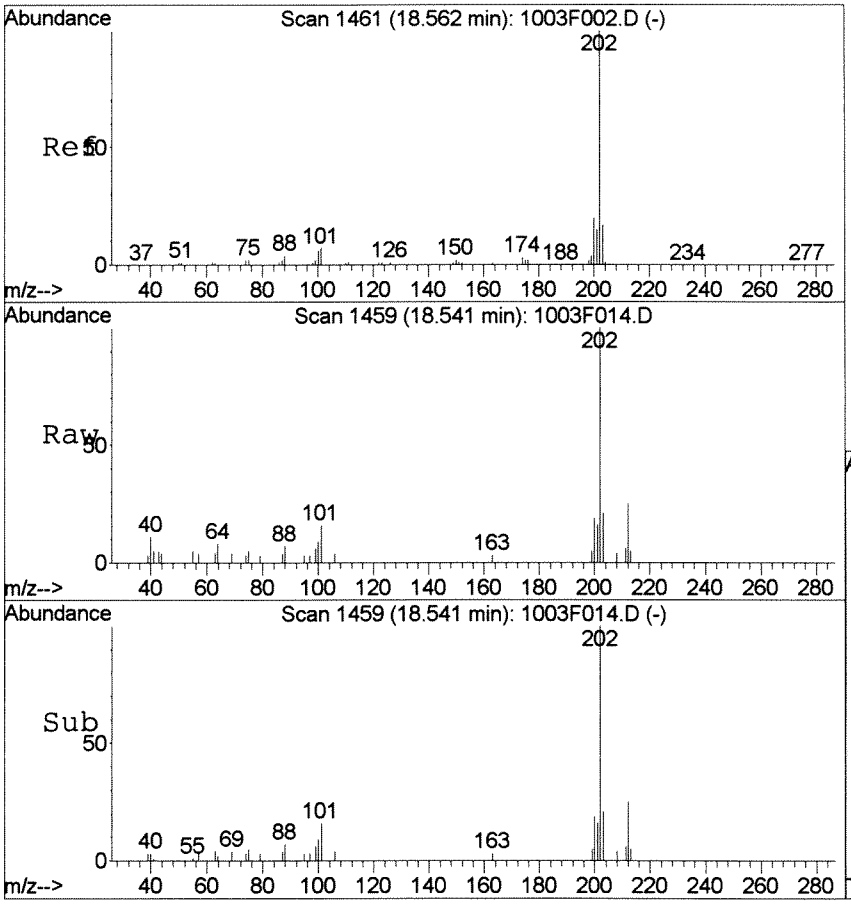


#66
Di-n-butyl Phthalate
Concen: 0.50 ug/ml
RT: 17.62 min Scan# 1369
Delta R.T. -0.01 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:149 Resp: 2250

Ion	Ratio	Lower	Upper
149	100		
150	8.7	0.0	39.3
104	0.0	0.0	35.1

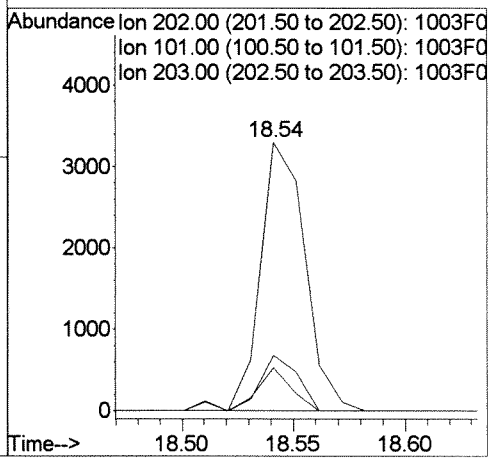


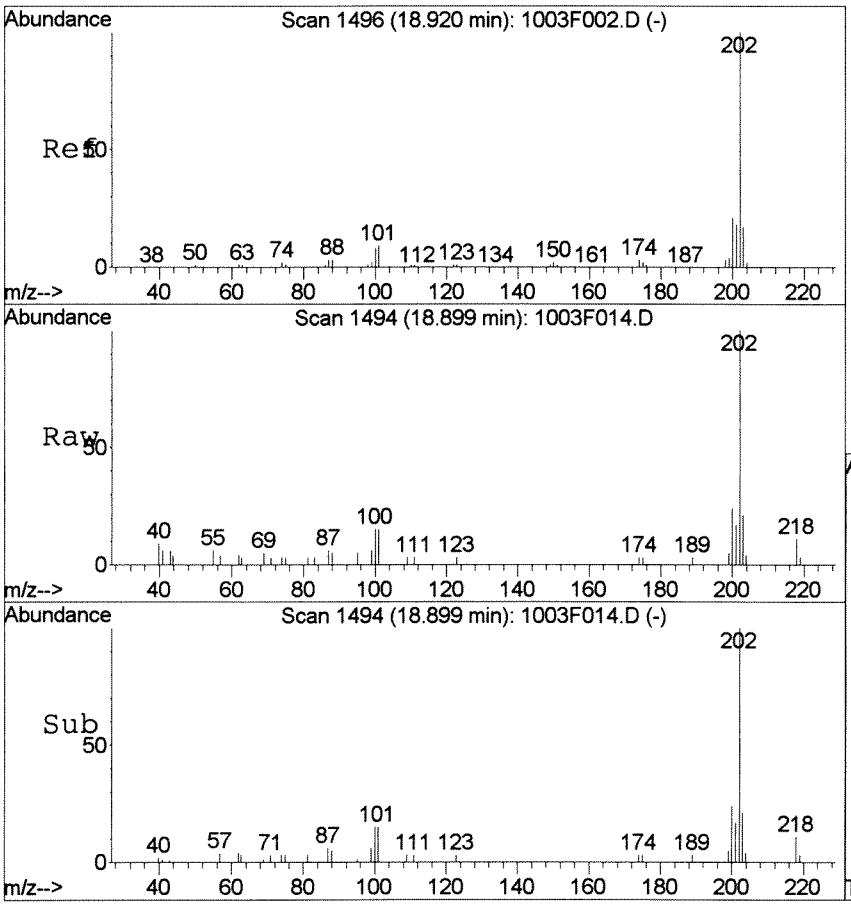


#67
Fluoranthene
Concen: 1.14 ug/ml
RT: 18.54 min Scan# 1459
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:202 Resp: 4543

Ion	Ratio	Lower	Upper
202	100		
101	14.2	0.0	39.2
203	19.0	0.0	47.5

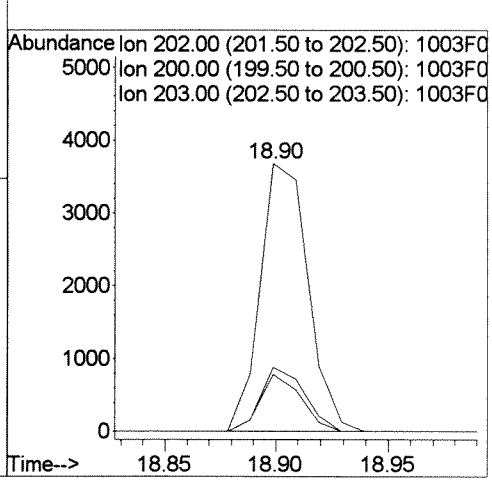


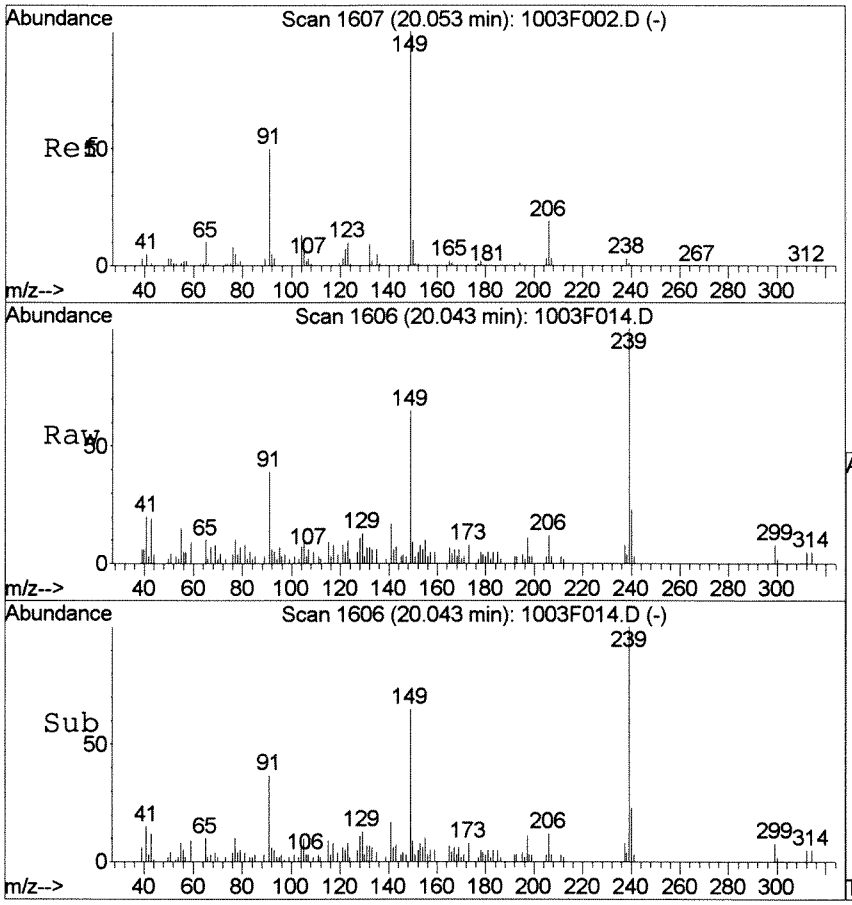


#70
Pyrene
Concen: 1.21 ug/ml
RT: 18.90 min Scan# 1494
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:202 Resp: 5489

Ion	Ratio	Lower	Upper
202	100		
200	24.0	0.0	50.7
203	21.3	0.0	49.2

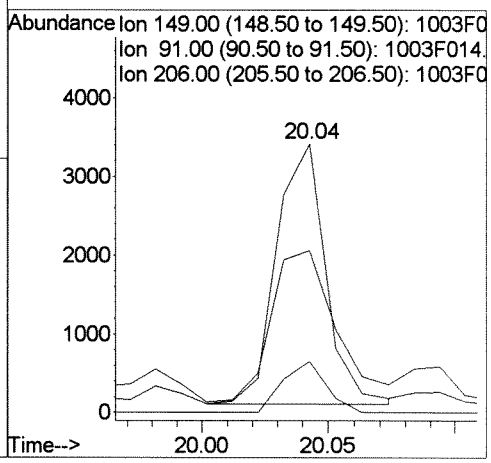


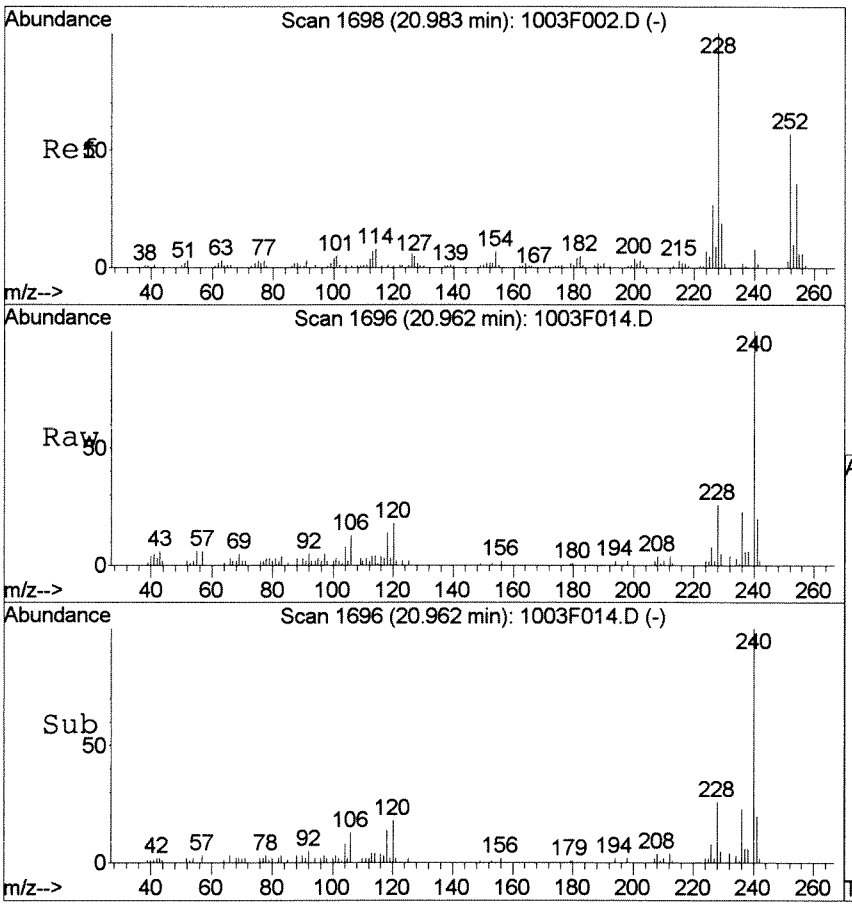


#72
Butyl Benzyl Phthalate
Concen: 2.13 ug/ml m
RT: 20.04 min Scan# 1606
Delta R.T. -0.01 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:149 Resp: 4440

Ion	Ratio	Lower	Upper
149	100		
91	60.2	28.0	88.0
206	19.1	0.0	46.9

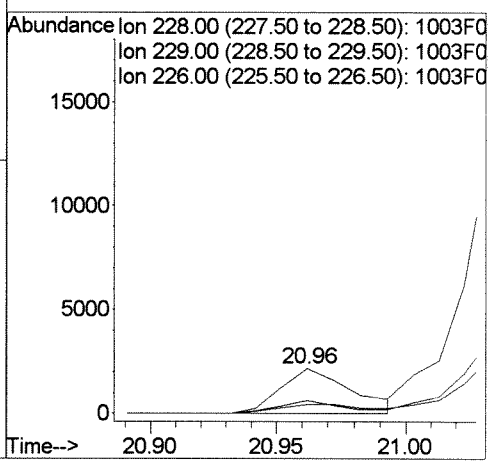


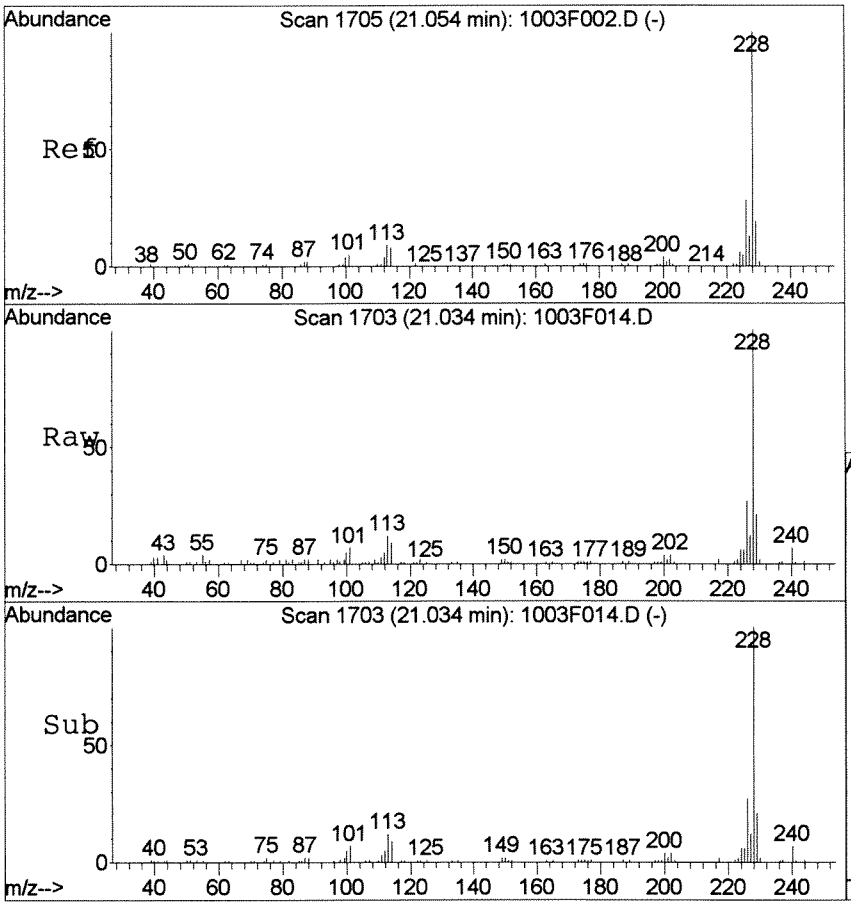


#74
Benz(a)anthracene
Concen: 1.09 ug/ml
RT: 20.96 min Scan# 1696
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:228 Resp: 4194

Ion	Ratio	Lower	Upper
228	100		
229	17.2	0.0	49.0
226	29.2	0.0	57.3

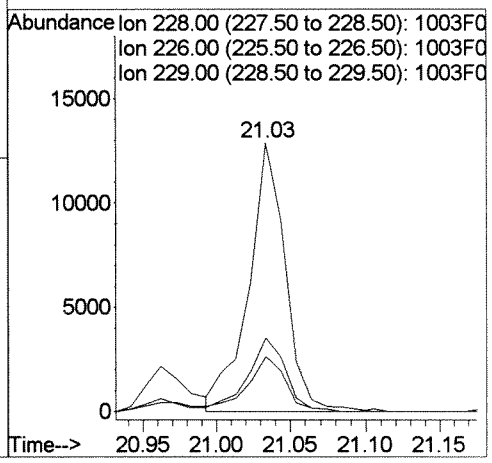


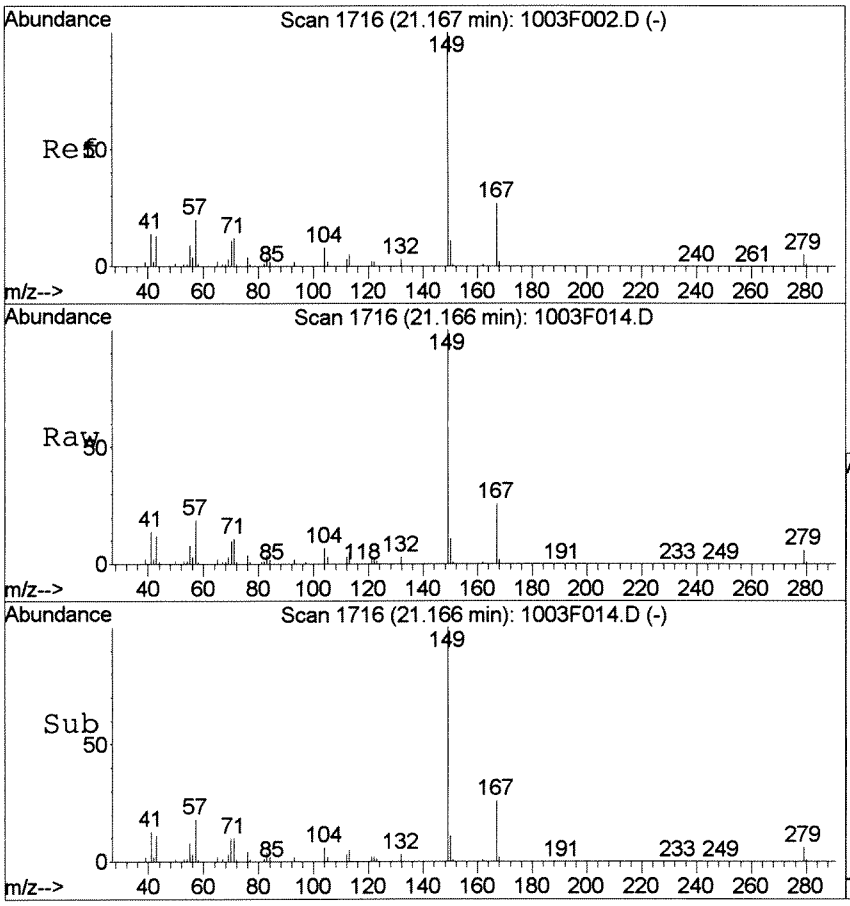


#75
Chrysene
Concen: 5.85 ug/ml
RT: 21.03 min Scan# 1703
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:228 Resp: 22230

Ion	Ratio	Lower	Upper
228	100		
226	27.5	0.0	59.3
229	20.1	0.0	49.2

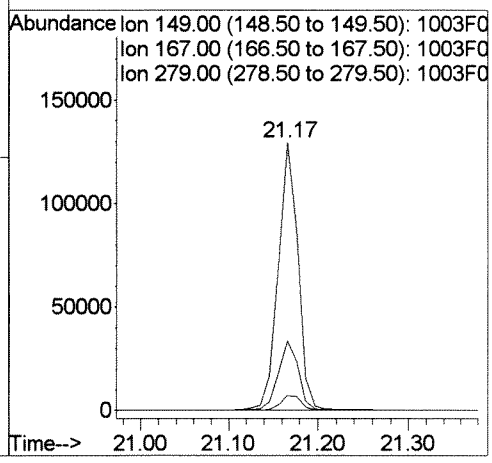


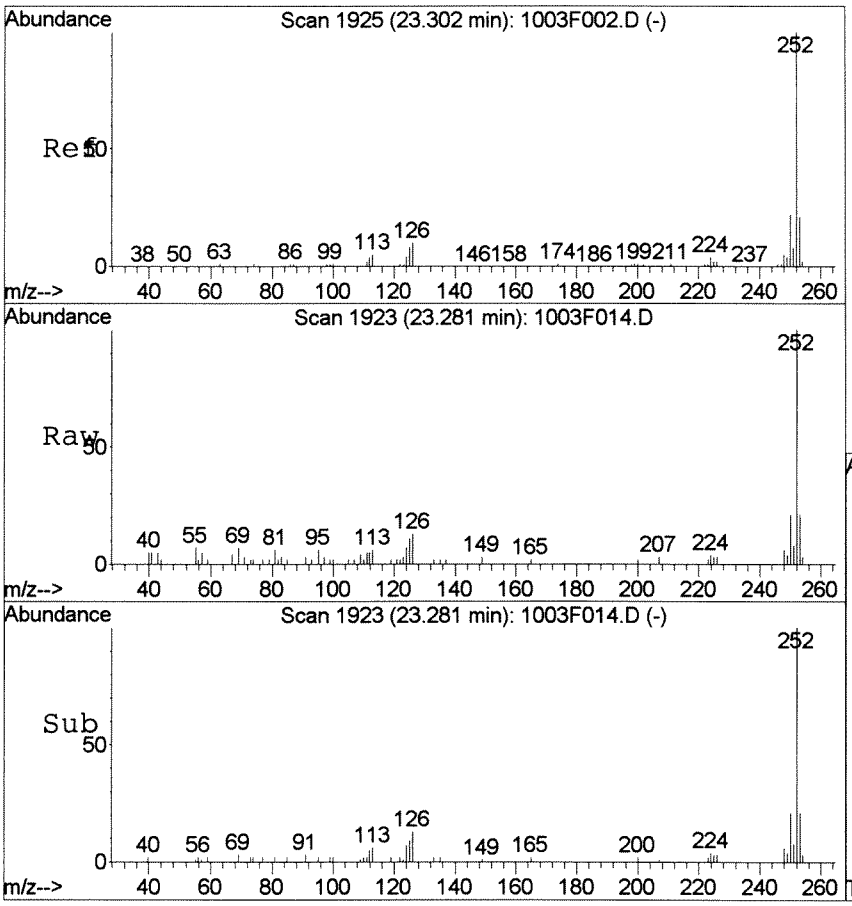


#76
Bis(2-ethylhexyl) Phthalate
Concen: 72.90 ug/ml
RT: 21.17 min Scan# 1716
Delta R.T. -0.00 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:149 Resp: 199577

Ion	Ratio	Lower	Upper
149	100		
167	26.0	0.0	57.7
279	5.6	0.0	36.6

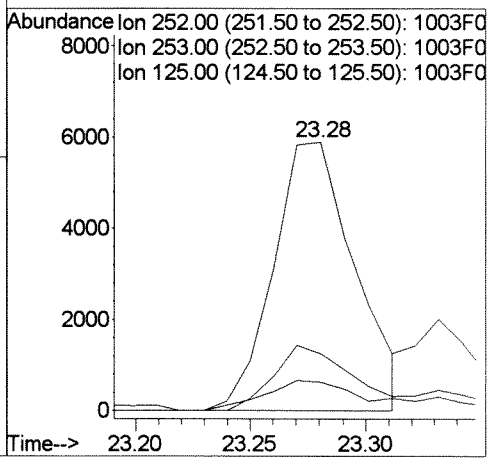


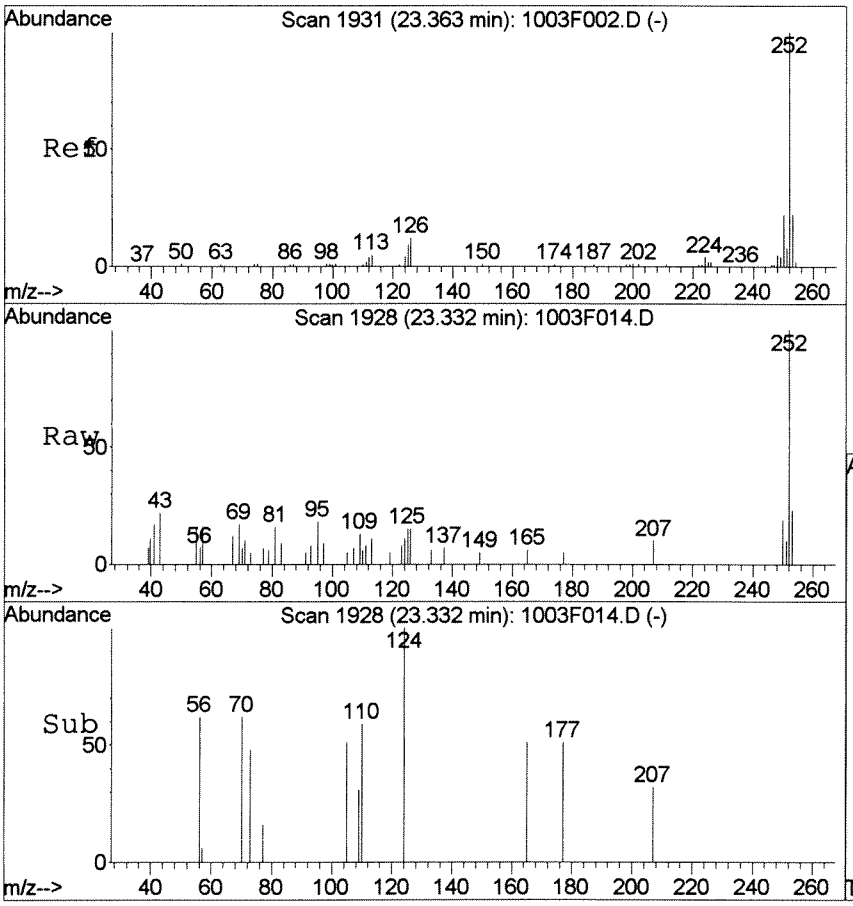


#79
Benzo(b)fluoranthene
Concen: 4.02 ug/ml m
RT: 23.28 min Scan# 1923
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:252 Resp: 14382

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.9
125	10.7	0.0	39.2

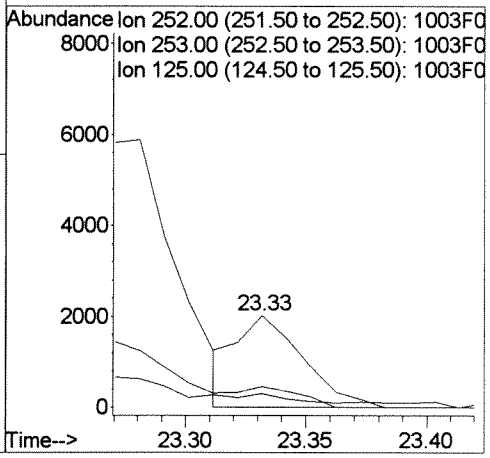


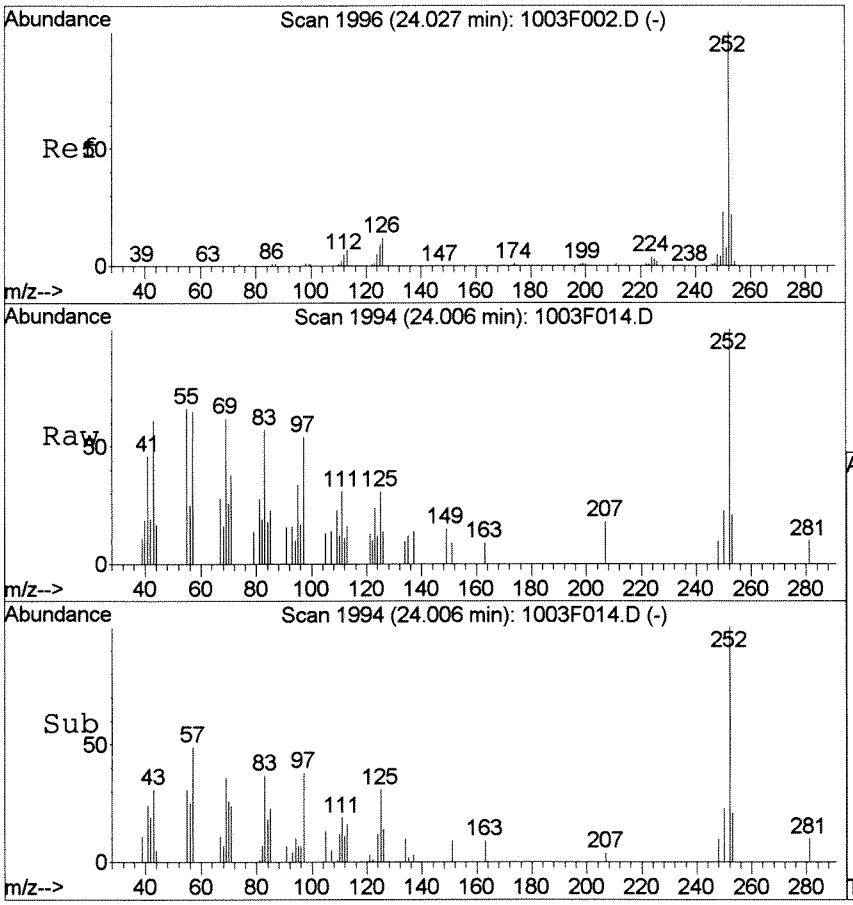


#80
Benzo(k)fluoranthene
Concen: 1.11 ug/ml m
RT: 23.33 min Scan# 1928
Delta R.T. -0.03 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:252 Resp: 3897

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.3
125	15.1	0.0	38.4

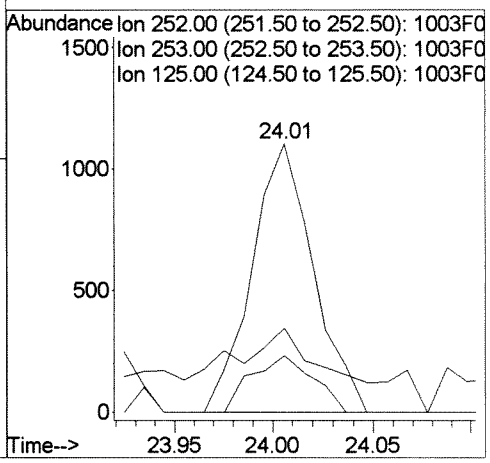


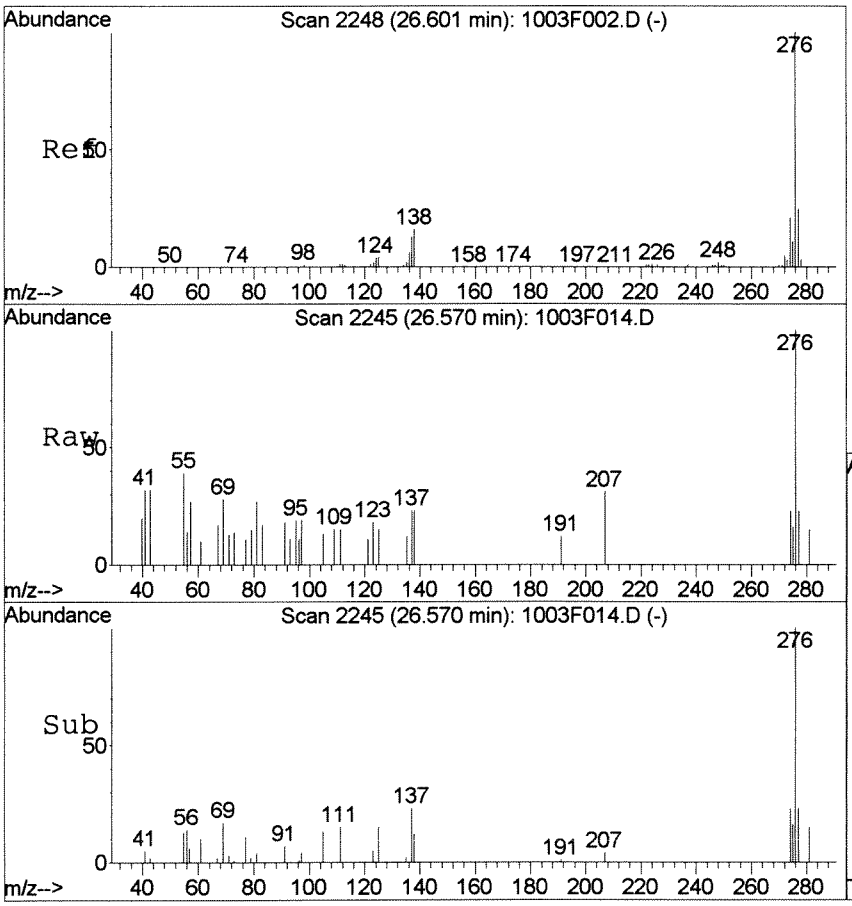


#81
Benzo(a)pyrene
Concen: 0.69 ug/ml
RT: 24.01 min Scan# 1994
Delta R.T. -0.02 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:252 Resp: 2377

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.1
125	17.7	0.0	39.6

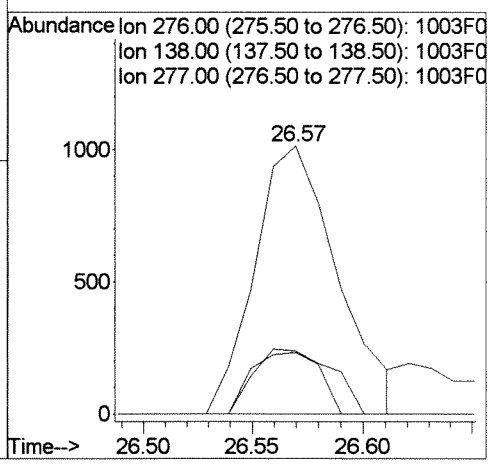


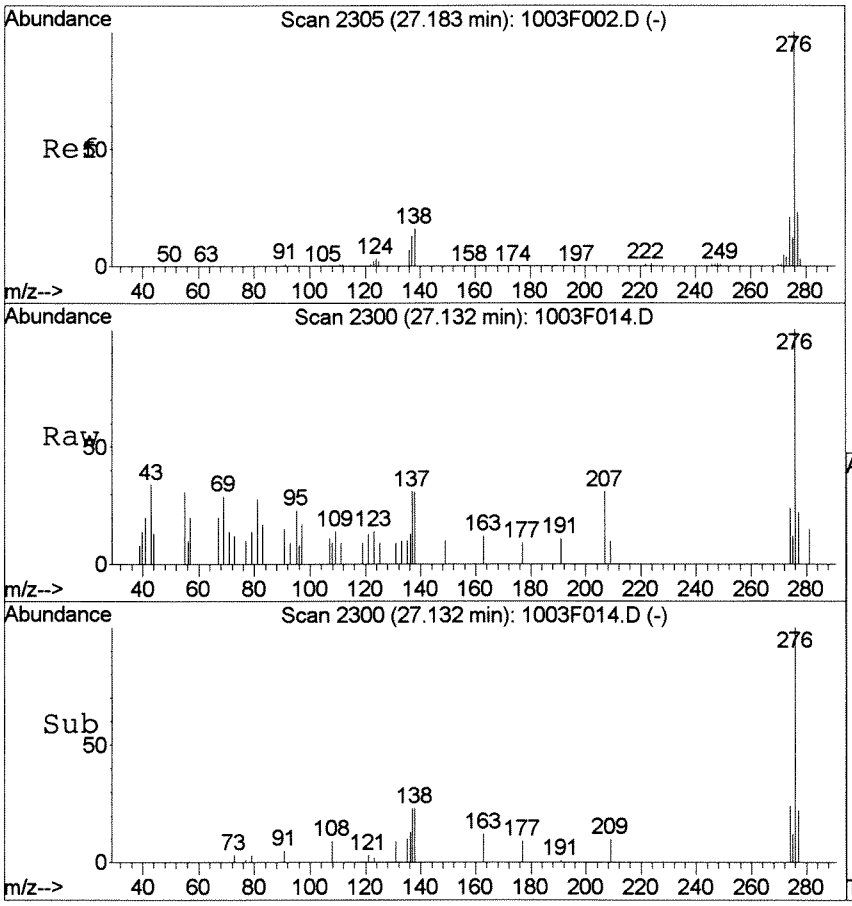


#82
Indeno(1,2,3-cd)pyrene
Concen: 0.84 ug/ml m
RT: 26.57 min Scan# 2245
Delta R.T. -0.03 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:276 Resp: 2634

Ion	Ratio	Lower	Upper
276	100		
138	23.5	0.0	46.3
277	22.9	0.0	53.1

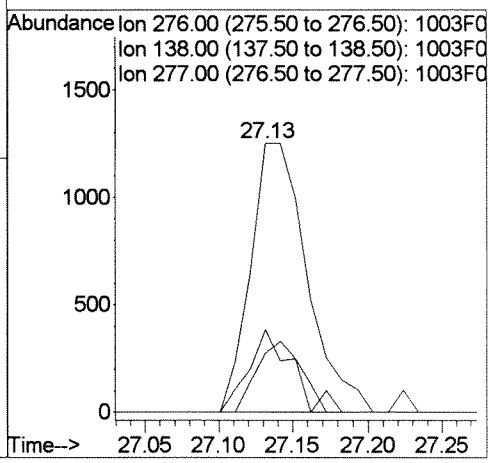




#84
Benzo(g,h,i)perylene
Concen: 0.97 ug/ml
RT: 27.13 min Scan# 2300
Delta R.T. -0.05 min
Lab File: 1003F014.D
Acq: 3 Oct 2014 11:00 pm

Tgt Ion:276 Resp: 3314

Ion	Ratio	Lower	Upper
276	100		
138	30.7	0.0	46.4
277	22.0	0.0	53.1



Exception Report

Data File: J:\MS07\DATA\100114\1001F011.D
Lab ID: K1409921-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 01:55
Date Quantitated: 10/02/2014 14:19
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 02 2014 TRT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F011.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 01:55	**Quant Date:**	10/02/2014 14:19	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376329	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	70475	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	246310	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	122602	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	210289	40.00	OK
5	Chrysene-d12	20.98	0.00	240	209364	40.00	OK
6	Perylene-d12	24.15	0.03	264	187589	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.74	0.01	0.00	99	162696	68.26	46	26-106	OK	
1	Nitrobenzene-d5	10.15	0.00	0.00	82	91732	43.03	43	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	230355	49.81	50	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	122845	106.15	71	20-123	OK	
5	Terphenyl-d14	19.21	0.01	0.00	244	315113	68.87	69	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0**d**		0.023	U	
1	2-Methylphenol				107	0		0.020	U	
1	4-Methylphenol	10.03	0.02	0.00	107	1238	0.5700	0.022	J	
2	2,4-Dimethylphenol				122	0		0.018	U	
2	Hexachlorobutadiene				225	0		0.017	U	
3	Diethyl Phthalate	14.95	-0.01	0.00	149	675**m**	0.1400	0.017	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.17	U	
4	Hexachlorobenzene				284	0		0.018	U	
4	Fluoranthene	18.54		0.00	202	86560	15.02	0.59		
5	Pyrene	18.90	0.01	0.00	202	98153	15.83	0.62		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F011.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 01:55	**Quant Date:**	10/02/2014 14:19	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-008			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	29454**m**	10.34	0.41		
5	Chrysene	21.02	-0.01	0.00	228	123095	23.65	0.93		
5	Bis(2-ethylhexyl) Phthalate	21.16	0.01	0.00	149	117497	31.35	1.2		
6	Di-n-octyl Phthalate	22.61	0.02	0.00	149	10799**m**	1.76	0.069	J	

Prep Amount:	40.062 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	63.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:16 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	70475	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	246310	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	122602	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	210289	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	209364	40.00	ug/ml	0.00
77) Perylene-d12	24.15	264	187589	40.00	ug/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	119403	59.06	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 39.37%			
7) Phenol-d6	8.74	99	162696	68.26	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 45.51%			
19) Nitrobenzene-d5	10.15	82	91732	43.03	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 43.03%			
38) 2-Fluorobiphenyl	13.11	172	230355	49.81	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 49.81%			
59) 2,4,6-Tribromophenol	15.47	330	122845	106.15	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 70.77%			
71) Terphenyl-d14	19.21	244	315113	68.87	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 68.87%			
Target Compounds						Qvalue
5) Aniline	8.64	93	6185	2.51	ug/ml	70
18) 4-Methylphenol	10.03	107	1238	0.57	ug/ml	81
27) Benzoic Acid	11.04	122	2990	2.75	ug/ml	97
29) Naphthalene	11.34	128	4589	0.82	ug/ml	98
33) 2-Methylnaphthalene	12.48	142	2440	0.67	ug/ml	95
41) Acenaphthylene	13.93	152	11241	1.87	ug/ml	95
42) Dimethyl Phthalate	13.79	163	3536	0.79	ug/ml	99
44) Acenaphthene	14.22	154	1486	0.45	ug/ml	97
47) Dibenzofuran	14.51	168	3376	0.64	ug/ml	97
51) Fluorene	15.06	166	3694	0.92	ug/ml	93
53) Diethyl Phthalate	14.95	149	675m	0.14	ug/ml	
62) Pentachlorophenol	16.30	266	1240	9.81	ug/ml	94
63) Phenanthrene	16.61	178	39203	7.65	ug/ml	100
64) Anthracene	16.69	178	22473	4.32	ug/ml	100
65) Carbazole	16.99	167	16325	3.28	ug/ml	97
66) Di-n-butyl Phthalate	17.61	149	13500m	2.06	ug/ml	
67) Fluoranthene	18.54	202	86560	15.02	ug/ml	98
70) Pyrene	18.90	202	98153	15.83	ug/ml	99
72) Butyl Benzyl Phthalate	20.03	149	29454m	10.34	ug/ml	
74) Benz(a)anthracene	20.96	228	55580	10.52	ug/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:16 2014 Quant Results File: 093014BNC7.RES

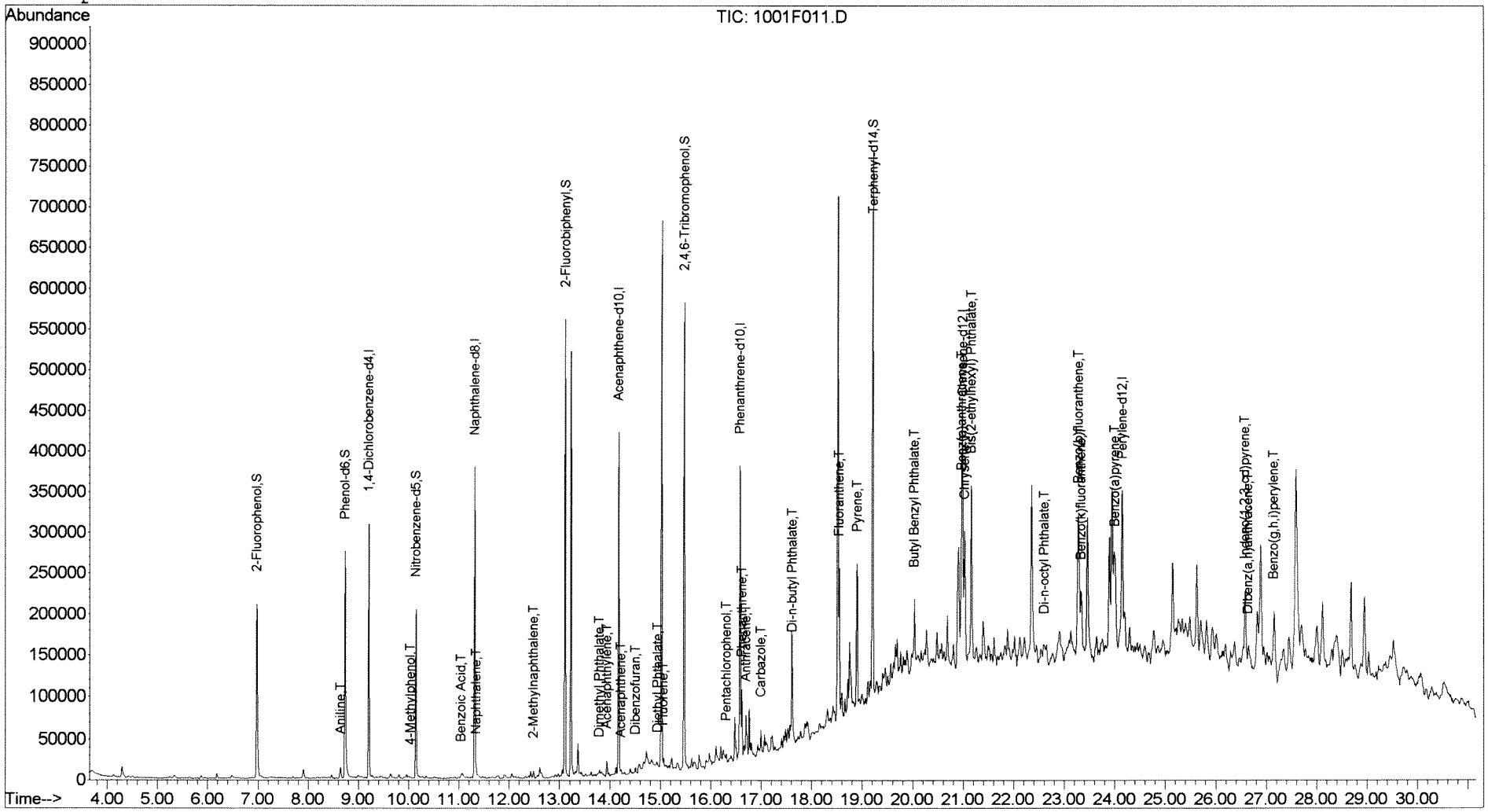
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75) Chrysene	21.02	228	123095	23.65	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.16	149	117497	31.35	ug/ml	99
78) Di-n-octyl Phthalate	22.61	149	10799m	1.76	ug/ml	
79) Benzo(b)fluoranthene	23.28	252	191384	41.88	ug/ml	99
80) Benzo(k)fluoranthene	23.33	252	45606m	10.20	ug/ml	
81) Benzo(a)pyrene	24.01	252	64471	14.54	ug/ml	99
82) Indeno(1,2,3-cd)pyrene	26.58	276	72431m	18.12	ug/ml	
83) Dibenz(a,h)anthracene	26.64	278	15200	3.69	ug/ml	92
84) Benzo(g,h,i)perylene	27.15	276	75746	17.28	ug/ml	95

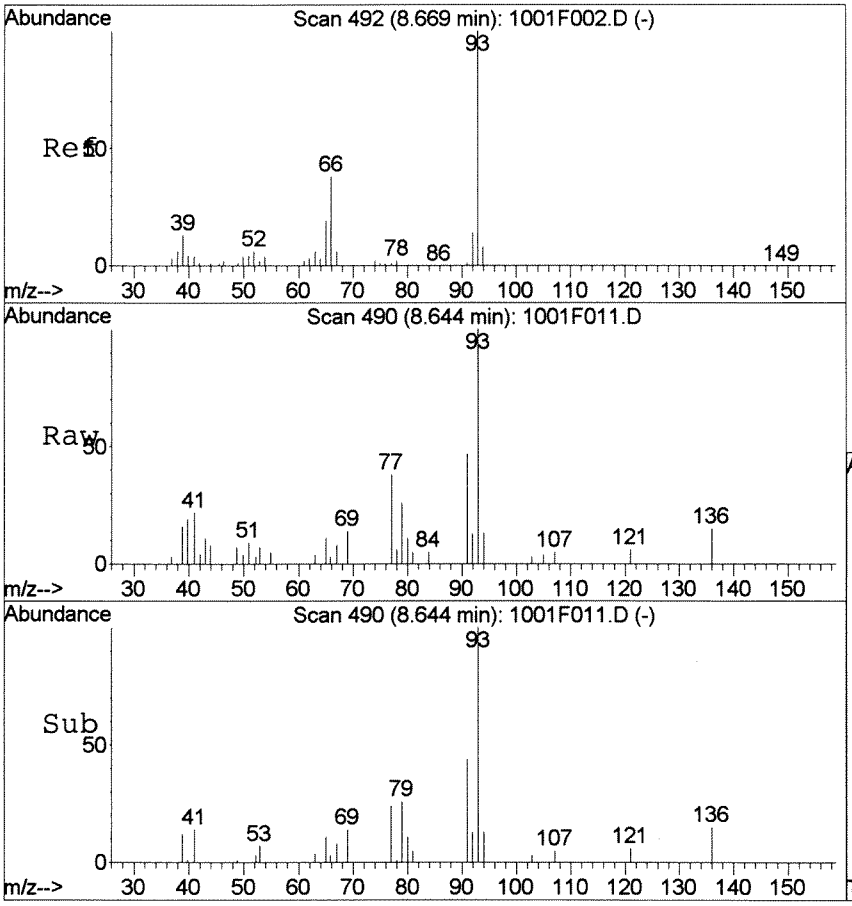
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:19 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



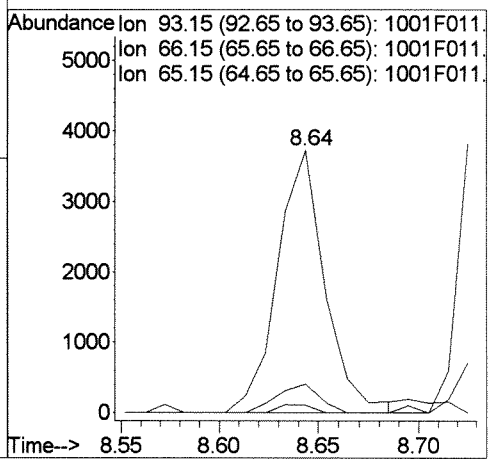
2585

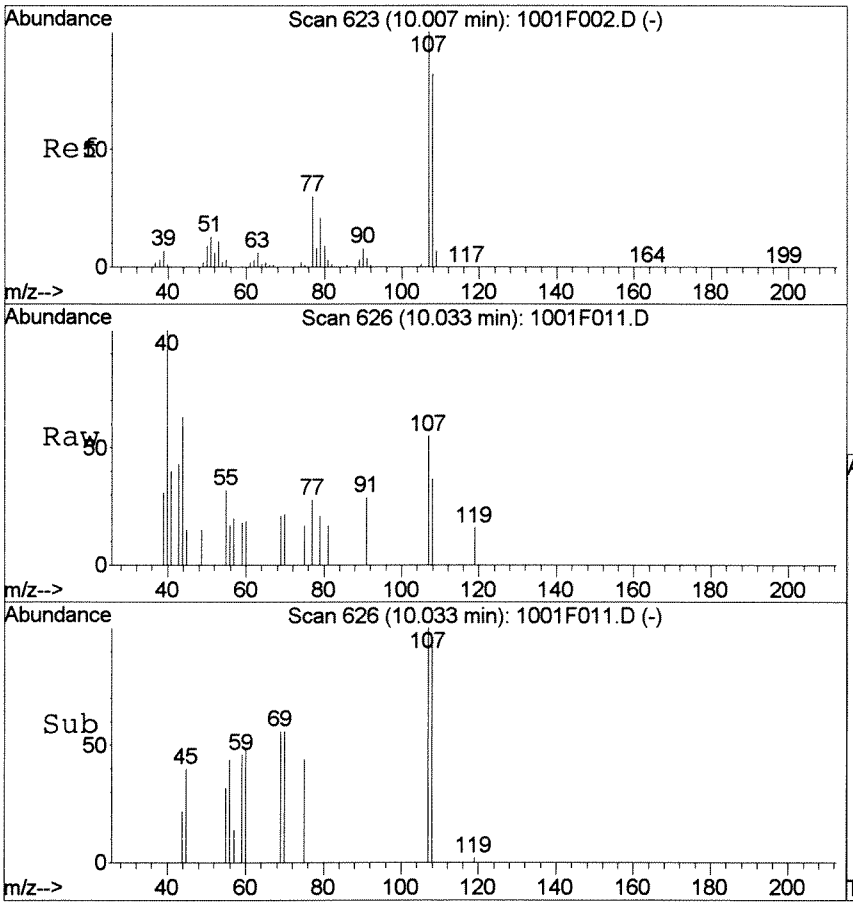


#5
Aniline
Concen: 2.51 ug/ml
RT: 8.64 min Scan# 490
Delta R.T. -0.03 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion: 93 Resp: 6185

Ion	Ratio	Lower	Upper
93	100		
66	3.0	0.0	49.3
65	11.2	0.0	36.8

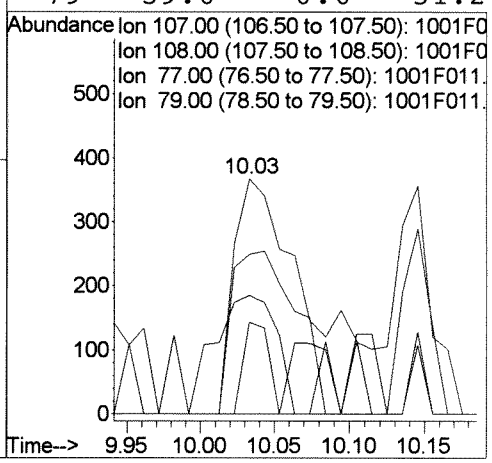


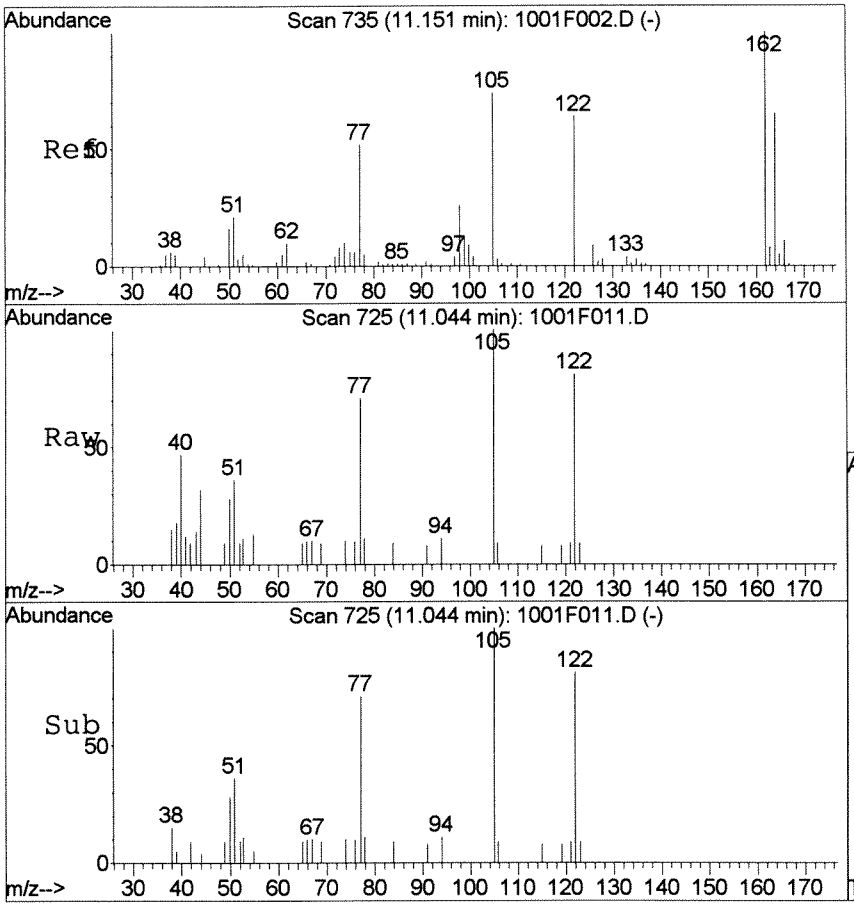


#18
4-Methylphenol
Concen: 0.57 ug/ml
RT: 10.03 min Scan# 626
Delta R.T. 0.03 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:107 Resp: 1238

Ion	Ratio	Lower	Upper
107	100		
108	67.8	52.1	112.1
77	21.4	0.0	60.0
79	39.0	0.0	51.2

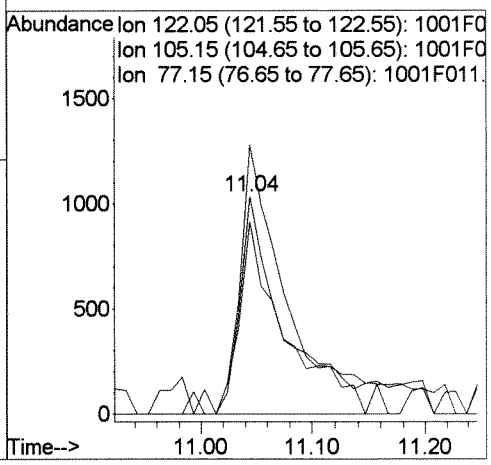


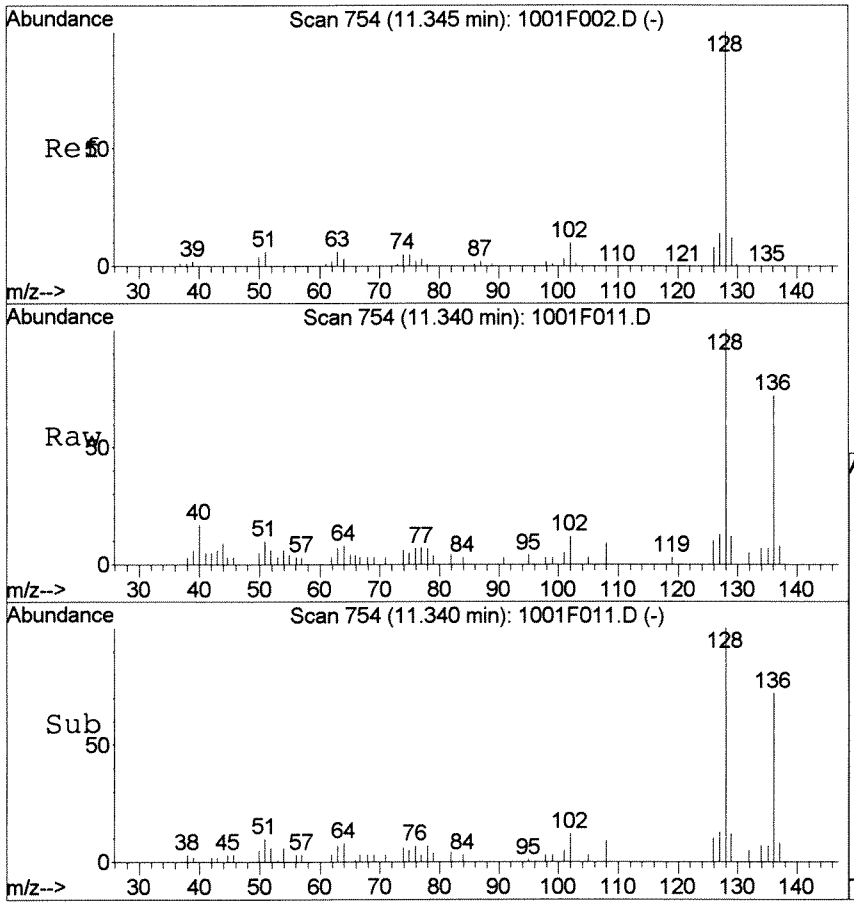


#27
Benzoic Acid
Concen: 2.75 ug/ml
RT: 11.04 min Scan# 725
Delta R.T. -0.11 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:122 Resp: 2990

Ion	Ratio	Lower	Upper
122	100		
105	117.1	90.4	150.4
77	76.8	50.1	110.1

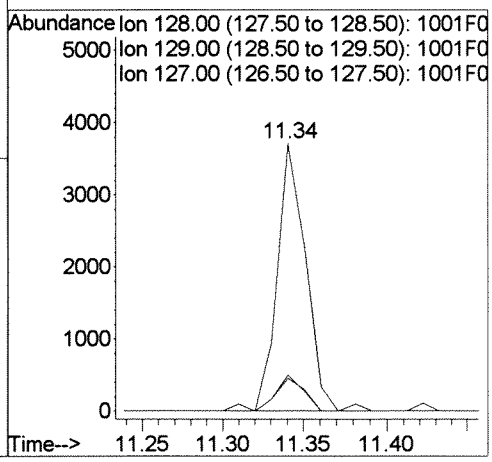


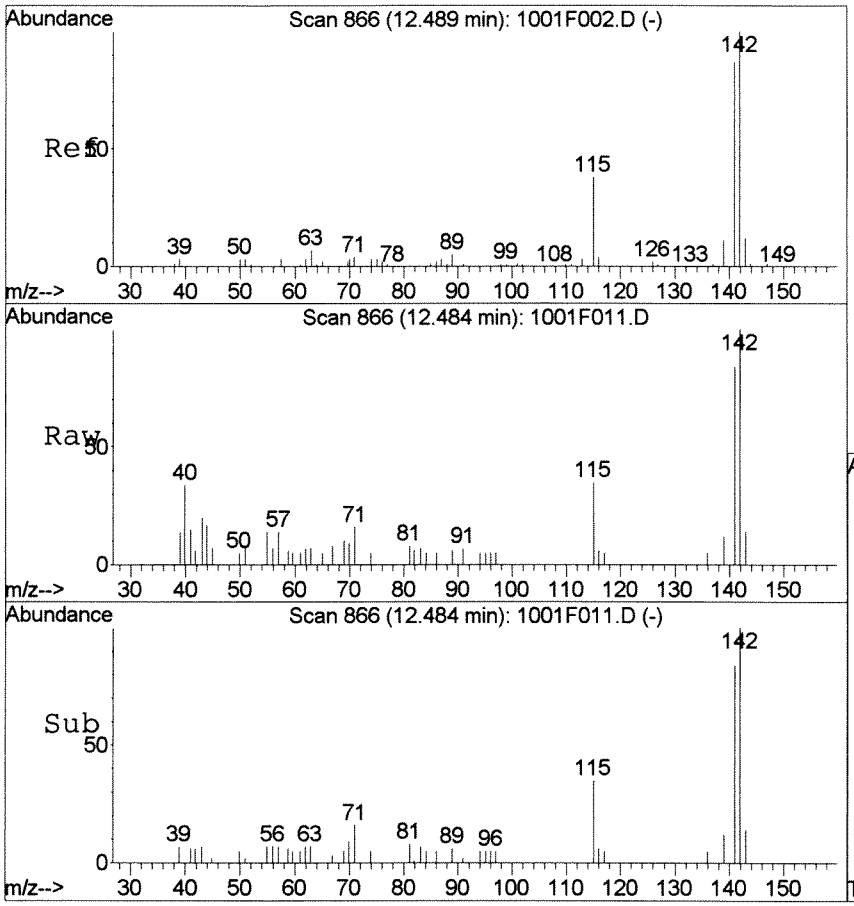


#29
Naphthalene
Concen: 0.82 ug/ml
RT: 11.34 min Scan# 754
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:128 Resp: 4589

Ion	Ratio	Lower	Upper
128	100		
129	12.2	0.0	41.2
127	13.4	0.0	44.0

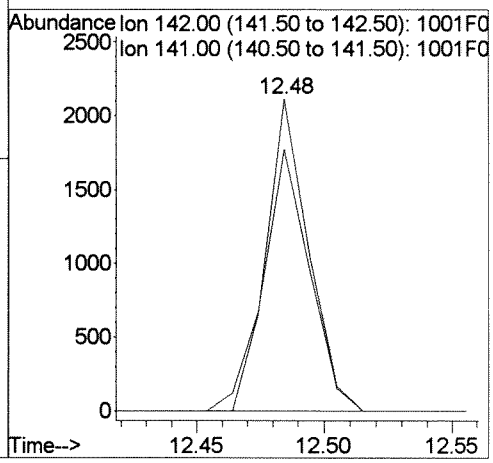


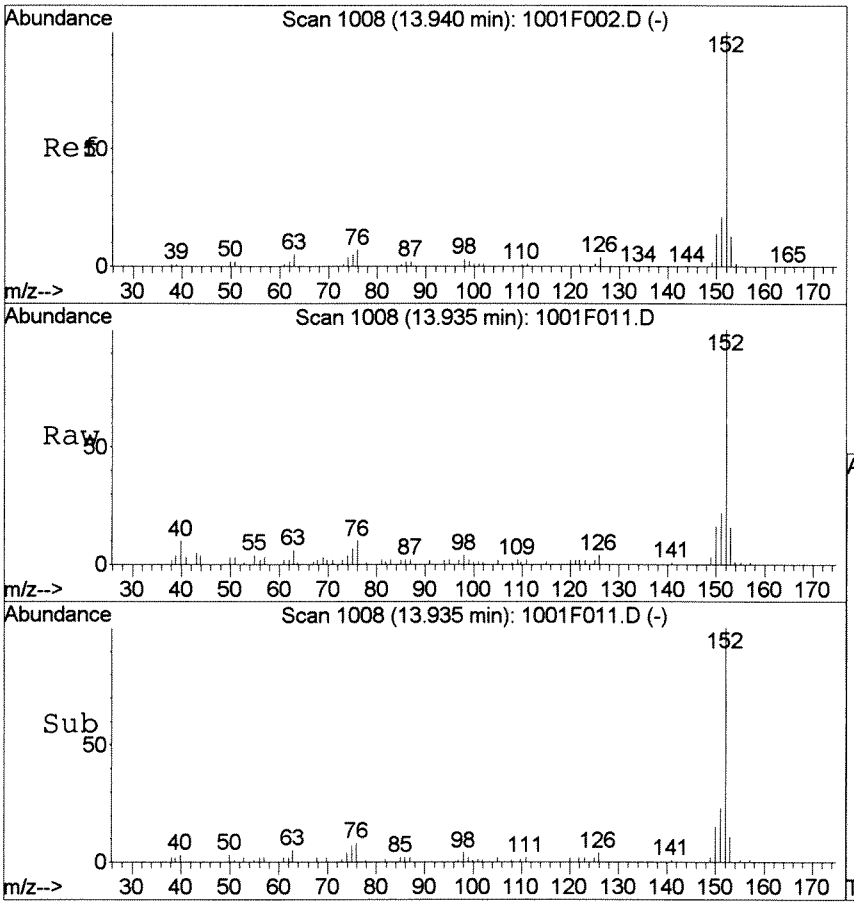


#33
2-Methylnaphthalene
Concen: 0.67 ug/ml
RT: 12.48 min Scan# 866
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:142 Resp: 2440

Ion	Ratio	Lower	Upper
142	100		
141	83.9	58.7	118.7

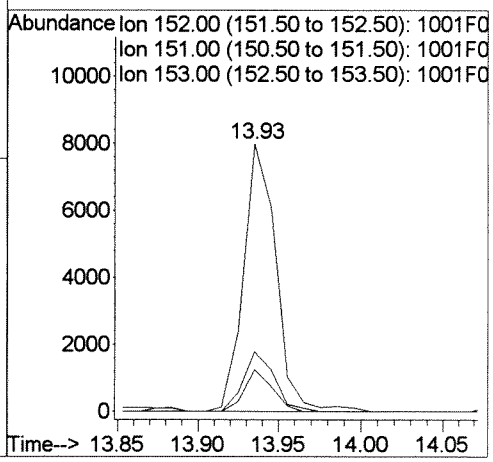


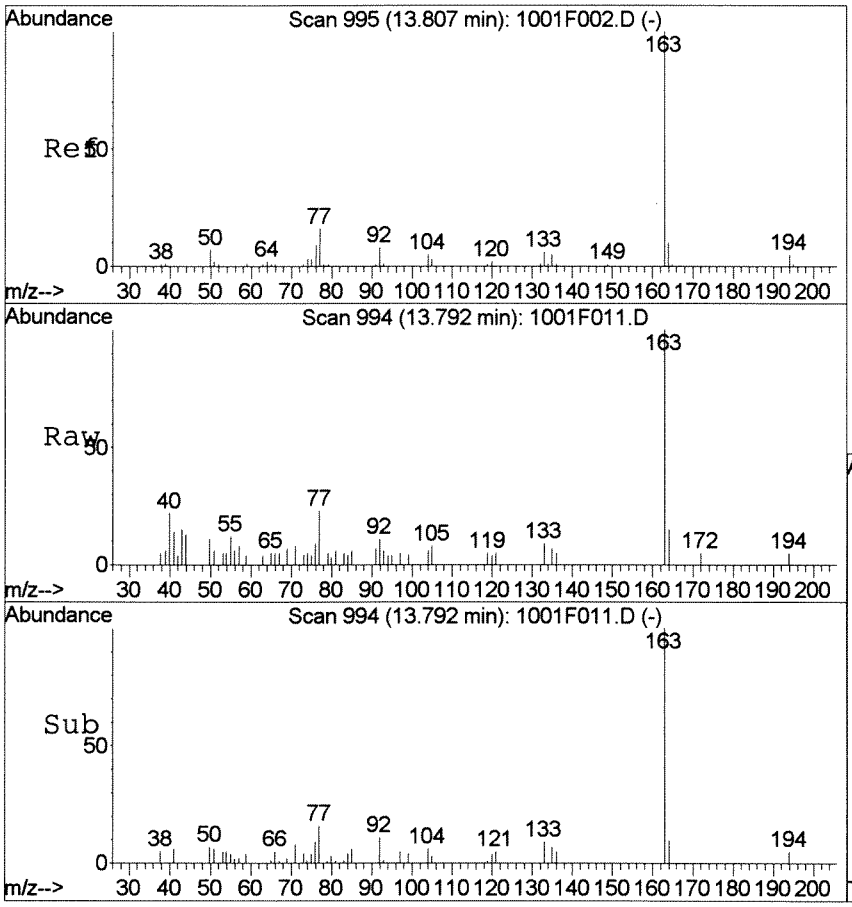


#41
Acenaphthylene
Concen: 1.87 ug/ml
RT: 13.93 min Scan# 1008
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:152 Resp: 11241

Ion	Ratio	Lower	Upper
152	100		
151	22.4	0.0	50.3
153	15.6	0.0	43.2

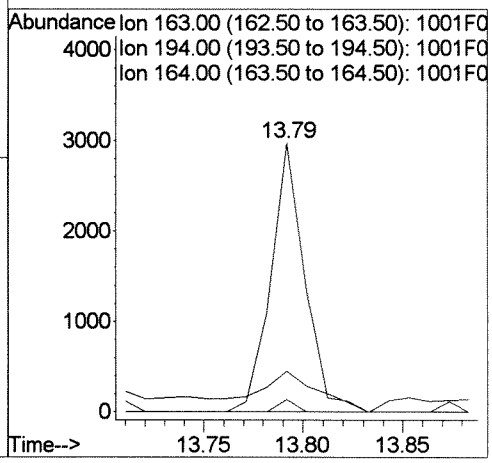


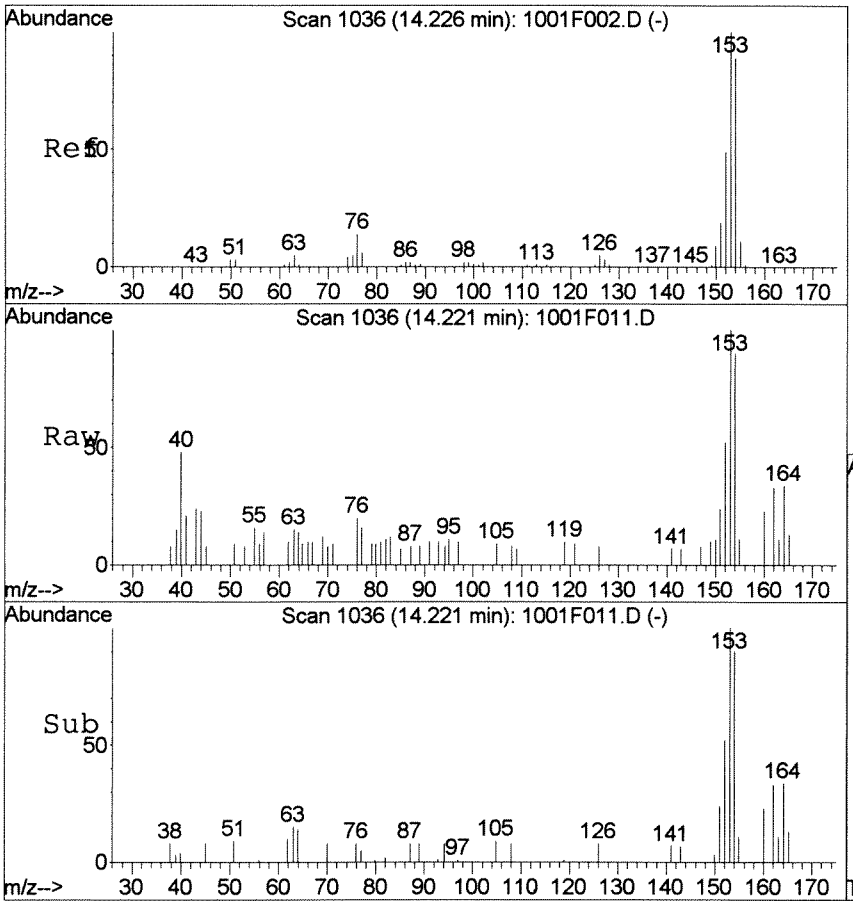


#42
Dimethyl Phthalate
Concen: 0.79 ug/ml
RT: 13.79 min Scan# 994
Delta R.T. -0.02 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:163 Resp: 3536

Ion	Ratio	Lower	Upper
163	100		
194	4.6	0.0	34.6
164	10.6	0.0	39.9

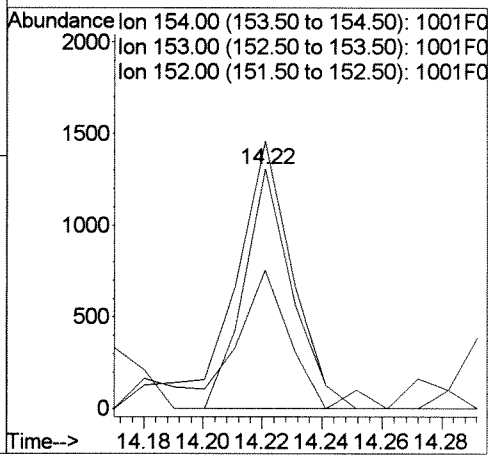


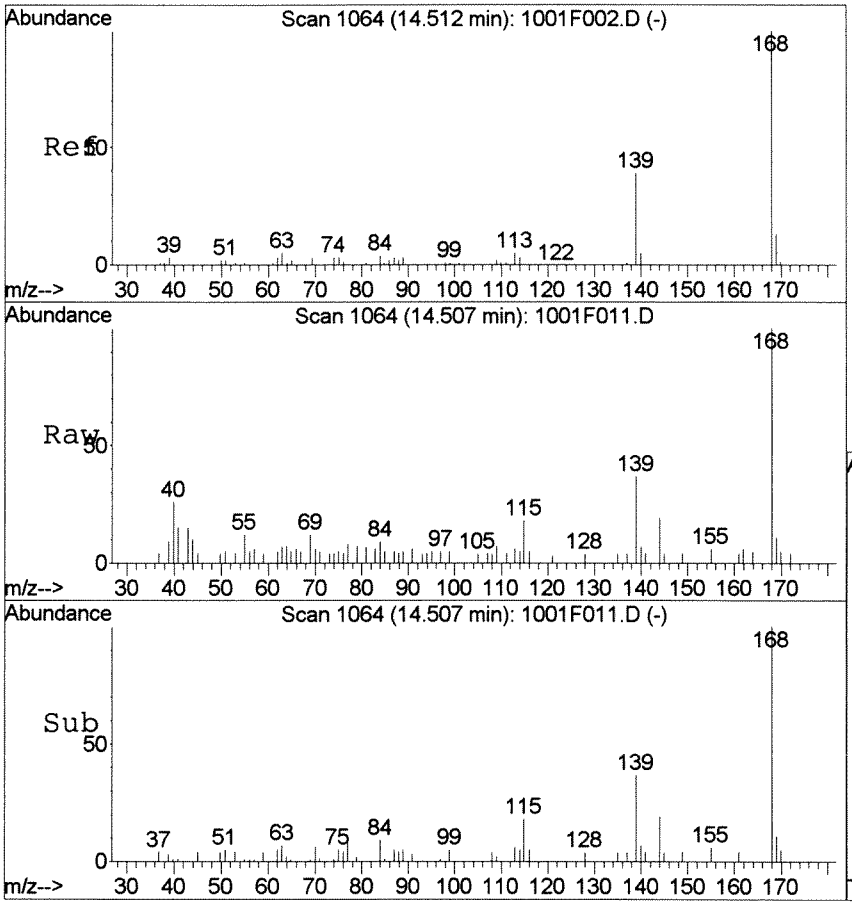


#44
Acenaphthene
Concen: 0.45 ug/ml
RT: 14.22 min Scan# 1036
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:154 Resp: 1486

Ion	Ratio	Lower	Upper
154	100		
153	105.5	79.7	139.7
152	53.7	23.7	83.7

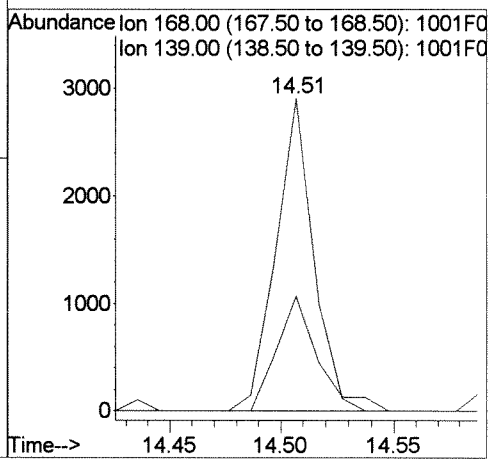


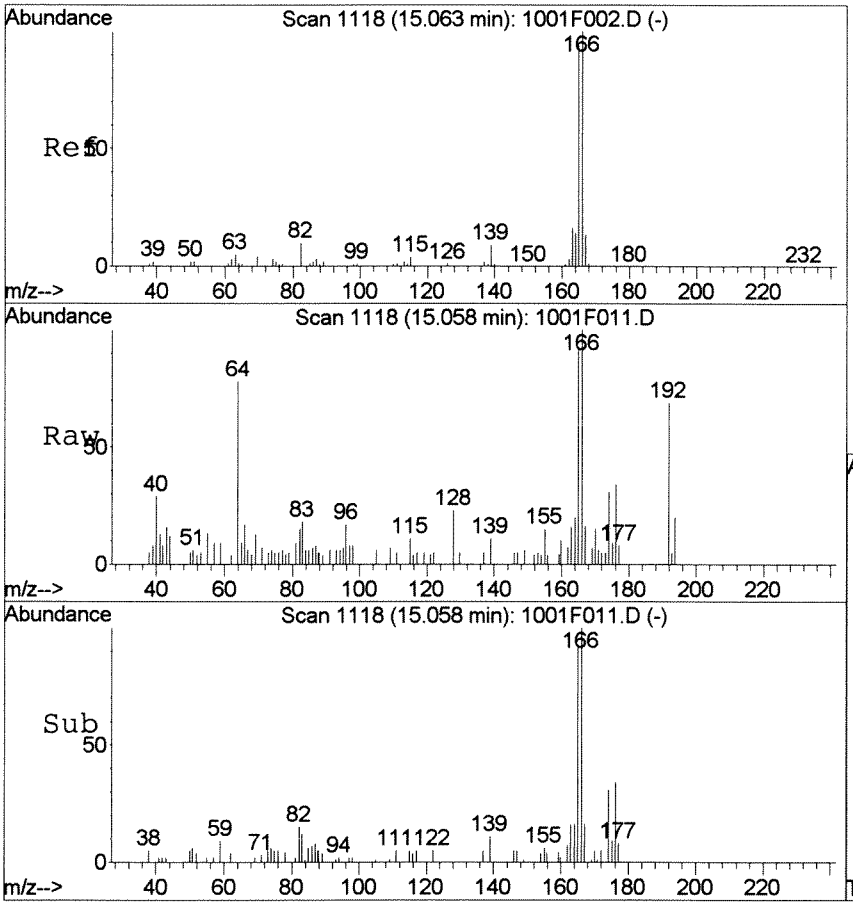


#47
Dibenzofuran
Concen: 0.64 ug/ml
RT: 14.51 min Scan# 1064
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:168 Resp: 3376

Ion	Ratio	Lower	Upper
168	100		
139	36.8	8.8	68.8

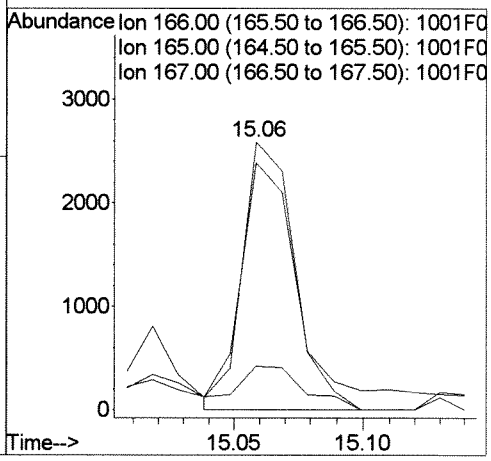


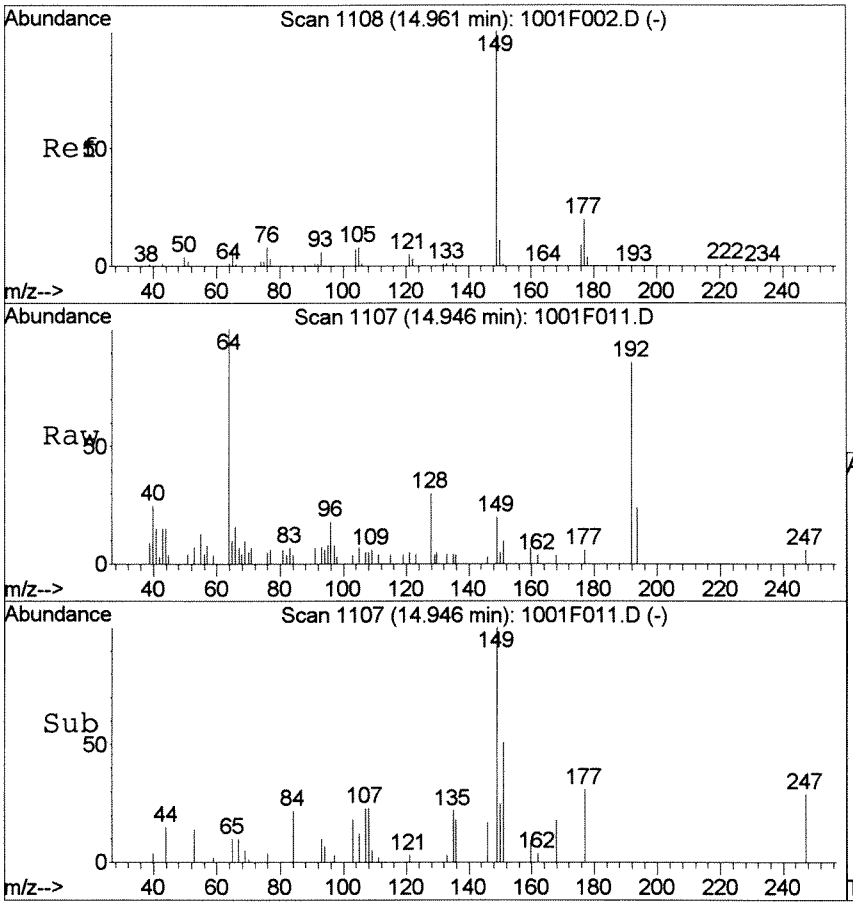


#51
Fluorene
Concen: 0.92 ug/ml
RT: 15.06 min Scan# 1118
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:166 Resp: 3694

Ion	Ratio	Lower	Upper
166	100		
165	88.1	65.9	125.9
167	14.2	0.0	43.4

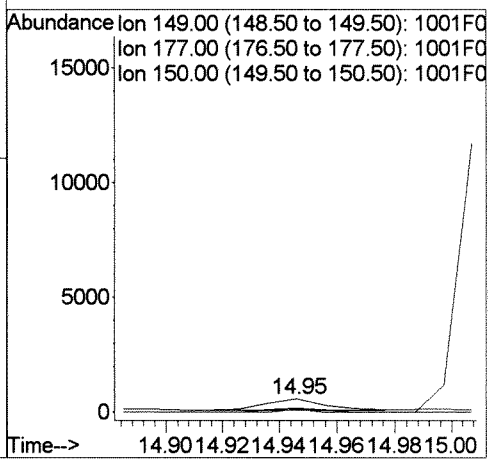


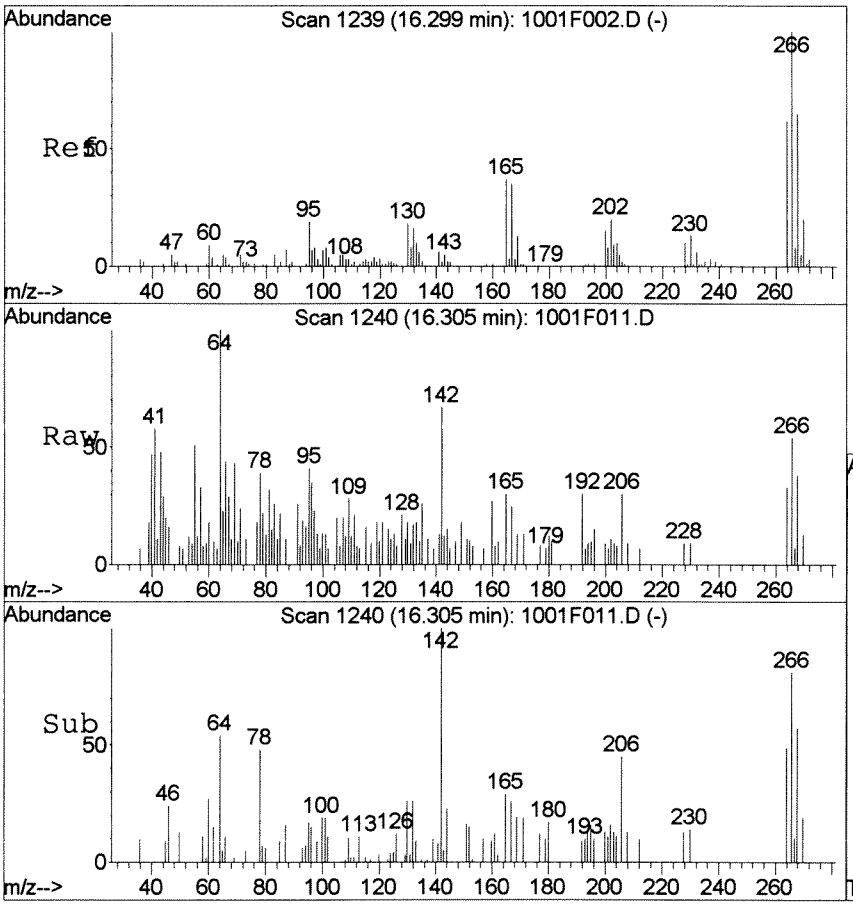


#53
Diethyl Phthalate
Concen: 0.14 ug/ml m
RT: 14.95 min Scan# 1107
Delta R.T. -0.02 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:149 Resp: 675

Ion	Ratio	Lower	Upper
149	100		
177	31.0	0.0	50.8
150	24.9	0.0	41.3

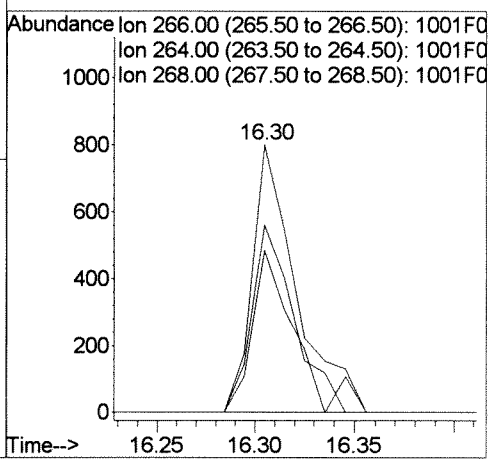


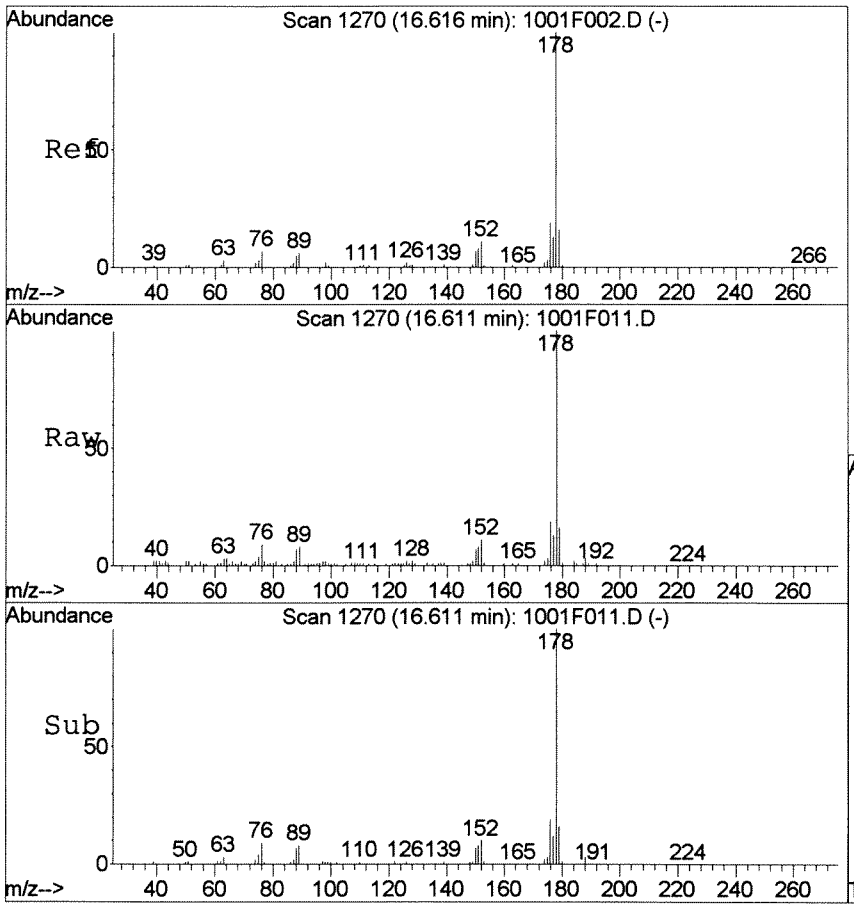


#62
Pentachlorophenol
Concen: 9.81 ug/ml
RT: 16.30 min Scan# 1240
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:266 Resp: 1240

Ion	Ratio	Lower	Upper
266	100		
264	60.4	32.7	92.7
268	70.0	33.2	93.2

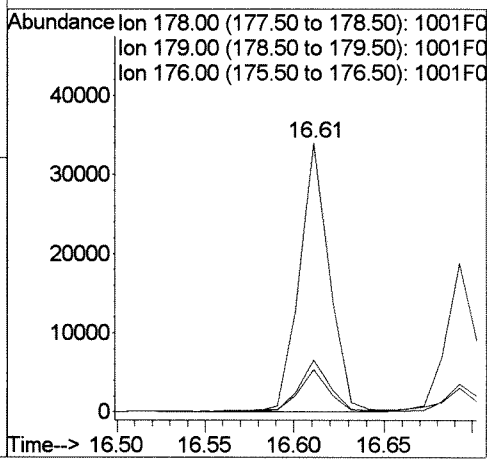


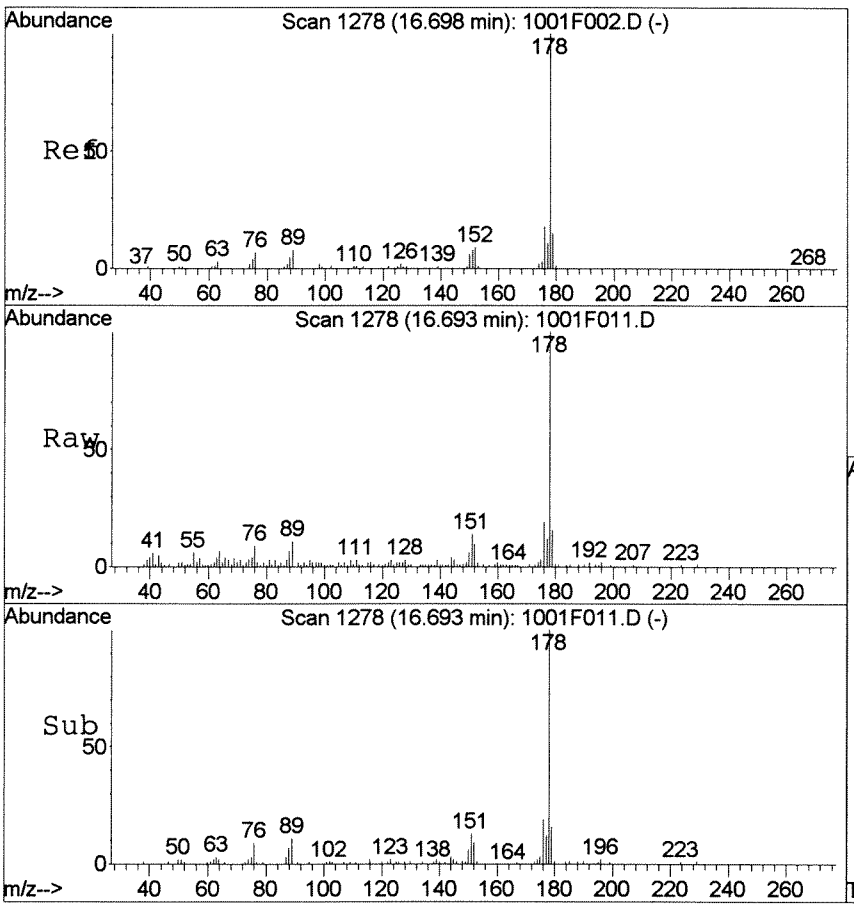


#63
Phenanthrene
Concen: 7.65 ug/ml
RT: 16.61 min Scan# 1270
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:178 Resp: 39203

Ion	Ratio	Lower	Upper
178	100		
179	15.7	0.0	45.5
176	19.1	0.0	49.1

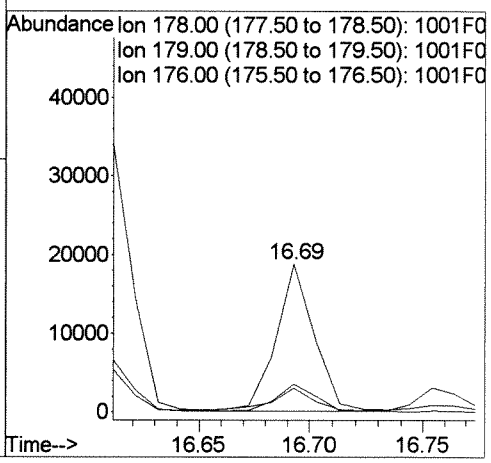


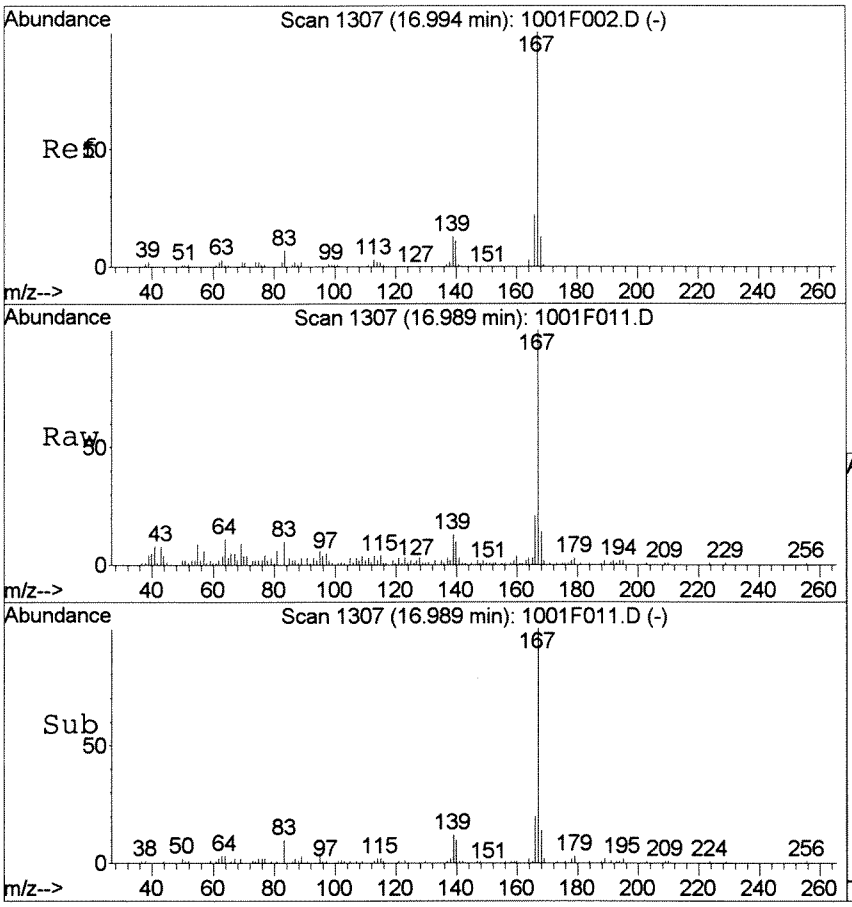


#64
Anthracene
Concen: 4.32 ug/ml
RT: 16.69 min Scan# 1278
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:178 Resp: 22473

Ion	Ratio	Lower	Upper
178	100		
179	15.6	0.0	45.6
176	18.5	0.0	48.8

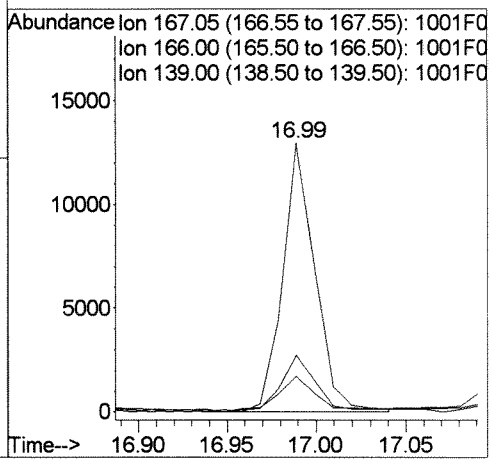


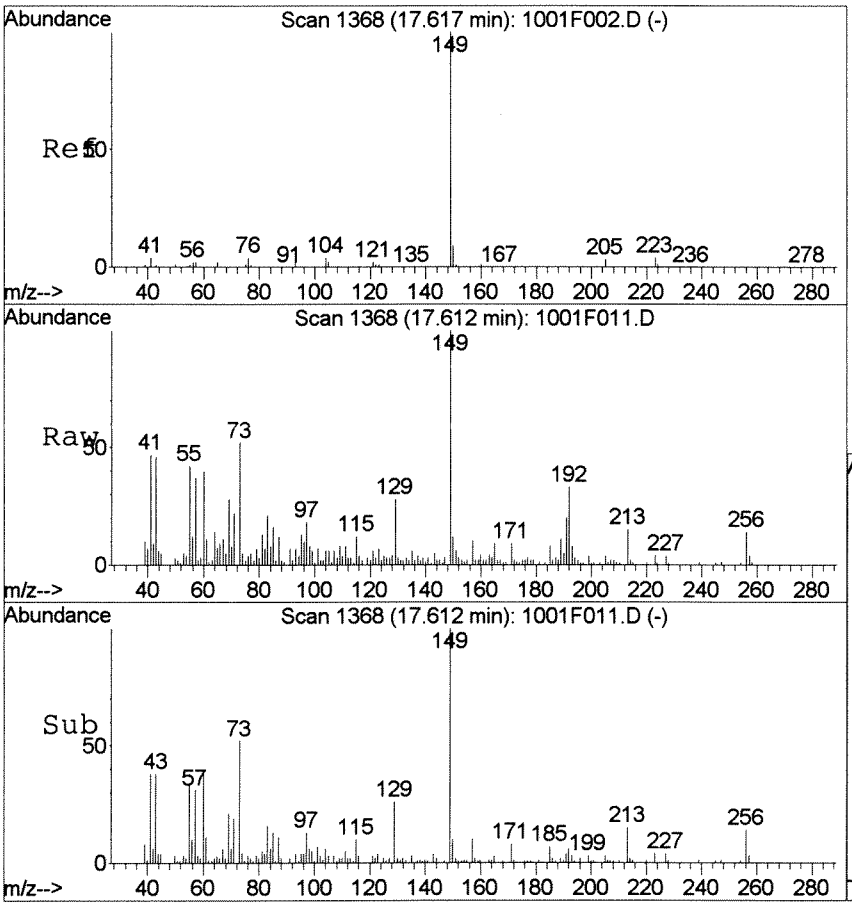


#65
Carbazole
Concen: 3.28 ug/ml
RT: 16.99 min Scan# 1307
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:167 Resp: 16325

Ion	Ratio	Lower	Upper
167	100		
166	20.3	0.0	51.6
139	12.3	0.0	43.3

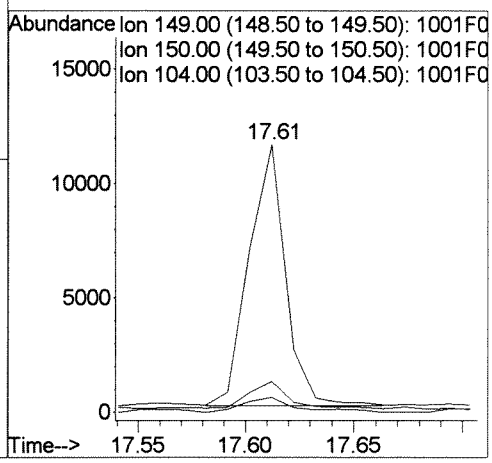


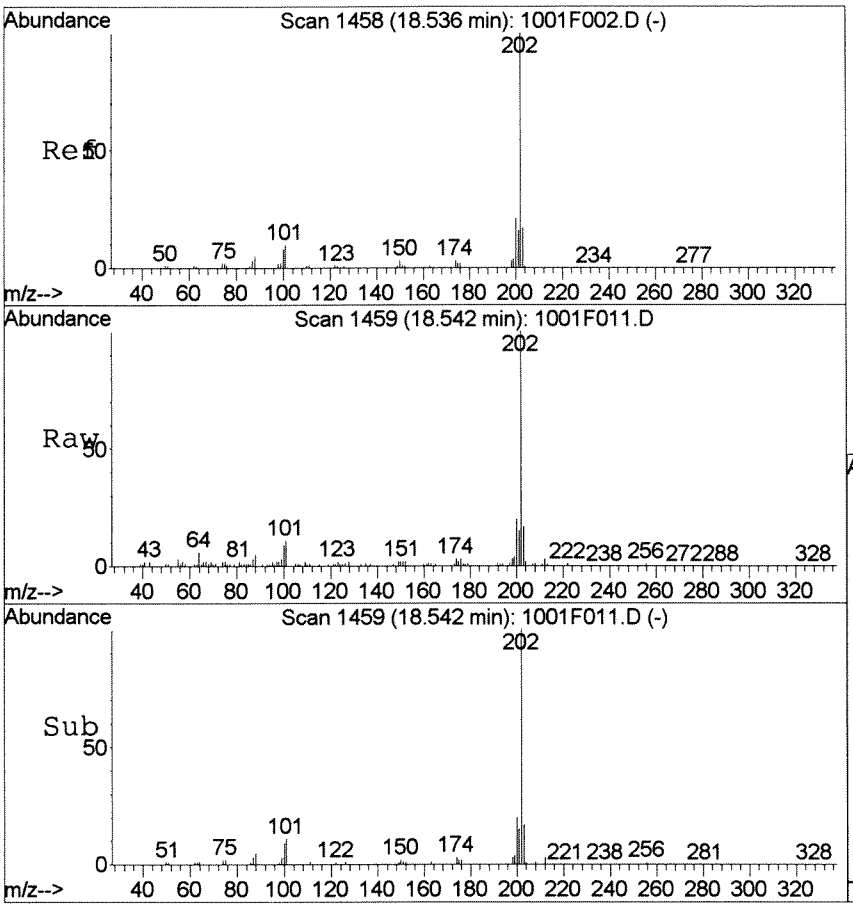


#66
Di-n-butyl Phthalate
Concen: 2.06 ug/ml m
RT: 17.61 min Scan# 1368
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:149 Resp: 13500

Ion	Ratio	Lower	Upper
149	100		
150	11.5	0.0	39.3
104	5.6	0.0	35.1

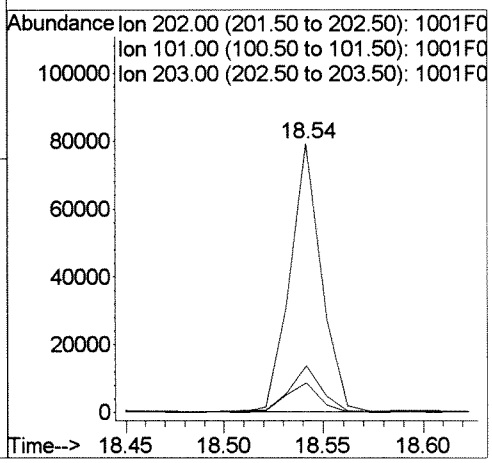


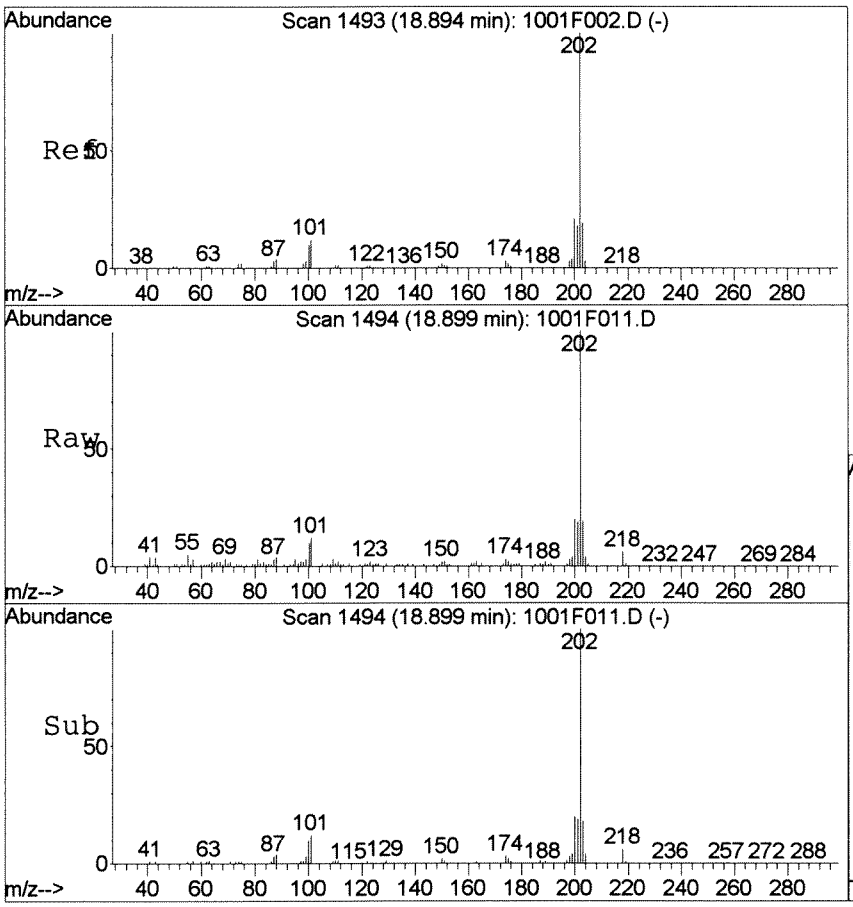


#67
Fluoranthene
Concen: 15.02 ug/ml
RT: 18.54 min Scan# 1459
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:202 Resp: 86560

Ion	Ratio	Lower	Upper
202	100		
101	10.9	0.0	39.2
203	17.1	0.0	47.5

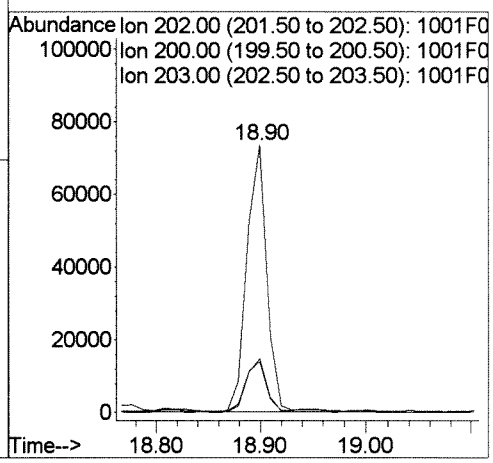


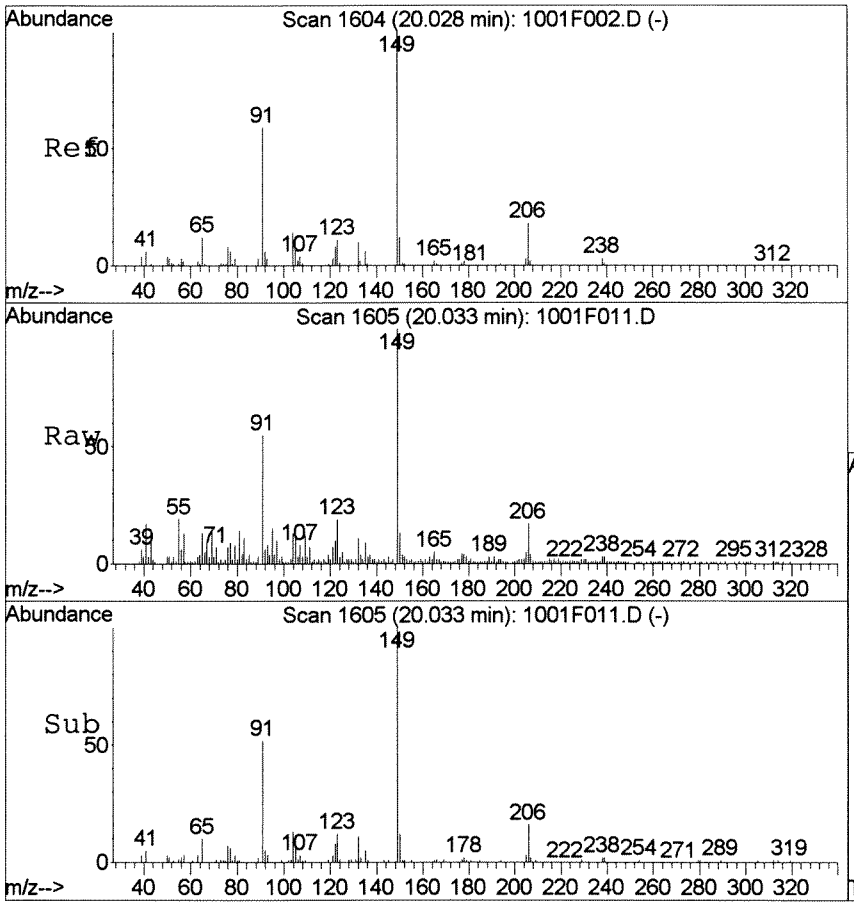


#70
Pyrene
Concen: 15.83 ug/ml
RT: 18.90 min Scan# 1494
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:202 Resp: 98153

Ion	Ratio	Lower	Upper
202	100		
200	20.2	0.0	50.7
203	18.7	0.0	49.2

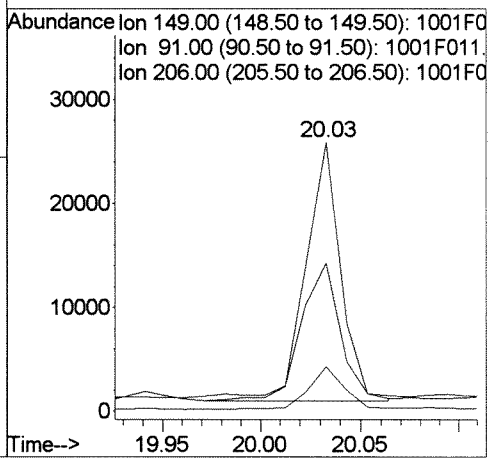


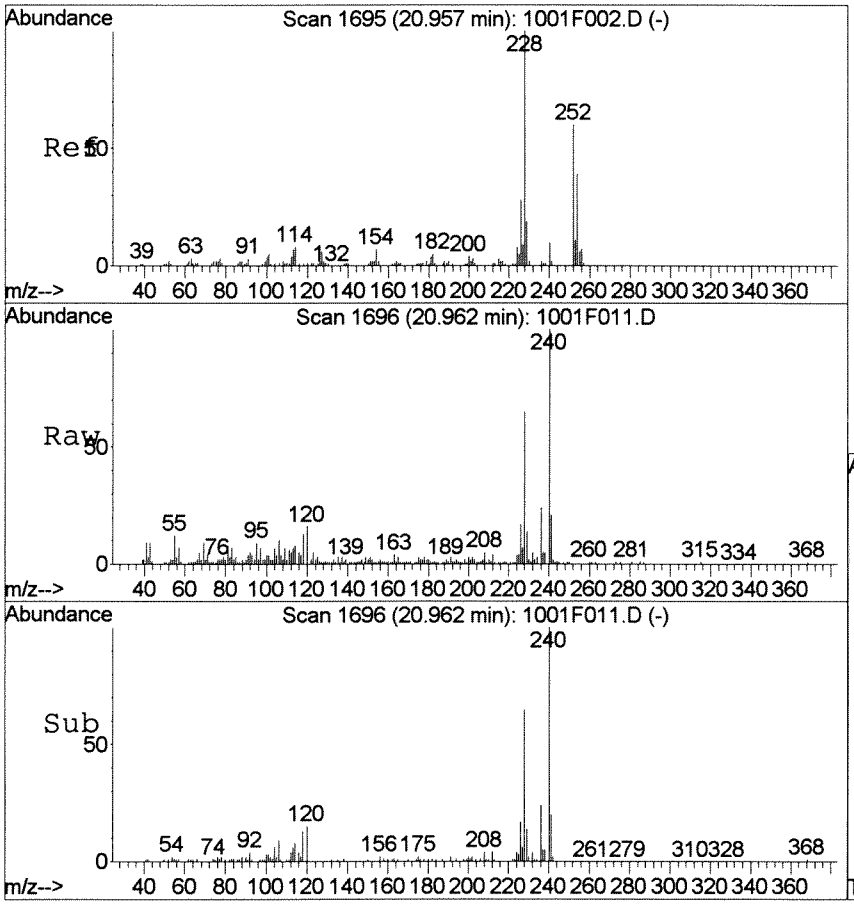


#72
Butyl Benzyl Phthalate
Concen: 10.34 ug/ml m
RT: 20.03 min Scan# 1605
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:149 Resp: 29454

Ion	Ratio	Lower	Upper
149	100		
91	55.3	28.0	88.0
206	16.7	0.0	46.9

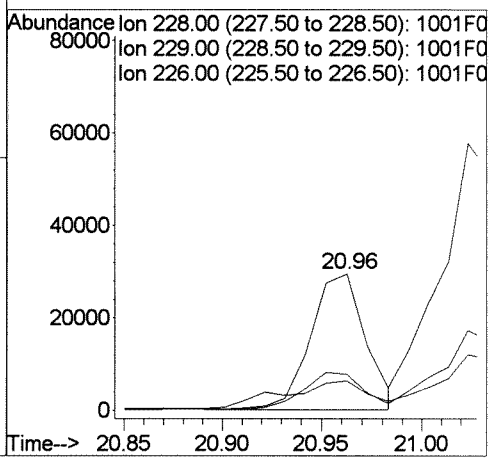


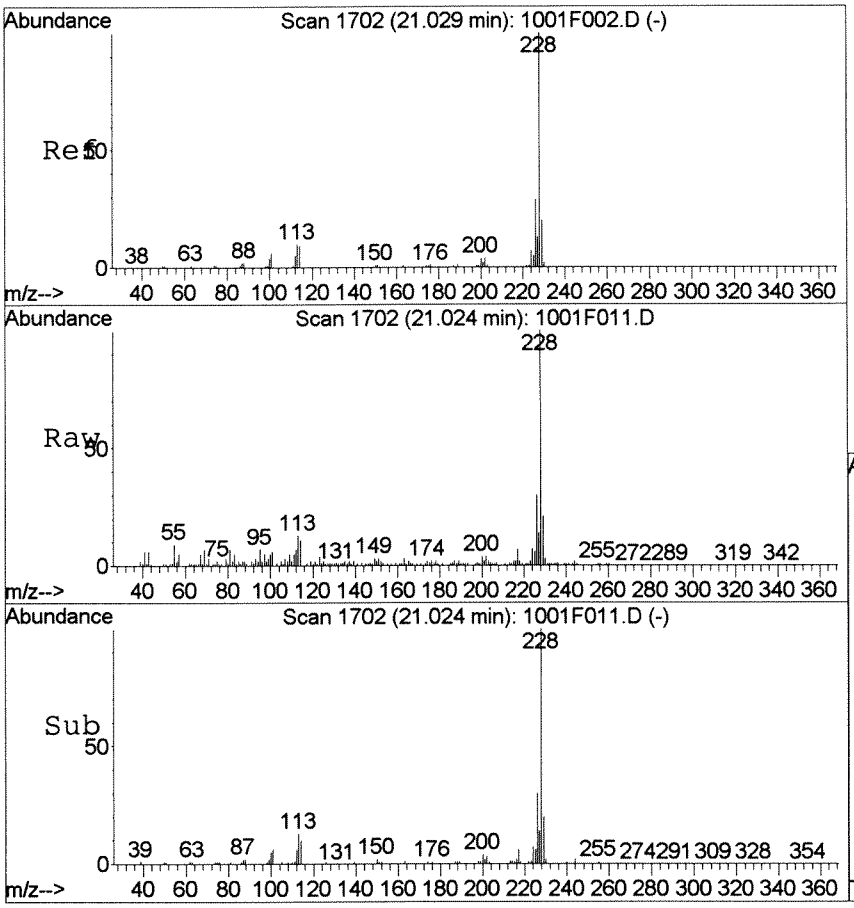


#74
Benz(a)anthracene
Concen: 10.52 ug/ml
RT: 20.96 min Scan# 1696
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:228 Resp: 55580

Ion	Ratio	Lower	Upper
228	100		
229	19.2	0.0	49.0
226	25.8	0.0	57.3

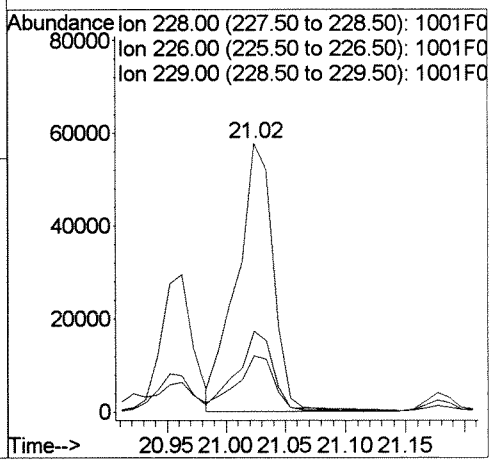


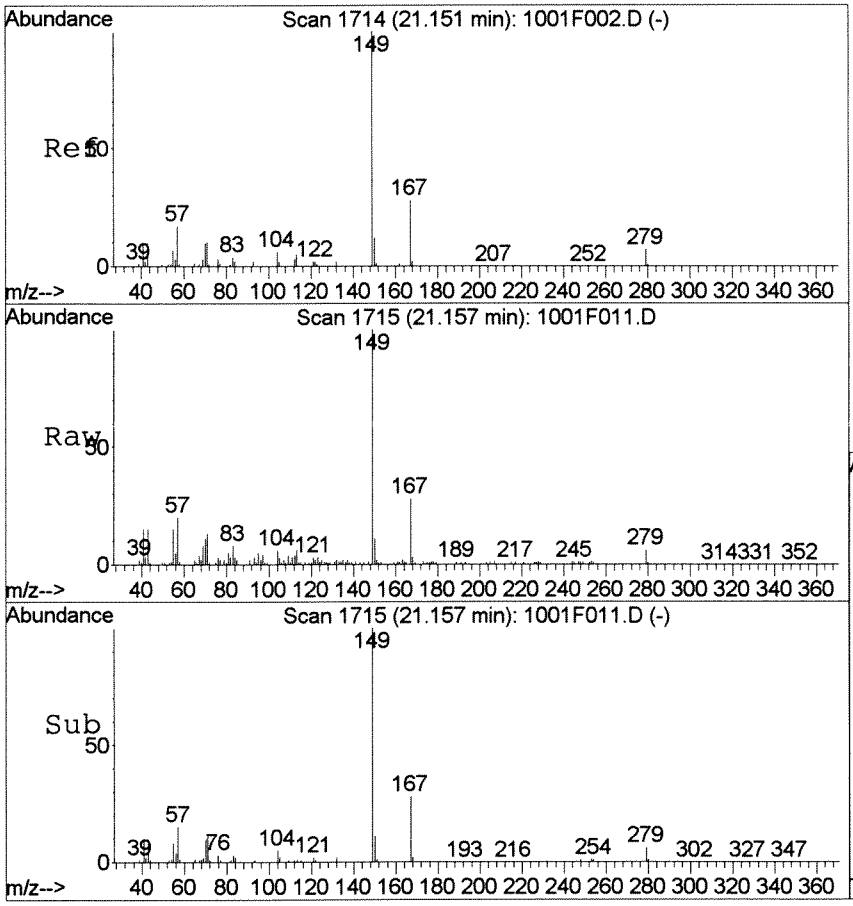


#75
Chrysene
Concen: 23.65 ug/ml
RT: 21.02 min Scan# 1702
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:228 Resp: 123095

Ion	Ratio	Lower	Upper
228	100		
226	29.9	0.0	59.3
229	19.7	0.0	49.2

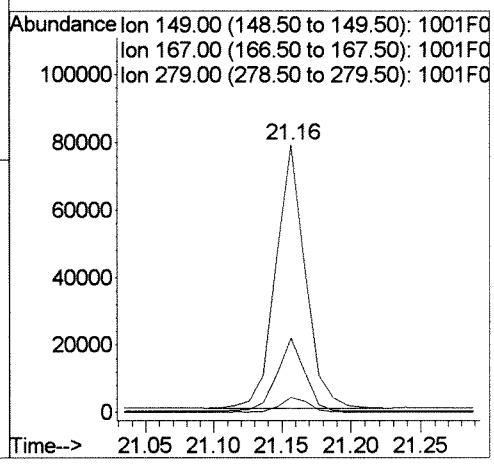


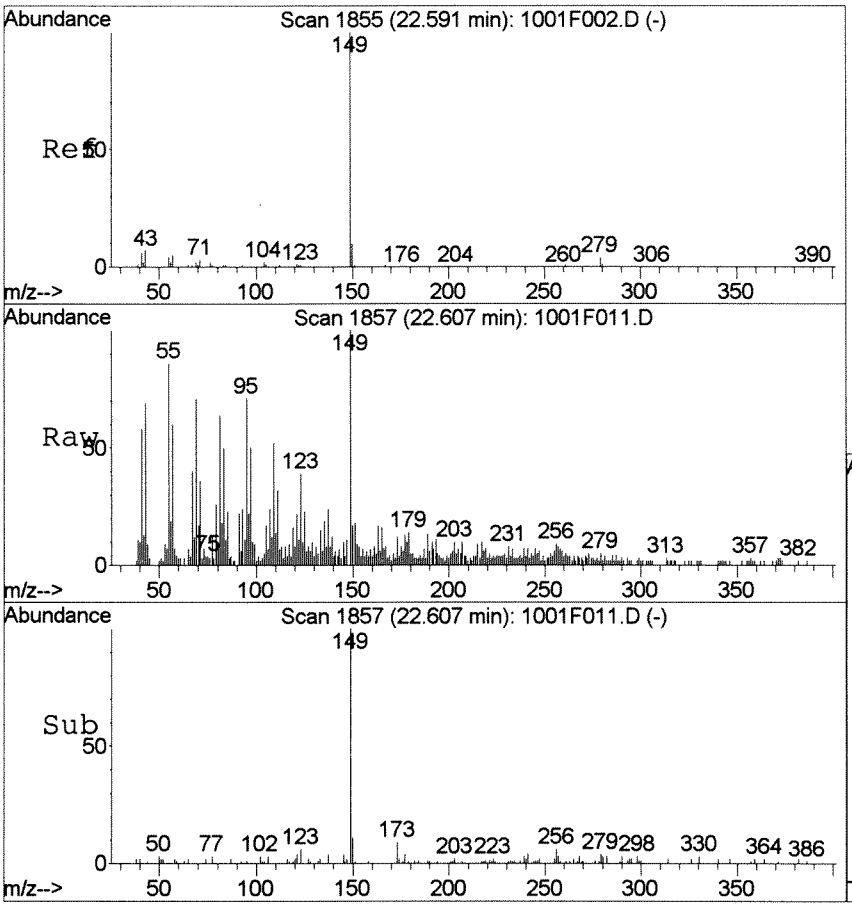


#76
Bis(2-ethylhexyl) Phthalate
Concen: 31.35 ug/ml
RT: 21.16 min Scan# 1715
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:149 Resp: 117497

Ion	Ratio	Lower	Upper
149	100		
167	27.8	0.0	57.7
279	5.6	0.0	36.6

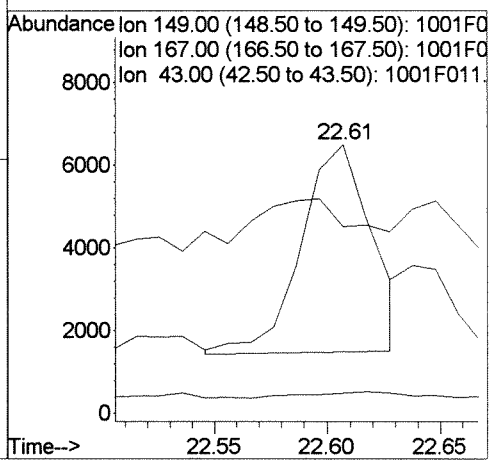


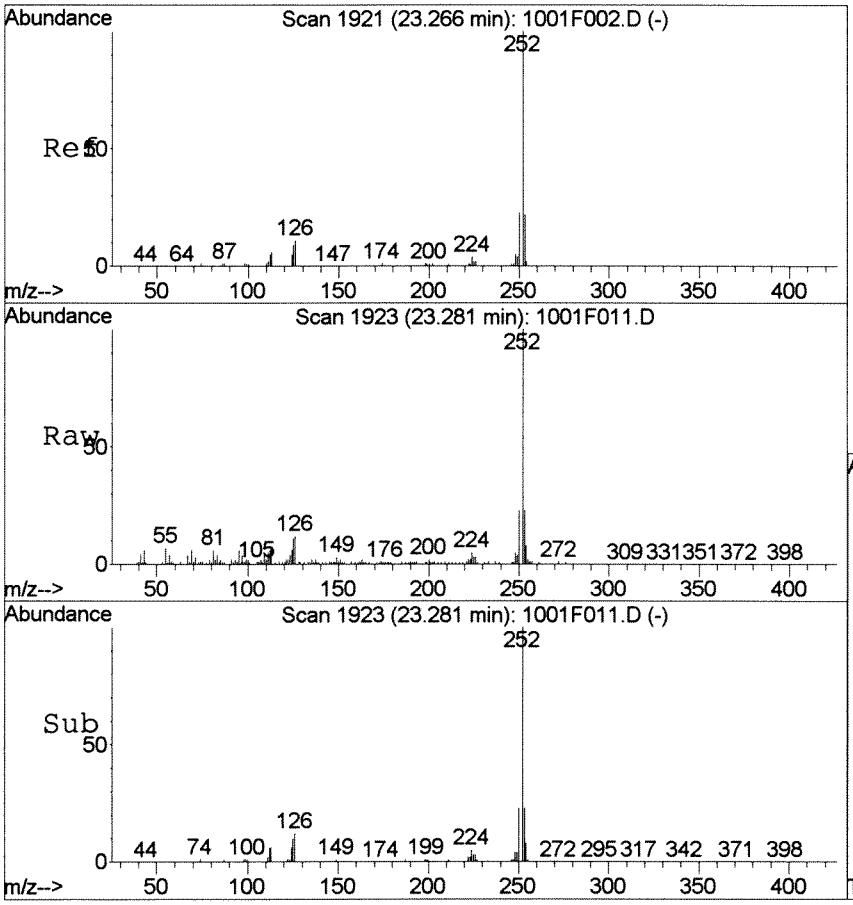


#78
Di-n-octyl Phthalate
Concen: 1.76 ug/ml m
RT: 22.61 min Scan# 1857
Delta R.T. 0.02 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:149 Resp: 10799

Ion	Ratio	Lower	Upper
149	100		
167	7.6	0.0	31.4
43	69.5	0.0	37.1#

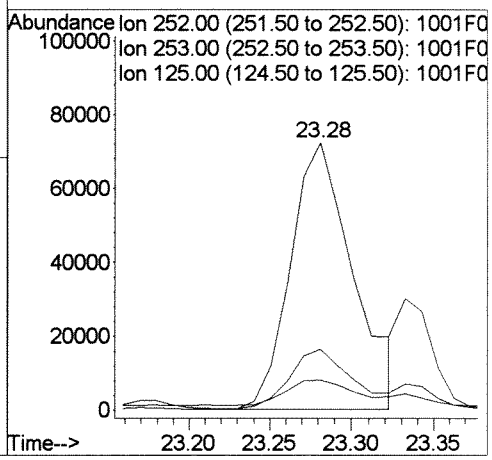


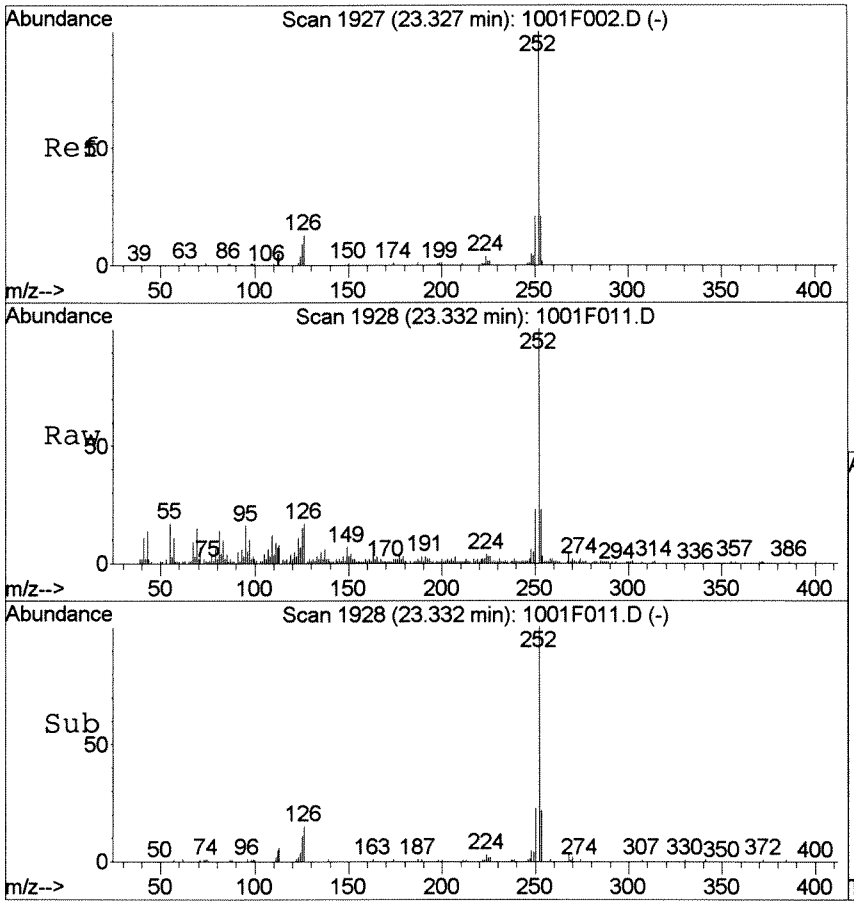


#79
Benzo(b)fluoranthene
Concen: 41.88 ug/ml
RT: 23.28 min Scan# 1923
Delta R.T. 0.02 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:252 Resp: 191384

Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	51.9
125	9.1	0.0	39.2

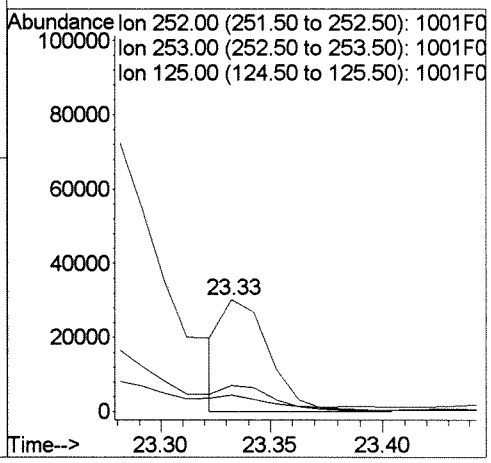


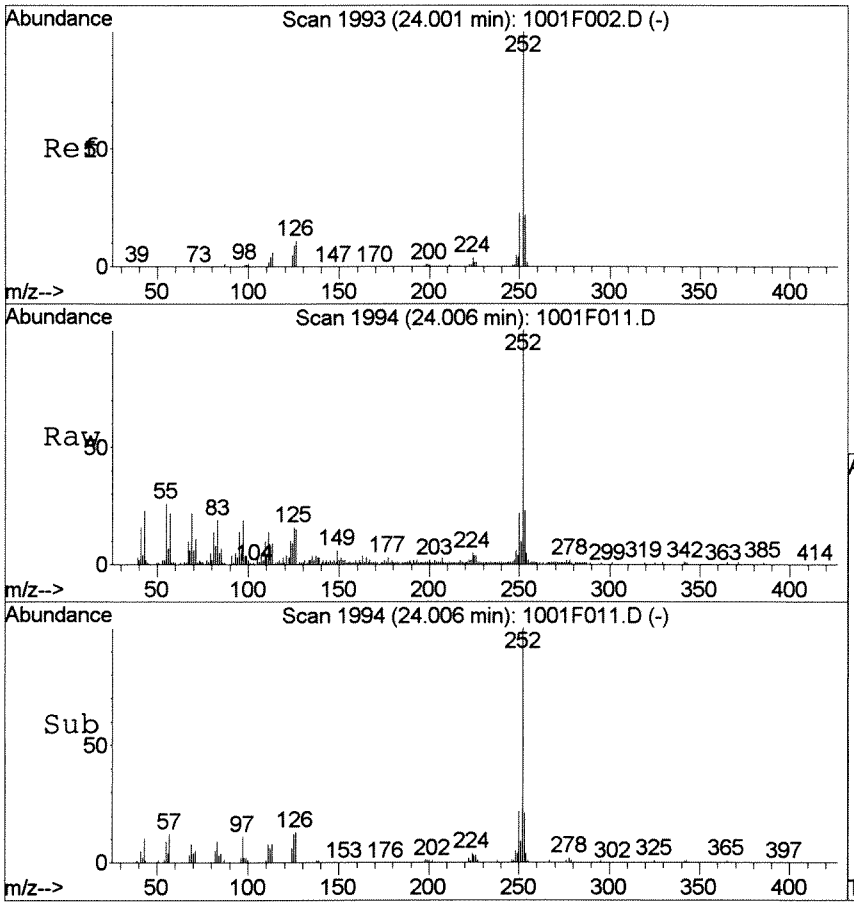


#80
Benzo(k)fluoranthene
Concen: 10.20 ug/ml m
RT: 23.33 min Scan# 1928
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:252 Resp: 45606

Ion	Ratio	Lower	Upper
252	100		
253	23.5	0.0	51.3
125	14.9	0.0	38.4

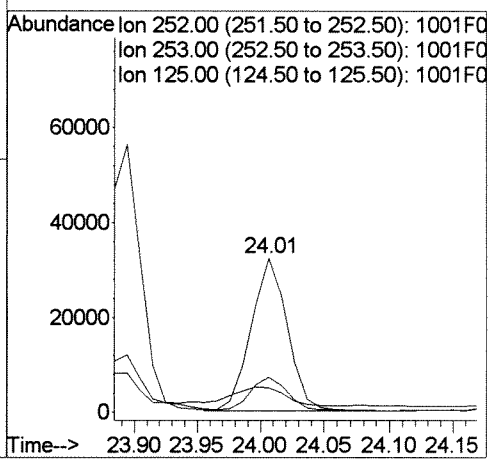


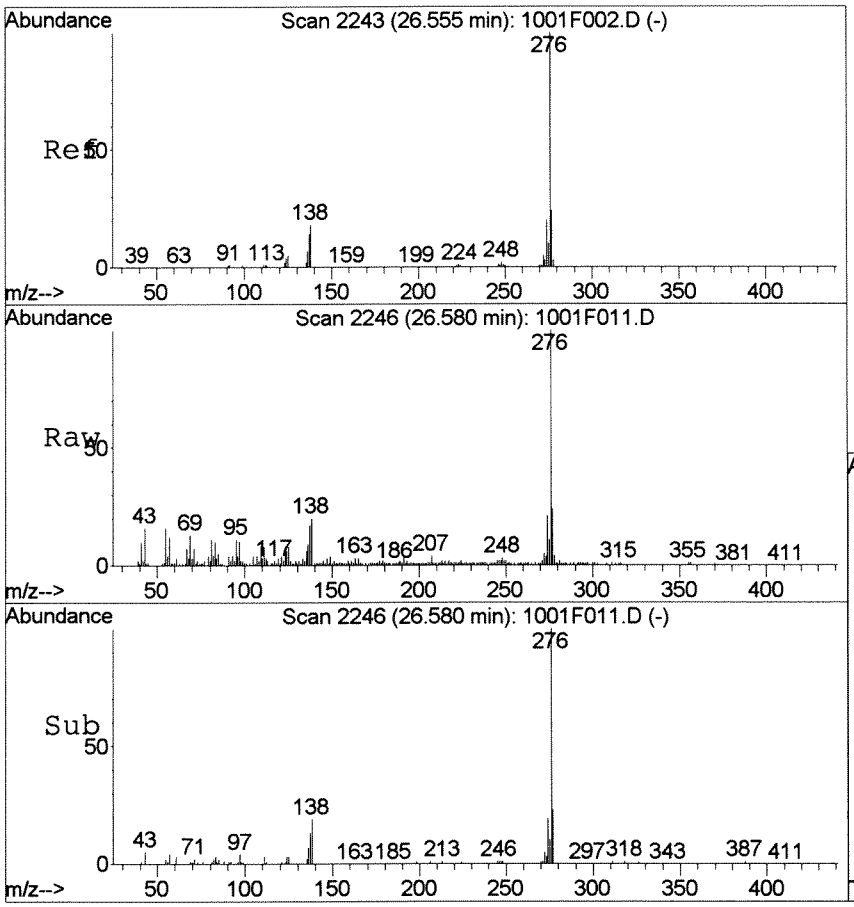


#81
Benzo(a)pyrene
Concen: 14.54 ug/ml
RT: 24.01 min Scan# 1994
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:252 Resp: 64471

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.1
125	10.7	0.0	39.6

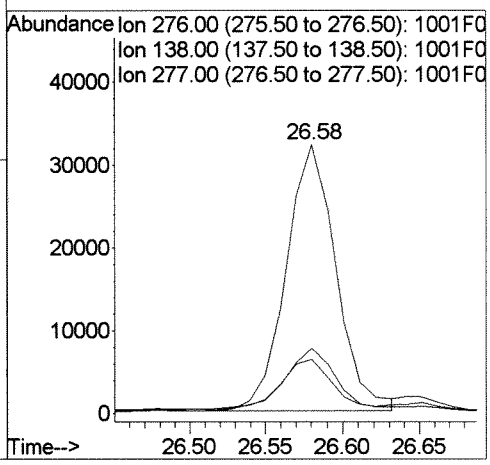


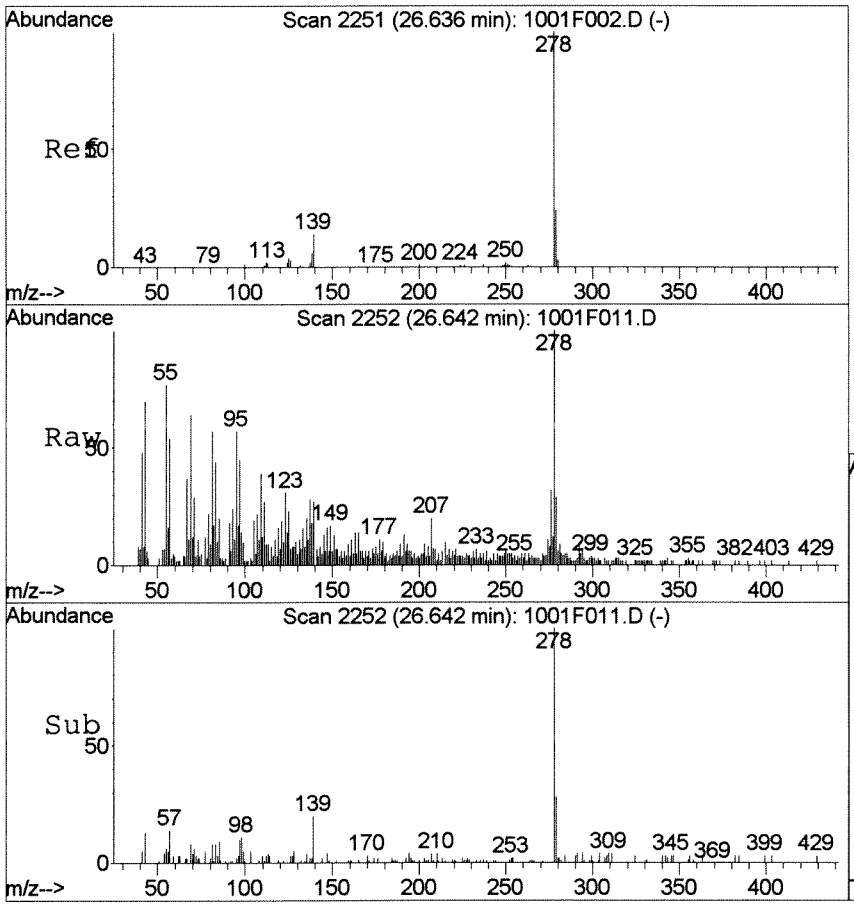


#82
Indeno(1,2,3-cd)pyrene
Concen: 18.12 ug/ml m
RT: 26.58 min Scan# 2246
Delta R.T. 0.02 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:276 Resp: 72431

Ion	Ratio	Lower	Upper
276	100		
138	20.2	0.0	46.3
277	24.3	0.0	53.1

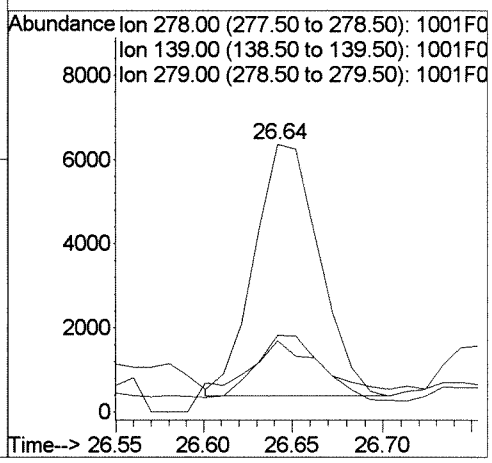


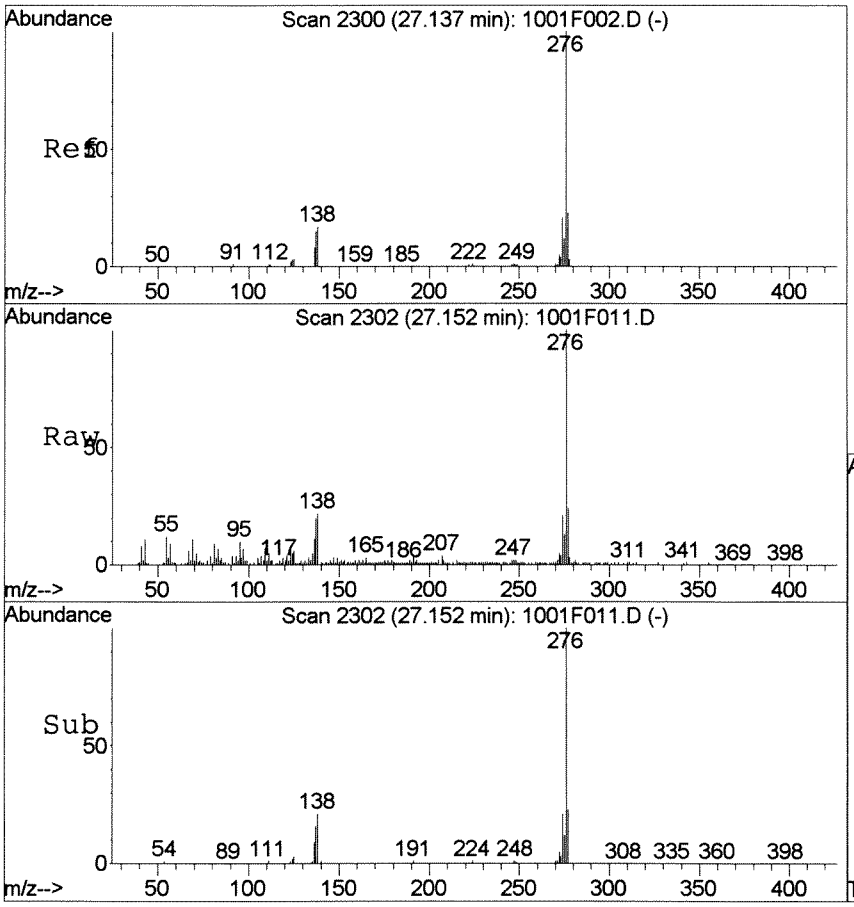


#83
Dibenz(a,h)anthracene
Concen: 3.69 ug/ml
RT: 26.64 min Scan# 2252
Delta R.T. -0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:278 Resp: 15200

Ion	Ratio	Lower	Upper
278	100		
139	18.2	0.0	43.0
279	25.6	0.0	53.5

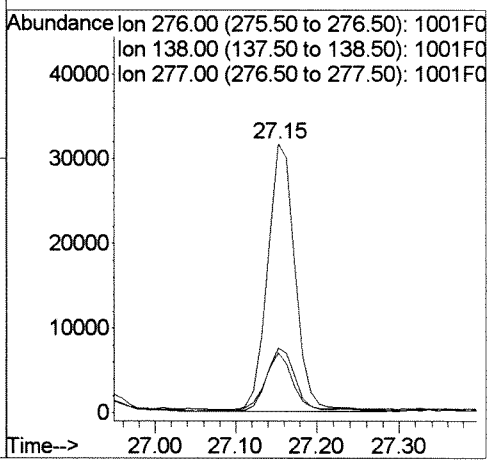




#84
Benzo(g,h,i)perylene
Concen: 17.28 ug/ml
RT: 27.15 min Scan# 2302
Delta R.T. 0.01 min
Lab File: 1001F011.D
Acq: 2 Oct 2014 1:55 am

Tgt Ion:276 Resp: 75746

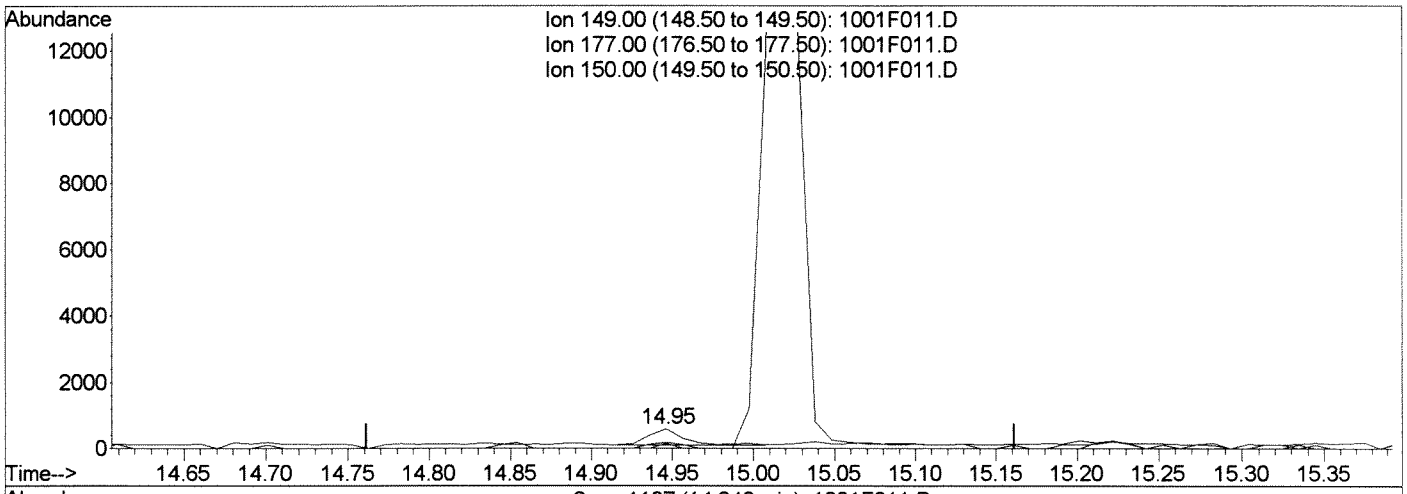
Ion	Ratio	Lower	Upper
276	100		
138	20.9	0.0	46.4
277	23.4	0.0	53.1

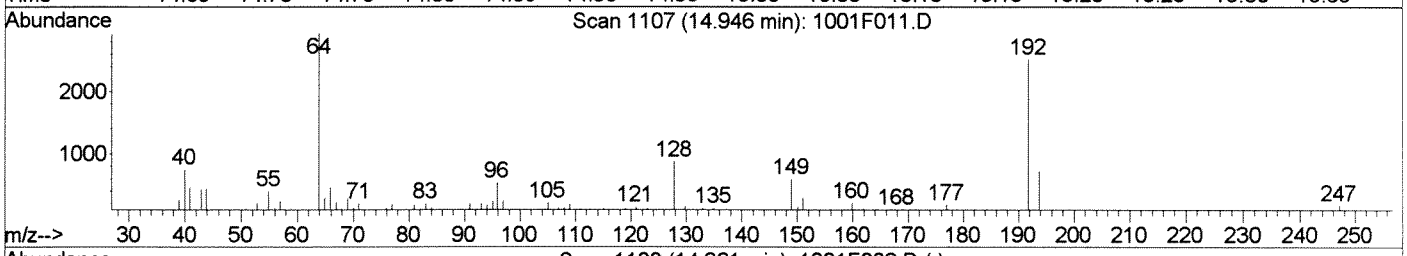


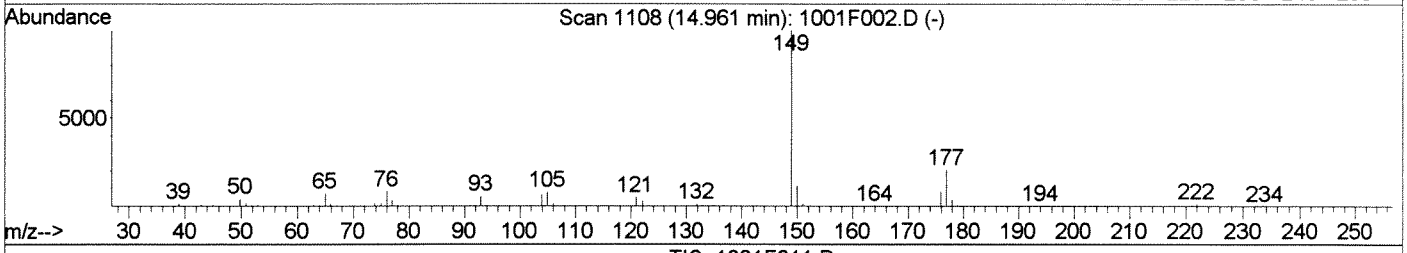
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:12 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(53) Diethyl Phthalate (T)

14.95min 0.15ug/ml

response 724

Ion	Exp%	Act%
149.00	100	100
177.00	20.80	0.00
150.00	11.30	30.47
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

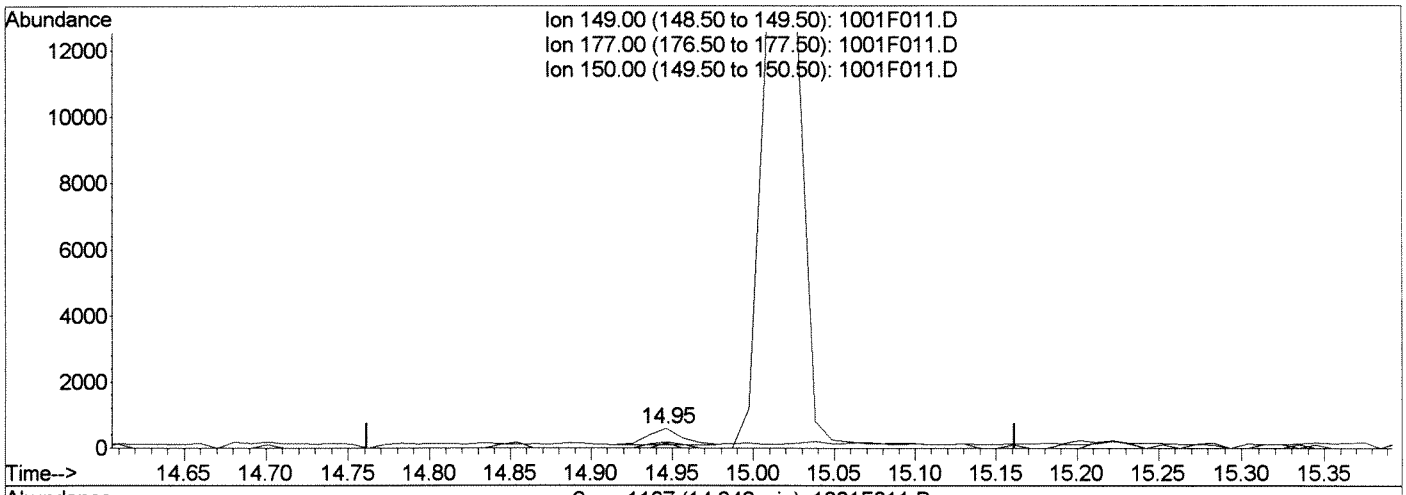
TR

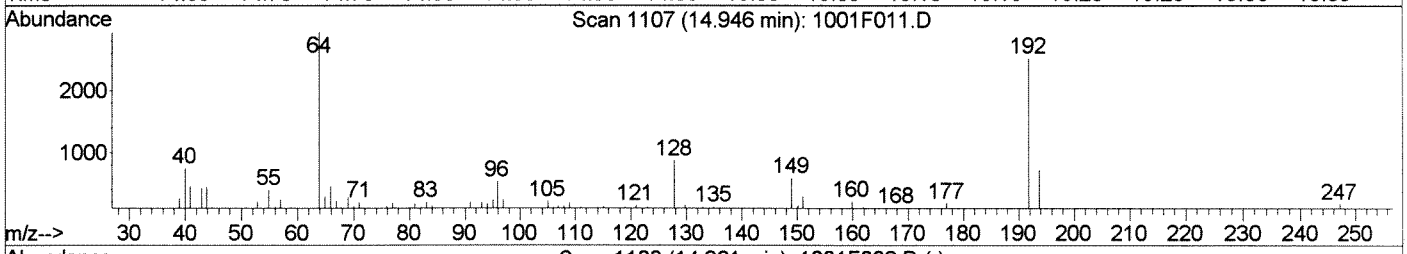
1001F011.D 093014BNC7.M Thu Oct 02 14:13:46 2014

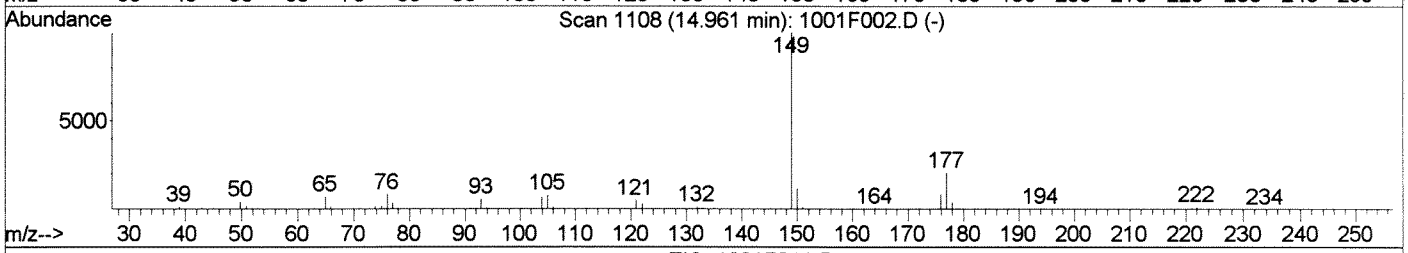
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:14 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(53) Diethyl Phthalate (T)

14.95min 0.14ug/ml m

response 675

Ion	Exp%	Act%
149.00	100	100
177.00	20.80	30.96
150.00	11.30	24.87
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

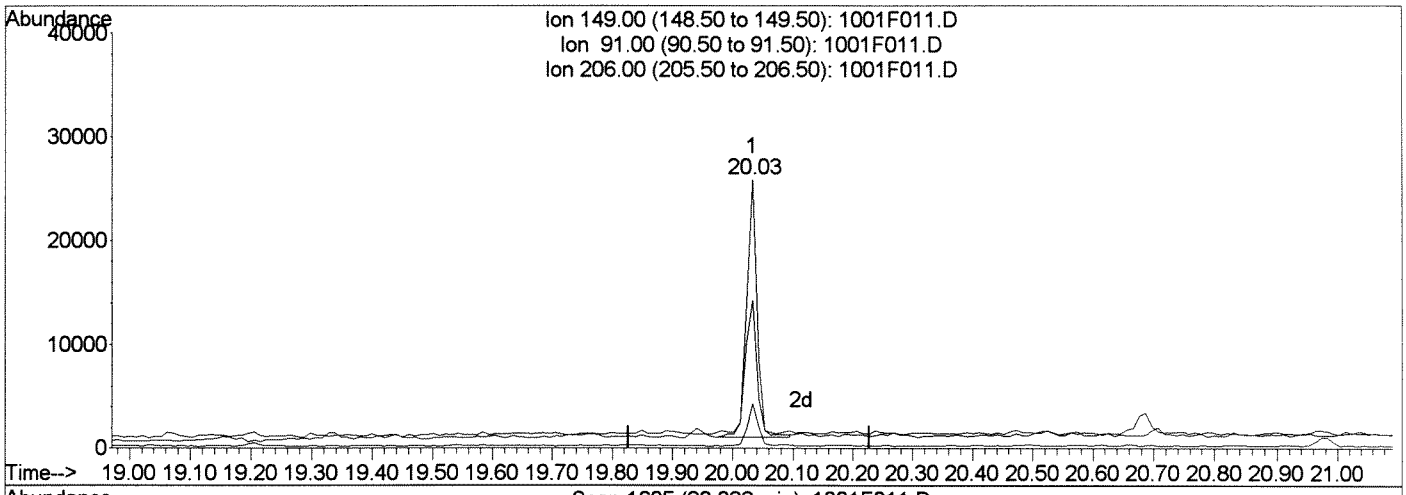
TRT

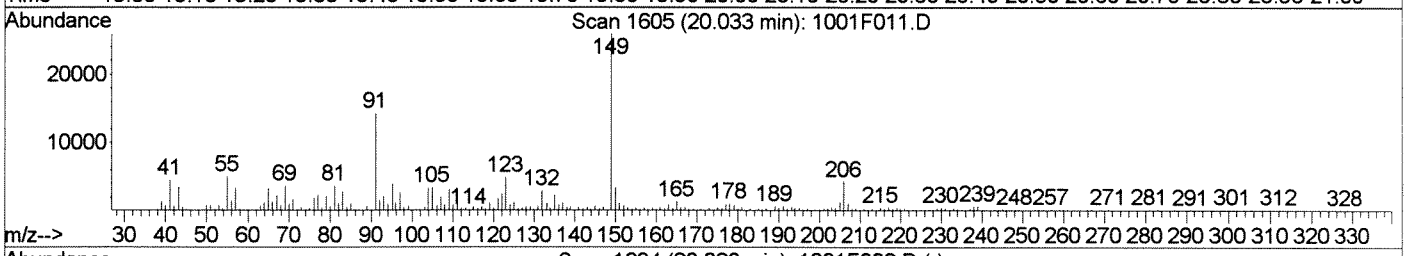
1001F011.D 093014BNC7.M Thu Oct 02 14:14:24 2014

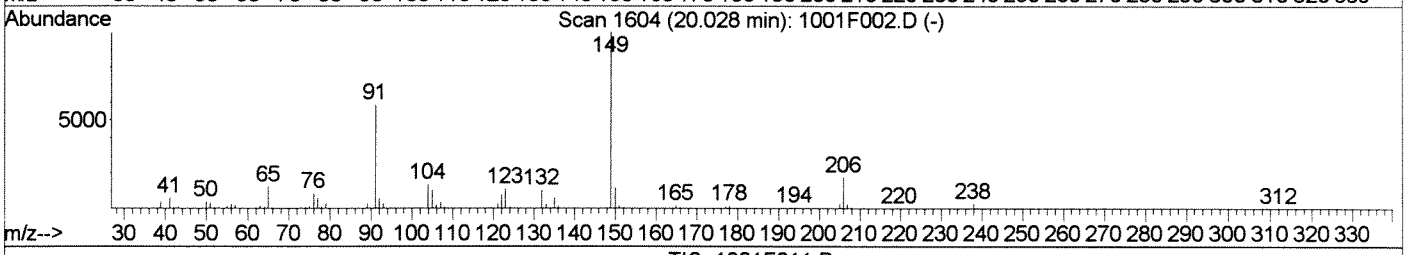
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:16 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(72) Butyl Benzyl Phthalate (T)

20.03min 10.51ug/ml

response 29923

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	51.51
206.00	16.90	16.28
0.00	0.00	0.00

Manual Integration:

Before

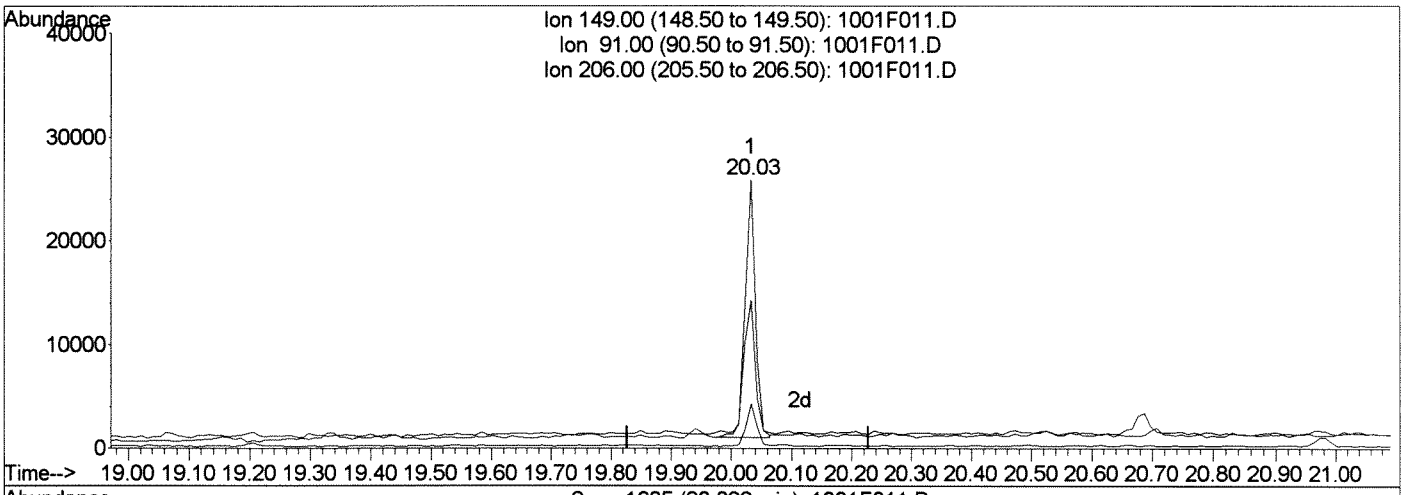
10/02/14

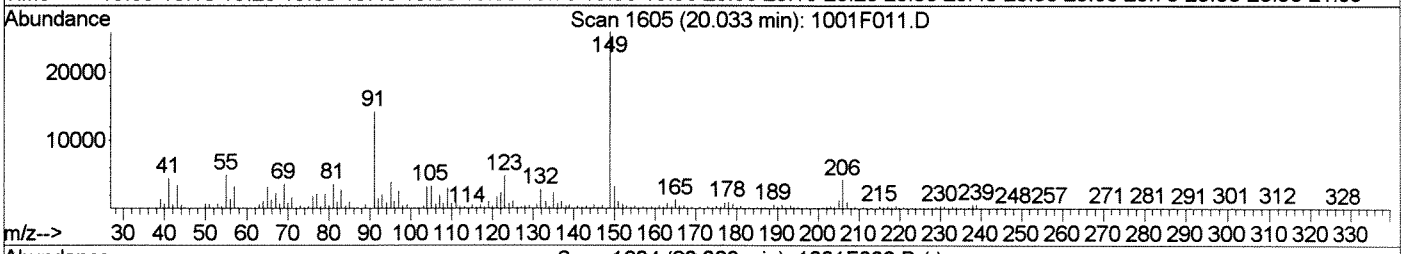
1001F011.D 093014BNC7.M Thu Oct 02 14:17:09 2014

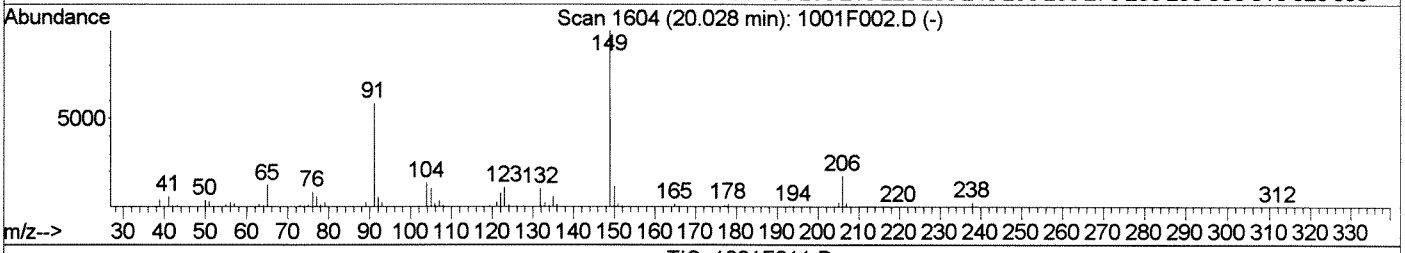
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:17 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(72) Butyl Benzyl Phthalate (T)

20.03min 10.34ug/ml m

response 29454

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	55.27
206.00	16.90	16.66
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

5

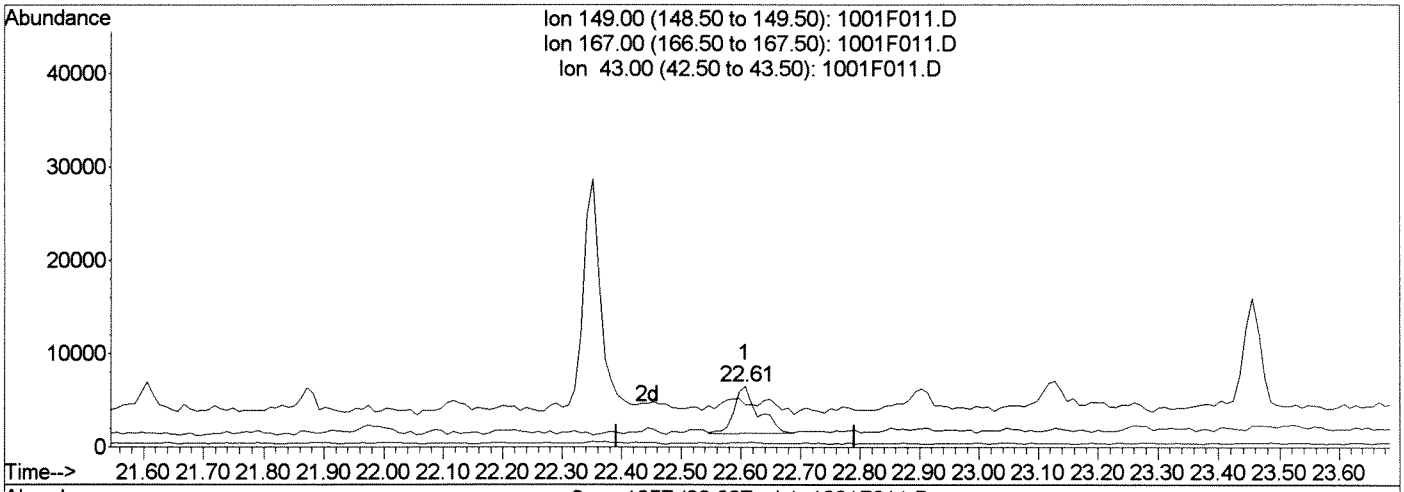
TRT

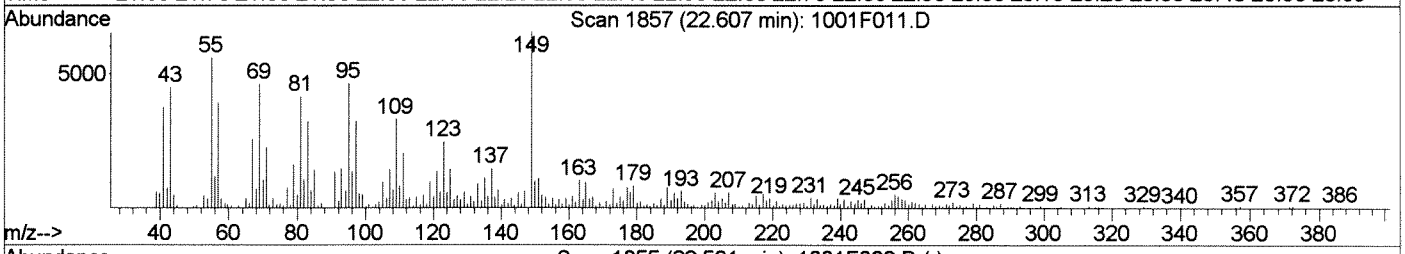
1001F011.D 093014BNC7.M Thu Oct 02 14:17:35 2014

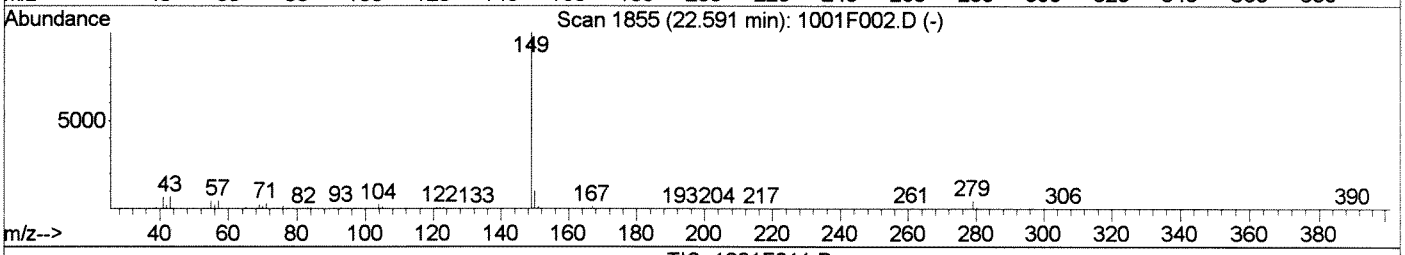
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:17 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(78) Di-n-octyl Phthalate (T)

22.61min 2.29ug/ml

response 14090

Ion	Exp%	Act%
149.00	100	100
167.00	1.40	2.02
43.00	7.10	11.40
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

S

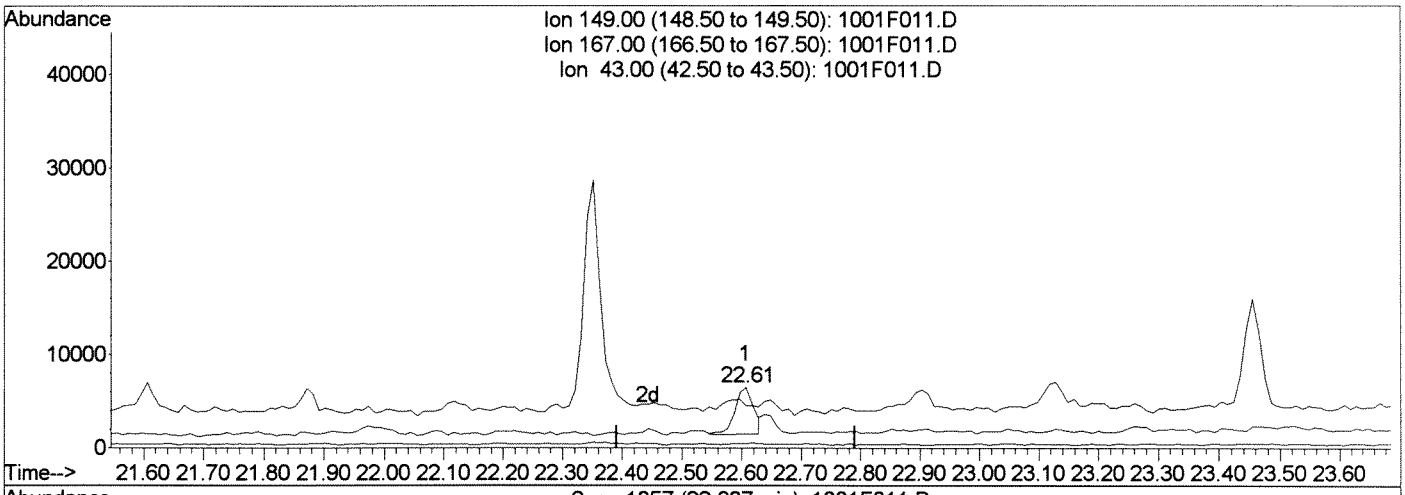
TRT

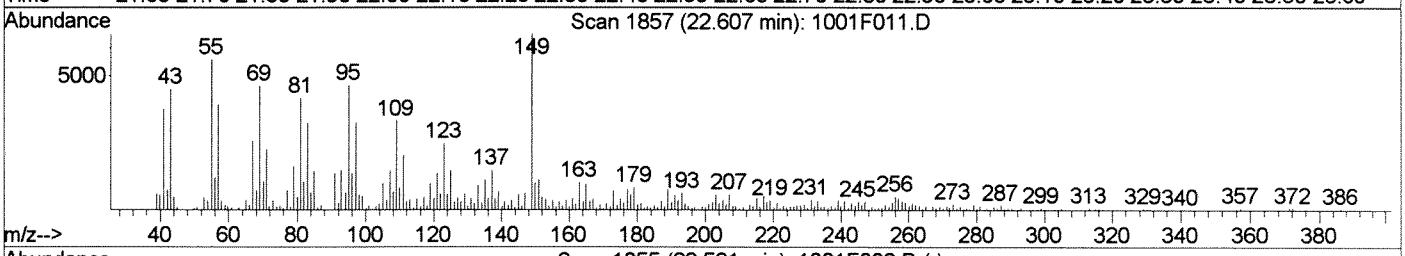
1001F011.D 093014BNC7.M Thu Oct 02 14:18:04 2014

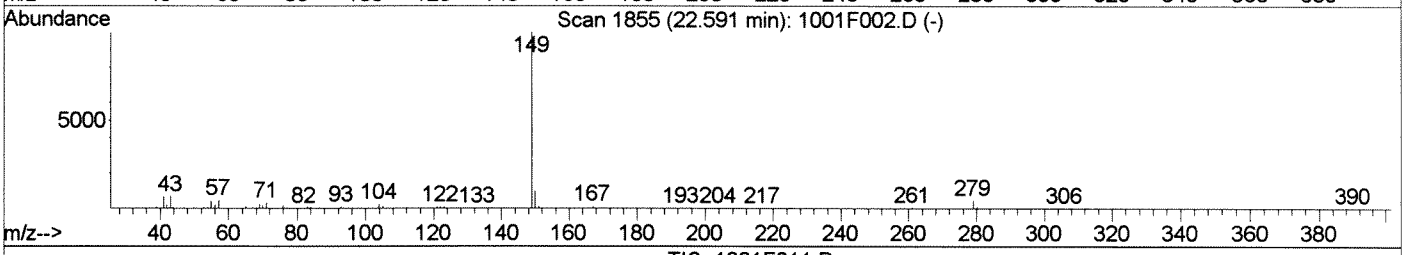
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F011.D Vial: 11
Acq On : 2 Oct 2014 1:55 am Operator: T. THOMAS
Sample : K1409921-008 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:18 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F011.D

(78) Di-n-octyl Phthalate (T)

22.61min 1.76ug/ml m

response 10799

Ion	Exp%	Act%
149.00	100	100
167.00	1.40	7.62
43.00	7.10	69.49#
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/2/14

TKT

1001F011.D 093014BNC7.M Thu Oct 02 14:18:30 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F010.D
Lab ID: K1409921-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 01:15
Date Quantitated: 10/02/2014 14:05
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 02 2014 DKT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F010.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 01:15	**Quant Date:**	10/02/2014 14:05	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-009			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376330	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.20	-0.01	152	71127	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	243088	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	123192	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	209547	40.00	OK
5	Chrysene-d12	20.98	0.00	240	219991	40.00	OK
6	Perylene-d12	24.13	0.01	264	204948	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.74	0.01	0.00	99	163792	68.09	45	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	89996	41.83	42	29-116	OK	
3	2-Fluorobiphenyl	13.10	-0.01	0.00	172	257015	55.31	55	32-104	OK	
4	2,4,6-Tribromophenol	15.46	-0.01	0.00	330	149213	129.39	86	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	375342	78.07	78	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0d		0.021	U	
1	2-Methylphenol				107	0		0.019	U	
1	4-Methylphenol				107	0		0.019	U	
2	2,4-Dimethylphenol				122	0		0.017	U	
2	Hexachlorobutadiene				225	0		0.015	U	
3	Diethyl Phthalate	14.94	-0.02	0.00	149	1129	0.2400	0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.15	U	
4	Hexachlorobenzene				284	0		0.017	U	
4	Fluoranthene	18.54		0.00	202	45329	7.89	0.28	J	
5	Pyrene	18.89		0.00	202	44360	6.81	0.24	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F010.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 01:15	**Quant Date:**	10/02/2014 14:05	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-009			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	37186**m**	12.43	0.44		
5	Chrysene	21.02	-0.01	0.00	228	61807	11.30	0.40		
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	31155	7.91	0.28	J	
6	Di-n-octyl Phthalate				149	0**d**		0.026	U	

Prep Amount:	40.490 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	69.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F010.D Vial: 10
Acq On : 2 Oct 2014 1:15 am Operator: T. THOMAS
Sample : K1409921-009 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:14 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	71127	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	243088	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	123192	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	209547	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	219991	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	204948	40.00	ug/ml	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	102554	50.26	ug/ml	0.01
Spiked Amount 150.000	Range 21 - 100		Recovery = 33.51%			
7) Phenol-d6	8.74	99	163792	68.09	ug/ml	0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 45.39%			
19) Nitrobenzene-d5	10.14	82	89996	41.83	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 41.83%			
38) 2-Fluorobiphenyl	13.10	172	257015	55.31	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 55.31%			
59) 2,4,6-Tribromophenol	15.46	330	149213	129.39	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 86.26%			
71) Terphenyl-d14	19.20	244	375342	78.07	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 78.07%			
Target Compounds						Qvalue
27) Benzoic Acid	11.05	122	2652	2.48	ug/ml	94
29) Naphthalene	11.35	128	3248	0.59	ug/ml	98
33) 2-Methylnaphthalene	12.49	142	1319	0.37	ug/ml	100
41) Acenaphthylene	13.94	152	1712	0.28	ug/ml	94
44) Acenaphthene	14.22	154	903	0.27	ug/ml	93
47) Dibenzofuran	14.50	168	2343	0.44	ug/ml	94
51) Fluorene	15.06	166	1031	0.26	ug/ml	94
53) Diethyl Phthalate	14.94	149	1129	0.24	ug/ml	53
63) Phenanthrene	16.61	178	17765	3.48	ug/ml	99
64) Anthracene	16.69	178	5827	1.12	ug/ml	94
65) Carbazole	16.98	167	4588	0.92	ug/ml	96
66) Di-n-butyl Phthalate	17.61	149	21362m	3.27	ug/ml	
67) Fluoranthene	18.54	202	45329	7.89	ug/ml	98
70) Pyrene	18.89	202	44360	6.81	ug/ml	100
72) Butyl Benzyl Phthalate	20.03	149	37186m	12.43	ug/ml	
74) Benz(a)anthracene	20.95	228	22314	4.02	ug/ml	97
75) Chrysene	21.02	228	61807	11.30	ug/ml	98
76) Bis(2-ethylhexyl) Phthalat	21.15	149	31155	7.91	ug/ml	99
79) Benzo(b)fluoranthene	23.27	252	102838	20.60	ug/ml	98
80) Benzo(k)fluoranthene	23.32	252	26499	5.42	ug/ml	94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F010.D Vial: 10
Acq On : 2 Oct 2014 1:15 am Operator: T. THOMAS
Sample : K1409921-009 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:14 2014 Quant Results File: 093014BNC7.RES

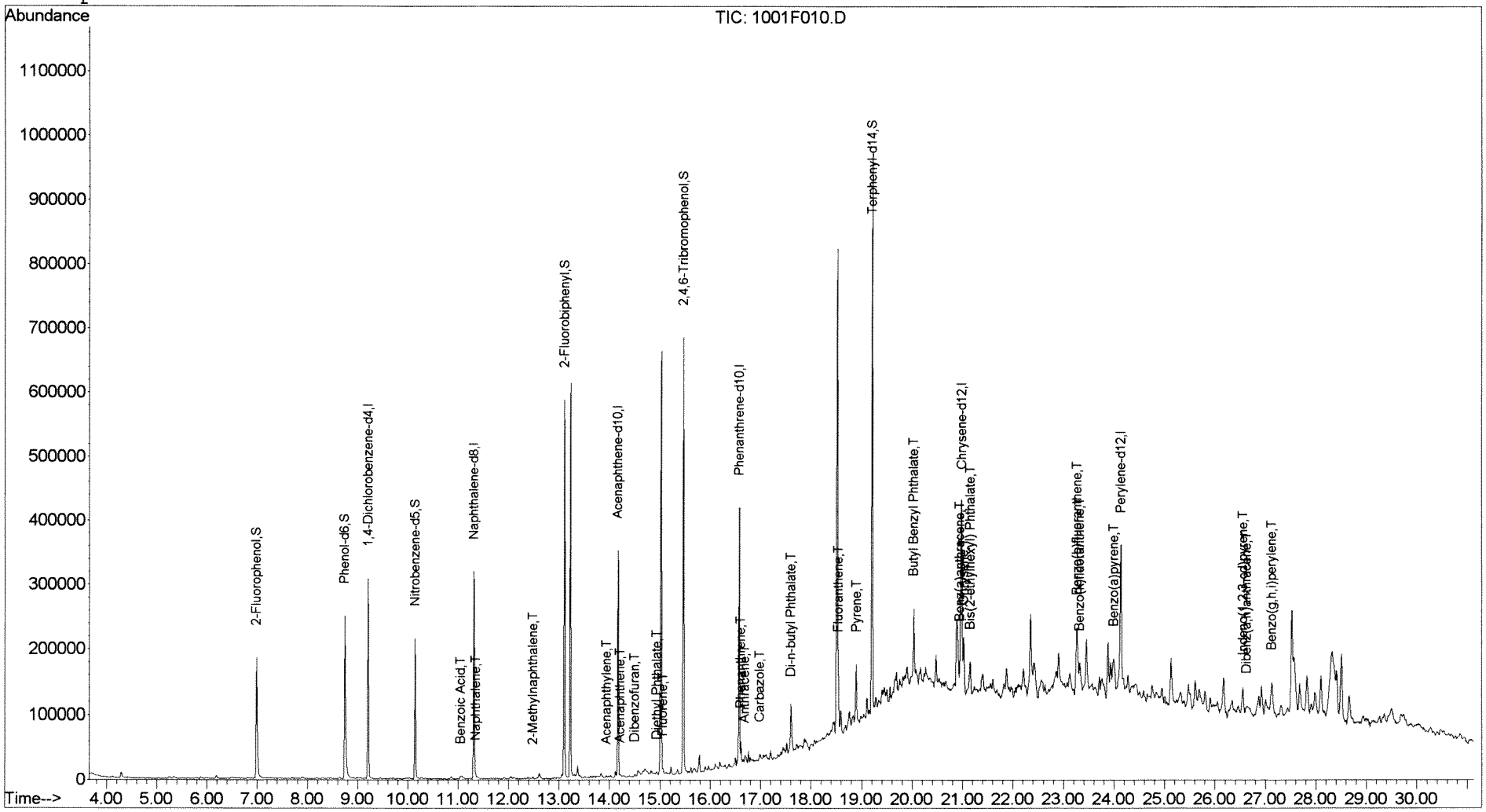
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

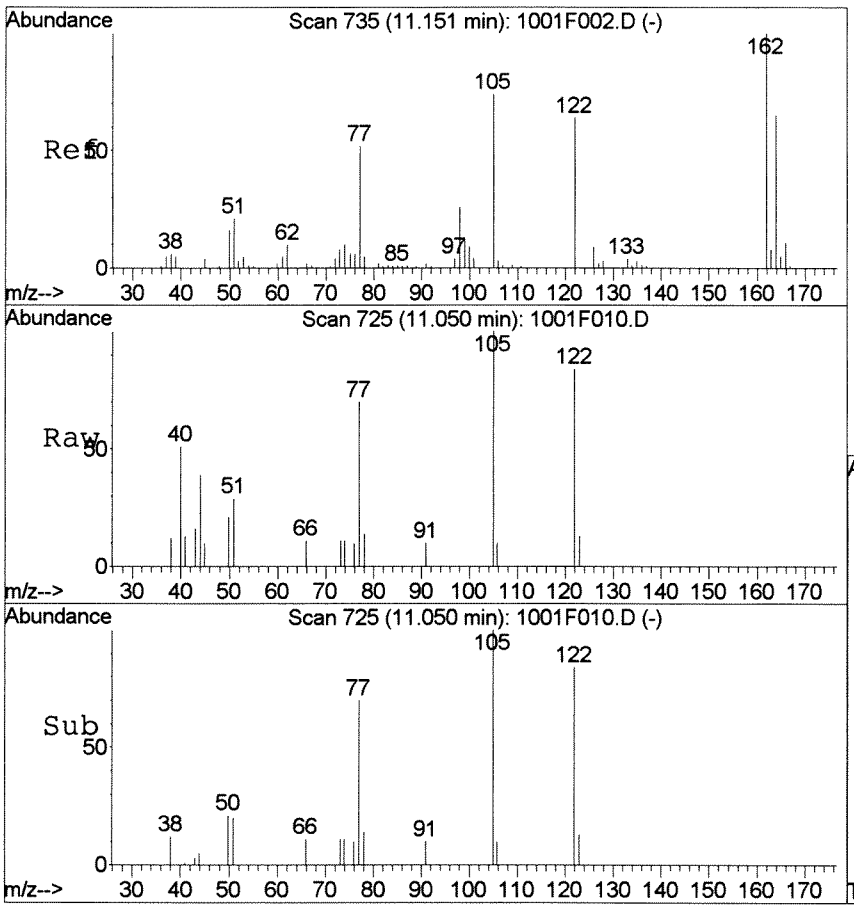
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Benzo(a)pyrene	23.99	252	17735	3.66	ug/ml	93
82)	Indeno(1,2,3-cd)pyrene	26.56	276	31461m	7.20	ug/ml	
83)	Dibenz(a,h)anthracene	26.63	278	8963	1.99	ug/ml	92
84)	Benzo(g,h,i)perylene	27.13	276	35421	7.40	ug/ml	93

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F010.D Vial: 10
Acq On : 2 Oct 2014 1:15 am Operator: T. THOMAS
Sample : K1409921-009 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:05 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

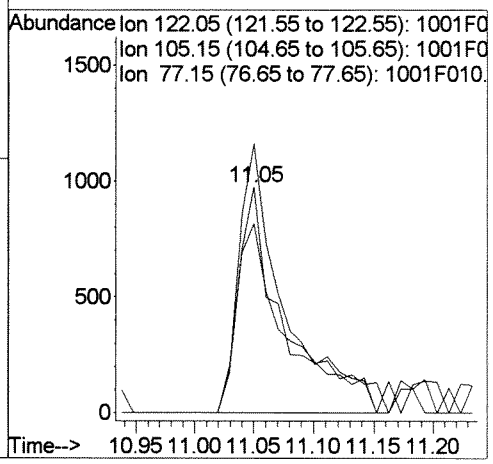


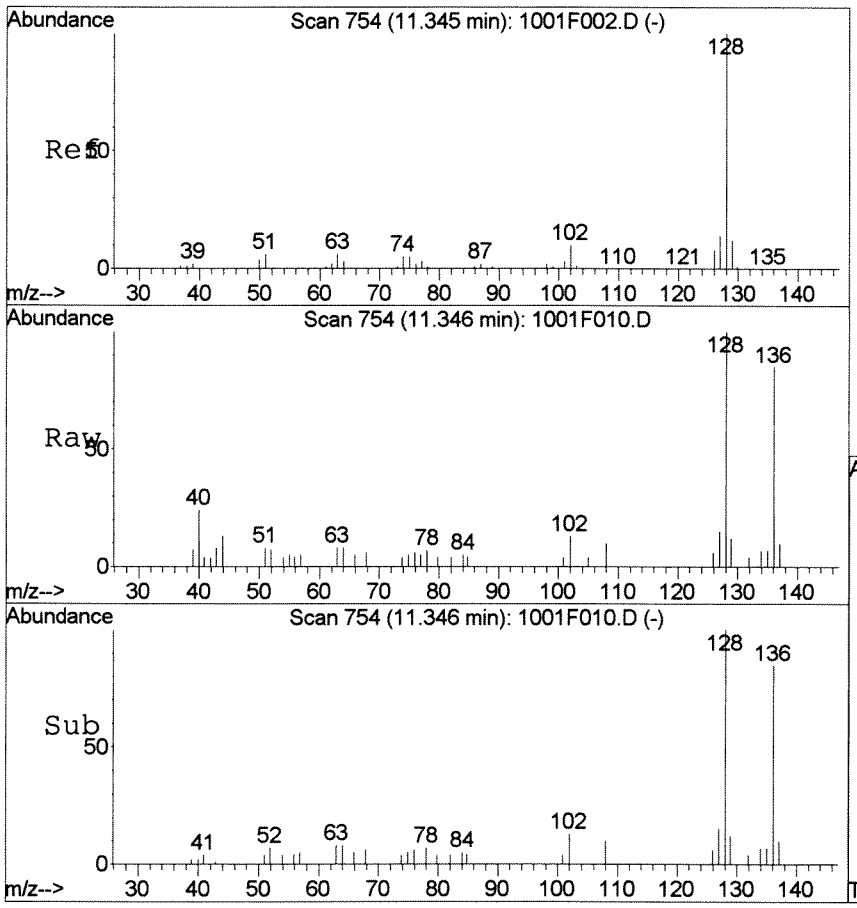


#27
Benzoic Acid
Concen: 2.48 ug/ml
RT: 11.05 min Scan# 725
Delta R.T. -0.10 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:122 Resp: 2652

Ion	Ratio	Lower	Upper
122	100		
105	112.0	90.4	150.4
77	83.8	50.1	110.1

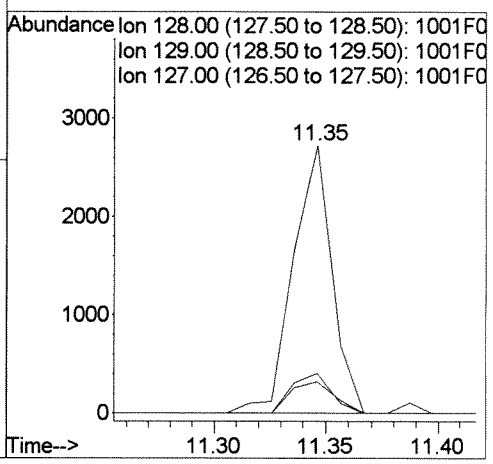


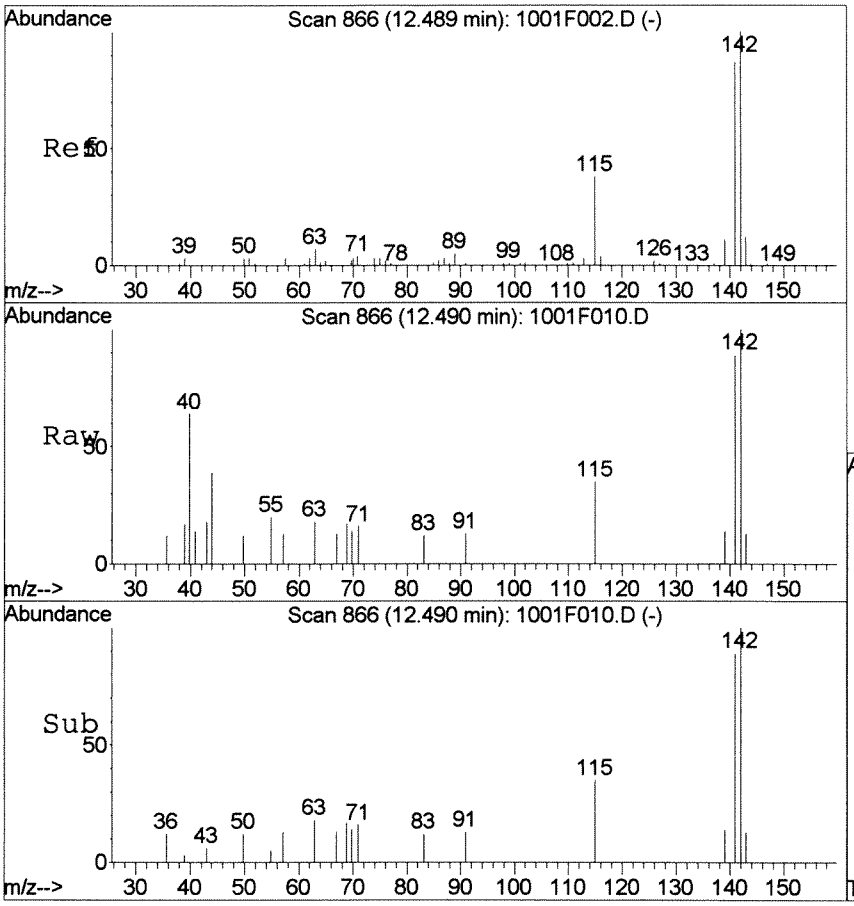


#29
Naphthalene
Concen: 0.59 ug/ml
RT: 11.35 min Scan# 754
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:128 Resp: 3248

Ion	Ratio	Lower	Upper
128	100		
129	11.8	0.0	41.2
127	14.9	0.0	44.0

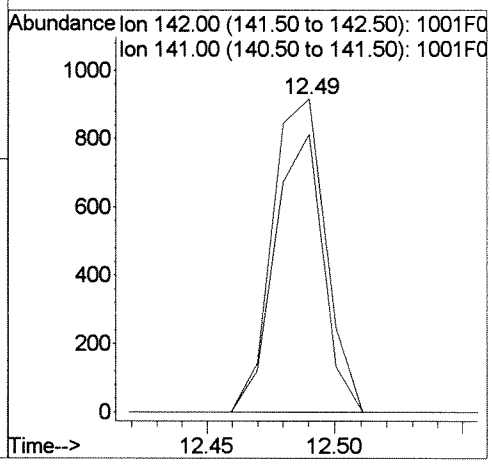


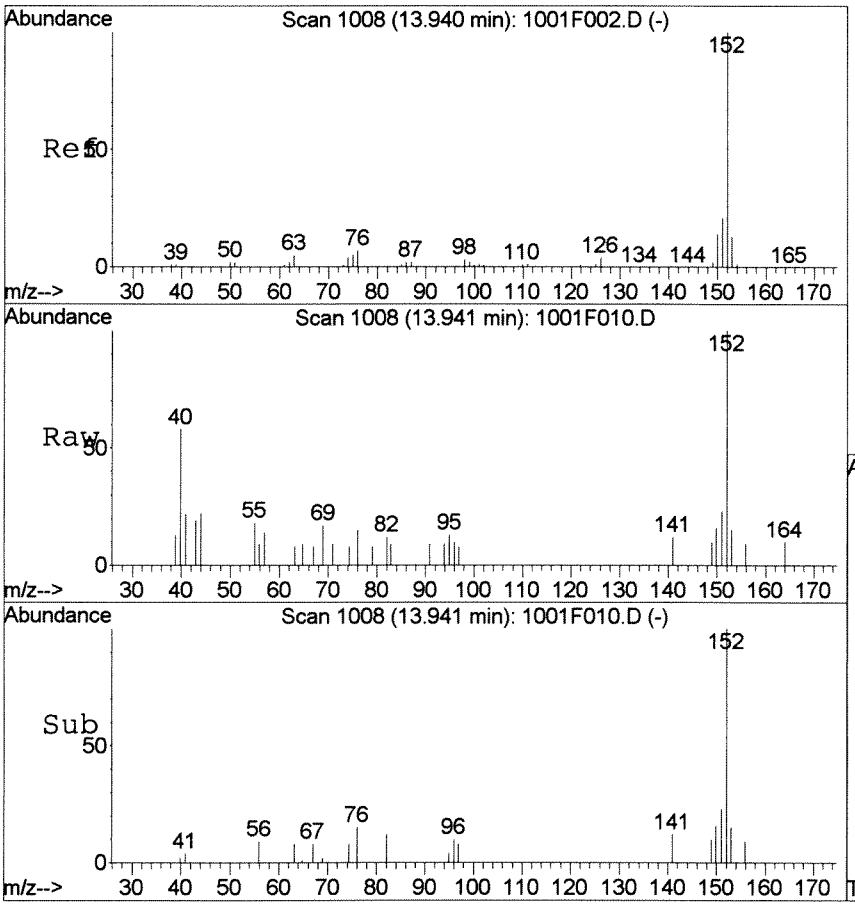


#33
2-Methylnaphthalene
Concen: 0.37 ug/ml
RT: 12.49 min Scan# 866
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:142 Resp: 1319

Ion	Ratio	Lower	Upper
142	100		
141	88.6	58.7	118.7

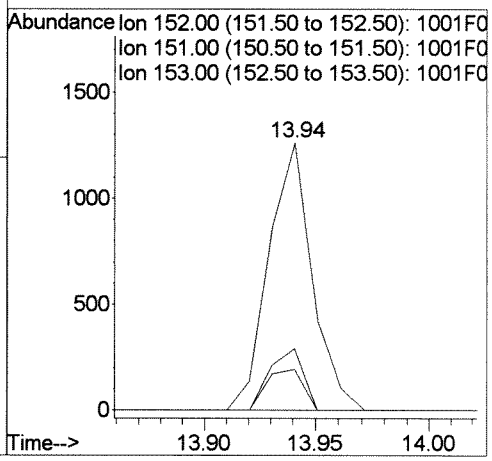


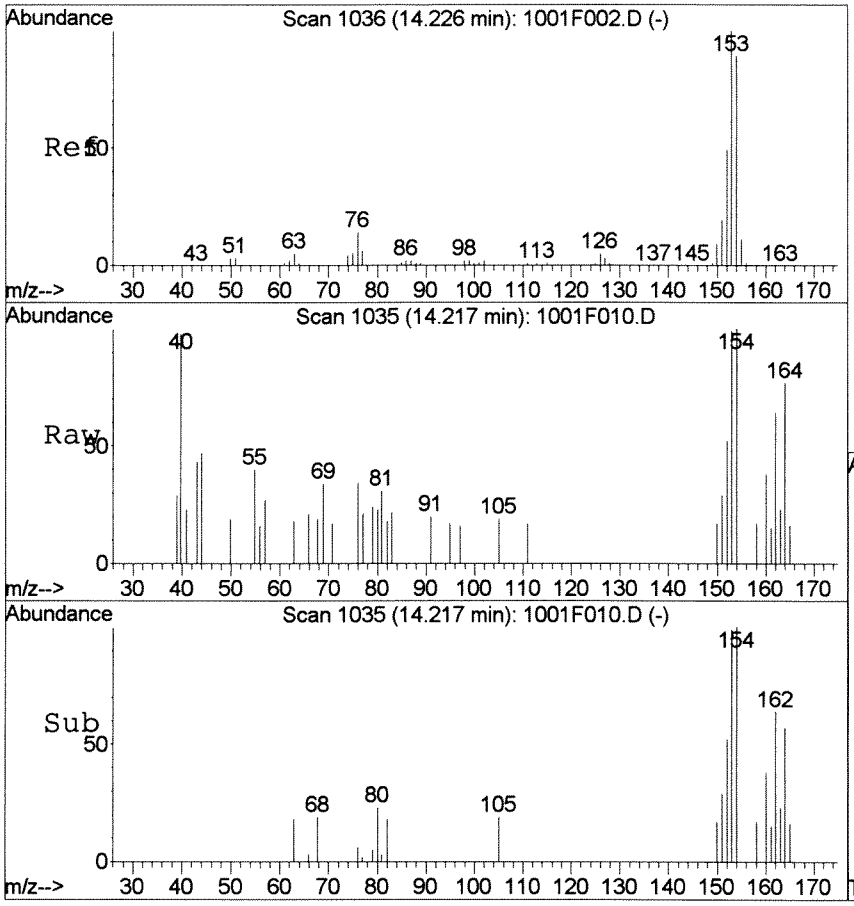


#41
Acenaphthylene
Concen: 0.28 ug/ml
RT: 13.94 min Scan# 1008
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:152 Resp: 1712

Ion	Ratio	Lower	Upper
152	100		
151	23.1	0.0	50.3
153	15.3	0.0	43.2

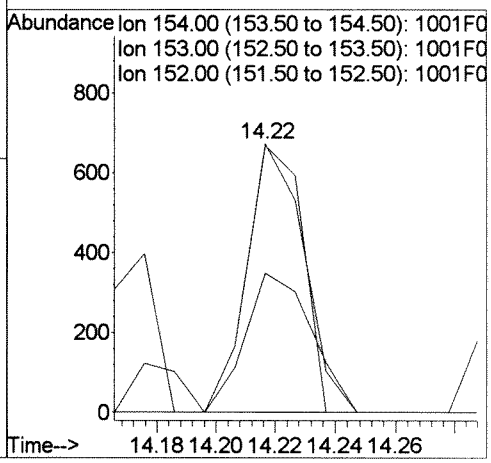


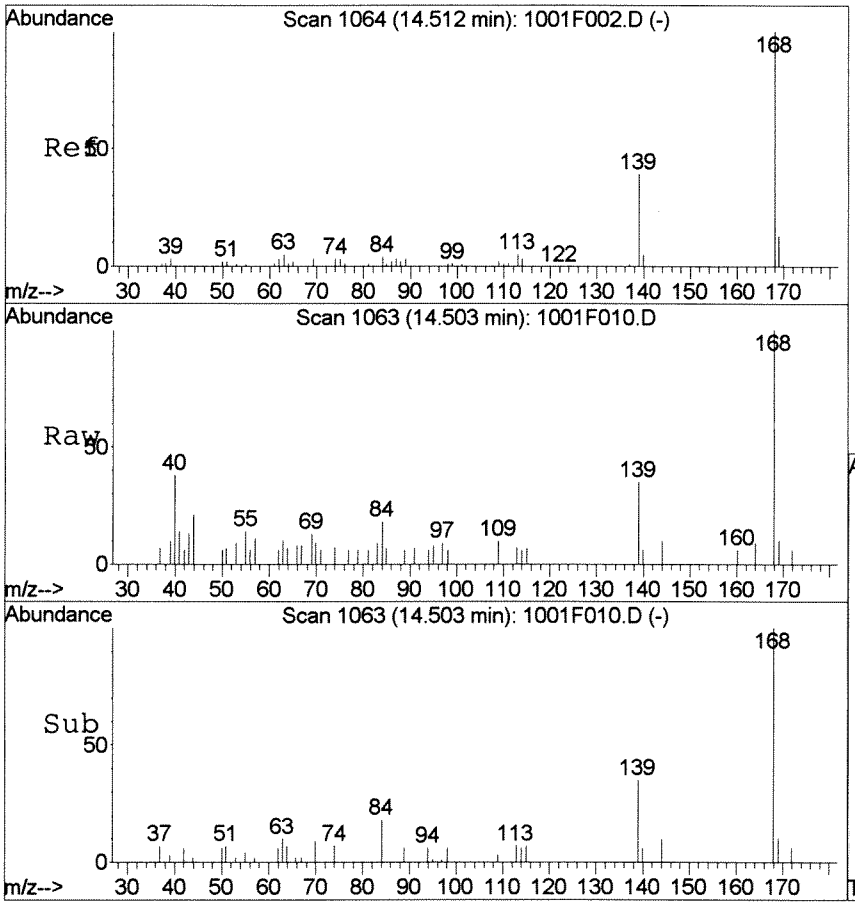


#44
Acenaphthene
Concen: 0.27 ug/ml
RT: 14.22 min Scan# 1035
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:154 Resp: 903

Ion	Ratio	Lower	Upper
154	100		
153	99.3	79.7	139.7
152	51.9	23.7	83.7

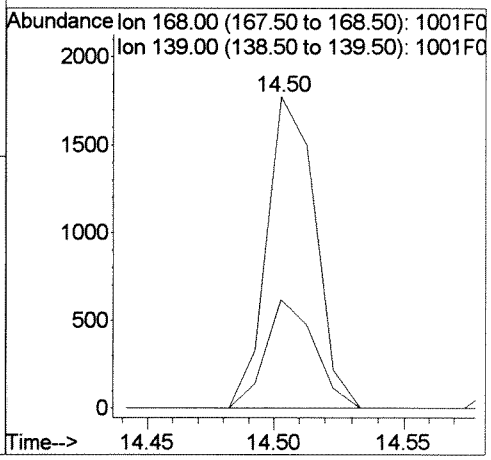


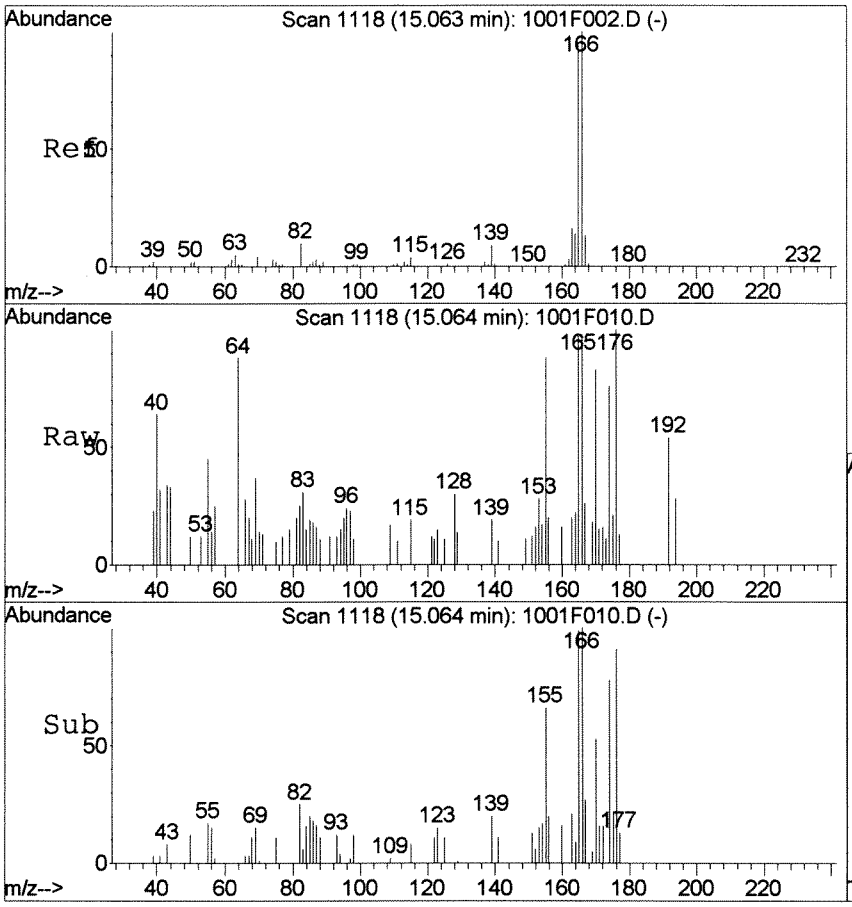


#47
Dibenzofuran
Concen: 0.44 ug/ml
RT: 14.50 min Scan# 1063
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:168 Resp: 2343

Ion	Ratio	Lower	Upper
168	100		
139	34.9	8.8	68.8

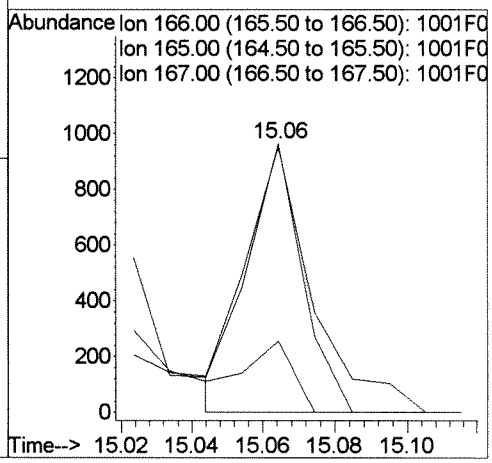


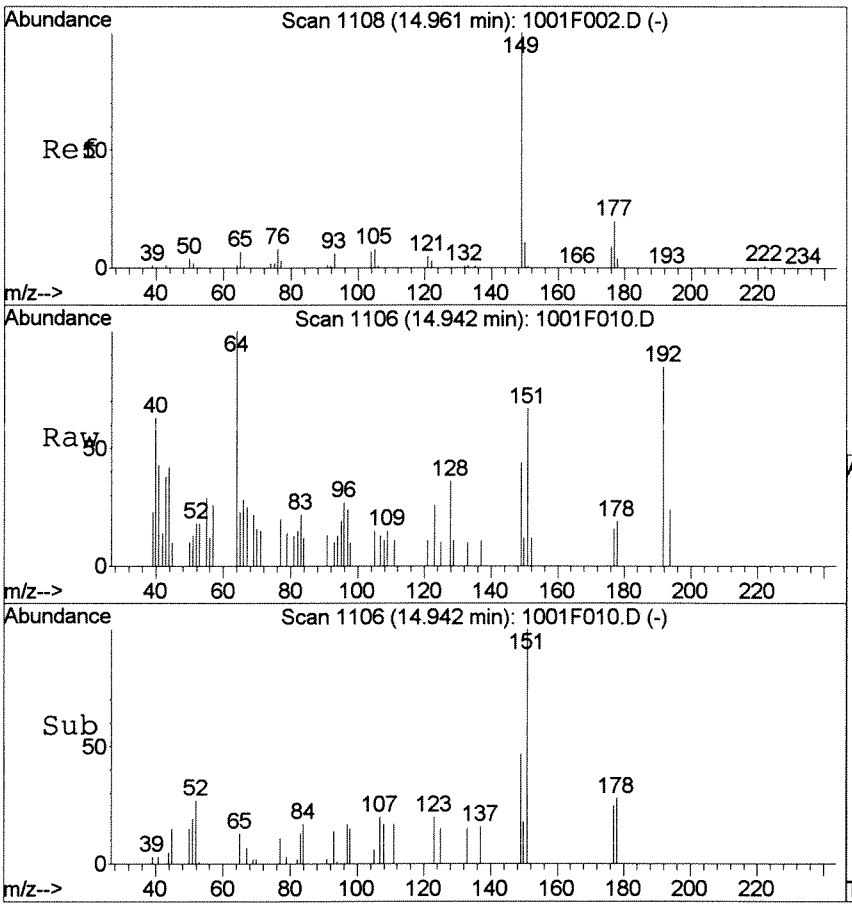


#51
Fluorene
Concen: 0.26 ug/ml
RT: 15.06 min Scan# 1118
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:166 Resp: 1031

Ion	Ratio	Lower	Upper
166	100		
165	92.8	65.9	125.9
167	22.3	0.0	43.4

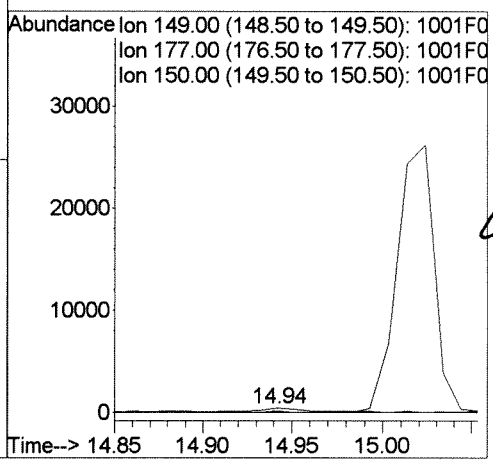


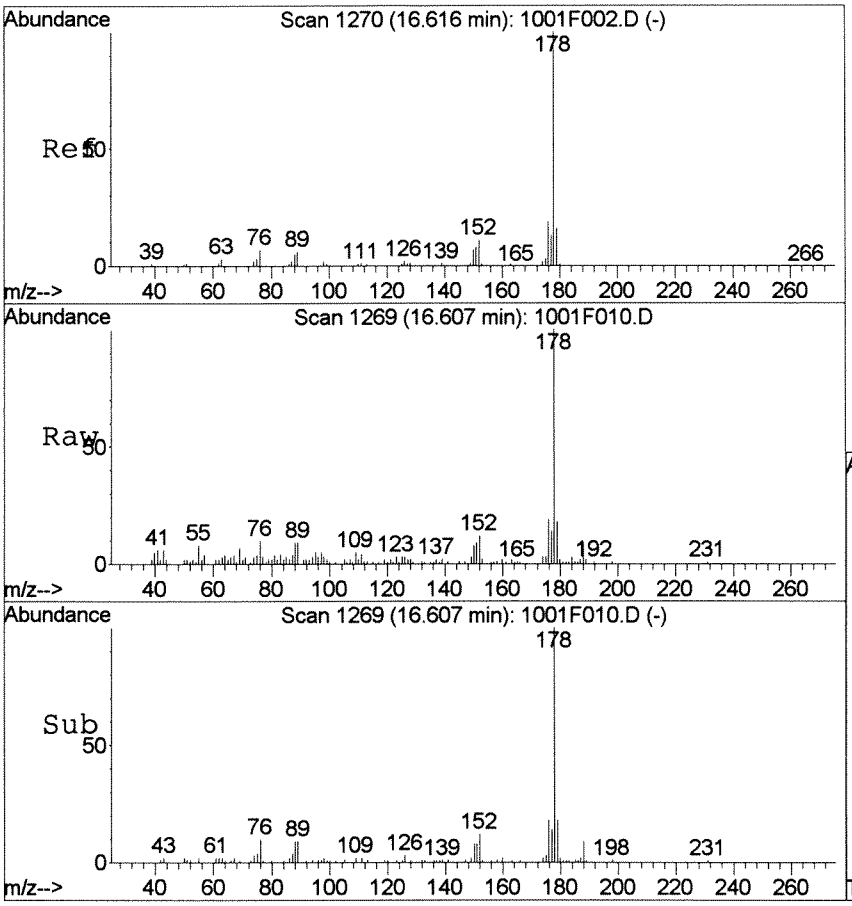


#53
Diethyl Phthalate
Concen: 0.24 ug/ml
RT: 14.94 min Scan# 1106
Delta R.T. -0.02 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:149 Resp: 1129

Ion	Ratio	Lower	Upper
149	100		
177	0.0	0.0	50.8
150	30.7	0.0	41.3

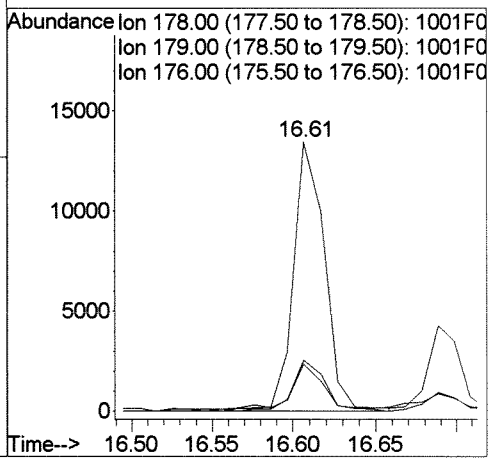


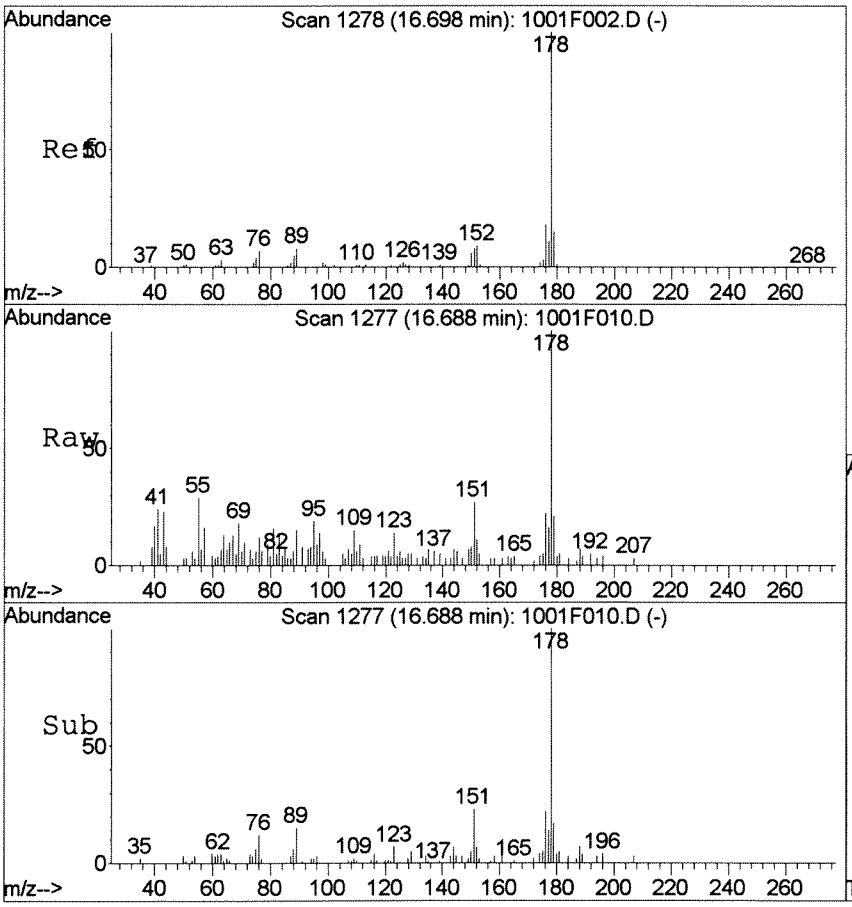


#63
Phenanthrene
Concen: 3.48 ug/ml
RT: 16.61 min Scan# 1269
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:178 Resp: 17765

Ion	Ratio	Lower	Upper
178	100		
179	16.5	0.0	45.5
176	19.0	0.0	49.1

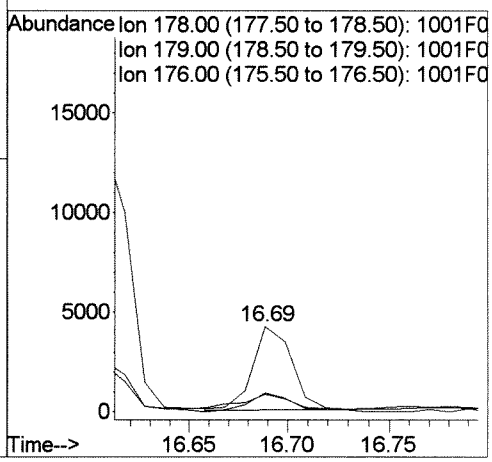


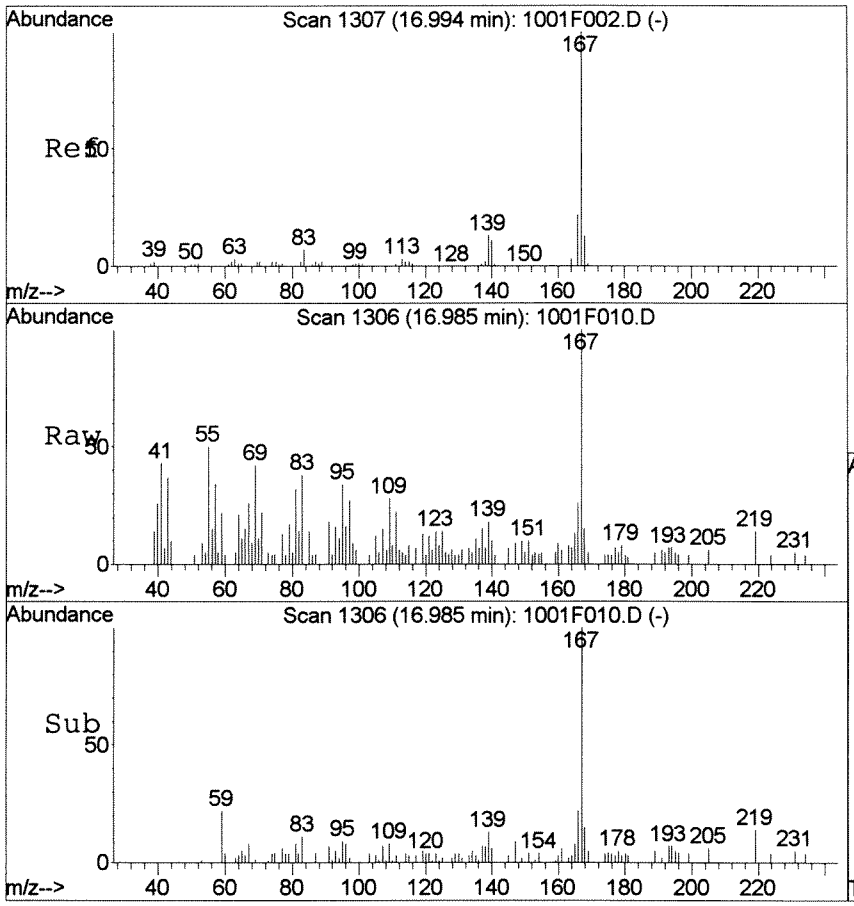


#64
Anthracene
Concen: 1.12 ug/ml
RT: 16.69 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:178 Resp: 5827

Ion	Ratio	Lower	Upper
178	100		
179	16.1	0.0	45.6
176	23.0	0.0	48.8

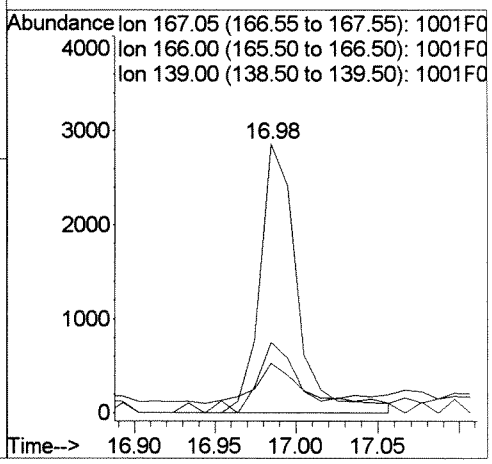


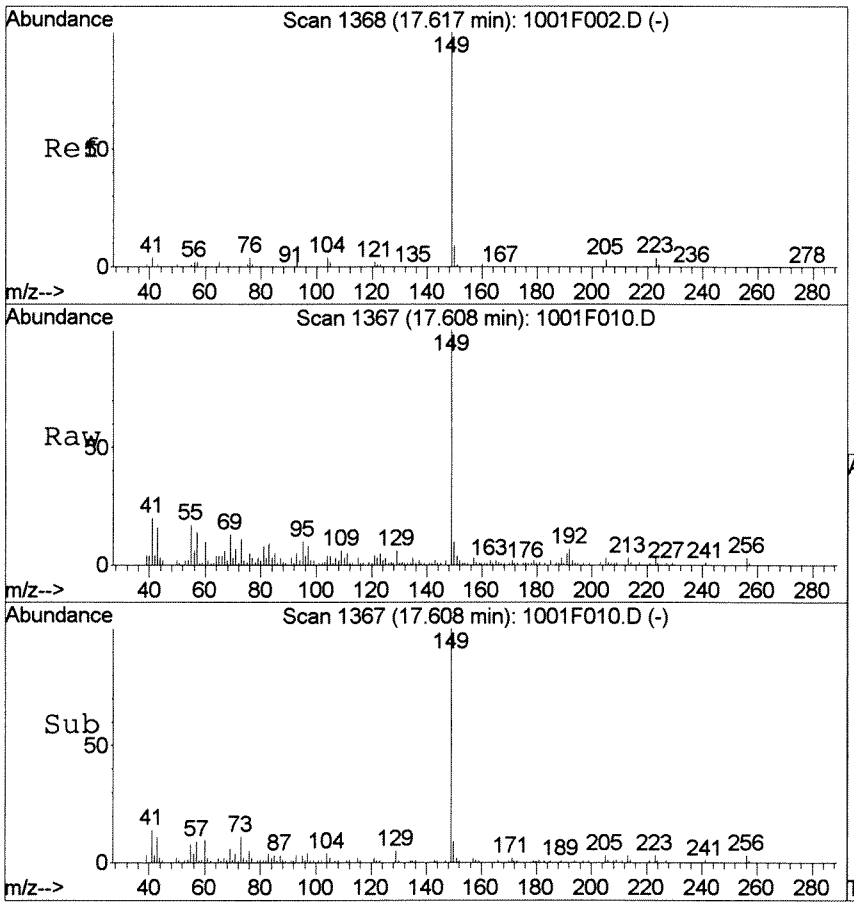


#65
Carbazole
Concen: 0.92 ug/ml
RT: 16.98 min Scan# 1306
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:167 Resp: 4588

Ion	Ratio	Lower	Upper
167	100		
166	24.7	0.0	51.6
139	13.5	0.0	43.3

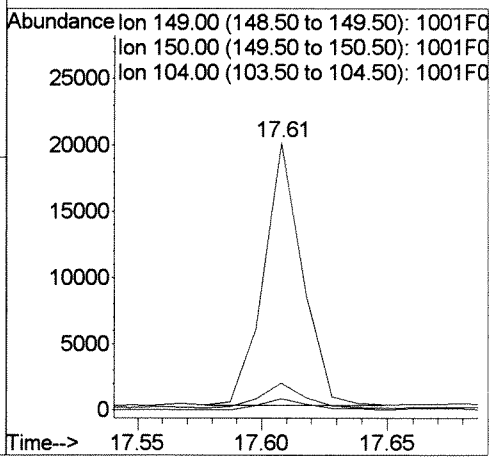


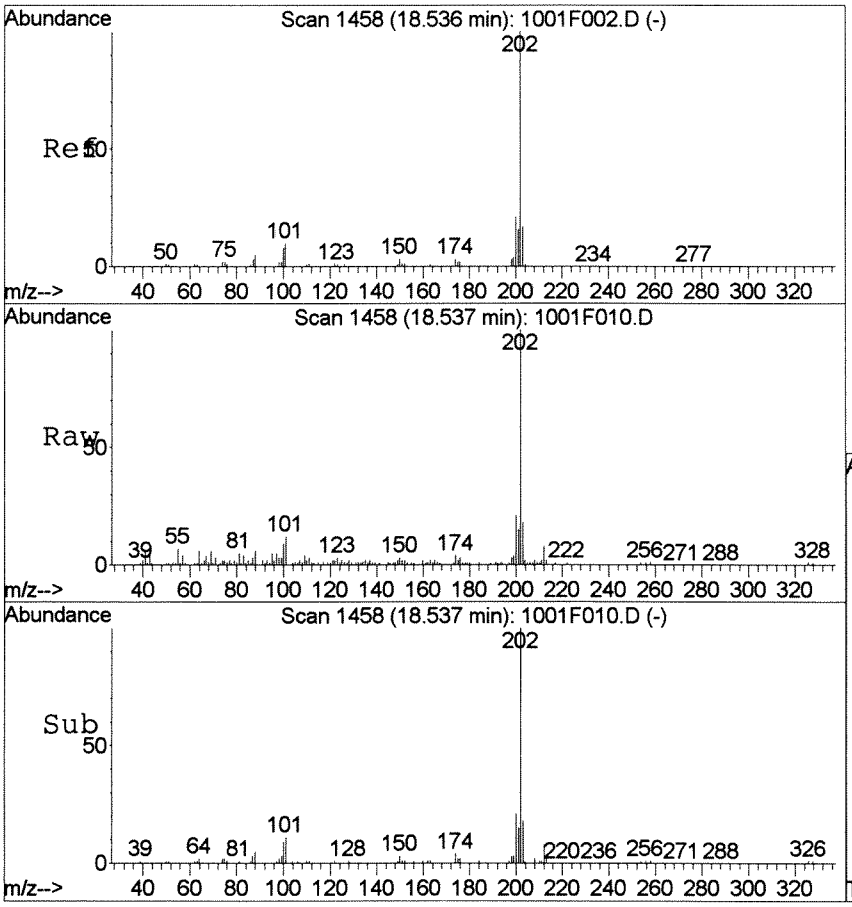


#66
Di-n-butyl Phthalate
Concen: 3.27 ug/ml m
RT: 17.61 min Scan# 1367
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:149 Resp: 21362

Ion	Ratio	Lower	Upper
149	100		
150	10.0	0.0	39.3
104	4.3	0.0	35.1

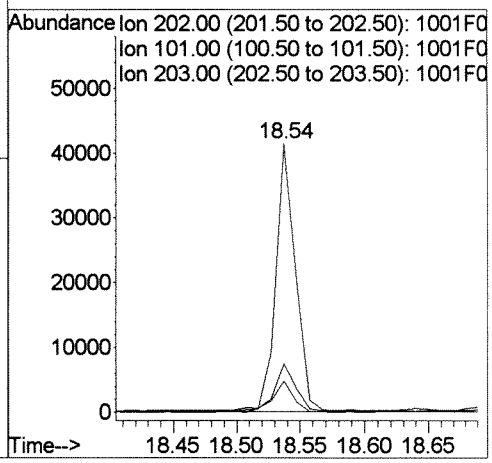


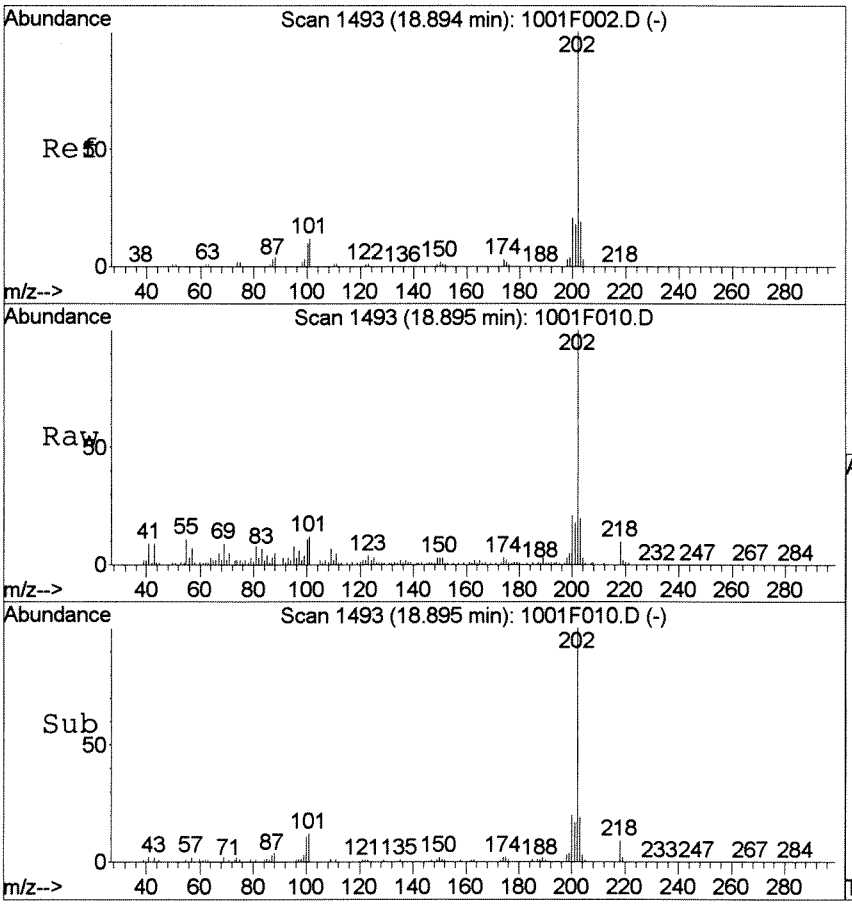


#67
Fluoranthene
Concen: 7.89 ug/ml
RT: 18.54 min Scan# 1458
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:202 Resp: 45329

Ion	Ratio	Lower	Upper
202	100		
101	11.6	0.0	39.2
203	17.5	0.0	47.5

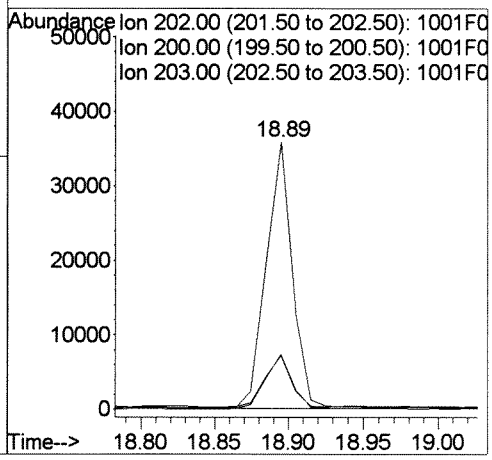


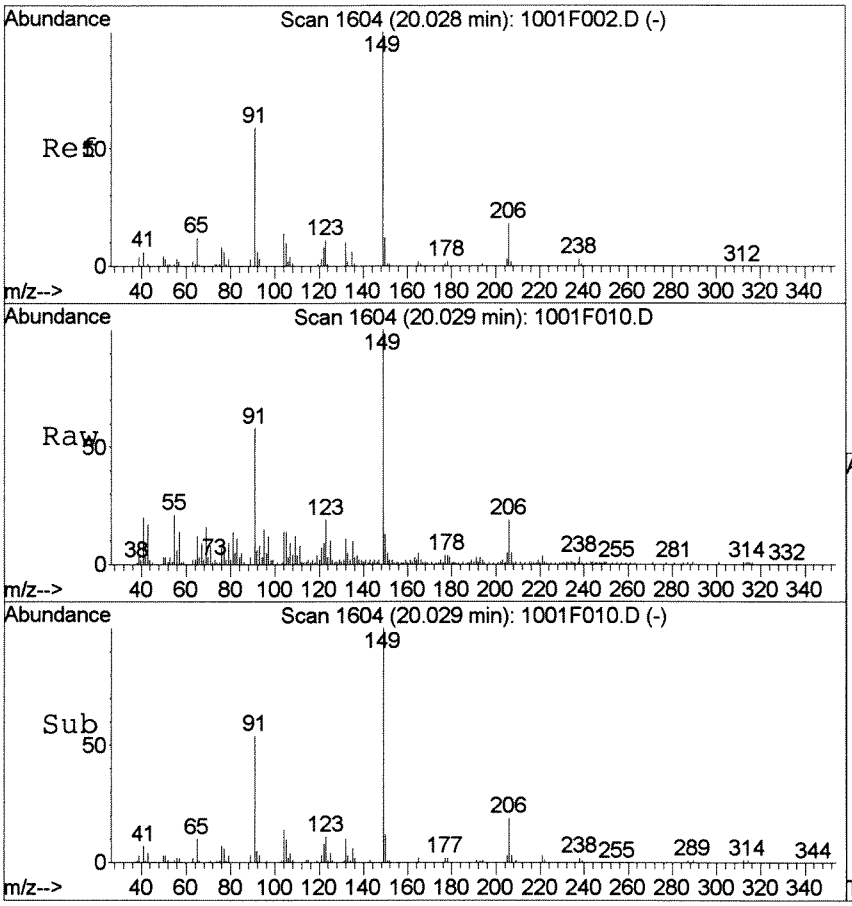


#70
Pyrene
Concen: 6.81 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:202 Resp: 44360

Ion	Ratio	Lower	Upper
202	100		
200	20.5	0.0	50.7
203	19.3	0.0	49.2

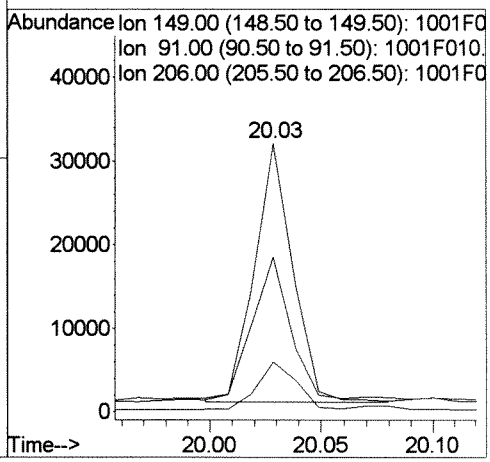


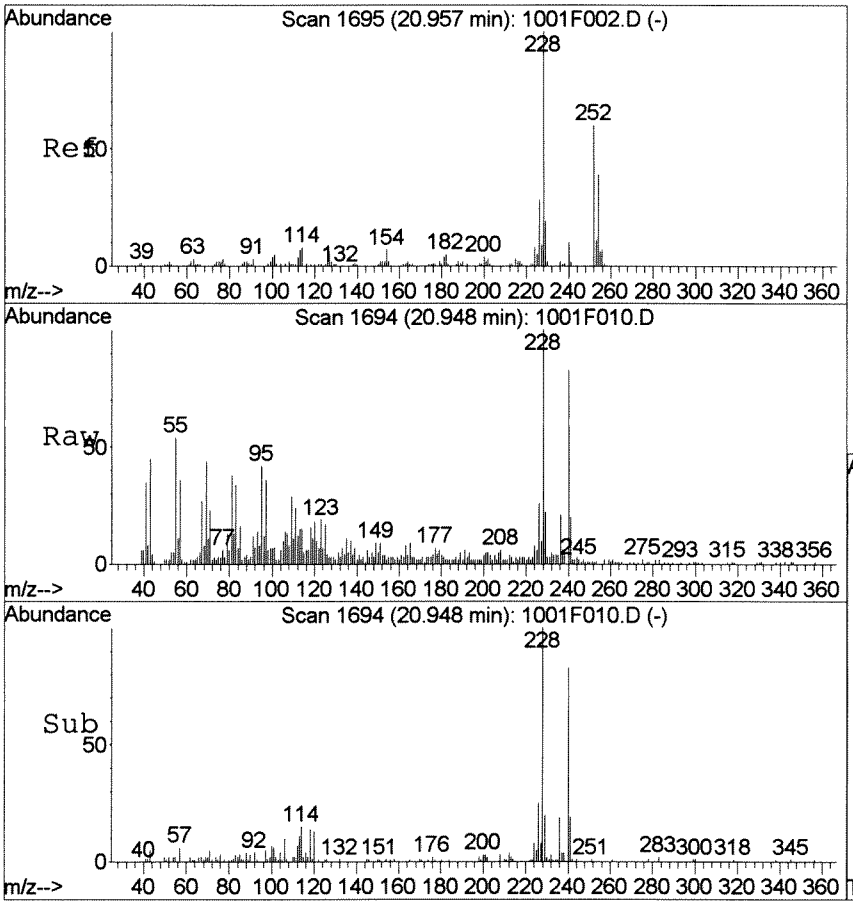


#72
Butyl Benzyl Phthalate
Concen: 12.43 ug/ml m
RT: 20.03 min Scan# 1604
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:149 Resp: 37186

Ion	Ratio	Lower	Upper
149	100		
91	57.8	28.0	88.0
206	18.5	0.0	46.9

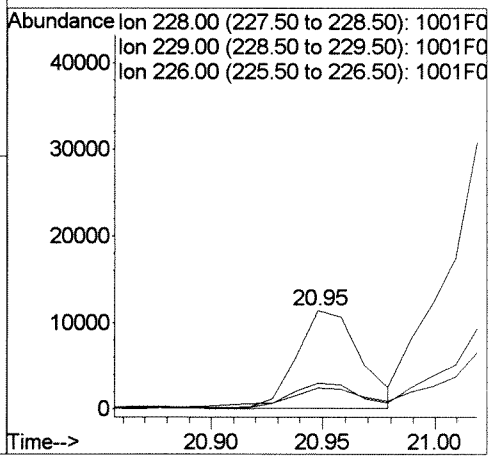


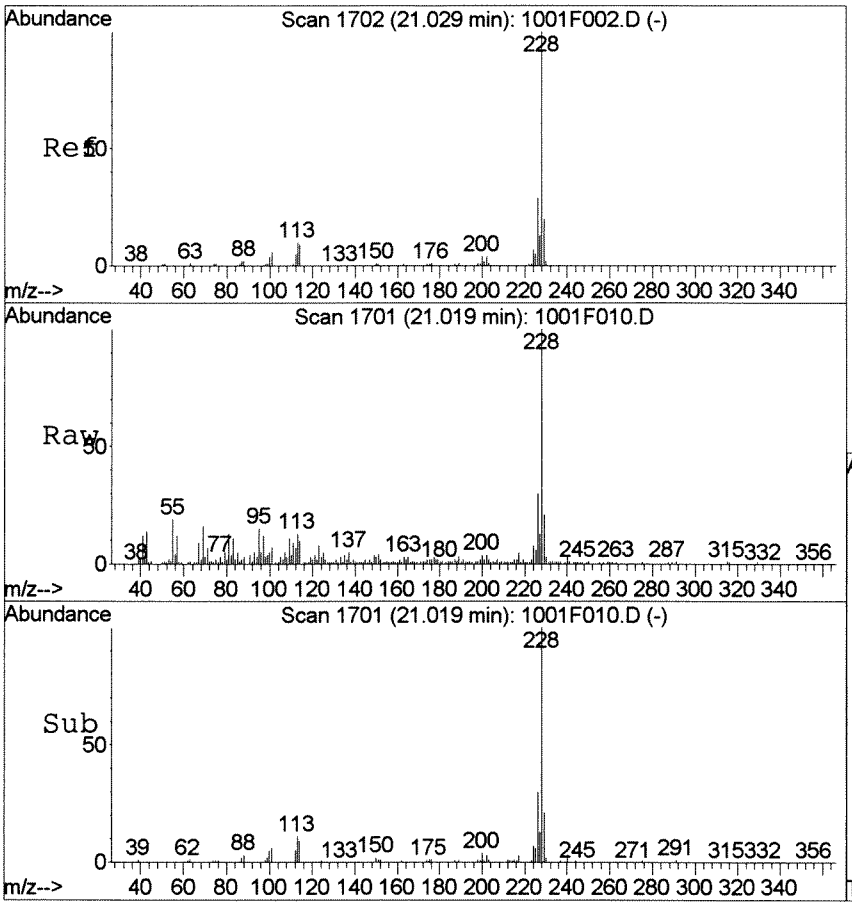


#74
Benz(a)anthracene
Concen: 4.02 ug/ml
RT: 20.95 min Scan# 1694
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:228 Resp: 22314

Ion	Ratio	Lower	Upper
228	100		
229	18.1	0.0	49.0
226	25.6	0.0	57.3

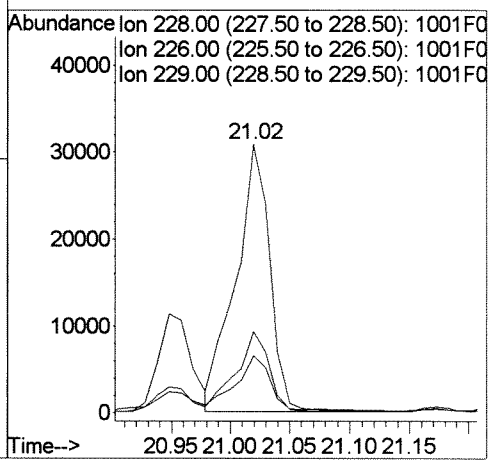


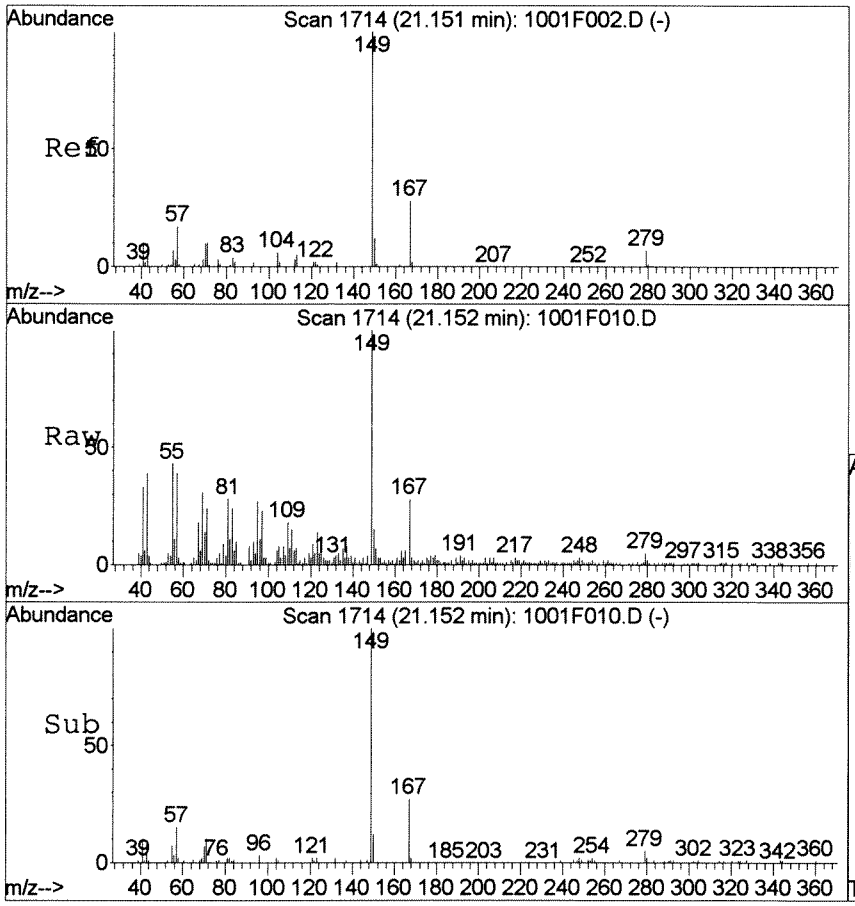


#75
Chrysene
Concen: 11.30 ug/ml
RT: 21.02 min Scan# 1701
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:228 Resp: 61807

Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.0	59.3
229	20.3	0.0	49.2

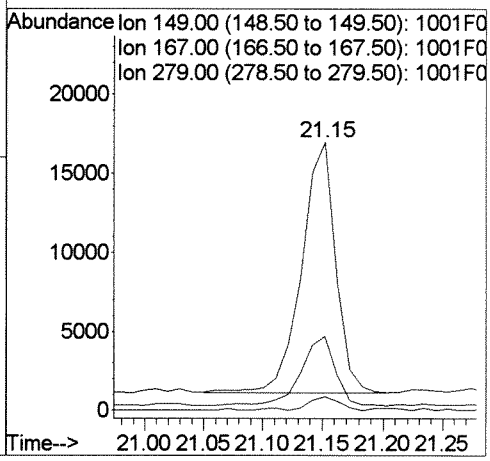


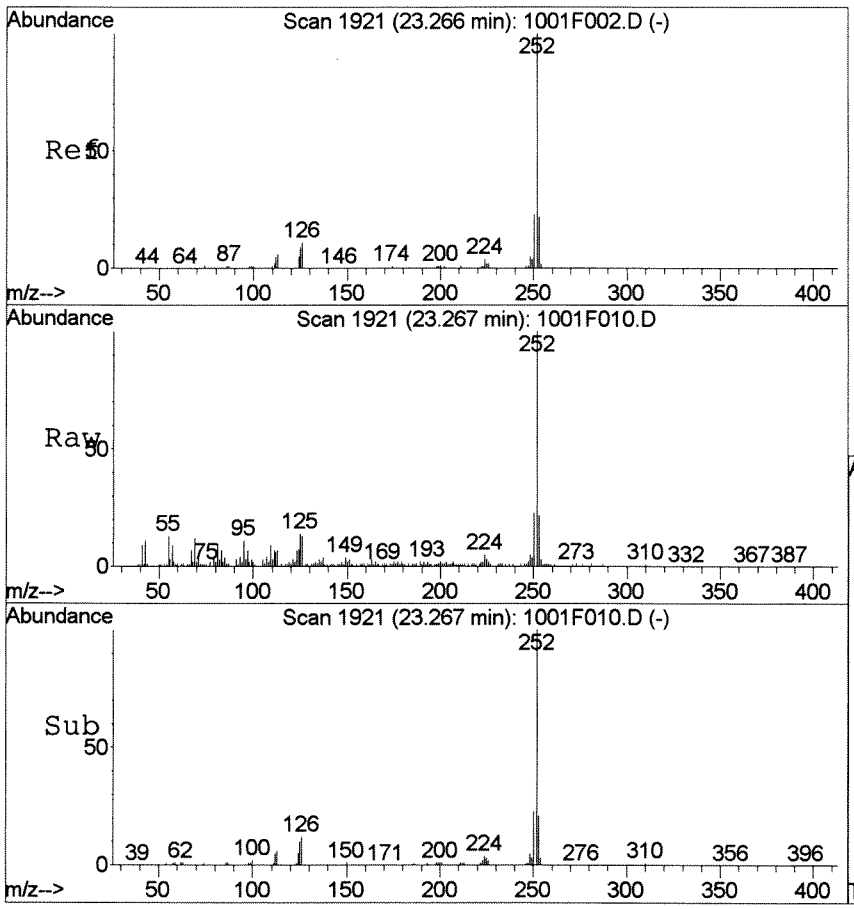


#76
Bis(2-ethylhexyl) Phthalate
Concen: 7.91 ug/ml
RT: 21.15 min Scan# 1714
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:149 Resp: 31155

Ion	Ratio	Lower	Upper
149	100		
167	27.6	0.0	57.7
279	5.1	0.0	36.6

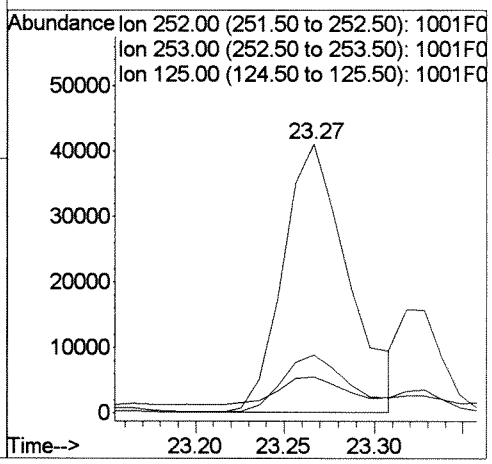


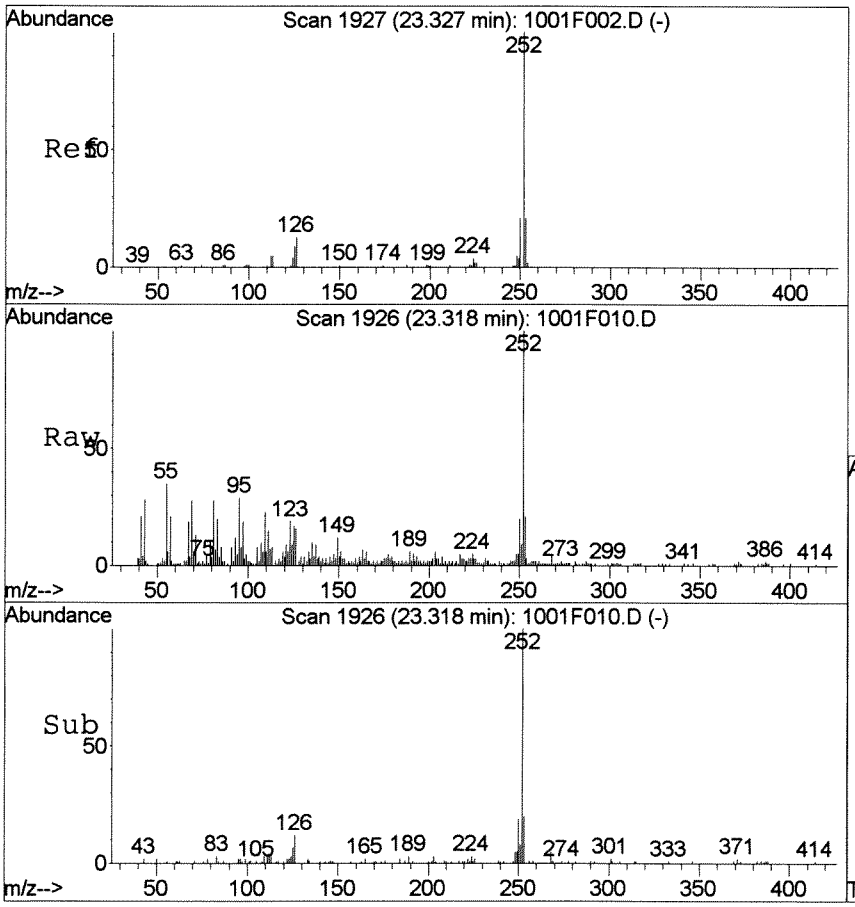


#79
Benzo(b)fluoranthene
Concen: 20.60 ug/ml
RT: 23.27 min Scan# 1921
Delta R.T. 0.00 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:252 Resp: 102838

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.9
125	10.2	0.0	39.2

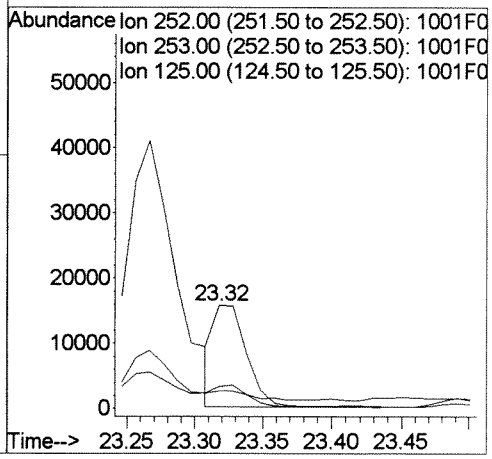


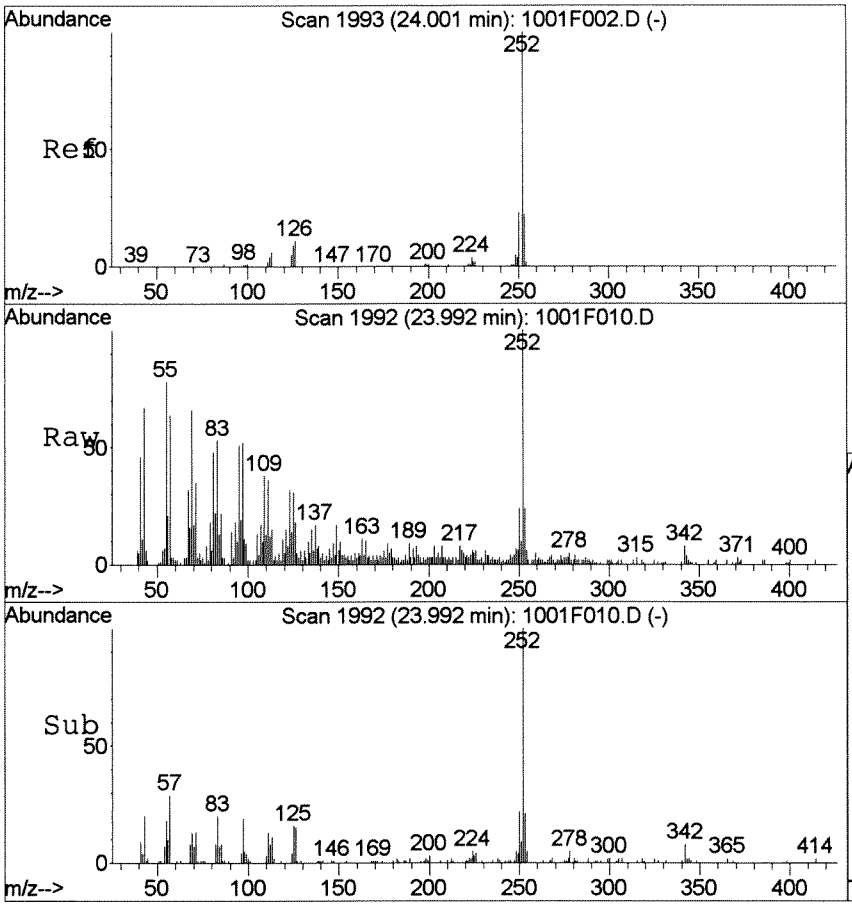


#80
Benzo(k)fluoranthene
Concen: 5.42 ug/ml
RT: 23.32 min Scan# 1926
Delta R.T. -0.02 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:252 Resp: 26499

Ion	Ratio	Lower	Upper
252	100		
253	18.6	0.0	51.3
125	5.9	0.0	38.4

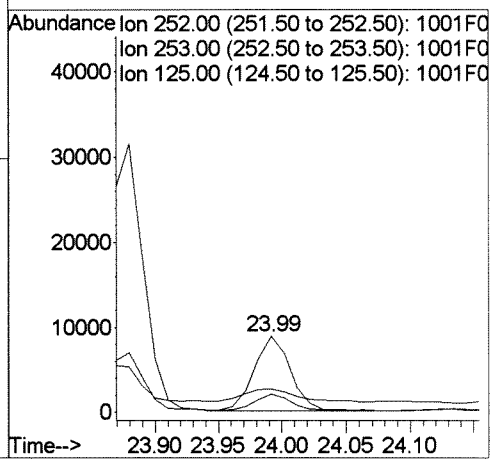


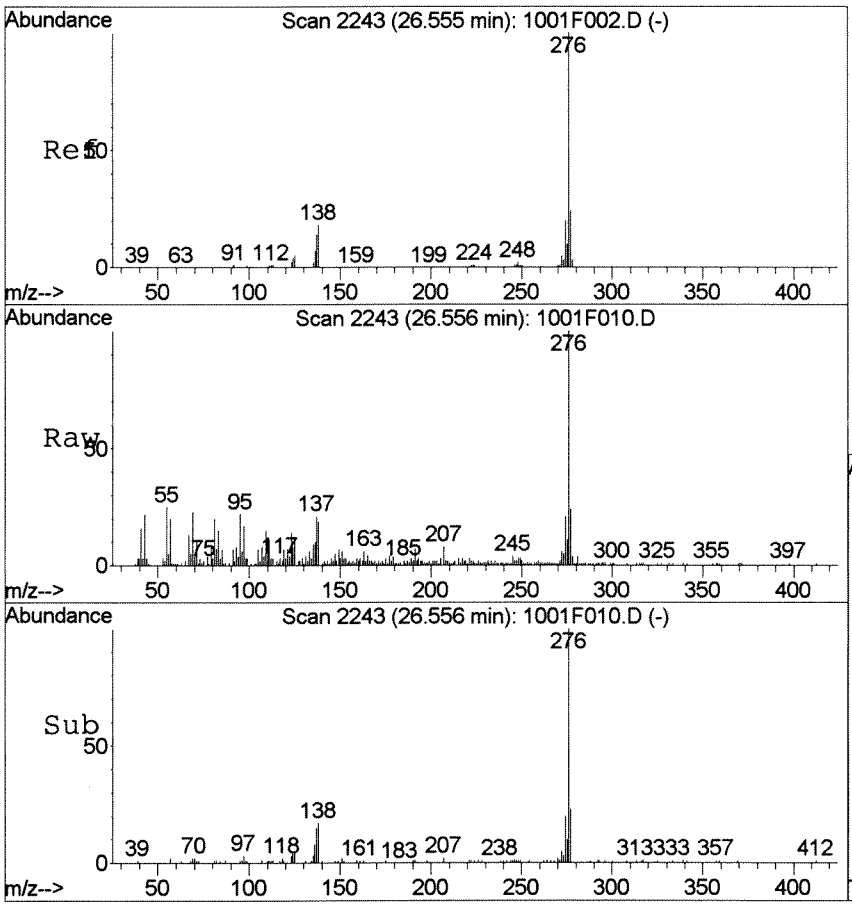


#81
Benzo(a)pyrene
Concen: 3.66 ug/ml
RT: 23.99 min Scan# 1992
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:252 Resp: 17735

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.1
125	16.5	0.0	39.6

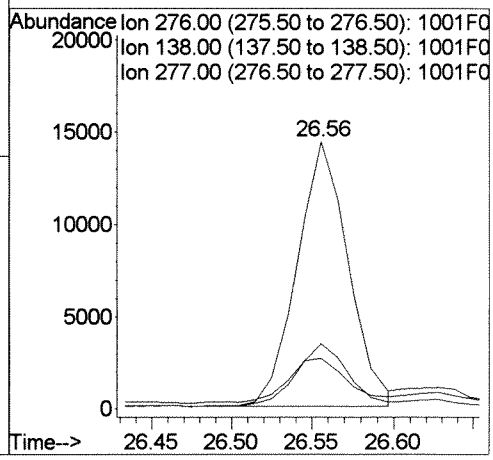


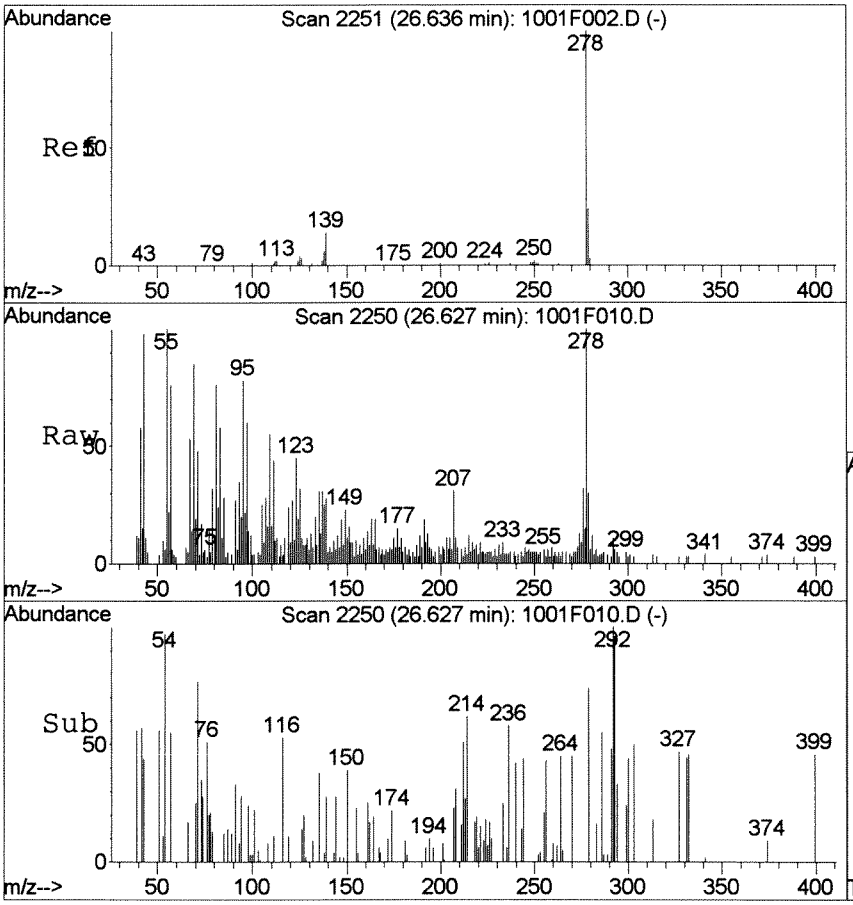


#82
Indeno(1,2,3-cd)pyrene
Concen: 7.20 ug/ml m
RT: 26.56 min Scan# 2243
Delta R.T. -0.01 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:276 Resp: 31461

Ion	Ratio	Lower	Upper
276	100		
138	19.0	0.0	46.3
277	24.5	0.0	53.1

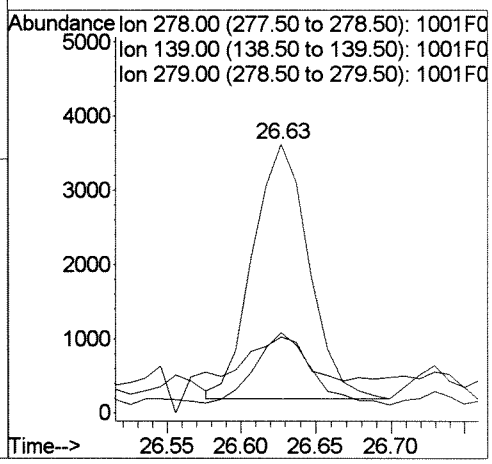


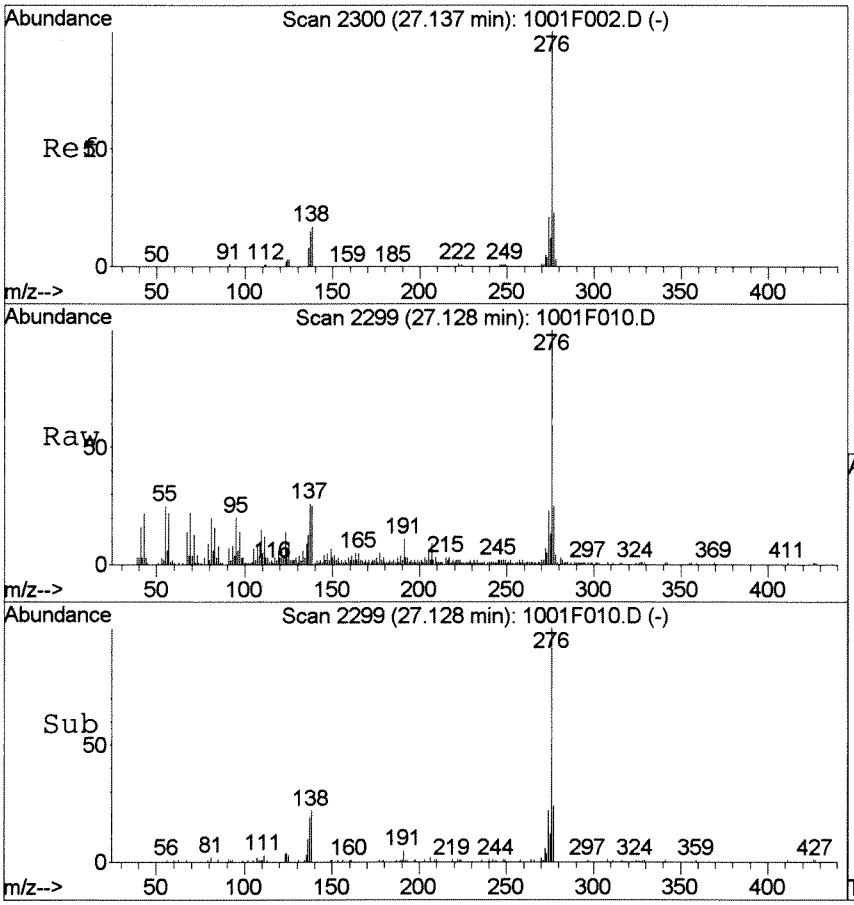


#83
Dibenz(a,h)anthracene
Concen: 1.99 ug/ml
RT: 26.63 min Scan# 2250
Delta R.T. -0.02 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:278 Resp: 8963

Ion	Ratio	Lower	Upper
278	100		
139	15.0	0.0	43.0
279	28.4	0.0	53.5

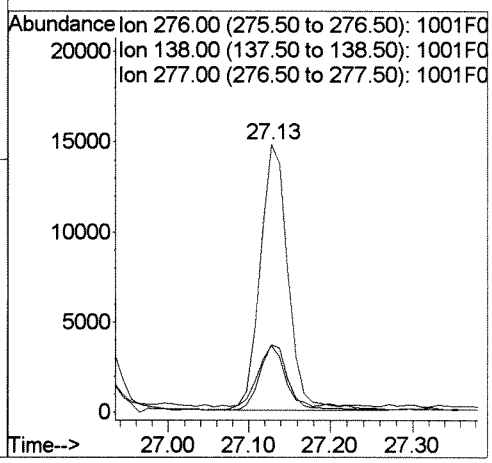




#84
Benzo(g,h,i)perylene
Concen: 7.40 ug/ml
RT: 27.13 min Scan# 2299
Delta R.T. -0.02 min
Lab File: 1001F010.D
Acq: 2 Oct 2014 1:15 am

Tgt Ion:276 Resp: 35421

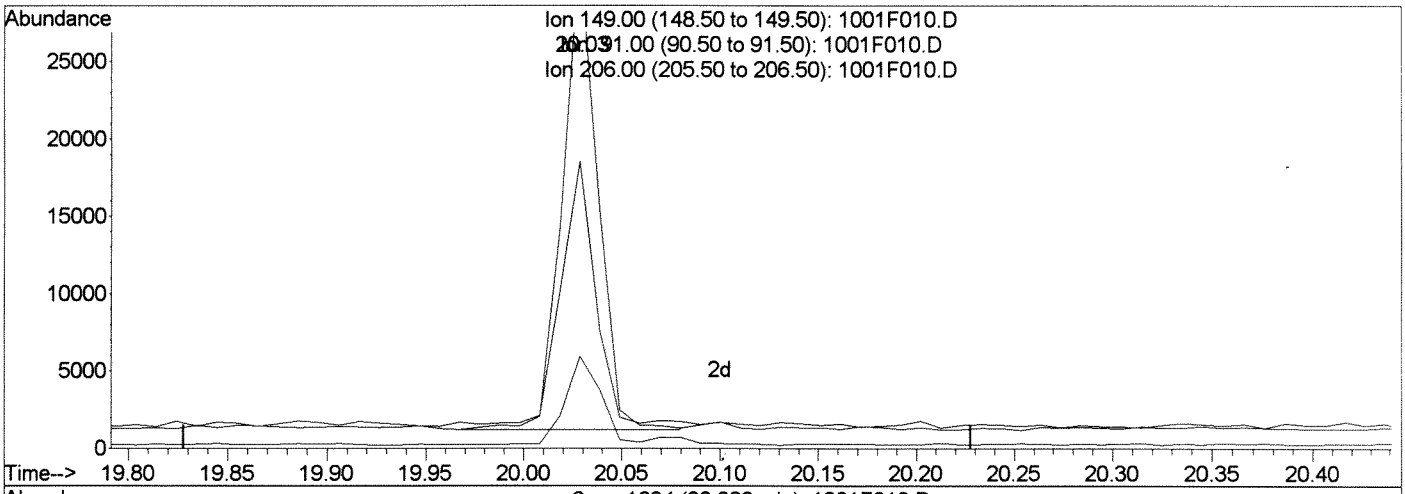
Ion	Ratio	Lower	Upper
276	100		
138	22.3	0.0	46.4
277	24.5	0.0	53.1

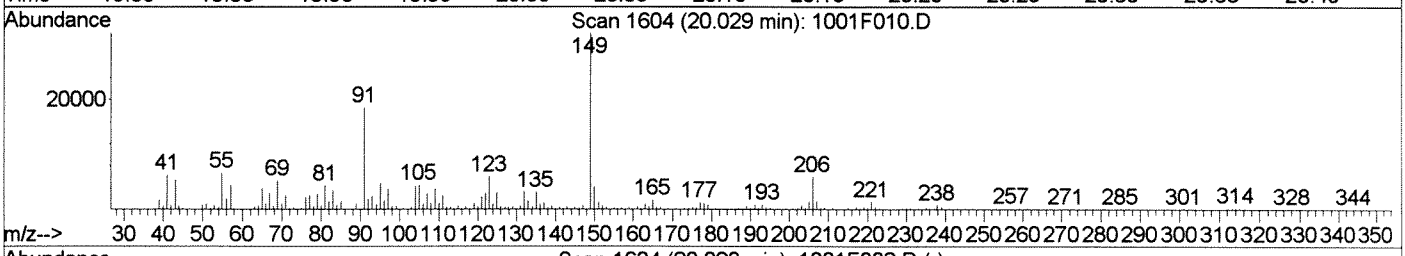


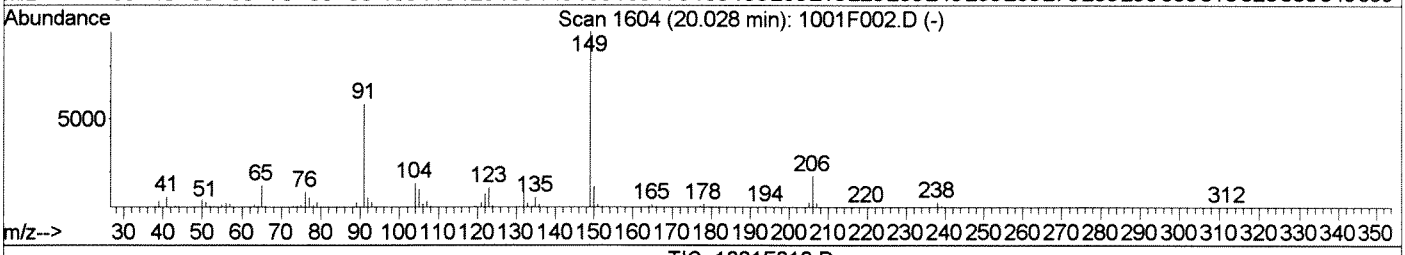
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F010.D Vial: 10
Acq On : 2 Oct 2014 1:15 am Operator: T. THOMAS
Sample : K1409921-009 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:03 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F010.D

(72) Butyl Benzyl Phthalate (T)

20.03min 12.56ug/ml

response 37591

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	54.53
206.00	16.90	17.66
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/2/14
S

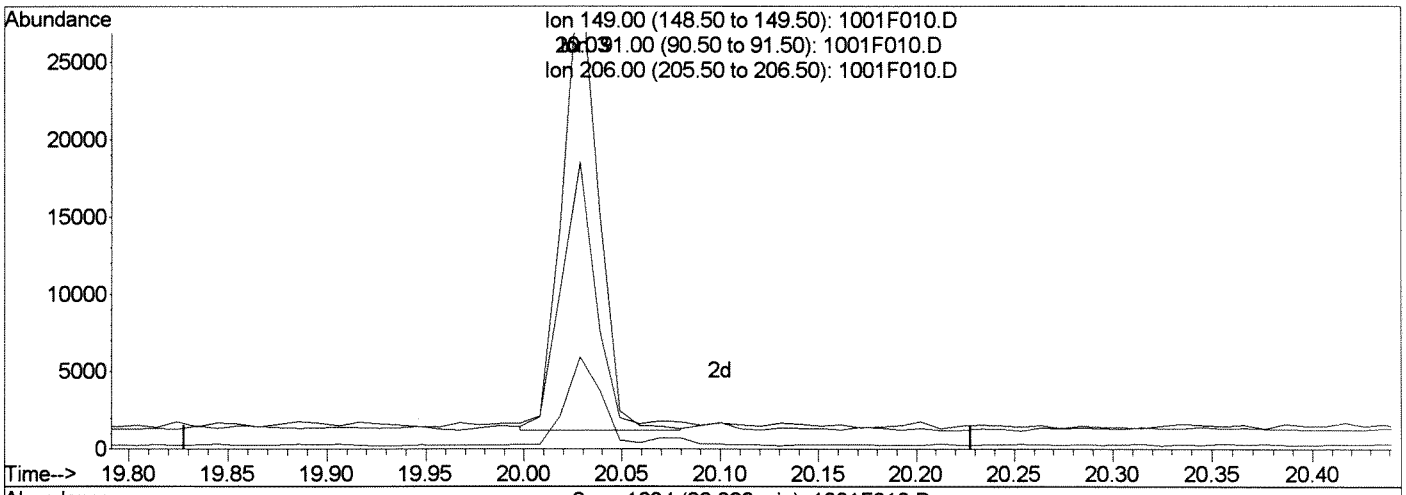
TRT

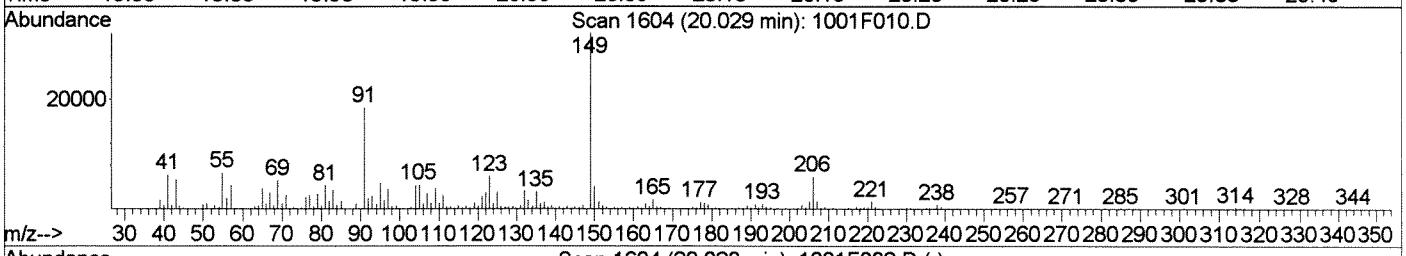
1001F010.D 093014BNC7.M Thu Oct 02 14:03:52 2014

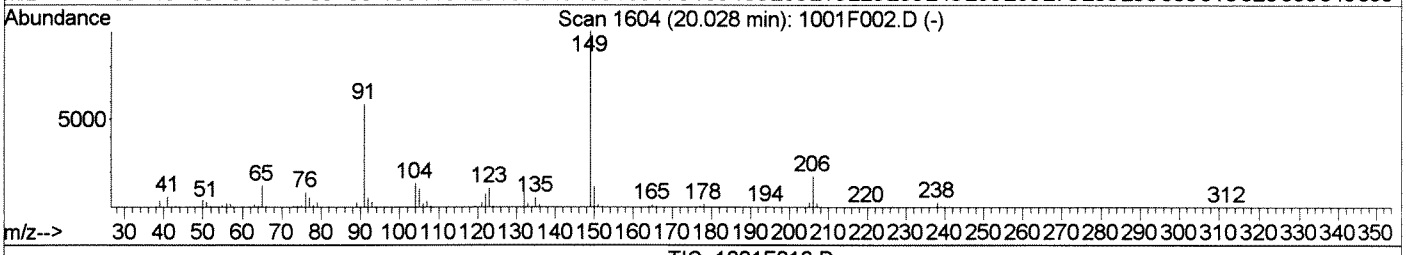
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F010.D Vial: 10
Acq On : 2 Oct 2014 1:15 am Operator: T. THOMAS
Sample : K1409921-009 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 14:04 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F010.D

(72) Butyl Benzyl Phthalate (T)

20.03min 12.43ug/ml m

response 37186

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	57.75
206.00	16.90	18.51
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TRT

1001F010.D 093014BNC7.M Thu Oct 02 14:04:14 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F009.D
Lab ID: K1409921-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/02/2014 00:34
Date Quantitated: 10/02/2014 13:56
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 02 2014 RT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F009.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 00:34	**Quant Date:**	10/02/2014 13:56	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376331	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.20	-0.01	152	69615	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	234265	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	117432	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	213069	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	215402	40.00	OK
6	Perylene-d12	24.13	0.01	264	193068	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.72	-0.01	0.00	99	152425	64.74	43	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	88490	42.02	42	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	201805	45.56	46	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	97687	83.31	56	20-123	OK	
5	Terphenyl-d14	19.19	-0.01	0.00	244	262243	55.71	56	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol	8.74	-0.01	0.00	94	630	0.2800	0.060	Ui	
1	2-Methylphenol				107	0		0.054	U	
1	4-Methylphenol	10.01		0.00	107	1677	0.7800	0.082	J	
2	2,4-Dimethylphenol				122	0		0.048	U	
2	Hexachlorobutadiene				225	0		0.045	U	
3	Diethyl Phthalate				149	0d		0.045	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.45	U	
4	Hexachlorobenzene				284	0		0.048	U	
4	Fluoranthene	18.53	-0.01	0.00	202	16592m	2.84	0.30	J	
5	Pyrene	18.89		0.00	202	11966	1.88	0.20	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F009.D			**Instrument:**	MS07
Acqu Date:	10/02/2014 00:34	**Quant Date:**	10/02/2014 13:56	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-010			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.02	-0.01	0.00	149	9351**m**	3.19	0.34	J	
5	Chrysene	21.02	-0.01	0.00	228	20348	3.80	0.40	J	
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	24052	6.24	0.66	J	
6	Di-n-octyl Phthalate	22.60	0.01	0.00	149	5225	0.8300	0.087	J	

Prep Amount:	40.330 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	23.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Columbia Analytical Services Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:12 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	69615	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	234265	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	117432	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	213069	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	215402	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	193068	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	105201	52.68	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 35.12%			
7) Phenol-d6	8.72	99	152425	64.74	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 43.16%			
19) Nitrobenzene-d5	10.14	82	88490	42.02	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 42.02%			
38) 2-Fluorobiphenyl	13.11	172	201805	45.56	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 45.56%			
59) 2,4,6-Tribromophenol	15.47	330	97687	83.31	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 55.54%			
71) Terphenyl-d14	19.19	244	262243	55.71	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 55.71%			
Target Compounds						Qvalue
8) Phenol	8.74	94	630	0.28	ug/ml#	1
18) 4-Methylphenol	10.01	107	1677	0.78	ug/ml	98
29) Naphthalene	11.34	128	1467	0.28	ug/ml	93
33) 2-Methylnaphthalene	12.48	142	400m	0.12	ug/ml	
42) Dimethyl Phthalate	13.79	163	1079	0.25	ug/ml	77
44) Acenaphthene	14.22	154	4156	1.33	ug/ml	99
47) Dibenzofuran	14.51	168	1097	0.22	ug/ml	97
51) Fluorene	15.06	166	2244	0.59	ug/ml	91
63) Phenanthrene	16.61	178	7297	1.41	ug/ml	98
64) Anthracene	16.69	178	2104	0.40	ug/ml	88
65) Carbazole	16.99	167	1508	0.30	ug/ml	93
66) Di-n-butyl Phthalate	17.61	149	5399m	0.81	ug/ml	
67) Fluoranthene	18.53	202	16592m	2.84	ug/ml	
70) Pyrene	18.89	202	11966	1.88	ug/ml	96
72) Butyl Benzyl Phthalate	20.02	149	9351m	3.19	ug/ml	
74) Benz(a)anthracene	20.95	228	5781	1.06	ug/ml	90
75) Chrysene	21.02	228	20348	3.80	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	24052	6.24	ug/ml	100
78) Di-n-octyl Phthalate	22.60	149	5225	0.83	ug/ml	93
79) Benzo(b)fluoranthene	23.26	252	17903	3.81	ug/ml	90

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:12 2014 Quant Results File: 093014BNC7.RES

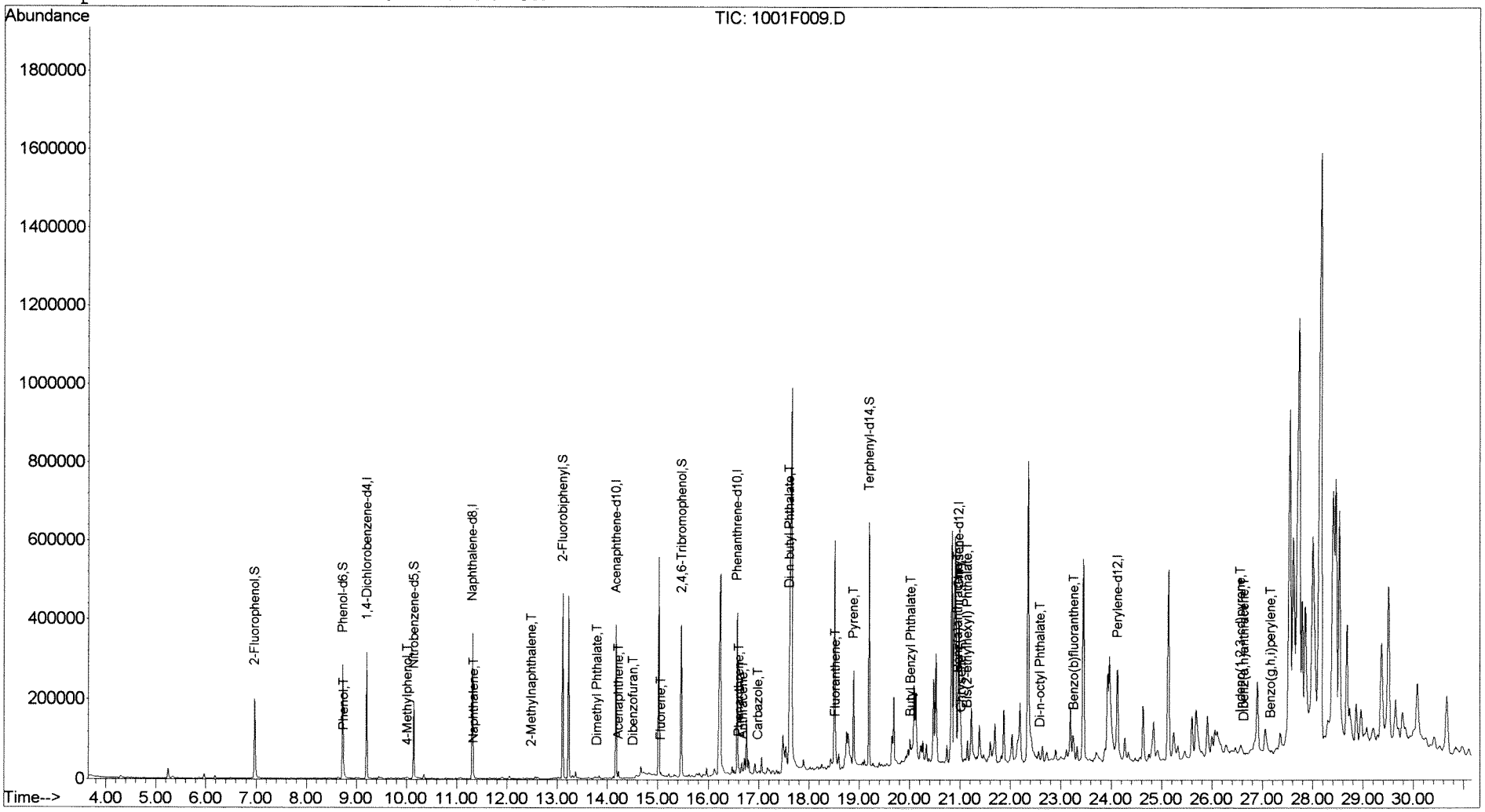
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82) Indeno(1,2,3-cd)pyrene	26.57	276	4647	1.13	ug/ml	89
83) Dibenz(a,h)anthracene	26.64	278	1363	0.32	ug/ml	67
84) Benzo(g,h,i)perylene	27.16	276	5403	1.20	ug/ml	85

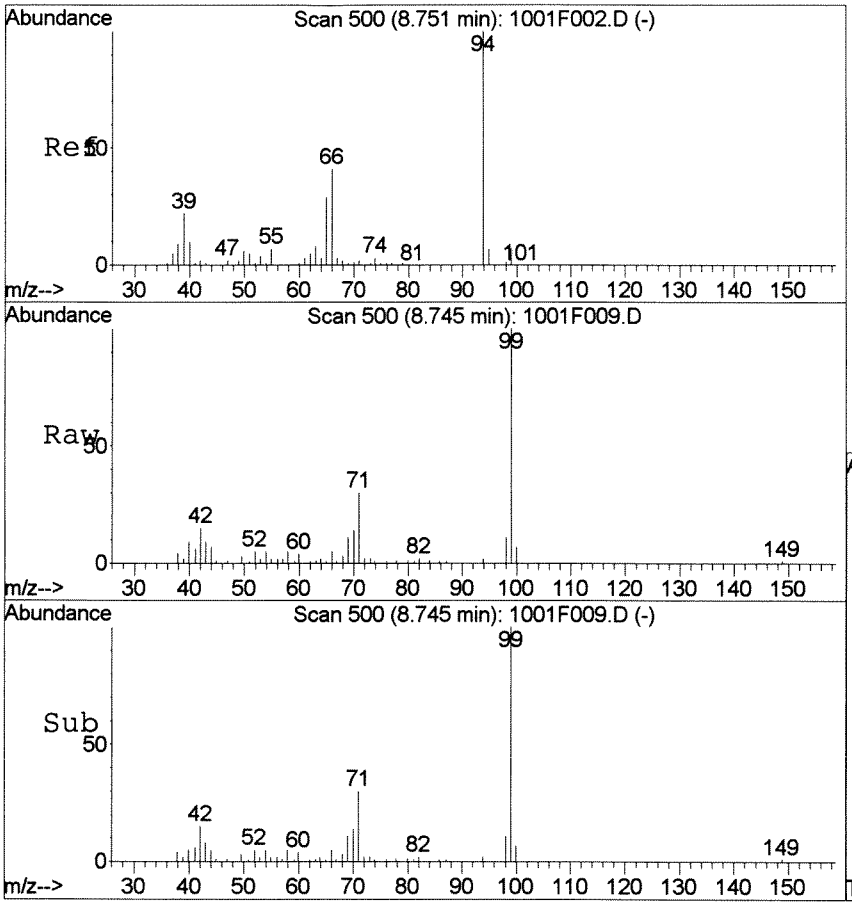
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:56 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



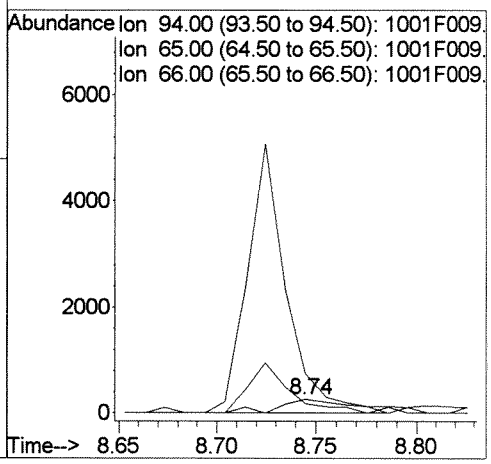
2632

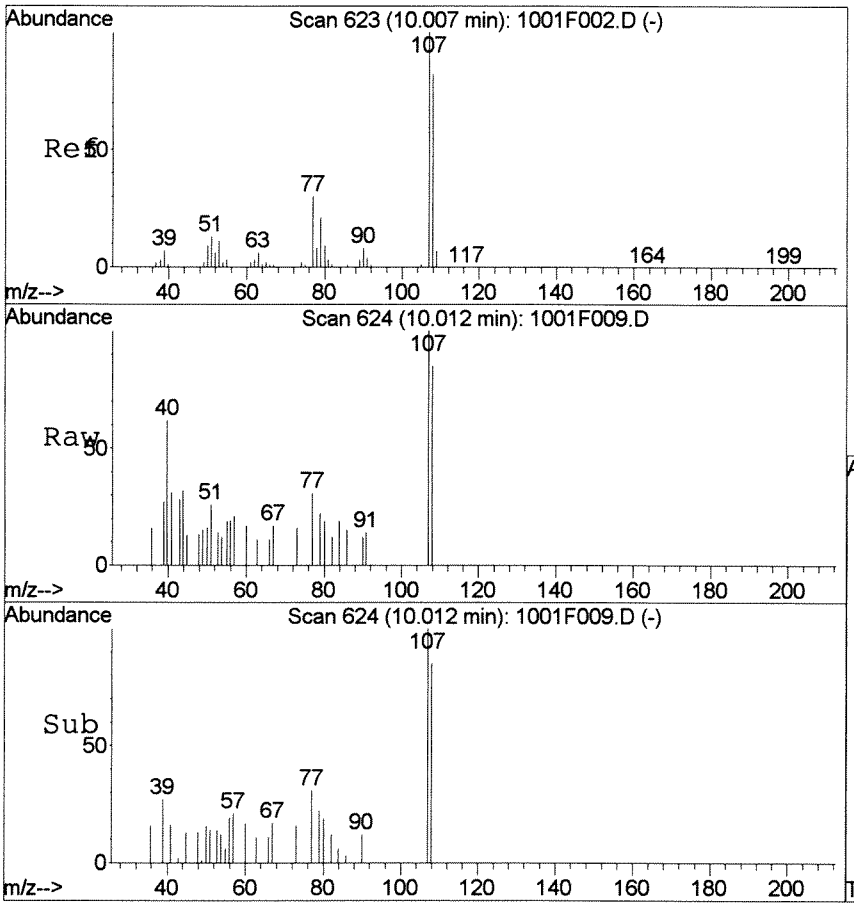


#8
Phenol
Concen: 0.28 ug/ml
RT: 8.74 min Scan# 500
Delta R.T. -0.02 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion: 94 Resp: 630

Ion	Ratio	Lower	Upper
94	100		
65	46.6	0.0	54.3
66	261.3	6.1	66.1#

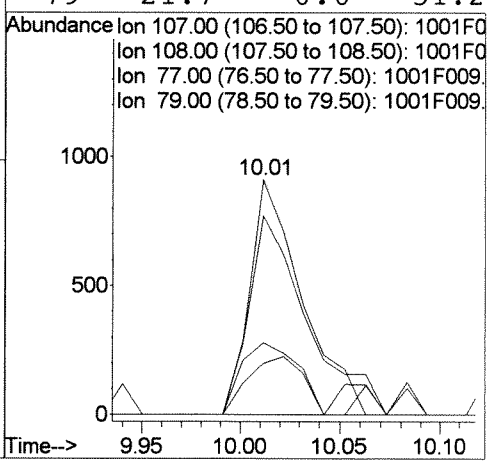


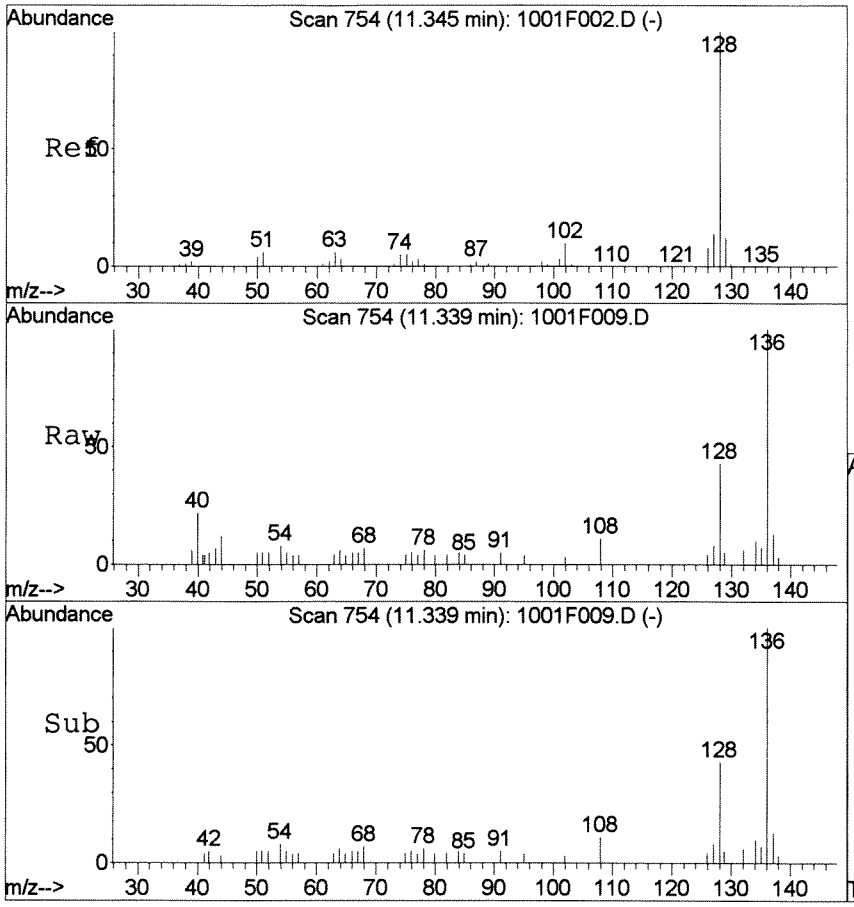


#18
4-Methylphenol
Concen: 0.78 ug/ml
RT: 10.01 min Scan# 624
Delta R.T. 0.00 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:107 Resp: 1677

Ion	Ratio	Lower	Upper
107	100		
108	84.7	52.1	112.1
77	30.6	0.0	60.0
79	21.7	0.0	51.2

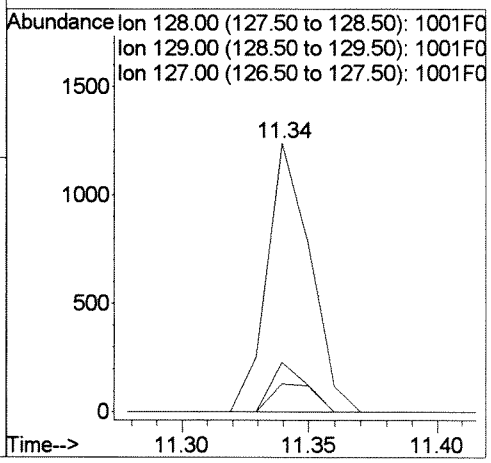


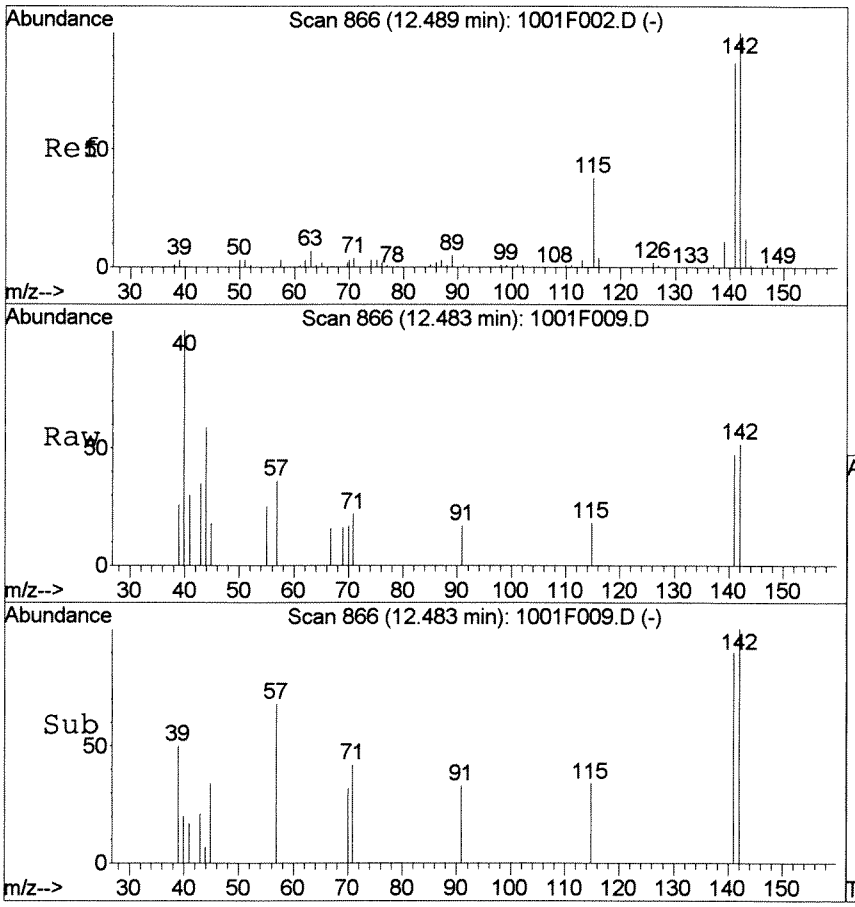


#29
Naphthalene
Concen: 0.28 ug/ml
RT: 11.34 min Scan# 754
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:128 Resp: 1467

Ion	Ratio	Lower	Upper
128	100		
129	10.6	0.0	41.2
127	18.6	0.0	44.0

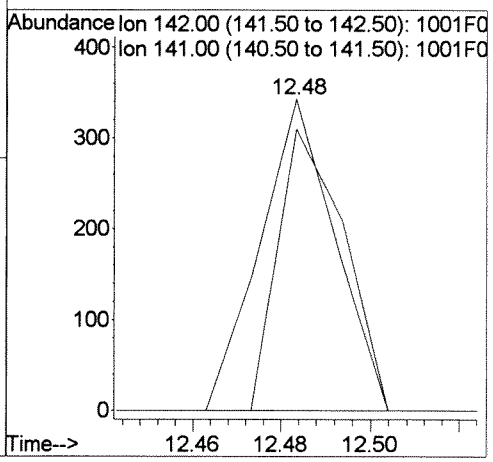


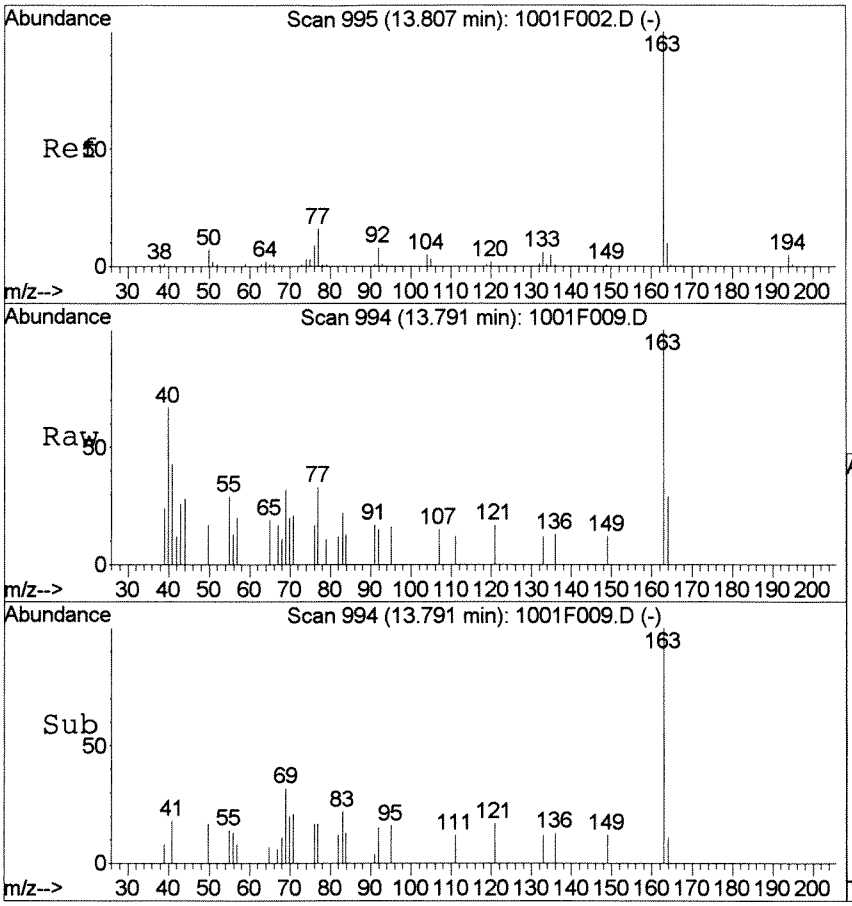


#33
2-Methylnaphthalene
Concen: 0.12 ug/ml m
RT: 12.48 min Scan# 866
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:142 Resp: 400

Ion	Ratio	Lower	Upper
142	100		
141	90.4	58.7	118.7

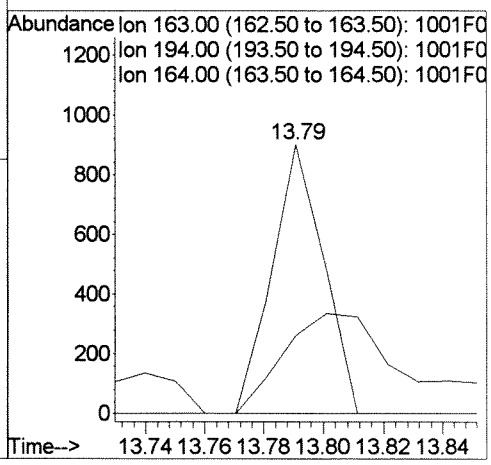


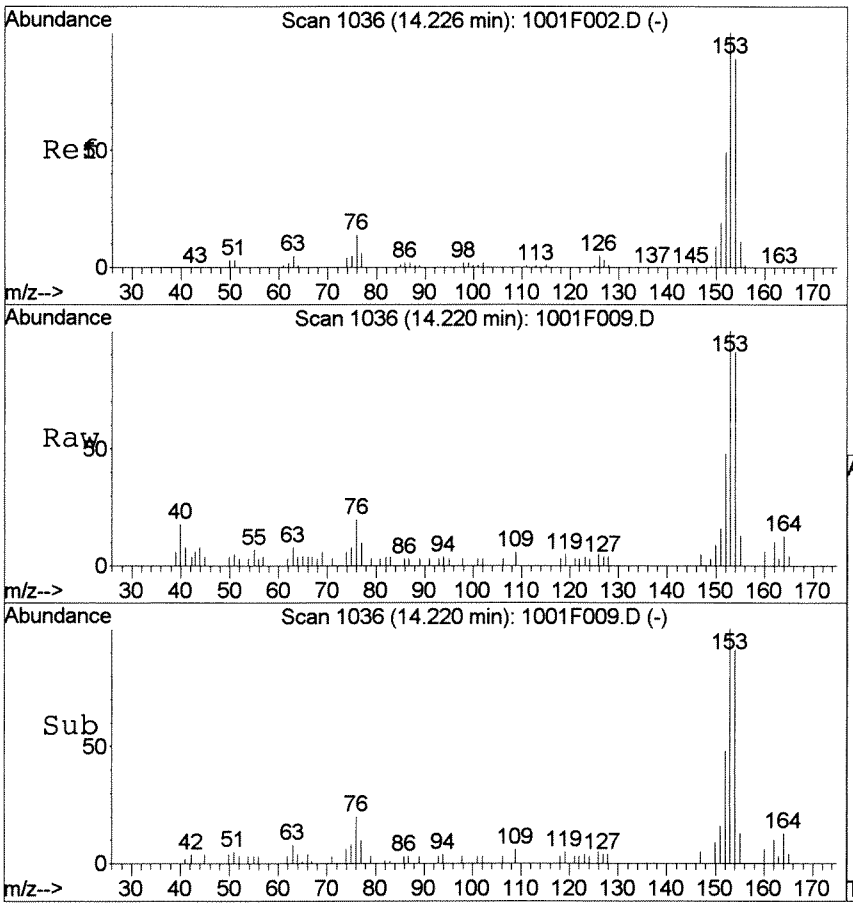


#42
Dimethyl Phthalate
Concen: 0.25 ug/ml
RT: 13.79 min Scan# 994
Delta R.T. -0.02 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:163 Resp: 1079

Ion	Ratio	Lower	Upper
163	100		
194	0.0	0.0	34.6
164	20.0	0.0	39.9

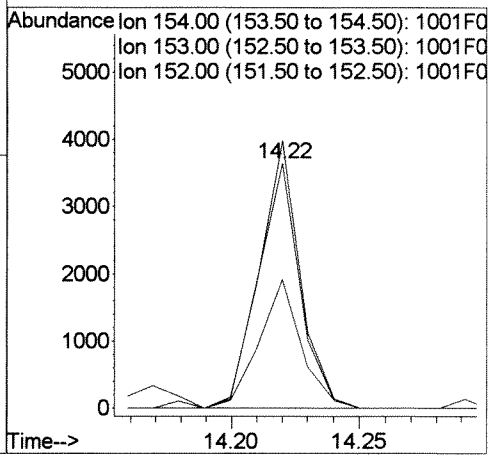


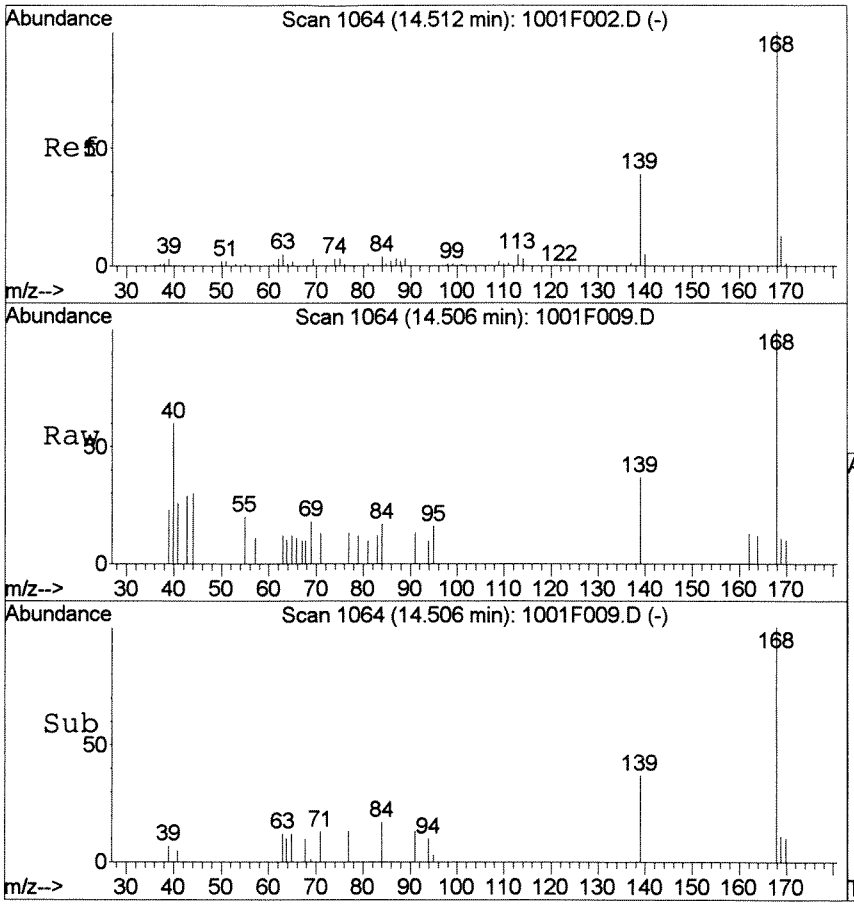


#44
Acenaphthene
Concen: 1.33 ug/ml
RT: 14.22 min Scan# 1036
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:154 Resp: 4156

Ion	Ratio	Lower	Upper
154	100		
153	109.3	79.7	139.7
152	52.6	23.7	83.7

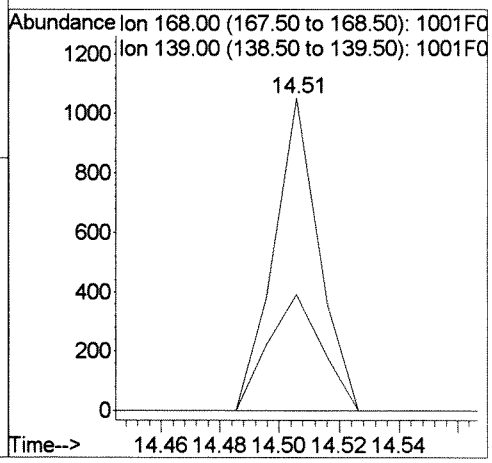


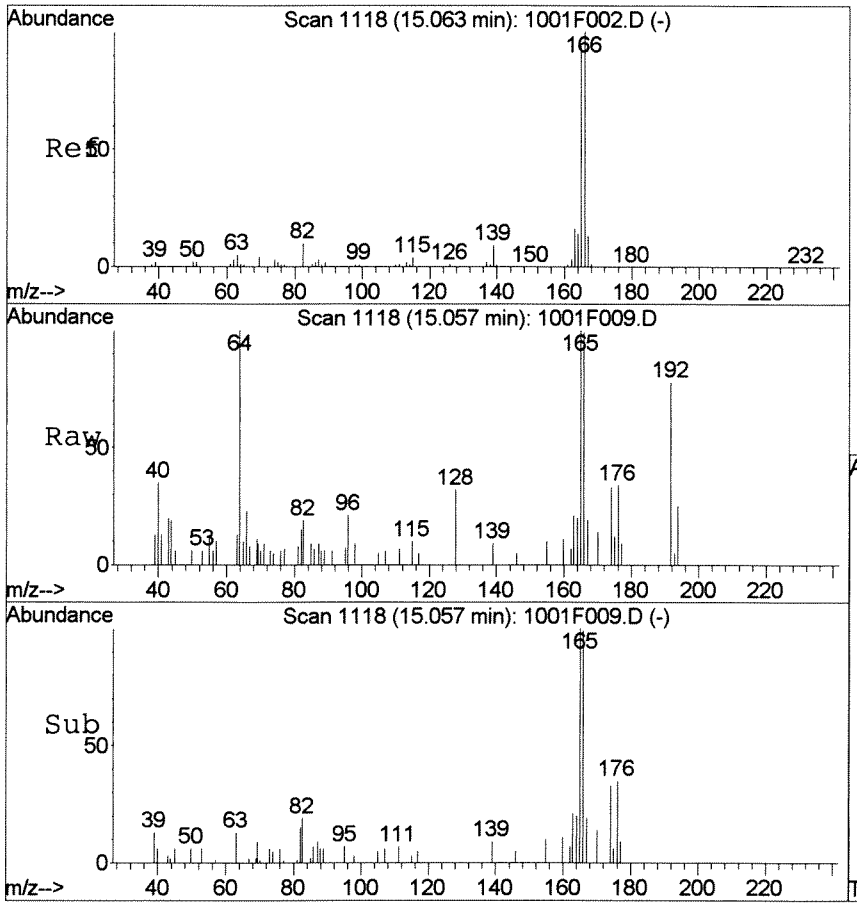


#47
Dibenzofuran
Concen: 0.22 ug/ml
RT: 14.51 min Scan# 1064
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:168 Resp: 1097

Ion	Ratio	Lower	Upper
168	100		
139	37.3	8.8	68.8

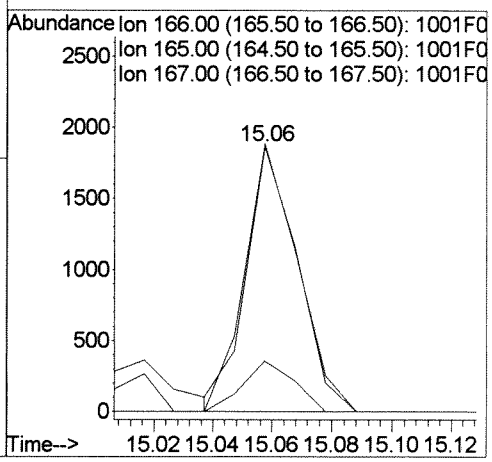


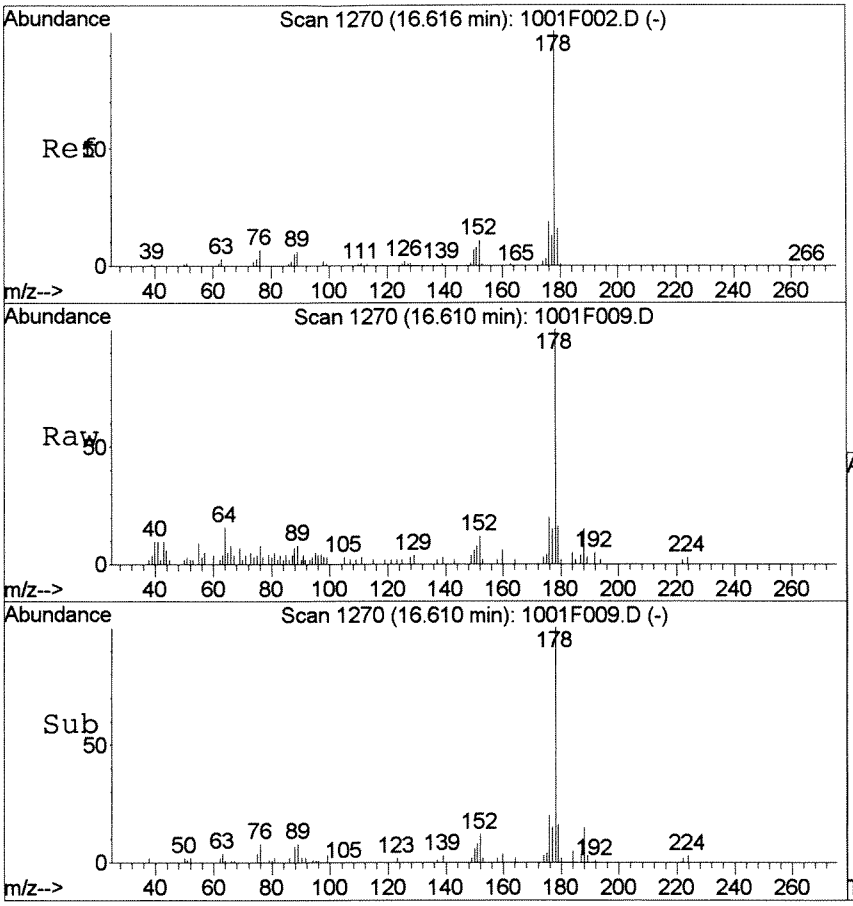


#51
Fluorene
Concen: 0.59 ug/ml
RT: 15.06 min Scan# 1118
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:166 Resp: 2244

Ion	Ratio	Lower	Upper
166	100		
165	103.8	65.9	125.9
167	19.7	0.0	43.4

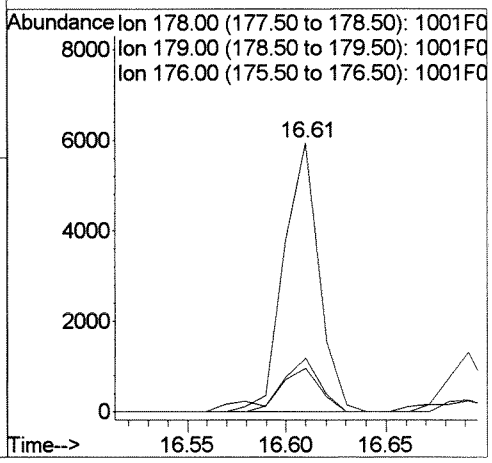


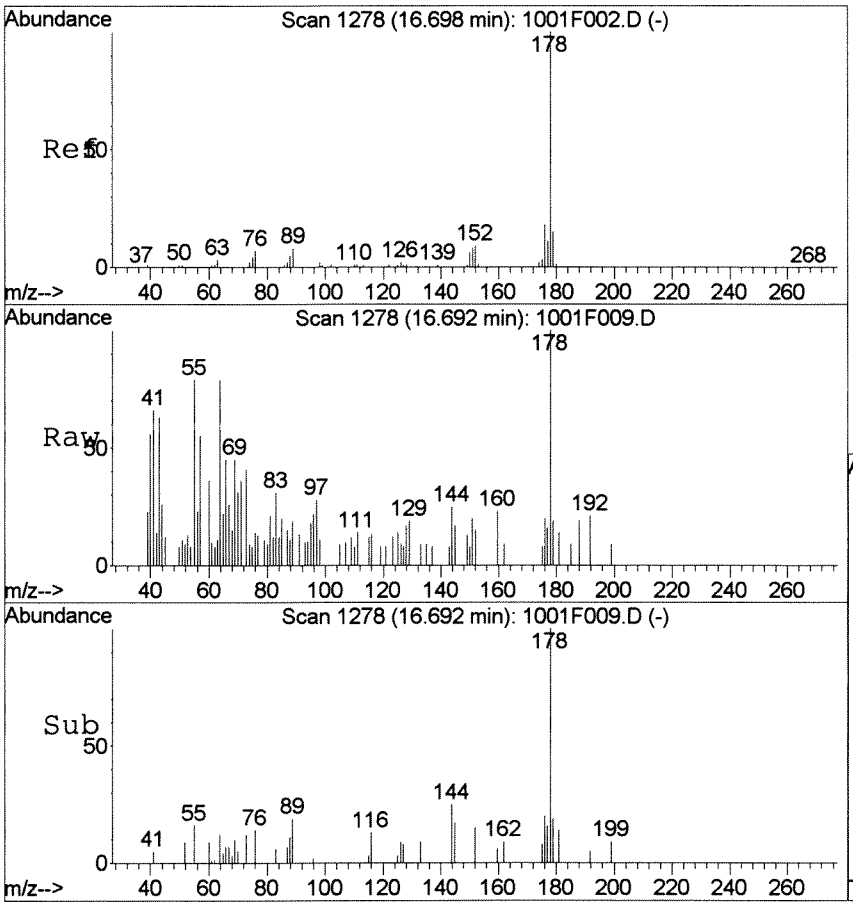


#63
Phenanthrene
Concen: 1.41 ug/ml
RT: 16.61 min Scan# 1270
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:178 Resp: 7297

Ion	Ratio	Lower	Upper
178	100		
179	16.2	0.0	45.5
176	19.9	0.0	49.1

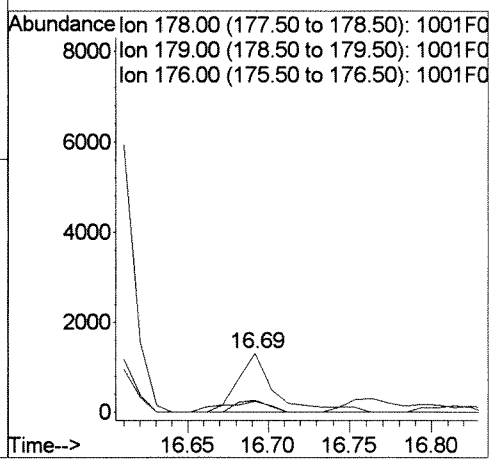


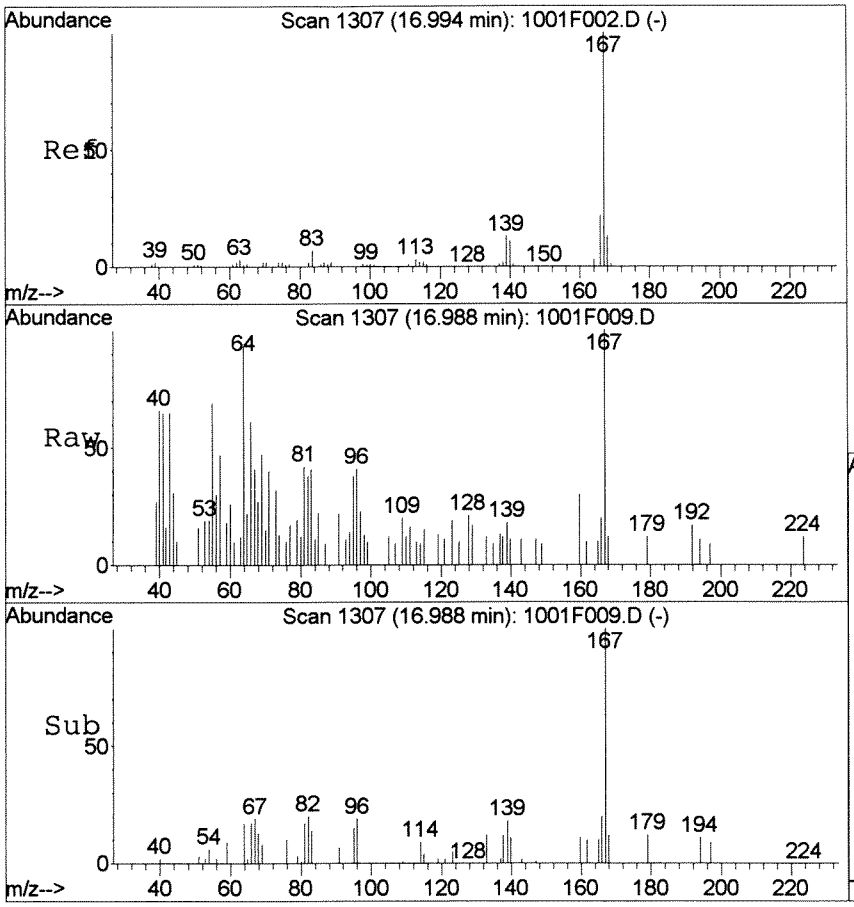


#64
Anthracene
Concen: 0.40 ug/ml
RT: 16.69 min Scan# 1278
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:178 Resp: 2104

Ion	Ratio	Lower	Upper
178	100		
179	6.1	0.0	45.6
176	20.3	0.0	48.8

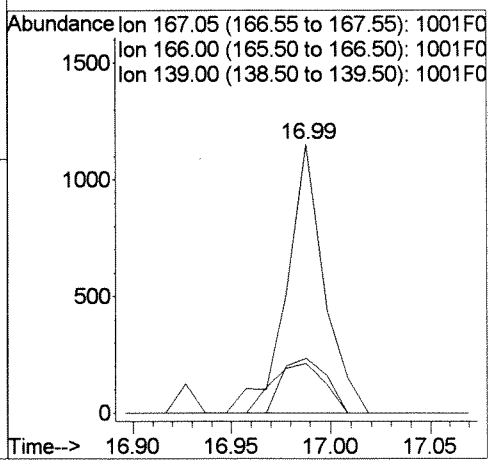


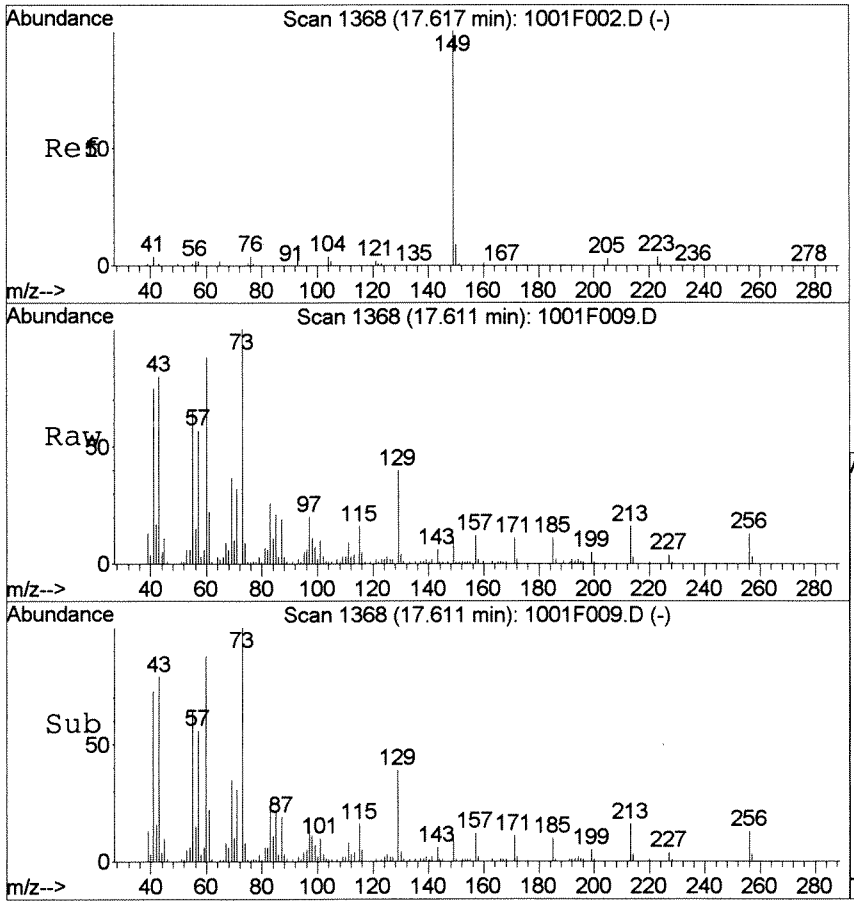


#65
Carbazole
Concen: 0.30 ug/ml
RT: 16.99 min Scan# 1307
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:167 Resp: 1508

Ion	Ratio	Lower	Upper
167	100		
166	20.4	0.0	51.6
139	18.5	0.0	43.3

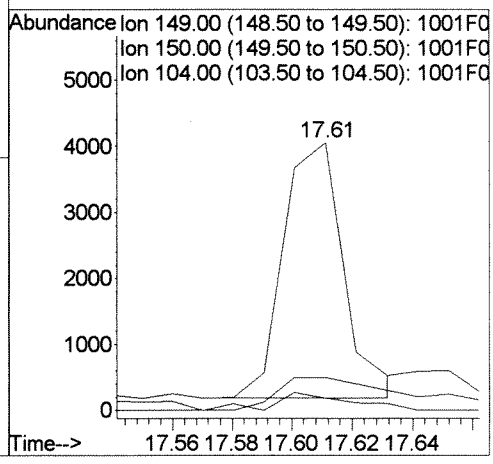


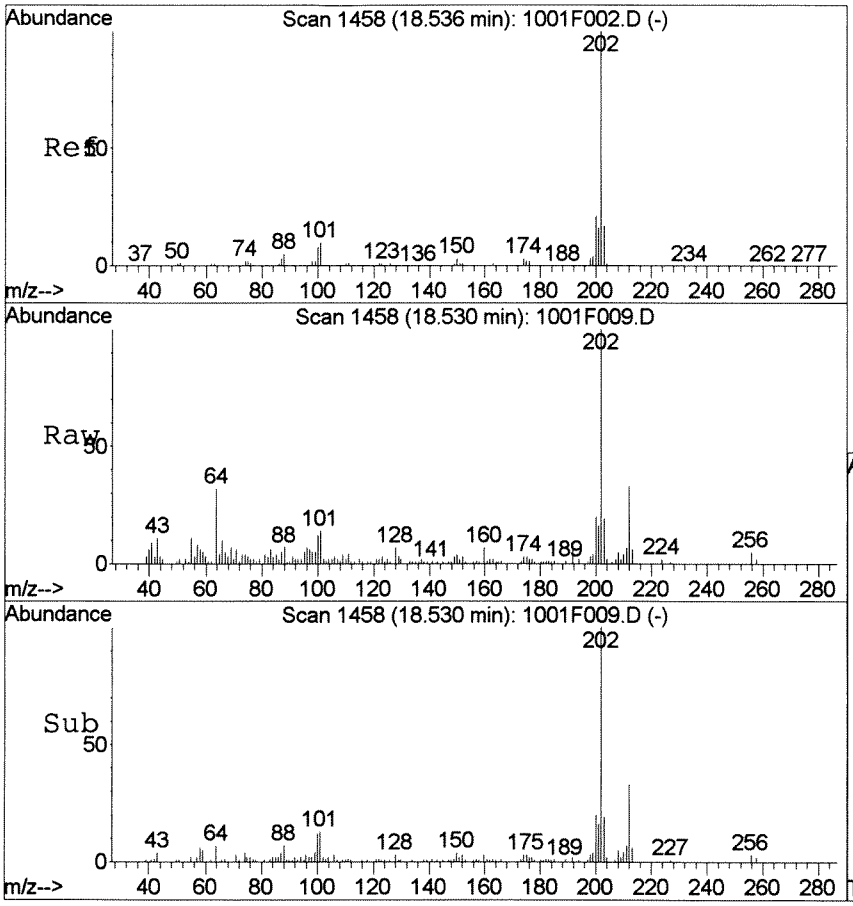


#66
Di-n-butyl Phthalate
Concen: 0.81 ug/ml m
RT: 17.61 min Scan# 1368
Delta R.T. 0.00 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:149 Resp: 5399

Ion	Ratio	Lower	Upper
149	100		
150	12.3	0.0	39.3
104	4.6	0.0	35.1

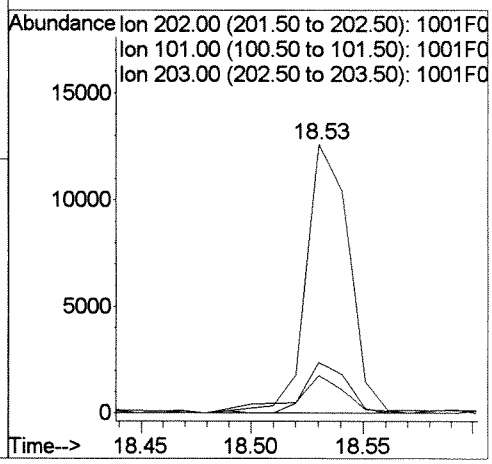


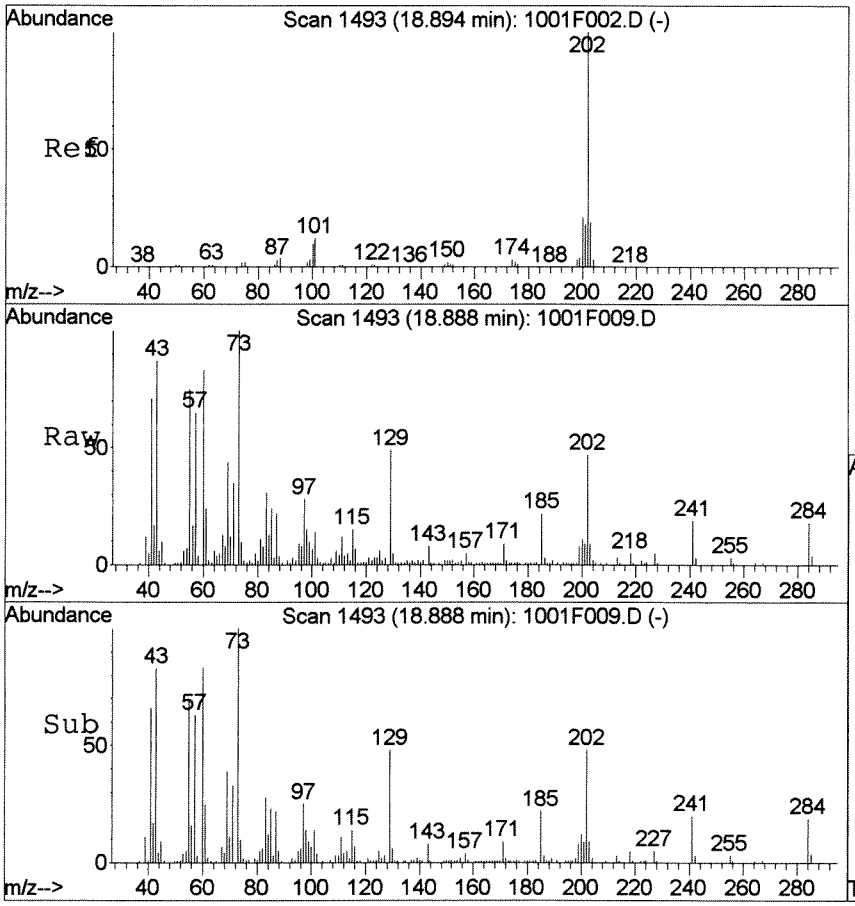


#67
Fluoranthene
Concen: 2.84 ug/ml m
RT: 18.53 min Scan# 1458
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:202 Resp: 16592

Ion	Ratio	Lower	Upper
202	100		
101	14.0	0.0	39.2
203	18.8	0.0	47.5

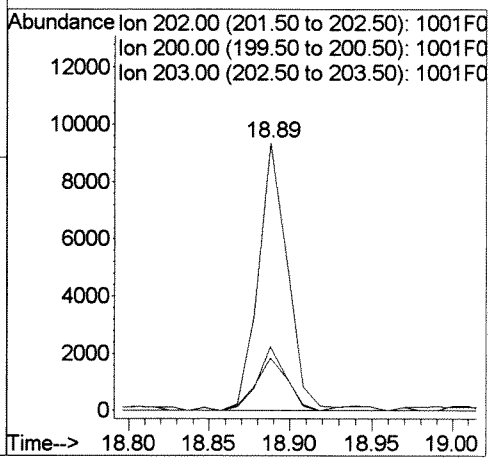


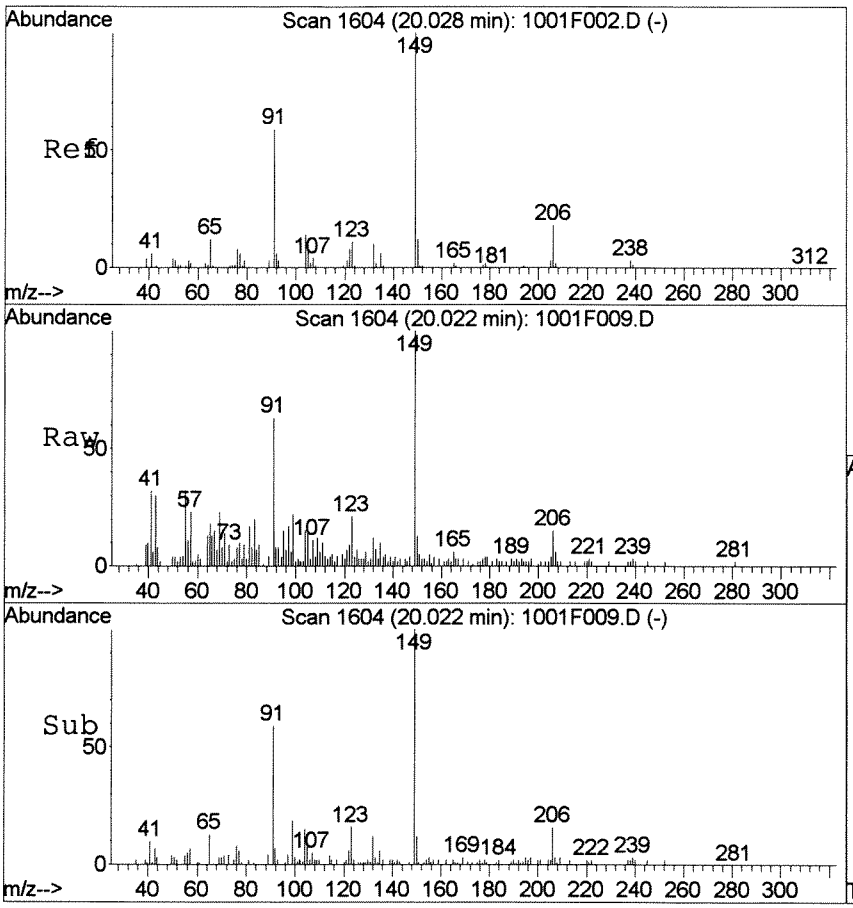


#70
Pyrene
Concen: 1.88 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:202 Resp: 11966

Ion	Ratio	Lower	Upper
202	100		
200	23.8	0.0	50.7
203	19.0	0.0	49.2

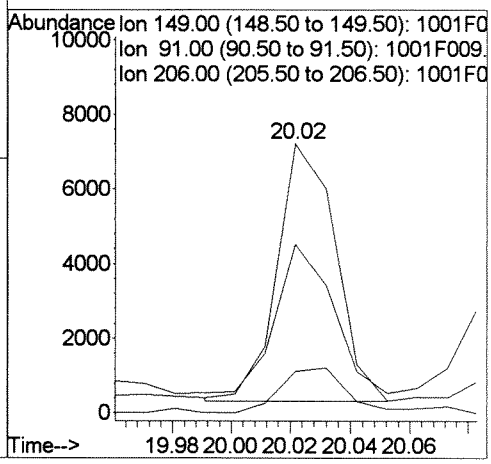


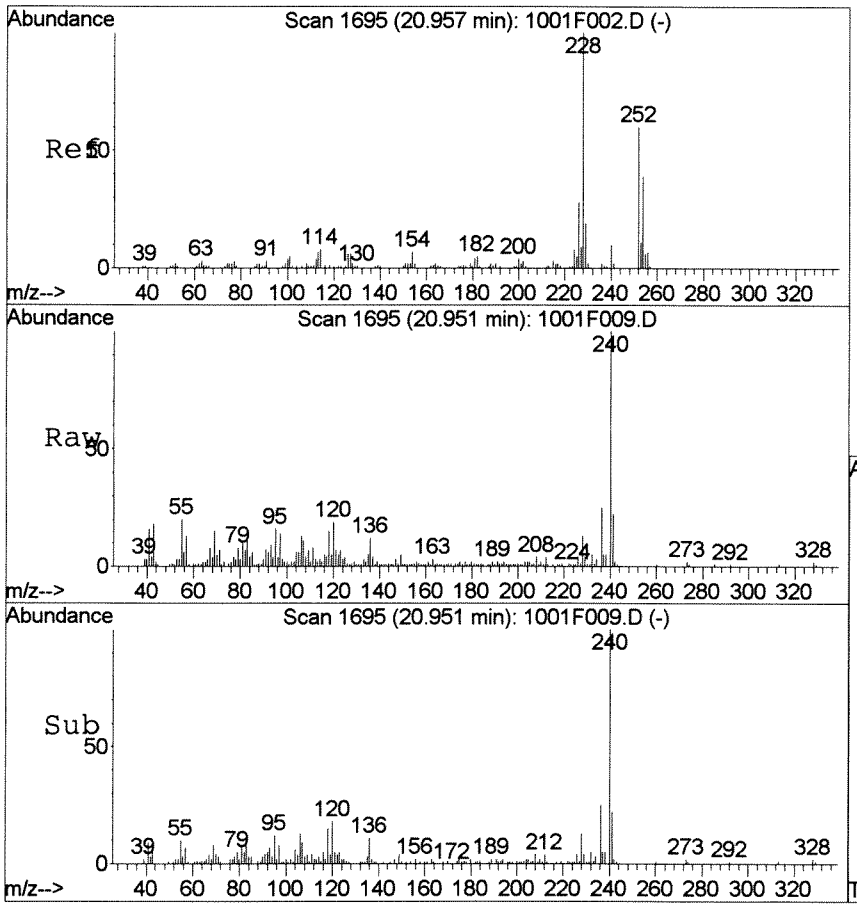


#72
Butyl Benzyl Phthalate
Concen: 3.19 ug/ml m
RT: 20.02 min Scan# 1604
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:149 Resp: 9351

Ion	Ratio	Lower	Upper
149	100		
91	62.7	28.0	88.0
206	15.5	0.0	46.9

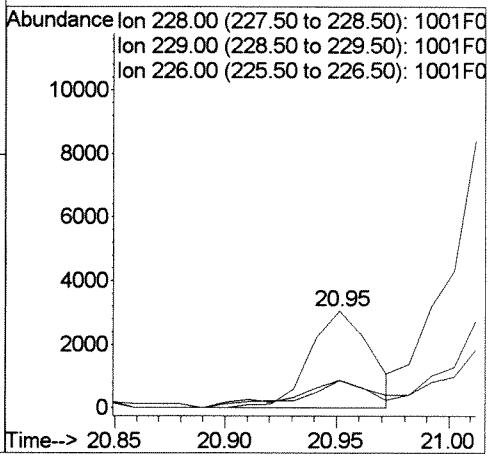


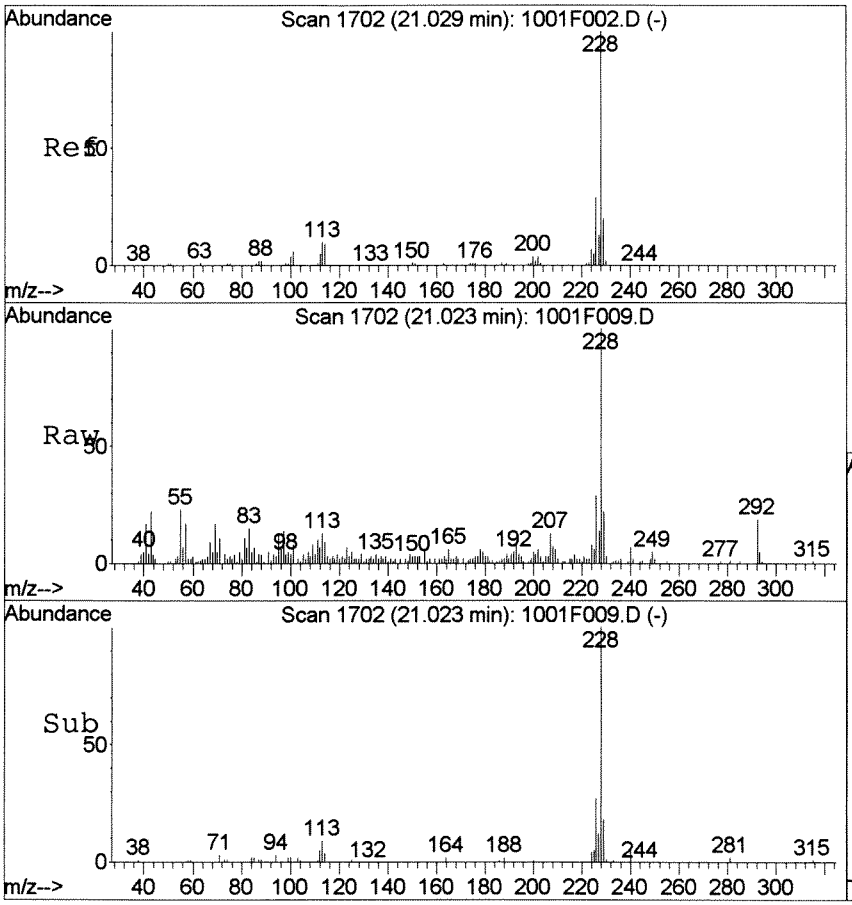


#74
Benz(a)anthracene
Concen: 1.06 ug/ml
RT: 20.95 min Scan# 1695
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:228 Resp: 5781

Ion	Ratio	Lower	Upper
228	100		
229	26.3	0.0	49.0
226	29.9	0.0	57.3

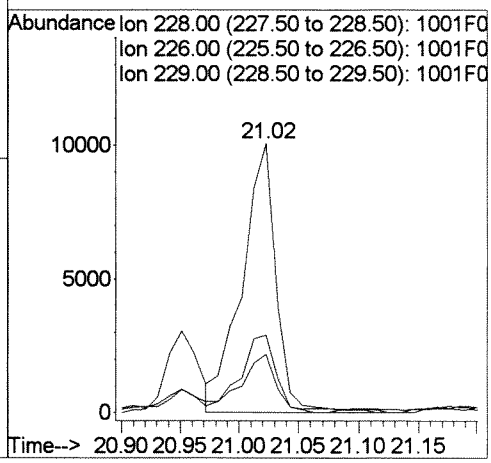


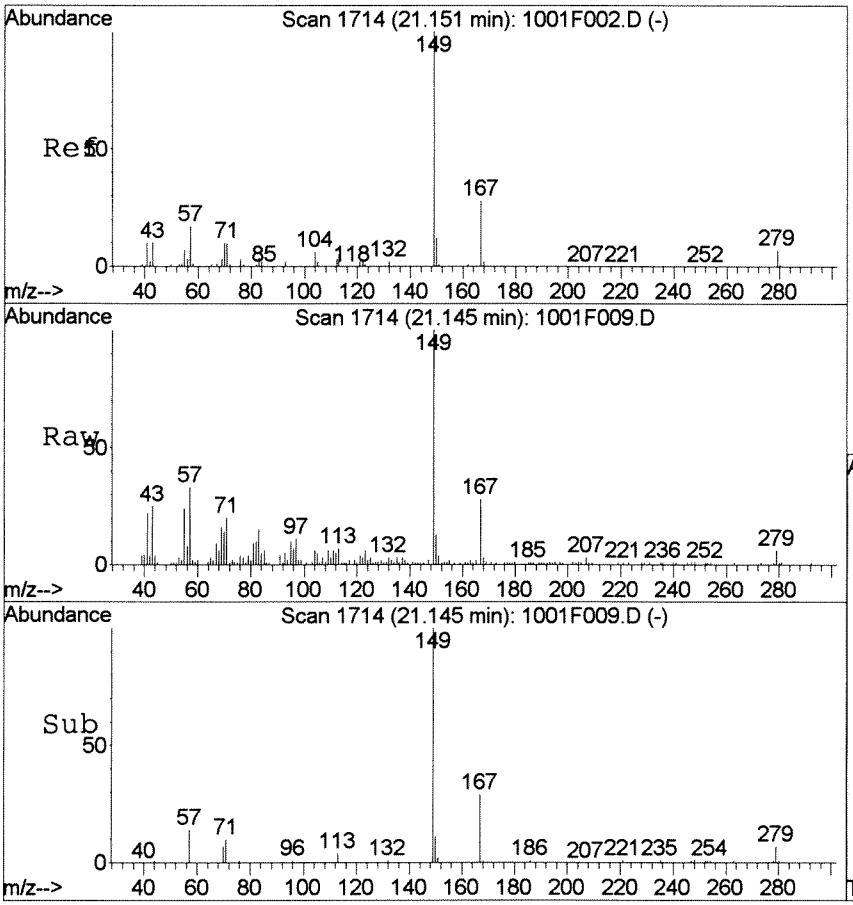


#75
Chrysene
Concen: 3.80 ug/ml
RT: 21.02 min Scan# 1702
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:228 Resp: 20348

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	59.3
229	20.0	0.0	49.2

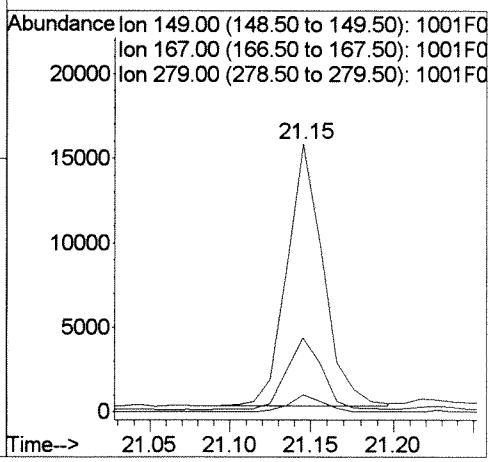


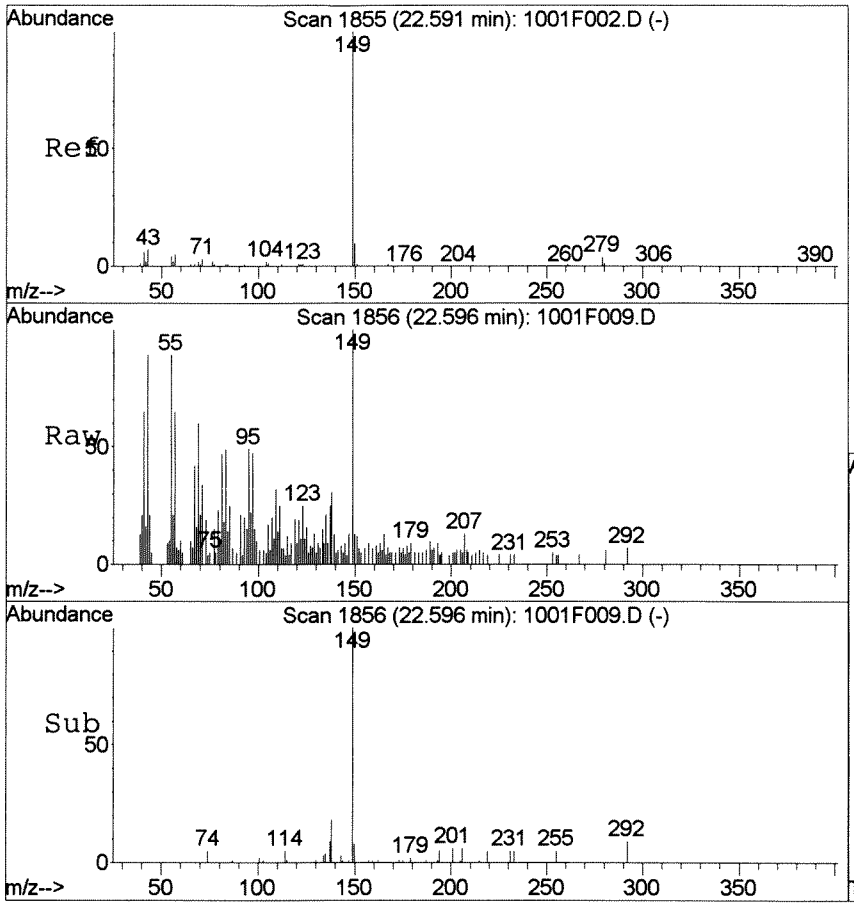


#76
Bis(2-ethylhexyl) Phthalate
Concen: 6.24 ug/ml
RT: 21.15 min Scan# 1714
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:149 Resp: 24052

Ion	Ratio	Lower	Upper
149	100		
167	27.5	0.0	57.7
279	6.5	0.0	36.6

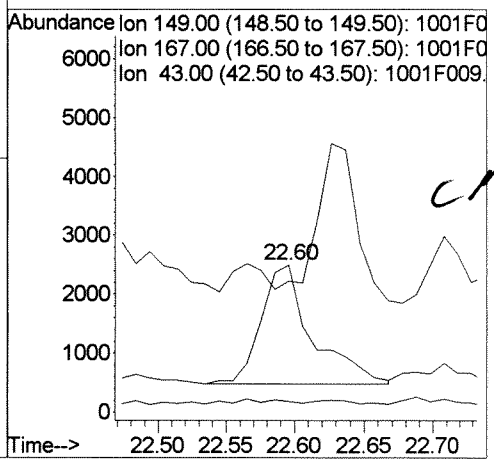


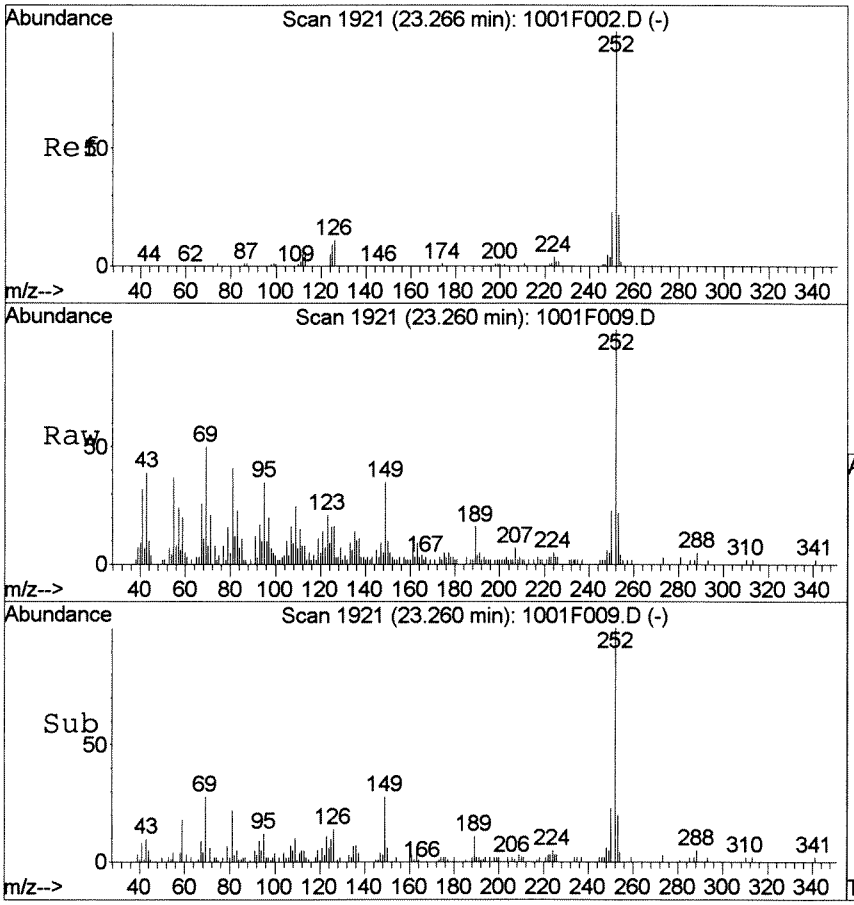


#78
Di-n-octyl Phthalate
Concen: 0.83 ug/ml
RT: 22.60 min Scan# 1856
Delta R.T. 0.00 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:149 Resp: 5225

Ion	Ratio	Lower	Upper
149	100		
167	2.3	0.0	31.4
43	9.7	0.0	37.1

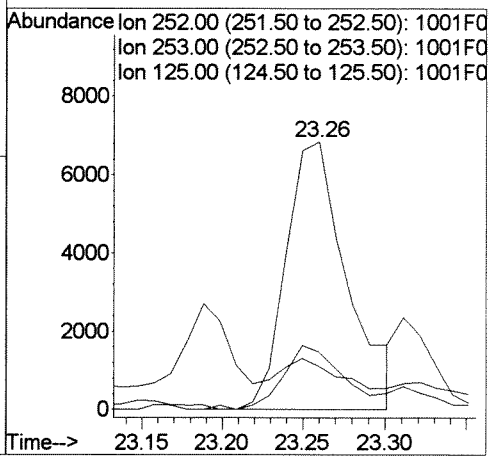


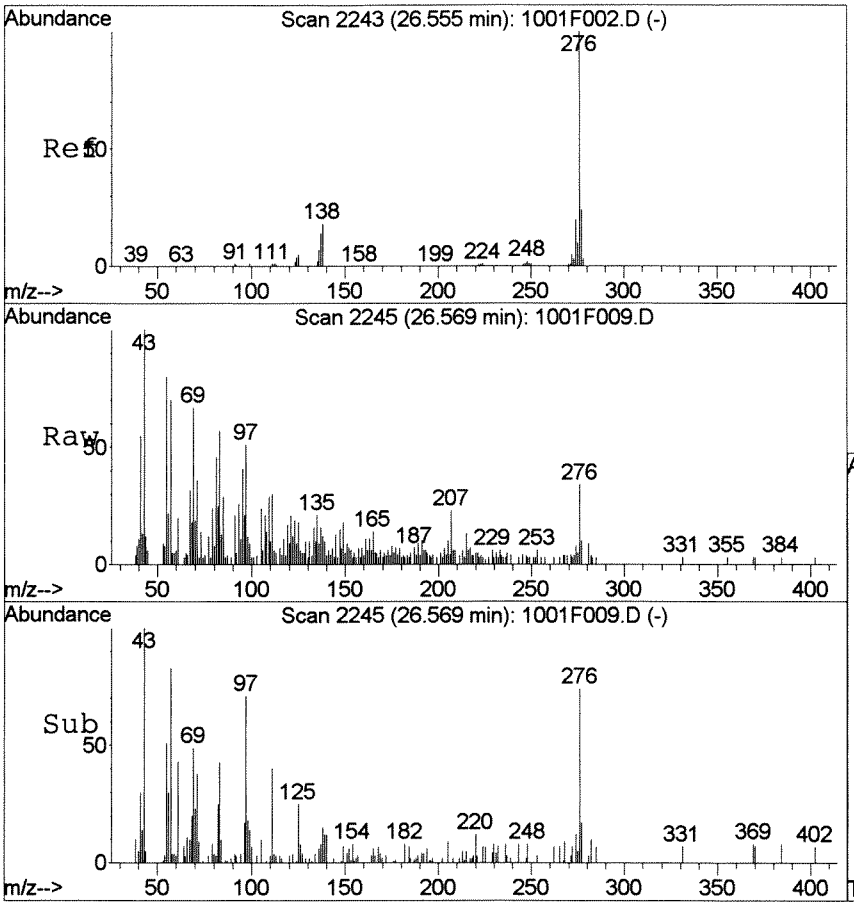


#79
Benzo(b)fluoranthene
Concen: 3.81 ug/ml
RT: 23.26 min Scan# 1921
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:252 Resp: 17903

Ion	Ratio	Lower	Upper
252	100		
253	20.1	0.0	51.9
125	0.0	0.0	39.2

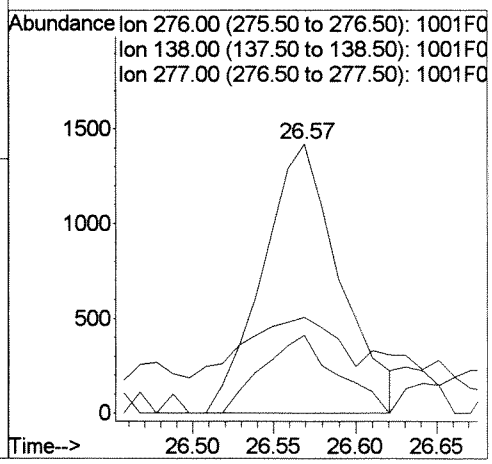


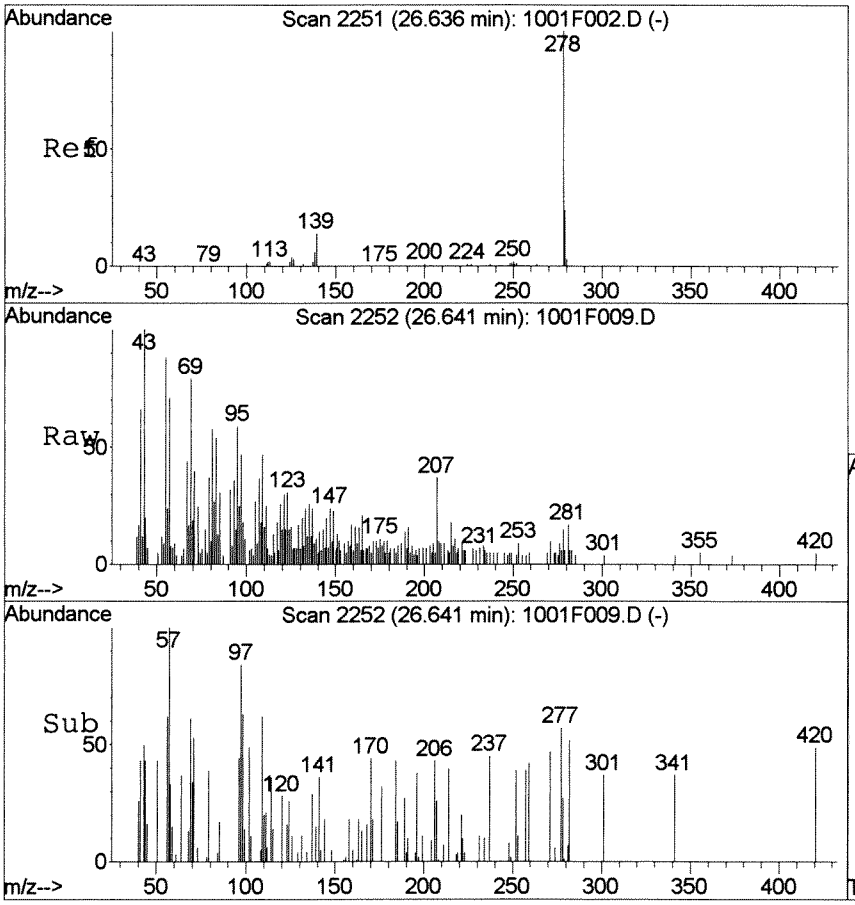


#82
Indeno(1,2,3-cd)pyrene
Concen: 1.13 ug/ml
RT: 26.57 min Scan# 2245
Delta R.T. 0.00 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:276 Resp: 4647

Ion	Ratio	Lower	Upper
276	100		
138	17.5	0.0	46.3
277	31.5	0.0	53.1

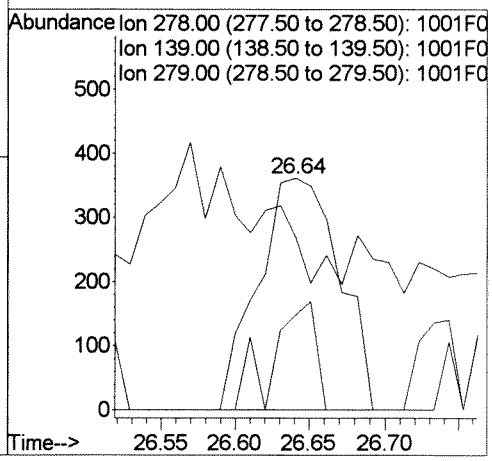


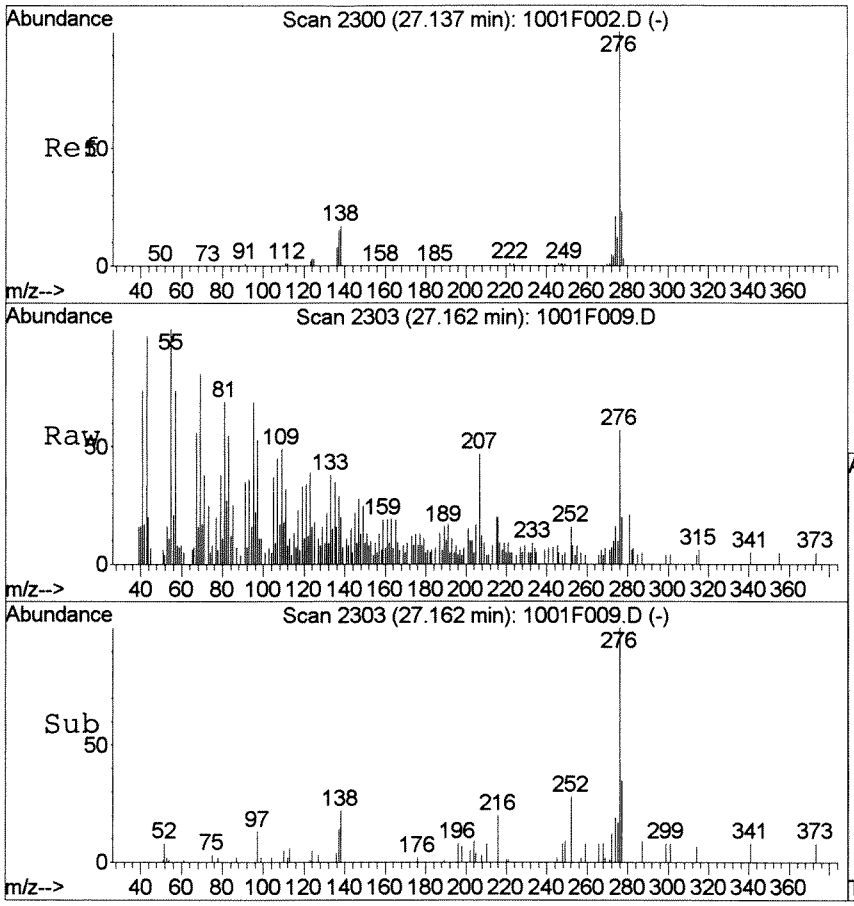


#83
Dibenz(a,h)anthracene
Concen: 0.32 ug/ml
RT: 26.64 min Scan# 2252
Delta R.T. -0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:278 Resp: 1363

Ion	Ratio	Lower	Upper
278	100		
139	1.4	0.0	43.0
279	41.0	0.0	53.5

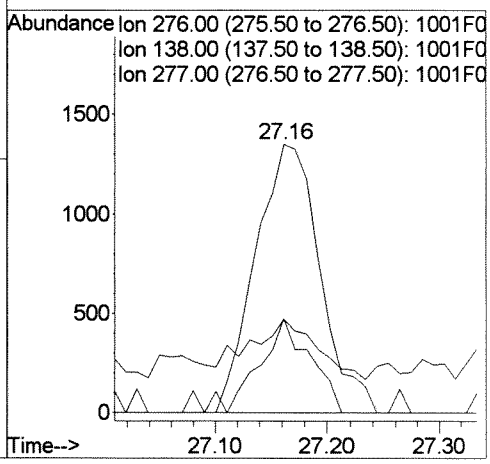




#84
Benzo(g,h,i)perylene
Concen: 1.20 ug/ml
RT: 27.16 min Scan# 2303
Delta R.T. 0.01 min
Lab File: 1001F009.D
Acq: 2 Oct 2014 12:34 am

Tgt Ion:276 Resp: 5403

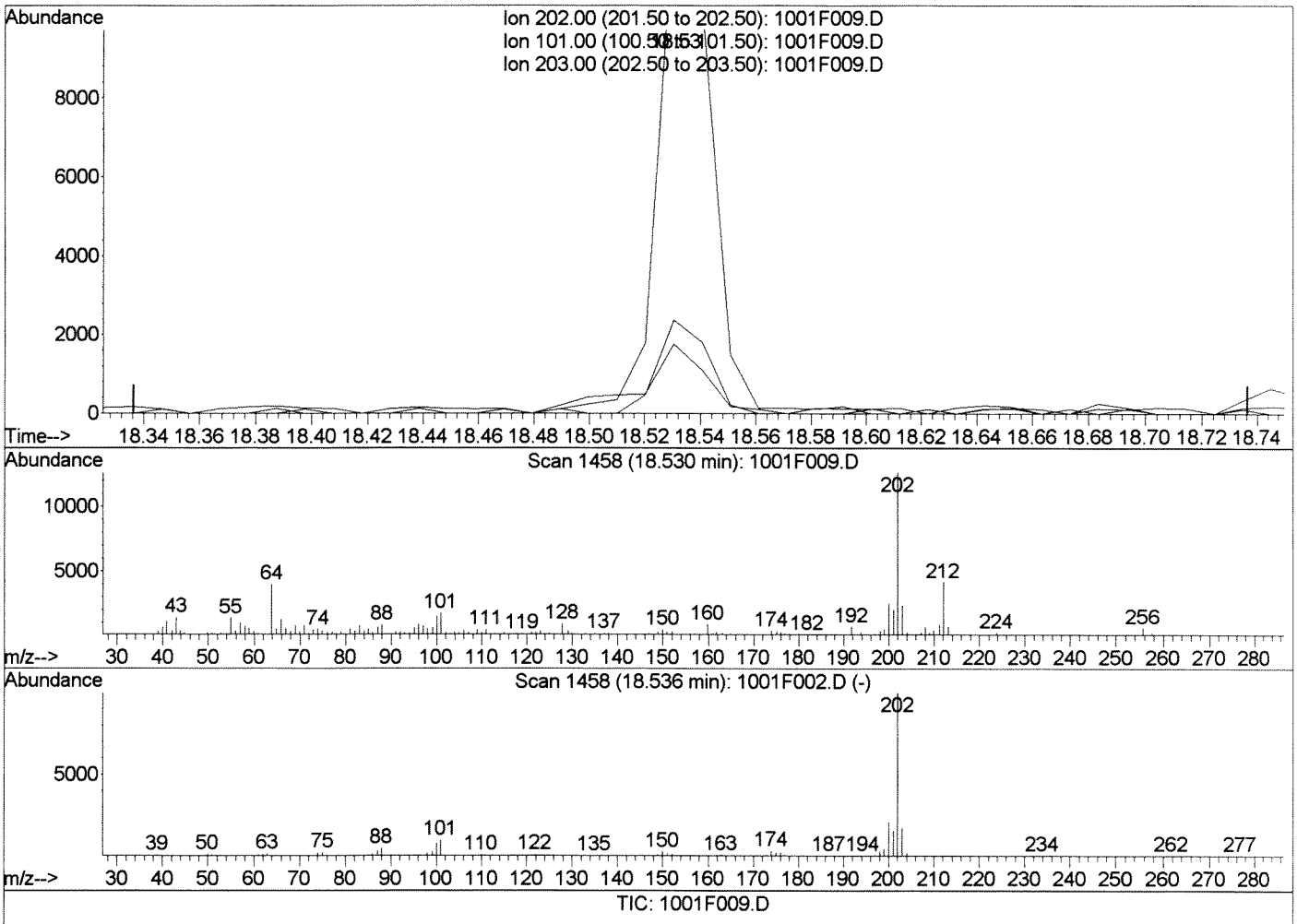
Ion	Ratio	Lower	Upper
276	100		
138	16.7	0.0	46.4
277	35.2	0.0	53.1



Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:53 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F009.D

(67) Fluoranthene (T)

18.53min 2.89ug/ml

response 16858

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	13.50
203.00	17.50	17.85
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/2/14

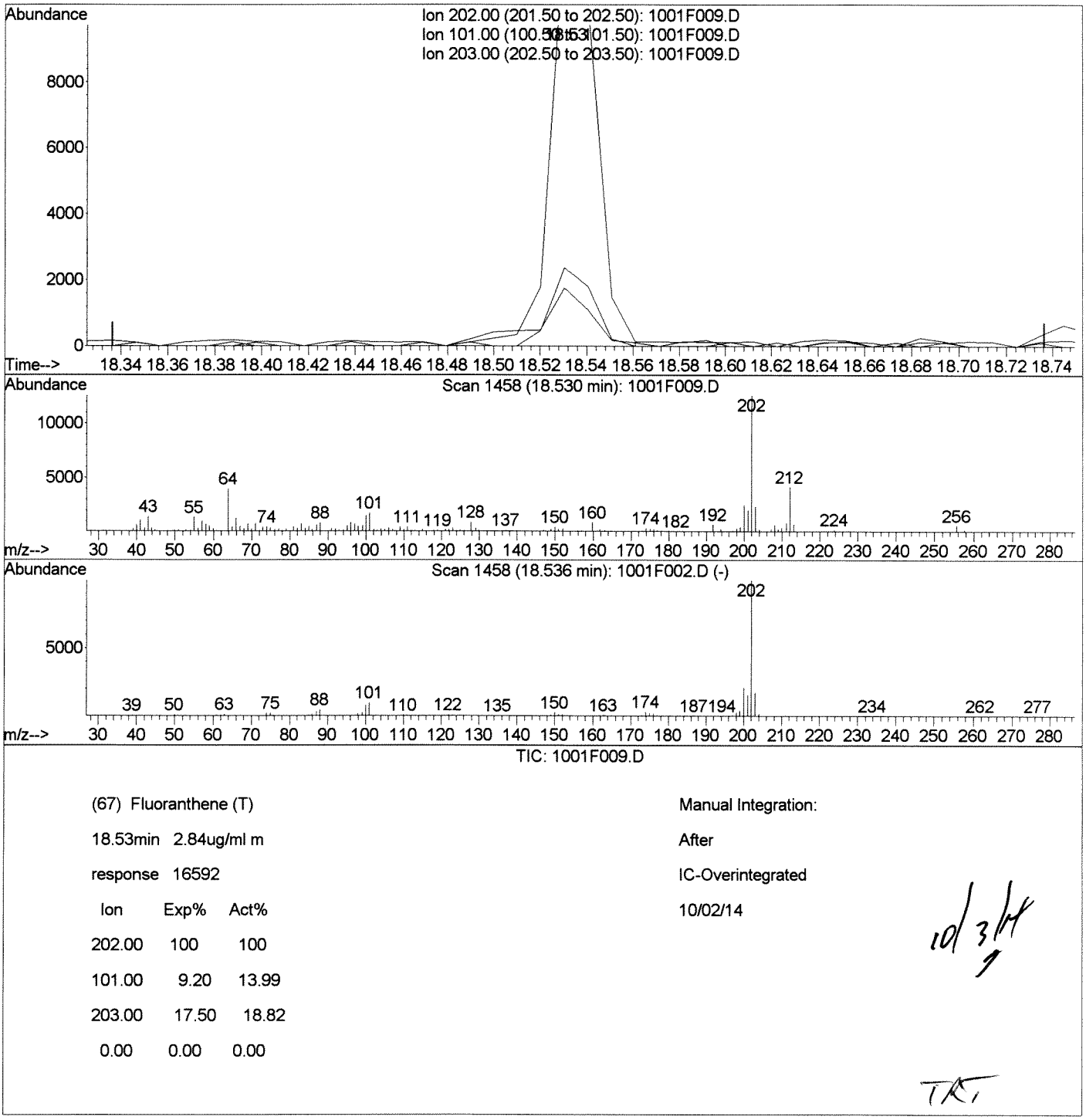
TRT

1001F009.D 093014BNC7.M Thu Oct 02 13:54:33 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:54 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F009.D

(67) Fluoranthene (T)

18.53min 2.84ug/ml m

response 16592

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	13.99
203.00	17.50	18.82
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

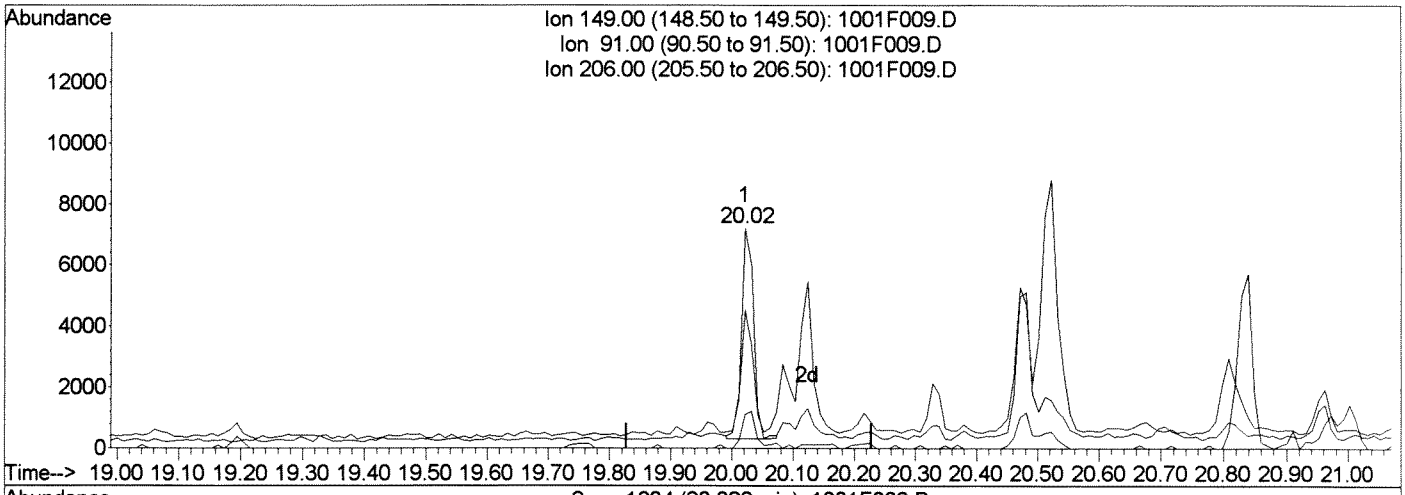
TKT

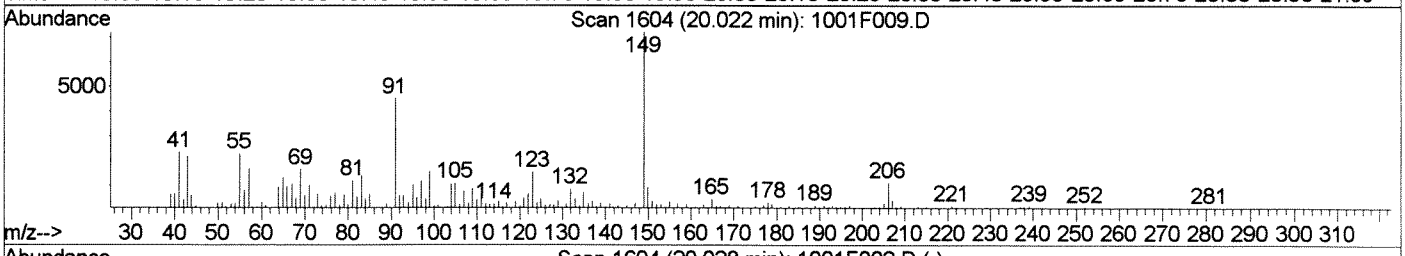
1001F009.D 093014BNC7.M Thu Oct 02 13:54:51 2014

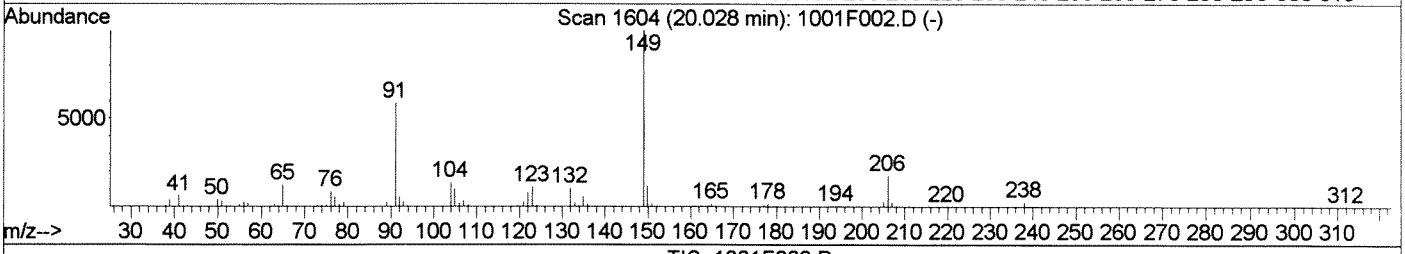
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:54 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F009.D

(72) Butyl Benzyl Phthalate (T)

20.02min 3.23ug/ml

response 9451

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	53.64
206.00	16.90	15.11
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14
T

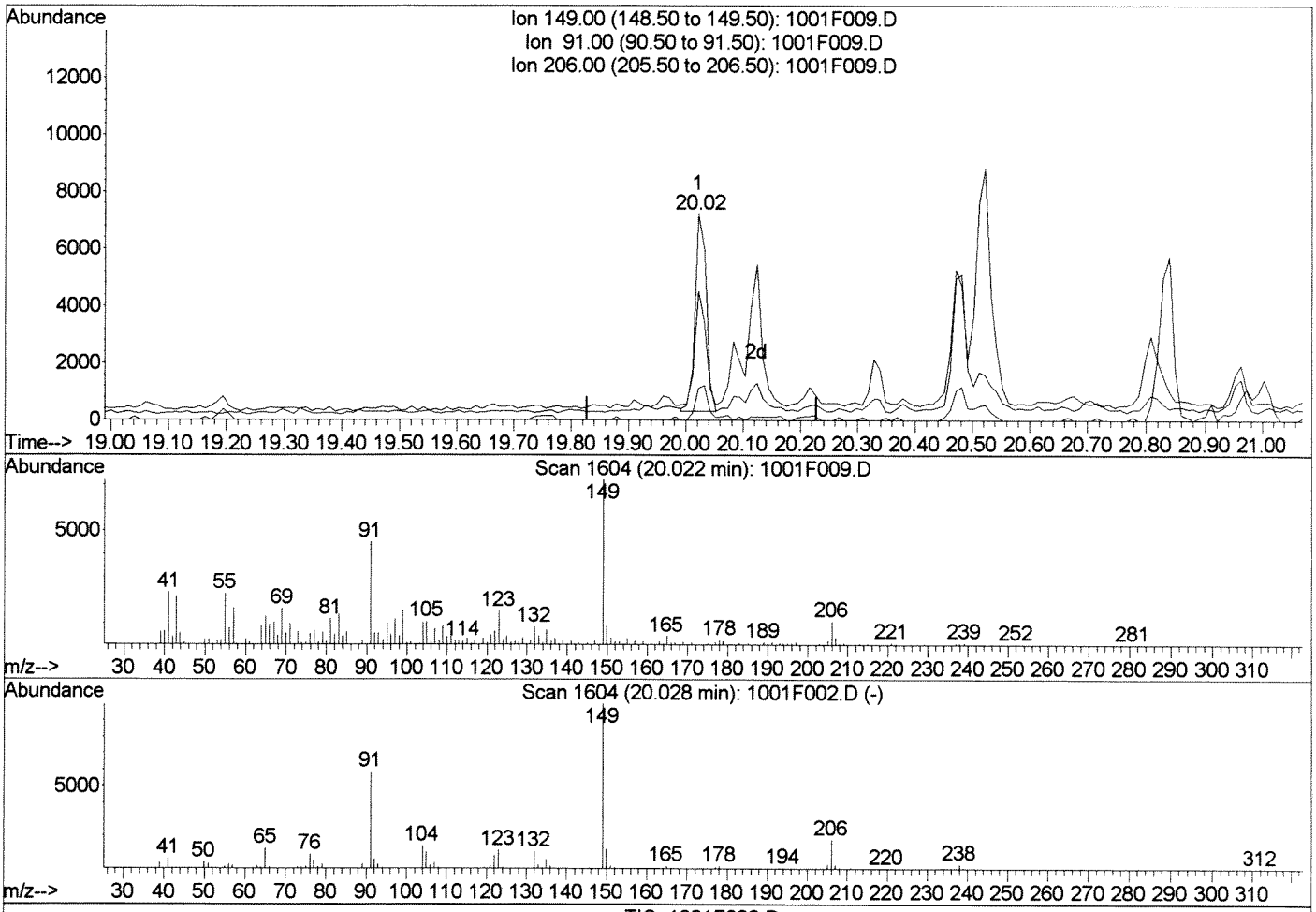
TRT

1001F009.D 093014BNC7.M Thu Oct 02 13:55:09 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F009.D Vial: 9
Acq On : 2 Oct 2014 12:34 am Operator: T. THOMAS
Sample : K1409921-010 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:55 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F009.D

(72) Butyl Benzyl Phthalate (T)

20.02min 3.19ug/ml m

response 9351

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	62.70
206.00	16.90	15.50
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/2/14

TAT

1001F009.D 093014BNC7.M Thu Oct 02 13:55:32 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F008.D
Lab ID: K1409921-011
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 10/01/2014 23:54
Date Quantitated: 10/02/2014 13:49
Batch ID: KWG1413431
Analysis Method: 8270D
ListJoinID: LJ16534

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: OCT 0 2 2014 TRT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F008.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 23:54	**Quant Date:**	10/02/2014 13:49	**Vial:**	8
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-011			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**	V	**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376324	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16534
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.20	-0.01	152	70791	40.00	OK
2	Naphthalene-d8	11.30	-0.01	136	256735	40.00	OK
3	Acenaphthene-d10	14.16	-0.01	164	123673	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	215456	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	222487	40.00	OK
6	Perylene-d12	24.11	-0.01	264	213913	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.72	-0.01	0.00	99	188827	78.87	53	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	109909	51.33	51	29-116	OK	
3	2-Fluorobiphenyl	13.10	-0.01	0.00	172	246744	52.89	53	32-104	OK	
4	2,4,6-Tribromophenol	15.46	-0.01	0.00	330	146664	123.70	82	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	375503	77.23	77	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0**d**		0.019	U	
1	2-Methylphenol				107	0		0.017	U	
1	4-Methylphenol				107	0		0.017	U	
2	2,4-Dimethylphenol				122	0		0.015	U	
2	Hexachlorobutadiene				225	0		0.014	U	
3	Diethyl Phthalate				149	0**d**		0.014	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.14	U	
4	Hexachlorobenzene				284	0		0.015	U	
4	Fluoranthene	18.54		0.00	202	3278**m**	0.5600	0.018	J	
5	Pyrene	18.89		0.00	202	3744	0.5700	0.018	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F008.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 23:54	**Quant Date:**	10/02/2014 13:49	**Vial:**	8
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-011			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Butyl Benzyl Phthalate	20.03		0.00	149	4317**m**	1.43	0.046	J	
5	Chrysene	21.02	-0.01	0.00	228	3845	0.7000	0.022	J	
5	Bis(2-ethylhexyl) Phthalate	21.14	-0.01	0.00	149	21499**m**	5.40	0.17	J	
6	Di-n-octyl Phthalate	22.59		0.00	149	1736	0.2500	0.024	U	

Prep Amount:	40.240 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	77.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:11 2014 Quant Results File: 093014BNC7.RES

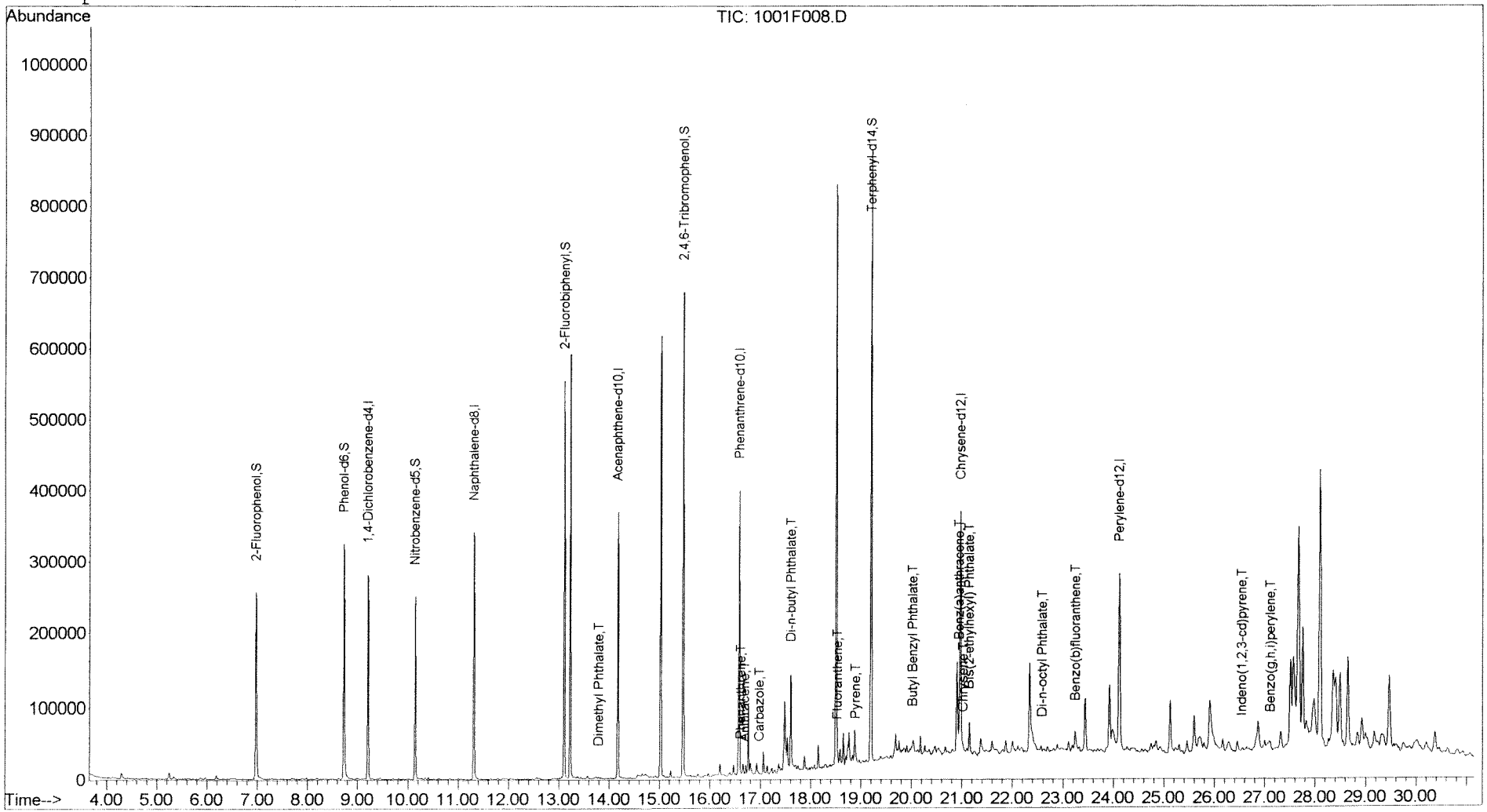
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	70791	40.00	ug/ml	-0.01
21) Naphthalene-d8	11.30	136	256735	40.00	ug/ml	-0.01
34) Acenaphthene-d10	14.16	164	123673	40.00	ug/ml	-0.01
58) Phenanthrene-d10	16.57	188	215456	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	222487	40.00	ug/ml	-0.01
77) Perylene-d12	24.11	264	213913	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	133975	65.98	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 43.99%			
7) Phenol-d6	8.72	99	188827	78.87	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.58%			
19) Nitrobenzene-d5	10.14	82	109909	51.33	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 51.33%			
38) 2-Fluorobiphenyl	13.10	172	246744	52.89	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 52.89%			
59) 2,4,6-Tribromophenol	15.46	330	146664	123.70	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 82.47%			
71) Terphenyl-d14	19.20	244	375503	77.23	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 77.23%			
Target Compounds						Qvalue
42) Dimethyl Phthalate	13.80	163	686	0.15	ug/ml	80
63) Phenanthrene	16.61	178	1773	0.34	ug/ml	90
64) Anthracene	16.69	178	501	0.09	ug/ml	60
65) Carbazole	16.98	167	602	0.12	ug/ml	79
66) Di-n-butyl Phthalate	17.61	149	4881	0.73	ug/ml	93
67) Fluoranthene	18.54	202	3278m	0.56	ug/ml	
70) Pyrene	18.89	202	3744	0.57	ug/ml	98
72) Butyl Benzyl Phthalate	20.03	149	4317m	1.43	ug/ml	
74) Benz(a)anthracene	20.95	228	1860	0.33	ug/ml	62
75) Chrysene	21.02	228	3845	0.70	ug/ml	91
76) Bis(2-ethylhexyl) Phthalat	21.14	149	21499m	5.40	ug/ml	
78) Di-n-octyl Phthalate	22.59	149	1736	0.25	ug/ml	82
79) Benzo(b)fluoranthene	23.24	252	4643m	0.89	ug/ml	
82) Indeno(1,2,3-cd)pyrene	26.54	276	1488	0.33	ug/ml	74
84) Benzo(g,h,i)perylene	27.12	276	2358	0.47	ug/ml	92

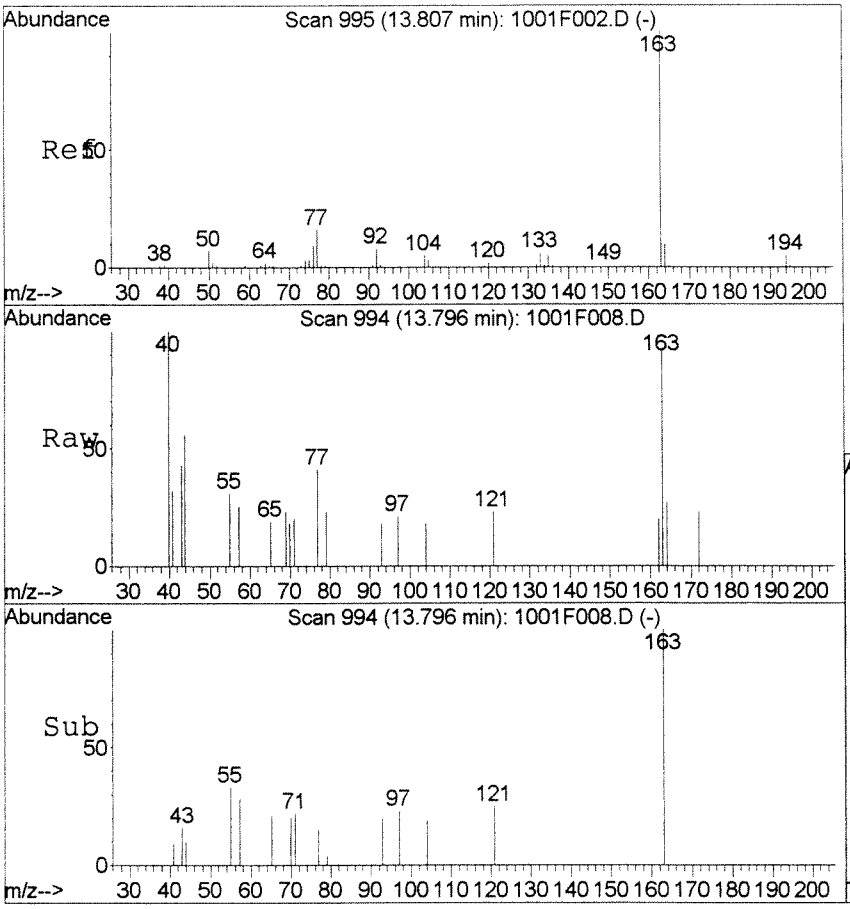
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:49 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



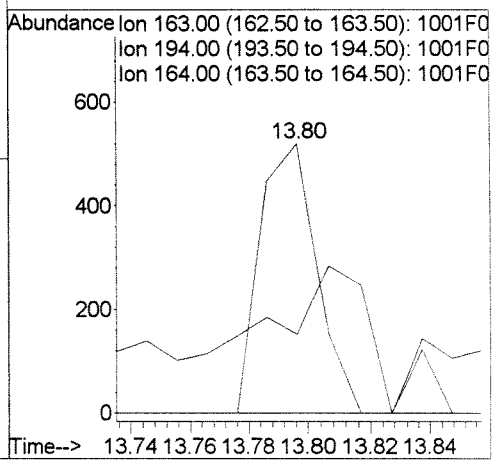
2653

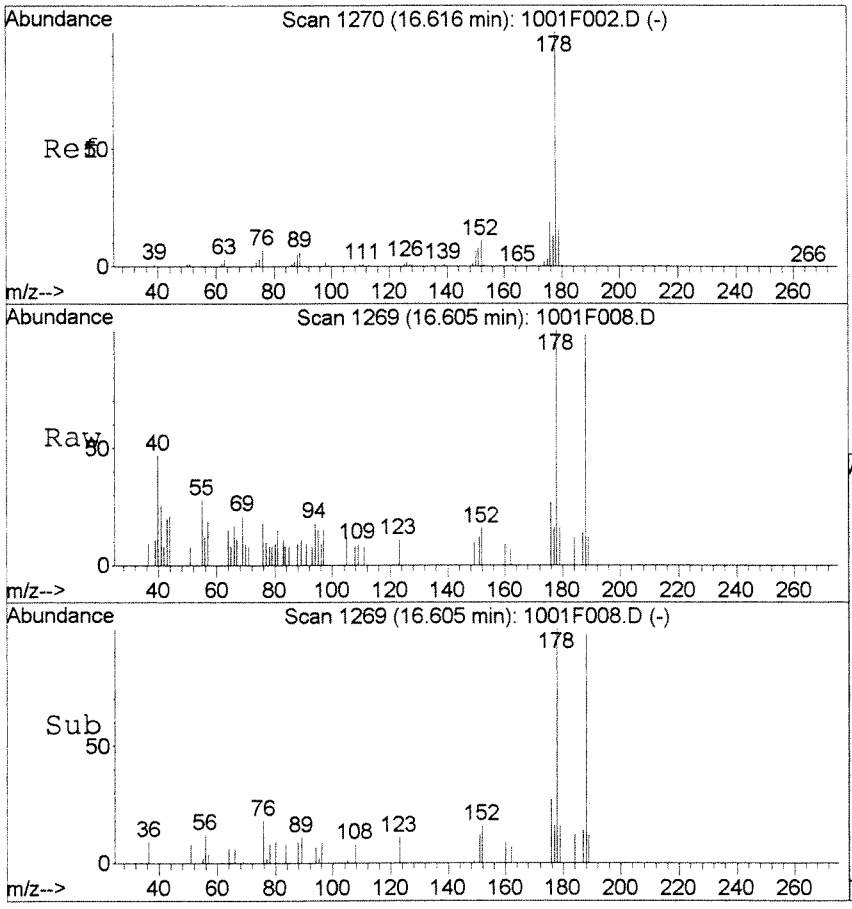


#42
Dimethyl Phthalate
Concen: 0.15 ug/ml
RT: 13.80 min Scan# 994
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:163 Resp: 686

Ion	Ratio	Lower	Upper
163	100		
194	0.0	0.0	34.6
164	18.2	0.0	39.9

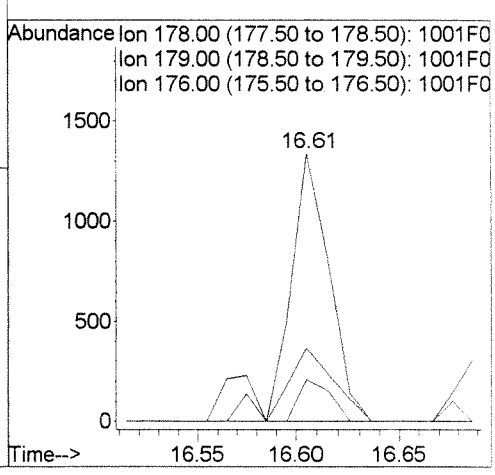


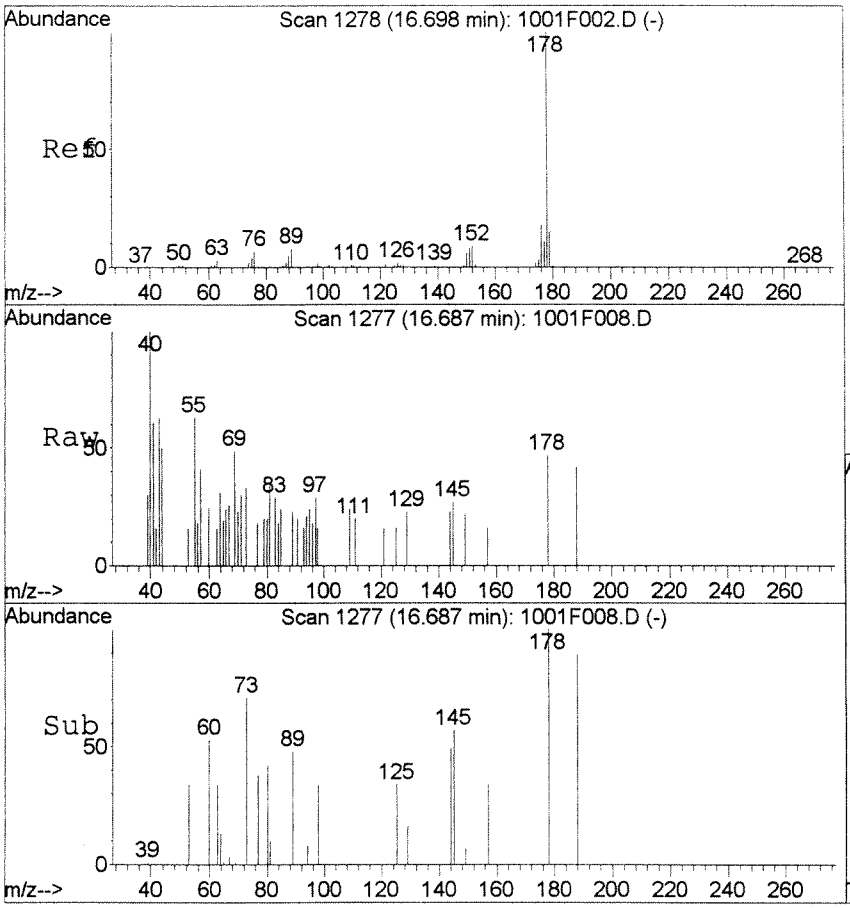


#63
Phenanthrene
Concen: 0.34 ug/ml
RT: 16.61 min Scan# 1269
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:178 Resp: 1773

Ion	Ratio	Lower	Upper
178	100		
179	15.6	0.0	45.5
176	27.4	0.0	49.1

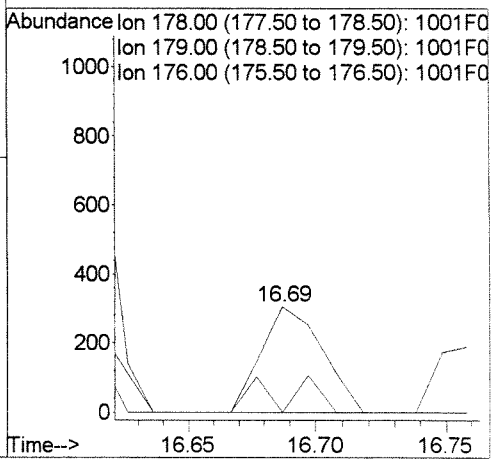


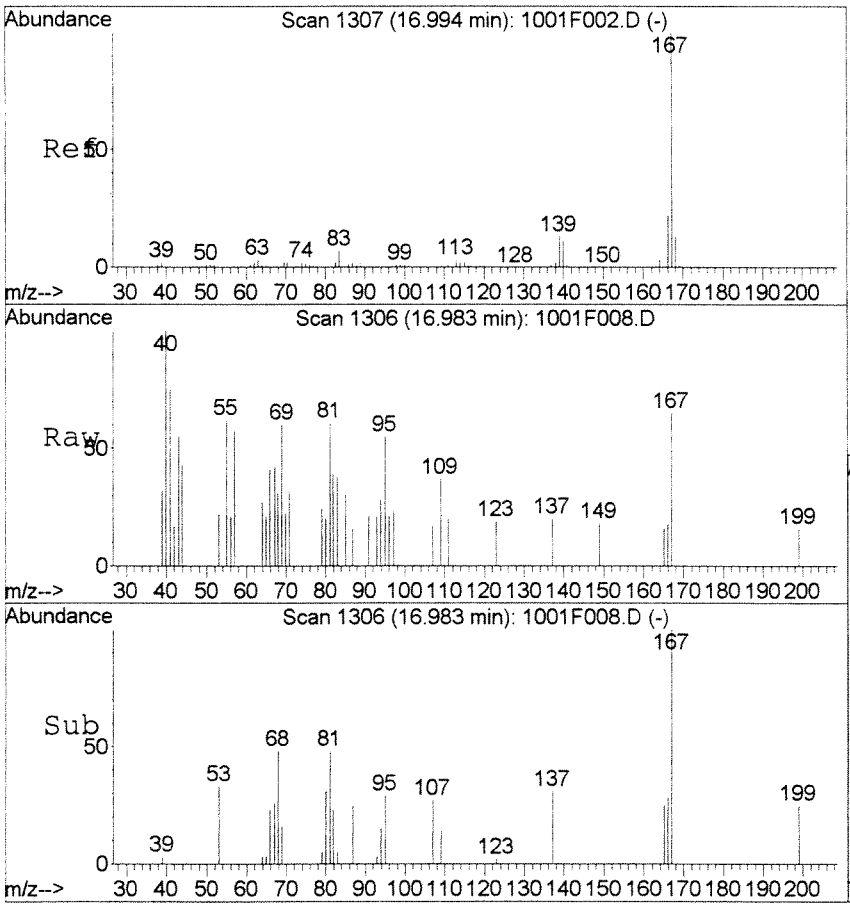


#64
Anthracene
Concen: 0.09 ug/ml
RT: 16.69 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:178 Resp: 501

Ion	Ratio	Lower	Upper
178	100		
179	0.0	0.0	45.6
176	0.0	0.0	48.8

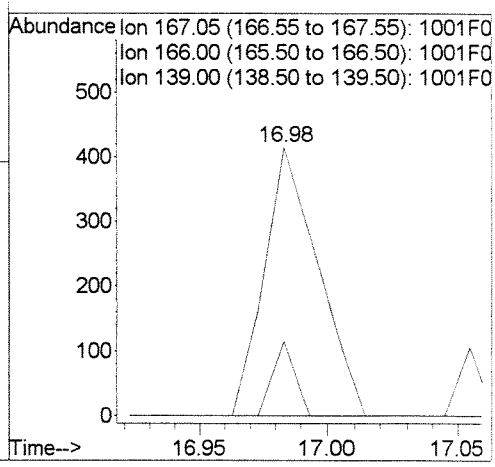


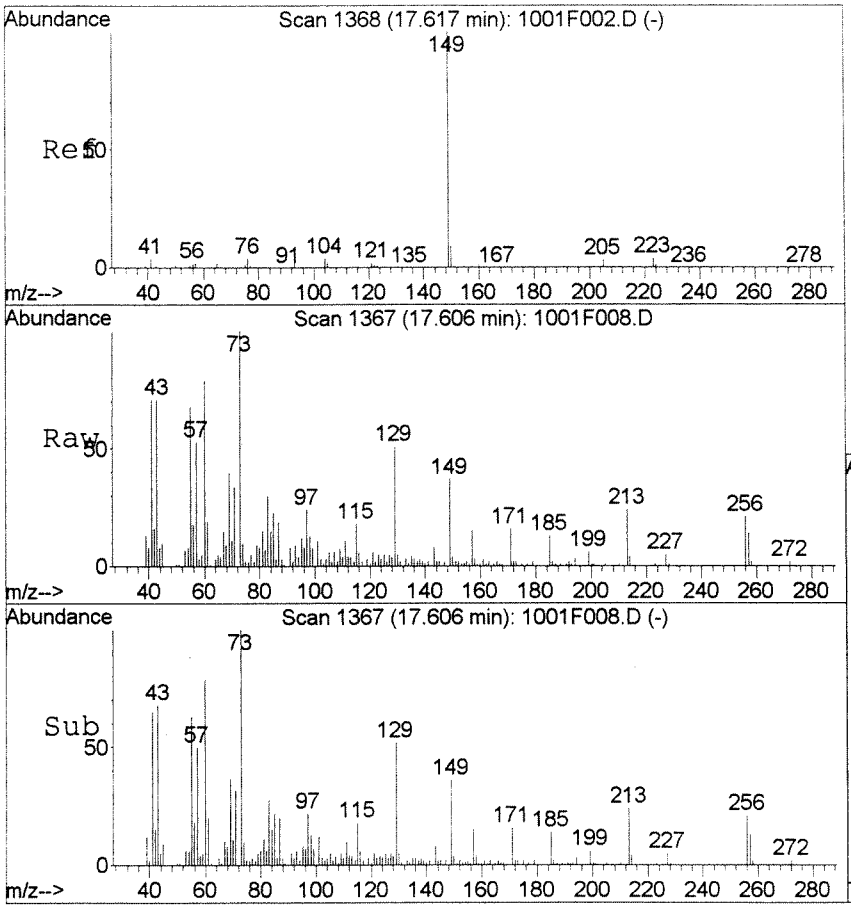


#65
Carbazole
Concen: 0.12 ug/ml
RT: 16.98 min Scan# 1306
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:167 Resp: 602

Ion	Ratio	Lower	Upper
167	100		
166	27.7	0.0	51.6
139	0.0	0.0	43.3

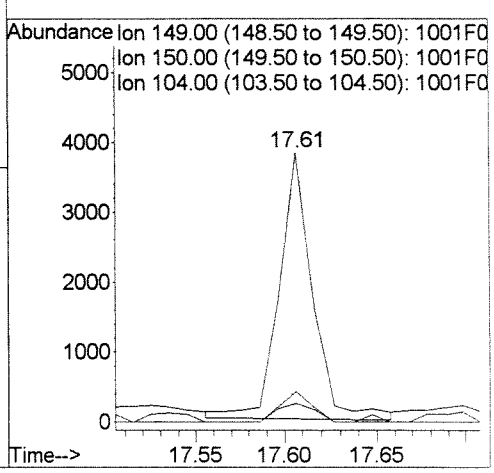


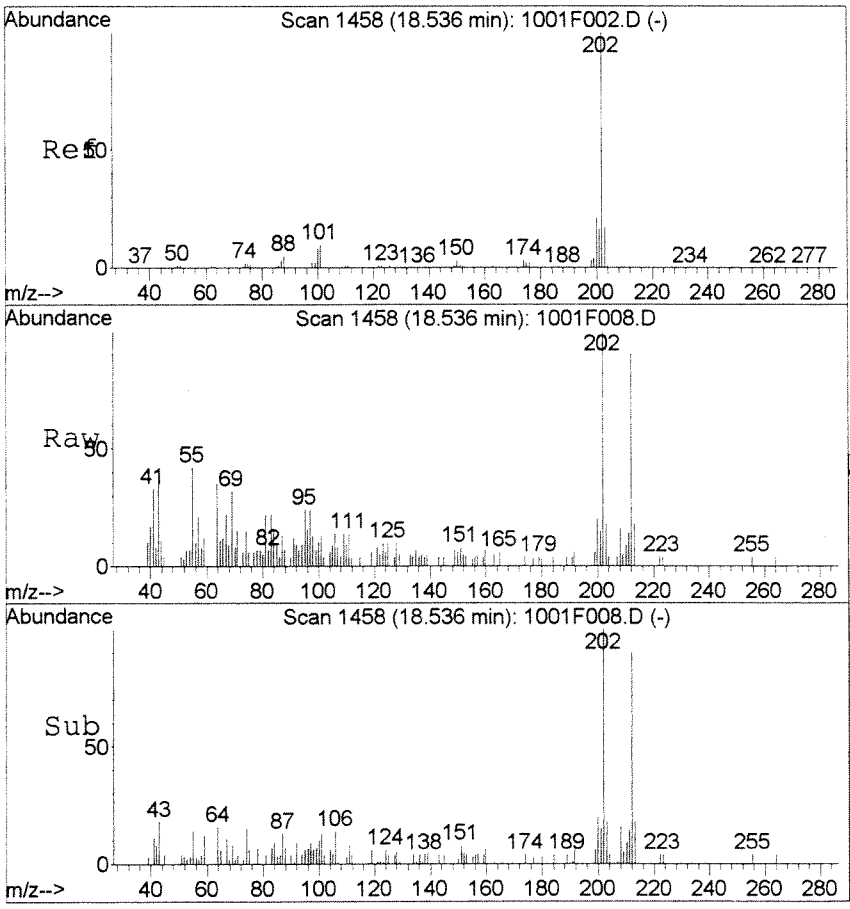


#66
Di-n-butyl Phthalate
Concen: 0.73 ug/ml
RT: 17.61 min Scan# 1367
Delta R.T. -0.00 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:149 Resp: 4881

Ion	Ratio	Lower	Upper
149	100		
150	11.8	0.0	39.3
104	7.2	0.0	35.1

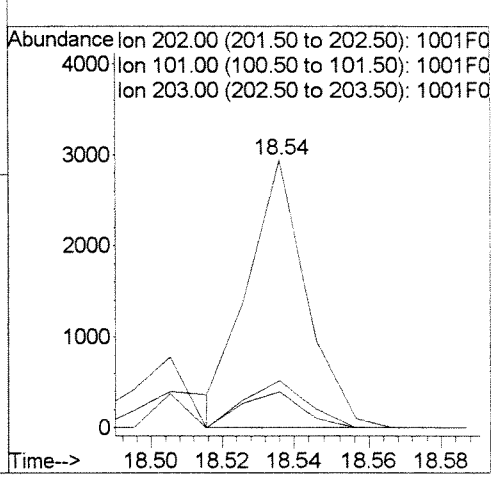


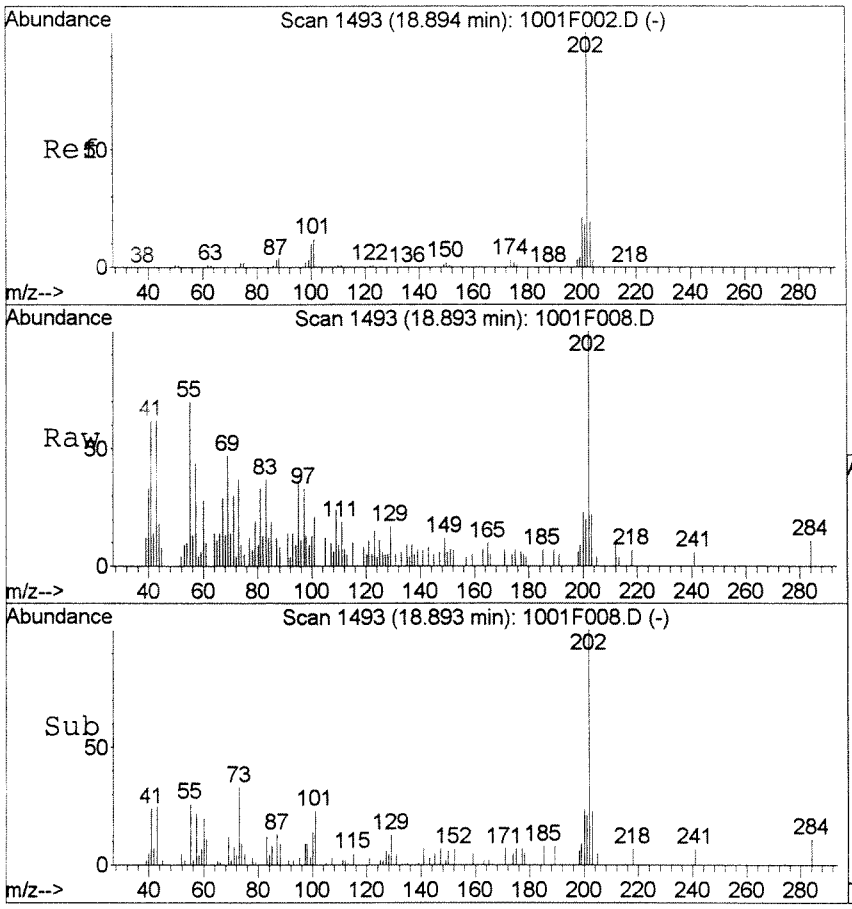


#67
Fluoranthene
Concen: 0.56 ug/ml m
RT: 18.54 min Scan# 1458
Delta R.T. -0.00 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:202 Resp: 3278

Ion	Ratio	Lower	Upper
202	100		
101	13.5	0.0	39.2
203	17.6	0.0	47.5

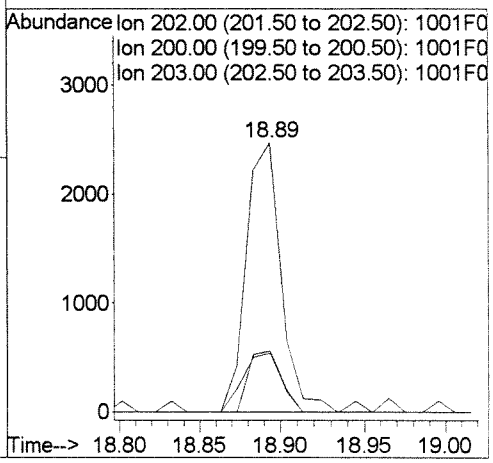


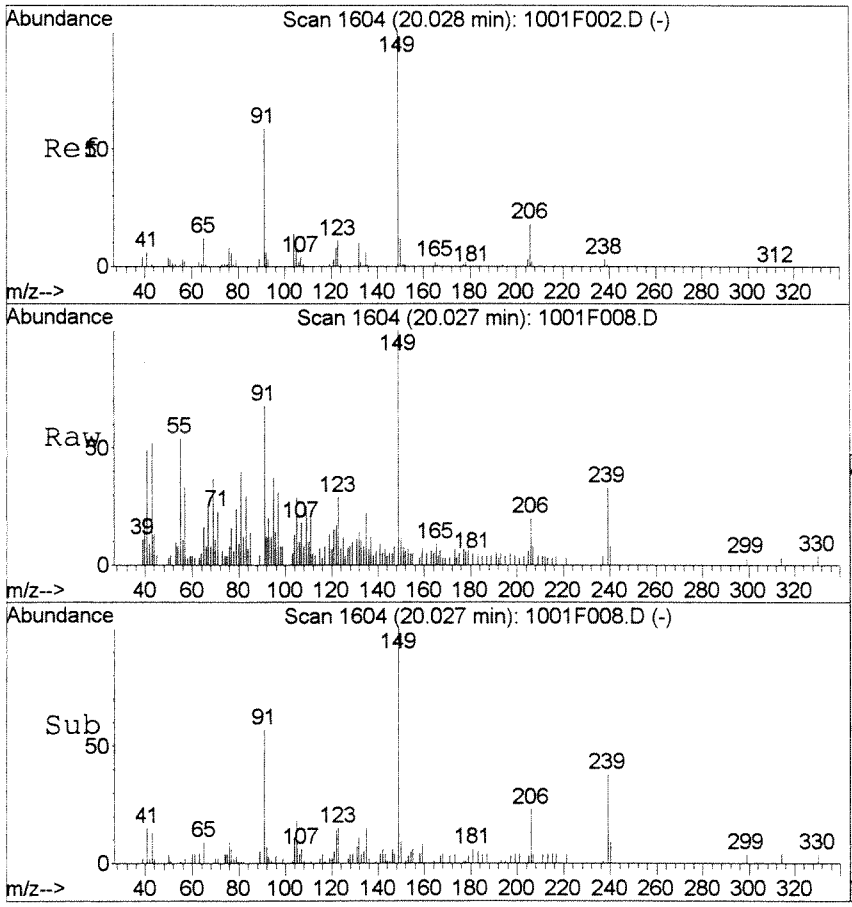


#70
Pyrene
Concen: 0.57 ug/ml
RT: 18.89 min Scan# 1493
Delta R.T. -0.00 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:202 Resp: 3744

Ion	Ratio	Lower	Upper
202	100		
200	22.7	0.0	50.7
203	19.3	0.0	49.2

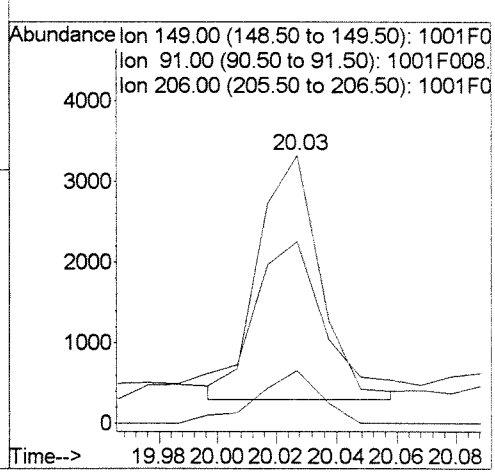


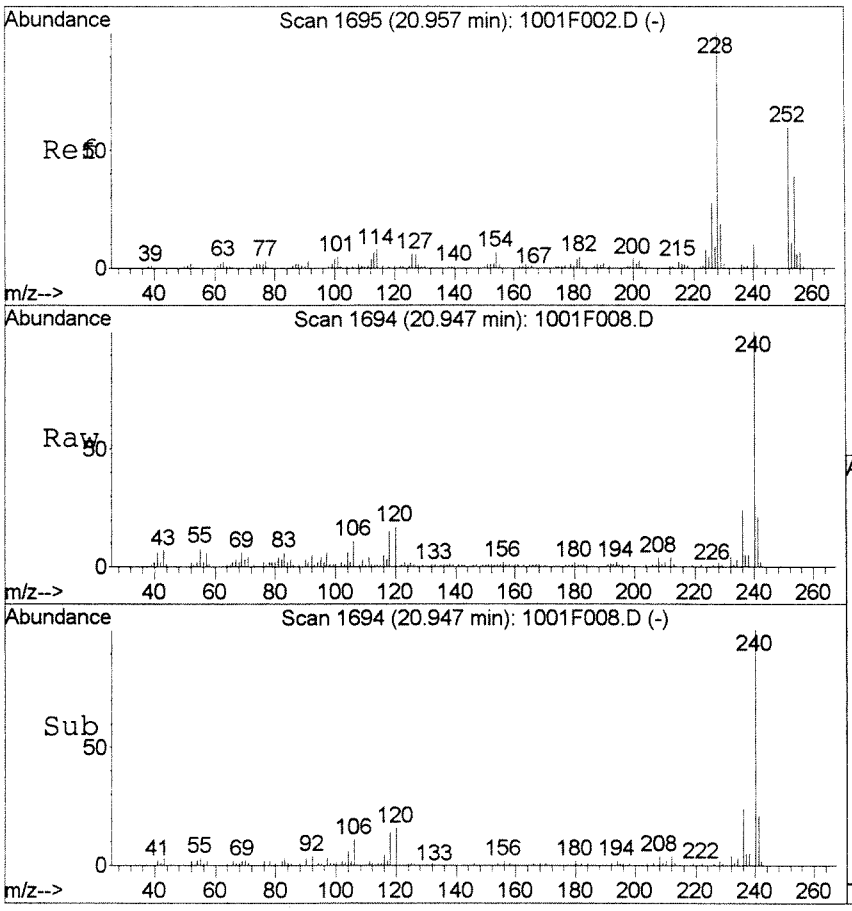


#72
Butyl Benzyl Phthalate
Concen: 1.43 ug/ml m
RT: 20.03 min Scan# 1604
Delta R.T. -0.00 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:149 Resp: 4317

Ion	Ratio	Lower	Upper
149	100		
91	67.9	28.0	88.0
206	19.7	0.0	46.9

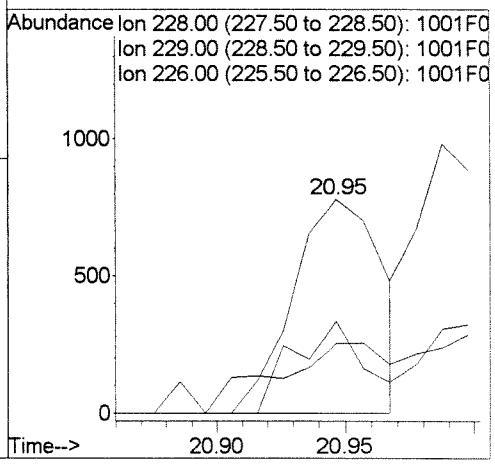


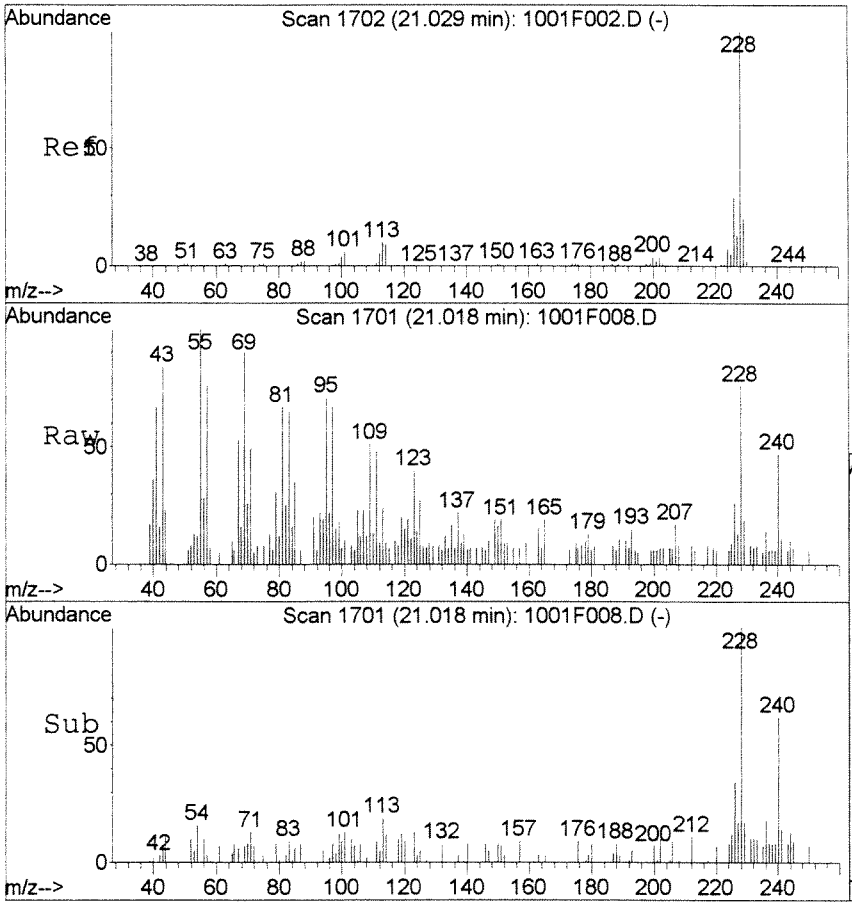


#74
Benz(a)anthracene
Concen: 0.33 ug/ml
RT: 20.95 min Scan# 1694
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:228 Resp: 1860

Ion	Ratio	Lower	Upper
228	100		
229	30.4	0.0	49.0
226	51.7	0.0	57.3

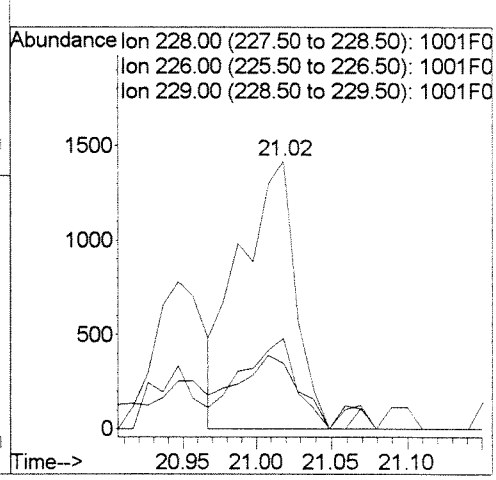


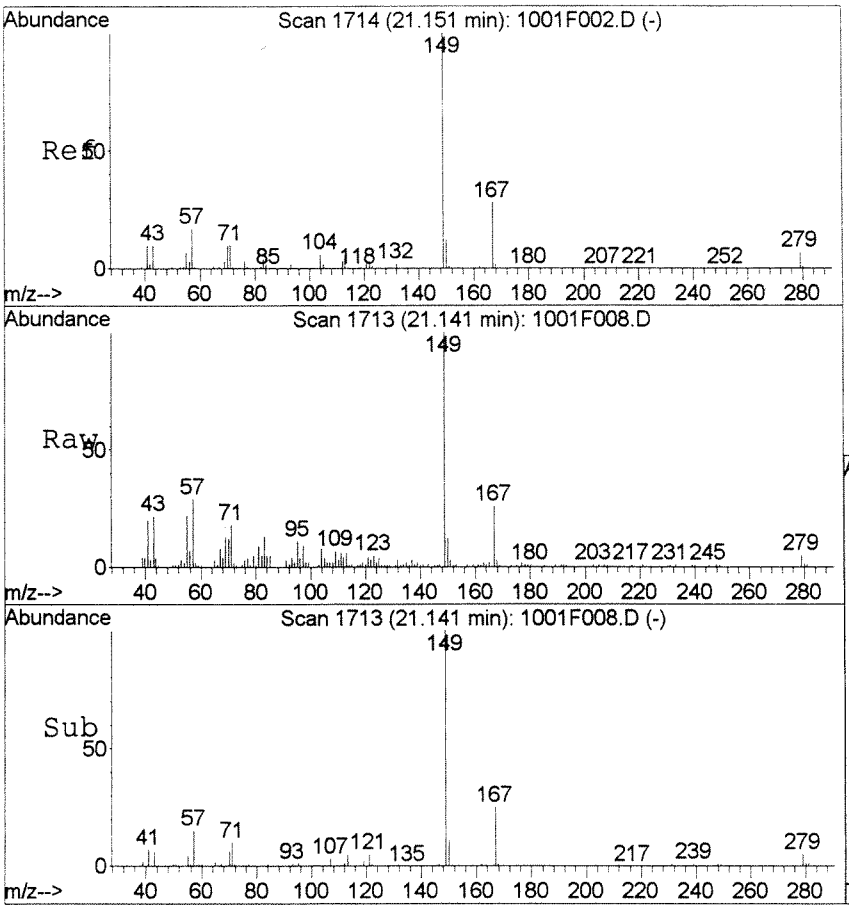


#75
Chrysene
Concen: 0.70 ug/ml
RT: 21.02 min Scan# 1701
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:228 Resp: 3845

Ion	Ratio	Lower	Upper
228	100		
226	36.0	0.0	59.3
229	17.2	0.0	49.2

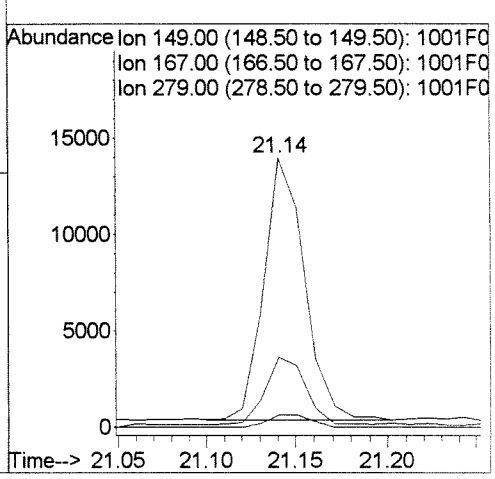


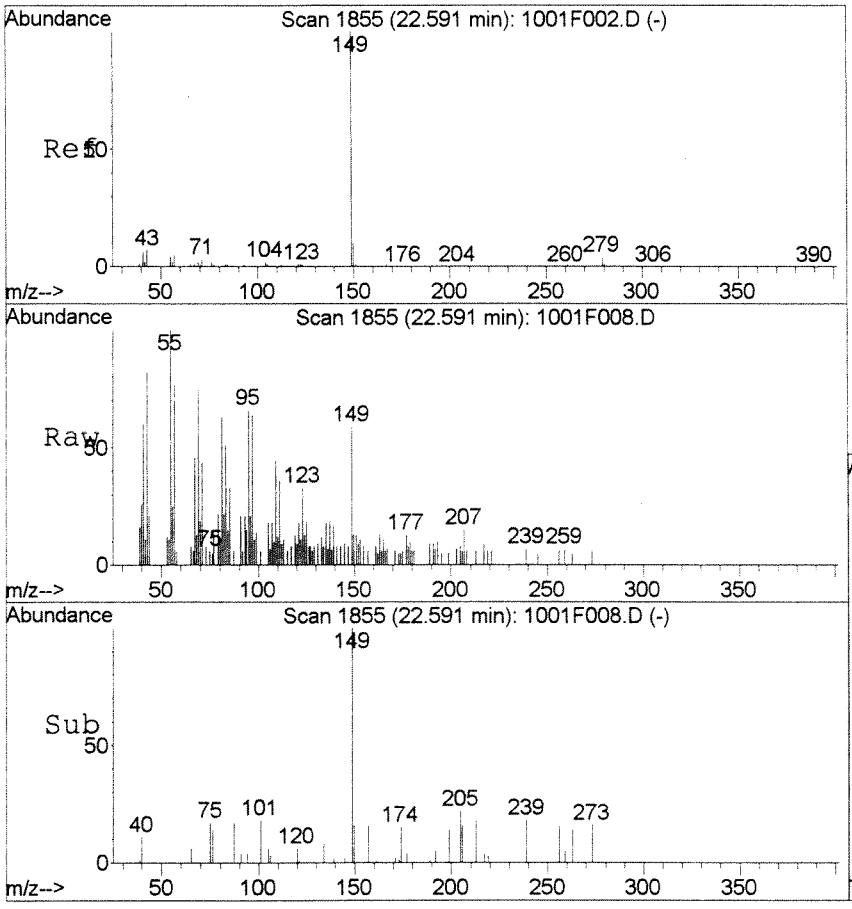


#76
Bis(2-ethylhexyl) Phthalate
Concen: 5.40 ug/ml m
RT: 21.14 min Scan# 1713
Delta R.T. -0.01 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:149 Resp: 21499

Ion	Ratio	Lower	Upper
149	100		
167	26.1	0.0	57.7
279	4.6	0.0	36.6

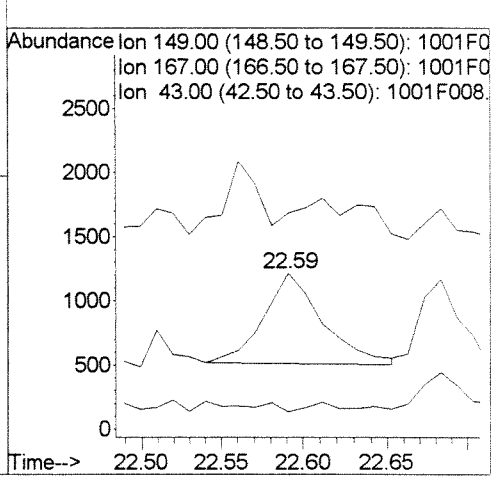


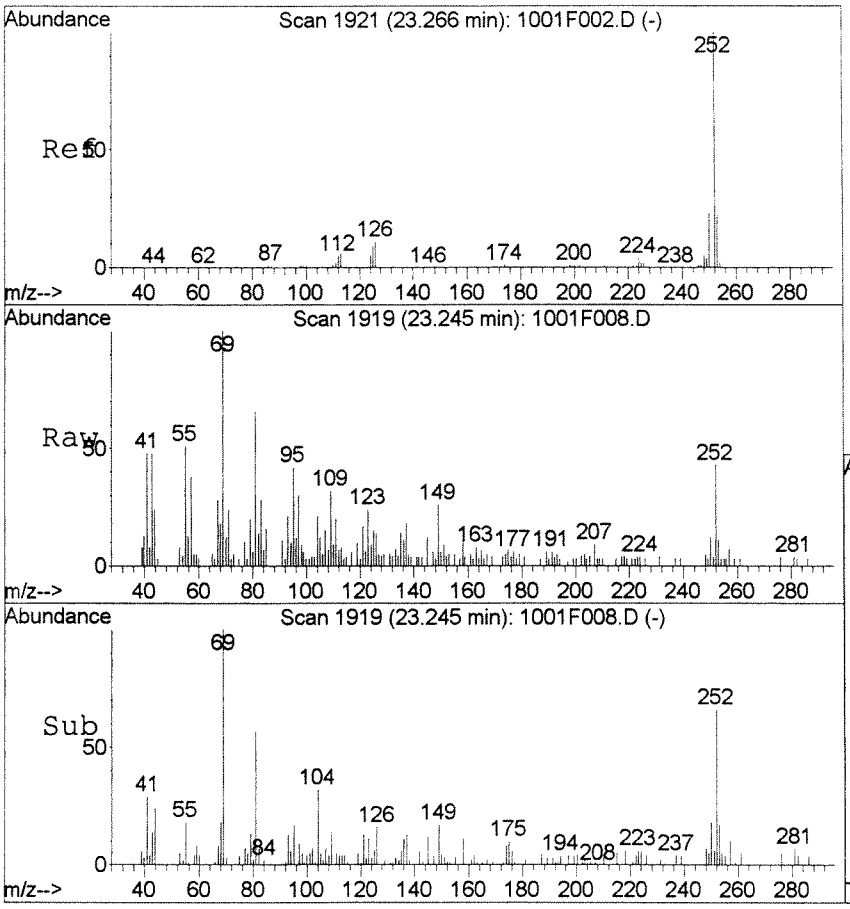


#78
Di-n-octyl Phthalate
Concen: 0.25 ug/ml
RT: 22.59 min Scan# 1855
Delta R.T. 0.00 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:149 Resp: 1736

Ion	Ratio	Lower	Upper
149	100		
167	0.0	0.0	31.4
43	14.2	0.0	37.1

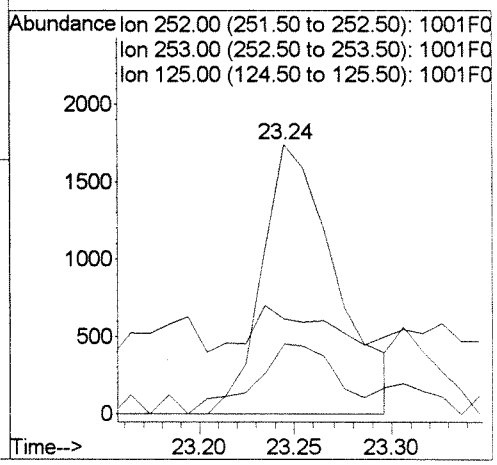


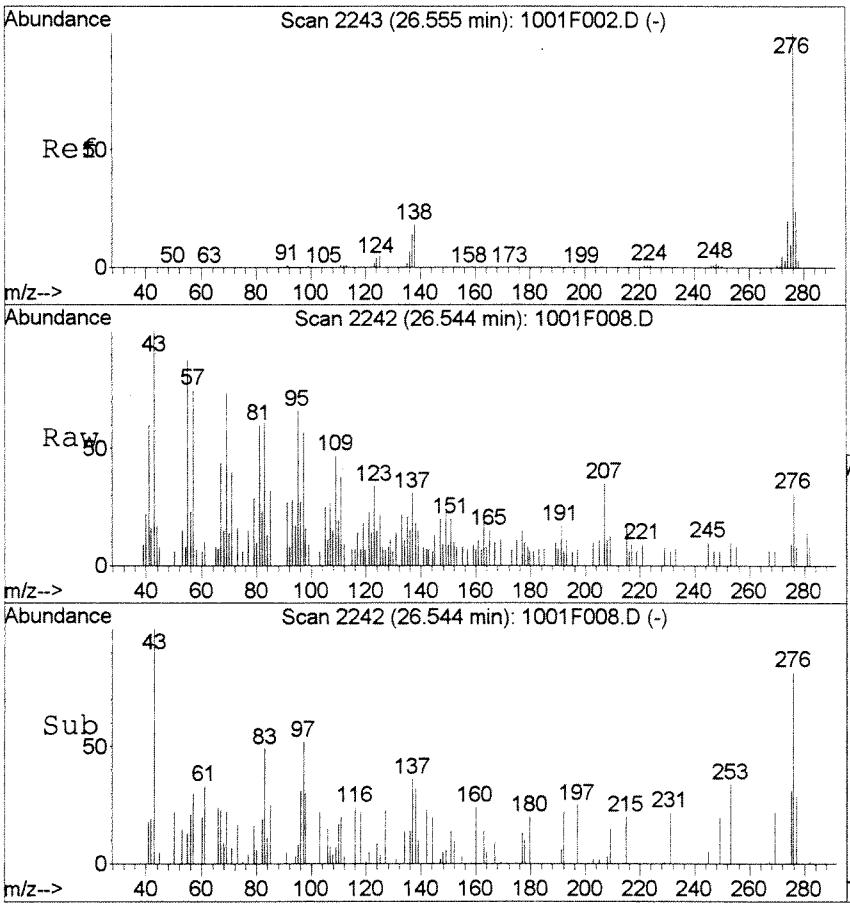


#79
Benzo(b)fluoranthene
Concen: 0.89 ug/ml m
RT: 23.24 min Scan# 1919
Delta R.T. -0.02 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:252 Resp: 4643

Ion	Ratio	Lower	Upper
252	100		
253	26.0	0.0	51.9
125	35.3	0.0	39.2

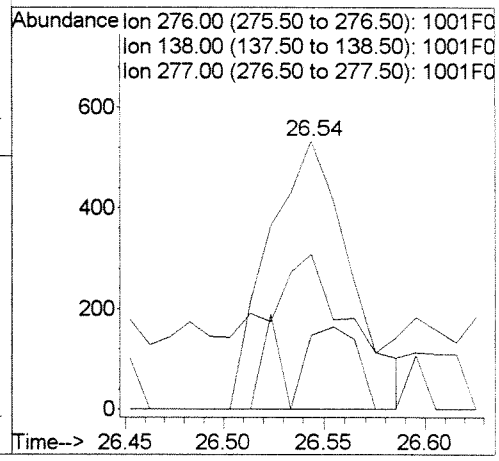


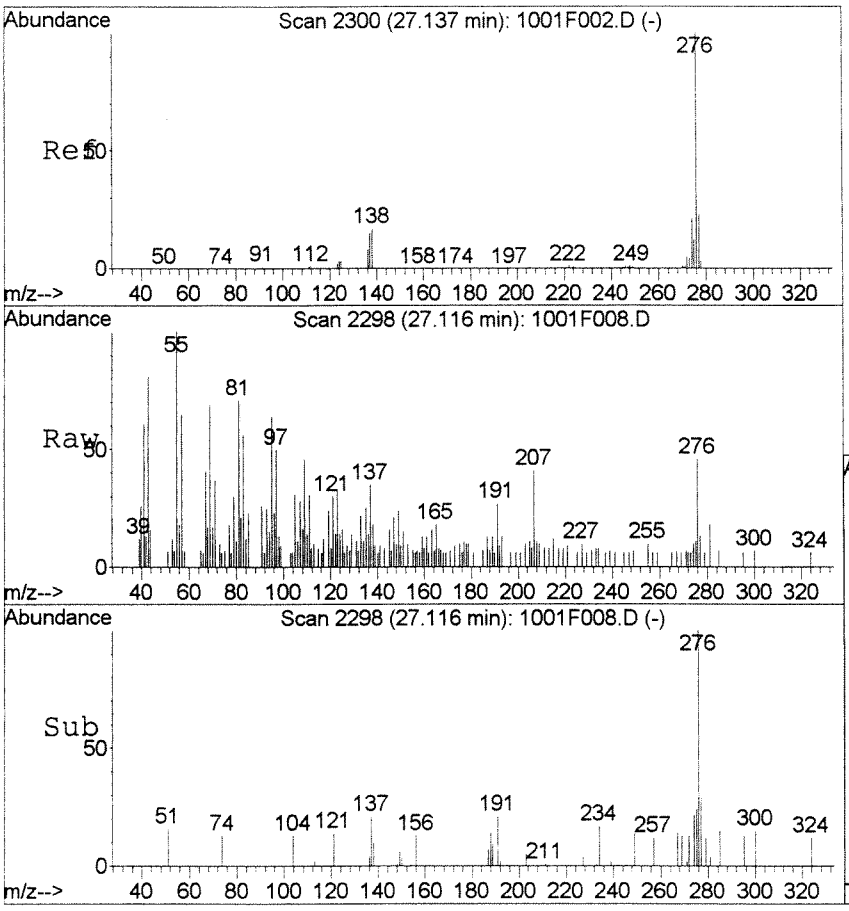


#82
Indeno(1,2,3-cd)pyrene
Concen: 0.33 ug/ml
RT: 26.54 min Scan# 2242
Delta R.T. -0.02 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

Tgt Ion:276 Resp: 1488

Ion	Ratio	Lower	Upper
276	100		
138	34.1	0.0	46.3
277	30.5	0.0	53.1

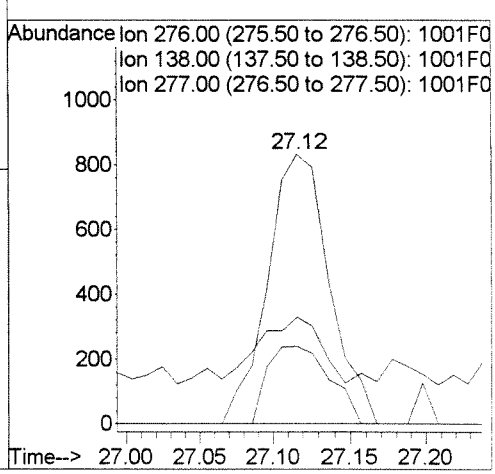




#84
Benzo(g,h,i)perylene
Concen: 0.47 ug/ml
RT: 27.12 min Scan# 2298
Delta R.T. -0.03 min
Lab File: 1001F008.D
Acq: 1 Oct 2014 11:54 pm

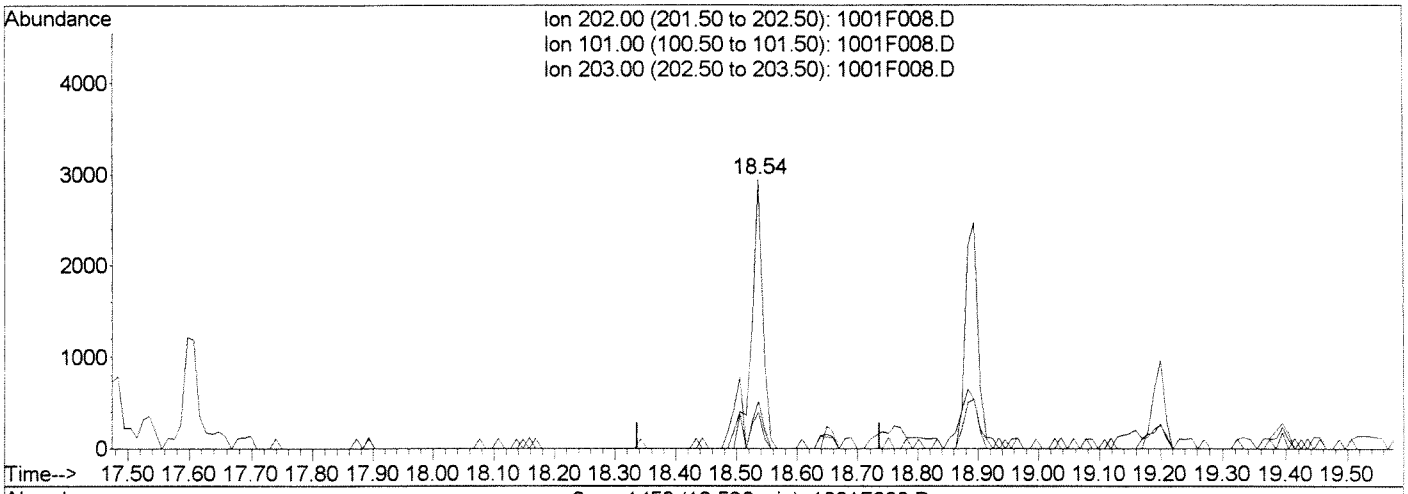
Tgt Ion:276 Resp: 2358

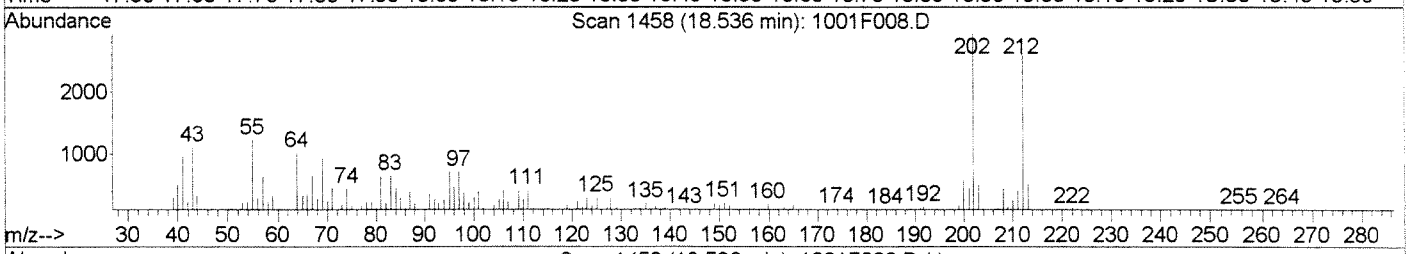
Ion	Ratio	Lower	Upper
276	100		
138	17.3	0.0	46.4
277	28.6	0.0	53.1

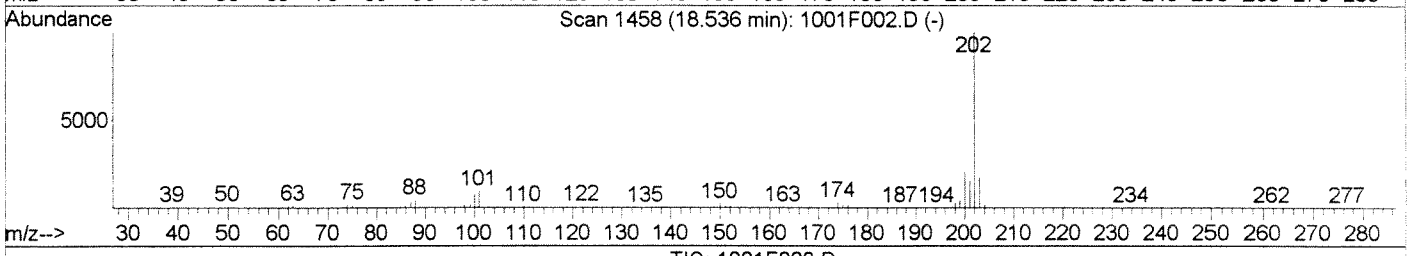


Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:43 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F008.D

(67) Fluoranthene (T)

18.54min 0.65ug/ml

response 3861

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	13.49
203.00	17.50	17.57
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

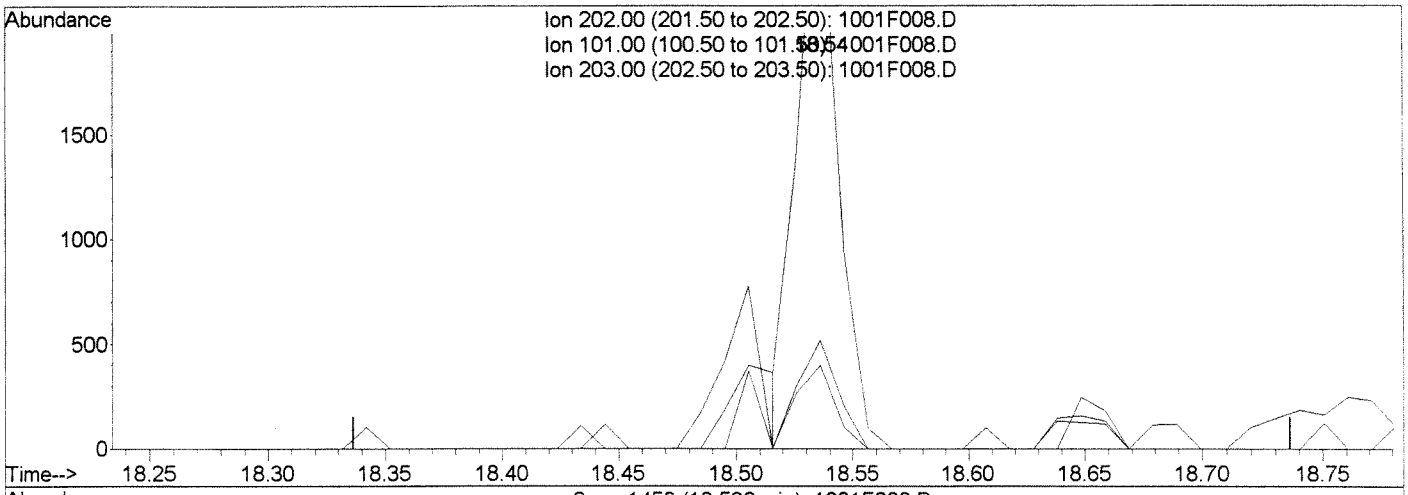
10/3/14
S

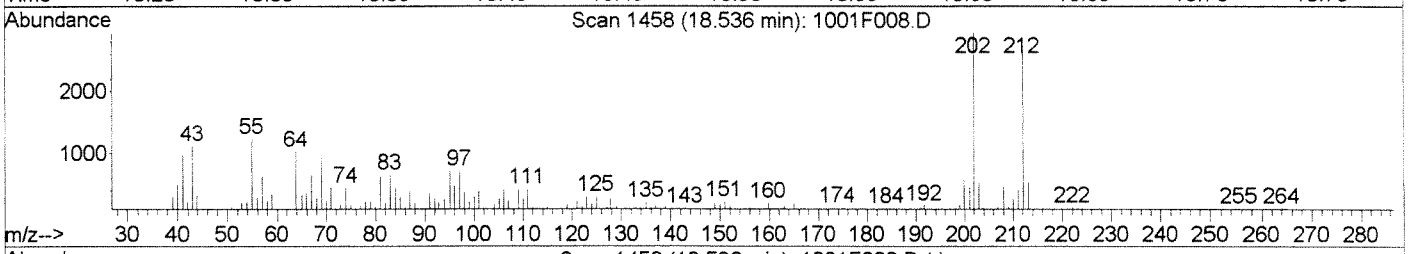
TRT

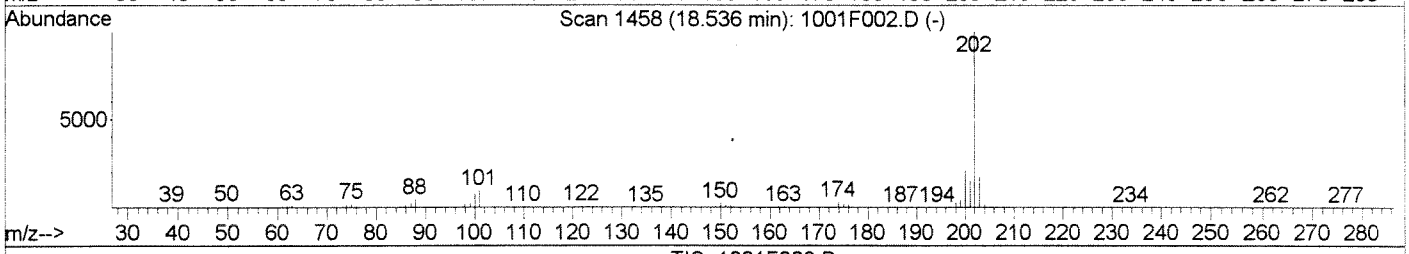
1001F008.D 093014BNC7.M Thu Oct 02 13:44:47 2014

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:44 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F008.D

(67) Fluoranthene (T)

18.54min 0.56ug/ml m

response 3278

Ion	Exp%	Act%
202.00	100	100
101.00	9.20	13.49
203.00	17.50	17.57
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

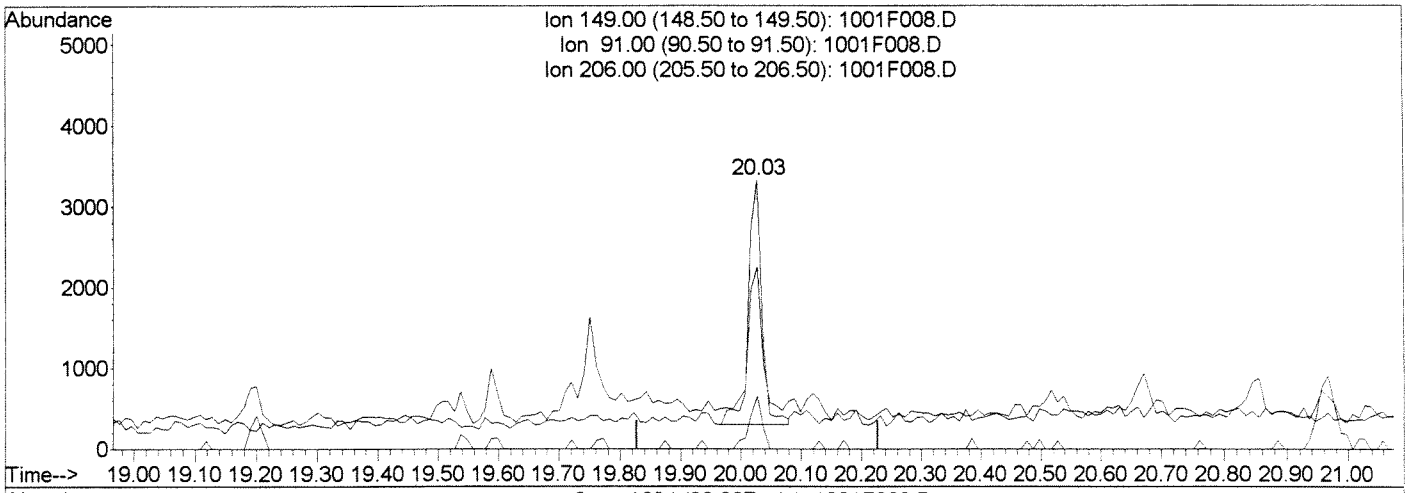
10/3 kp 5

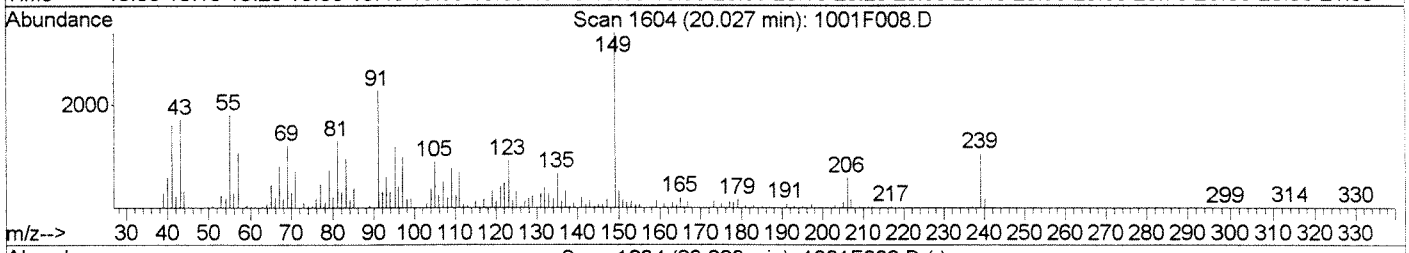
TRT

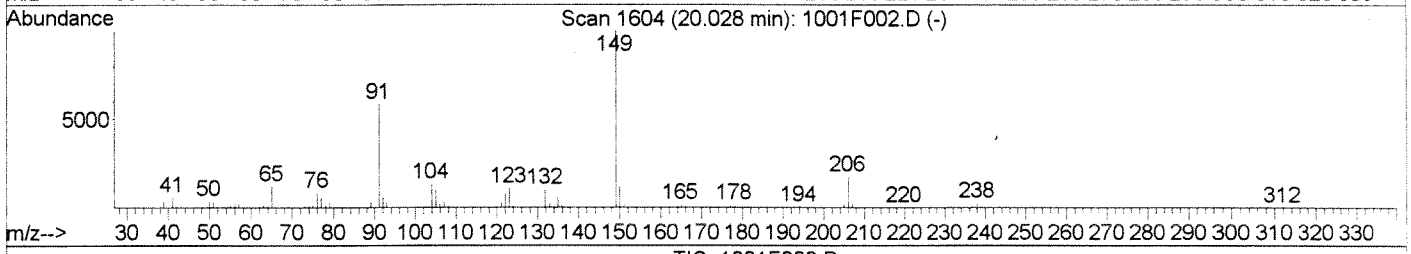
1001F008.D 093014BNC7.M Thu Oct 02 13:45:01 2014

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:44 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F008.D

(72) Butyl Benzyl Phthalate (T)

20.03min 1.57ug/ml

response 4744

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	57.47
206.00	16.90	21.95
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

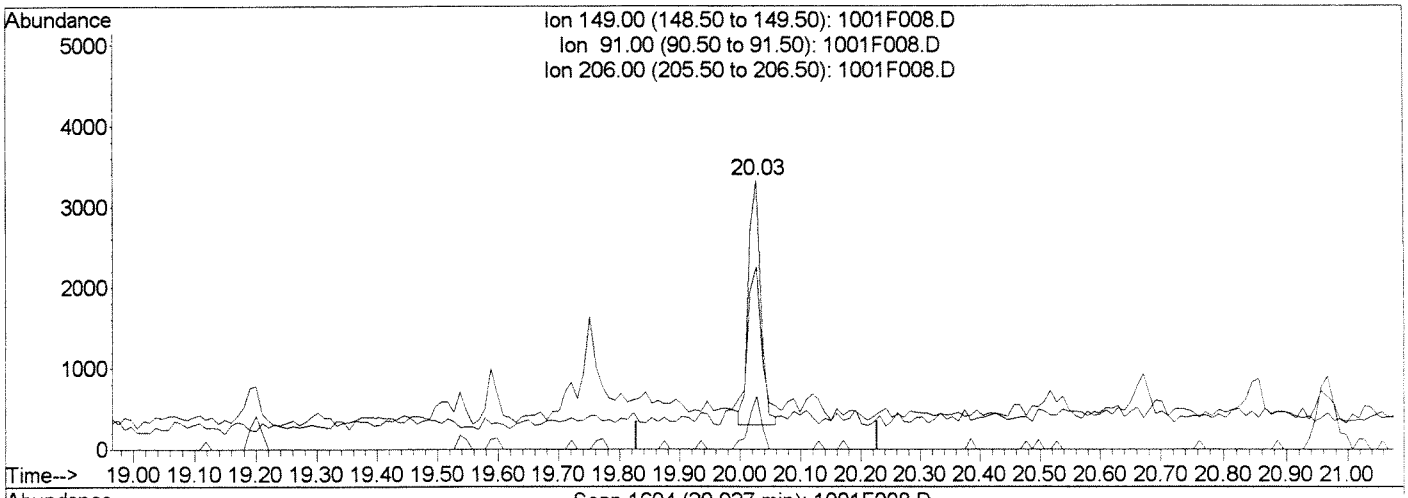
TRT

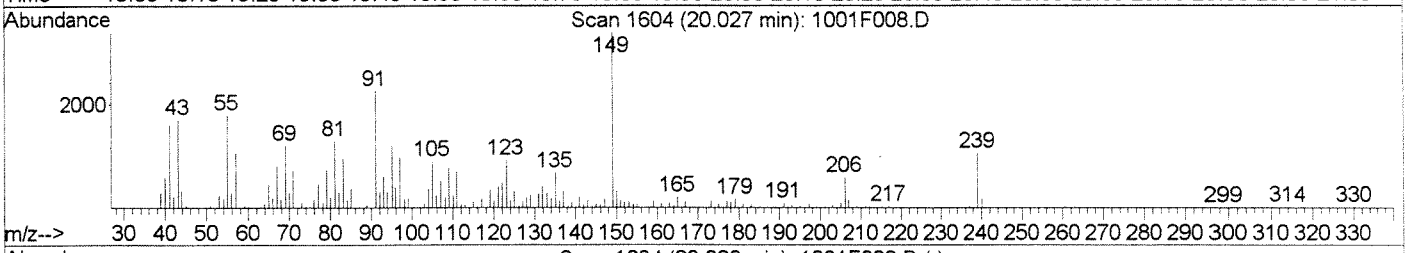
1001F008.D 093014BNC7.M Thu Oct 02 13:45:27 2014

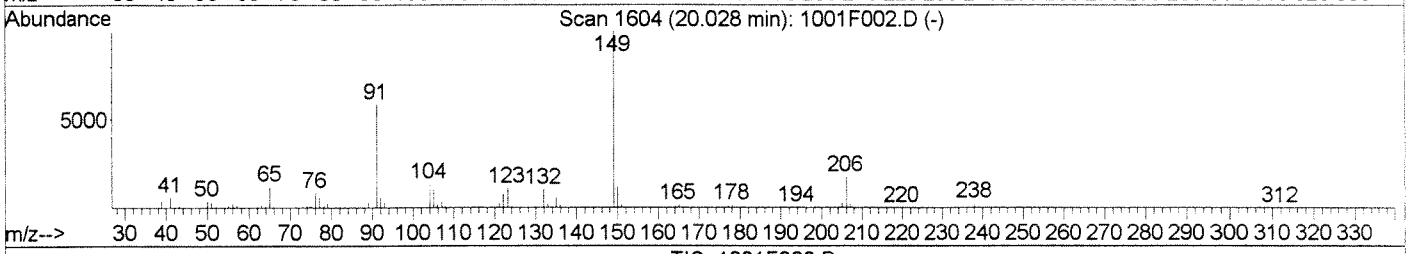
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:45 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 1001F008.D

(72) Butyl Benzyl Phthalate (T)

20.03min 1.43ug/ml m

response 4317

Ion	Exp%	Act%
149.00	100	100
91.00	58.00	67.88
206.00	16.90	19.73
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TKT

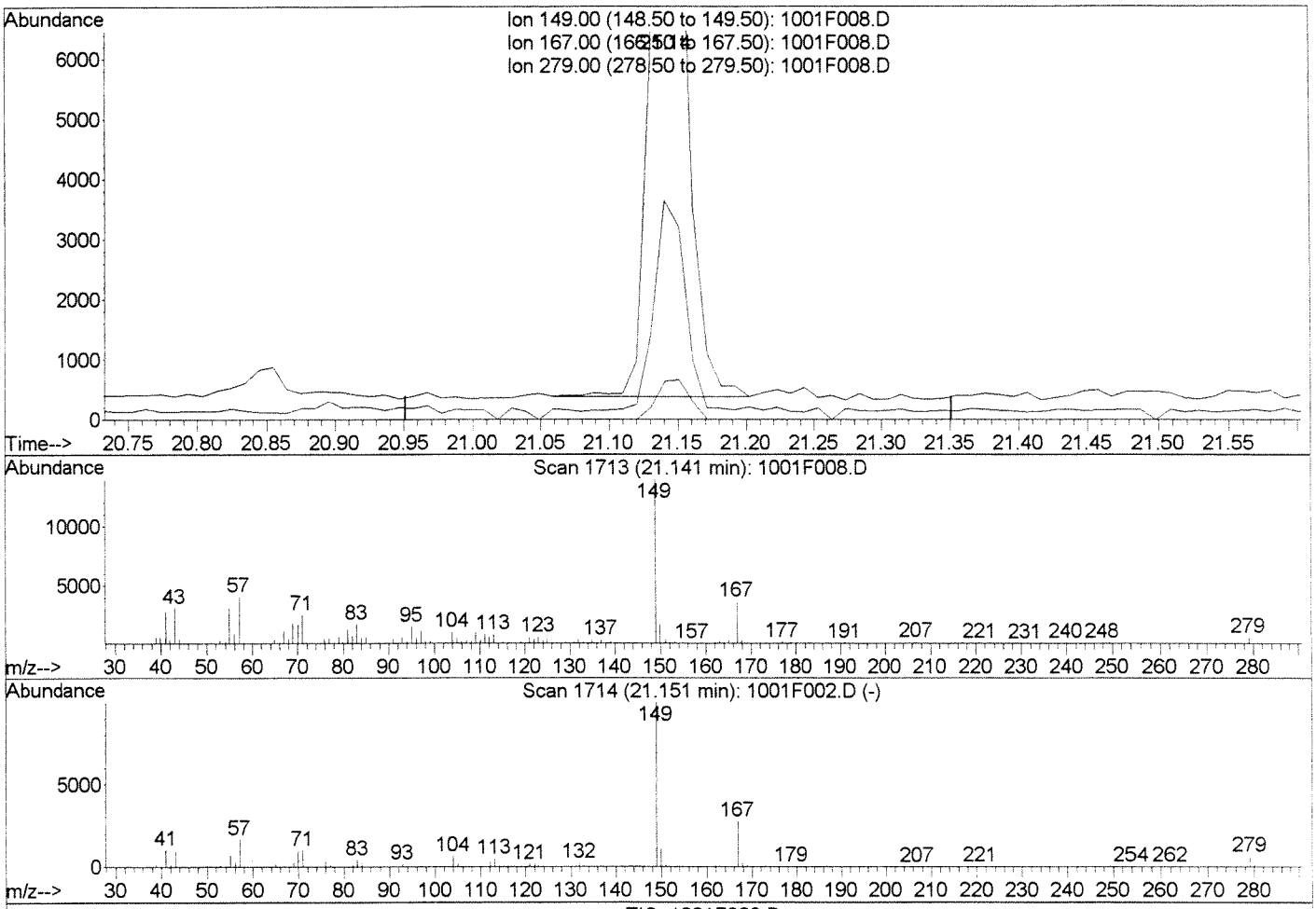
1001F008.D 093014BNC7.M Thu Oct 02 13:45:49 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F008.D
Acq On : 1 Oct 2014 11:54 pm
Sample : K1409921-011
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:45 2014

Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F008.D

(76) Bis(2-ethylhexyl) Phthalate (T)

21.14min 5.41ug/ml

response 21554

Ion	Exp%	Act%
149.00	100	100
167.00	27.70	25.39
279.00	6.60	4.69
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

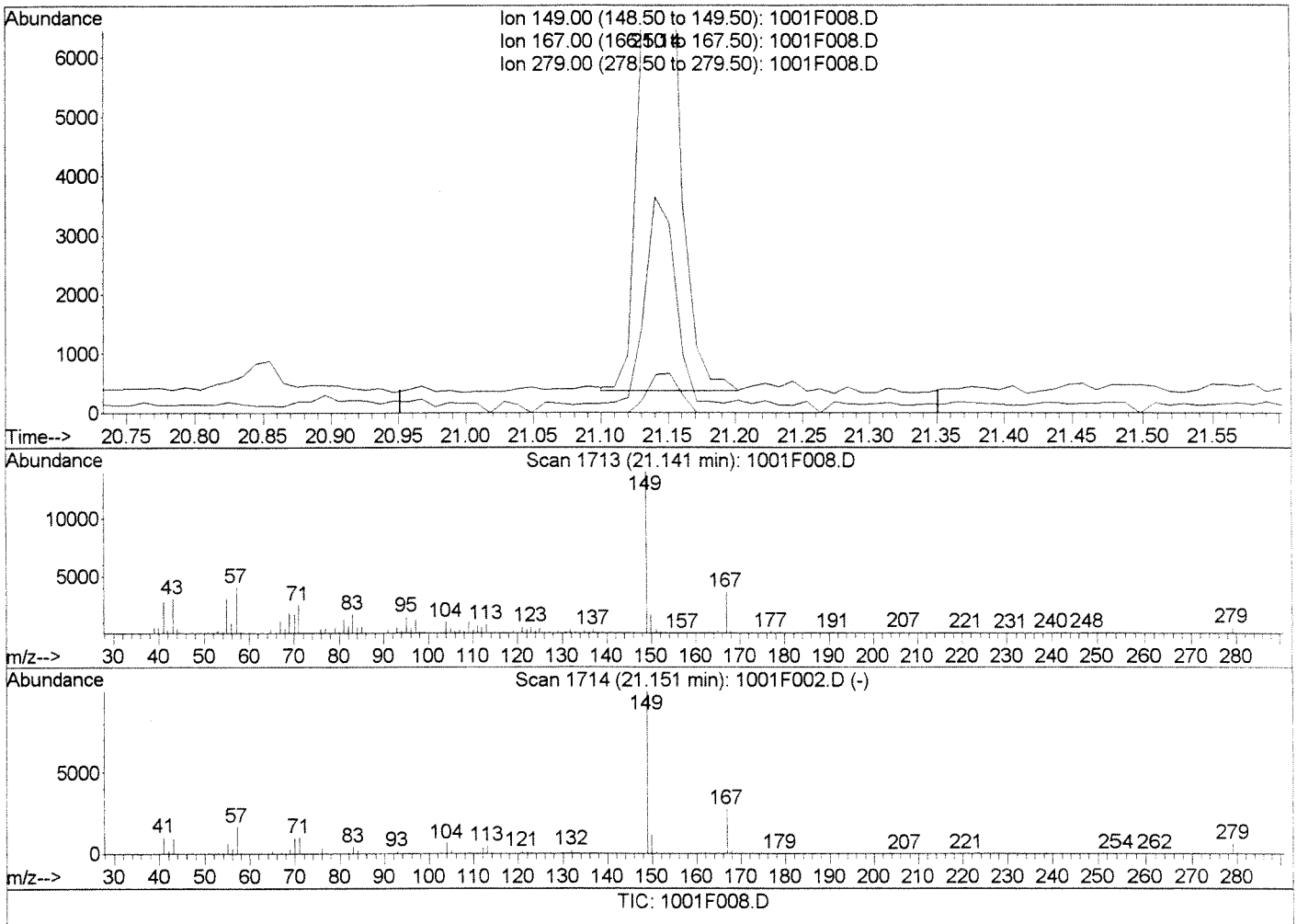
TRT

1001F008.D 093014BNC7.M Thu Oct 02 13:46:33 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F008.D Vial: 8
Acq On : 1 Oct 2014 11:54 pm Operator: T. THOMAS
Sample : K1409921-011 Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:48 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F008.D

(76) Bis(2-ethylhexyl) Phthalate (T)

21.14min 5.40ug/ml m

response 21499

Ion	Exp%	Act%
149.00	100	100
167.00	27.70	26.06
279.00	6.60	4.56
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/02/14

10/3/14

TRT

1001F008.D 093014BNC7.M Thu Oct 02 13:48:16 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F003.D
Lab ID: KWG1412851-5
RunType: MB
Matrix: SEDIMENT

Date Acquired: 10/01/2014 20:31
Date Quantitated: 10/02/2014 13:21
Batch ID: KWG1413431
Analysis Method: 8270D
MethodJoinID: MJ1284

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K9921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK

Primary Review: OCT 02 2014 TR

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F003.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 20:31	**Quant Date:**	10/02/2014 13:21	**Vial:**	3
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412851-5			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	09/29/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	09/22/2014		
Prep Ref:	1376336				

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:					
Tune Ref:	J:\MS07\DATA\100114\1001F001.D			**Method ID:**	MJ1284
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	64712	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	234173	40.00	OK
3	Acenaphthene-d10	14.16	-0.01	164	118216	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	211192	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	217749	40.00	OK
6	Perylene-d12	24.11	-0.01	264	218645	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.97	0.00	0.00	112	121887	65.66	44	20-83	OK	
1	Phenol-d6	8.72	-0.01	0.00	99	156832	71.66	48	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	101246	51.72	52	29-116	OK	
3	2-Fluorobiphenyl	13.10	-0.01	0.00	172	207003	46.42	46	32-104	OK	
4	2,4,6-Tribromophenol	15.46	-0.01	0.00	330	100700	86.64	58	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	376188	79.05	79	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				42	0		0.025	U	
1	Pyridine				79	0		0.020	U	
1	Aniline				93	0		0.022	U	
1	Bis(2-chloroethyl) Ether				93	0		0.012	U	
1	Phenol				94	0		0.019	U	
1	2-Chlorophenol				128	0		0.0099	U	
1	1,3-Dichlorobenzene				146	0		0.018	U	
1	1,4-Dichlorobenzene				146	0		0.018	U	
1	1,2-Dichlorobenzene				146	0		0.018	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F003.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 20:31	**Quant Date:**	10/02/2014 13:21	**Vial:**	3
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412851-5			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol				108	0		0.017	U	
1	Bis(2-chloroisopropyl) Ether				45	0		0.014	U	
1	2-Methylphenol				107	0		0.017	U	
1	Hexachloroethane				117	0		0.022	U	
1	N-Nitrosodi-n-propylamine				70	0		0.019	U	
1	4-Methylphenol				107	0		0.017	U	
1	Nitrobenzene				77	0		0.026	U	
2	Isophorone				82	0		0.014	U	
2	2-Nitrophenol				139	0		0.014	U	
2	2,4-Dimethylphenol				122	0		0.015	U	
2	Bis(2-chloroethoxy)methane				93	0		0.011	U	
2	2,4-Dichlorophenol				162	0		0.016	U	
2	Benzoic Acid				122	0		0.14	U	
2	1,2,4-Trichlorobenzene				180	0		0.011	U	
2	Naphthalene				128	0		0.014	U	
2	4-Chloroaniline				127	0		0.014	U	
2	Hexachlorobutadiene				225	0		0.014	U	
2	4-Chloro-3-methylphenol				107	0		0.017	U	
2	2-Methylnaphthalene				142	0		0.011	U	
3	Hexachlorocyclopentadiene				237	0		0.012	U	
3	2,4,6-Trichlorophenol				196	0		0.014	U	
3	2,4,5-Trichlorophenol				196	0		0.018	U	
3	2-Chloronaphthalene				162	0d		0.010	U	
3	2-Nitroaniline				65	0		0.017	U	
3	Acenaphthylene				152	0		0.016	U	
3	Dimethyl Phthalate				163	0		0.016	U	
3	2,6-Dinitrotoluene				165	0		0.016	U	
3	Acenaphthene				154	0		0.013	U	
3	3-Nitroaniline				138	0		0.018	U	
3	2,4-Dinitrophenol				184	0		0.11	U	
3	Dibenzofuran				168	0		0.012	U	
3	4-Nitrophenol				109	0		0.15	U	
3	2,4-Dinitrotoluene				165	0		0.015	U	
3	2,3,4,6-Tetrachlorophenol				232	0		0.046	U	
3	Fluorene				166	0		0.013	U	
3	4-Chlorophenyl Phenyl Ether				204	0		0.016	U	
3	Diethyl Phthalate				149	0		0.014	U	
3	4-Nitroaniline				138	0		0.18	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.14	U	
3	N-Nitrosodiphenylamine				169	0		0.018	U	
3	1,2-Diphenylhydrazine				77	0		0.014	U	
4	4-Bromophenyl Phenyl Ether				248	0		0.012	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F003.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 20:31	**Quant Date:**	10/02/2014 13:21	**Vial:**	3
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412851-5			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene				284	0		0.015	U	
4	Pentachlorophenol				266	0		0.13	U	
4	Phenanthrene				178	0		0.010	U	
4	Anthracene				178	0		0.014	U	
4	Carbazole				167	0		0.011	U	
4	Di-n-butyl Phthalate				149	0**d**		0.012	U	
4	Fluoranthene				202	0**d**		0.011	U	
5	Benzidine				184	0		0.42	U	
5	Pyrene				202	0		0.014	U	
5	Butyl Benzyl Phthalate				149	0		0.016	U	
5	3,3'-Dichlorobenzidine				252	0		0.027	U	
5	Benz(a)anthracene				228	0**d**		0.012	U	
5	Chrysene				228	0**d**		0.012	U	
5	Bis(2-ethylhexyl) Phthalate				149	0		0.019	U	
6	Di-n-octyl Phthalate				149	0		0.024	U	
6	Benzo(b)fluoranthene				252	0		0.017	U	
6	Benzo(k)fluoranthene				252	0		0.019	U	
6	Benzo(a)pyrene				252	0**d**		0.020	U	
6	Indeno(1,2,3-cd)pyrene				276	0		0.039	U	
6	Dibenz(a,h)anthracene				278	0		0.027	U	
6	Benzo(g,h,i)perylene				276	0		0.020	U	
	4,4'-Methylenebis(2-chloroanilin				0	0		0.75	U	NR
	1,3,5-Trichlorobenzene				0	0		0.25	U	NR
	2,3,7,8-Tetrachlorodibenzo-p-dic				0	0		0.25	U	NR
	Dibenzo(a,i)pyrene				0	0		0.25	U	NR
	Dibenzo(a,h)pyrene				0	0		0.25	U	NR
	Dibenzo(a,e)pyrene				0	0		0.25	U	NR
	Perylene				0	0		0.25	U	NR
	Dibenz(a,j)acridine				0	0		0.25	U	NR
	Dibenz(a,h)acridine				0	0		0.25	U	NR
	HPMO				0	0		1.5	U	NR
	3-Methylcholanthrene				0	0		0.25	U	NR
	Hexachlorocyclohexane				0	0		0.50	U	NR
	1,2,3,4-Tetrachlorobenzene				0	0		0.25	U	NR
	1,2,3,5-Tetrachlorobenzene				0	0		0.25	U	NR
	Acrylamide				0	0		38	U	NR
	Diisobutyl Phthalate				0	0		0.25	U	NR
	1-Methyl-2-pyrrolidinone				0	0		0.25	U	NR
	1,2,3-Trichlorobenzene				0	0		0.25	U	NR
	1-Methylnaphthalene				0	0		0.25	U	NR
	Biphenyl				0	0		0.25	U	NR
	OPMO				0	0		1.5	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F003.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 20:31	**Quant Date:**	10/02/2014 13:21	**Vial:**	3
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412851-5			**Soln Conc. Units:**	ug/ml

Prep Amount:	40.490 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F003.D Vial: 3
Acq On : 1 Oct 2014 8:31 pm Operator: T. THOMAS
Sample : KWG1412851-05 | MB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:02 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

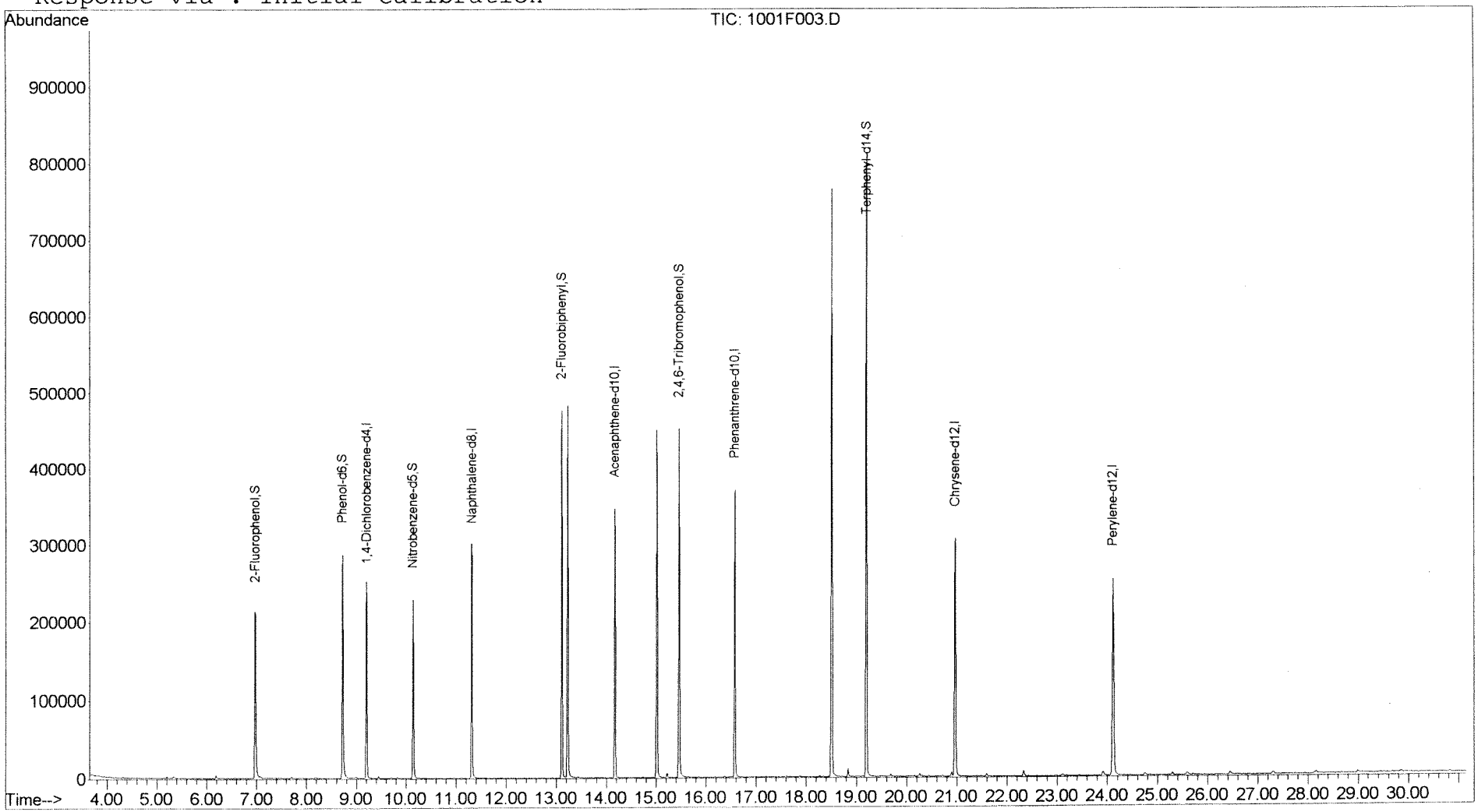
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	64712	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	234173	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.16	164	118216	40.00	ug/ml	-0.01
58) Phenanthrene-d10	16.58	188	211192	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	217749	40.00	ug/ml	-0.01
77) Perylene-d12	24.11	264	218645	40.00	ug/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	121887	65.66	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 43.77%			
7) Phenol-d6	8.72	99	156832	71.66	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 47.77%			
19) Nitrobenzene-d5	10.14	82	101246	51.72	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 51.72%			
38) 2-Fluorobiphenyl	13.10	172	207003	46.42	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 46.42%			
59) 2,4,6-Tribromophenol	15.46	330	100700	86.64	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 57.76%			
71) Terphenyl-d14	19.20	244	376188	79.05	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 79.05%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
1001F003.D 093014BNC7.M Thu Oct 02 16:16:35 2014 Page 1

Data File : J:\MS07\DATA\100114\1001F003.D Vial: 3
Acq On : 1 Oct 2014 8:31 pm Operator: T. THOMAS
Sample : KWG1412851-05 | MB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:21 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2674

Exception Report

Data File: J:\MS07\DATA\100114\1001F006.D
Lab ID: KWG1412851-1 -- K1409921-011MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 10/01/2014 22:33
Date Quantitated: 10/02/2014 13:38
Batch ID: KWG1413431
Analysis Method: 8270D
MethodJoinID: MJ1284

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K9921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK

Primary Review: OCT 02 2014 TPT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F006.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 22:33	**Quant Date:**	10/02/2014 13:38	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412851-1 -- K1409921-011MS			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	09/22/2014		
Prep Ref:	1376332				

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:					
Tune Ref:	J:\MS07\DATA\100114\1001F001.D			**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.20	-0.01	152	66854	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	230126	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	106375	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	204875	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	209175	40.00	OK
6	Perylene-d12	24.12	0.00	264	204437	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.97	0.00	0.00	112	124282	64.81	43	20-83	OK	
1	Phenol-d6	8.72	-0.01	0.00	99	156244	69.10	46	26-106	OK	
1	Nitrobenzene-d5	10.14	-0.01	0.00	82	96555	47.75	48	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	210801	52.54	53	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	132726	117.72	78	20-123	OK	
5	Terphenyl-d14	19.19	-0.01	0.00	244	342069	74.83	75	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.96	-0.01	0.00	42	45675	49.05	1.57	J	
1	Pyridine	4.00		0.00	79	193299**m**	79.54	2.55		
1	Aniline	8.66	-0.01	0.00	93	95043**m**	40.66	1.30		
1	Bis(2-chloroethyl) Ether	8.82		0.00	93	90778**m**	49.22	1.58		
1	Phenol	8.75		0.00	94	105867	48.72	1.56		
1	2-Chlorophenol	8.87		0.00	128	100596	46.81	1.50		
1	1,3-Dichlorobenzene	9.10		0.00	146	113282	45.12	1.45		
1	1,4-Dichlorobenzene	9.24		0.00	146	113679	45.54	1.46		
1	1,2-Dichlorobenzene	9.48		0.00	146	110277	46.79	1.50		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F006.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 22:33	**Quant Date:**	10/02/2014 13:38	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412851-1 -- K1409921-011MS			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.50	-0.01	0.00	108	54701	49.75	1.60		
1	Bis(2-chloroisopropyl) Ether	9.73	0.02	0.00	45	89300	46.58	1.49		
1	2-Methylphenol	9.74		0.00	107	70720	49.35	1.58		
1	Hexachloroethane	10.03		0.00	117	46672	46.14	1.48		
1	N-Nitrosodi-n-propylamine	9.94	-0.02	0.00	70	61284	49.22	1.58		
1	4-Methylphenol	10.00	-0.01	0.00	107	112301	54.41	1.75		
1	Nitrobenzene	10.18		0.00	77	91718	49.34	1.58		
2	Isophorone	10.59	-0.01	0.00	82	163595	47.96	1.54		
2	2-Nitrophenol	10.71		0.00	139	61367	52.57	1.69		
2	2,4-Dimethylphenol	10.86	-0.01	0.00	122	89212	58.01	1.86		
2	Bis(2-chloroethoxy)methane	10.98	-0.01	0.00	93	112457	51.27	1.64		
2	2,4-Dichlorophenol	11.14		0.00	162	99763	57.99	1.86		
2	Benzoic Acid	11.12	-0.03	0.00	122	61179	60.32	1.93	J	
2	1,2,4-Trichlorobenzene	11.23		0.00	180	101072	48.99	1.57		
2	Naphthalene	11.35		0.00	128	260711	49.85	1.60		
2	4-Chloroaniline	11.48		0.00	127	117841	55.76	1.79		
2	Hexachlorobutadiene	11.56	-0.01	0.00	225	65289	48.01	1.54		
2	4-Chloro-3-methylphenol	12.33	-0.01	0.00	107	108251	70.60	2.26		
2	2-Methylnaphthalene	12.48	-0.01	0.00	142	176721	52.21	1.67		
3	Hexachlorocyclopentadiene	12.74		0.00	237	43208	38.36	1.23		
3	2,4,6-Trichlorophenol	12.98		0.00	196	81860	69.10	2.22		
3	2,4,5-Trichlorophenol	13.06	0.01	0.00	196	100654	75.03	2.41		
3	2-Chloronaphthalene	13.27	-0.01	0.00	162	188580	55.30	1.77		
3	2-Nitroaniline	13.48		0.00	65	63765	73.98	2.37		
3	Acenaphthylene	13.93	-0.01	0.00	152	326276	62.62	2.01		
3	Dimethyl Phthalate	13.80	-0.01	0.00	163	291319	74.57	2.39		
3	2,6-Dinitrotoluene	13.89	-0.01	0.00	165	72395	77.68	2.49		
3	Acenaphthene	14.22	-0.01	0.00	154	183280	64.56	2.07		
3	3-Nitroaniline	14.16		0.00	138	74898	75.84	2.43		
3	2,4-Dinitrophenol	14.33	-0.01	0.00	184	43188	72.01	2.31		
3	Dibenzofuran	14.51		0.00	168	293695	63.92	2.05		
3	4-Nitrophenol	14.53		0.00	109	46101	82.85	2.66		
3	2,4-Dinitrotoluene	14.55	0.01	0.00	165	101318	83.29	2.67		
3	2,3,4,6-Tetrachlorophenol	14.74	-0.01	0.00	232	87878	81.96	2.63		
3	Fluorene	15.07	0.01	0.00	166	249346	71.83	2.30		
3	4-Chlorophenyl Phenyl Ether	15.09		0.00	204	130549	70.95	2.28		
3	Diethyl Phthalate	14.96		0.00	149	320372	79.02	2.53		
3	4-Nitroaniline	15.16	-0.01	0.00	138	84211	80.53	2.58		
3	2-Methyl-4,6-dinitrophenol	15.20	-0.01	0.00	198	65824	80.66	2.59		
3	N-Nitrosodiphenylamine	15.30		0.00	169	194720	74.54	2.39		
3	1,2-Diphenylhydrazine	15.34	-0.01	0.00	77	236389	71.58	2.30		
4	4-Bromophenyl Phenyl Ether	15.89	0.01	0.00	248	98789	75.75	2.43		

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F006.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 22:33	**Quant Date:**	10/02/2014 13:38	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412851-1 -- K1409921-011MS			**Soln Conc. Units:**	ug/ml

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.95		0.00	284	139677	80.14	2.57		
4	Pentachlorophenol	16.30		0.00	266	69015m	78.92	2.53		
4	Phenanthrene	16.61	-0.01	0.00	178	396540	79.44	2.55		
4	Anthracene	16.70		0.00	178	376477	74.33	2.38		
4	Carbazole	16.99		0.00	167	394692	81.38	2.61		
4	Di-n-butyl Phthalate	17.61	-0.01	0.00	149	530981	83.21	2.67		
4	Fluoranthene	18.54		0.00	202	439661	78.31	2.51		
5	Benzidine				184	0d		0.42	U	
5	Pyrene	18.90	0.01	0.00	202	499379	80.61	2.59		
5	Butyl Benzyl Phthalate	20.03		0.00	149	251957	88.54	2.84		
5	3,3'-Dichlorobenzidine	20.95	-0.01	0.00	252	140115	60.55	1.94		
5	Benz(a)anthracene	20.95	-0.01	0.00	228	429842	81.43	2.61		
5	Chrysene	21.02	-0.01	0.00	228	427045	82.14	2.63		
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	357922	95.58	3.07		
6	Di-n-octyl Phthalate	22.60	0.01	0.00	149	582985	87.05	2.79		
6	Benzo(b)fluoranthene	23.26	-0.01	0.00	252	428489	86.03	2.76		
6	Benzo(k)fluoranthene	23.33		0.00	252	413065	84.75	2.72		
6	Benzo(a)pyrene	24.00		0.00	252	404311	83.69	2.68		
6	Indeno(1,2,3-cd)pyrene	26.56	0.01	0.00	276	355544	81.62	2.62		
6	Dibenz(a,h)anthracene	26.64		0.00	278	363768	81.11	2.60		
6	Benzo(g,h,i)perylene	27.15	0.01	0.00	276	378746	79.28	2.54		
	4,4'-Methylenebis(2-chloroanilin				0	0		0.97	U	NR
	1,3,5-Trichlorobenzene				0	0		0.32	U	NR
	2,3,7,8-Tetrachlorodibenzo-p-dic				0	0		0.32	U	NR
	Dibenzo(a,i)pyrene				0	0		0.32	U	NR
	Dibenzo(a,h)pyrene				0	0		0.32	U	NR
	Dibenzo(a,e)pyrene				0	0		0.32	U	NR
	Perylene				0	0		0.32	U	NR
	Dibenz(a,j)acridine				0	0		0.32	U	NR
	Dibenz(a,h)acridine				0	0		0.32	U	NR
	HPMO				0	0		2.0	U	NR
	3-Methylcholanthrene				0	0		0.32	U	NR
	Hexachlorocyclohexane				0	0		0.65	U	NR
	1,2,3,4-Tetrachlorobenzene				0	0		0.32	U	NR
	1,2,3,5-Tetrachlorobenzene				0	0		0.32	U	NR
	Acrylamide				0	0		49	U	NR
	Diisobutyl Phthalate				0	0		0.32	U	NR
	1-Methyl-2-pyrrolidinone				0	0		0.32	U	NR
	1,2,3-Trichlorobenzene				0	0		0.32	U	NR
	1-Methylnaphthalene				0	0		0.32	U	NR
	Biphenyl				0	0		0.32	U	NR
	OPMO				0	0		2.0	U	NR

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F006.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 22:33	**Quant Date:**	10/02/2014 13:38	**Vial:**	6
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1412851-1 -- K1409921-011MS			**Soln Conc. Units:**	ug/ml

Prep Amount:	40.017 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	77.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F006.D Vial: 6
Acq On : 1 Oct 2014 10:33 pm Operator: T. THOMAS
Sample : K1409921-011 MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:07 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	66854	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	230126	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	106375	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	204875	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	209175	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	204437	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	124282	64.81	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 43.21%			
7) Phenol-d6	8.72	99	156244	69.10	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 46.07%			
19) Nitrobenzene-d5	10.14	82	96555	47.75	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 47.75%			
38) 2-Fluorobiphenyl	13.11	172	210801	52.54	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 52.54%			
59) 2,4,6-Tribromophenol	15.47	330	132726	117.72	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 78.48%			
71) Terphenyl-d14	19.19	244	342069	74.83	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 74.83%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.96	42	45675	49.05	ug/ml	93
3) Pyridine	4.00	79	193299m	79.54	ug/ml	
5) Aniline	8.66	93	95043m	40.66	ug/ml	
6) Bis(2-chloroethyl) Ether	8.82	93	90778m	49.22	ug/ml	
8) Phenol	8.75	94	105867	48.72	ug/ml	99
9) 2-Chlorophenol	8.87	128	100596	46.81	ug/ml	98
10) 1,3-Dichlorobenzene	9.10	146	113282	45.12	ug/ml	97
11) 1,4-Dichlorobenzene	9.24	146	113679	45.54	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	110277	46.79	ug/ml	97
13) Benzyl Alcohol	9.50	108	54701	49.75	ug/ml	92
14) Bis(2-chloroisopropyl) Eth	9.73	45	89300	46.58	ug/ml	86
15) 2-Methylphenol	9.74	107	70720	49.35	ug/ml	91
16) Hexachloroethane	10.03	117	46672	46.14	ug/ml	83
17) N-Nitrosodi-n-propylamine	9.94	70	61284	49.22	ug/ml	98
18) 4-Methylphenol	10.00	107	112301	54.41	ug/ml	97
20) Nitrobenzene	10.18	77	91718	49.34	ug/ml	96
22) Isophorone	10.59	82	163595	47.96	ug/ml	99
23) 2-Nitrophenol	10.71	139	61367	52.57	ug/ml	99
24) 2,4-Dimethylphenol	10.86	122	89212	58.01	ug/ml	96
25) Bis(2-chloroethoxy)methane	10.98	93	112457	51.27	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F006.D Vial: 6
Acq On : 1 Oct 2014 10:33 pm Operator: T. THOMAS
Sample : K1409921-011 MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:07 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.14	162	99763	57.99	ug/ml	99
27)	Benzoic Acid	11.12	122	61179	60.32	ug/ml	97
28)	1,2,4-Trichlorobenzene	11.23	180	101072	48.99	ug/ml	99
29)	Naphthalene	11.35	128	260711	49.85	ug/ml	99
30)	4-Chloroaniline	11.48	127	117841	55.76	ug/ml	99
31)	Hexachlorobutadiene	11.56	225	65289	48.01	ug/ml	99
32)	4-Chloro-3-methylphenol	12.33	107	108251	70.60	ug/ml	94
33)	2-Methylnaphthalene	12.48	142	176721	52.21	ug/ml	97
35)	Hexachlorocyclopentadiene	12.74	237	43208	38.36	ug/ml	98
36)	2,4,6-Trichlorophenol	12.98	196	81860	69.10	ug/ml	97
37)	2,4,5-Trichlorophenol	13.06	196	100654	75.03	ug/ml	97
39)	2-Chloronaphthalene	13.27	162	188580	55.30	ug/ml	98
40)	2-Nitroaniline	13.48	65	63765	73.98	ug/ml#	80
41)	Acenaphthylene	13.93	152	326276	62.62	ug/ml	99
42)	Dimethyl Phthalate	13.80	163	291319	74.57	ug/ml	99
43)	2,6-Dinitrotoluene	13.89	165	72395	77.68	ug/ml	91
44)	Acenaphthene	14.22	154	183280	64.56	ug/ml	99
45)	3-Nitroaniline	14.16	138	74898	75.84	ug/ml	99
46)	2,4-Dinitrophenol	14.33	184	43188	72.01	ug/ml	96
47)	Dibenzofuran	14.51	168	293695	63.92	ug/ml	100
48)	4-Nitrophenol	14.53	109	46101	82.85	ug/ml	95
49)	2,4-Dinitrotoluene	14.55	165	101318	83.29	ug/ml	83
50)	2,3,4,6-Tetrachlorophenol	14.74	232	87878	81.96	ug/ml	92
51)	Fluorene	15.07	166	249346	71.83	ug/ml	98
52)	4-Chlorophenyl Phenyl Ethe	15.09	204	130549	70.95	ug/ml	96
53)	Diethyl Phthalate	14.96	149	320372	79.02	ug/ml	98
54)	4-Nitroaniline	15.16	138	84211	80.53	ug/ml	99
55)	2-Methyl-4,6-dinitrophenol	15.20	198	65824	80.66	ug/ml	100
56)	N-Nitrosodiphenylamine	15.30	169	194720	74.54	ug/ml	99
57)	1,2-Diphenylhydrazine	15.34	77	236389	71.58	ug/ml	98
60)	4-Bromophenyl Phenyl Ether	15.89	248	98789	75.75	ug/ml	93
61)	Hexachlorobenzene	15.95	284	139677	80.14	ug/ml	94
62)	Pentachlorophenol	16.30	266	69015m	78.92	ug/ml	
63)	Phenanthrene	16.61	178	396540	79.44	ug/ml	100
64)	Anthracene	16.70	178	376477	74.33	ug/ml	99
65)	Carbazole	16.99	167	394692	81.38	ug/ml	99
66)	Di-n-butyl Phthalate	17.61	149	530981	83.21	ug/ml	99
67)	Fluoranthene	18.54	202	439661	78.31	ug/ml	99
70)	Pyrene	18.90	202	499379	80.61	ug/ml	98
72)	Butyl Benzyl Phthalate	20.03	149	251957	88.54	ug/ml	91
73)	3,3'-Dichlorobenzidine	20.95	252	140115	60.55	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F006.D Vial: 6
Acq On : 1 Oct 2014 10:33 pm Operator: T. THOMAS
Sample : K1409921-011 MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:07 2014 Quant Results File: 093014BNC7.RES

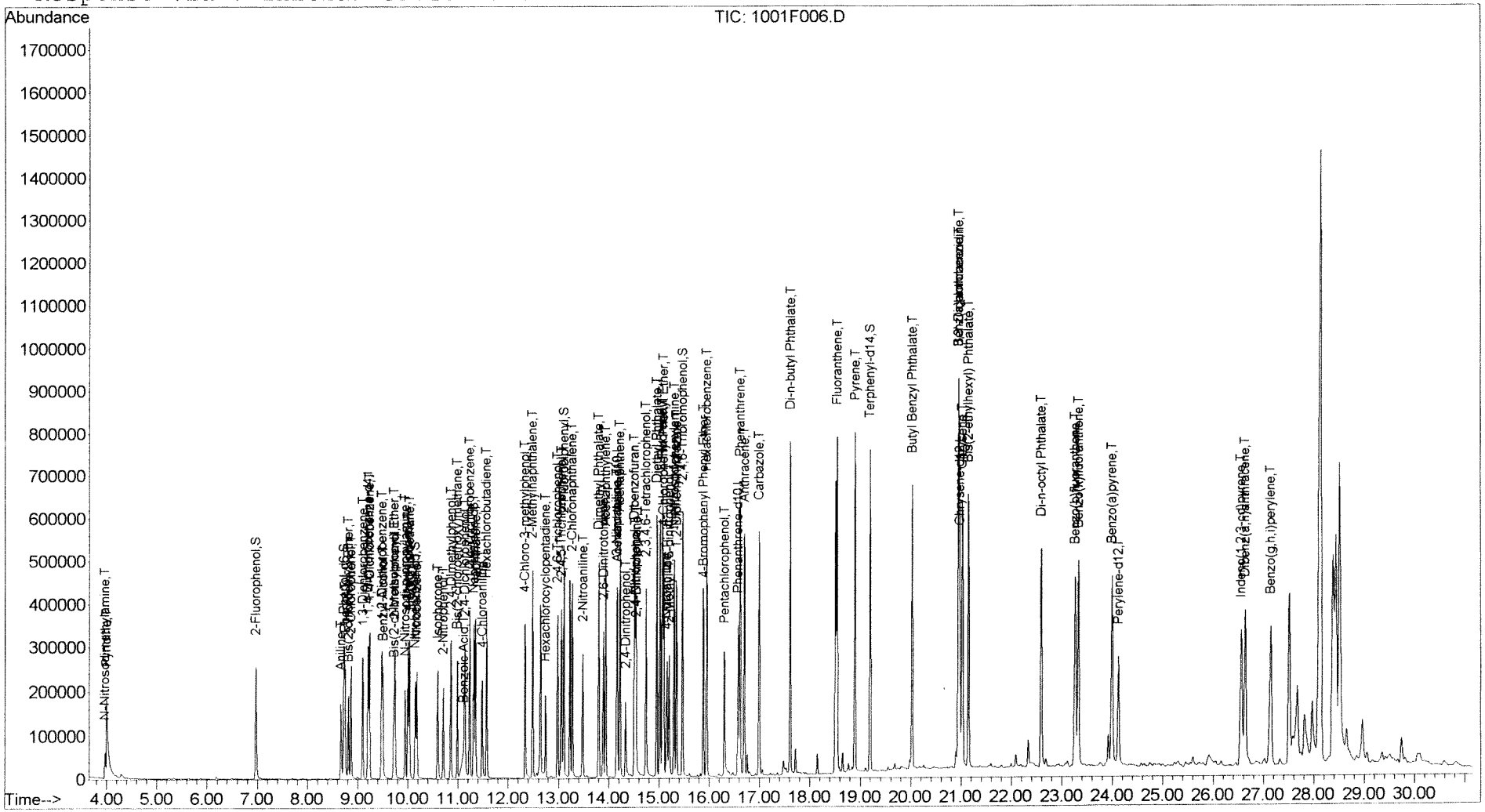
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) Benz(a)anthracene	20.95	228	429842	81.43	ug/ml	99
75) Chrysene	21.02	228	427045	82.14	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	357922	95.58	ug/ml	97
78) Di-n-octyl Phthalate	22.60	149	582985	87.05	ug/ml	96
79) Benzo(b)fluoranthene	23.26	252	428489	86.03	ug/ml	100
80) Benzo(k)fluoranthene	23.33	252	413065	84.75	ug/ml	100
81) Benzo(a)pyrene	24.00	252	404311	83.69	ug/ml	100
82) Indeno(1,2,3-cd)pyrene	26.56	276	355544	81.62	ug/ml	98
83) Dibenz(a,h)anthracene	26.64	278	363768	81.11	ug/ml	98
84) Benzo(g,h,i)perylene	27.15	276	378746	79.28	ug/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F006.D Vial: 6
Acq On : 1 Oct 2014 10:33 pm Operator: T. THOMAS
Sample : K1409921-011 MS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:38 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



Exception Report

Data File: J:\MS07\DATA\100114\1001F007.D
Lab ID: KWG1412851-2 -- K1409921-011DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 10/01/2014 23:13
Date Quantitated: 10/02/2014 13:40
Batch ID: KWG1413431
Analysis Method: 8270D
MethodJoinID: MJ1284

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K9921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK

Primary Review: OCT 02 2014 TAT

Secondary Review: 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F007.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 23:13	**Quant Date:**	10/02/2014 13:40	**Vial:**	7
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1412851-2 -- K1409921-011DMS			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/08/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376333	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:			
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	67586	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	238619	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	115794	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	213646	40.00	OK
5	Chrysene-d12	20.98	0.00	240	214104	40.00	OK
6	Perylene-d12	24.12	0.00	264	217309	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	6.97	0.00	0.00	112	146134	75.38	50	20-83	OK
1	Phenol-d6	8.73	0.00	0.00	99	179004	78.31	52	26-106	OK
1	Nitrobenzene-d5	10.15	0.00	0.00	82	121682	59.52	60	29-116	OK
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	247569	56.68	57	32-104	OK
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	126012	107.18	71	20-123	OK
5	Terphenyl-d14	19.20	0.00	0.00	244	331798	70.91	71	37-133	OK

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.96	-0.01	0.00	42	47339	50.29	1.60	J	
1	Pyridine	4.02	0.02	0.00	79	110913**m**	45.15	1.43		
1	Aniline	8.67		0.00	93	116023	49.10	1.56		
1	Bis(2-chloroethyl) Ether	8.81	-0.01	0.00	93	104507**m**	56.05	1.78		
1	Phenol	8.75		0.00	94	117291	53.39	1.70		
1	2-Chlorophenol	8.87		0.00	128	121649	56.00	1.78		
1	1,3-Dichlorobenzene	9.10		0.00	146	129608	51.06	1.62		
1	1,4-Dichlorobenzene	9.23	-0.01	0.00	146	136446	54.07	1.72		
1	1,2-Dichlorobenzene	9.48		0.00	146	126450	53.08	1.69		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F007.D		**Instrument:** MS07
Acqu Date:	10/01/2014 23:13	**Quant Date:** 10/02/2014 13:40	**Vial:** 7
Run Type:	DMS		**Dilution:** 1.0
Lab ID:	KWG1412851-2 -- K1409921-011DMS		**Soln Conc. Units:** ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.50	-0.01	0.00	108	64819	58.31	1.85		
1	Bis(2-chloroisopropyl) Ether	9.71		0.00	45	111334	57.45	1.83		
1	2-Methylphenol	9.74		0.00	107	81829	56.49	1.79		
1	Hexachloroethane	10.03		0.00	117	54580	53.37	1.70		
1	N-Nitrosodi-n-propylamine	9.95	-0.01	0.00	70	72599	57.67	1.83		
1	4-Methylphenol	10.01		0.00	107	126994	60.86	1.93		
1	Nitrobenzene	10.18		0.00	77	109146	58.08	1.85		
2	Isophorone	10.59	-0.01	0.00	82	199111	56.29	1.79		
2	2-Nitrophenol	10.70	-0.01	0.00	139	66432	54.89	1.74		
2	2,4-Dimethylphenol	10.85	-0.02	0.00	122	83847	52.58	1.67		
2	Bis(2-chloroethoxy)methane	10.99		0.00	93	136788	60.14	1.91		
2	2,4-Dichlorophenol	11.13	-0.01	0.00	162	107245	60.12	1.91		
2	Benzoic Acid	11.08	-0.07	-0.01	122	24981	23.75	0.754	J	
2	1,2,4-Trichlorobenzene	11.23		0.00	180	117902	55.12	1.75		
2	Naphthalene	11.35		0.00	128	310329	57.23	1.82		
2	4-Chloroaniline	11.48		0.00	127	130330	59.47	1.89		
2	Hexachlorobutadiene	11.57		0.00	225	77585	55.02	1.75		
2	4-Chloro-3-methylphenol	12.34		0.00	107	102504	64.47	2.05		
2	2-Methylnaphthalene	12.49		0.00	142	201246	57.34	1.82		
3	Hexachlorocyclopentadiene	12.74		0.00	237	49076	39.76	1.26		
3	2,4,6-Trichlorophenol	12.98		0.00	196	78946	61.22	1.94		
3	2,4,5-Trichlorophenol	13.05		0.00	196	91108	62.39	1.98		
3	2-Chloronaphthalene	13.28		0.00	162	207882	56.00	1.78		
3	2-Nitroaniline	13.48		0.00	65	60545	64.53	2.05		
3	Acenaphthylene	13.94		0.00	152	327387	57.72	1.83		
3	Dimethyl Phthalate	13.80	-0.01	0.00	163	284877	66.99	2.13		
3	2,6-Dinitrotoluene	13.89	-0.01	0.00	165	66699	65.75	2.09		
3	Acenaphthene	14.23		0.00	154	185874	60.15	1.91		
3	3-Nitroaniline	14.15	-0.01	0.00	138	76531	71.19	2.26		
3	2,4-Dinitrophenol	14.34		0.00	184	27120	48.16	1.53	J	
3	Dibenzofuran	14.51		0.00	168	284220	56.83	1.81		
3	4-Nitrophenol	14.52	-0.01	0.00	109	38364	63.34	2.01		
3	2,4-Dinitrotoluene	14.54		0.00	165	89591	67.66	2.15		
3	2,3,4,6-Tetrachlorophenol	14.74	-0.01	0.00	232	81423	69.76	2.22		
3	Fluorene	15.06		0.00	166	245473	64.96	2.06		
3	4-Chlorophenyl Phenyl Ether	15.09		0.00	204	126173	63.00	2.00		
3	Diethyl Phthalate	14.95	-0.01	0.00	149	310372	70.33	2.23		
3	4-Nitroaniline	15.16	-0.01	0.00	138	83270	73.15	2.32		
3	2-Methyl-4,6-dinitrophenol	15.20	-0.01	0.00	198	50669	57.04	1.81	J	
3	N-Nitrosodiphenylamine	15.30		0.00	169	185212	65.14	2.07		
3	1,2-Diphenylhydrazine	15.35		0.00	77	229640	63.88	2.03		
4	4-Bromophenyl Phenyl Ether	15.88		0.00	248	93371	68.65	2.18		

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d: Compound manually deleted
NR: Analyte not reported from this analysis

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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F007.D		**Instrument:** MS07
Acqu Date:	10/01/2014 23:13	**Quant Date:** 10/02/2014 13:40	**Vial:** 7
Run Type:	DMS		**Dilution:** 1.0
Lab ID:	KWG1412851-2 -- K1409921-011DMS		**Soln Conc. Units:** ug/ml

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.95		0.00	284	126950	69.85	2.22		
4	Pentachlorophenol	16.30		0.00	266	62048m	69.40	2.20		
4	Phenanthrene	16.62		0.00	178	387983	74.54	2.37		
4	Anthracene	16.70		0.00	178	386768	73.23	2.33		
4	Carbazole	16.99		0.00	167	377166	74.57	2.37		
4	Di-n-butyl Phthalate	17.61	-0.01	0.00	149	518722	77.95	2.48		
4	Fluoranthene	18.54		0.00	202	430134	73.47	2.33		
5	Benzidine	18.80		0.00	184	10810	4.07	0.42	U	
5	Pyrene	18.89		0.00	202	483412	76.24	2.42		
5	Butyl Benzyl Phthalate	20.03		0.00	149	233084	80.02	2.54		
5	3,3'-Dichlorobenzidine	20.96		0.00	252	153826	64.94	2.06		
5	Benz(a)anthracene	20.95	-0.01	0.00	228	400164	74.06	2.35		
5	Chrysene	21.03		0.00	228	403571	75.83	2.41		
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	332640	86.79	2.76		
6	Di-n-octyl Phthalate	22.59		0.00	149	554726	77.92	2.48		
6	Benzo(b)fluoranthene	23.27		0.00	252	425708	80.41	2.55		
6	Benzo(k)fluoranthene	23.33		0.00	252	388698	75.02	2.38		
6	Benzo(a)pyrene	23.99	-0.01	0.00	252	383202	74.63	2.37		
6	Indeno(1,2,3-cd)pyrene	26.55		0.00	276	360279	77.80	2.47		
6	Dibenz(a,h)anthracene	26.64		0.00	278	350949	73.61	2.34		
6	Benzo(g,h,i)perylene	27.14		0.00	276	380865	75.00	2.38		
	4,4'-Methylenebis(2-chloroanilin				0	0		0.96	U	NR
	1,3,5-Trichlorobenzene				0	0		0.32	U	NR
	2,3,7,8-Tetrachlorodibenzo-p-dic				0	0		0.32	U	NR
	Dibenzo(a,i)pyrene				0	0		0.32	U	NR
	Dibenzo(a,h)pyrene				0	0		0.32	U	NR
	Dibenzo(a,e)pyrene				0	0		0.32	U	NR
	Perylene				0	0		0.32	U	NR
	Dibenz(a,j)acridine				0	0		0.32	U	NR
	Dibenz(a,h)acridine				0	0		0.32	U	NR
	HPMO				0	0		2.0	U	NR
	3-Methylcholanthrene				0	0		0.32	U	NR
	Hexachlorocyclohexane				0	0		0.64	U	NR
	1,2,3,4-Tetrachlorobenzene				0	0		0.32	U	NR
	1,2,3,5-Tetrachlorobenzene				0	0		0.32	U	NR
	Acrylamide				0	0		48	U	NR
	Diisobutyl Phthalate				0	0		0.32	U	NR
	1-Methyl-2-pyrrolidinone				0	0		0.32	U	NR
	1,2,3-Trichlorobenzene				0	0		0.32	U	NR
	1-Methylnaphthalene				0	0		0.32	U	NR
	Biphenyl				0	0		0.32	U	NR
	OPMO				0	0		2.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F007.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 23:13	**Quant Date:**	10/02/2014 13:40	**Vial:**	7
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1412851-2 -- K1409921-011DMS			**Soln Conc. Units:**	ug/ml

Prep Amount:	40.410 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	77.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F007.D Vial: 7
Acq On : 1 Oct 2014 11:13 pm Operator: T. THOMAS
Sample : K1409921-011 DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:09 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	67586	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	238619	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	115794	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	213646	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	214104	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	217309	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	146134	75.38	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 50.25%			
7) Phenol-d6	8.73	99	179004	78.31	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.21%			
19) Nitrobenzene-d5	10.15	82	121682	59.52	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 59.52%			
38) 2-Fluorobiphenyl	13.11	172	247569	56.68	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 56.68%			
59) 2,4,6-Tribromophenol	15.47	330	126012	107.18	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 71.45%			
71) Terphenyl-d14	19.20	244	331798	70.91	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 70.91%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.96	42	47339	50.29	ug/ml	97
3) Pyridine	4.02	79	110913m	45.15	ug/ml	
5) Aniline	8.67	93	116023	49.10	ug/ml	91
6) Bis(2-chloroethyl) Ether	8.81	93	104507m	56.05	ug/ml	
8) Phenol	8.75	94	117291	53.39	ug/ml	99
9) 2-Chlorophenol	8.87	128	121649	56.00	ug/ml	96
10) 1,3-Dichlorobenzene	9.10	146	129608	51.06	ug/ml	99
11) 1,4-Dichlorobenzene	9.23	146	136446	54.07	ug/ml	96
12) 1,2-Dichlorobenzene	9.48	146	126450	53.08	ug/ml	98
13) Benzyl Alcohol	9.50	108	64819	58.31	ug/ml	98
14) Bis(2-chloroisopropyl) Eth	9.71	45	111334	57.45	ug/ml	99
15) 2-Methylphenol	9.74	107	81829	56.49	ug/ml	98
16) Hexachloroethane	10.03	117	54580	53.37	ug/ml	100
17) N-Nitrosodi-n-propylamine	9.95	70	72599	57.67	ug/ml	99
18) 4-Methylphenol	10.01	107	126994	60.86	ug/ml	98
20) Nitrobenzene	10.18	77	109146	58.08	ug/ml	93
22) Isophorone	10.59	82	199111	56.29	ug/ml	99
23) 2-Nitrophenol	10.70	139	66432	54.89	ug/ml	92
24) 2,4-Dimethylphenol	10.85	122	83847	52.58	ug/ml	99
25) Bis(2-chloroethoxy)methane	10.99	93	136788	60.14	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F007.D Vial: 7
Acq On : 1 Oct 2014 11:13 pm Operator: T. THOMAS
Sample : K1409921-011 DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:09 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.13	162	107245	60.12	ug/ml	96
27)	Benzoic Acid	11.08	122	24981	23.75	ug/ml	99
28)	1,2,4-Trichlorobenzene	11.23	180	117902	55.12	ug/ml	99
29)	Naphthalene	11.35	128	310329	57.23	ug/ml	99
30)	4-Chloroaniline	11.48	127	130330	59.47	ug/ml	96
31)	Hexachlorobutadiene	11.57	225	77585	55.02	ug/ml	98
32)	4-Chloro-3-methylphenol	12.34	107	102504	64.47	ug/ml#	65
33)	2-Methylnaphthalene	12.49	142	201246	57.34	ug/ml	99
35)	Hexachlorocyclopentadiene	12.74	237	49076	39.76	ug/ml	97
36)	2,4,6-Trichlorophenol	12.98	196	78946	61.22	ug/ml	100
37)	2,4,5-Trichlorophenol	13.05	196	91108	62.39	ug/ml	97
39)	2-Chloronaphthalene	13.28	162	207882	56.00	ug/ml	98
40)	2-Nitroaniline	13.48	65	60545	64.53	ug/ml	90
41)	Acenaphthylene	13.94	152	327387	57.72	ug/ml	100
42)	Dimethyl Phthalate	13.80	163	284877	66.99	ug/ml	99
43)	2,6-Dinitrotoluene	13.89	165	66699	65.75	ug/ml	80
44)	Acenaphthene	14.23	154	185874	60.15	ug/ml	99
45)	3-Nitroaniline	14.15	138	76531	71.19	ug/ml	95
46)	2,4-Dinitrophenol	14.34	184	27120	48.16	ug/ml	79
47)	Dibenzofuran	14.51	168	284220	56.83	ug/ml	99
48)	4-Nitrophenol	14.52	109	38364	63.34	ug/ml#	64
49)	2,4-Dinitrotoluene	14.54	165	89591	67.66	ug/ml	95
50)	2,3,4,6-Tetrachlorophenol	14.74	232	81423	69.76	ug/ml	81
51)	Fluorene	15.06	166	245473	64.96	ug/ml	98
52)	4-Chlorophenyl Phenyl Ethe	15.09	204	126173	63.00	ug/ml	98
53)	Diethyl Phthalate	14.95	149	310372	70.33	ug/ml	97
54)	4-Nitroaniline	15.16	138	83270	73.15	ug/ml	97
55)	2-Methyl-4,6-dinitrophenol	15.20	198	50669	57.04	ug/ml#	100
56)	N-Nitrosodiphenylamine	15.30	169	185212	65.14	ug/ml	98
57)	1,2-Diphenylhydrazine	15.35	77	229640	63.88	ug/ml	98
60)	4-Bromophenyl Phenyl Ether	15.88	248	93371	68.65	ug/ml	98
61)	Hexachlorobenzene	15.95	284	126950	69.85	ug/ml	98
62)	Pentachlorophenol	16.30	266	62048m	69.40	ug/ml	
63)	Phenanthrene	16.62	178	387983	74.54	ug/ml	99
64)	Anthracene	16.70	178	386768	73.23	ug/ml	98
65)	Carbazole	16.99	167	377166	74.57	ug/ml	99
66)	Di-n-butyl Phthalate	17.61	149	518722	77.95	ug/ml	99
67)	Fluoranthene	18.54	202	430134	73.47	ug/ml	99
69)	Benzidine	18.80	184	10810	4.07	ug/ml	95
70)	Pyrene	18.89	202	483412	76.24	ug/ml	98
72)	Butyl Benzyl Phthalate	20.03	149	233084	80.02	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F007.D Vial: 7
Acq On : 1 Oct 2014 11:13 pm Operator: T. THOMAS
Sample : K1409921-011 DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:09 2014 Quant Results File: 093014BNC7.RES

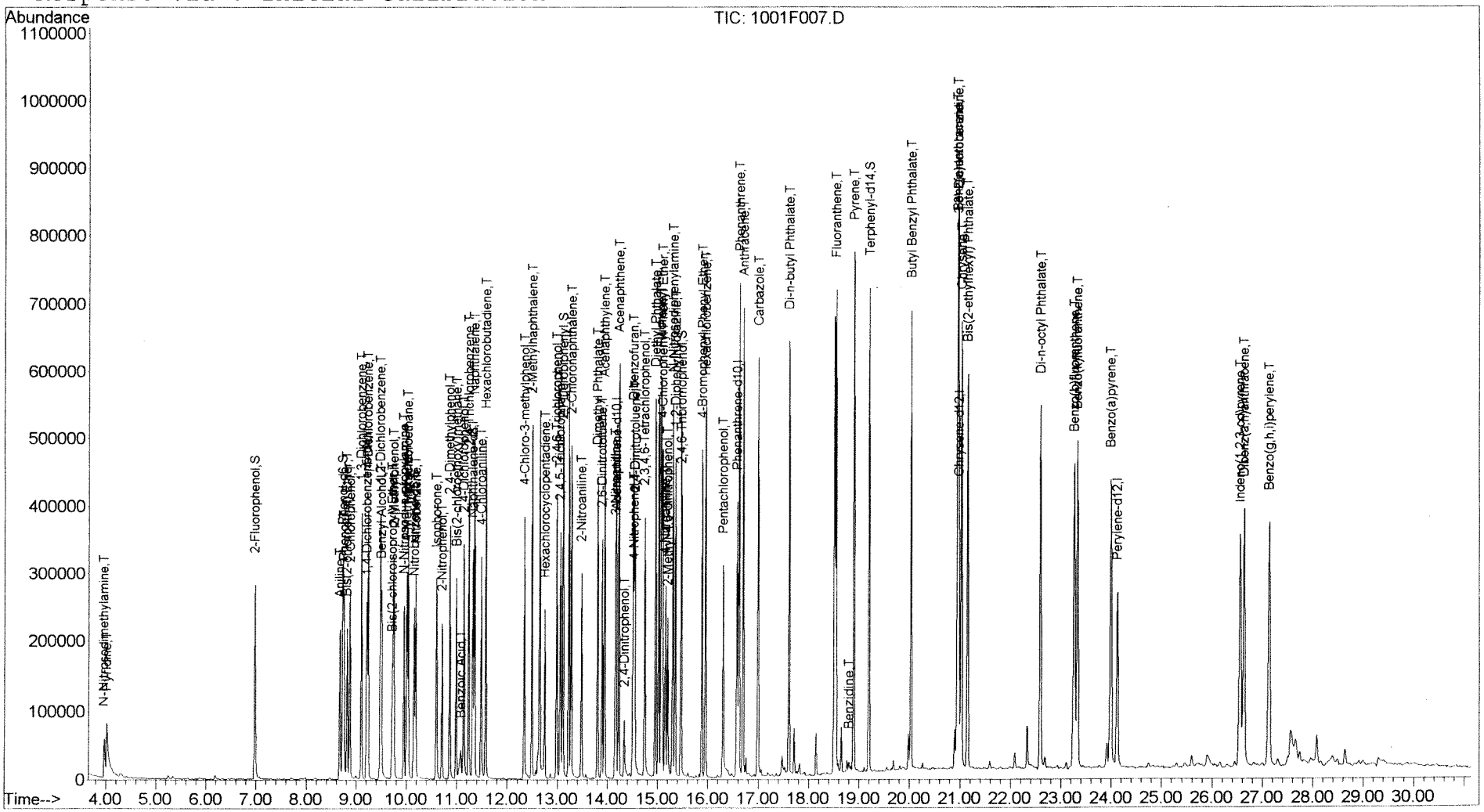
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.96	252	153826	64.94	ug/ml	98
74) Benz(a)anthracene	20.95	228	400164	74.06	ug/ml	98
75) Chrysene	21.03	228	403571	75.83	ug/ml	100
76) Bis(2-ethylhexyl) Phthalat	21.15	149	332640	86.79	ug/ml	99
78) Di-n-octyl Phthalate	22.59	149	554726	77.92	ug/ml	98
79) Benzo(b)fluoranthene	23.27	252	425708	80.41	ug/ml	99
80) Benzo(k)fluoranthene	23.33	252	388698	75.02	ug/ml	99
81) Benzo(a)pyrene	23.99	252	383202	74.63	ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.55	276	360279	77.80	ug/ml	96
83) Dibenz(a,h)anthracene	26.64	278	350949	73.61	ug/ml	98
84) Benzo(g,h,i)perylene	27.14	276	380865	75.00	ug/ml	96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F007.D Vial: 7
Acq On : 1 Oct 2014 11:13 pm Operator: T. THOMAS
Sample : K1409921-011 DMS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:40 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2692

Exception Report

Data File: J:\MS07\DATA\100114\1001F004.D
Lab ID: KWG1412851-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 10/01/2014 21:12
Date Quantitated: 10/02/2014 13:32
Batch ID: KWG1413431
Analysis Method: 8270D
MethodJoinID: MJ1284

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K9921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK
Continuing Calibration Recovery	Benzidine	110.7	NA	20	1

OCT 02 2014 TRT

Primary Review: _____

Secondary Review: 6 10 3/4

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F004.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:12	**Quant Date:**	10/02/2014 13:32	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412851-3			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	09/29/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
Prep Ref:	1376334	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:			
Tune Ref:	J:\MS07\DATA\100114\1001F001.D	**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	69555	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	227931	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	109394	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	207805	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	200447	40.00	OK
6	Perylene-d12	24.12	0.00	264	210543	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.97	0.00	0.00	112	143491	71.92	48	20-83	OK	
1	Phenol-d6	8.73	0.00	0.00	99	186348	79.22	53	26-106	OK	
1	Nitrobenzene-d5	10.15	0.00	0.00	82	123704	58.80	59	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	240553	58.30	58	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	130346	113.98	76	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	347931	79.43	79	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.97		0.00	42	51828	53.50	1.78	J	
1	Pyridine	4.00		0.00	79	225382m	89.14	2.97		
1	Aniline	8.66	-0.01	0.00	93	139162	57.22	1.91		
1	Bis(2-chloroethyl) Ether	8.82		0.00	93	117949	61.46	2.05		
1	Phenol	8.75		0.00	94	125442	55.49	1.85		
1	2-Chlorophenol	8.87		0.00	128	126153	56.43	1.88		
1	1,3-Dichlorobenzene	9.10		0.00	146	134359	51.44	1.71		
1	1,4-Dichlorobenzene	9.24		0.00	146	139933	53.88	1.80		
1	1,2-Dichlorobenzene	9.48		0.00	146	134373	54.81	1.83		

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F004.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:12	**Quant Date:**	10/02/2014 13:32	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412851-3			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.50	-0.01	0.00	108	67513	59.02	1.97		
1	Bis(2-chloroisopropyl) Ether	9.72	0.01	0.00	45	106841	53.57	1.79		
1	2-Methylphenol	9.75	0.01	0.00	107	84427	56.63	1.89		
1	Hexachloroethane	10.03		0.00	117	55754	52.98	1.77		
1	N-Nitrosodi-n-propylamine	9.95	-0.01	0.00	70	76182	58.81	1.96		
1	4-Methylphenol	10.00	-0.01	0.00	107	132180	61.55	2.05		
1	Nitrobenzene	10.18		0.00	77	116550	60.27	2.01		
2	Isophorone	10.59	-0.01	0.00	82	204636	60.56	2.02		
2	2-Nitrophenol	10.71		0.00	139	76226	65.93	2.20		
2	2,4-Dimethylphenol	10.86	-0.01	0.00	122	92796	60.92	2.03		
2	Bis(2-chloroethoxy)methane	10.98	-0.01	0.00	93	141531	65.15	2.17		
2	2,4-Dichlorophenol	11.14		0.00	162	110239	64.70	2.16		
2	Benzoic Acid	11.12	-0.03	0.00	122	50915	50.68	1.69	J	
2	1,2,4-Trichlorobenzene	11.23		0.00	180	124738	61.05	2.04		
2	Naphthalene	11.35		0.00	128	327909	63.31	2.11		
2	4-Chloroaniline	11.48		0.00	127	145069	69.30	2.31		
2	Hexachlorobutadiene	11.56	-0.01	0.00	225	77762	57.74	1.92		
2	4-Chloro-3-methylphenol	12.33	-0.01	0.00	107	98590	64.91	2.16		
2	2-Methylnaphthalene	12.48	-0.01	0.00	142	213430	63.66	2.12		
3	Hexachlorocyclopentadiene	12.75	0.01	0.00	237	56656	47.15	1.57		
3	2,4,6-Trichlorophenol	12.98		0.00	196	78621	64.54	2.15		
3	2,4,5-Trichlorophenol	13.06	0.01	0.00	196	85676	62.10	2.07		
3	2-Chloronaphthalene	13.27	-0.01	0.00	162	219125	62.49	2.08		
3	2-Nitroaniline	13.49	0.01	0.00	65	66560	75.09	2.50		
3	Acenaphthylene	13.93	-0.01	0.00	152	351878	65.67	2.19		
3	Dimethyl Phthalate	13.80	-0.01	0.00	163	293942	73.17	2.44		
3	2,6-Dinitrotoluene	13.89	-0.01	0.00	165	74237	77.46	2.58		
3	Acenaphthene	14.22	-0.01	0.00	154	193598	66.31	2.21		
3	3-Nitroaniline	14.16		0.00	138	79758	78.53	2.62		
3	2,4-Dinitrophenol	14.33	-0.01	0.00	184	41467	68.31	2.28		
3	Dibenzofuran	14.51		0.00	168	316384	66.96	2.23		
3	4-Nitrophenol	14.53		0.00	109	44293	77.41	2.58		
3	2,4-Dinitrotoluene	14.55	0.01	0.00	165	106033	84.77	2.83		
3	2,3,4,6-Tetrachlorophenol	14.74	-0.01	0.00	232	84069	76.24	2.54		
3	Fluorene	15.07	0.01	0.00	166	249085	69.77	2.33		
3	4-Chlorophenyl Phenyl Ether	15.09		0.00	204	128656	68.00	2.27		
3	Diethyl Phthalate	14.96		0.00	149	310366	74.44	2.48		
3	4-Nitroaniline	15.16	-0.01	0.00	138	92040	85.59	2.85		
3	2-Methyl-4,6-dinitrophenol	15.20	-0.01	0.00	198	66769	79.56	2.65		
3	N-Nitrosodiphenylamine	15.30		0.00	169	188880	70.31	2.34		
3	1,2-Diphenylhydrazine	15.34	-0.01	0.00	77	234501	69.05	2.30		
4	4-Bromophenyl Phenyl Ether	15.89	0.01	0.00	248	99077	74.90	2.50		

U: Undetected at or above MDL
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D: Result from dilution
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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F004.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:12	**Quant Date:**	10/02/2014 13:32	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412851-3			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.95		0.00	284	139363	78.84	2.63		
4	Pentachlorophenol	16.30		0.00	266	62745**m**	71.77	2.39		
4	Phenanthrene	16.61	-0.01	0.00	178	384409	75.93	2.53		
4	Anthracene	16.70		0.00	178	403242	78.49	2.62		
4	Carbazole	17.00	0.01	0.00	167	415478	84.45	2.82		
4	Di-n-butyl Phthalate	17.61	-0.01	0.00	149	531105	82.05	2.74		
4	Fluoranthene	18.54		0.00	202	461084	80.97	2.70		
5	Benzidine	18.80		0.00	184	115061	90.45	3.02		
5	Pyrene	18.90	0.01	0.00	202	514598	86.68	2.89		
5	Butyl Benzyl Phthalate	20.03		0.00	149	237745	87.18	2.91		
5	3,3'-Dichlorobenzidine	20.96		0.00	252	186478	84.09	2.80		
5	Benz(a)anthracene	20.95	-0.01	0.00	228	410981	81.24	2.71		
5	Chrysene	21.02	-0.01	0.00	228	430785	86.46	2.88		
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	324577	90.45	3.02		
6	Di-n-octyl Phthalate	22.59		0.00	149	586138	84.98	2.83		
6	Benzo(b)fluoranthene	23.26	-0.01	0.00	252	436811	85.16	2.84		
6	Benzo(k)fluoranthene	23.33		0.00	252	420115	83.69	2.79		
6	Benzo(a)pyrene	24.00		0.00	252	426362	85.70	2.86		
6	Indeno(1,2,3-cd)pyrene	26.56	0.01	0.00	276	380599	84.83	2.83		
6	Dibenz(a,h)anthracene	26.63	-0.01	0.00	278	395923	85.72	2.86		
6	Benzo(g,h,i)perylene	27.13	-0.01	0.00	276	400958	81.49	2.72		
	4,4'-Methylenebis(2-chloroanilin				0	0		1.0	U	NR
	1,3,5-Trichlorobenzene				0	0		0.34	U	NR
	2,3,7,8-Tetrachlorodibenzo-p-dic				0	0		0.34	U	NR
	Dibenzo(a,i)pyrene				0	0		0.34	U	NR
	Dibenzo(a,h)pyrene				0	0		0.34	U	NR
	Dibenzo(a,e)pyrene				0	0		0.34	U	NR
	Perylene				0	0		0.34	U	NR
	Dibenz(a,j)acridine				0	0		0.34	U	NR
	Dibenz(a,h)acridine				0	0		0.34	U	NR
	HPMO				0	0		2.0	U	NR
	3-Methylcholanthrene				0	0		0.34	U	NR
	Hexachlorocyclohexane				0	0		0.67	U	NR
	1,2,3,4-Tetrachlorobenzene				0	0		0.34	U	NR
	1,2,3,5-Tetrachlorobenzene				0	0		0.34	U	NR
	Acrylamide				0	0		50	U	NR
	Diisobutyl Phthalate				0	0		0.34	U	NR
	1-Methyl-2-pyrrolidinone				0	0		0.34	U	NR
	1,2,3-Trichlorobenzene				0	0		0.34	U	NR
	1-Methylnaphthalene				0	0		0.34	U	NR
	Biphenyl				0	0		0.34	U	NR
	OPMO				0	0		2.0	U	NR

U: Undetected at or above MDL
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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F004.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:12	**Quant Date:**	10/02/2014 13:32	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412851-3			**Soln Conc. Units:**	ug/ml

Prep Amount:	30.000 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:04 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	69555	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	227931	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	109394	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	207805	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	200447	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	210543	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	143491	71.92	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 47.95%			
7) Phenol-d6	8.73	99	186348	79.22	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.81%			
19) Nitrobenzene-d5	10.15	82	123704	58.80	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 58.80%			
38) 2-Fluorobiphenyl	13.11	172	240553	58.30	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 58.30%			
59) 2,4,6-Tribromophenol	15.47	330	130346	113.98	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 75.99%			
71) Terphenyl-d14	19.20	244	347931	79.43	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 79.43%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	51828	53.50	ug/ml	92
3) Pyridine	4.00	79	225382m	89.14	ug/ml	
5) Aniline	8.66	93	139162	57.22	ug/ml	93
6) Bis(2-chloroethyl) Ether	8.82	93	117949	61.46	ug/ml	97
8) Phenol	8.75	94	125442	55.49	ug/ml	96
9) 2-Chlorophenol	8.87	128	126153	56.43	ug/ml	99
10) 1,3-Dichlorobenzene	9.10	146	134359	51.44	ug/ml	97
11) 1,4-Dichlorobenzene	9.24	146	139933	53.88	ug/ml	97
12) 1,2-Dichlorobenzene	9.48	146	134373	54.81	ug/ml	98
13) Benzyl Alcohol	9.50	108	67513	59.02	ug/ml	96
14) Bis(2-chloroisopropyl) Eth	9.72	45	106841	53.57	ug/ml	96
15) 2-Methylphenol	9.75	107	84427	56.63	ug/ml	98
16) Hexachloroethane	10.03	117	55754	52.98	ug/ml	89
17) N-Nitrosodi-n-propylamine	9.95	70	76182	58.81	ug/ml	96
18) 4-Methylphenol	10.00	107	132180	61.55	ug/ml	100
20) Nitrobenzene	10.18	77	116550	60.27	ug/ml	100
22) Isophorone	10.59	82	204636	60.56	ug/ml	99
23) 2-Nitrophenol	10.71	139	76226	65.93	ug/ml	98
24) 2,4-Dimethylphenol	10.86	122	92796	60.92	ug/ml	98
25) Bis(2-chloroethoxy)methane	10.98	93	141531	65.15	ug/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:04 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.14	162	110239	64.70	ug/ml	96
27)	Benzoic Acid	11.12	122	50915	50.68	ug/ml	98
28)	1,2,4-Trichlorobenzene	11.23	180	124738	61.05	ug/ml	98
29)	Naphthalene	11.35	128	327909	63.31	ug/ml	99
30)	4-Chloroaniline	11.48	127	145069	69.30	ug/ml	98
31)	Hexachlorobutadiene	11.56	225	77762	57.74	ug/ml	99
32)	4-Chloro-3-methylphenol	12.33	107	98590	64.91	ug/ml#	66
33)	2-Methylnaphthalene	12.48	142	213430	63.66	ug/ml	100
35)	Hexachlorocyclopentadiene	12.75	237	56656	47.15	ug/ml	95
36)	2,4,6-Trichlorophenol	12.98	196	78621	64.54	ug/ml	99
37)	2,4,5-Trichlorophenol	13.06	196	85676	62.10	ug/ml	99
39)	2-Chloronaphthalene	13.27	162	219125	62.49	ug/ml	98
40)	2-Nitroaniline	13.49	65	66560	75.09	ug/ml	83
41)	Acenaphthylene	13.93	152	351878	65.67	ug/ml	100
42)	Dimethyl Phthalate	13.80	163	293942	73.17	ug/ml	100
43)	2,6-Dinitrotoluene	13.89	165	74237	77.46	ug/ml	89
44)	Acenaphthene	14.22	154	193598	66.31	ug/ml	99
45)	3-Nitroaniline	14.16	138	79758	78.53	ug/ml	99
46)	2,4-Dinitrophenol	14.33	184	41467	68.31	ug/ml	99
47)	Dibenzofuran	14.51	168	316384	66.96	ug/ml	99
48)	4-Nitrophenol	14.53	109	44293	77.41	ug/ml	93
49)	2,4-Dinitrotoluene	14.55	165	106033	84.77	ug/ml	86
50)	2,3,4,6-Tetrachlorophenol	14.74	232	84069	76.24	ug/ml	92
51)	Fluorene	15.07	166	249085	69.77	ug/ml	100
52)	4-Chlorophenyl Phenyl Ethe	15.09	204	128656	68.00	ug/ml	95
53)	Diethyl Phthalate	14.96	149	310366	74.44	ug/ml	98
54)	4-Nitroaniline	15.16	138	92040	85.59	ug/ml	100
55)	2-Methyl-4,6-dinitrophenol	15.20	198	66769	79.56	ug/ml	100
56)	N-Nitrosodiphenylamine	15.30	169	188880	70.31	ug/ml	99
57)	1,2-Diphenylhydrazine	15.34	77	234501	69.05	ug/ml	98
60)	4-Bromophenyl Phenyl Ether	15.89	248	99077	74.90	ug/ml	92
61)	Hexachlorobenzene	15.95	284	139363	78.84	ug/ml	92
62)	Pentachlorophenol	16.30	266	62745m	71.77	ug/ml	
63)	Phenanthrene	16.61	178	384409	75.93	ug/ml	100
64)	Anthracene	16.70	178	403242	78.49	ug/ml	99
65)	Carbazole	17.00	167	415478	84.45	ug/ml	98
66)	Di-n-butyl Phthalate	17.61	149	531105	82.05	ug/ml	99
67)	Fluoranthene	18.54	202	461084	80.97	ug/ml	99
69)	Benzidine	18.80	184	115061	90.45	ug/ml	99
70)	Pyrene	18.90	202	514598	86.68	ug/ml	98
72)	Butyl Benzyl Phthalate	20.03	149	237745	87.18	ug/ml	91

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:04 2014 Quant Results File: 093014BNC7.RES

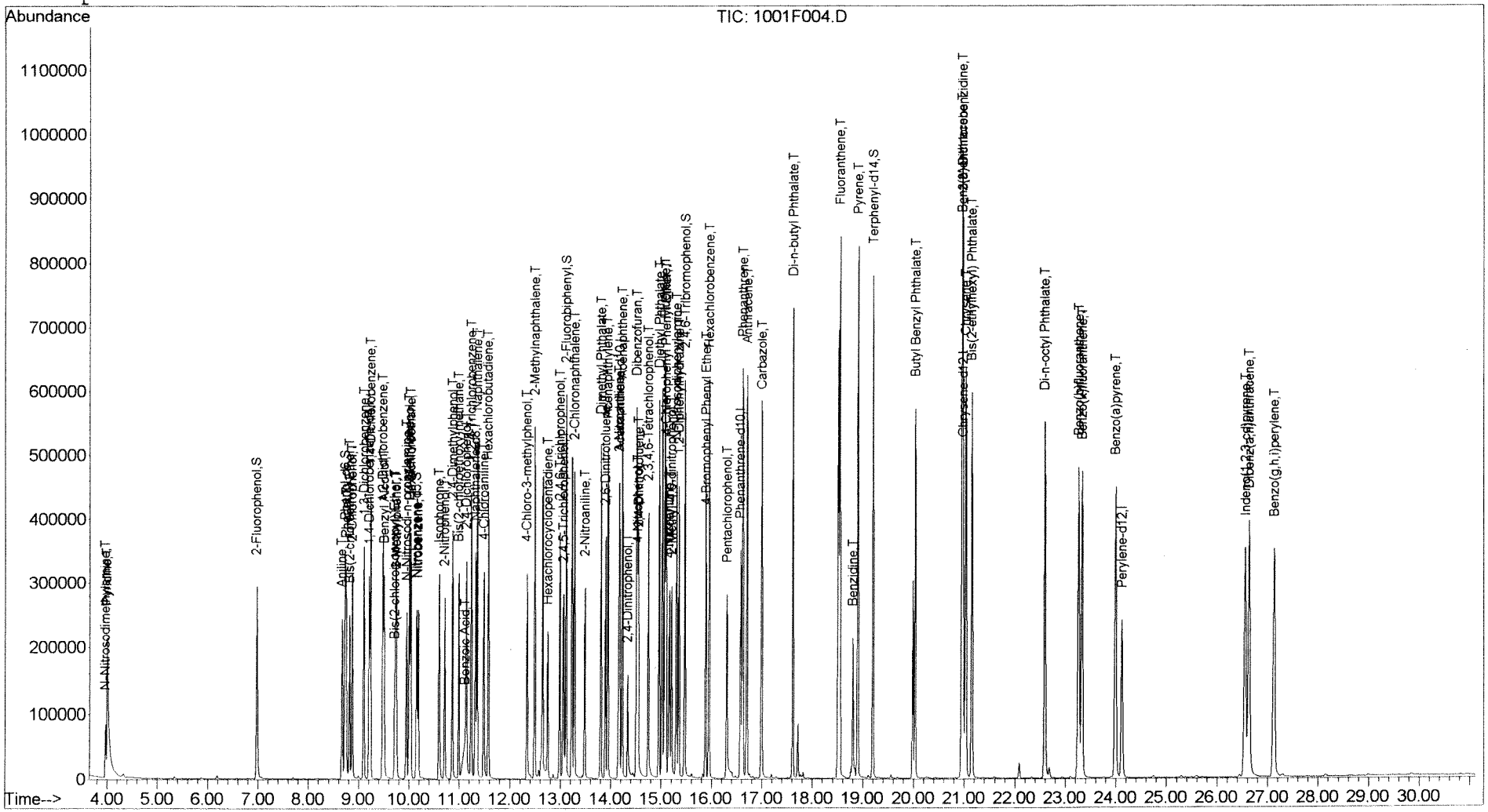
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	3,3'-Dichlorobenzidine	20.96	252	186478	84.09	ug/ml	99
74)	Benz(a)anthracene	20.95	228	410981	81.24	ug/ml	100
75)	Chrysene	21.02	228	430785	86.46	ug/ml	99
76)	Bis(2-ethylhexyl) Phthalat	21.15	149	324577	90.45	ug/ml	98
78)	Di-n-octyl Phthalate	22.59	149	586138	84.98	ug/ml	100
79)	Benzo(b)fluoranthene	23.26	252	436811	85.16	ug/ml	99
80)	Benzo(k)fluoranthene	23.33	252	420115	83.69	ug/ml	99
81)	Benzo(a)pyrene	24.00	252	426362	85.70	ug/ml	98
82)	Indeno(1,2,3-cd)pyrene	26.56	276	380599	84.83	ug/ml	99
83)	Dibenz(a,h)anthracene	26.63	278	395923	85.72	ug/ml	98
84)	Benzo(g,h,i)perylene	27.13	276	400958	81.49	ug/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:32 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

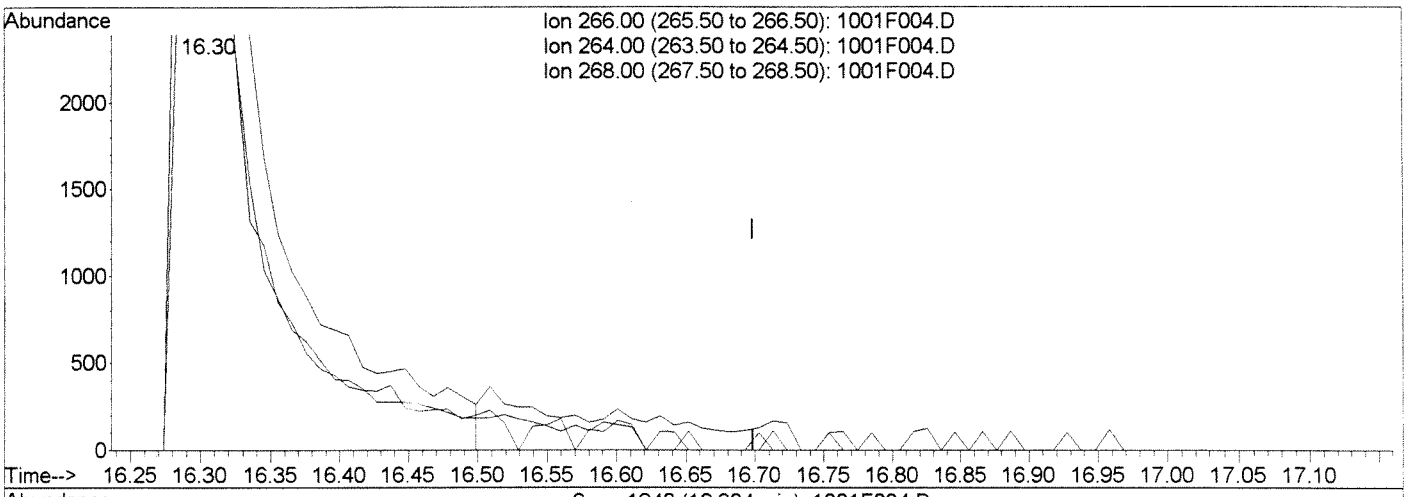


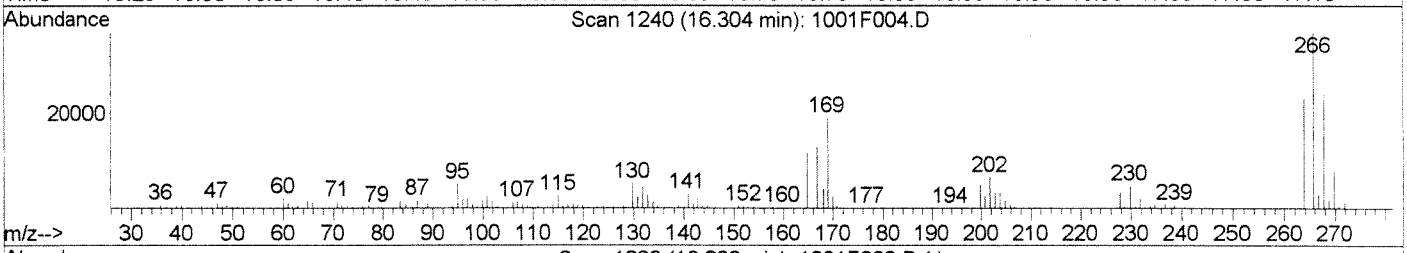
2701

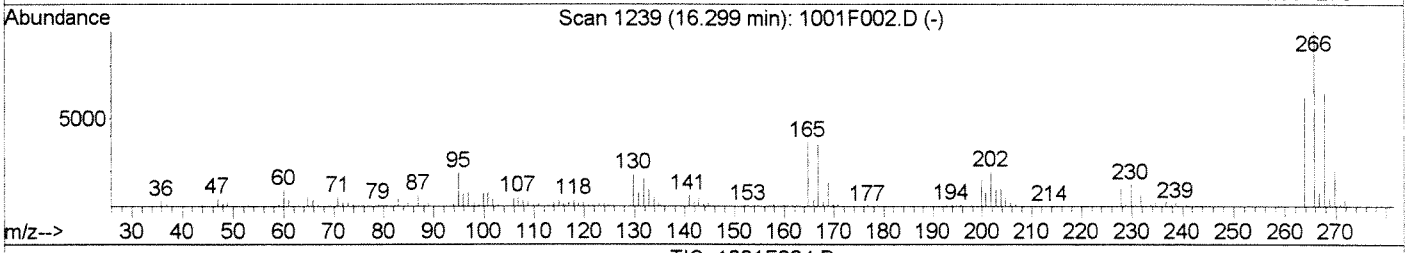
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:29 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration







TIC: 1001F004.D

(62) Pentachlorophenol (T)

16.30min 69.33ug/ml

response 60276

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.23
268.00	63.20	65.38
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

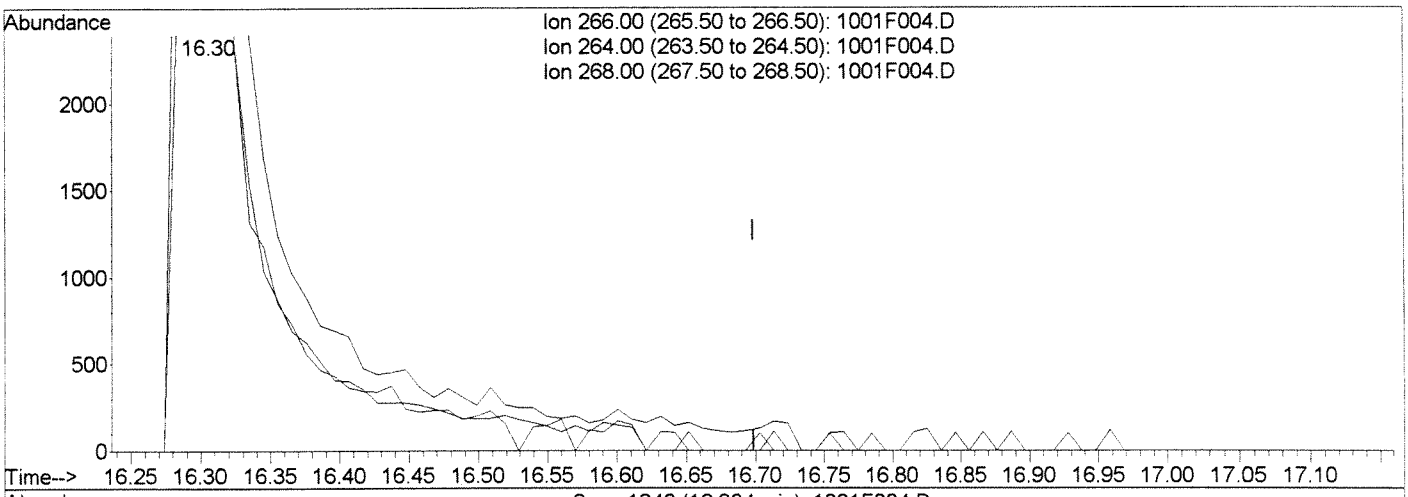
TRT

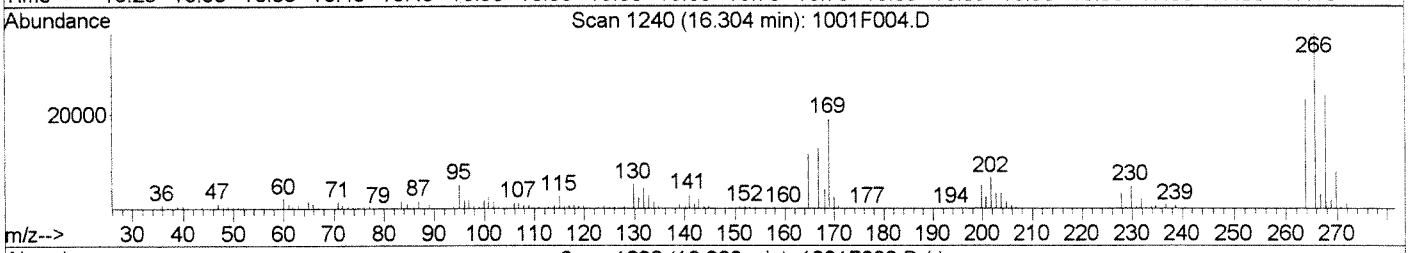
1001F004.D 093014BNC7.M Thu Oct 02 13:31:54 2014

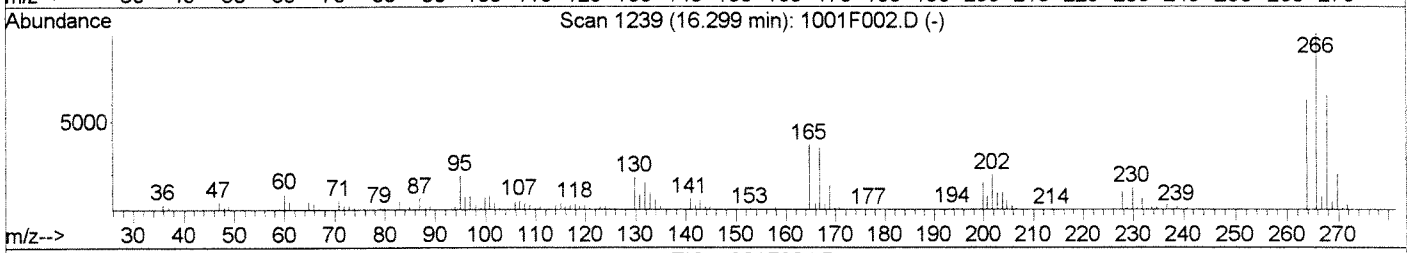
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F004.D Vial: 4
Acq On : 1 Oct 2014 9:12 pm Operator: T. THOMAS
Sample : KWG1412851-03 | LCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:32 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration







TIC: 1001F004.D

(62) Pentachlorophenol (T)

16.30min 71.77ug/ml m

response 62745

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.28
268.00	63.20	65.39
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/02/14

10/3/14

TRT

1001F004.D 093014BNC7.M Thu Oct 02 13:32:08 2014

Exception Report

Data File: J:\MS07\DATA\100114\1001F005.D
Lab ID: KWG1412851-4
RunType: DLCS
Matrix: SEDIMENT

Date Acquired: 10/01/2014 21:52
Date Quantitated: 10/02/2014 13:34
Batch ID: KWG1413431
Analysis Method: 8270D
MethodJoinID: MJ1284

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K9921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK
Continuing Calibration Recovery	Benzidine	110.7	NA	20	1

Primary Review: OCT 02 2014 TR

Secondary Review: on 10/3/14

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F005.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:52	**Quant Date:**	10/02/2014 13:34	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412851-4			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	09/29/2014

Analysis Lot:	KWG1413431	**Prep Lot:**	KWG1412851	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3541		
		Prep Date:	09/22/2014		
Prep Ref:	1376335				

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:					
Tune Ref:	J:\MS07\DATA\100114\1001F001.D			**Method ID:**	MJ1284
MB Ref:	J:\MS07\DATA\100114\1001F003.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	64508	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	237209	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	111676	40.00	OK
4	Phenanthrene-d10	16.57	-0.01	188	213324	40.00	OK
5	Chrysene-d12	20.97	-0.01	240	204697	40.00	OK
6	Perylene-d12	24.12	0.00	264	214725	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.97	0.00	0.00	112	144000	77.82	52	20-83	OK	
1	Phenol-d6	8.73	0.00	0.00	99	190761	87.44	58	26-106	OK	
1	Nitrobenzene-d5	10.15	0.00	0.00	82	124912	64.02	64	29-116	OK	
3	2-Fluorobiphenyl	13.11	0.00	0.00	172	259703	61.65	62	32-104	OK	
4	2,4,6-Tribromophenol	15.47	0.00	0.00	330	140569	119.74	80	20-123	OK	
5	Terphenyl-d14	19.20	0.00	0.00	244	378410	84.59	85	37-133	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.97		0.00	42	56056	62.39	2.08		
1	Pyridine	4.00		0.00	79	229849**m**	98.02	3.27		
1	Aniline	8.67		0.00	93	146950	65.15	2.17		
1	Bis(2-chloroethyl) Ether	8.82		0.00	93	120556	67.74	2.26		
1	Phenol	8.75		0.00	94	126311	60.24	2.01		
1	2-Chlorophenol	8.87		0.00	128	120851	58.29	1.94		
1	1,3-Dichlorobenzene	9.09	-0.01	0.00	146	135349	55.87	1.86		
1	1,4-Dichlorobenzene	9.24		0.00	146	137613	57.13	1.90		
1	1,2-Dichlorobenzene	9.47	-0.01	0.00	146	138447	60.89	2.03		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F005.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:52	**Quant Date:**	10/02/2014 13:34	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412851-4			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.50	-0.01	0.00	108	71840	67.71	2.26		
1	Bis(2-chloroisopropyl) Ether	9.73	0.02	0.00	45	108722	58.78	1.96		
1	2-Methylphenol	9.74		0.00	107	86304	62.42	2.08		
1	Hexachloroethane	10.03		0.00	117	56770	58.16	1.94		
1	N-Nitrosodi-n-propylamine	9.95	-0.01	0.00	70	80807	67.26	2.24		
1	4-Methylphenol	10.00	-0.01	0.00	107	136391	68.48	2.28		
1	Nitrobenzene	10.18		0.00	77	117498	65.51	2.18		
2	Isophorone	10.60		0.00	82	220165	62.61	2.09		
2	2-Nitrophenol	10.71		0.00	139	78367	65.13	2.17		
2	2,4-Dimethylphenol	10.86	-0.01	0.00	122	98873	62.37	2.08		
2	Bis(2-chloroethoxy)methane	10.98	-0.01	0.00	93	138638	61.32	2.04		
2	2,4-Dichlorophenol	11.14		0.00	162	113589	64.06	2.14		
2	Benzoic Acid	11.12	-0.03	0.00	122	57218	54.73	1.82	J	
2	1,2,4-Trichlorobenzene	11.23		0.00	180	125828	59.17	1.97		
2	Naphthalene	11.35		0.00	128	339167	62.92	2.10		
2	4-Chloroaniline	11.47	-0.01	0.00	127	152947	70.21	2.34		
2	Hexachlorobutadiene	11.57		0.00	225	82061	58.54	1.95		
2	4-Chloro-3-methylphenol	12.33	-0.01	0.00	107	112472	71.16	2.37		
2	2-Methylnaphthalene	12.49		0.00	142	202493	58.04	1.93		
3	Hexachlorocyclopentadiene	12.74		0.00	237	61086	49.40	1.65		
3	2,4,6-Trichlorophenol	12.99	0.01	0.00	196	83445	67.10	2.24		
3	2,4,5-Trichlorophenol	13.05		0.00	196	94631	67.19	2.24		
3	2-Chloronaphthalene	13.27	-0.01	0.00	162	229121	64.00	2.13		
3	2-Nitroaniline	13.48		0.00	65	72780	80.43	2.68		
3	Acenaphthylene	13.94		0.00	152	376896	68.90	2.30		
3	Dimethyl Phthalate	13.80	-0.01	0.00	163	330252	80.53	2.68		
3	2,6-Dinitrotoluene	13.90		0.00	165	82759	84.59	2.82		
3	Acenaphthene	14.22	-0.01	0.00	154	204898	68.75	2.29		
3	3-Nitroaniline	14.16		0.00	138	91388	88.14	2.94		
3	2,4-Dinitrophenol	14.33	-0.01	0.00	184	48329	75.68	2.52		
3	Dibenzofuran	14.51		0.00	168	336617	69.79	2.33		
3	4-Nitrophenol	14.53		0.00	109	51694	88.50	2.95		
3	2,4-Dinitrotoluene	14.55	0.01	0.00	165	117974	92.38	3.08		
3	2,3,4,6-Tetrachlorophenol	14.74	-0.01	0.00	232	97395	86.52	2.88		
3	Fluorene	15.07	0.01	0.00	166	272530	74.78	2.49		
3	4-Chlorophenyl Phenyl Ether	15.09		0.00	204	142559	73.80	2.46		
3	Diethyl Phthalate	14.96		0.00	149	366586	86.13	2.87		
3	4-Nitroaniline	15.16	-0.01	0.00	138	105498	96.10	3.20		
3	2-Methyl-4,6-dinitrophenol	15.20	-0.01	0.00	198	74673	87.16	2.91		
3	N-Nitrosodiphenylamine	15.31	0.01	0.00	169	220605	80.44	2.68		
3	1,2-Diphenylhydrazine	15.35		0.00	77	265967	76.71	2.56		
4	4-Bromophenyl Phenyl Ether	15.89	0.01	0.00	248	111737	82.28	2.74		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F005.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:52	**Quant Date:**	10/02/2014 13:34	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412851-4			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.95		0.00	284	156402	86.19	2.87		
4	Pentachlorophenol	16.31	0.01	0.00	266	73841m	80.81	2.69		
4	Phenanthrene	16.61	-0.01	0.00	178	439106	84.49	2.82		
4	Anthracene	16.70		0.00	178	459411	87.11	2.90		
4	Carbazole	17.00	0.01	0.00	167	457261	90.54	3.02		
4	Di-n-butyl Phthalate	17.61	-0.01	0.00	149	619972	93.30	3.11		
4	Fluoranthene	18.54		0.00	202	498366	85.25	2.84		
5	Benzidine	18.80		0.00	184	134796	106.41	3.55		
5	Pyrene	18.90	0.01	0.00	202	543038	89.57	2.99		
5	Butyl Benzyl Phthalate	20.03		0.00	149	275519	98.94	3.30		
5	3,3'-Dichlorobenzidine	20.95	-0.01	0.00	252	209719	92.61	3.09		
5	Benz(a)anthracene	20.95	-0.01	0.00	228	470037	90.99	3.03		
5	Chrysene	21.03		0.00	228	467197	91.82	3.06		
5	Bis(2-ethylhexyl) Phthalate	21.15		0.00	149	382056	104.26	3.48		
6	Di-n-octyl Phthalate	22.59		0.00	149	641624	91.22	3.04		
6	Benzo(b)fluoranthene	23.26	-0.01	0.00	252	496798	94.96	3.17		
6	Benzo(k)fluoranthene	23.33		0.00	252	479435	93.65	3.12		
6	Benzo(a)pyrene	24.00		0.00	252	490335	96.64	3.22		
6	Indeno(1,2,3-cd)pyrene	26.56	0.01	0.00	276	423847	92.63	3.09		
6	Dibenz(a,h)anthracene	26.63	-0.01	0.00	278	466476	99.02	3.30		
6	Benzo(g,h,i)perylene	27.13	-0.01	0.00	276	449432	89.56	2.99		
	4,4'-Methylenebis(2-chloroanilin				0	0		1.0	U	NR
	1,3,5-Trichlorobenzene				0	0		0.34	U	NR
	2,3,7,8-Tetrachlorodibenzo-p-dic				0	0		0.34	U	NR
	Dibenzo(a,i)pyrene				0	0		0.34	U	NR
	Dibenzo(a,h)pyrene				0	0		0.34	U	NR
	Dibenzo(a,e)pyrene				0	0		0.34	U	NR
	Perylene				0	0		0.34	U	NR
	Dibenz(a,j)acridine				0	0		0.34	U	NR
	Dibenz(a,h)acridine				0	0		0.34	U	NR
	HPMO				0	0		2.0	U	NR
	3-Methylcholanthrene				0	0		0.34	U	NR
	Hexachlorocyclohexane				0	0		0.67	U	NR
	1,2,3,4-Tetrachlorobenzene				0	0		0.34	U	NR
	1,2,3,5-Tetrachlorobenzene				0	0		0.34	U	NR
	Acrylamide				0	0		50	U	NR
	Diisobutyl Phthalate				0	0		0.34	U	NR
	1-Methyl-2-pyrrolidinone				0	0		0.34	U	NR
	1,2,3-Trichlorobenzene				0	0		0.34	U	NR
	1-Methylnaphthalene				0	0		0.34	U	NR
	Biphenyl				0	0		0.34	U	NR
	OPMO				0	0		2.0	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F005.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 21:52	**Quant Date:**	10/02/2014 13:34	**Vial:**	5
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412851-4			**Soln Conc. Units:**	ug/ml

Prep Amount:	30.000 g	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:06 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	64508	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	237209	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	111676	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	213324	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	204697	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	214725	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	144000	77.82	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 51.88%			
7) Phenol-d6	8.73	99	190761	87.44	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 58.29%			
19) Nitrobenzene-d5	10.15	82	124912	64.02	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 64.02%			
38) 2-Fluorobiphenyl	13.11	172	259703	61.65	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 61.65%			
59) 2,4,6-Tribromophenol	15.47	330	140569	119.74	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 79.83%			
71) Terphenyl-d14	19.20	244	378410	84.59	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 84.59%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	56056	62.39	ug/ml	92
3) Pyridine	4.00	79	229849m	98.02	ug/ml	
5) Aniline	8.67	93	146950	65.15	ug/ml	94
6) Bis(2-chloroethyl) Ether	8.82	93	120556	67.74	ug/ml	97
8) Phenol	8.75	94	126311	60.24	ug/ml	96
9) 2-Chlorophenol	8.87	128	120851	58.29	ug/ml	93
10) 1,3-Dichlorobenzene	9.09	146	135349	55.87	ug/ml	99
11) 1,4-Dichlorobenzene	9.24	146	137613	57.13	ug/ml	98
12) 1,2-Dichlorobenzene	9.47	146	138447	60.89	ug/ml	99
13) Benzyl Alcohol	9.50	108	71840	67.71	ug/ml	93
14) Bis(2-chloroisopropyl) Eth	9.73	45	108722	58.78	ug/ml	81
15) 2-Methylphenol	9.74	107	86304	62.42	ug/ml	92
16) Hexachloroethane	10.03	117	56770	58.16	ug/ml	80
17) N-Nitrosodi-n-propylamine	9.95	70	80807	67.26	ug/ml	95
18) 4-Methylphenol	10.00	107	136391	68.48	ug/ml	98
20) Nitrobenzene	10.18	77	117498	65.51	ug/ml	100
22) Isophorone	10.60	82	220165	62.61	ug/ml	99
23) 2-Nitrophenol	10.71	139	78367	65.13	ug/ml	99
24) 2,4-Dimethylphenol	10.86	122	98873	62.37	ug/ml	96
25) Bis(2-chloroethoxy)methane	10.98	93	138638	61.32	ug/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:06 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.14	162	113589	64.06	ug/ml	98
27)	Benzoic Acid	11.12	122	57218	54.73	ug/ml	98
28)	1,2,4-Trichlorobenzene	11.23	180	125828	59.17	ug/ml	99
29)	Naphthalene	11.35	128	339167	62.92	ug/ml	99
30)	4-Chloroaniline	11.47	127	152947	70.21	ug/ml	95
31)	Hexachlorobutadiene	11.57	225	82061	58.54	ug/ml	100
32)	4-Chloro-3-methylphenol	12.33	107	112472	71.16	ug/ml	97
33)	2-Methylnaphthalene	12.49	142	202493	58.04	ug/ml	94
35)	Hexachlorocyclopentadiene	12.74	237	61086	49.40	ug/ml	97
36)	2,4,6-Trichlorophenol	12.99	196	83445	67.10	ug/ml	96
37)	2,4,5-Trichlorophenol	13.05	196	94631	67.19	ug/ml	99
39)	2-Chloronaphthalene	13.27	162	229121	64.00	ug/ml	98
40)	2-Nitroaniline	13.48	65	72780	80.43	ug/ml	99
41)	Acenaphthylene	13.94	152	376896	68.90	ug/ml	100
42)	Dimethyl Phthalate	13.80	163	330252	80.53	ug/ml	99
43)	2,6-Dinitrotoluene	13.90	165	82759	84.59	ug/ml	91
44)	Acenaphthene	14.22	154	204898	68.75	ug/ml	98
45)	3-Nitroaniline	14.16	138	91388	88.14	ug/ml	99
46)	2,4-Dinitrophenol	14.33	184	48329	75.68	ug/ml	90
47)	Dibenzofuran	14.51	168	336617	69.79	ug/ml	99
48)	4-Nitrophenol	14.53	109	51694	88.50	ug/ml	99
49)	2,4-Dinitrotoluene	14.55	165	117974	92.38	ug/ml	84
50)	2,3,4,6-Tetrachlorophenol	14.74	232	97395	86.52	ug/ml	95
51)	Fluorene	15.07	166	272530	74.78	ug/ml	98
52)	4-Chlorophenyl Phenyl Ethe	15.09	204	142559	73.80	ug/ml	98
53)	Diethyl Phthalate	14.96	149	366586	86.13	ug/ml	98
54)	4-Nitroaniline	15.16	138	105498	96.10	ug/ml	98
55)	2-Methyl-4,6-dinitrophenol	15.20	198	74673	87.16	ug/ml	100
56)	N-Nitrosodiphenylamine	15.31	169	220605	80.44	ug/ml	97
57)	1,2-Diphenylhydrazine	15.35	77	265967	76.71	ug/ml	97
60)	4-Bromophenyl Phenyl Ether	15.89	248	111737	82.28	ug/ml	92
61)	Hexachlorobenzene	15.95	284	156402	86.19	ug/ml	94
62)	Pentachlorophenol	16.31	266	73841m	80.81	ug/ml	
63)	Phenanthrene	16.61	178	439106	84.49	ug/ml	100
64)	Anthracene	16.70	178	459411	87.11	ug/ml	99
65)	Carbazole	17.00	167	457261	90.54	ug/ml	98
66)	Di-n-butyl Phthalate	17.61	149	619972	93.30	ug/ml	99
67)	Fluoranthene	18.54	202	498366	85.25	ug/ml	100
69)	Benzidine	18.80	184	134796	106.41	ug/ml	98
70)	Pyrene	18.90	202	543038	89.57	ug/ml	98
72)	Butyl Benzyl Phthalate	20.03	149	275519	98.94	ug/ml	90

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 12:33:06 2014 Quant Results File: 093014BNC7.RES

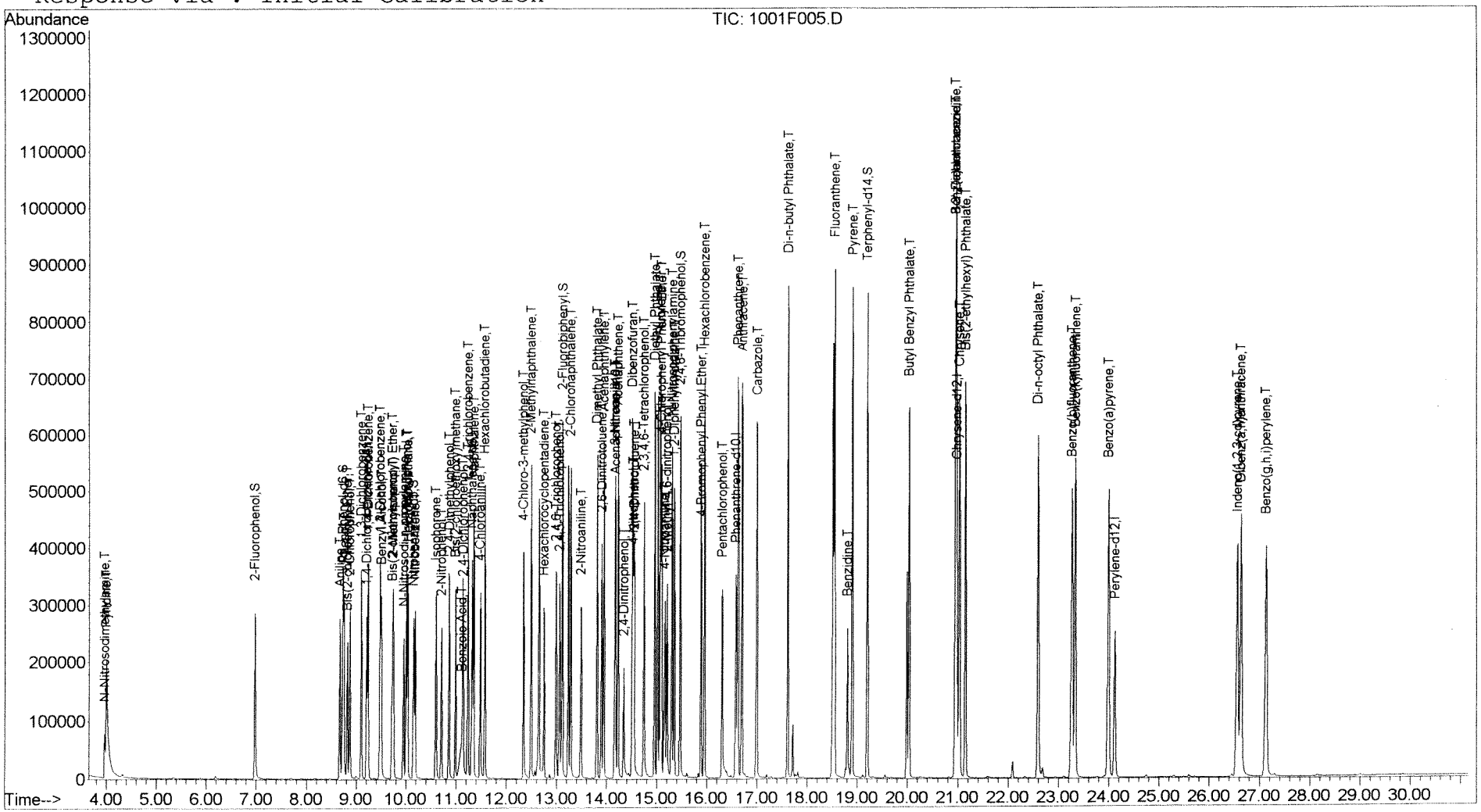
Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	3,3'-Dichlorobenzidine	20.95	252	209719	92.61	ug/ml	98
74)	Benz(a)anthracene	20.95	228	470037	90.99	ug/ml	99
75)	Chrysene	21.03	228	467197	91.82	ug/ml	100
76)	Bis(2-ethylhexyl) Phthalat	21.15	149	382056	104.26	ug/ml	98
78)	Di-n-octyl Phthalate	22.59	149	641624	91.22	ug/ml	99
79)	Benzo(b)fluoranthene	23.26	252	496798	94.96	ug/ml	99
80)	Benzo(k)fluoranthene	23.33	252	479435	93.65	ug/ml	99
81)	Benzo(a)pyrene	24.00	252	490335	96.64	ug/ml	99
82)	Indeno(1,2,3-cd)pyrene	26.56	276	423847	92.63	ug/ml	98
83)	Dibenz(a,h)anthracene	26.63	278	466476	99.02	ug/ml	99
84)	Benzo(g,h,i)perylene	27.13	276	449432	89.56	ug/ml	96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:34 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

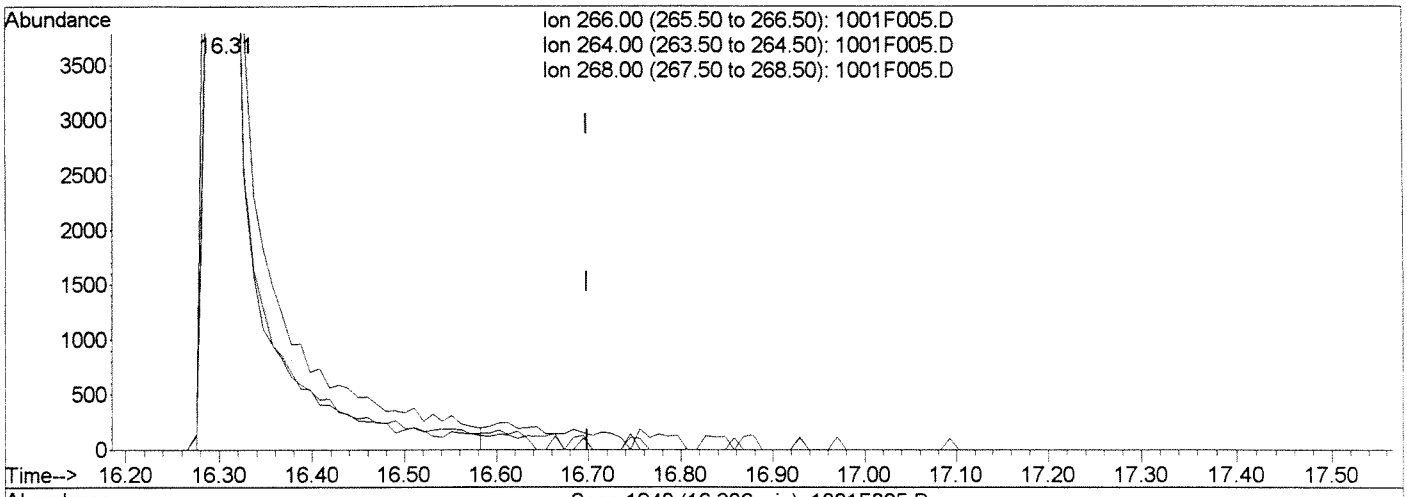


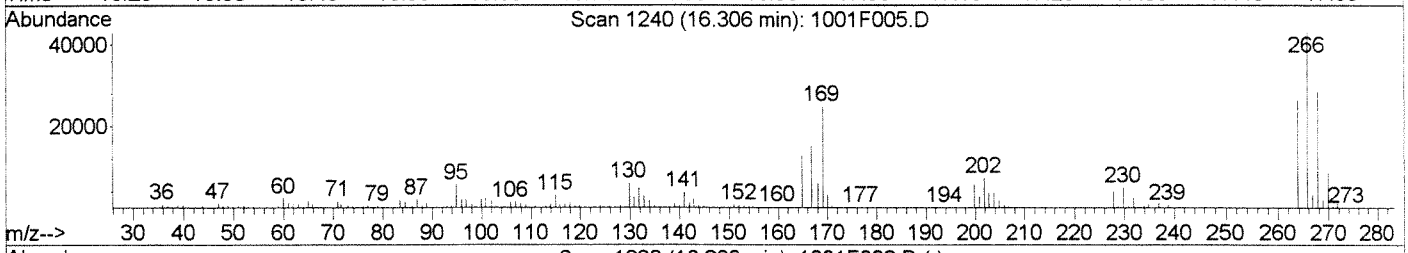
2712

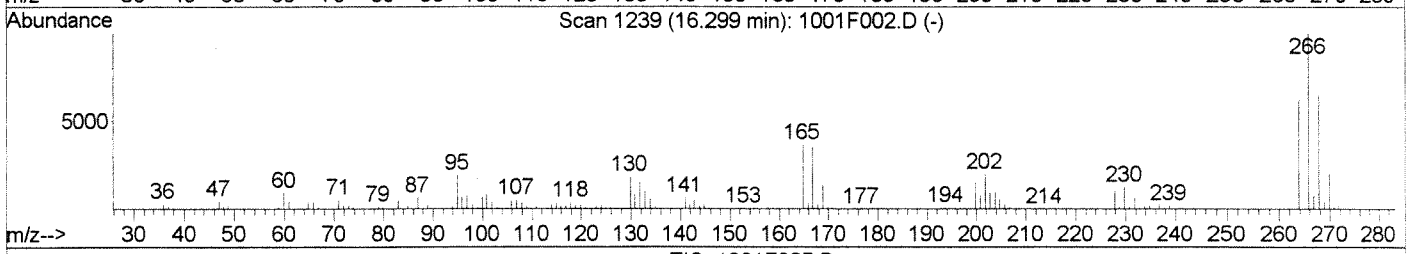
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:32 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration







TIC: 1001F005.D

(62) Pentachlorophenol (T)

16.31min 79.28ug/ml

response 72235

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.64
268.00	63.20	66.44
0.00	0.00	0.00

Manual Integration:

Before

10/02/14

10/3/14

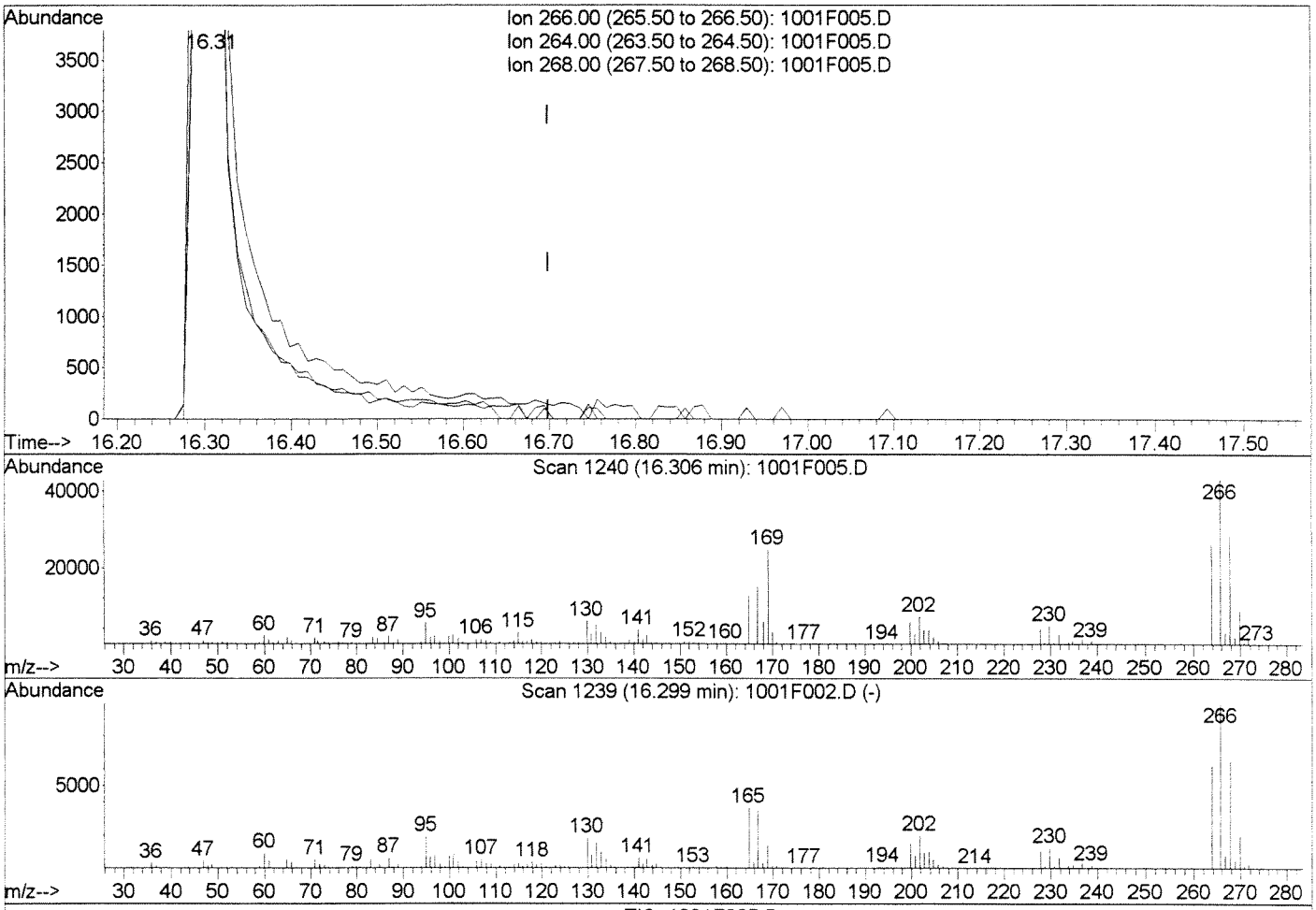
TRT

1001F005.D 093014BNC7.M Thu Oct 02 13:34:24 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F005.D Vial: 5
Acq On : 1 Oct 2014 9:52 pm Operator: T. THOMAS
Sample : KWG1412851-04 | DLCS Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 13:34 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration



TIC: 1001F005.D

(62) Pentachlorophenol (T)

16.31min 80.81ug/ml m

response 73841

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.65
268.00	63.20	66.46
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/02/14

10/3/14
J

TRT

1001F005.D 093014BNC7.M Thu Oct 02 13:34:31 2014

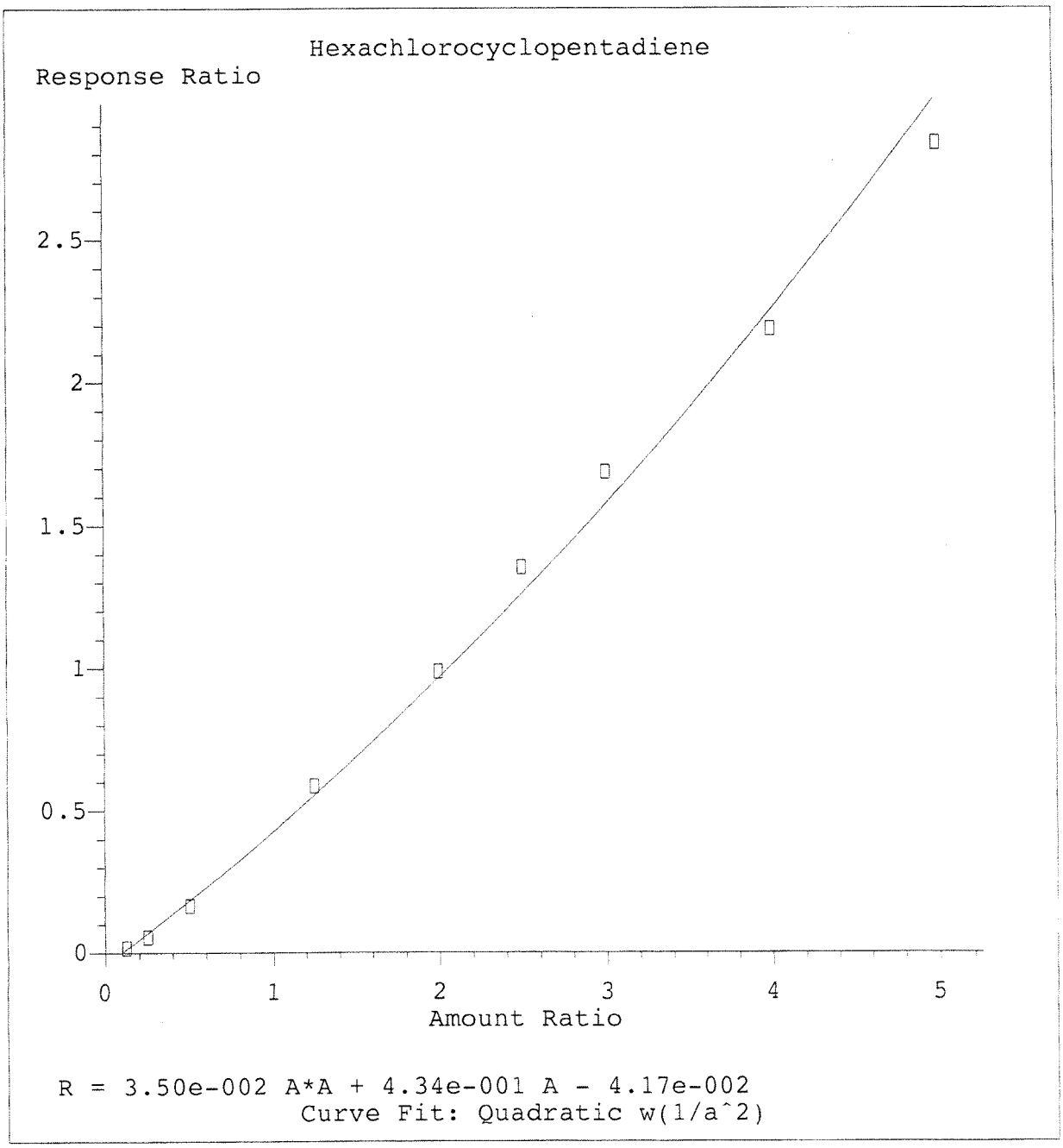
Injection Log

Directory: J:\MS07\DATA\093014

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0930F001.D	1.	DFTPP @ 50 ppm | SVM47-35C		30 Sep 2014 19:4
2	2	0930F002.D	1.	IB		30 Sep 2014 20:2
3	3	0930F003.D	1.	8270 ICAL @ 1 ppm | SVM46-25C		30 Sep 2014 21:0
4	4	0930F004.D	1.	8270 ICAL @ 5 ppm | SVM47-14C		30 Sep 2014 21:4
5	5	0930F005.D	1.	8270 ICAL @ 10 ppm | SVM47-14D		30 Sep 2014 22:2
6	6	0930F006.D	1.	8270 ICAL @ 20 ppm | SVM47-14E		30 Sep 2014 23:0
7	7	0930F007.D	1.	8270 ICAL @ 50 ppm | SVM47-14F		30 Sep 2014 23:4
8	8	0930F008.D	1.	8270 ICAL @ 80 ppm | SVM47-14G		1 Oct 2014 00:27
9	9	0930F009.D	1.	8270 ICAL @ 100 ppm | SVM47-14H		1 Oct 2014 01:07
10	10	0930F010.D	1.	8270 ICAL @ 120 ppm | SVM47-14I		1 Oct 2014 01:47
11	11	0930F011.D	1.	8270 ICAL @ 160 ppm | SVM47-14J		1 Oct 2014 02:27
12	12	0930F012.D	1.	8270 ICAL @ 200 ppm | SVM47-14K		1 Oct 2014 03:08
13	13	0930F013.D	1.	8270 ICV @ 80 ppm | SVM46-65B		1 Oct 2014 03:48
14	14	0930F014.D	1.	HCCPD ICV @ 80 ppm | SVM46-88J	NR	1 Oct 2014 04:28
15	15	0930F015.D	1.	BENZ ICV @ 50 ppm | SVM46-10D		1 Oct 2014 05:08

ICAL 13580
TRT 10/1/14

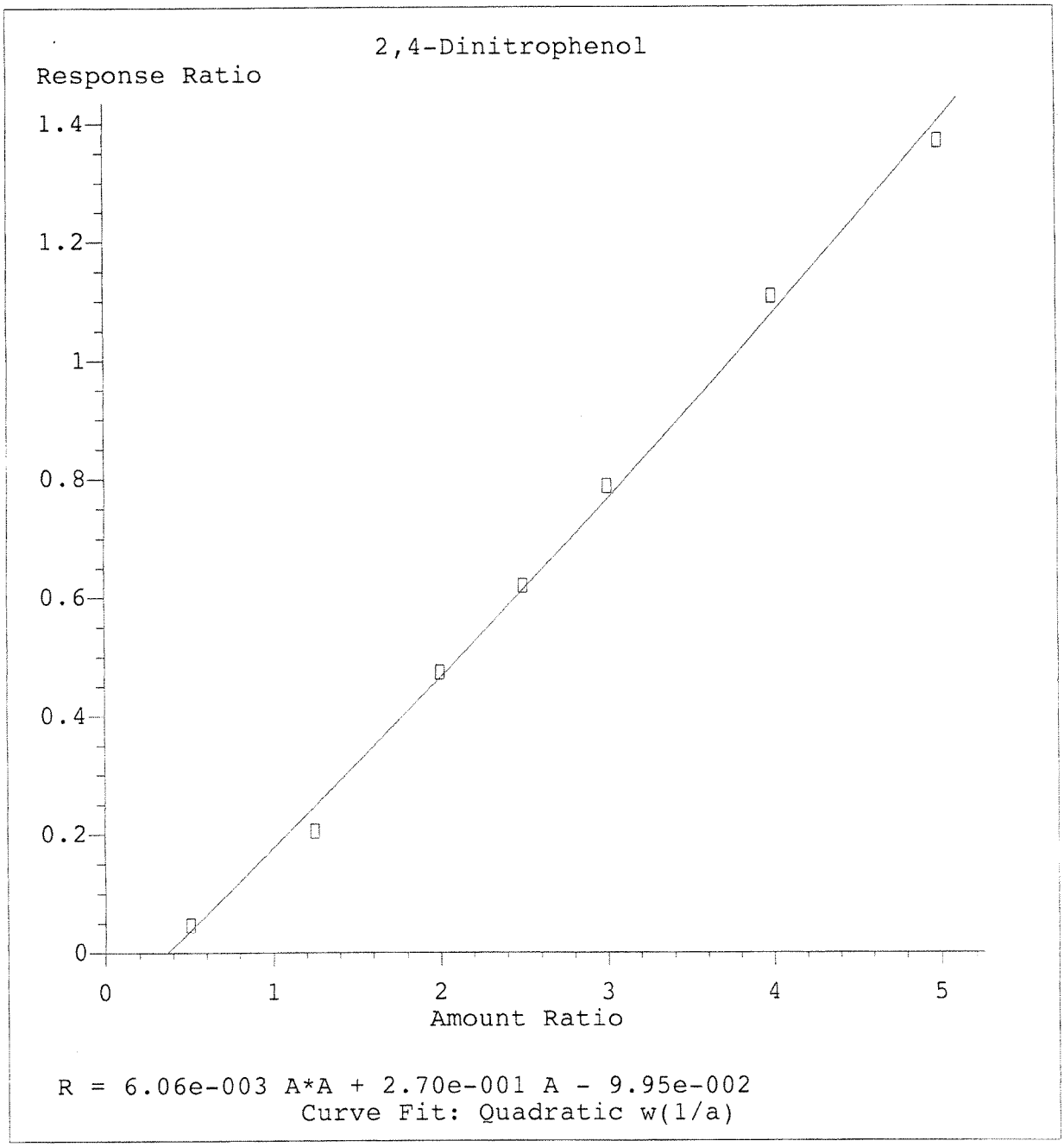
10/2/14
5



Method Name: J:\MS07\METHODS\8270_625\093014BNC7.M
Calibration Table Last Updated: Wed Oct 01 14:18:27 2014

10/2/14

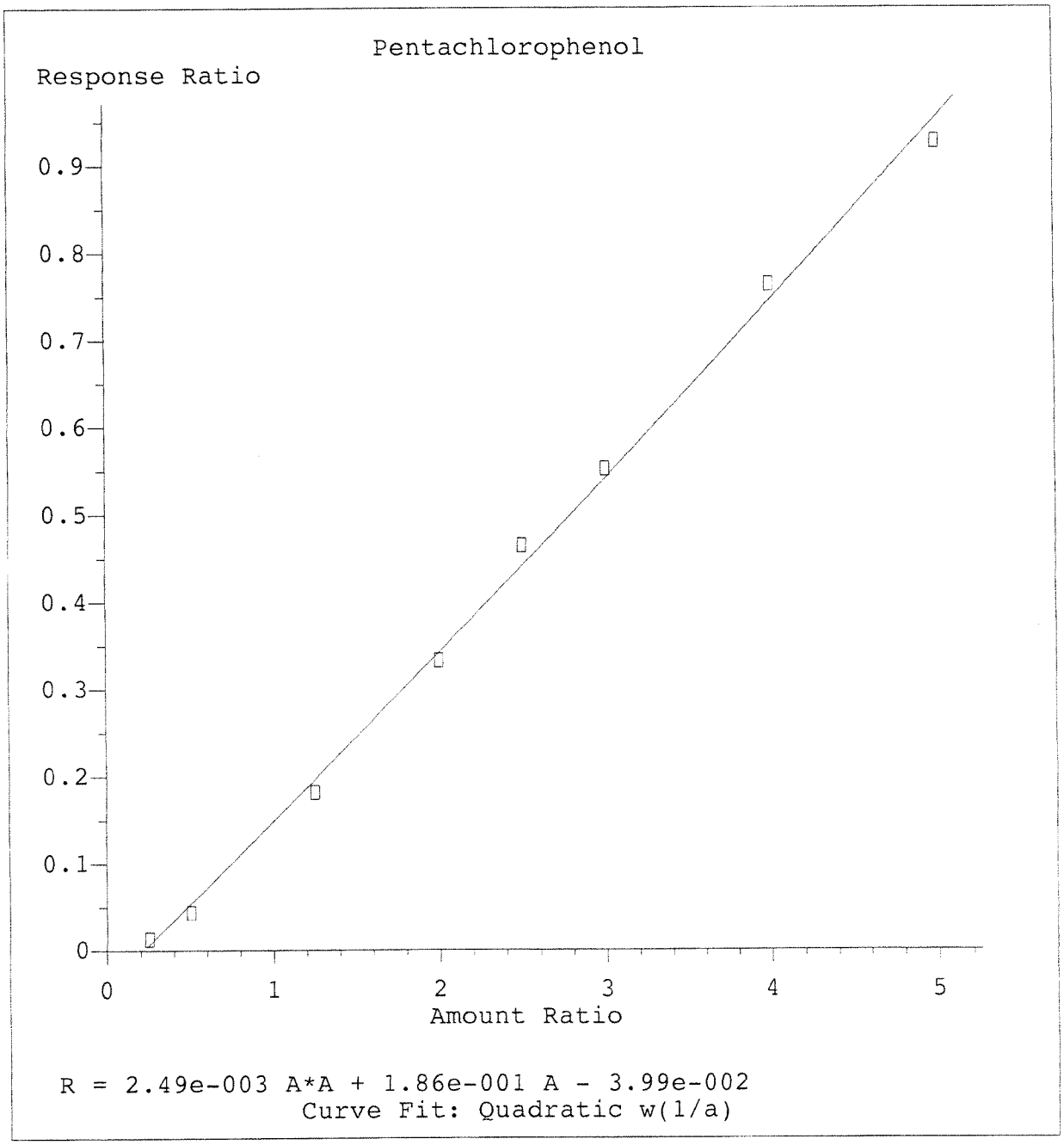
OCT 0 1 2014



Method Name: J:\MS07\METHODS\8270_625\093014BNC7.M
Calibration Table Last Updated: Wed Oct 01 14:20:00 2014

10/24

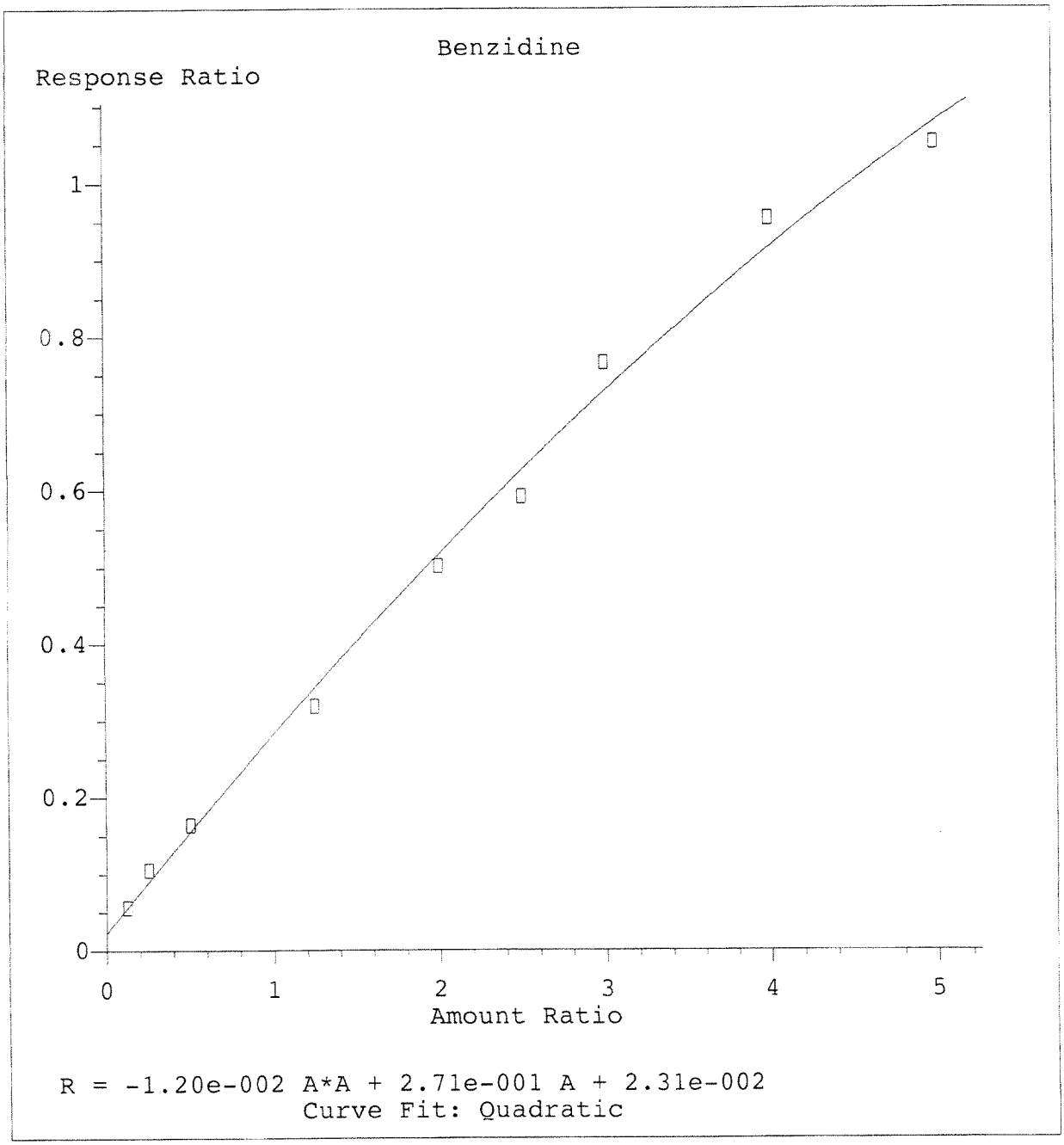
OCT 0 1 2014 TRT



Method Name: J:\MS07\METHODS\8270_625\093014BNC7.M
Calibration Table Last Updated: Wed Oct 01 14:22:07 2014

10/2/14
S

OCT 0 1 2014 TRT

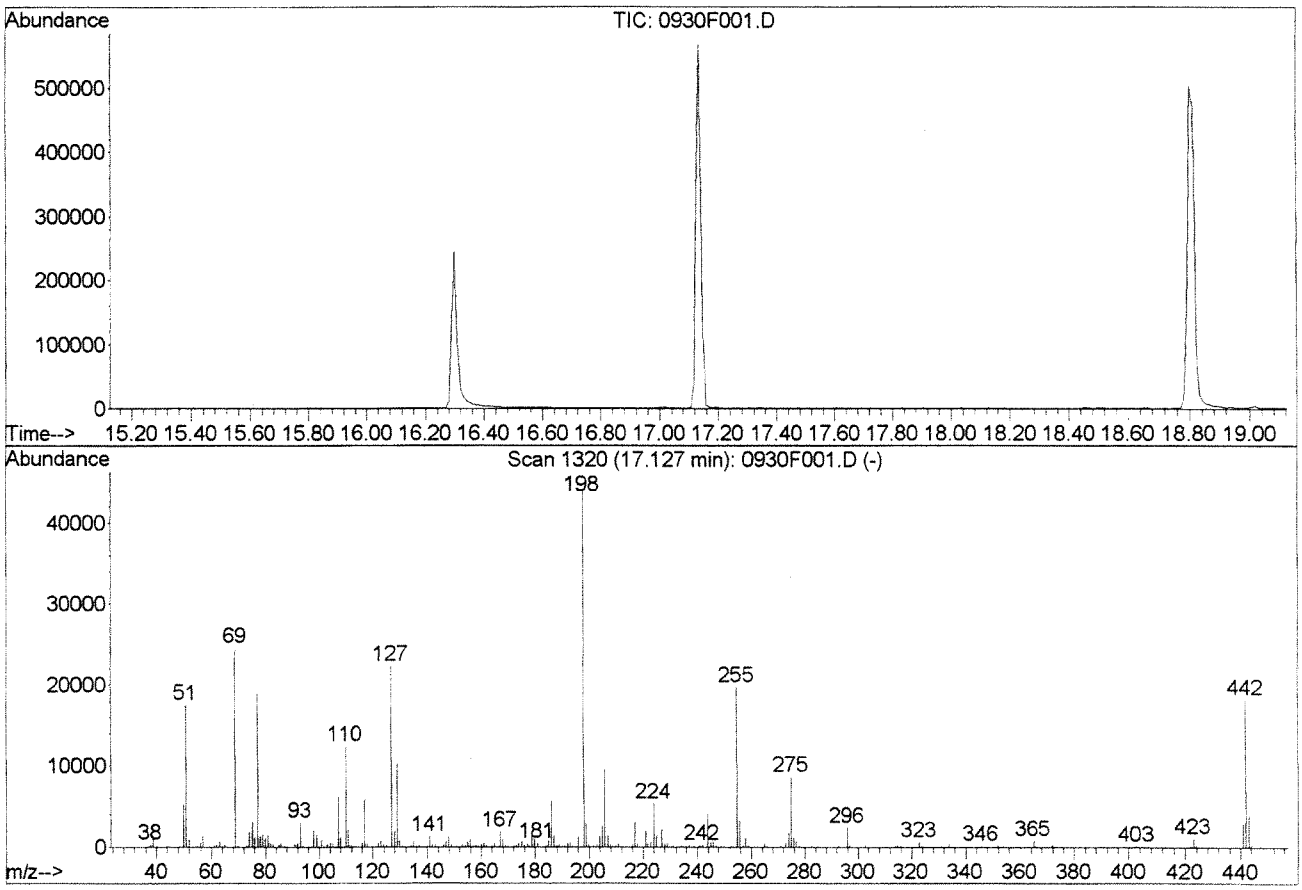


Method Name: J:\MS07\METHODS\8270_625\093014BNC7.M
Calibration Table Last Updated: Wed Oct 01 14:23:20 2014

OCT 0 1 2014

DFTPP

Data File : J:\MS07\DATA\093014\0930F001.D Vial: 1
Acq On : 30 Sep 2014 7:41 pm Operator: T. THOMAS
Sample : DFTPP @ 50 ppm | SVM47-35C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\081514BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07



Spectrum Information: Scan 1320

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	39.9	17592	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	55.8	24600	PASS
70	69	0.00	2	0.6	153	PASS
127	198	25	75	50.7	22376	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	44120	PASS
199	198	5	9	6.6	2903	PASS
275	198	10	30	19.6	8660	PASS
365	198	0.75	100	1.8	777	PASS
441	443	0.01	100	74.7	2898	PASS
442	198	40	110	41.4	18248	PASS
443	442	15	24	21.3	3881	PASS

10/14

0930F001.D 081514BNC7.M Tue Sep 30 20:22:27 2014

SEP 30 2014 TRT

Scan 1320 (17.127 min): 0930F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	118	60.85	256	77.00	18920	90.80	380
37.90	318	61.95	258	78.00	1345	91.90	502
38.90	1472	62.95	736	78.90	1653	92.90	3042
43.90	140	63.95	131	79.90	1116	93.80	203
44.80	115	64.95	355	80.90	1484	95.85	144
49.90	5154	68.85	24600	81.90	435	97.85	2035
50.90	17592	69.85	153	82.90	384	98.85	1484
51.90	933	72.85	259	84.90	286	99.85	129
54.70	143	73.95	1868	85.90	498	100.85	907
55.95	566	74.90	3100	87.00	162	102.85	324
56.85	1362	76.00	1155	87.90	120	103.95	599

Scan 1320 (17.127 min): 0930F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
104.85	473	121.90	487	135.95	212	149.75	111
106.95	6286	122.90	674	136.95	339	150.85	138
107.85	1205	123.90	347	137.85	103	152.90	357
109.95	12456	124.90	302	139.95	177	153.90	258
110.85	2099	126.90	22376	140.85	1328	154.90	590
111.85	237	127.90	1942	141.85	335	155.90	941
112.85	104	128.90	10270	142.85	253	156.80	207
116.00	453	129.90	797	145.85	318	157.90	267
116.90	5807	130.90	184	146.85	603	159.00	198
117.80	400	133.85	300	147.85	1321	159.90	337
119.80	121	134.95	747	148.85	382	160.90	508

Scan 1320 (17.127 min): 0930F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
161.80	203	175.95	299	188.85	349	201.60	206
163.90	125	176.95	409	189.85	110	202.90	361
164.90	512	177.75	200	190.90	168	203.90	1300
166.90	1922	178.85	1627	191.90	500	204.90	2580
167.90	961	179.85	1043	192.90	558	205.90	9599
168.90	212	180.85	505	193.90	109	206.90	1430
169.90	107	183.85	158	194.90	141	207.80	380
171.85	205	184.85	720	195.90	1216	208.80	106
172.95	269	185.95	5616	197.90	44120	210.05	202
173.85	512	186.85	1466	198.90	2903	210.85	406
174.95	717	187.85	194	199.90	234	215.95	312

Scan 1320 (17.127 min): 0930F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.85	3104	233.80	169	248.95	159	273.90	1827
217.85	391	234.90	135	252.85	116	274.90	8660
220.95	2027	235.80	100	254.95	19752	275.90	1240
221.65	478	236.90	218	255.85	3302	276.80	707
222.85	636	238.90	120	256.95	230	277.90	157
223.95	5399	240.80	163	257.85	1084	282.80	116
224.85	1408	241.90	237	258.85	199	284.80	156
226.85	2177	243.90	4105	264.85	469	292.85	145
227.85	379	244.90	626	265.75	150	295.85	2457
228.75	521	245.80	752	270.90	119	296.85	303
230.90	188	246.80	199	272.80	552	302.85	249

10/21

SEP 30 2014

Scan 1320 (17.127 min): 0930F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
314.00	139	353.90	203	442.95	3881		
314.80	249	364.85	777	443.95	351		
315.90	144	365.85	169				
322.90	643	371.85	297				
323.90	156	402.80	154				
326.85	135	420.75	136				
333.95	433	421.85	188				
334.85	101	422.90	1129				
345.80	160	423.90	216				
351.90	237	441.00	2898				
352.80	135	441.95	18248				

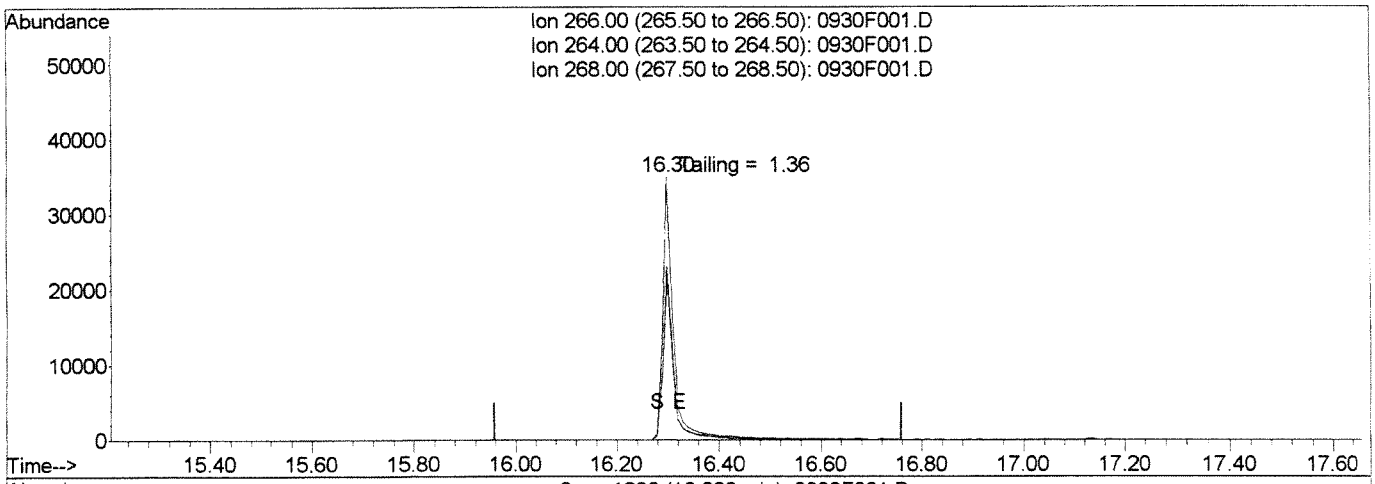
10/1/14

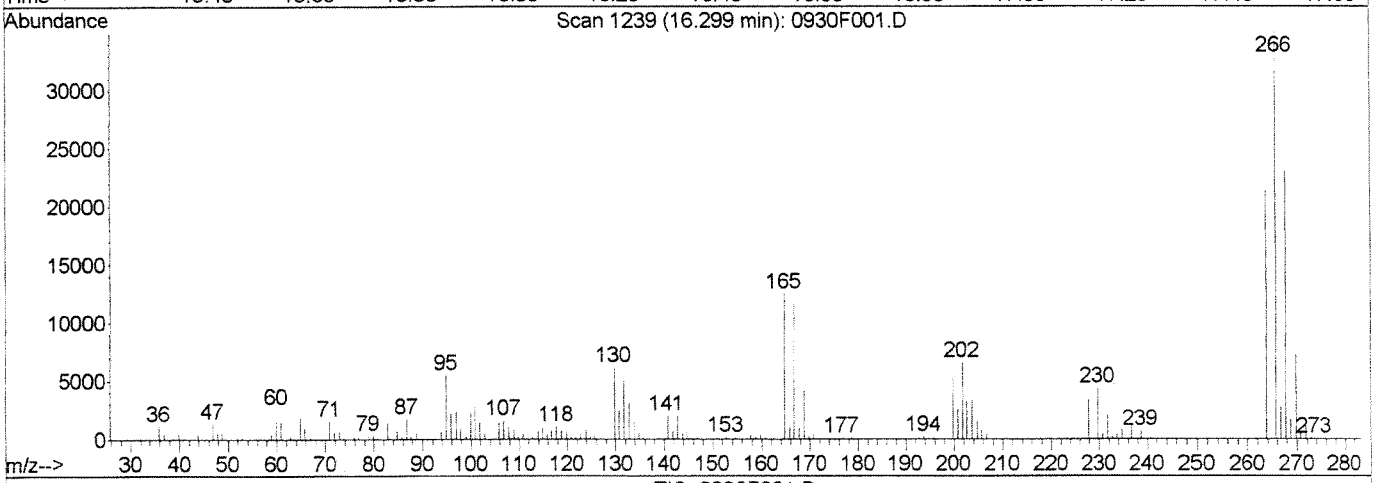
SEP 30 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F001.D Vial: 1
Acq On : 30 Sep 2014 7:41 pm Operator: T. THOMAS
Sample : DFTPP @ 50 ppm | SVM47-35C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 20:18 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\081514BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Mon Sep 29 19:28:38 2014
Response via : Single Level Calibration





TIC: 0930F001.D

(62) Pentachlorophenol (T)

16.30min 0.00ug/ml

response 52249

Ion	Exp%	Act%
266.00	100	100
264.00	64.00	61.39
268.00	63.70	65.88
0.00	0.00	0.00

10/2/14

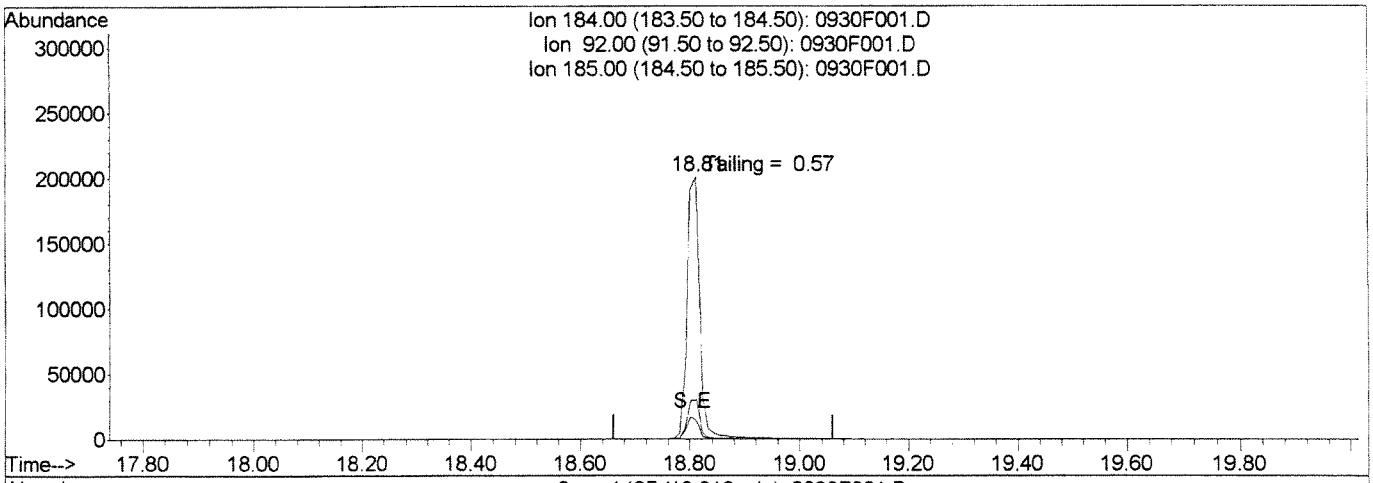
0930F001.D 081514BNC7.M Tue Sep 30 20:18:24 2014

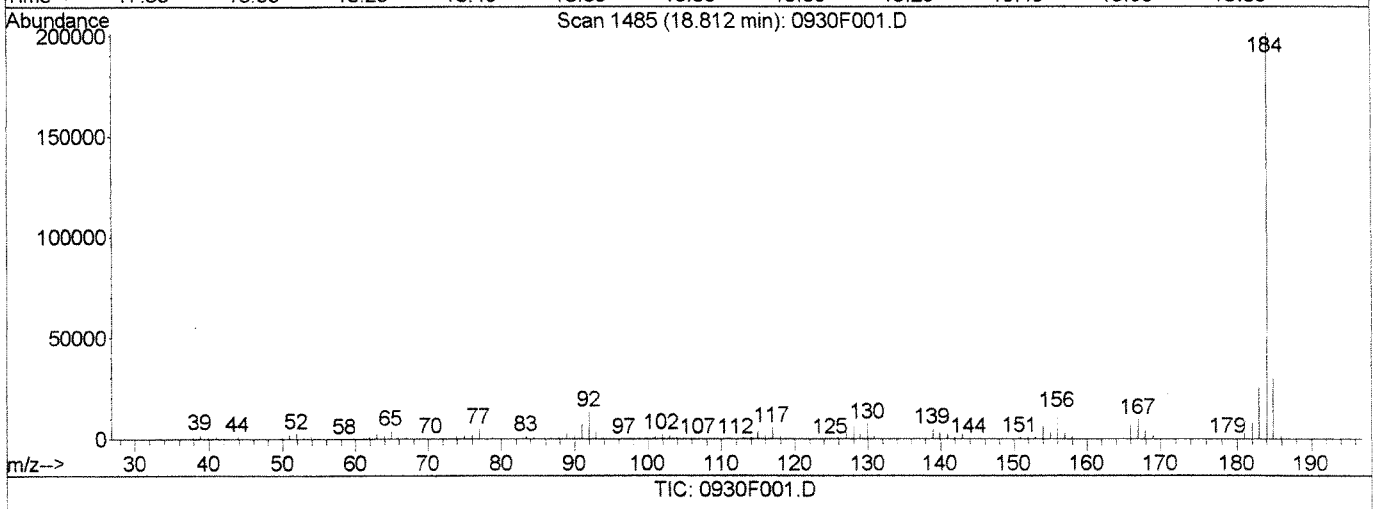
SEP 30 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F001.D Vial: 1
Acq On : 30 Sep 2014 7:41 pm Operator: T. THOMAS
Sample : DFTPP @ 50 ppm | SVM47-35C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 30 20:18 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\081514BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Mon Sep 29 19:28:38 2014
Response via : Single Level Calibration





TIC: 0930F001.D

(69) Benzidine (T)

18.81min 0.00ug/ml

response 318437

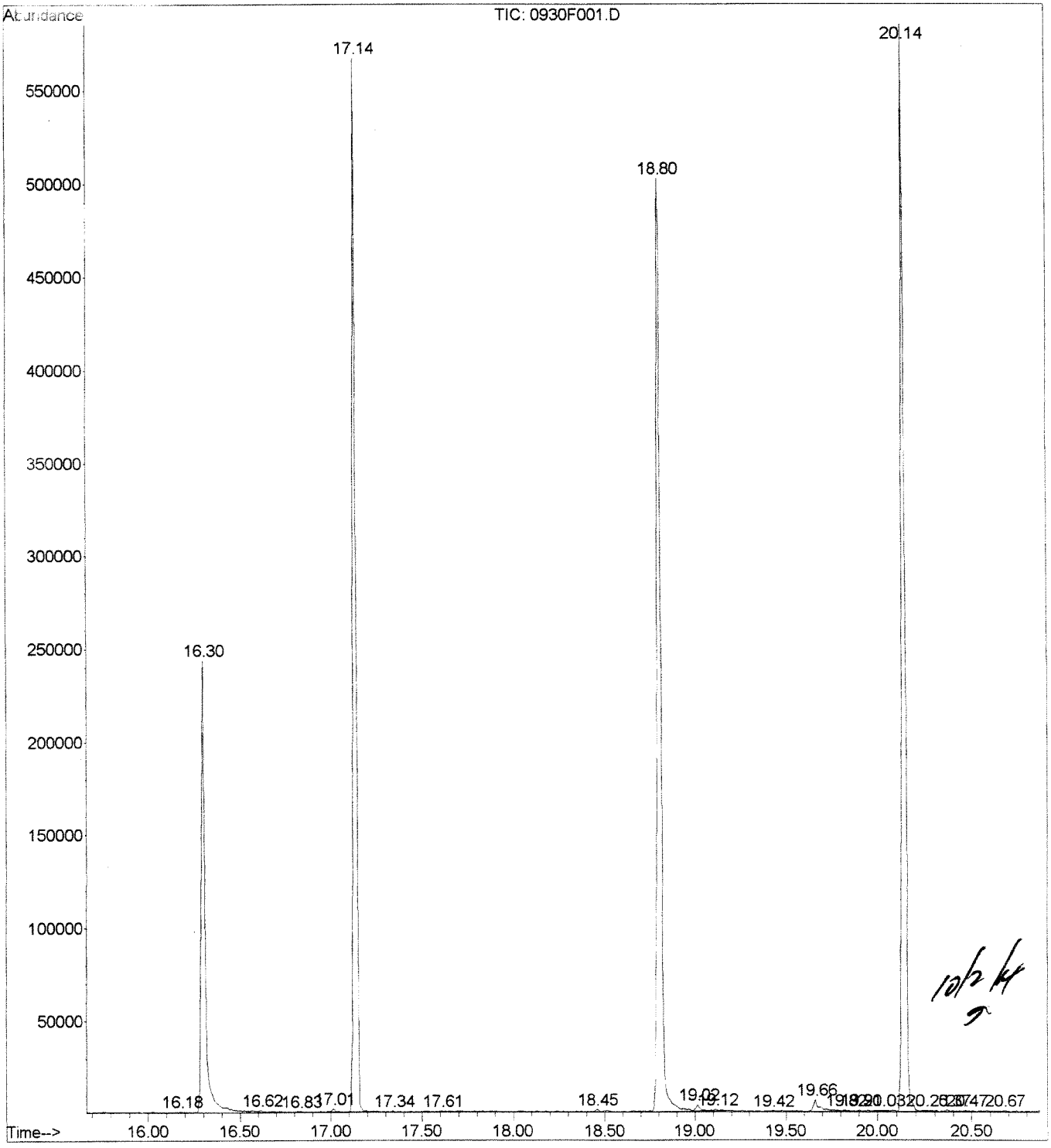
Ion	Exp%	Act%
184.00	100	100
92.00	9.40	6.67
185.00	15.00	14.93
0.00	0.00	0.00

10/2/14

0930F001.D 081514BNC7.M Tue Sep 30 20:18:33 2014

SEP 30 2014

File : J:\MS07\DATA\093014\0930F001.D
Operator : T. THOMAS
Acquired : 30 Sep 2014 7:41 pm using AcqMethod 8270_1
Instrument : MS07
Sample Name: DFTPP @ 50 ppm | SVM47-35C
Misc Info :
Vial Number: 1



SEP 30 2014

1	3.705	rVB	0.306	39212	3.674	3.981	
2	3.991	rVV	0.072	3992	3.981	4.052	
3	4.062	rVV	0.041	1646	4.052	4.093	
4	4.113	rVV	0.041	1187	4.093	4.134	
5	4.144	rVV	0.082	2211	4.134	4.216	
6	4.246	rVB	0.102	2916	4.216	4.318	
7	4.532	rVB	0.112	2607	4.502	4.614	
8	4.634	rVB	0.041	1273	4.614	4.655	
9	4.665	rBV	0.061	1429	4.655	4.716	
10	4.788	rBV	0.061	1258	4.757	4.818	
11	4.839	rVV	0.123	2166	4.818	4.941	
12	4.961	rVV	0.123	2052	4.941	5.063	
13	5.074	rVB	0.082	1185	5.063	5.145	
14	5.268	rBV	0.092	1299	5.227	5.319	
15	5.349	rVB	0.051	1479	5.319	5.370	
16	5.390	rBV	0.123	2368	5.370	5.492	
17	5.554	rBV	0.102	1313	5.492	5.595	
18	5.850	rVB	0.153	3408	5.799	5.952	
19	6.003	rBV	0.092	1567	5.983	6.075	
20	6.156	rBV	0.102	1579	6.075	6.177	
21	6.248	rBV	0.082	1474	6.228	6.310	
22	6.401	rVB	0.061	983.00	6.371	6.432	
23	6.565	rBV	0.102	2555	6.493	6.596	
24	6.749	rBV	0.082	1296	6.698	6.779	
25	6.912	rVB	0.092	1283	6.892	6.984	
26	7.178	rVB	0.061	971.00	7.147	7.208	
27	7.239	rVB	0.102	1780	7.208	7.311	
28	7.341	rVB	0.051	1279	7.311	7.362	
29	7.413	rBV	0.072	1908	7.362	7.433	
30	7.545	rVB	0.092	1139	7.525	7.617	
31	7.648	rVB	0.072	1782	7.617	7.689	
32	7.709	rBV	0.041	1295	7.689	7.729	
33	7.750	rVV	0.072	1027	7.729	7.801	
34	7.842	rVV	0.082	1399	7.801	7.883	
35	7.903	rVB	0.072	1034	7.883	7.954	
36	8.046	rVB	0.112	1554	8.026	8.138	
37	8.690	rVB	0.061	1313	8.669	8.730	
38	8.802	rVV	0.092	1803	8.730	8.822	
39	8.863	rVB	0.092	1653	8.822	8.914	
40	9.149	rVB	0.061	1105	9.098	9.159	
41	9.190	rBV	0.082	1502	9.159	9.241	
42	9.313	rBV	0.102	1442	9.241	9.343	
43	9.476	rBV	0.082	1530	9.425	9.507	
44	9.568	rVV	0.112	2322	9.507	9.619	
45	9.701	rVB	0.072	1467	9.650	9.721	
46	9.834	rVB	0.072	1250	9.823	9.895	
47	10.079	rVB	0.112	2244	10.038	10.150	
48	10.457	rVB	0.092	1280	10.406	10.497	
49	10.528	rBV	0.082	1320	10.497	10.579	
50	11.345	rBV	0.102	1913	11.304	11.407	
51	12.234	rVV	0.102	1594	12.162	12.265	
52	12.326	rVB	0.082	1180	12.265	12.346	
53	12.898	rVB	0.092	967.00	12.857	12.949	
54	12.980	rBV	0.112	1143	12.949	13.061	
55	13.123	rBV	0.092	1120	13.061	13.153	
56	13.480	rBV	0.072	1079	13.429	13.501	
57	13.715	rVB	0.102	1376	13.695	13.797	
58	13.838	rBV	0.061	1124	13.797	13.858	
59	14.175	rBV	0.092	1359	14.144	14.236	
60	14.982	rVB	0.123	1559	14.910	15.033	
61	15.411	rVB	0.092	1076	15.370	15.462	

10/24
3

SEP 30 2014

62	16.177	rVB	0.082		1077	16.156	16.238
63	16.299	rBV	0.317		362137	16.238	16.555
64	16.616	rVB	0.051		1203	16.596	16.647
65	16.830	rBV	0.092		1345	16.759	16.851
66	17.014	rBV	0.123		3174	16.963	17.086
67	17.137	rVV	0.184		668268	17.086	17.270
68	17.341	rVB	0.072		1131	17.300	17.372
69	17.607	rBV	0.092		1641	17.586	17.678
70	18.455	rBV	0.072		1653	18.414	18.485
71	18.802	rBV	0.255		791034	18.730	18.986
72	19.016	rVV	0.092		5422	18.986	19.078
73	19.119	rVB	0.102	DAE	1871	19.078	19.180
74	19.425	rBV	0.082		951.00	19.374	19.456
75	19.660	rBV	0.215	DAA	16637	19.599	19.813
76	19.823	rVB	0.072		1570	19.813	19.885
77	19.905	rBV	0.041		1163	19.885	19.925
78	20.028	rVV	0.092		2493	19.977	20.068
79	20.140	rVV	0.123	DAT	760093	20.099	20.222
80	20.252	rVV	0.112		2831	20.222	20.334
81	20.375	rVV	0.092		1720	20.334	20.426
82	20.467	rVB	0.102		1983	20.426	20.528
83	20.671	rVB	0.051		1300	20.661	20.712
84	20.896	rBV	0.112		2251	20.824	20.937
85	21.039	rBV	0.092		1081	20.998	21.090
86	21.590	rBV	0.072		2407	21.550	21.621
87	21.785	rBV	0.061		1146	21.764	21.825
88	21.907	rVB	0.123		1482	21.866	21.989
89	22.326	rBV	0.123		6487	22.285	22.408
90	22.591	rBV	0.102		1971	22.530	22.632
91	22.796	rBV	0.092		1817	22.734	22.826
92	22.867	rBV	0.102		3049	22.826	22.929
93	23.000	rVV	0.051		1111	22.969	23.020
94	23.112	rVB	0.112		13116	23.051	23.163
95	23.378	rVB	0.061		1102	23.347	23.409
96	23.480	rVB	0.041		958.00	23.470	23.511
97	23.654	rVB	0.072		1563	23.623	23.695
98	23.715	rBV	0.102		2282	23.695	23.797
99	23.827	rVB	0.051		978.00	23.797	23.848
100	23.919	rBV	0.184		21750	23.848	24.032
101	24.124	rVB	0.051		954.00	24.093	24.144
102	24.348	rVB	0.102		3236	24.256	24.359
103	24.410	rBV	0.061		1995	24.359	24.420
104	24.430	rVV	0.041		1262	24.420	24.461
105	24.491	rVV	0.102		2787	24.461	24.563
106	24.573	rVB	0.051		1056	24.563	24.614
107	24.655	rBV	0.072		2225	24.614	24.685
108	24.747	rVV	0.184		30945	24.685	24.869
109	24.900	rVV	0.061		1547	24.869	24.931
110	24.982	rVB	0.072		1301	24.931	25.002
111	25.043	rBV	0.072		2059	25.002	25.074
112	25.135	rVB	0.051		1379	25.104	25.155
113	25.186	rBV	0.051		1067	25.155	25.206
114	25.288	rVB	0.092		1637	25.237	25.329
115	25.390	rBV	0.082		1931	25.329	25.411
116	25.421	rVB	0.082		1215	25.411	25.492
117	25.595	rBV	0.204		34275	25.492	25.697
118	25.860	rVB	0.041		1342	25.840	25.881
119	25.921	rBV	0.102		2853	25.881	25.983
120	26.013	rBV	0.072		1921	25.983	26.054
121	26.126	rVV	0.112		2781	26.054	26.167
122	26.310	rBV	0.082		2511	26.269	26.350

18508 / 778601

DAT Break Down = 2.38%

SEP 30 2014

123	26.442	rVV	0.255	38761	26.350	26.606
124	26.647	rBV	0.082	1813	26.606	26.687
125	26.800	rVB	0.051	1455	26.759	26.810
126	26.820	rBV	0.082	2152	26.810	26.892
127	26.984	rVB	0.051	1136	26.953	27.004
128	27.106	rBV	0.133	5062	27.004	27.137
129	27.188	rVB	0.082	2772	27.137	27.219
130	27.239	rBV	0.031	1230	27.219	27.249
131	27.300	rBV	0.143	30078	27.249	27.392
132	27.433	rVB	0.041	1395	27.423	27.464
133	27.484	rVB	0.082	3546	27.464	27.546
134	27.566	rBV	0.051	2017	27.546	27.597
135	27.668	rBV	0.082	1790	27.597	27.678
136	27.750	rBV	0.102	3170	27.678	27.780
137	27.821	rVB	0.133	3255	27.780	27.913
138	27.944	rVB	0.072	2667	27.913	27.985
139	28.066	rBV	0.112	4633	27.985	28.097
140	28.158	rVB	0.184	28371	28.097	28.281
141	28.312	rBV	0.082	3036	28.281	28.363
142	28.383	rBV	0.082	2150	28.363	28.444
143	28.485	rVB	0.061	1148	28.444	28.506
144	28.516	rBV	0.031	1618	28.506	28.536
145	28.567	rVB	0.082	2877	28.536	28.618
146	28.628	rBV	0.082	3105	28.618	28.700
147	28.741	rVB	0.051	1683	28.700	28.751
148	28.812	rBV	0.123	6126	28.751	28.873
149	28.884	rBV	0.082	3279	28.873	28.955
150	29.006	rBV	0.133	20413	28.955	29.088
151	29.098	rVB	0.051	2302	29.088	29.139
152	29.210	rBV	0.153	7858	29.139	29.292
153	29.353	rVB	0.163	6598	29.292	29.456
154	29.466	rBV	0.031	1463	29.456	29.486
155	29.517	rVB	0.051	2326	29.486	29.537
156	29.599	rBV	0.082	3308	29.537	29.619
157	29.731	rVV	0.133	9097	29.670	29.803
158	29.864	rVV	0.194	24569	29.803	29.997
159	30.048	rVV	0.112	7930	29.997	30.109
160	30.140	rVV	0.112	6180	30.109	30.222
161	30.242	rVV	0.102	4255	30.222	30.324
162	30.344	rVV	0.051	1687	30.324	30.375
163	30.395	rVV	0.041	1257	30.375	30.416
164	30.426	rVB	0.061	2587	30.416	30.477
165	30.487	rBV	0.061	1700	30.477	30.538
166	30.589	rVB	0.215	10697	30.538	30.753
167	30.845	rBV	0.194	14434	30.753	30.947
168	30.967	rVB	0.133	8472	30.947	31.080
169	31.100	rBV	0.031	1716	31.080	31.110

1024

SEP 30 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F002.D Vial: 2
Acq On : 30 Sep 2014 8:25 pm Operator: T. THOMAS
Sample : IB Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:49 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:04 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	79426	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	272866	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	143225	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	253889	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	261253	40.00	ug/ml	0.00
77) Perylene-d12	24.11	264	269938	40.00	ug/ml	0.00

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0	0.00	ug/ml
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#	
7) Phenol-d6	0.00	99	0	0.00	ug/ml
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#	
19) Nitrobenzene-d5	0.00	82	0	0.00	ug/ml
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#	
38) 2-Fluorobiphenyl	0.00	172	0	0.00	ug/ml
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#	
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/ml
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#	
71) Terphenyl-d14	0.00	244	0	0.00	ug/ml
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#	

Target Compounds Qvalue

10/2/14

(#) = qualifier out of range (m) = manual integration
0930F002.D 093014BNC7.M Wed Oct 01 14:34:35 2014 Page 1

OCT 0 1 2014 TRT

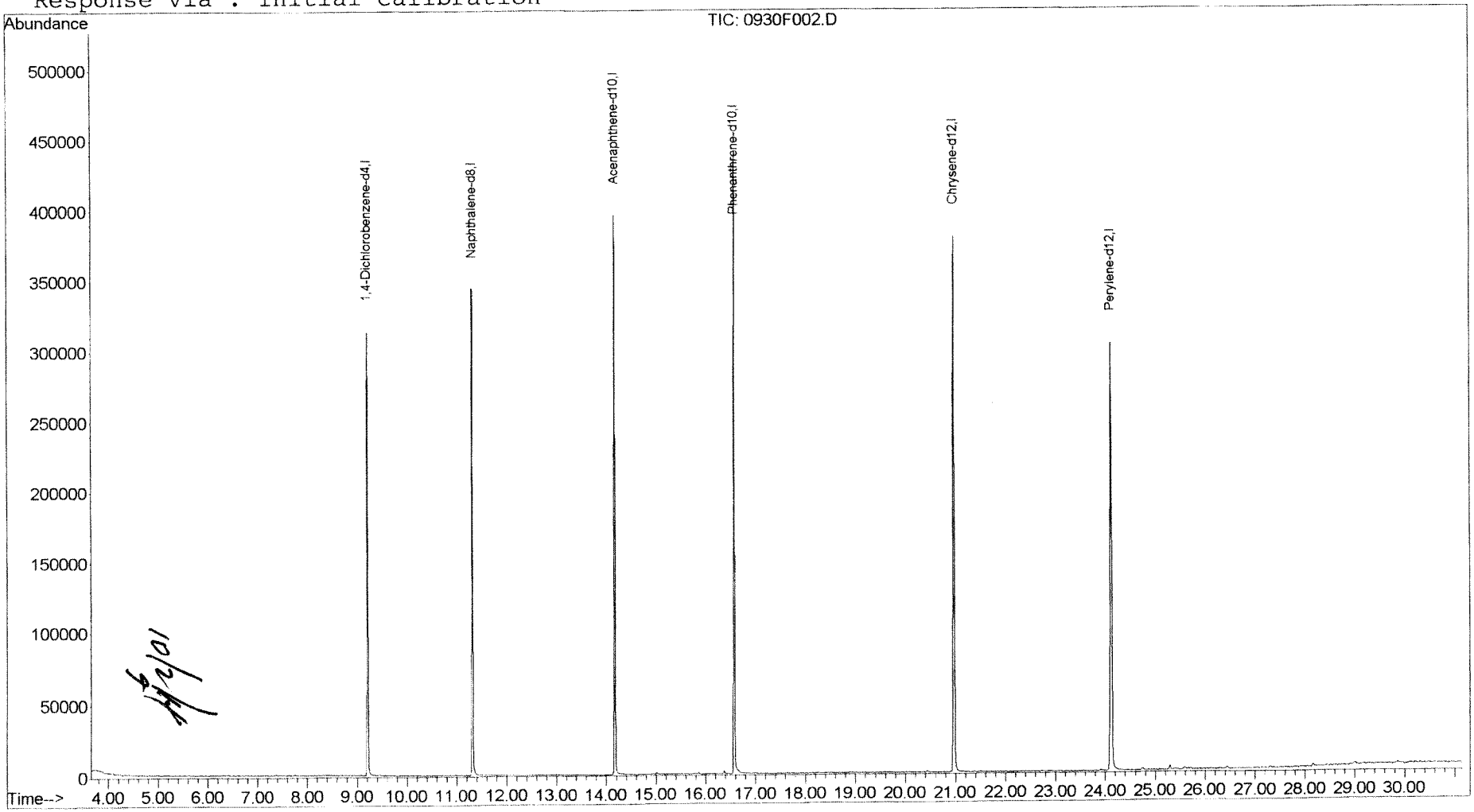
Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F002.D
Acq On : 30 Sep 2014 8:25 pm
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:50 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2730

OCT 01 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:51 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	77374	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	265822	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	130021	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	237271	40.00	ug/ml	0.00
68) Chrysene-d12	20.96	240	244997	40.00	ug/ml	-0.02
77) Perylene-d12	24.12	264	248956	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.99	112	2028m	0.82	ug/ml	0.02
Spiked Amount 150.000	Range 21 - 100		Recovery = 0.55%#			
7) Phenol-d6	8.74	99	2643	0.86	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 0.57%#			
19) Nitrobenzene-d5	10.15	82	2142	0.79	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 0.79%#			
38) 2-Fluorobiphenyl	13.11	172	5145	1.12	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 1.12%#			
59) 2,4,6-Tribromophenol	15.47	330	827	0.70	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 0.47%#			
71) Terphenyl-d14	19.20	244	5221	1.06	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 1.06%#			
Target Compounds						Qvalue
5) Aniline	8.67	93	3002m	0.93	ug/ml	
6) Bis(2-chloroethyl) Ether	8.82	93	2354m	0.88	ug/ml	
8) Phenol	8.76	94	2925m	0.96	ug/ml	
9) 2-Chlorophenol	8.88	128	2473	0.95	ug/ml	94
10) 1,3-Dichlorobenzene	9.10	146	3143	1.11	ug/ml	95
11) 1,4-Dichlorobenzene	9.24	146	3241	1.12	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	2913	1.06	ug/ml	95
13) Benzyl Alcohol	9.50	108	1020	0.72	ug/ml	86
14) Bis(2-chloroisopropyl) Eth	9.72	45	2580	0.72	ug/ml	90
15) 2-Methylphenol	9.75	107	1652	0.90	ug/ml	95
16) Hexachloroethane	10.03	117	1321	1.10	ug/ml	91
17) N-Nitrosodi-n-propylamine	9.93	70	1601	0.91	ug/ml	93
18) 4-Methylphenol	10.01	107	2377	0.89	ug/ml	93
20) Nitrobenzene	10.18	77	2277	0.91	ug/ml	95
22) Isophorone	10.58	82	4194	0.94	ug/ml	96
23) 2-Nitrophenol	10.71	139	983	0.76	ug/ml	81
24) 2,4-Dimethylphenol	10.86	122	1777	1.02	ug/ml	94
25) Bis(2-chloroethoxy)methane	10.98	93	2645	0.93	ug/ml	98
26) 2,4-Dichlorophenol	11.16	162	1708	0.92	ug/ml	94
28) 1,2,4-Trichlorobenzene	11.23	180	2519	1.18	ug/ml	88

(#) = qualifier out of range (m) = manual integration

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:51 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) Naphthalene	11.34	128	6583	1.10 ug/ml	99
30) 4-Chloroaniline	11.48	127	2446	0.97 ug/ml	93
31) Hexachlorobutadiene	11.56	225	1615	1.23 ug/ml	98
32) 4-Chloro-3-methylphenol	12.35	107	1751	1.02 ug/ml#	62
33) 2-Methylnaphthalene	12.48	142	4211	1.14 ug/ml	98
36) 2,4,6-Trichlorophenol	12.99	196	1038	0.77 ug/ml	86
37) 2,4,5-Trichlorophenol	13.09	196	1035	0.69 ug/ml	88
39) 2-Chloronaphthalene	13.27	162	4266	1.07 ug/ml	98
40) 2-Nitroaniline	13.48	65	1031	0.90 ug/ml	81
41) Acenaphthylene	13.93	152	6692	1.11 ug/ml	98
42) Dimethyl Phthalate	13.79	163	4715	1.09 ug/ml	98
43) 2,6-Dinitrotoluene	13.88	165	949	0.95 ug/ml	84
44) Acenaphthene	14.22	154	3608	1.08 ug/ml	98
47) Dibenzofuran	14.51	168	5815	1.12 ug/ml	94
49) 2,4-Dinitrotoluene	14.54	165	944	0.74 ug/ml	82
50) 2,3,4,6-Tetrachlorophenol	14.75	232	479m	0.42 ug/ml	
51) Fluorene	15.06	166	4485	1.19 ug/ml	97
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	2434	1.23 ug/ml	95
53) Diethyl Phthalate	14.95	149	5162	1.18 ug/ml	97
54) 4-Nitroaniline	15.14	138	839m	0.77 ug/ml	
56) N-Nitrosodiphenylamine	15.29	169	3100	1.14 ug/ml	99
57) 1,2-Diphenylhydrazine	15.34	77	4445	1.01 ug/ml	93
60) 4-Bromophenyl Phenyl Ether	15.88	248	1503	1.02 ug/ml	91
61) Hexachlorobenzene	15.95	284	2093	1.13 ug/ml	96
63) Phenanthrene	16.61	178	6638	1.10 ug/ml	98
64) Anthracene	16.69	178	6267	1.05 ug/ml	96
65) Carbazole	16.99	167	5760	1.04 ug/ml	96
66) Di-n-butyl Phthalate	17.60	149	7713	1.04 ug/ml	99
67) Fluoranthene	18.53	202	6940	1.19 ug/ml	97
69) Benzidine	18.81	184	2419	1.37 ug/ml	91
70) Pyrene	18.89	202	7104	0.98 ug/ml	98
72) Butyl Benzyl Phthalate	20.02	149	2845	0.86 ug/ml	89
73) 3,3'-Dichlorobenzidine	20.94	252	1810	0.69 ug/ml	84
74) Benz(a)anthracene	20.94	228	6779	1.13 ug/ml	94
75) Chrysene	21.01	228	6242	1.09 ug/ml	97
76) Bis(2-ethylhexyl) Phthalat	21.15	149	3416	0.75 ug/ml	97
78) Di-n-octyl Phthalate	22.59	149	5085	0.55 ug/ml	91
79) Benzo(b)fluoranthene	23.25	252	4914	0.80 ug/ml	96
80) Benzo(k)fluoranthene	23.31	252	5123	0.85 ug/ml	94
81) Benzo(a)pyrene	23.98	252	5339	0.91 ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.53	276	4252	0.75 ug/ml	99

(#) = qualifier out of range (m) = manual integration

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:51 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83) Dibenz(a,h)anthracene	26.61	278	4062	0.68	ug/ml	94
84) Benzo(g,h,i)perylene	27.10	276	5476	0.90	ug/ml	93

10/2/14

(#) = qualifier out of range (m) = manual integration
0930F003.D 093014BNC7.M Wed Oct 01 14:34:38 2014 Page 3

OCT 0 1 2014 TAT

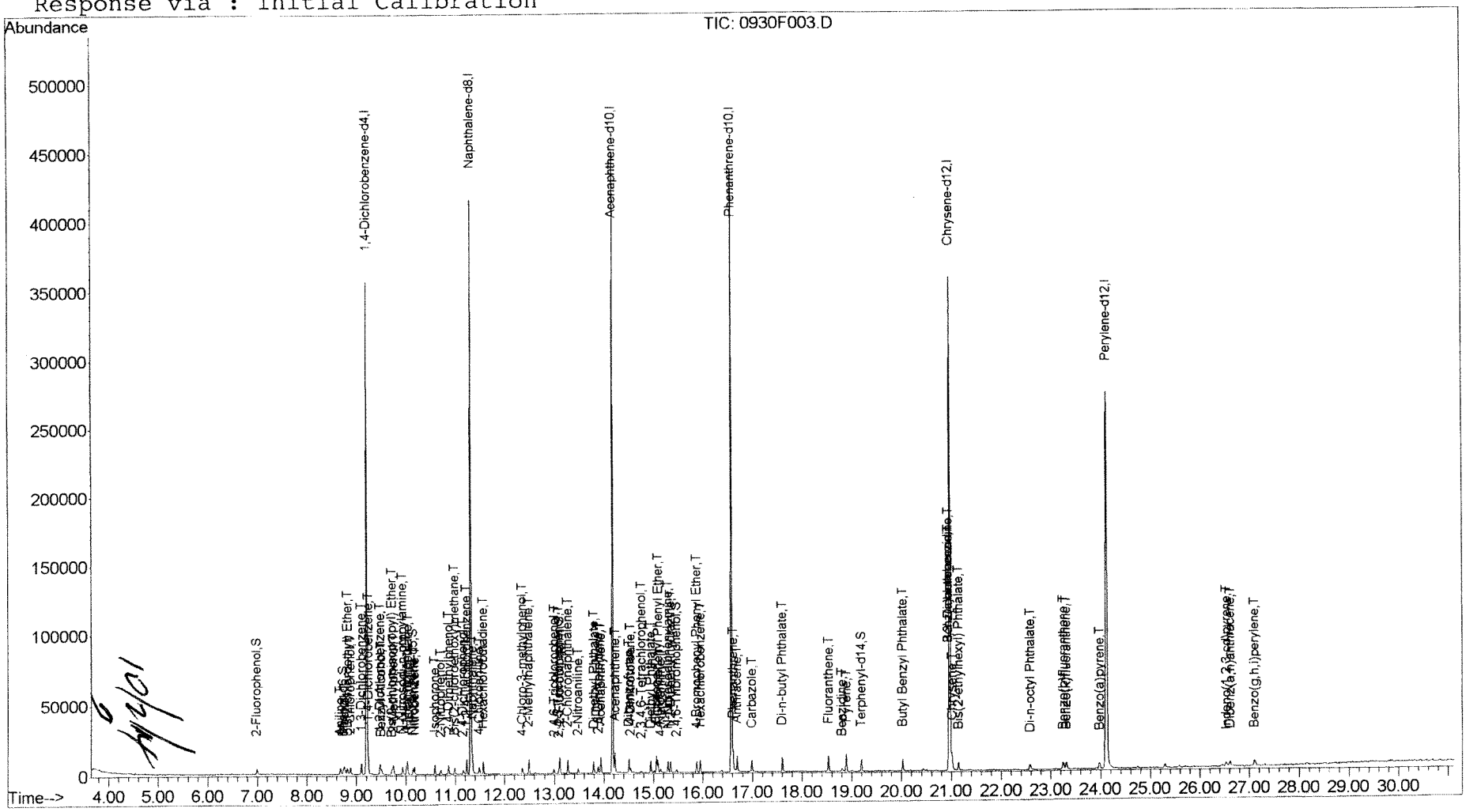
Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:57 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2734

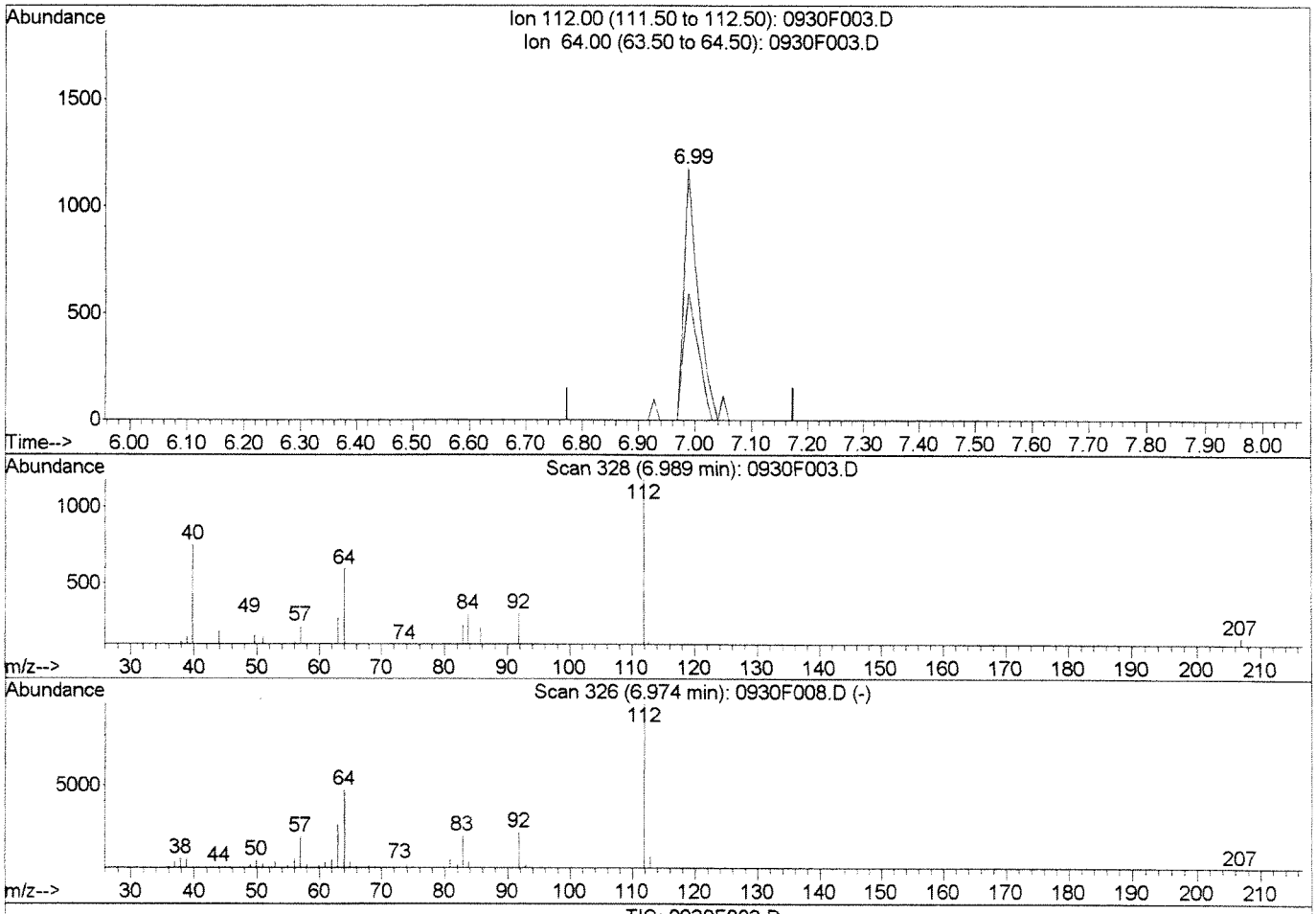
OCT 01 2014

0930F003.D 093014BNC7.M Wed Oct 01 14:34:38 2014 Page 4

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:50 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(4) 2-Fluorophenol (S)

6.99min 0.85ug/ml

response 2101

Ion	Exp%	Act%
112.00	100	100
64.00	47.00	50.47
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

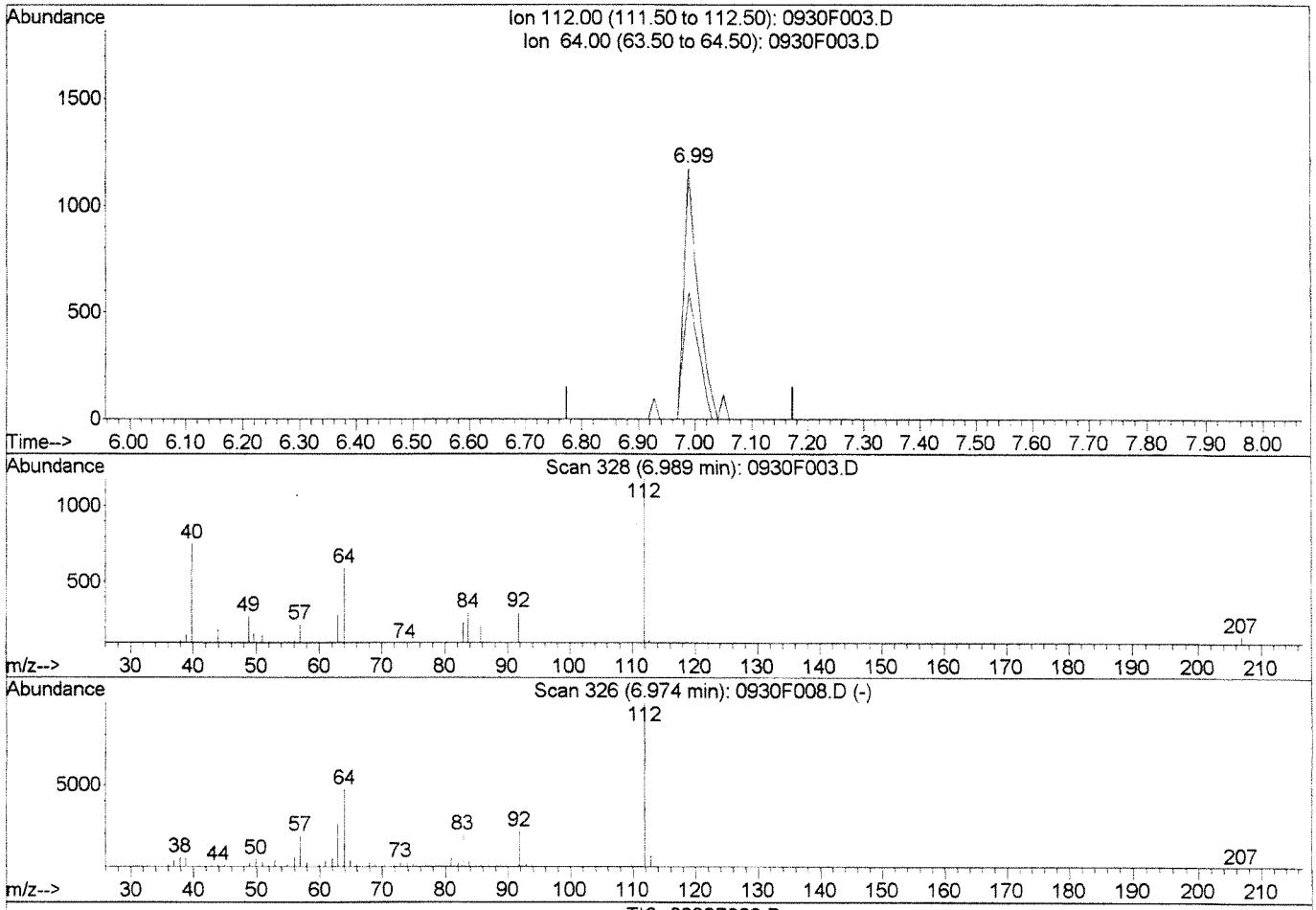
10/01/14

0930F003.D 093014BNC7.M Wed Oct 01 12:51:50 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(4) 2-Fluorophenol (S)

6.99min 0.82ug/ml m

response 2028

Ion	Exp%	Act%
112.00	100	100
64.00	47.00	50.47
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/1/14

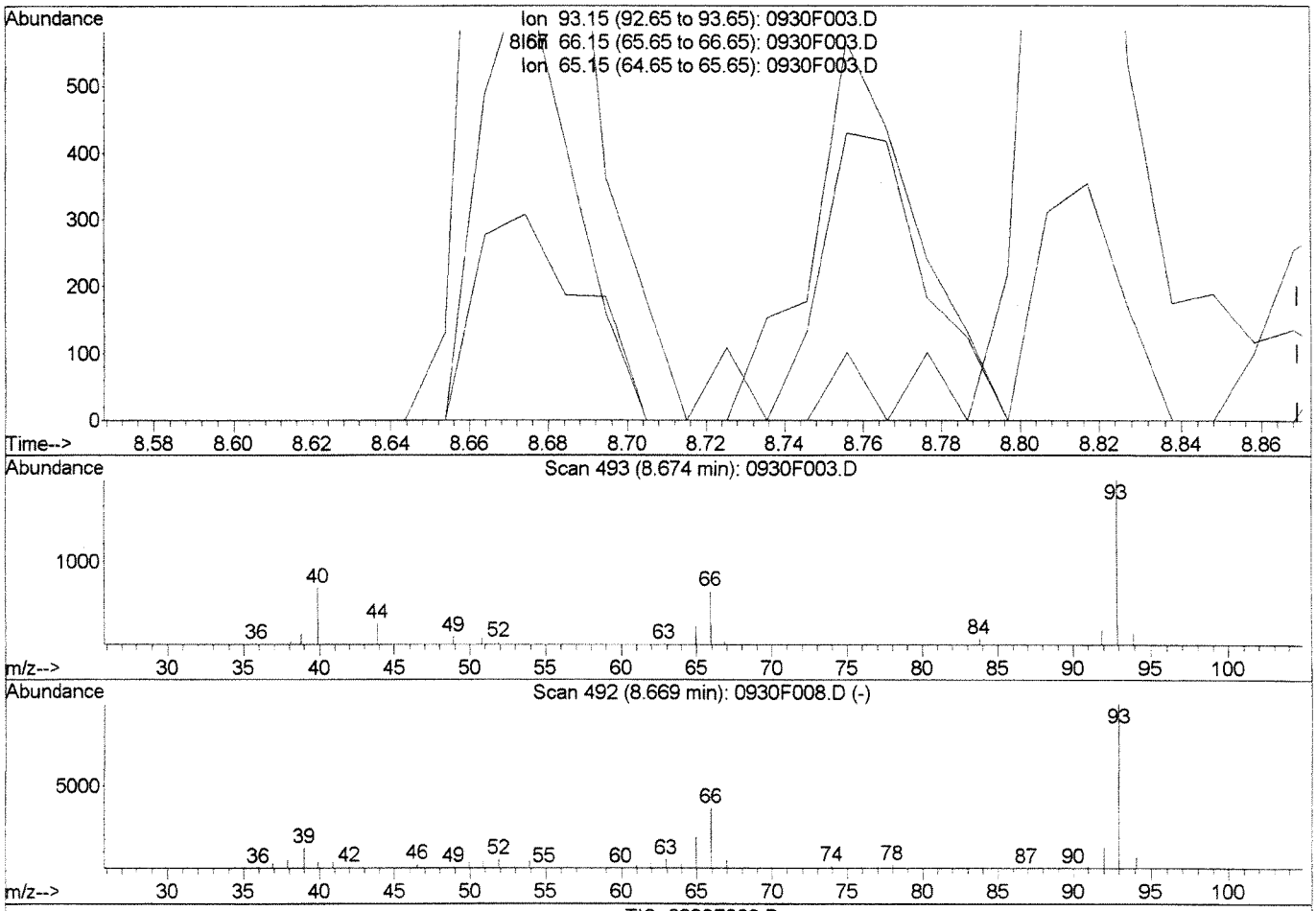
TR

0930F003.D 093014BNC7.M Wed Oct 01 12:52:07 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(5) Aniline (T)

8.67min 0.95ug/ml

response 3068

Ion	Exp%	Act%
93.15	100	100
66.15	19.30	31.53
65.15	6.80	12.79
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

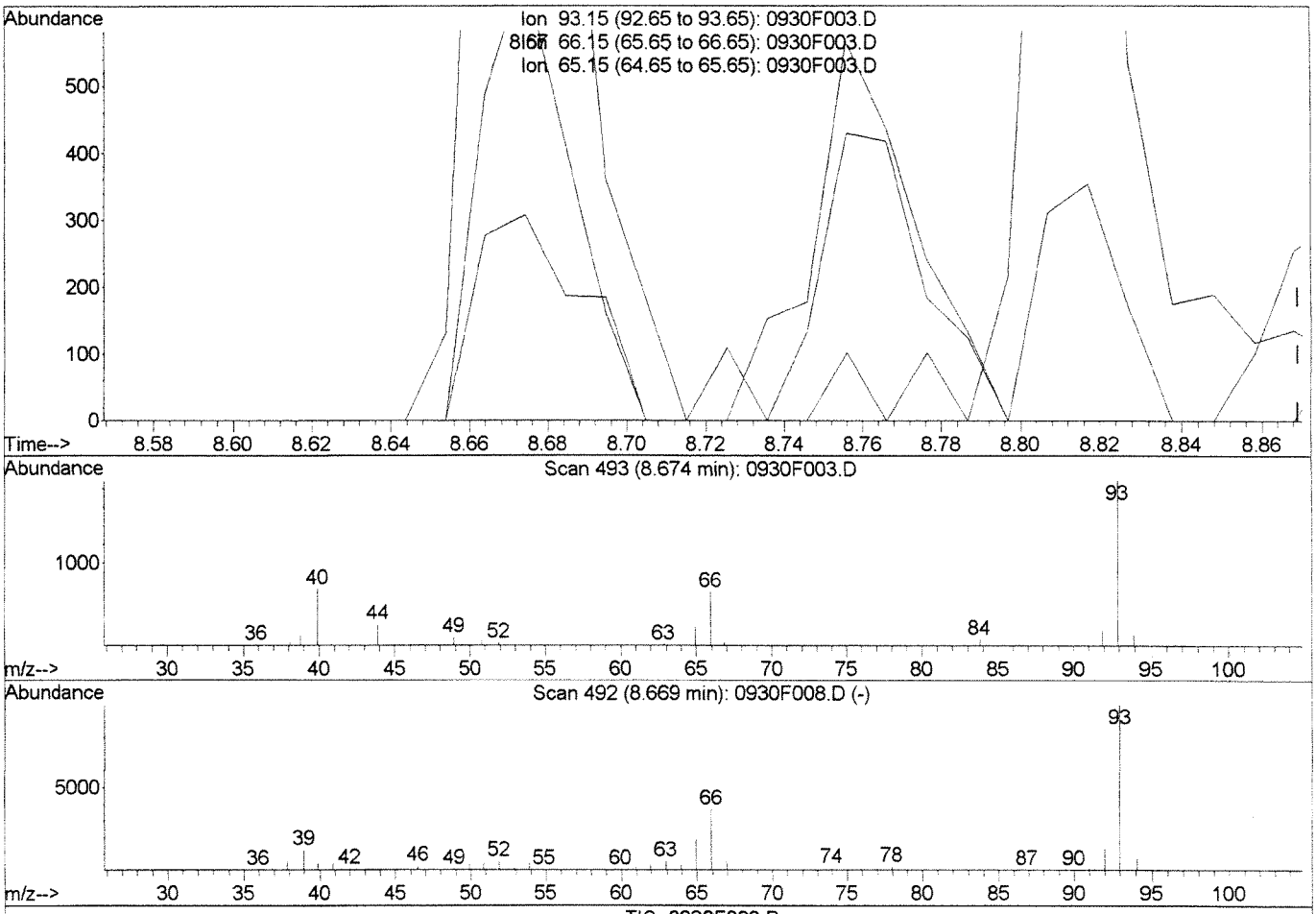
TDT

0930F003.D 093014BNC7.M Wed Oct 01 12:52:24 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(5) Aniline (T)

8.67min 0.93ug/ml m

response 3002

Ion	Exp%	Act%
93.15	100	100
66.15	19.30	36.25
65.15	6.80	16.35
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

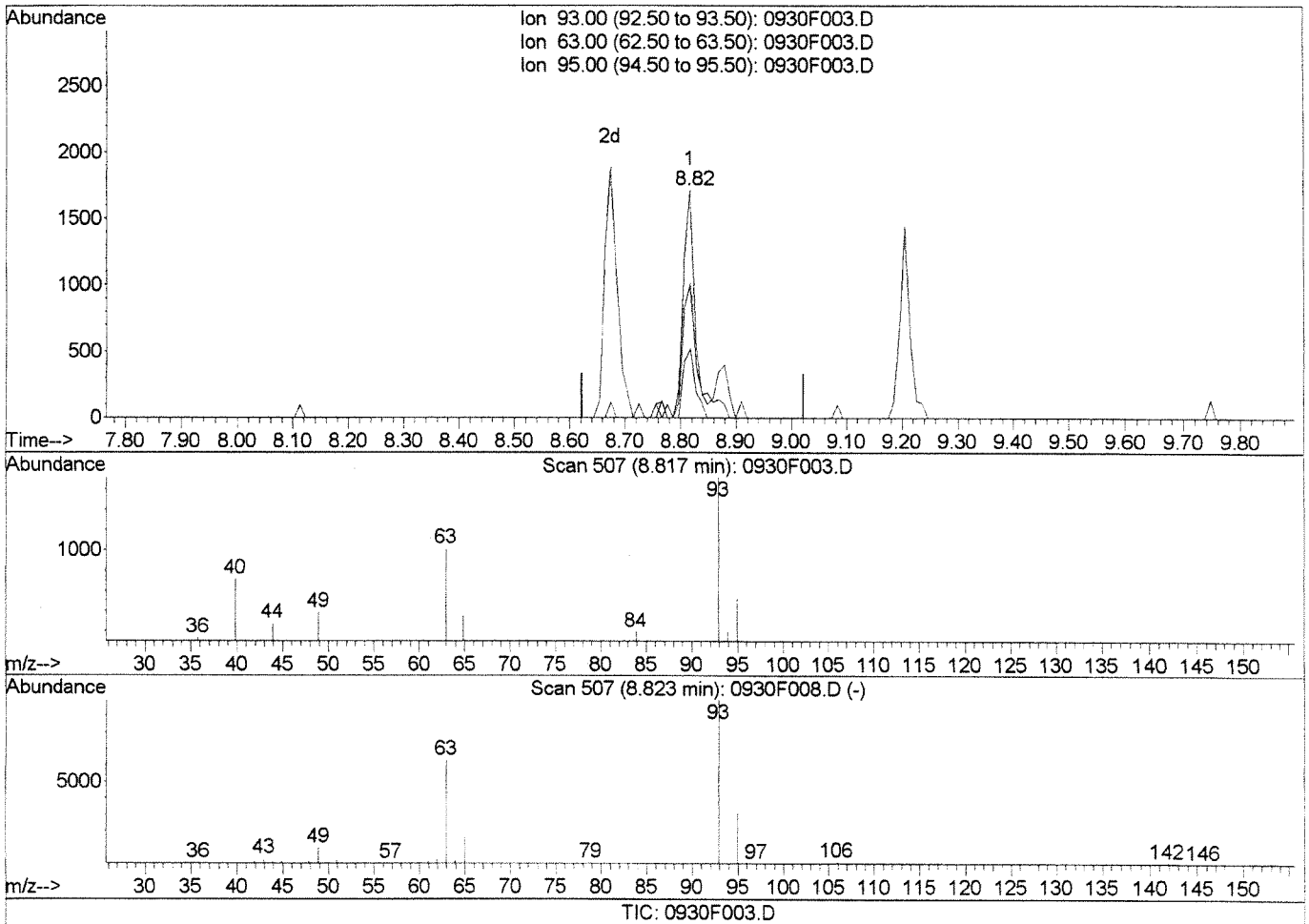
10/01/14

0930F003.D 093014BNC7.M Wed Oct 01 12:52:30 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 1.03ug/ml

response 2752

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	55.62
95.00	32.50	26.37
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TRT

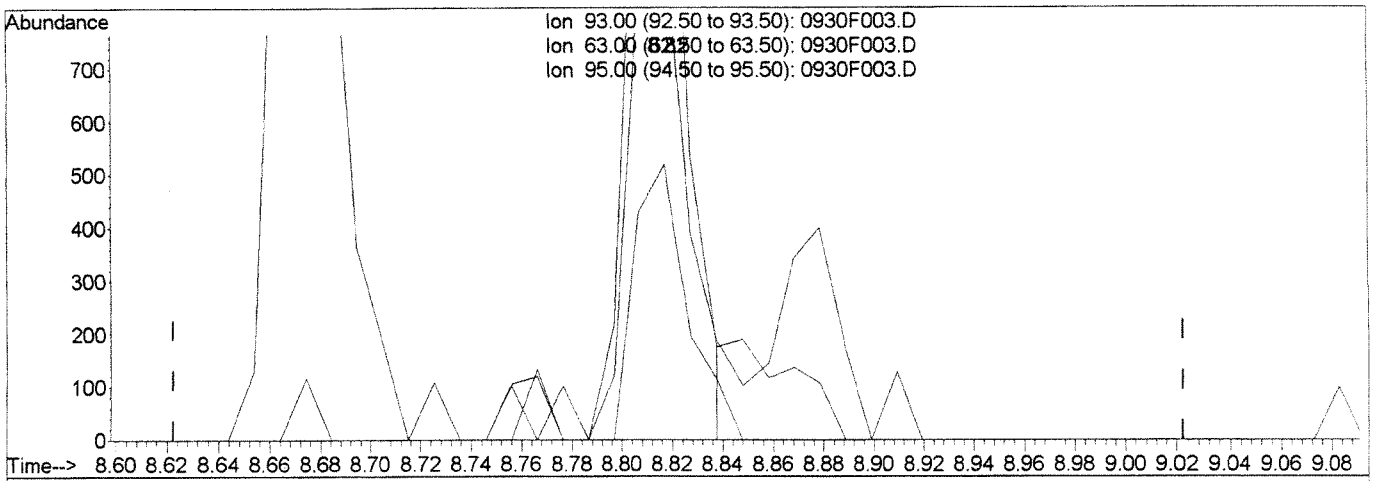
0930F003.D 093014BNC7.M Wed Oct 01 12:52:39 2014

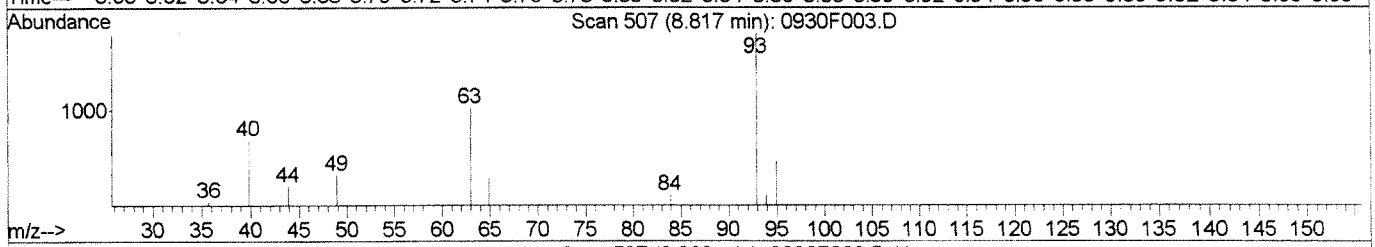
Quantitation Report (Qedit)

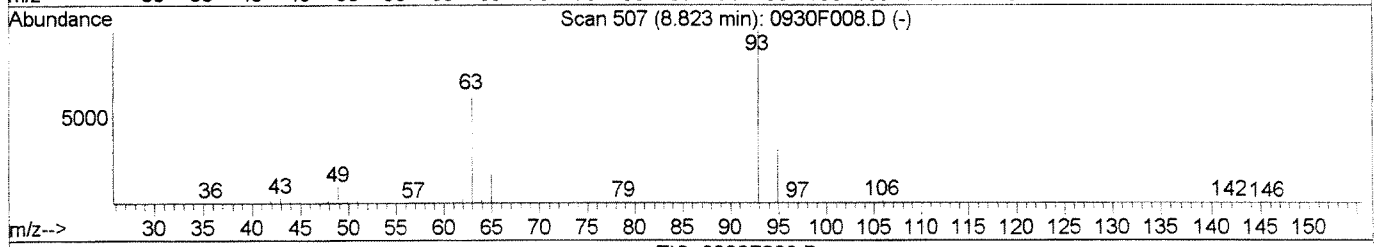
Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F003.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 0.88ug/ml m

response 2354

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	59.09
95.00	32.50	30.24
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

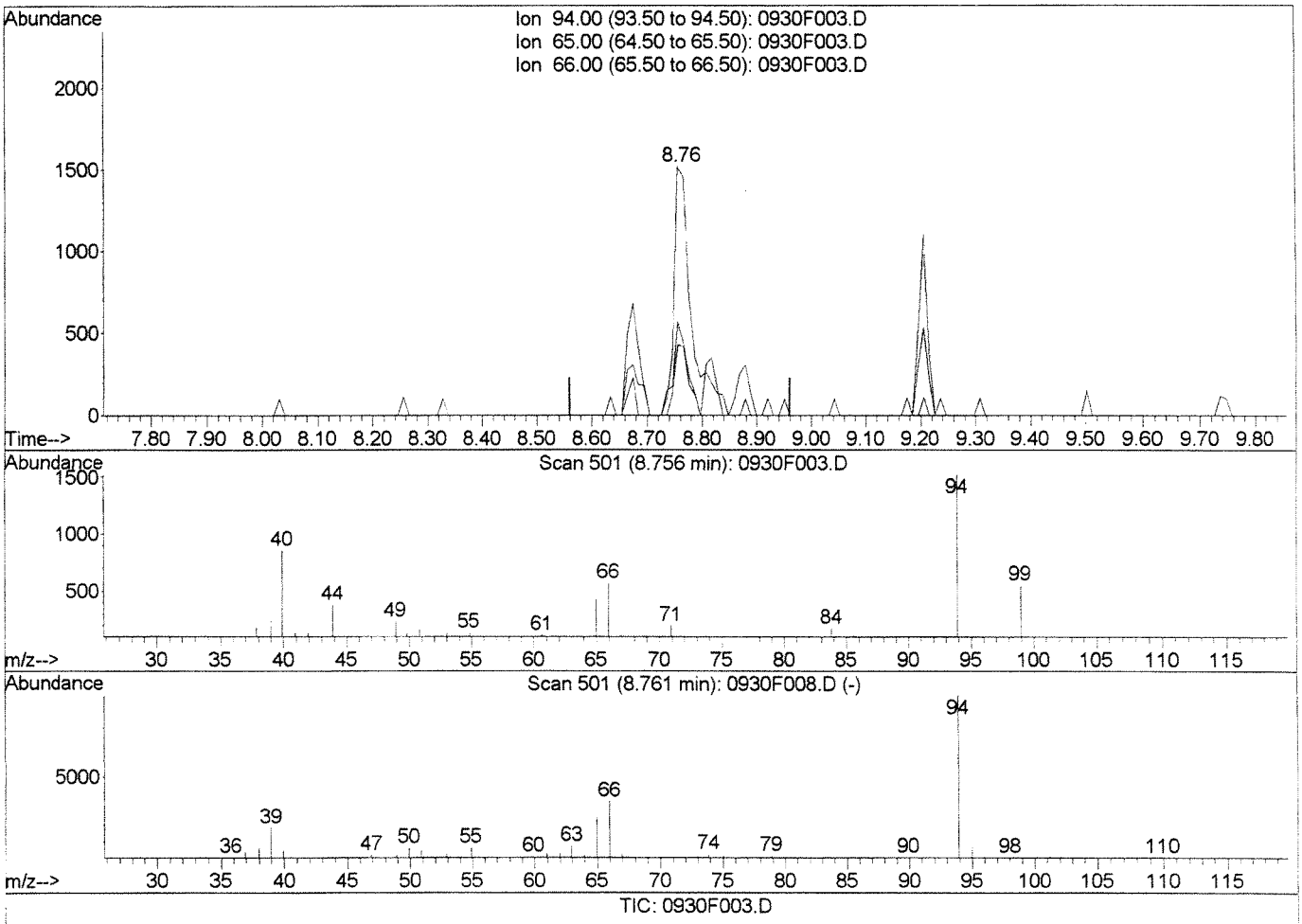
10/01/14

0930F003.D 093014BNC7.M Wed Oct 01 12:52:52 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:52 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F003.D

(8) Phenol (T)

8.76min 1.10ug/ml

response 3368

Ion	Exp%	Act%
94.00	100	100
65.00	24.30	24.97
66.00	36.10	37.37
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TRT

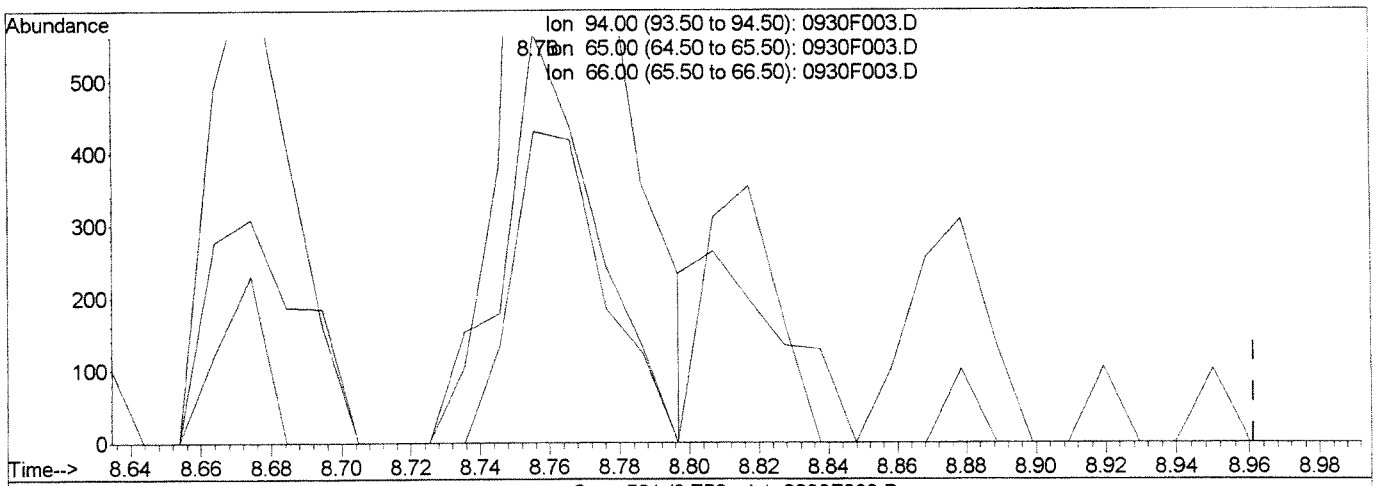
0930F003.D 093014BNC7.M Wed Oct 01 12:52:59 2014

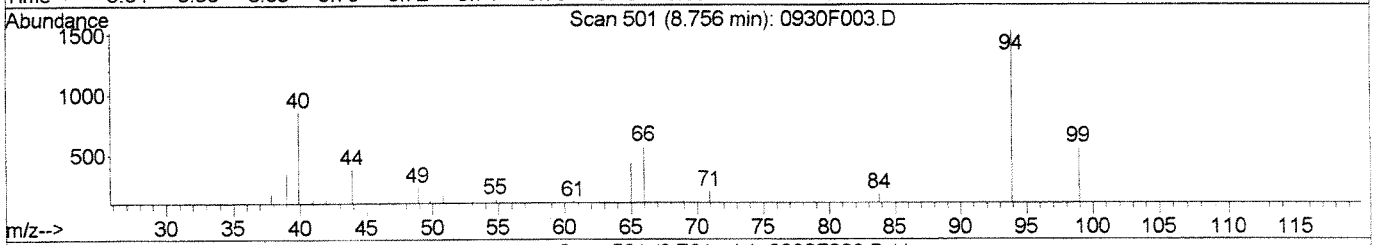
Quantitation Report (Qedit)

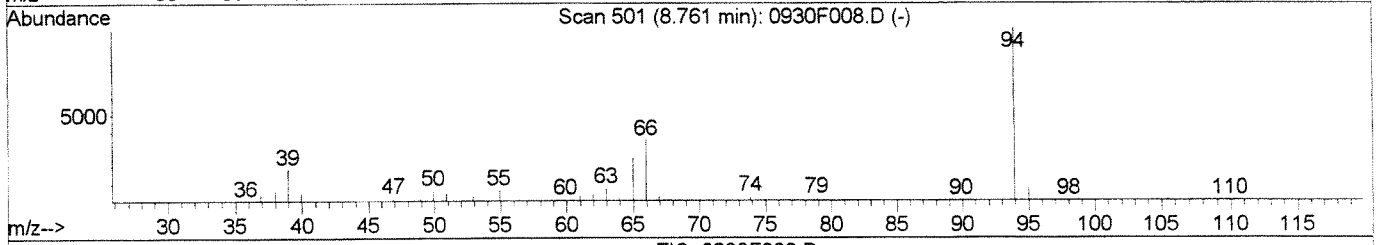
Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:53 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F003.D

(8) Phenol (T)

8.76min 0.96ug/ml m

response 2925

Ion	Exp%	Act%
94.00	100	100
65.00	24.30	28.29
66.00	36.10	37.37
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

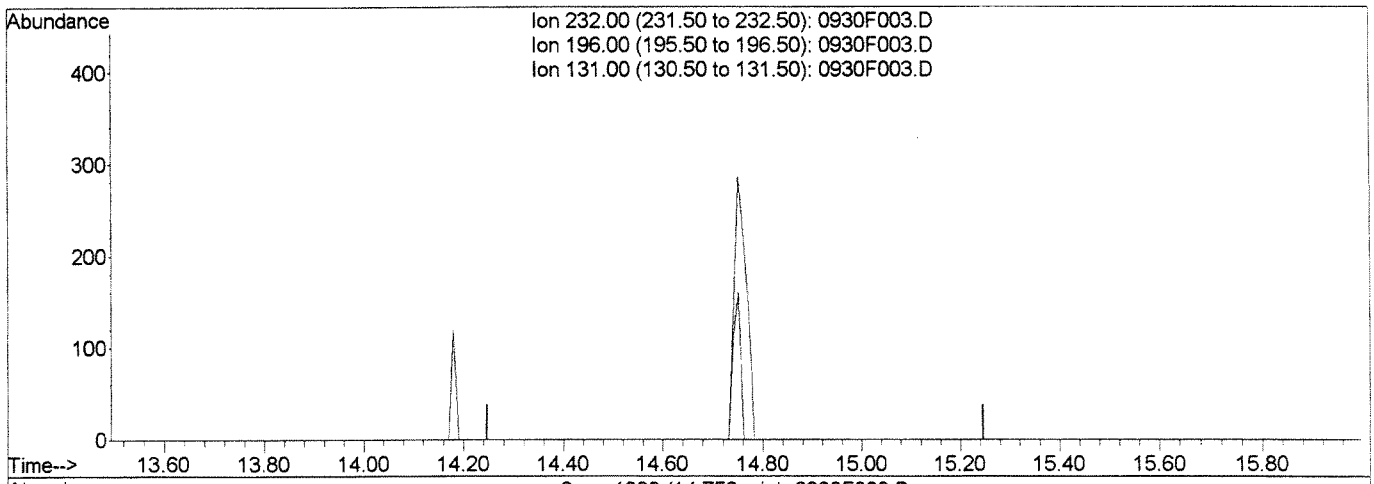
TRY

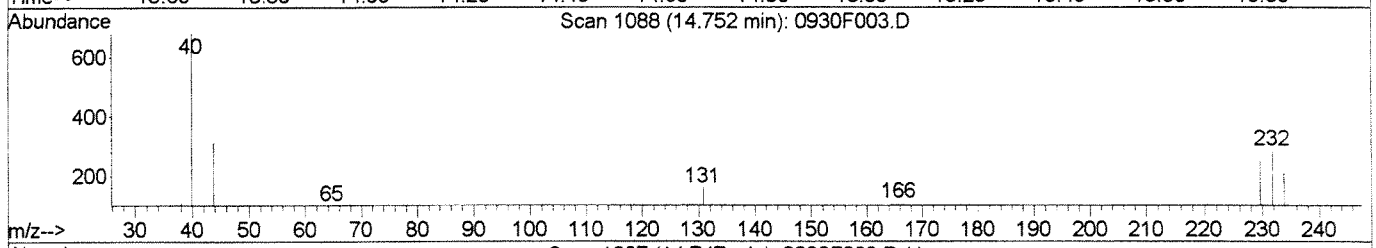
0930F003.D 093014BNC7.M Wed Oct 01 12:53:56 2014

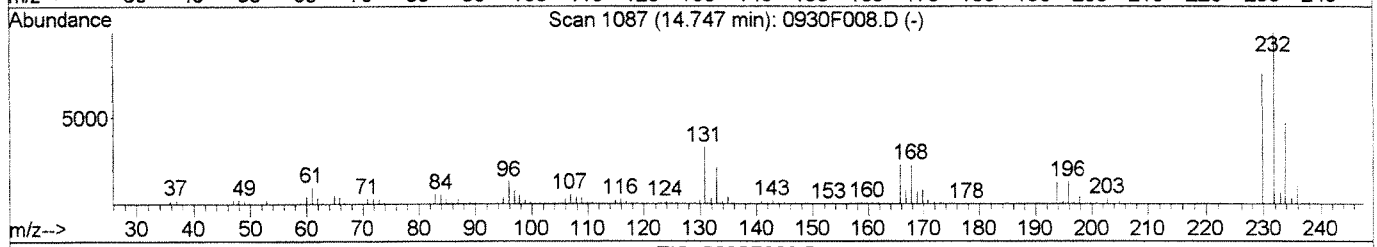
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:55 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F003.D

(50) 2,3,4,6-Tetrachlorophenol (T)

14.75min 0.00ug/ml

response 0

Ion	Exp%	Act%
232.00	100	0.00
196.00	13.00	0.00
131.00	32.40	0.00#
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

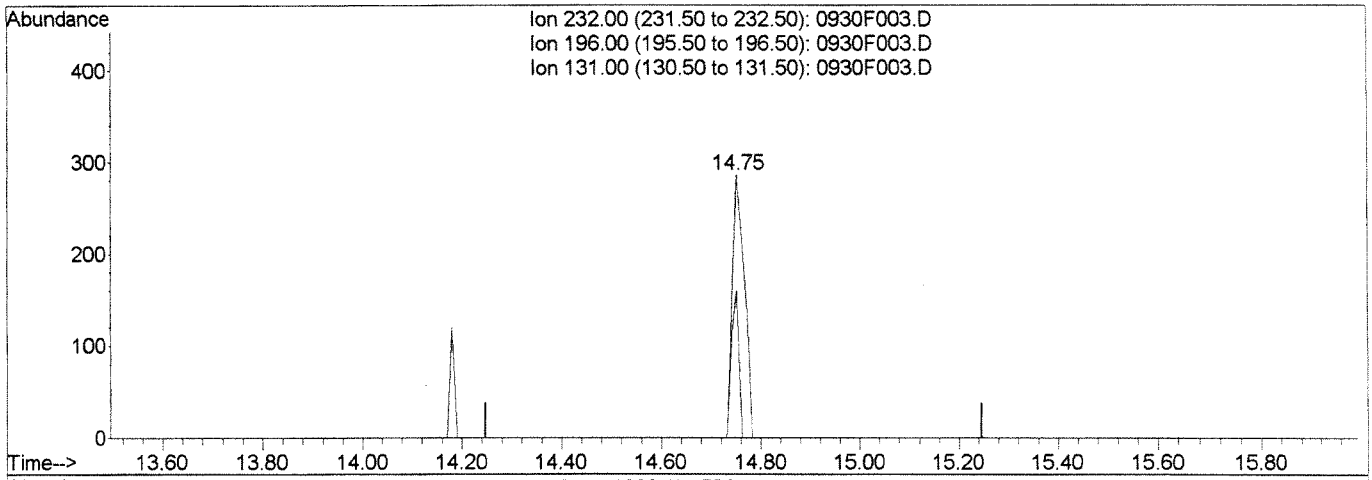
TAT

0930F003.D 093014BNC7.M Wed Oct 01 12:56:28 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:56 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration



TIC: 0930F003.D

(50) 2,3,4,6-Tetrachlorophenol (T)

14.75min 0.42ug/ml m

response 479

Ion	Exp%	Act%
232.00	100	100
196.00	13.00	0.00
131.00	32.40	55.94
0.00	0.00	0.00

Manual Integration:

After

MP

10/01/14

10/2 kk
T

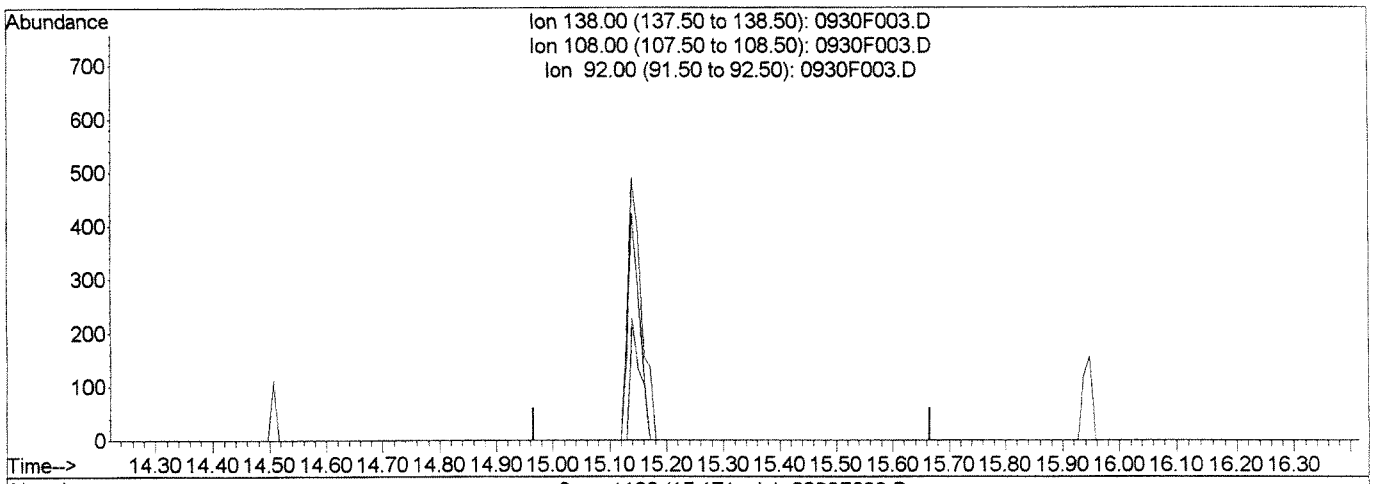
TRT

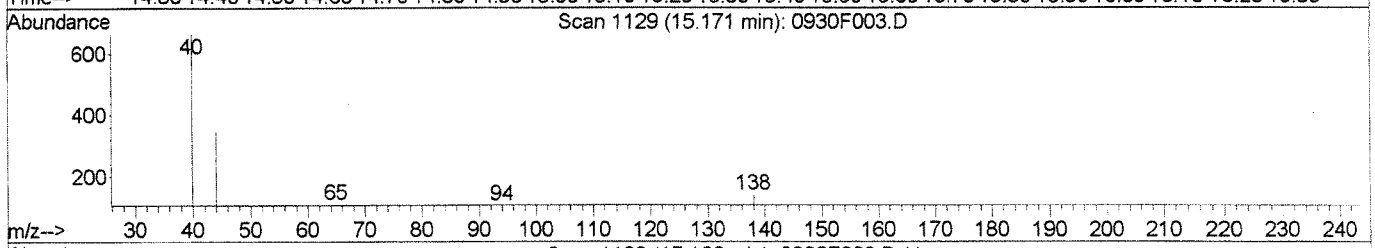
0930F003.D 093014BNC7.M Wed Oct 01 12:56:37 2014

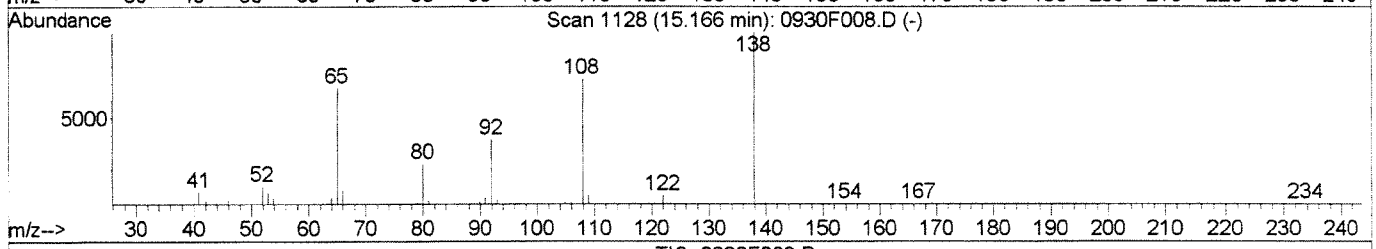
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F003.D Vial: 3
Acq On : 30 Sep 2014 9:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 1 ppm | SVM46-25C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:56 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F003.D

(54) 4-Nitroaniline (T)

15.17min 0.00ug/ml

response 0

Ion	Exp%	Act%
138.00	100	0.00
108.00	72.50	0.00#
92.00	38.00	0.00#
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

TRT

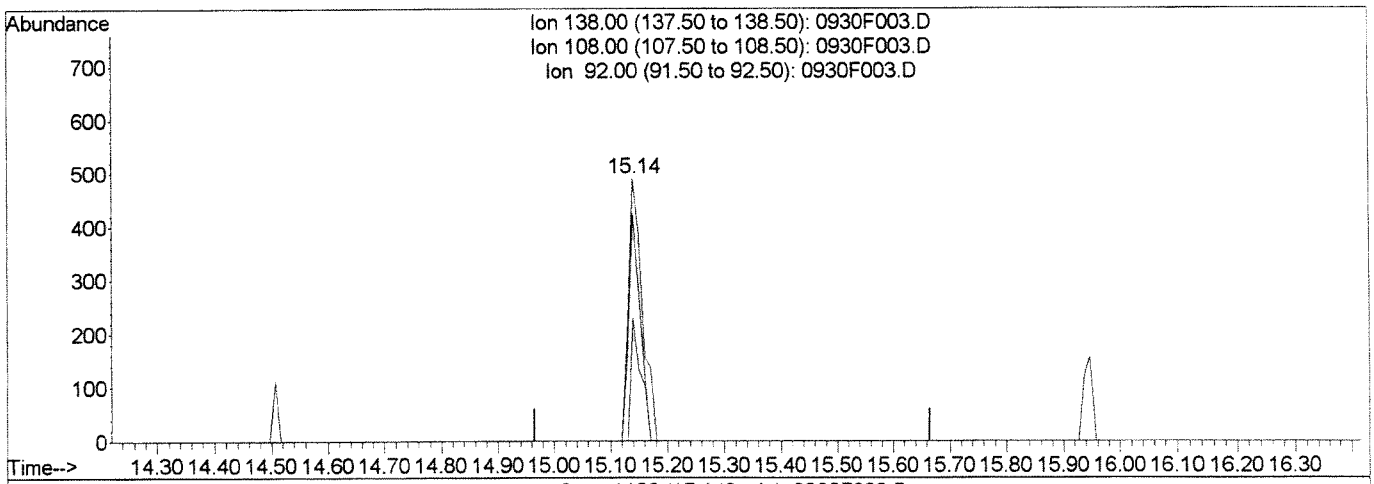
0930F003.D 093014BNC7.M Wed Oct 01 12:57:01 2014

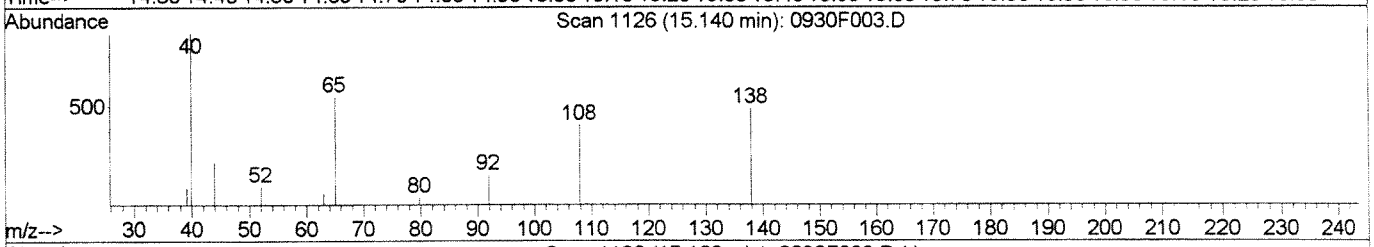
Quantitation Report (Qedit)

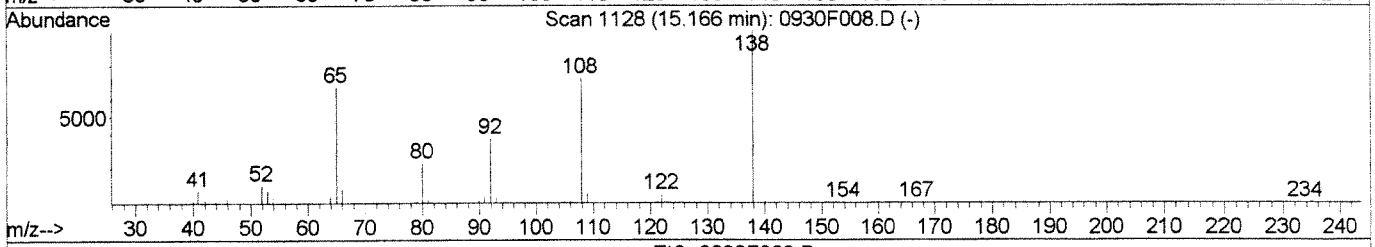
Data File : J:\MS07\DATA\093014\0930F003.D
Acq On : 30 Sep 2014 9:06 pm
Sample : 8270 ICAL @ 1 ppm | SVM46-25C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:57 2014

Vial: 3
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F003.D

(54) 4-Nitroaniline (T)

15.14min 0.77ug/ml m

response 839

Ion	Exp%	Act%
138.00	100	100
108.00	72.50	86.53
92.00	38.00	46.53
0.00	0.00	0.00

Manual Integration:

After

MP

10/01/14

10/2/14
5

TRT

0930F003.D 093014BNC7.M Wed Oct 01 12:57:10 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F004.D
Acq On : 30 Sep 2014 9:46 pm
Sample : 8270 ICAL @ 5 ppm | SVM47-14C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:53 2014

Vial: 4
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	80786	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	276877	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	138106	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	240757	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	253969	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	254746	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	11385	4.40	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery =	2.93%#		
7) Phenol-d6	8.73	99	13525	4.22	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery =	2.81%#		
19) Nitrobenzene-d5	10.14	82	12343	4.34	ug/ml	-0.02
Spiked Amount 100.000	Range 35 - 114		Recovery =	4.34%#		
38) 2-Fluorobiphenyl	13.11	172	26639	5.46	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	5.46%#		
59) 2,4,6-Tribromophenol	15.47	330	5676	4.72	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	3.15%#		
71) Terphenyl-d14	19.20	244	28222	5.53	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	5.53%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.06	42	3353	3.07	ug/ml	88
3) Pyridine	4.12	79	11975m	3.77	ug/ml	
5) Aniline	8.66	93	16063	4.78	ug/ml	67
6) Bis(2-chloroethyl) Ether	8.81	93	12288m	4.42	ug/ml	
8) Phenol	8.76	94	13246m	4.15	ug/ml	
9) 2-Chlorophenol	8.87	128	13551	4.99	ug/ml	98
10) 1,3-Dichlorobenzene	9.09	146	16068	5.44	ug/ml	99
11) 1,4-Dichlorobenzene	9.24	146	16644	5.51	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	15305	5.36	ug/ml	97
13) Benzyl Alcohol	9.50	108	6460	4.37	ug/ml#	78
14) Bis(2-chloroisopropyl) Eth	9.73	45	13138	3.51	ug/ml	89
15) 2-Methylphenol	9.74	107	9402	4.90	ug/ml	94
16) Hexachloroethane	10.03	117	6719	5.35	ug/ml	86
17) N-Nitrosodi-n-propylamine	9.93	70	8128	4.44	ug/ml	92
18) 4-Methylphenol	10.00	107	13804	4.97	ug/ml	98
20) Nitrobenzene	10.18	77	12101	4.61	ug/ml	92
22) Isophorone	10.58	82	21572	4.63	ug/ml	98
23) 2-Nitrophenol	10.71	139	6845	5.10	ug/ml	95
24) 2,4-Dimethylphenol	10.86	122	10023	5.52	ug/ml	95
25) Bis(2-chloroethoxy)methane	10.98	93	14361	4.83	ug/ml	98

(#) = qualifier out of range (m) = manual integration

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F004.D
Acq On : 30 Sep 2014 9:46 pm
Sample : 8270 ICAL @ 5 ppm | SVM47-14C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:53 2014

Vial: 4
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.15	162	10522	5.43 ug/ml	95
27) Benzoic Acid	11.03	122	2051	1.72 ug/ml	86
28) 1,2,4-Trichlorobenzene	11.23	180	13613	6.13 ug/ml	99
29) Naphthalene	11.34	128	35261	5.66 ug/ml	99
30) 4-Chloroaniline	11.48	127	13084	5.00 ug/ml	97
31) Hexachlorobutadiene	11.57	225	8450	6.16 ug/ml	99
32) 4-Chloro-3-methylphenol	12.34	107	8885	4.95 ug/ml#	50
33) 2-Methylnaphthalene	12.48	142	23400	6.10 ug/ml	93
35) Hexachlorocyclopentadiene	12.74	237	2338	1.41 ug/ml	93
36) 2,4,6-Trichlorophenol	12.99	196	7218	5.07 ug/ml	94
37) 2,4,5-Trichlorophenol	13.07	196	7913	4.98 ug/ml	99
39) 2-Chloronaphthalene	13.27	162	23615	5.59 ug/ml	98
40) 2-Nitroaniline	13.48	65	5076	4.16 ug/ml	80
41) Acenaphthylene	13.94	152	35740	5.57 ug/ml	100
42) Dimethyl Phthalate	13.79	163	24933	5.41 ug/ml	99
43) 2,6-Dinitrotoluene	13.88	165	5618	5.27 ug/ml	91
44) Acenaphthene	14.22	154	19748	5.57 ug/ml	99
45) 3-Nitroaniline	14.15	138	5801	4.94 ug/ml	95
47) Dibenzofuran	14.51	168	32360	5.87 ug/ml	91
48) 4-Nitrophenol	14.55	109	1839	3.47 ug/ml#	75
49) 2,4-Dinitrotoluene	14.53	165	6704	4.95 ug/ml	89
50) 2,3,4,6-Tetrachlorophenol	14.74	232	5188	4.27 ug/ml	86
51) Fluorene	15.06	166	23288	5.82 ug/ml	99
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	12051	5.71 ug/ml	97
53) Diethyl Phthalate	14.95	149	27282	5.89 ug/ml	100
54) 4-Nitroaniline	15.13	138	5338	4.60 ug/ml	94
55) 2-Methyl-4,6-dinitrophenol	15.19	198	1675	2.31 ug/ml#	100
56) N-Nitrosodiphenylamine	15.29	169	17054	5.89 ug/ml	97
57) 1,2-Diphenylhydrazine	15.34	77	22849	4.89 ug/ml	92
60) 4-Bromophenyl Phenyl Ether	15.88	248	8089	5.44 ug/ml	97
61) Hexachlorobenzene	15.95	284	10529	5.60 ug/ml	98
62) Pentachlorophenol	16.32	266	563	0.64 ug/ml	85
63) Phenanthrene	16.61	178	33166	5.43 ug/ml	99
64) Anthracene	16.69	178	34388	5.67 ug/ml	99
65) Carbazole	16.99	167	29532	5.26 ug/ml	97
66) Di-n-butyl Phthalate	17.60	149	37349	4.96 ug/ml	99
67) Fluoranthene	18.53	202	34082	5.78 ug/ml	96
69) Benzidine	18.80	184	14282	7.82 ug/ml	97
70) Pyrene	18.89	202	37706	5.04 ug/ml	98
72) Butyl Benzyl Phthalate	20.02	149	16112	4.70 ug/ml	96
73) 3,3'-Dichlorobenzidine	20.95	252	11938	4.36 ug/ml	98

(#) = qualifier out of range (m) = manual integration

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F004.D
Acq On : 30 Sep 2014 9:46 pm
Sample : 8270 ICAL @ 5 ppm | SVM47-14C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:53 2014

Vial: 4
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) Benz(a)anthracene	20.94	228	31681	5.11 ug/ml	99
75) Chrysene	21.01	228	32273	5.43 ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	20423	4.31 ug/ml	99
78) Di-n-octyl Phthalate	22.59	149	31162	3.27 ug/ml	98
79) Benzo(b)fluoranthene	23.25	252	27392	4.37 ug/ml	97
80) Benzo(k)fluoranthene	23.31	252	29471	4.76 ug/ml	99
81) Benzo(a)pyrene	23.98	252	28185	4.67 ug/ml	97
82) Indeno(1,2,3-cd)pyrene	26.54	276	24216	4.15 ug/ml	94
83) Dibenz(a,h)anthracene	26.61	278	27017m	4.45 ug/ml	
84) Benzo(g,h,i)perylene	27.11	276	30896	4.94 ug/ml	95

10/2/14
9

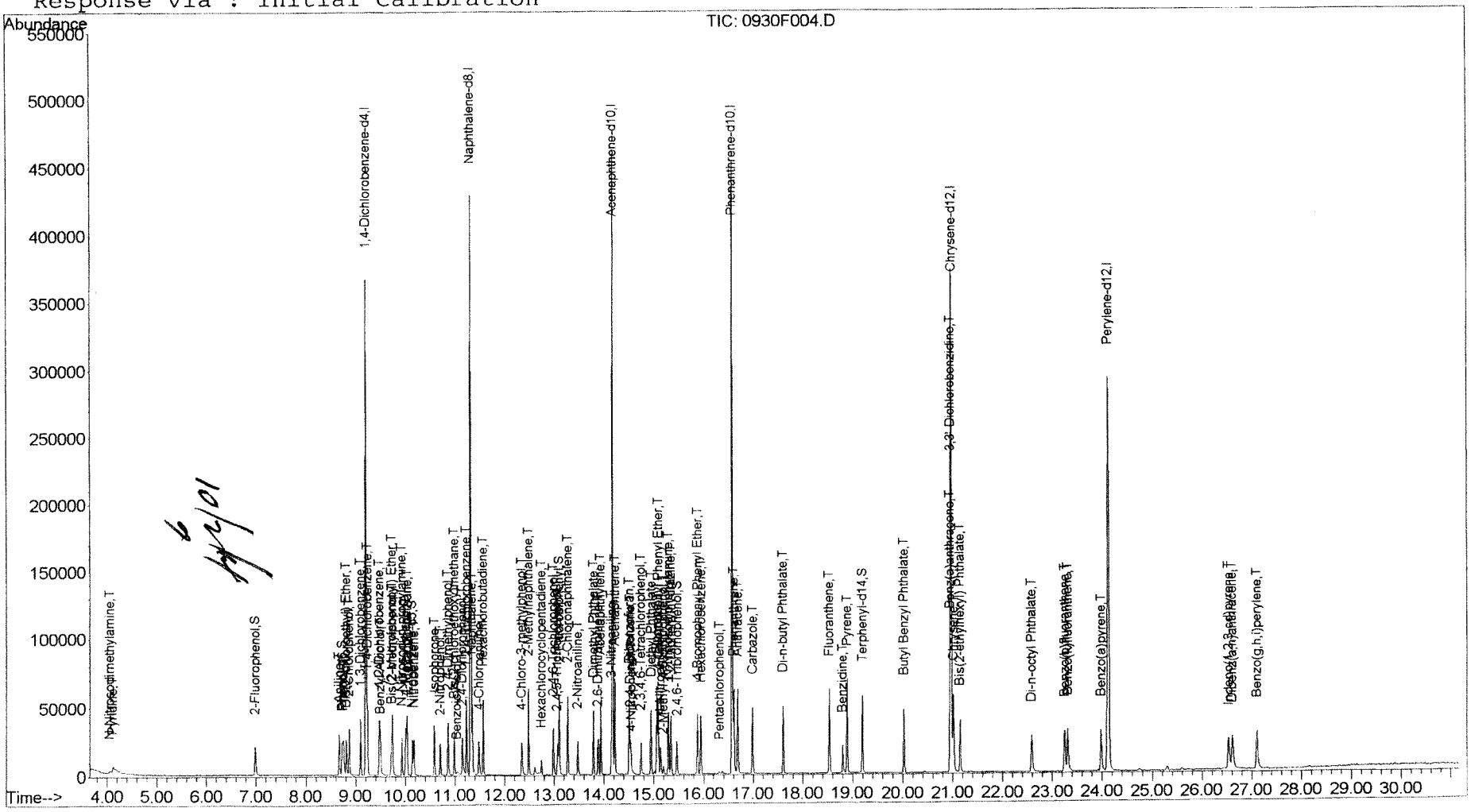
(#) = qualifier out of range (m) = manual integration
0930F004.D 093014BNC7.M Wed Oct 01 14:34:41 2014 Page 3

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:01 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2750

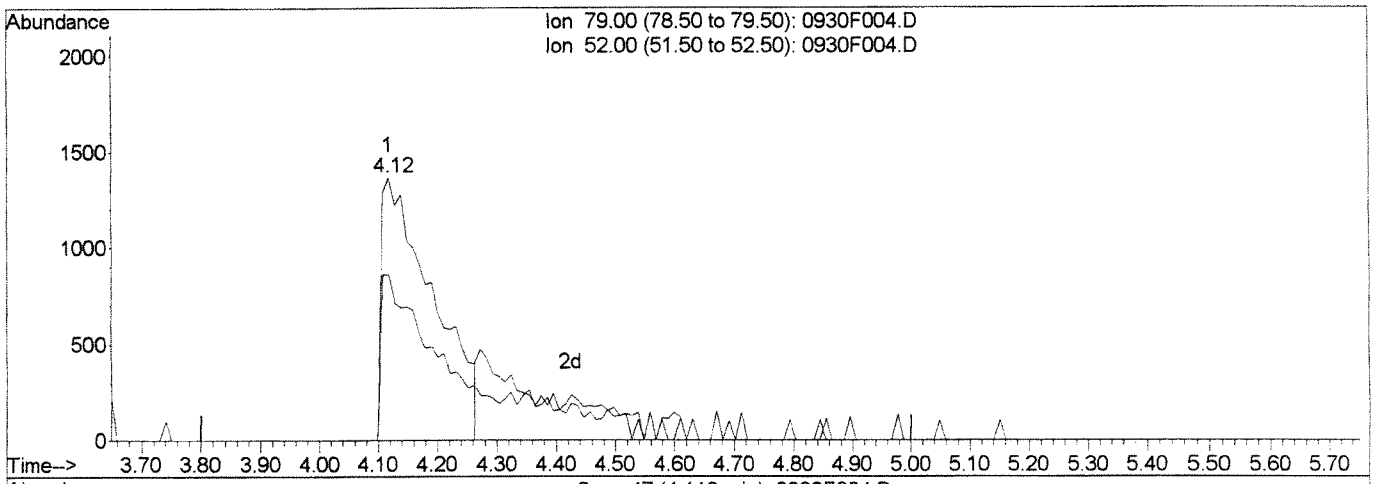
OCT 01 2014 130

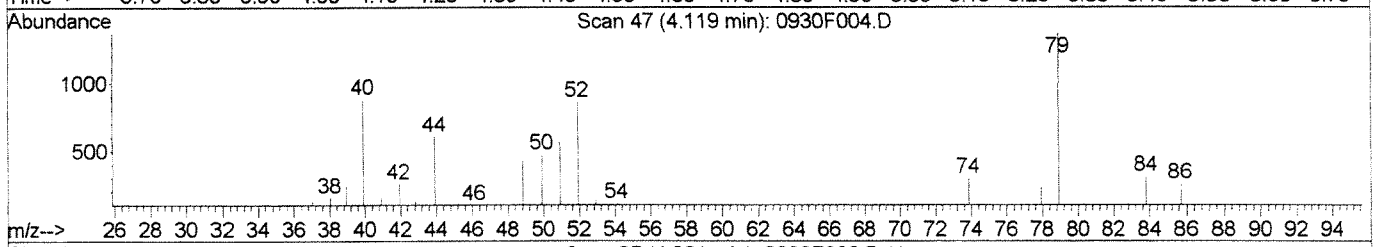
0930F004.D 093014BNC7.M Wed Oct 01 14:34:42 2014 Page 4

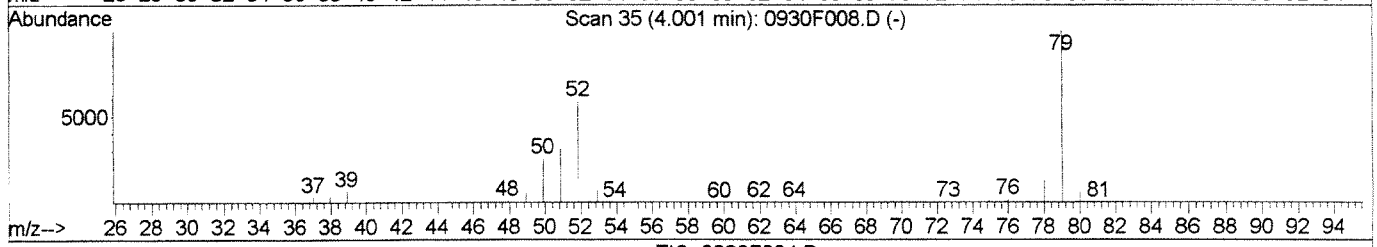
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:40 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(3) Pyridine (T)

4.12min 2.59ug/ml

response 8220

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	61.25
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

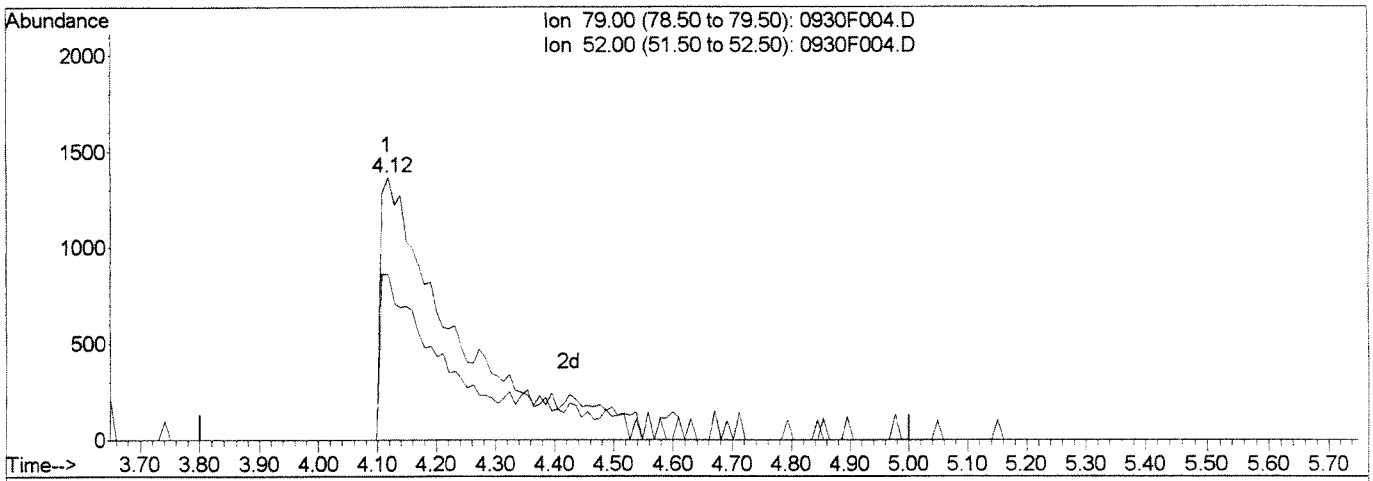
10/2/14

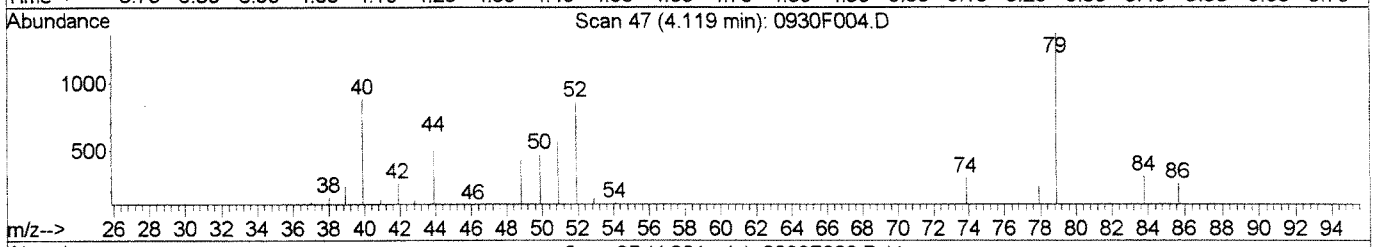
0930F004.D 093014BNC7.M Wed Oct 01 12:58:07 2014

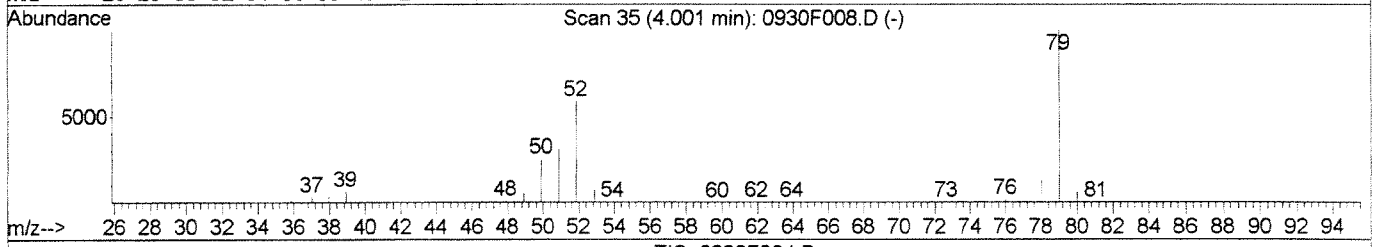
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(3) Pyridine (T)

4.12min 3.77ug/ml m

response 11975

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	62.84
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

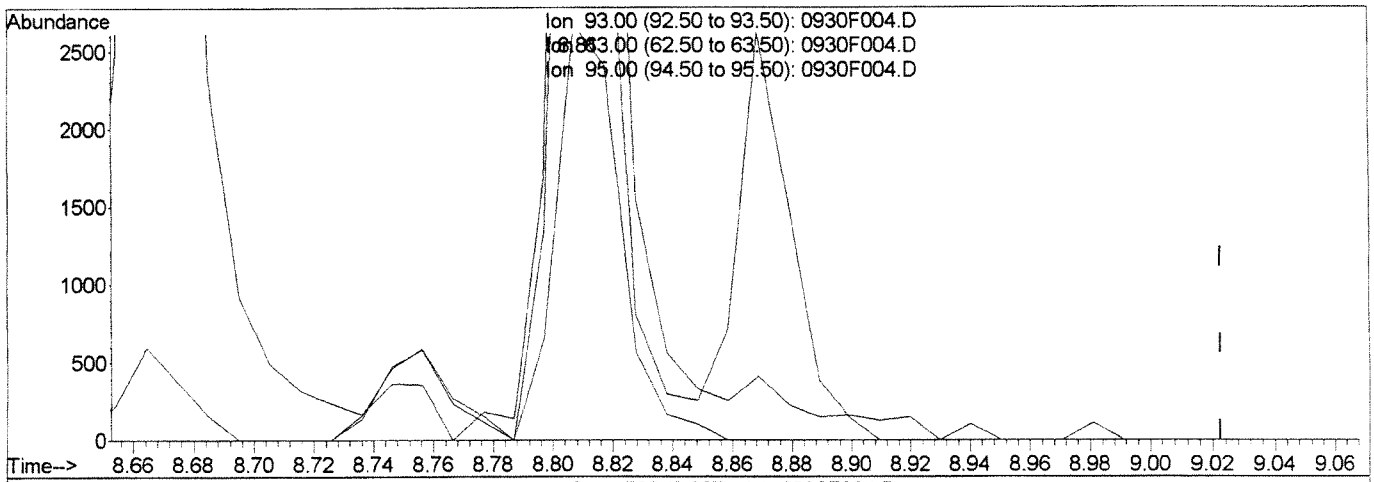
10/01/14

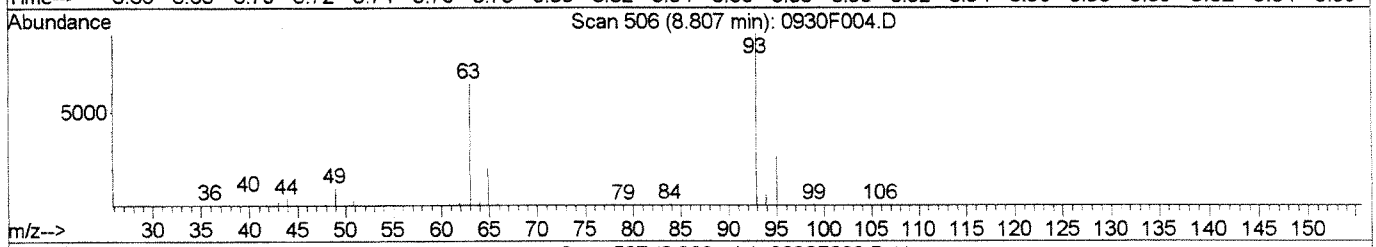
0930F004.D 093014BNC7.M Wed Oct 01 12:58:13 2014

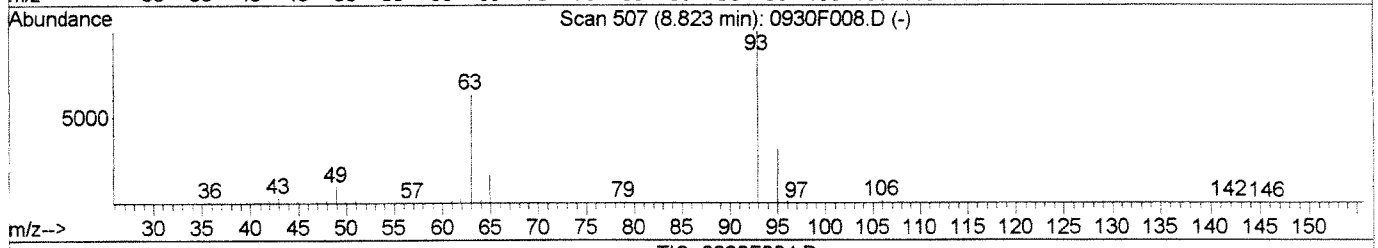
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 4.78ug/ml

response 13288

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	70.02
95.00	32.50	28.11
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

TAT

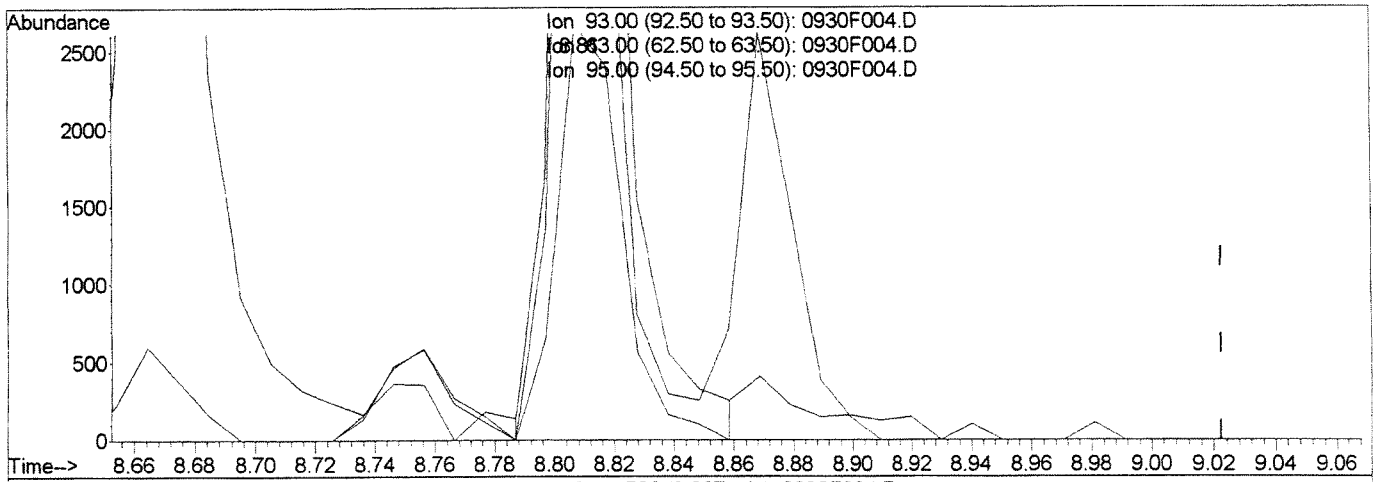
0930F004.D 093014BNC7.M Wed Oct 01 12:58:24 2014

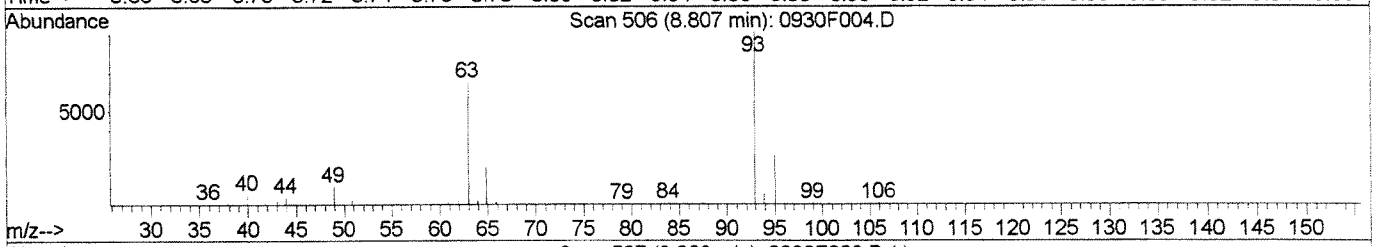
Quantitation Report (Qedit)

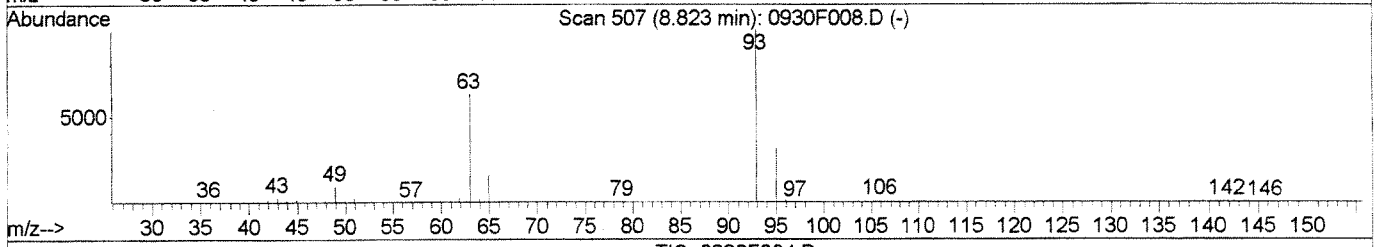
Data File : J:\MS07\DATA\093014\0930F004.D
Acq On : 30 Sep 2014 9:46 pm
Sample : 8270 ICAL @ 5 ppm | SVM47-14C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014

Vial: 4
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 4.42ug/ml m

response 12288

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	71.48
95.00	32.50	29.37
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/1/14

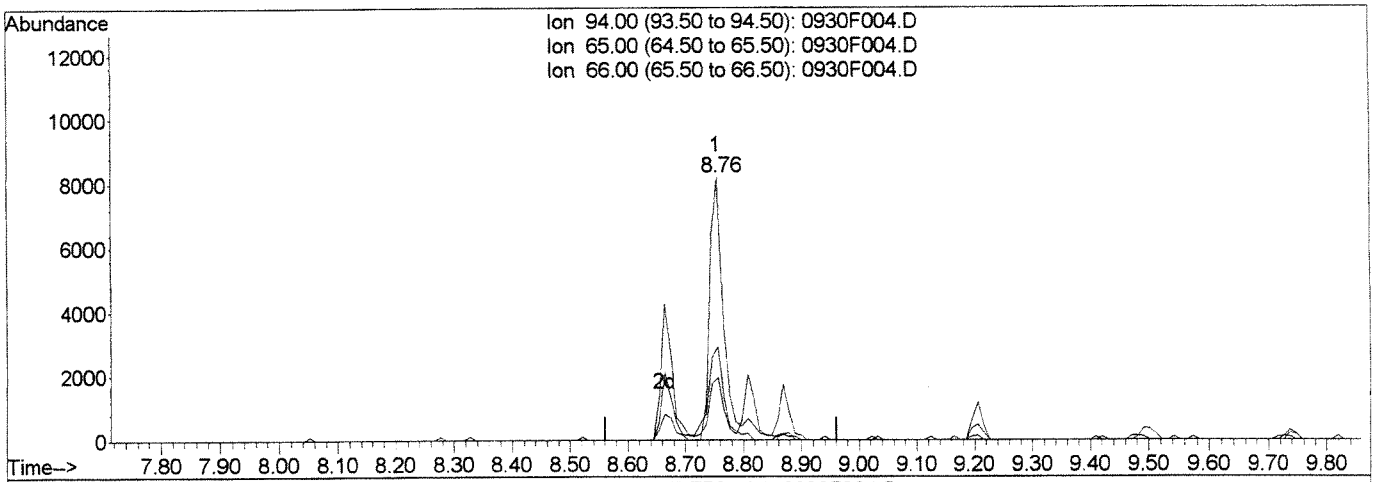
0930F004.D 093014BNC7.M Wed Oct 01 12:58:31 2014

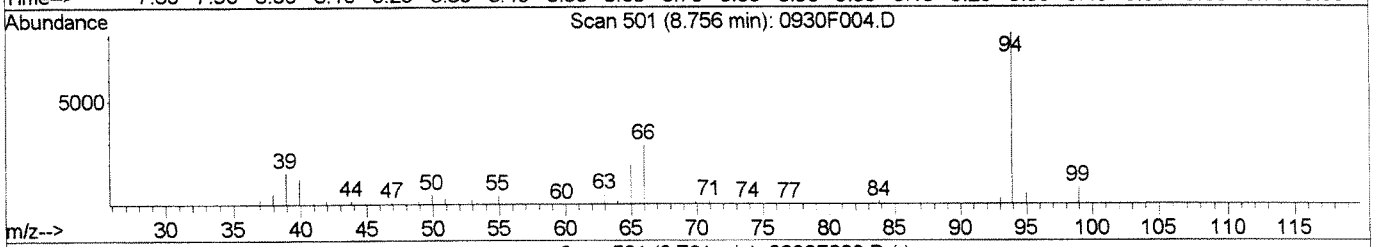
Quantitation Report (Qedit)

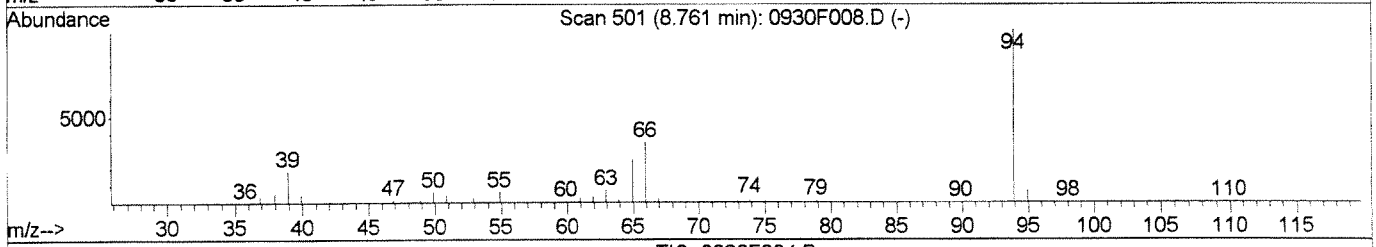
Data File : J:\MS07\DATA\093014\0930F004.D
Acq On : 30 Sep 2014 9:46 pm
Sample : 8270 ICAL @ 5 ppm | SVM47-14C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014

Vial: 4
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(8) Phenol (T)

8.76min 4.48ug/ml

response 14310

Ion	Exp%	Act%
94.00	100	100
65.00	24.30	19.46
66.00	36.10	33.85
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

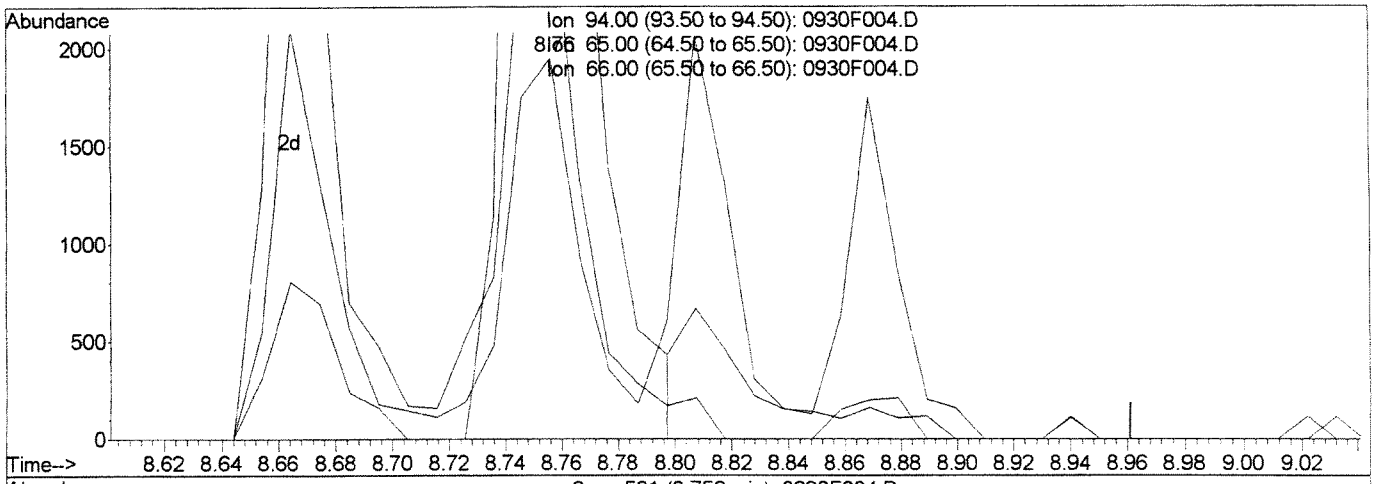
TRT

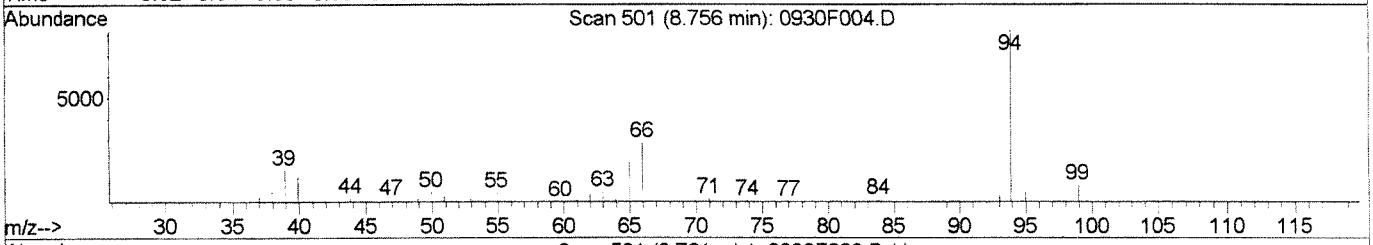
0930F004.D 093014BNC7.M Wed Oct 01 12:58:36 2014

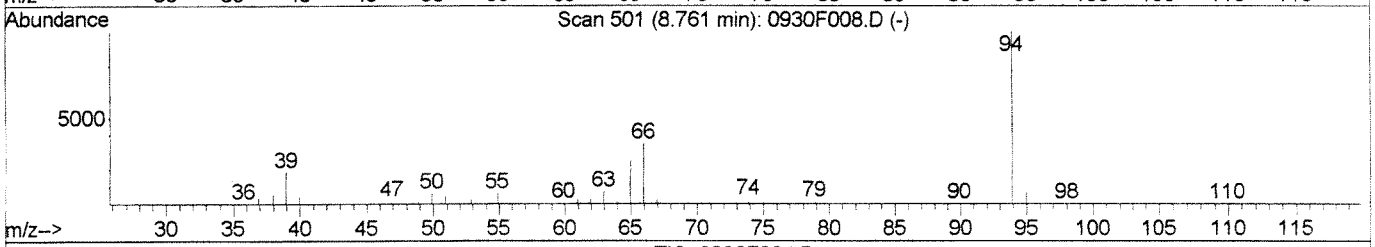
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(8) Phenol (T)

8.76min 4.15ug/ml m

response 13246

Ion	Exp%	Act%
94.00	100	100
65.00	24.30	23.83
66.00	36.10	35.51
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

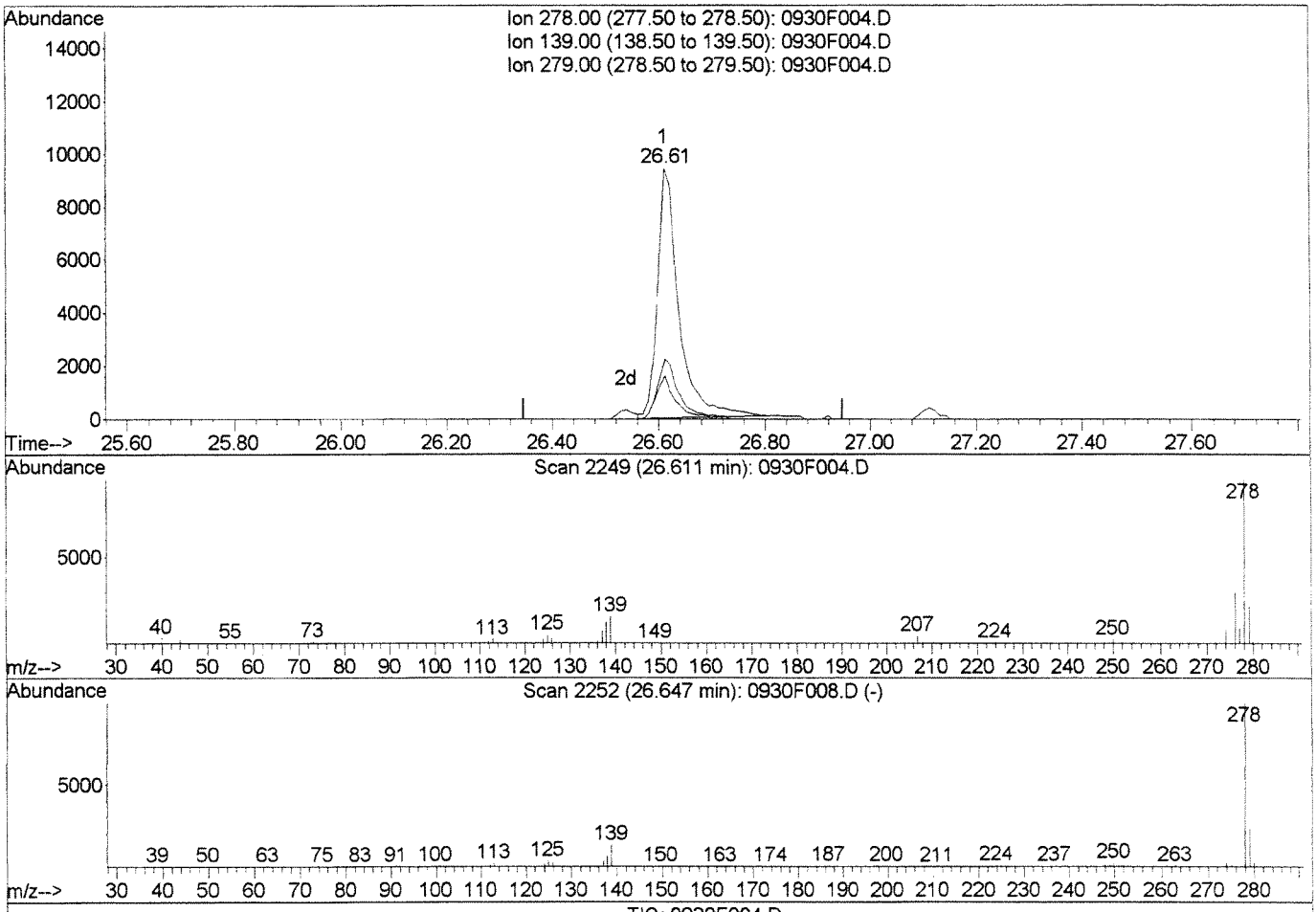
TRT

0930F004.D 093014BNC7.M Wed Oct 01 12:58:44 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:58 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F004.D

(83) Dibenz(a,h)anthracene (T)

26.61min 4.28ug/ml

response 25958

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	17.44
279.00	23.50	24.19
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

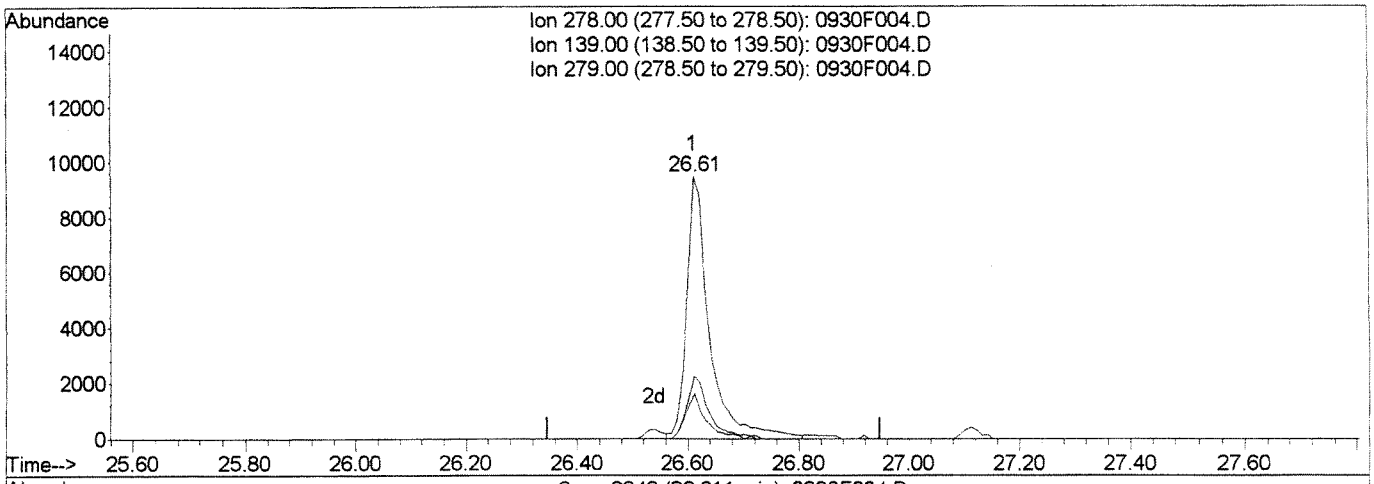
TRT

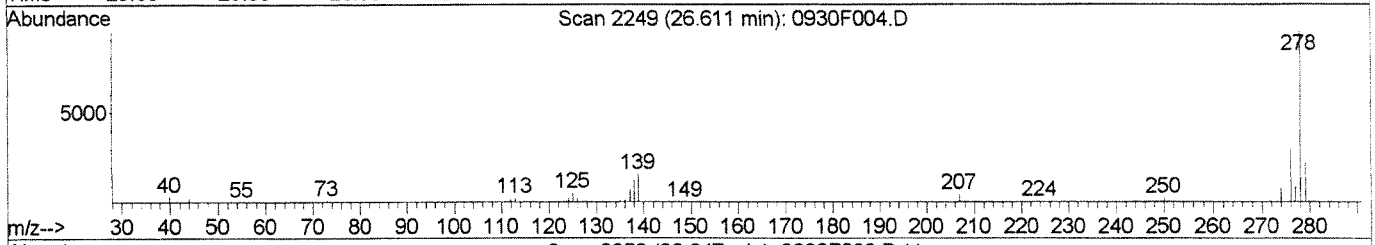
0930F004.D 093014BNC7.M Wed Oct 01 13:01:40 2014

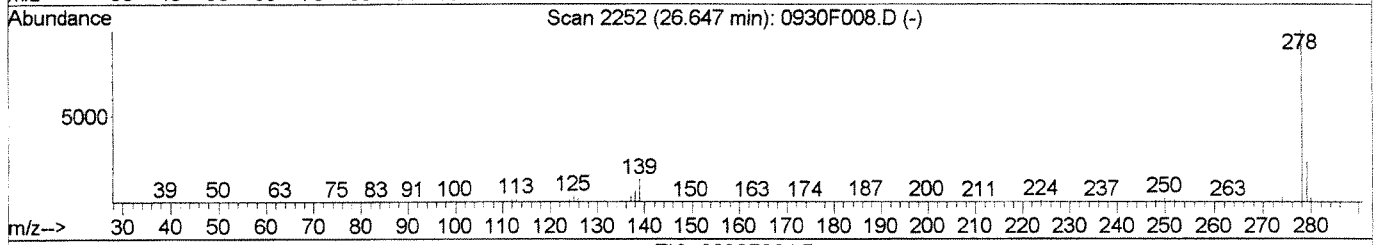
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F004.D Vial: 4
Acq On : 30 Sep 2014 9:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 5 ppm | SVM47-14C Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:01 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F004.D

(83) Dibenz(a,h)anthracene (T)

26.61min 4.45ug/ml m

response 27017

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	17.17
279.00	23.50	23.81
0.00	0.00	0.00

Manual Integration:

After

BLC

10/01/14

10/2/14

TRT

0930F004.D 093014BNC7.M Wed Oct 01 13:01:59 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F005.D Vial: 5
Acq On : 30 Sep 2014 10:26 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 10 ppm | SVM47-14D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:55 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	78073	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	260447	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	136979	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	244996	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	251745	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	253644	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	23803	9.52	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery =	6.35%#		
7) Phenol-d6	8.73	99	30180	9.74	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery =	6.49%#		
19) Nitrobenzene-d5	10.14	82	25702	9.35	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	9.35%#		
38) 2-Fluorobiphenyl	13.11	172	54444	11.25	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	11.25%#		
59) 2,4,6-Tribromophenol	15.47	330	12831	10.49	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	6.99%#		
71) Terphenyl-d14	19.19	244	58758	11.63	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	11.63%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.01	42	7699	7.29	ug/ml	89
3) Pyridine	4.06	79	27339m	8.90	ug/ml	
5) Aniline	8.66	93	28926	8.91	ug/ml	65
6) Bis(2-chloroethyl) Ether	8.81	93	24113m	8.98	ug/ml	
8) Phenol	8.75	94	29395	9.52	ug/ml	95
9) 2-Chlorophenol	8.87	128	26373	10.04	ug/ml	97
10) 1,3-Dichlorobenzene	9.10	146	32429	11.36	ug/ml	96
11) 1,4-Dichlorobenzene	9.24	146	31345	10.75	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	30604	11.09	ug/ml	97
13) Benzyl Alcohol	9.49	108	13962	9.77	ug/ml	98
14) Bis(2-chloroisopropyl) Eth	9.73	45	25262	6.98	ug/ml	87
15) 2-Methylphenol	9.74	107	18950	10.22	ug/ml	92
16) Hexachloroethane	10.03	117	13104	10.79	ug/ml	90
17) N-Nitrosodi-n-propylamine	9.93	70	16139	9.13	ug/ml	97
18) 4-Methylphenol	10.00	107	27253	10.16	ug/ml	98
20) Nitrobenzene	10.18	77	23695	9.34	ug/ml	93
22) Isophorone	10.58	82	44416	10.13	ug/ml	99
23) 2-Nitrophenol	10.70	139	14327	11.34	ug/ml	92
24) 2,4-Dimethylphenol	10.85	122	19940	11.68	ug/ml	97
25) Bis(2-chloroethoxy)methane	10.98	93	28953	10.36	ug/ml	100

(#) = qualifier out of range (m) = manual integration
0930F005.D 093014BNC7.M Wed Oct 01 14:34:44 2014 Page 1

OCT 01 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F005.D Vial: 5
Acq On : 30 Sep 2014 10:26 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 10 ppm | SVM47-14D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:55 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	21828	11.97 ug/ml	96
27) Benzoic Acid	11.04	122	7008	6.25 ug/ml	96
28) 1,2,4-Trichlorobenzene	11.23	180	25250	12.09 ug/ml	100
29) Naphthalene	11.34	128	67134	11.45 ug/ml	99
30) 4-Chloroaniline	11.47	127	27651	11.24 ug/ml	95
31) Hexachlorobutadiene	11.56	225	15984	12.39 ug/ml	99
32) 4-Chloro-3-methylphenol	12.34	107	19077	11.29 ug/ml	93
33) 2-Methylnaphthalene	12.48	142	43544	12.07 ug/ml	96
35) Hexachlorocyclopentadiene	12.75	237	7597	4.64 ug/ml	98
36) 2,4,6-Trichlorophenol	12.98	196	14646	10.37 ug/ml	96
37) 2,4,5-Trichlorophenol	13.07	196	16877	10.71 ug/ml	97
39) 2-Chloronaphthalene	13.27	162	45324	10.82 ug/ml	98
40) 2-Nitroaniline	13.47	65	10911	9.02 ug/ml	82
41) Acenaphthylene	13.93	152	68181	10.71 ug/ml	99
42) Dimethyl Phthalate	13.79	163	50271	11.00 ug/ml	100
43) 2,6-Dinitrotoluene	13.88	165	11406	10.78 ug/ml	94
44) Acenaphthene	14.22	154	38116	10.85 ug/ml	99
45) 3-Nitroaniline	14.15	138	12308	10.57 ug/ml	98
46) 2,4-Dinitrophenol	14.34	184	1408	2.38 ug/ml	83
47) Dibenzofuran	14.51	168	61734	11.30 ug/ml	92
48) 4-Nitrophenol	14.54	109	4509	8.58 ug/ml	92
49) 2,4-Dinitrotoluene	14.53	165	15120	11.25 ug/ml	97
50) 2,3,4,6-Tetrachlorophenol	14.74	232	11901	9.87 ug/ml	96
51) Fluorene	15.06	166	45138	11.37 ug/ml	97
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	24613	11.76 ug/ml	98
53) Diethyl Phthalate	14.95	149	51470	11.20 ug/ml	99
54) 4-Nitroaniline	15.13	138	11944	10.37 ug/ml	95
55) 2-Methyl-4,6-dinitrophenol	15.19	198	5434	7.56 ug/ml#	100
56) N-Nitrosodiphenylamine	15.29	169	34941	12.16 ug/ml	99
57) 1,2-Diphenylhydrazine	15.34	77	45798	9.88 ug/ml	92
60) 4-Bromophenyl Phenyl Ether	15.88	248	17029	11.25 ug/ml	99
61) Hexachlorobenzene	15.95	284	20960	10.96 ug/ml	99
62) Pentachlorophenol	16.30	266	3156	3.52 ug/ml	92
63) Phenanthrene	16.61	178	63648	10.24 ug/ml	99
64) Anthracene	16.69	178	65460	10.61 ug/ml	99
65) Carbazole	16.99	167	59819	10.46 ug/ml	99
66) Di-n-butyl Phthalate	17.60	149	82385	10.76 ug/ml	99
67) Fluoranthene	18.53	202	69956	11.66 ug/ml	97
69) Benzidine	18.80	184	26480	14.63 ug/ml	98
70) Pyrene	18.89	202	80027	10.79 ug/ml	98
72) Butyl Benzyl Phthalate	20.02	149	35157	10.35 ug/ml	95

(#) = qualifier out of range (m) = manual integration
0930F005.D 093014BNC7.M Wed Oct 01 14:34:44 2014 Page 2

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F005.D Vial: 5
Acq On : 30 Sep 2014 10:26 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 10 ppm | SVM47-14D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:55 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.95	252	24999	9.21	ug/ml	97
74) Benz(a)anthracene	20.94	228	64317	10.47	ug/ml	98
75) Chrysene	21.01	228	63547	10.78	ug/ml	98
76) Bis(2-ethylhexyl) Phthalat	21.15	149	43550	9.27	ug/ml	98
78) Di-n-octyl Phthalate	22.59	149	72967	7.70	ug/ml	99
79) Benzo(b)fluoranthene	23.25	252	59743	9.57	ug/ml	98
80) Benzo(k)fluoranthene	23.31	252	59657	9.68	ug/ml	98
81) Benzo(a)pyrene	23.98	252	60016	9.99	ug/ml	97
82) Indeno(1,2,3-cd)pyrene	26.54	276	52953	9.11	ug/ml	98
83) Dibenz(a,h)anthracene	26.61	278	58137	9.62	ug/ml	96
84) Benzo(g,h,i)perylene	27.11	276	63097	10.13	ug/ml	96

10/2/14

(#) = qualifier out of range (m) = manual integration
0930F005.D 093014BNC7.M Wed Oct 01 14:34:44 2014 Page 3

OCT 0 1 2014

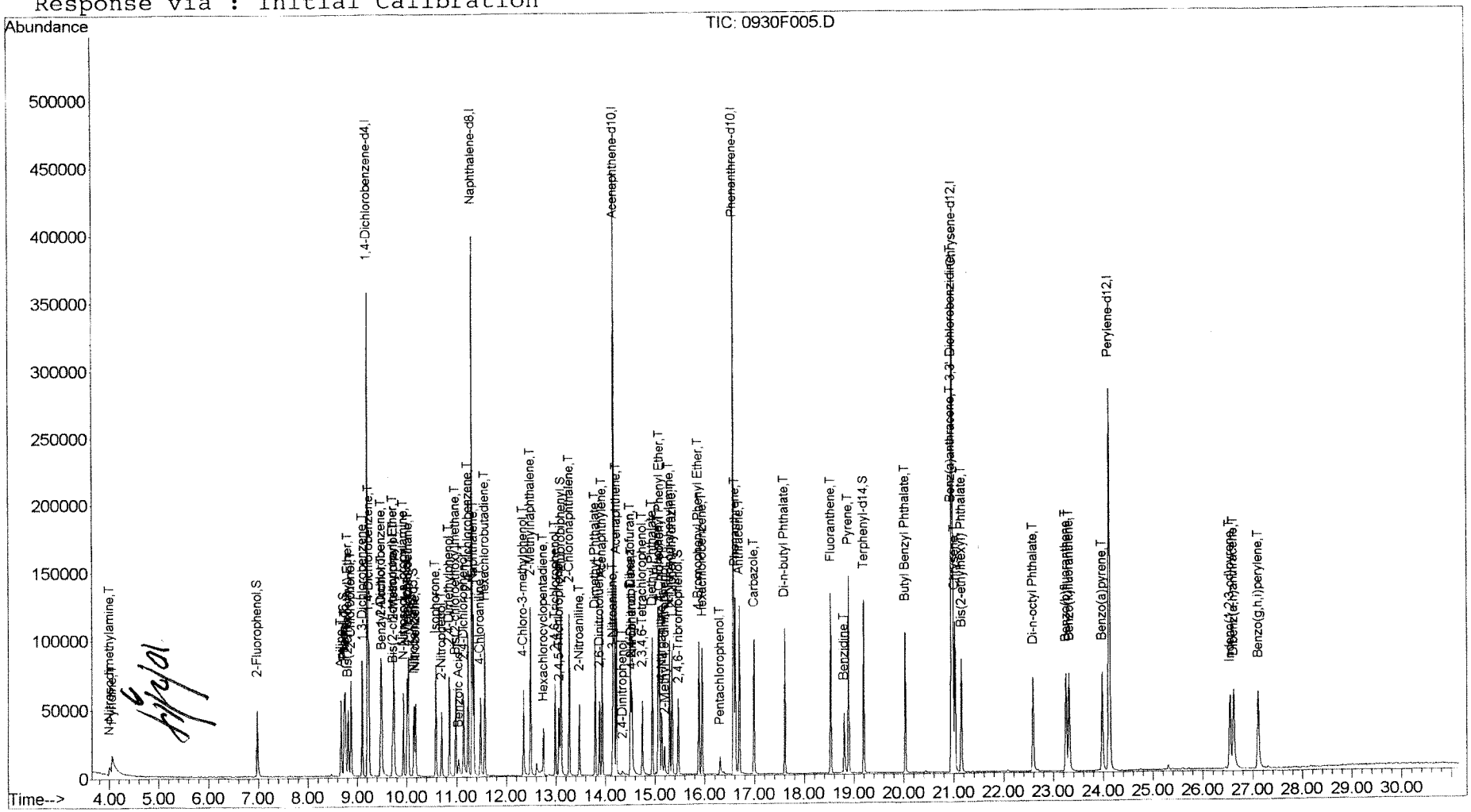
Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F005.D
Acq On : 30 Sep 2014 10:26 pm
Sample : 8270 ICAL @ 10 ppm | SVM47-14D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:02 2014

Vial: 5
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2762

OCT 01 2014

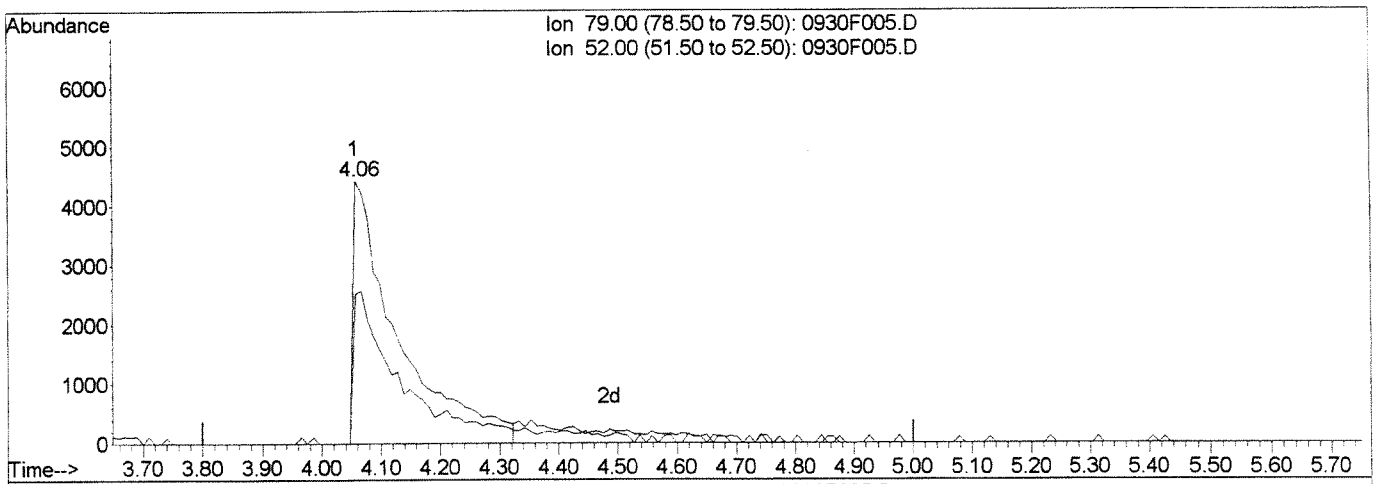
0930F005.D 093014BNC7.M Wed Oct 01 14:34:45 2014 Page 4

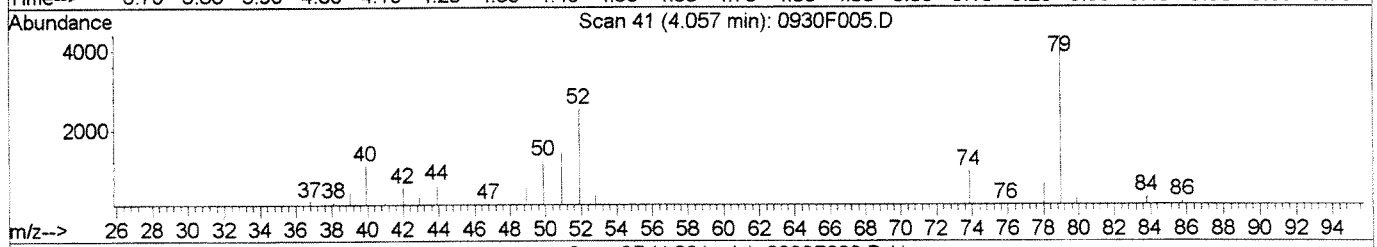
Quantitation Report (Qedit)

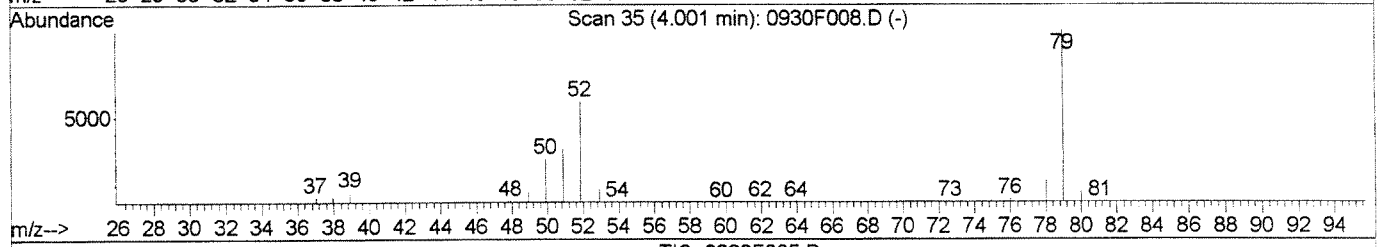
Data File : J:\MS07\DATA\093014\0930F005.D
Acq On : 30 Sep 2014 10:26 pm
Sample : 8270 ICAL @ 10 ppm | SVM47-14D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:40 2014

Vial: 5
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F005.D

(3) Pyridine (T)

4.06min 7.61ug/ml

response 23384

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	56.55
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

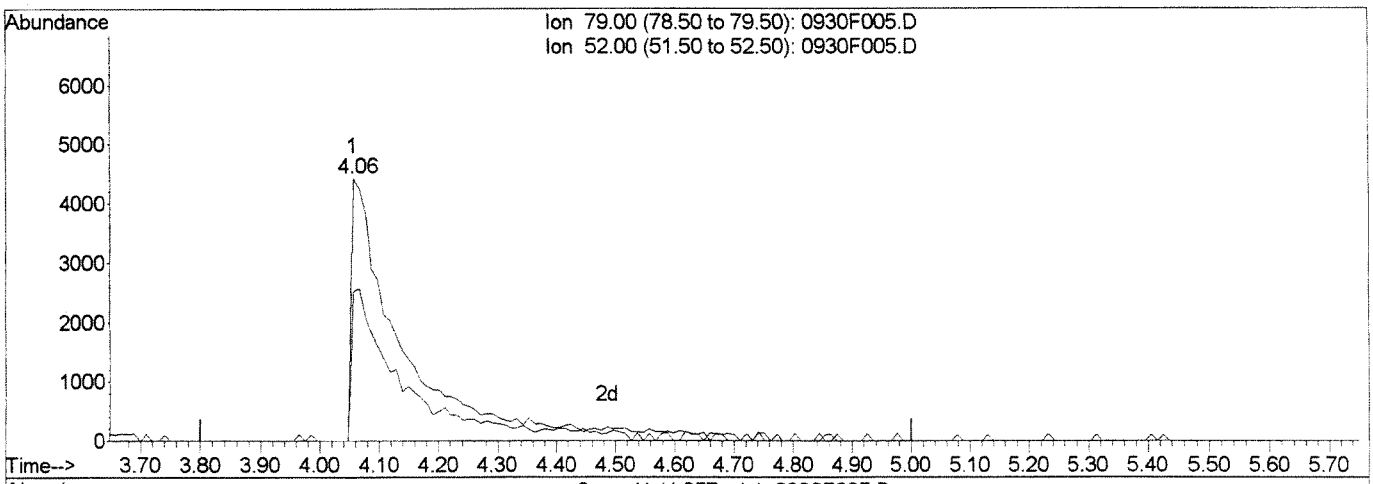
TRT

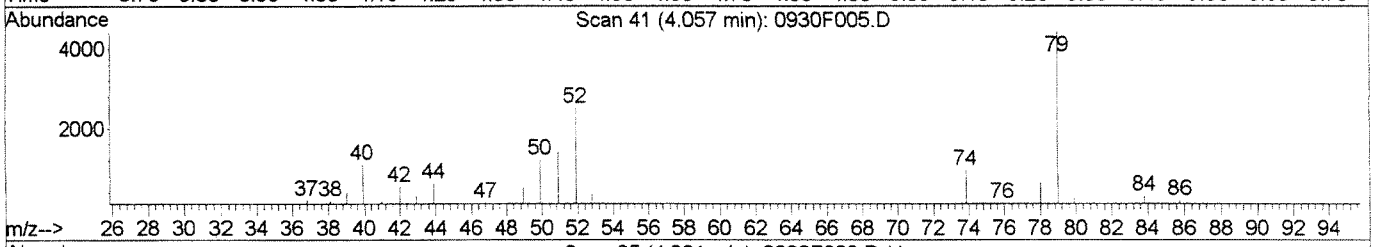
0930F005.D 093014BNC7.M Wed Oct 01 13:02:14 2014

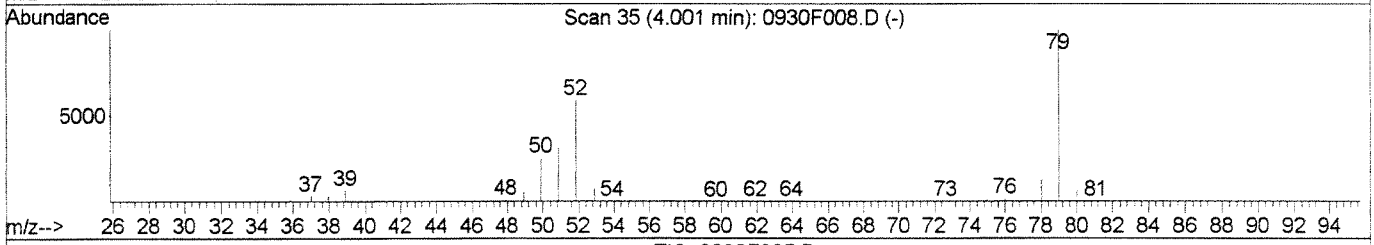
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F005.D Vial: 5
Acq On : 30 Sep 2014 10:26 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 10 ppm | SVM47-14D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:02 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F005.D

(3) Pyridine (T)

4.06min 8.90ug/ml m

response 27339

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	56.91
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/1/14

TRT

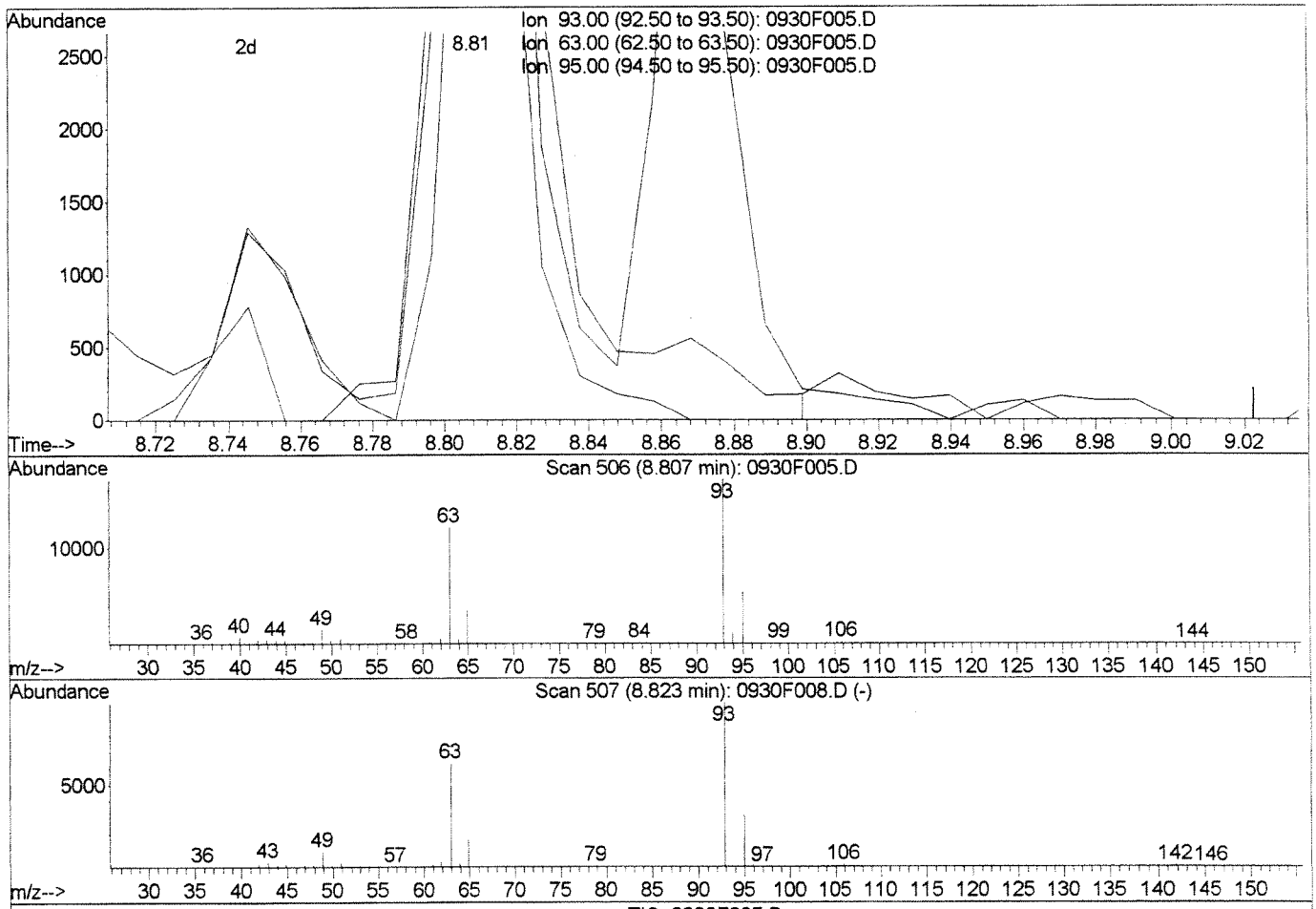
0930F005.D 093014BNC7.M Wed Oct 01 13:02:21 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F005.D
Acq On : 30 Sep 2014 10:26 pm
Sample : 8270 ICAL @ 10 ppm | SVM47-14D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:02 2014

Vial: 5
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F005.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 9.27ug/ml

response 24902

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	69.91
95.00	32.50	30.77
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/7/14

9

TRT

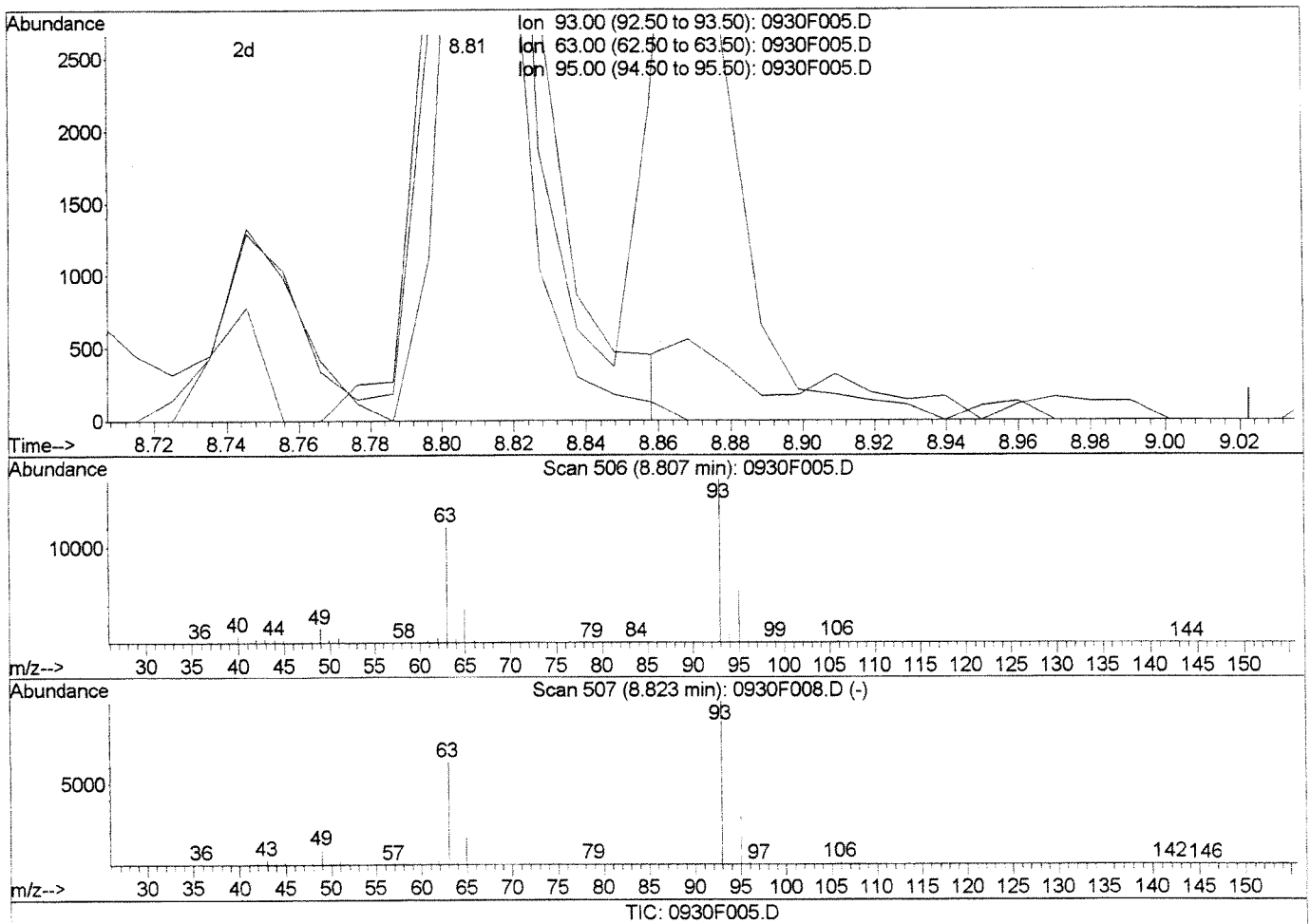
0930F005.D 093014BNC7.M Wed Oct 01 13:02:31 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F005.D
Acq On : 30 Sep 2014 10:26 pm
Sample : 8270 ICAL @ 10 ppm | SVM47-14D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:02 2014

Vial: 5
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F005.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 8.98ug/ml m

response 24113

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	71.15
95.00	32.50	31.81
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

TRT

0930F005.D 093014BNC7.M Wed Oct 01 13:02:38 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:56 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	75769	40.00	ug/ml	-0.01
21) Naphthalene-d8	11.31	136	257404	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	132744	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	236969	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	252864	40.00	ug/ml	-0.01
77) Perylene-d12	24.12	264	255200	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	46840	19.30	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 12.87%#			
7) Phenol-d6	8.72	99	55797	18.56	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 94		Recovery = 12.37%			
19) Nitrobenzene-d5	10.14	82	48402	18.14	ug/ml	-0.01
Spiked Amount 100.000	Range 35 - 114		Recovery = 18.14%#			
38) 2-Fluorobiphenyl	13.10	172	103081	21.98	ug/ml	-0.01
Spiked Amount 100.000	Range 43 - 116		Recovery = 21.98%#			
59) 2,4,6-Tribromophenol	15.46	330	25382	21.45	ug/ml	-0.01
Spiked Amount 150.000	Range 10 - 123		Recovery = 14.30%			
71) Terphenyl-d14	19.19	244	112825	22.22	ug/ml	-0.01
Spiked Amount 100.000	Range 33 - 141		Recovery = 22.22%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.96	42	19753	19.26	ug/ml	91
3) Pyridine	4.01	79	57704m	19.35	ug/ml	
5) Aniline	8.66	93	58226	18.48	ug/ml	93
6) Bis(2-chloroethyl) Ether	8.81	93	46902m	17.99	ug/ml	
8) Phenol	8.75	94	53183	17.75	ug/ml	98
9) 2-Chlorophenol	8.86	128	52218	20.49	ug/ml	97
10) 1,3-Dichlorobenzene	9.10	146	60258	21.74	ug/ml	98
11) 1,4-Dichlorobenzene	9.23	146	60145	21.25	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	58805	21.95	ug/ml	97
13) Benzyl Alcohol	9.50	108	26802	19.32	ug/ml	92
14) Bis(2-chloroisopropyl) Eth	9.71	45	48580	13.84	ug/ml	96
15) 2-Methylphenol	9.74	107	36353	20.21	ug/ml	99
16) Hexachloroethane	10.03	117	26386	22.40	ug/ml	99
17) N-Nitrosodi-n-propylamine	9.94	70	29246	17.04	ug/ml	96
18) 4-Methylphenol	10.00	107	53273	20.47	ug/ml	97
20) Nitrobenzene	10.17	77	45215	18.37	ug/ml	96
22) Isophorone	10.58	82	86501	19.96	ug/ml	96
23) 2-Nitrophenol	10.70	139	28411	22.76	ug/ml	96
24) 2,4-Dimethylphenol	10.85	122	38077	22.56	ug/ml	98
25) Bis(2-chloroethoxy)methane	10.98	93	56109	20.31	ug/ml	99

(#) = qualifier out of range (m) = manual integration 10/2/14
0930F006.D 093014BNC7.M Wed Oct 01 14:34:47 2014 Page 1

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:56 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.13	162	42189	23.41 ug/ml	95
27) Benzoic Acid	11.07	122	16922	15.27 ug/ml	99
28) 1,2,4-Trichlorobenzene	11.23	180	51155	24.79 ug/ml	98
29) Naphthalene	11.35	128	126689	21.87 ug/ml	99
30) 4-Chloroaniline	11.48	127	53756	22.12 ug/ml	97
31) Hexachlorobutadiene	11.57	225	31871	25.00 ug/ml	100
32) 4-Chloro-3-methylphenol	12.34	107	39220	23.49 ug/ml#	67
33) 2-Methylnaphthalene	12.49	142	85451	23.96 ug/ml	96
35) Hexachlorocyclopentadiene	12.74	237	21816	13.74 ug/ml	96
36) 2,4,6-Trichlorophenol	12.98	196	29797	21.77 ug/ml	99
37) 2,4,5-Trichlorophenol	13.06	196	31360	20.54 ug/ml	96
39) 2-Chloronaphthalene	13.27	162	88709	21.84 ug/ml	98
40) 2-Nitroaniline	13.47	65	21439	18.29 ug/ml	95
41) Acenaphthylene	13.94	152	133006	21.57 ug/ml	99
42) Dimethyl Phthalate	13.80	163	91154	20.58 ug/ml	100
43) 2,6-Dinitrotoluene	13.88	165	23366	22.79 ug/ml	87
44) Acenaphthene	14.22	154	69108	20.29 ug/ml	99
45) 3-Nitroaniline	14.15	138	23913	21.20 ug/ml	98
46) 2,4-Dinitrophenol	14.34	184	6159	10.74 ug/ml	92
47) Dibenzofuran	14.50	168	115529	21.82 ug/ml	97
48) 4-Nitrophenol	14.53	109	10638	20.88 ug/ml	81
49) 2,4-Dinitrotoluene	14.53	165	28584	21.95 ug/ml	98
50) 2,3,4,6-Tetrachlorophenol	14.74	232	24669	21.12 ug/ml	85
51) Fluorene	15.06	166	88546	23.02 ug/ml	99
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	46513	22.94 ug/ml	93
53) Diethyl Phthalate	14.94	149	102256	22.96 ug/ml	96
54) 4-Nitroaniline	15.13	138	23214	20.80 ug/ml	97
55) 2-Methyl-4,6-dinitrophenol	15.19	198	14443	20.74 ug/ml	100
56) N-Nitrosodiphenylamine	15.29	169	63139	22.68 ug/ml	100
57) 1,2-Diphenylhydrazine	15.34	77	88779	19.76 ug/ml	95
60) 4-Bromophenyl Phenyl Ether	15.88	248	32718	22.34 ug/ml	95
61) Hexachlorobenzene	15.94	284	40926	22.12 ug/ml	92
62) Pentachlorophenol	16.30	266	10291	11.86 ug/ml	97
63) Phenanthrene	16.61	178	121401	20.18 ug/ml	99
64) Anthracene	16.69	178	123842	20.75 ug/ml	99
65) Carbazole	16.98	167	113687	20.56 ug/ml	100
66) Di-n-butyl Phthalate	17.61	149	160383	21.65 ug/ml	100
67) Fluoranthene	18.54	202	140540	24.22 ug/ml	99
69) Benzidine	18.80	184	41429	22.79 ug/ml	98
70) Pyrene	18.89	202	156798	21.05 ug/ml	97
72) Butyl Benzyl Phthalate	20.03	149	72055	21.12 ug/ml	97

(#) = qualifier out of range (m) = manual integration

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:56 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73)	3,3'-Dichlorobenzidine	20.95	252	55959	20.53	ug/ml	96
74)	Benz(a)anthracene	20.95	228	131414	21.30	ug/ml	99
75)	Chrysene	21.02	228	126090	21.30	ug/ml	99
76)	Bis(2-ethylhexyl) Phthalat	21.14	149	92175	19.53	ug/ml	97
78)	Di-n-octyl Phthalate	22.59	149	169013	17.72	ug/ml	97
79)	Benzo(b)fluoranthene	23.26	252	127757	20.35	ug/ml	99
80)	Benzo(k)fluoranthene	23.32	252	126156	20.35	ug/ml	97
81)	Benzo(a)pyrene	23.98	252	121361	20.07	ug/ml	98
82)	Indeno(1,2,3-cd)pyrene	26.54	276	110799	18.95	ug/ml	99
83)	Dibenz(a,h)anthracene	26.62	278	119574	19.66	ug/ml	96
84)	Benzo(g,h,i)perylene	27.12	276	126049	20.12	ug/ml	98

(#) = qualifier out of range (m) = manual integration
0930F006.D 093014BNC7.M Wed Oct 01 14:34:47 2014 Page 3

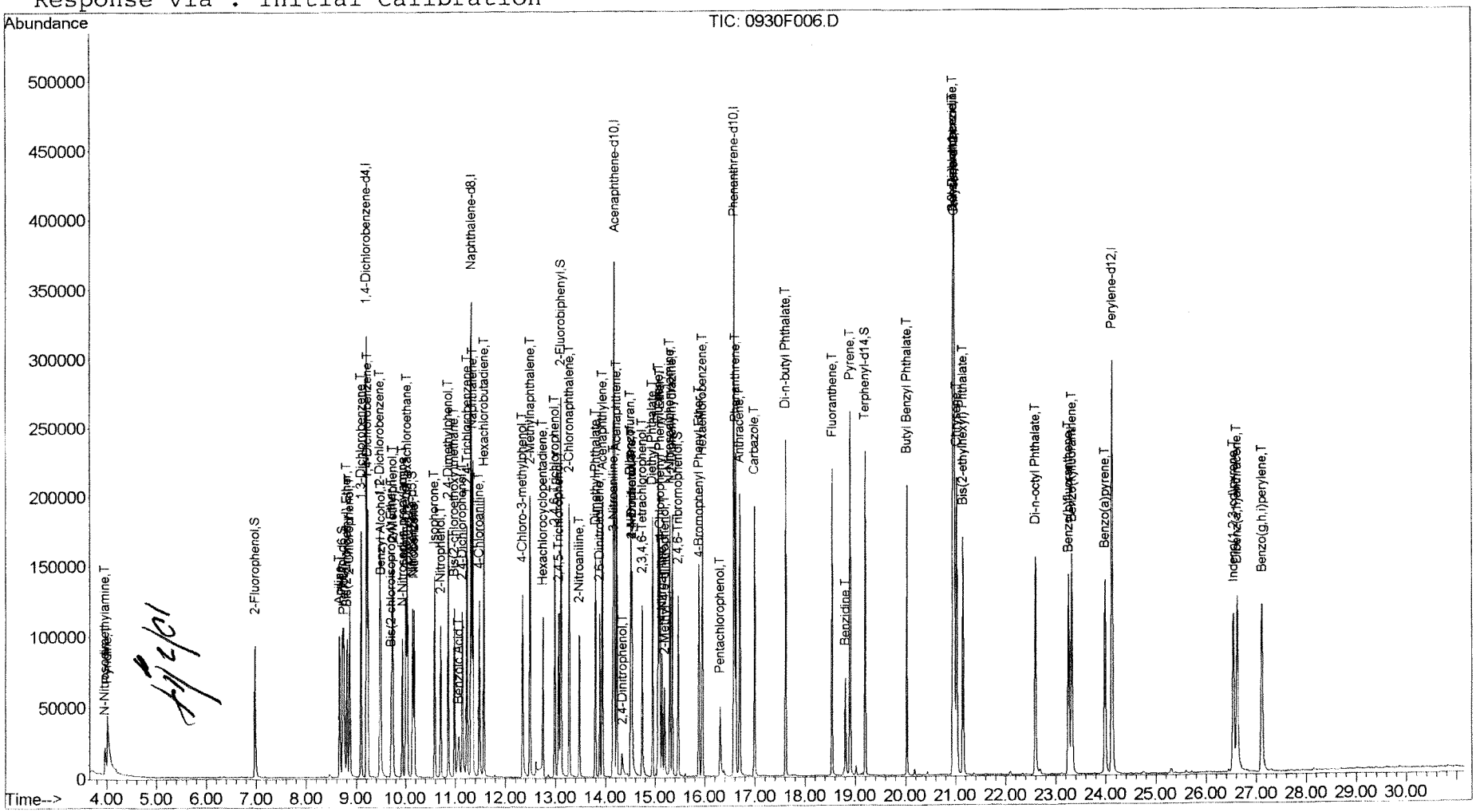
10/3/14

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:04 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration

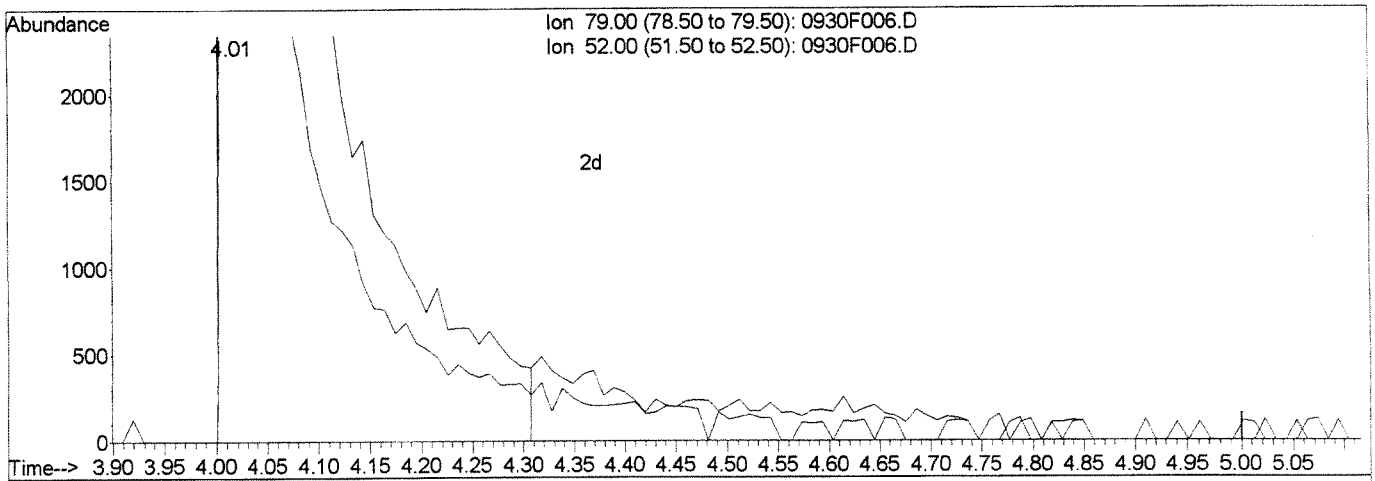


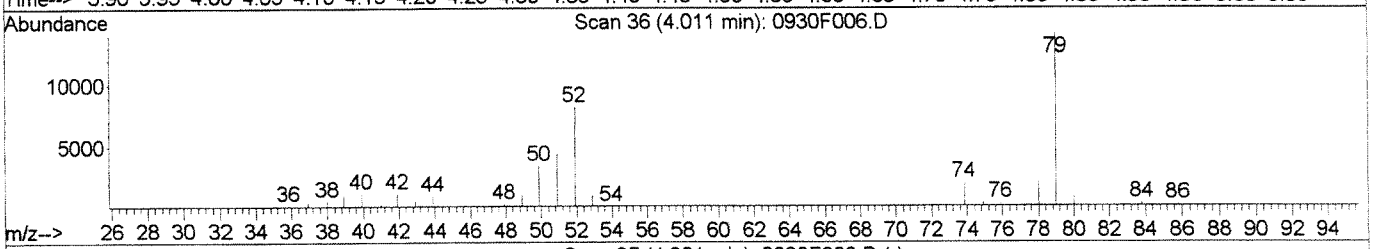
Quantitation Report (Qedit)

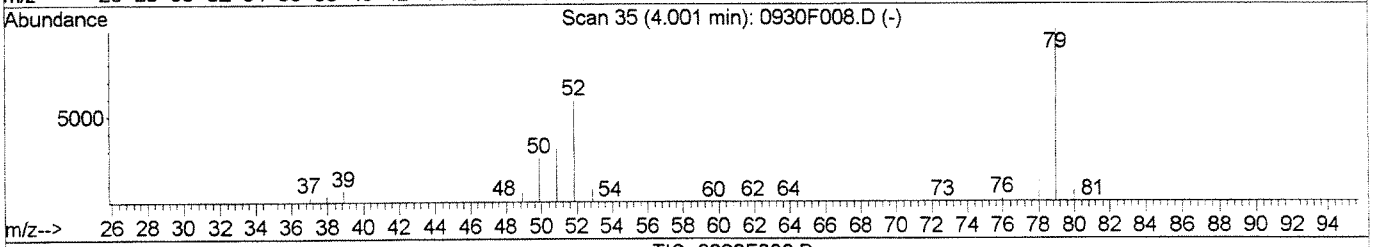
Data File : J:\MS07\DATA\093014\0930F006.D
Acq On : 30 Sep 2014 11:06 pm
Sample : 8270 ICAL @ 20 ppm | SVM47-14E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:40 2014

Vial: 6
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F006.D

(3) Pyridine (T)

4.01min 17.48ug/ml

response 52112

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.05
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

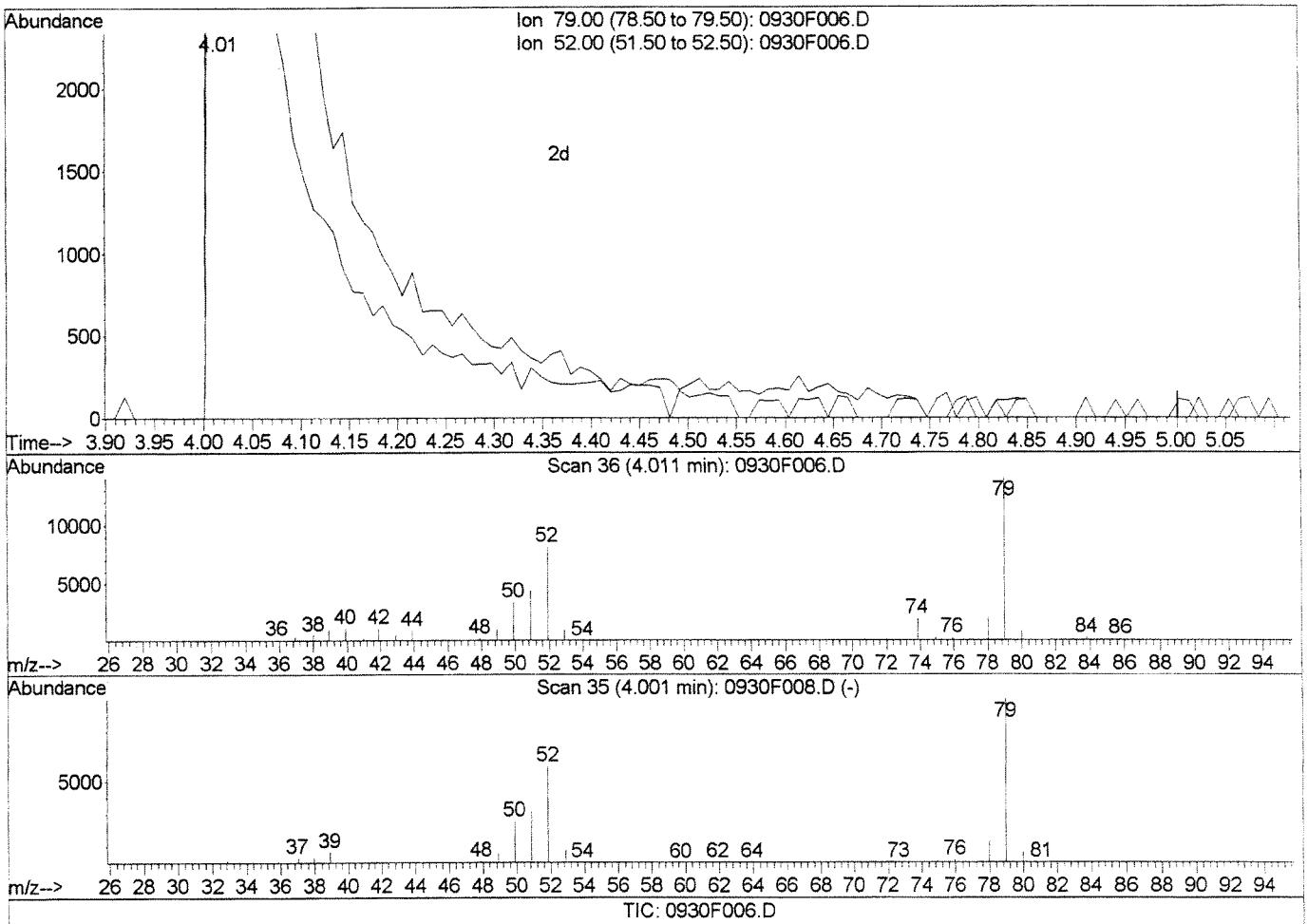
TRT

0930F006.D 093014BNC7.M Wed Oct 01 13:04:24 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:04 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F006.D

(3) Pyridine (T)

4.01min 19.35ug/ml m

response 57704

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.11
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/1/14

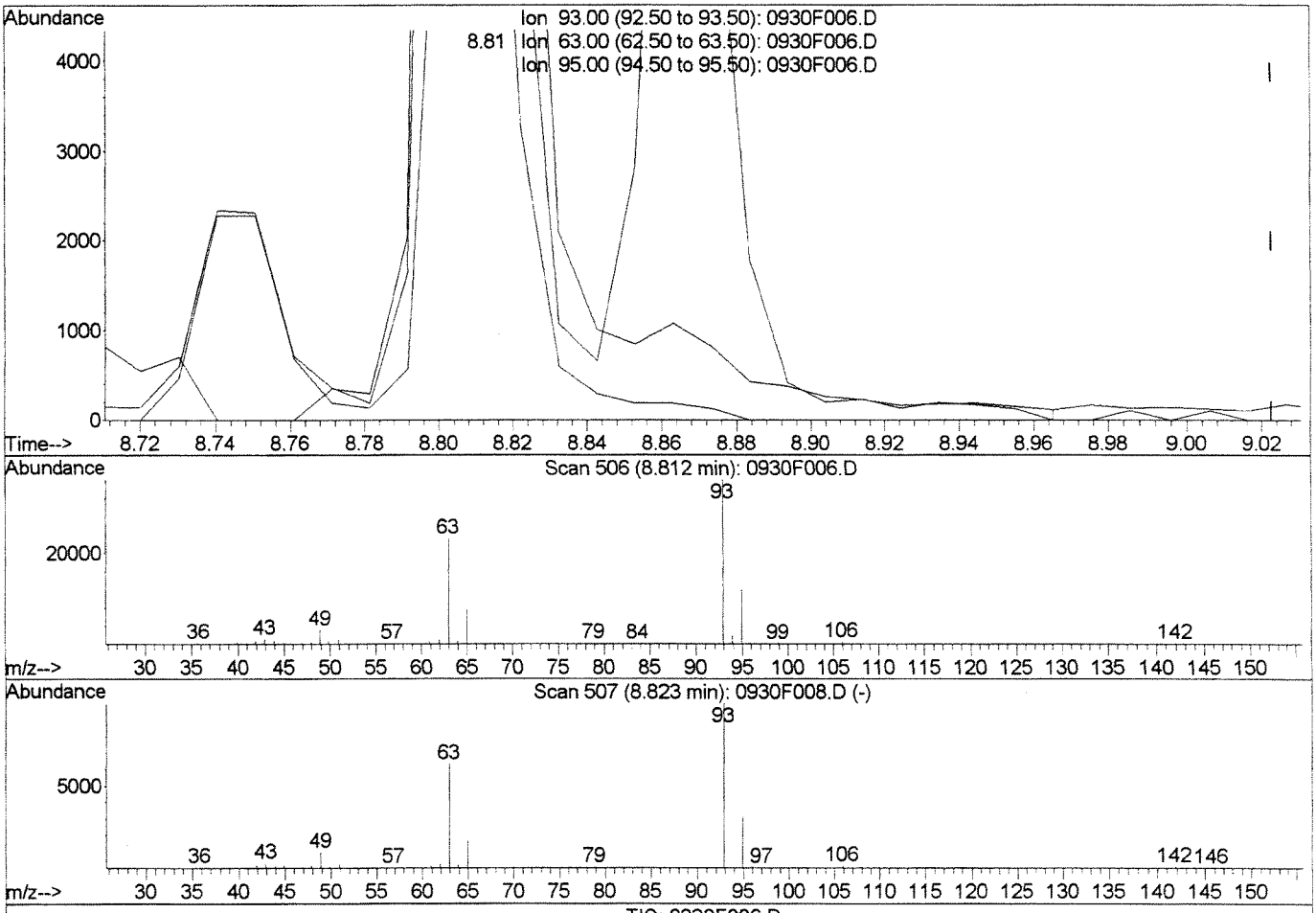
TRT

0930F006.D 093014BNC7.M Wed Oct 01 13:04:31 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:04 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F006.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 19.07ug/ml

response 49727

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	63.38
95.00	32.50	32.13
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14
J

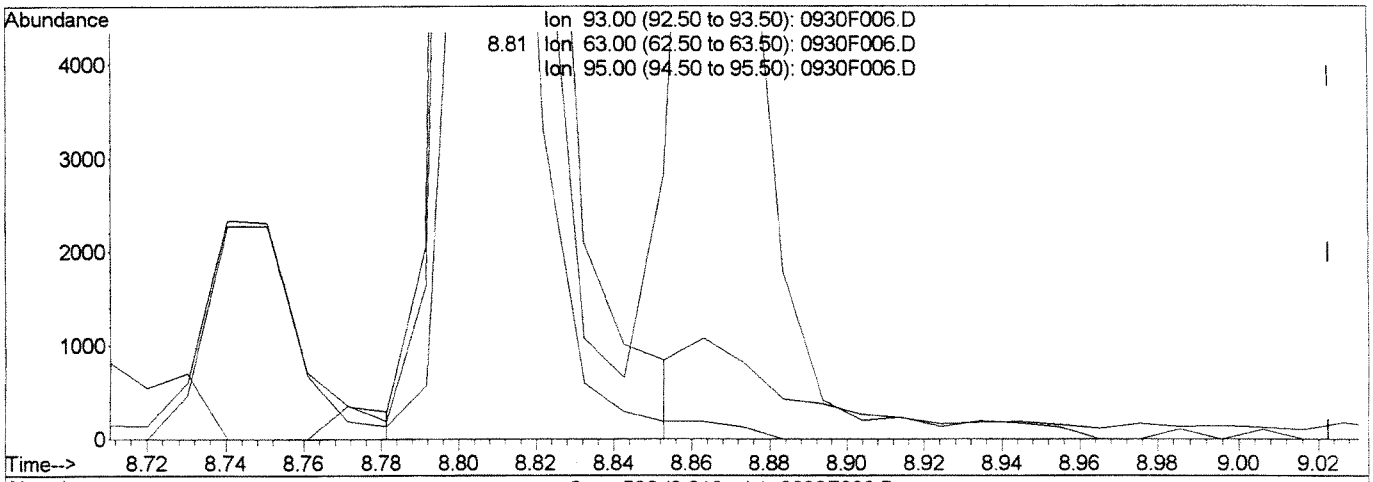
TRT

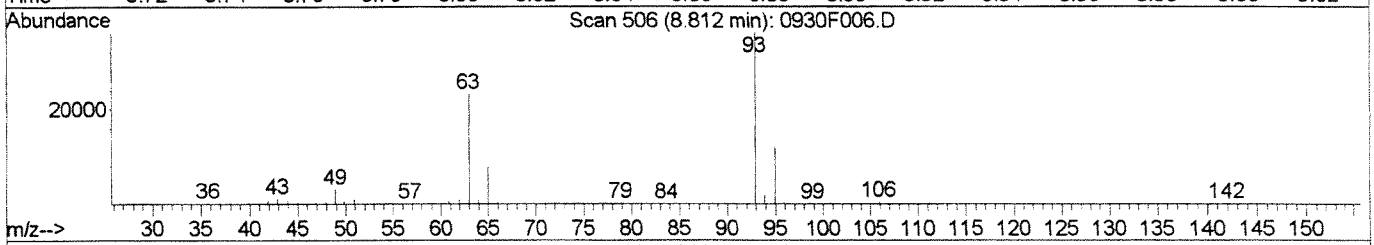
0930F006.D 093014BNC7.M Wed Oct 01 13:04:48 2014

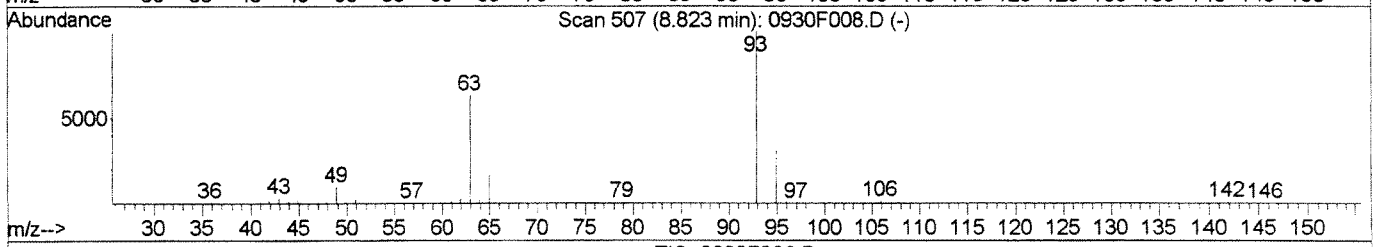
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F006.D Vial: 6
Acq On : 30 Sep 2014 11:06 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 20 ppm | SVM47-14E Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:04 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F006.D

(6) Bis(2-chloroethyl) Ether (T)

8.81min 17.99ug/ml m

response 46902

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.26
95.00	32.50	33.01
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

TRT

0930F006.D 093014BNC7.M Wed Oct 01 13:04:56 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	77438	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	264918	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	123753	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	220775	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	232819	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	245972	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	111639	45.02	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 30.01%			
7) Phenol-d6	8.73	99	132726	43.20	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 28.80%			
19) Nitrobenzene-d5	10.15	82	118875	43.59	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 43.59%			
38) 2-Fluorobiphenyl	13.11	172	230940	52.82	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 52.82%			
59) 2,4,6-Tribromophenol	15.47	330	64831	58.80	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 39.20%			
71) Terphenyl-d14	19.20	244	270223	57.81	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 57.81%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	56708	54.11	ug/ml	93
3) Pyridine	4.01	79	140806m	46.21	ug/ml	
5) Aniline	8.67	93	135008	41.93	ug/ml	97
6) Bis(2-chloroethyl) Ether	8.82	93	97567m	36.61	ug/ml	
8) Phenol	8.75	94	124677	40.72	ug/ml	94
9) 2-Chlorophenol	8.87	128	127773	49.05	ug/ml	97
10) 1,3-Dichlorobenzene	9.10	146	146678	51.79	ug/ml	97
11) 1,4-Dichlorobenzene	9.24	146	146265	50.55	ug/ml	99
12) 1,2-Dichlorobenzene	9.48	146	138863	50.72	ug/ml	97
13) Benzyl Alcohol	9.50	108	66954	47.23	ug/ml	95
14) Bis(2-chloroisopropyl) Eth	9.73	45	114856	32.01	ug/ml	93
15) 2-Methylphenol	9.75	107	82560	44.91	ug/ml	98
16) Hexachloroethane	10.03	117	60420	50.18	ug/ml	84
17) N-Nitrosodi-n-propylamine	9.95	70	74405	42.43	ug/ml	95
18) 4-Methylphenol	10.00	107	126983	47.74	ug/ml	99
20) Nitrobenzene	10.18	77	110559	43.95	ug/ml	99
22) Isophorone	10.60	82	187740	42.10	ug/ml	99
23) 2-Nitrophenol	10.71	139	70679	55.00	ug/ml	97
24) 2,4-Dimethylphenol	10.86	122	91743	52.82	ug/ml	97
25) Bis(2-chloroethoxy)methane	10.98	93	128983	45.36	ug/ml	99

(#) = qualifier out of range (m) = manual integration
0930F007.D 093014BNC7.M Wed Oct 01 14:34:50 2014 10/2/14 Page 1

OCT 0 6 2014 TDT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	107964	58.20	ug/ml	97
27) Benzoic Acid	11.12	122	52604	46.11	ug/ml	95
28) 1,2,4-Trichlorobenzene	11.23	180	123009	57.92	ug/ml	97
29) Naphthalene	11.35	128	300258	50.35	ug/ml	99
30) 4-Chloroaniline	11.48	127	128241	51.26	ug/ml	98
31) Hexachlorobutadiene	11.57	225	81737	62.29	ug/ml	99
32) 4-Chloro-3-methylphenol	12.34	107	92059	53.56	ug/ml	78
33) 2-Methylnaphthalene	12.49	142	202345	55.13	ug/ml	96
35) Hexachlorocyclopentadiene	12.74	237	72531	48.99	ug/ml	98
36) 2,4,6-Trichlorophenol	12.99	196	75797	59.39	ug/ml	97
37) 2,4,5-Trichlorophenol	13.06	196	78292	55.02	ug/ml	98
39) 2-Chloronaphthalene	13.27	162	202319	53.44	ug/ml	99
40) 2-Nitroaniline	13.48	65	52175	47.74	ug/ml	97
41) Acenaphthylene	13.94	152	297844	51.80	ug/ml	100
42) Dimethyl Phthalate	13.80	163	227509	55.11	ug/ml	100
43) 2,6-Dinitrotoluene	13.89	165	56772	59.40	ug/ml	81
44) Acenaphthene	14.22	154	168973	53.22	ug/ml	98
45) 3-Nitroaniline	14.16	138	59332	56.41	ug/ml	93
46) 2,4-Dinitrophenol	14.33	184	25405	47.52	ug/ml	86
47) Dibenzofuran	14.51	168	272724	55.24	ug/ml	97
48) 4-Nitrophenol	14.53	109	28656	60.32	ug/ml	86
49) 2,4-Dinitrotoluene	14.54	165	69221	57.02	ug/ml	95
50) 2,3,4,6-Tetrachlorophenol	14.74	232	62890	57.75	ug/ml	97
51) Fluorene	15.07	166	202234	56.39	ug/ml	98
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	108667	57.49	ug/ml	99
53) Diethyl Phthalate	14.95	149	227668	54.83	ug/ml	96
54) 4-Nitroaniline	15.15	138	61555	59.16	ug/ml	98
55) 2-Methyl-4,6-dinitrophenol	15.19	198	45020	69.33	ug/ml	100
56) N-Nitrosodiphenylamine	15.29	169	150937	58.16	ug/ml	98
57) 1,2-Diphenylhydrazine	15.35	77	193214	46.14	ug/ml	97
60) 4-Bromophenyl Phenyl Ether	15.88	248	74796	54.81	ug/ml	98
61) Hexachlorobenzene	15.95	284	99712	57.84	ug/ml	96
62) Pentachlorophenol	16.31	266	40136m	49.65	ug/ml	
63) Phenanthrene	16.61	178	275210	49.11	ug/ml	98
64) Anthracene	16.69	178	275698	49.58	ug/ml	100
65) Carbazole	16.99	167	280507	54.44	ug/ml	99
66) Di-n-butyl Phthalate	17.61	149	372047	53.91	ug/ml	98
67) Fluoranthene	18.53	202	325985	60.29	ug/ml	98
69) Benzidine	18.80	184	74113	44.27	ug/ml	97
70) Pyrene	18.90	202	359746	52.47	ug/ml	97
72) Butyl Benzyl Phthalate	20.02	149	169985	54.11	ug/ml	97

(#) = qualifier out of range (m) = manual integration

OCT 01 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.95	252	132587	52.82	ug/ml	99
74) Benz(a)anthracene	20.95	228	290913	51.21	ug/ml	99
75) Chrysene	21.02	228	283645	52.03	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	217456	50.03	ug/ml	99
78) Di-n-octyl Phthalate	22.59	149	421762	45.87	ug/ml	100
79) Benzo(b)fluoranthene	23.26	252	310711	51.34	ug/ml	100
80) Benzo(k)fluoranthene	23.32	252	298775	50.01	ug/ml	97
81) Benzo(a)pyrene	23.99	252	300426	51.55	ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.55	276	269990	47.91	ug/ml	97
83) Dibenz(a,h)anthracene	26.63	278	279091	47.61	ug/ml	98
84) Benzo(g,h,i)perylene	27.12	276	279579	46.30	ug/ml	96

(#) = qualifier out of range (m) = manual integration
0930F007.D 093014BNC7.M Wed Oct 01 14:34:51 2014 Page 3

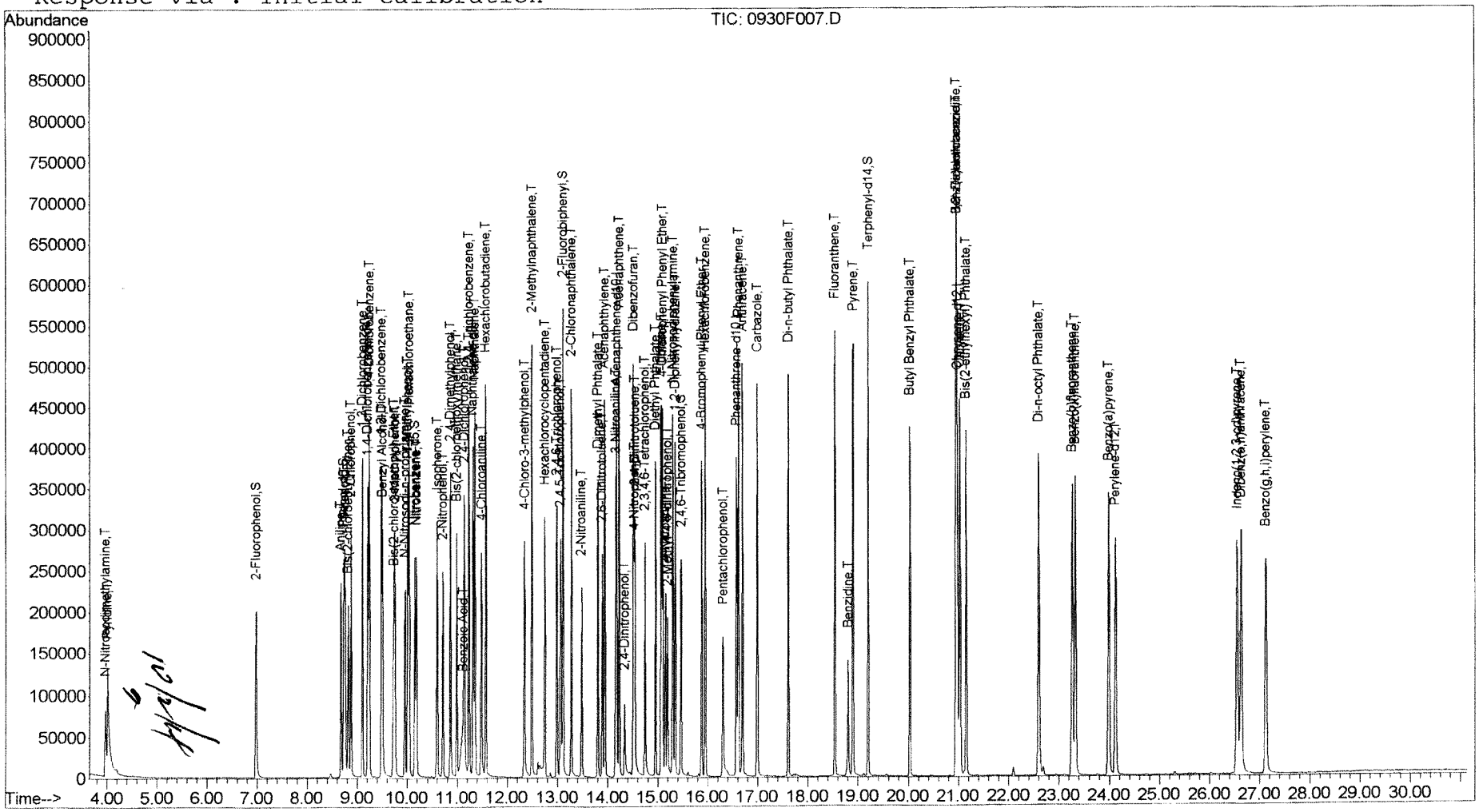
10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:08 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



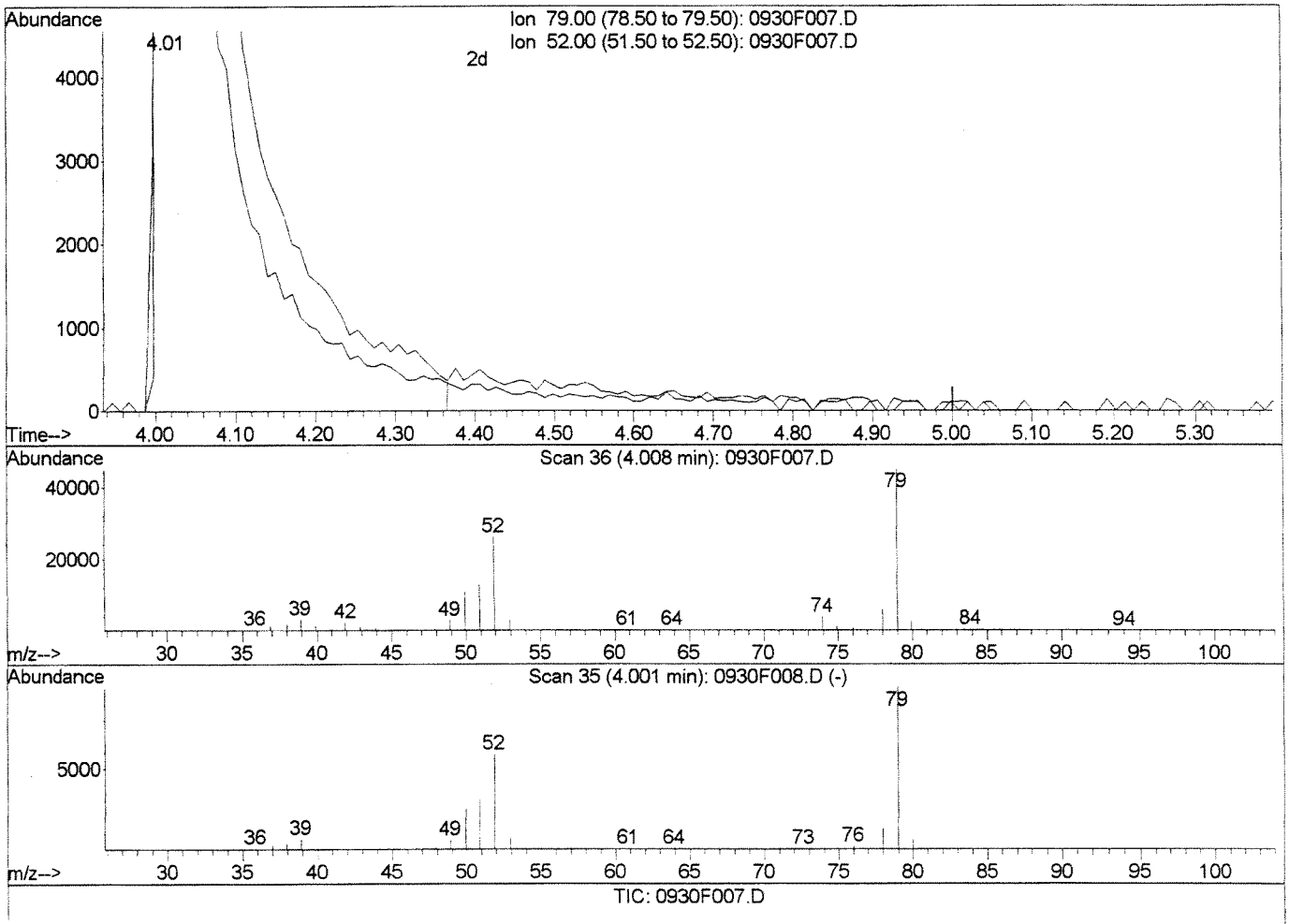
2778

OCT 01 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:40 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F007.D

(3) Pyridine (T)

4.01min 44.00ug/ml

response 134072

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.11
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

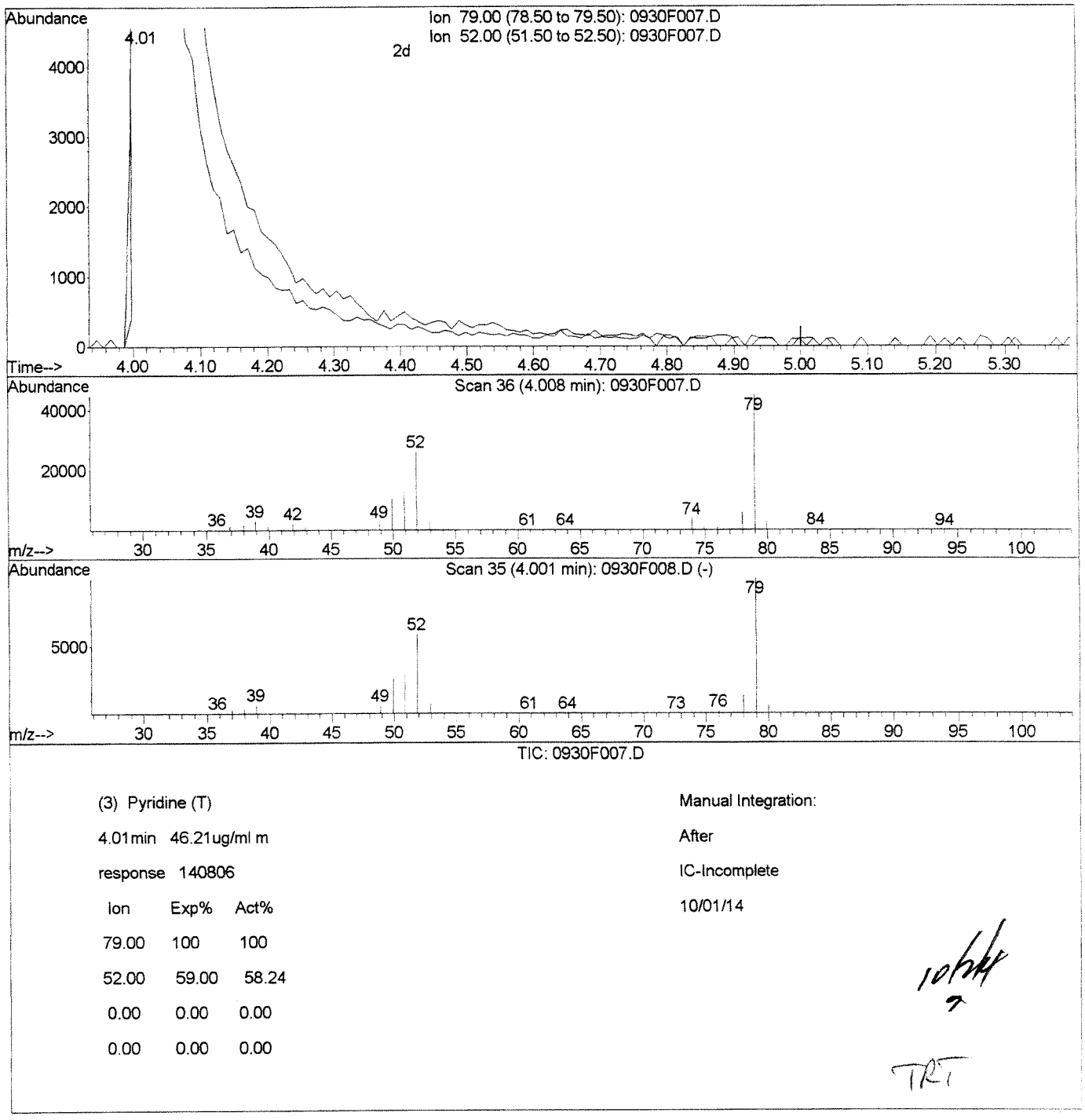
0930F007.D 093014BNC7.M Wed Oct 01 13:06:51 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F007.D
Acq On : 30 Sep 2014 11:46 pm
Sample : 8270 ICAL @ 50 ppm | SVM47-14F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:06 2014

Vial: 7
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F007.D

(3) Pyridine (T)

4.01min 46.21ug/ml m

response 140806

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.24
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/1/14

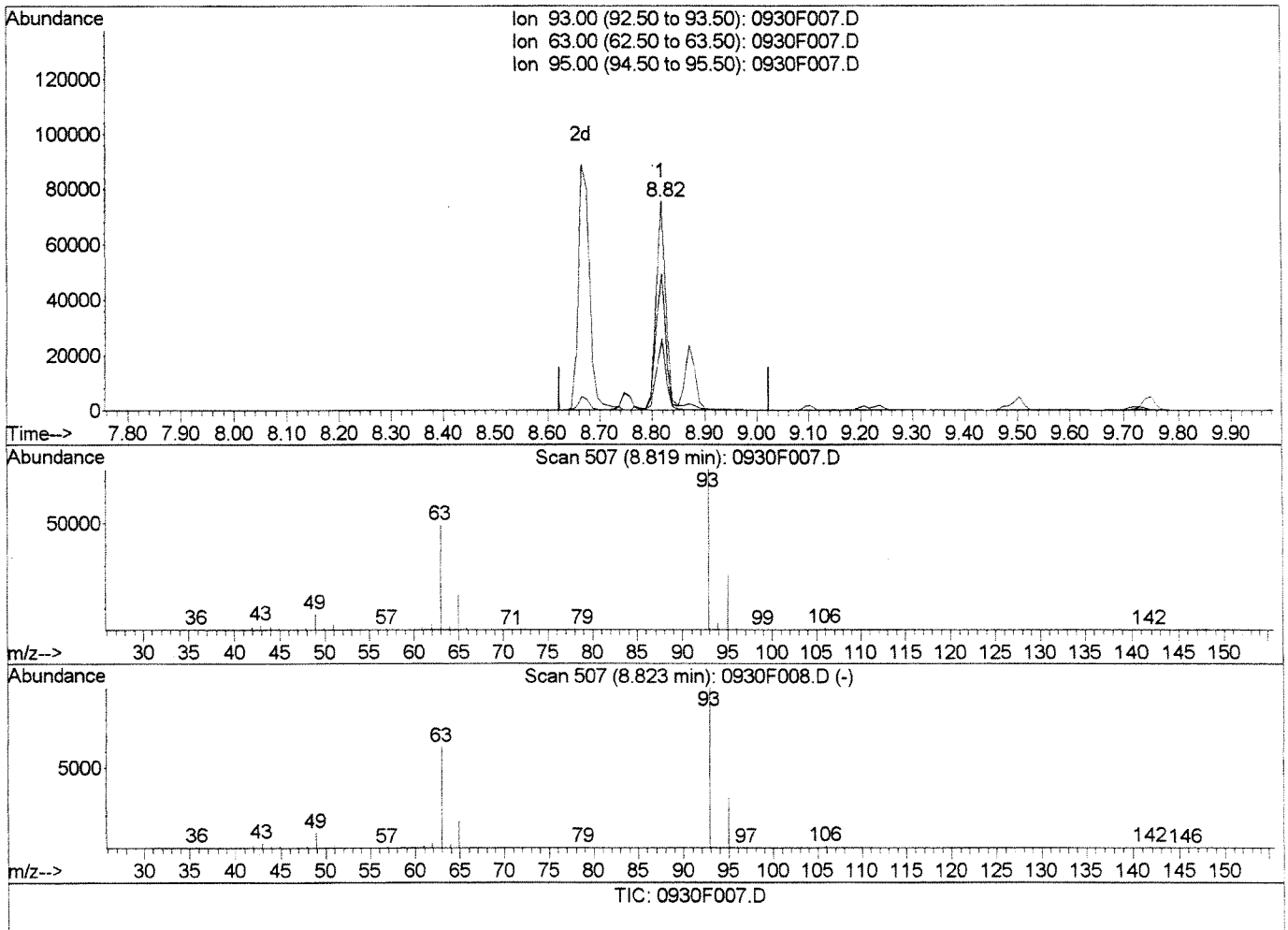
RT

0930F007.D 093014BNC7.M Wed Oct 01 13:06:58 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F007.D Vial: 7
Acq On : 30 Sep 2014 11:46 pm Operator: T. THOMAS
Sample : 8270 ICAL @ 50 ppm | SVM47-14F Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:06 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F007.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 39.17ug/ml

response 104370

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	61.72
95.00	32.50	31.10
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TRT

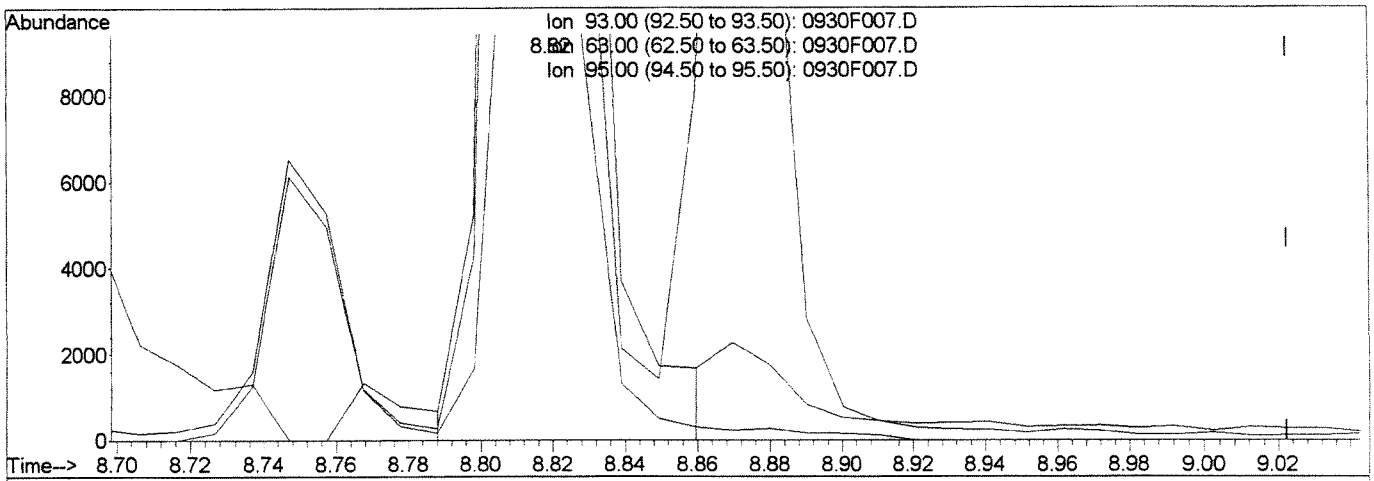
0930F007.D 093014BNC7.M Wed Oct 01 13:07:05 2014

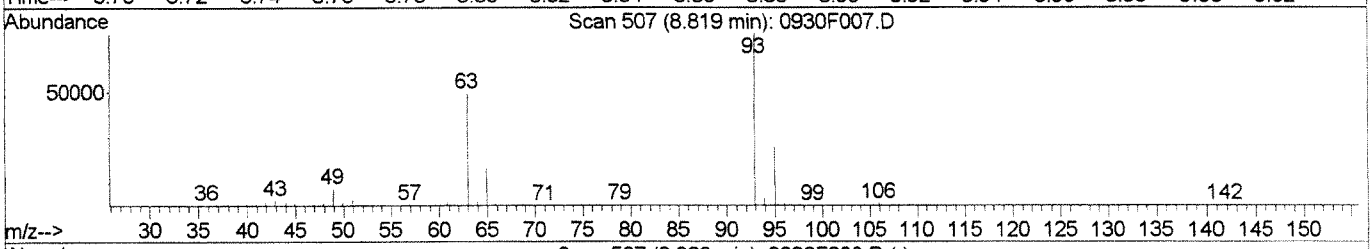
Quantitation Report (Qedit)

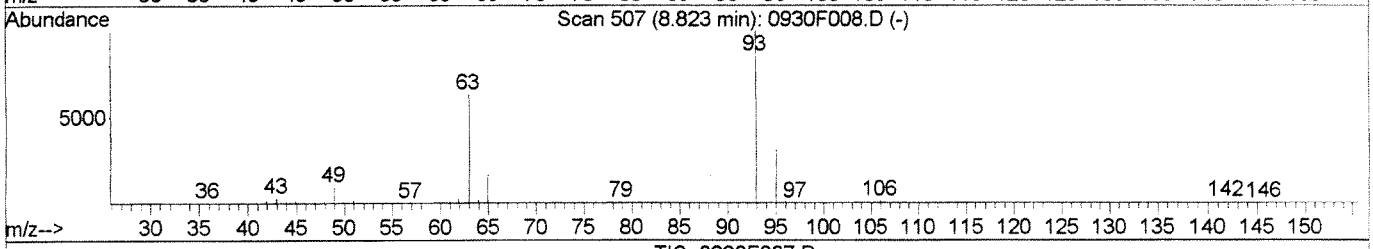
Data File : J:\MS07\DATA\093014\0930F007.D
Acq On : 30 Sep 2014 11:46 pm
Sample : 8270 ICAL @ 50 ppm | SVM47-14F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:07 2014

Vial: 7
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F007.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 36.61ug/ml m

response 97567

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	65.19
95.00	32.50	34.34
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

12/2/14

TRS

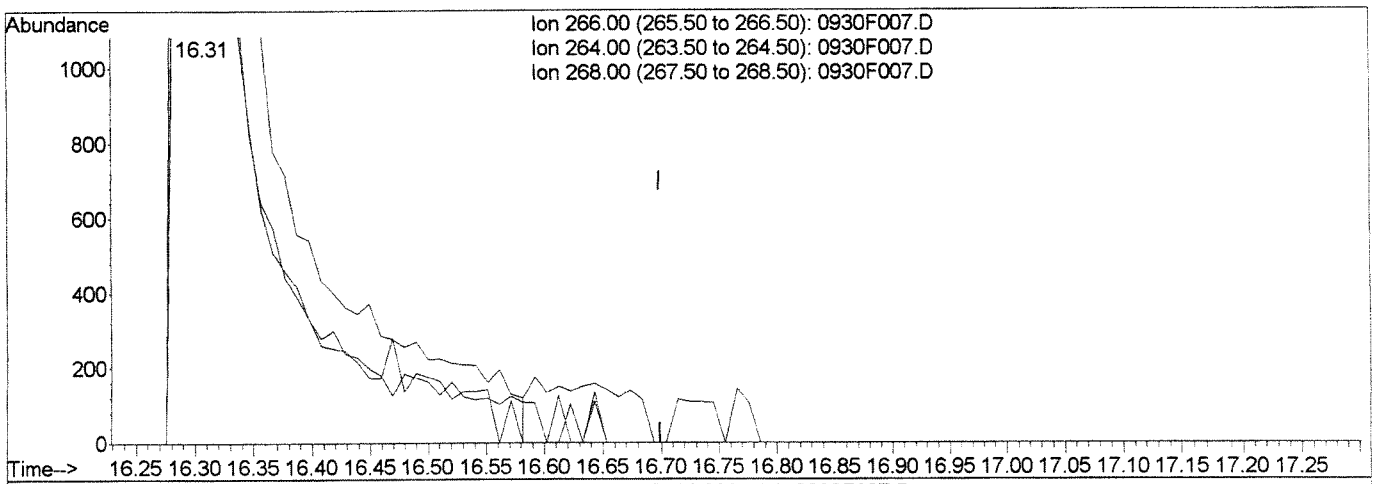
0930F007.D 093014BNC7.M Wed Oct 01 13:07:13 2014

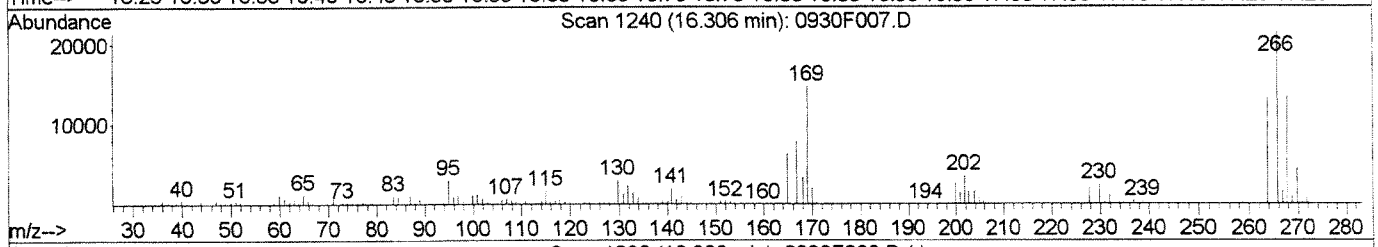
Quantitation Report (Qedit)

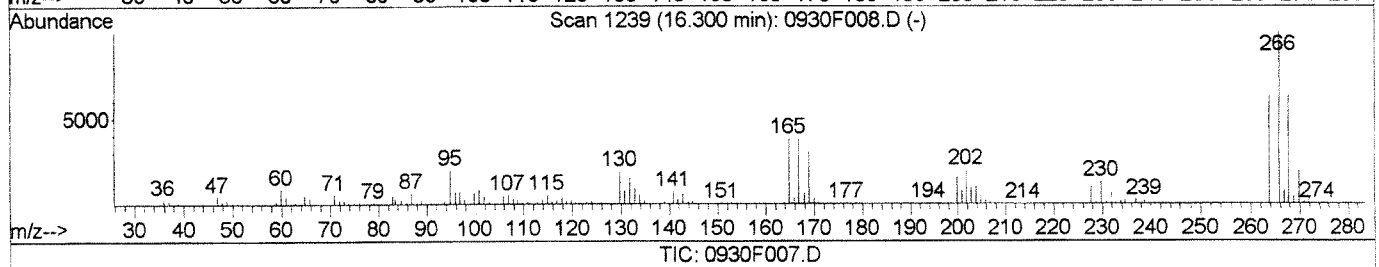
Data File : J:\MS07\DATA\093014\0930F007.D
Acq On : 30 Sep 2014 11:46 pm
Sample : 8270 ICAL @ 50 ppm | SVM47-14F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:07 2014

Vial: 7
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F007.D

(62) Pentachlorophenol (T)

16.31min 48.57ug/ml

response 39266

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.89
268.00	63.20	62.90
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

TRT

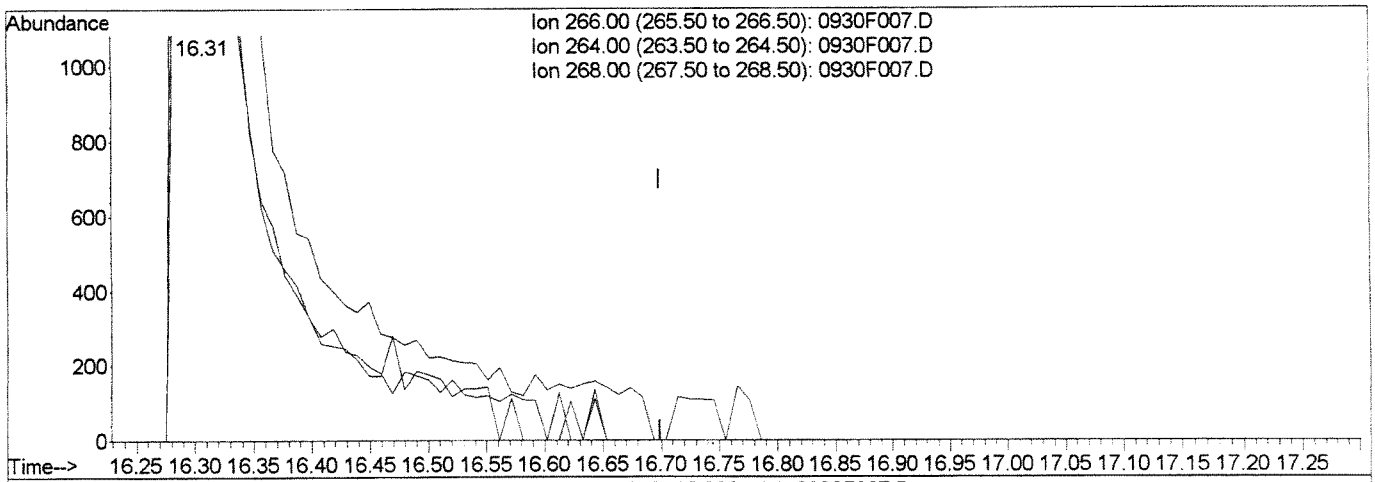
0930F007.D 093014BNC7.M Wed Oct 01 13:08:02 2014

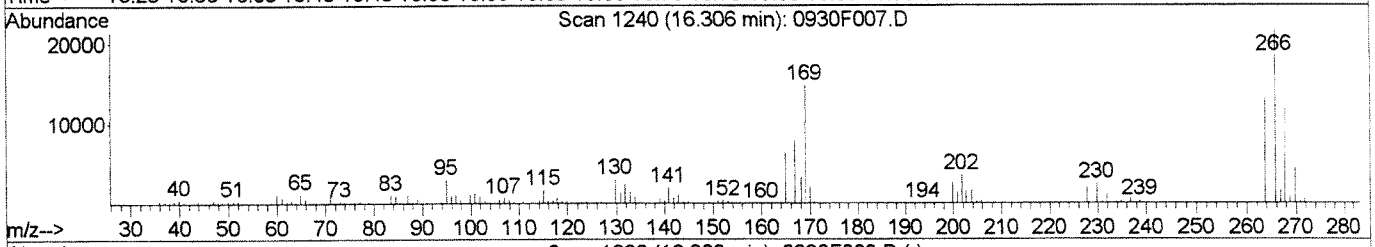
Quantitation Report (Qedit)

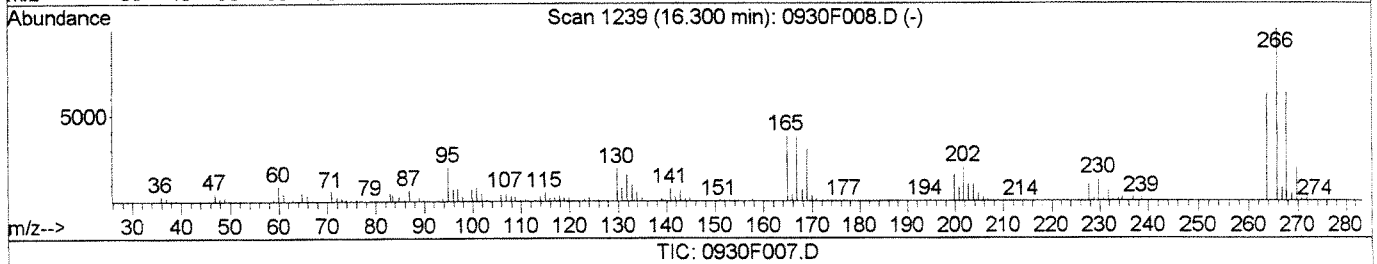
Data File : J:\MS07\DATA\093014\0930F007.D
Acq On : 30 Sep 2014 11:46 pm
Sample : 8270 ICAL @ 50 ppm | SVM47-14F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:08 2014

Vial: 7
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F007.D

(62) Pentachlorophenol (T)

16.31min 49.65ug/ml m

response 40136

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.97
268.00	63.20	62.72
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

TR

0930F007.D 093014BNC7.M Wed Oct 01 13:08:09 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:59 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	69792	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	256342	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	116440	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	235150	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	228474	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	239923	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	168516	75.40	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 50.27%			
7) Phenol-d6	8.73	99	194427	70.21	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 46.81%			
19) Nitrobenzene-d5	10.15	82	175369	71.35	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 71.35%			
38) 2-Fluorobiphenyl	13.11	172	341525	83.02	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 83.02%			
59) 2,4,6-Tribromophenol	15.47	330	104922	89.35	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.57%			
71) Terphenyl-d14	19.20	244	399151	87.02	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 87.02%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.96	42	82445	87.29	ug/ml	100
3) Pyridine	4.00	79	224935m	81.90	ug/ml	
5) Aniline	8.67	93	194820	67.13	ug/ml	100
6) Bis(2-chloroethyl) Ether	8.82	93	155188m	64.62	ug/ml	
8) Phenol	8.76	94	176100	63.82	ug/ml	100
9) 2-Chlorophenol	8.87	128	184326	78.52	ug/ml	100
10) 1,3-Dichlorobenzene	9.10	146	214873	84.18	ug/ml	100
11) 1,4-Dichlorobenzene	9.24	146	209515	80.35	ug/ml	100
12) 1,2-Dichlorobenzene	9.48	146	201128	81.51	ug/ml	100
13) Benzyl Alcohol	9.51	108	98217	76.87	ug/ml	100
14) Bis(2-chloroisopropyl) Eth	9.71	45	164009	50.71	ug/ml	100
15) 2-Methylphenol	9.75	107	122350	73.84	ug/ml	100
16) Hexachloroethane	10.03	117	84867	78.20	ug/ml	100
17) N-Nitrosodi-n-propylamine	9.96	70	100663	63.69	ug/ml	100
18) 4-Methylphenol	10.01	107	177679	74.11	ug/ml	100
20) Nitrobenzene	10.18	77	158721	70.01	ug/ml	100
22) Isophorone	10.60	82	284837	66.00	ug/ml	100
23) 2-Nitrophenol	10.71	139	105406	84.77	ug/ml	100
24) 2,4-Dimethylphenol	10.87	122	128398	76.39	ug/ml	100
25) Bis(2-chloroethoxy)methane	10.99	93	184219	66.96	ug/ml	100

(#) = qualifier out of range (m) = manual integration

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:59 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	148500	82.73 ug/ml	100
27) Benzoic Acid	11.15	122	86254	78.14 ug/ml	100
28) 1,2,4-Trichlorobenzene	11.23	180	180478	87.82 ug/ml	100
29) Naphthalene	11.35	128	446870	77.44 ug/ml	100
30) 4-Chloroaniline	11.49	127	183499	75.81 ug/ml	100
31) Hexachlorobutadiene	11.57	225	118868	93.61 ug/ml	100
32) 4-Chloro-3-methylphenol	12.34	107	133409	80.22 ug/ml	93
33) 2-Methylnaphthalene	12.49	142	279905	78.82 ug/ml	100
35) Hexachlorocyclopentadiene	12.74	237	115007	82.55 ug/ml	100
36) 2,4,6-Trichlorophenol	12.98	196	108871	90.66 ug/ml	100
37) 2,4,5-Trichlorophenol	13.05	196	117086	87.45 ug/ml	100
39) 2-Chloronaphthalene	13.28	162	292367	82.08 ug/ml	100
40) 2-Nitroaniline	13.48	65	78808	76.64 ug/ml	100
41) Acenaphthylene	13.94	152	452675	83.68 ug/ml	100
42) Dimethyl Phthalate	13.81	163	348070	89.60 ug/ml	100
43) 2,6-Dinitrotoluene	13.90	165	86067	95.71 ug/ml	100
44) Acenaphthene	14.23	154	246161	82.40 ug/ml	100
45) 3-Nitroaniline	14.16	138	87598	88.52 ug/ml	100
46) 2,4-Dinitrophenol	14.34	184	55057	109.45 ug/ml	100
47) Dibenzofuran	14.51	168	390216	84.01 ug/ml	100
48) 4-Nitrophenol	14.53	109	48948	109.51 ug/ml	100
49) 2,4-Dinitrotoluene	14.54	165	112613	98.59 ug/ml	100
50) 2,3,4,6-Tetrachlorophenol	14.75	232	100804	98.38 ug/ml	100
51) Fluorene	15.06	166	311135	92.20 ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	162299	91.25 ug/ml	100
53) Diethyl Phthalate	14.96	149	354355	90.71 ug/ml	100
54) 4-Nitroaniline	15.17	138	100364	102.51 ug/ml	100
55) 2-Methyl-4,6-dinitrophenol	15.21	198	72573	118.78 ug/ml	100
56) N-Nitrosodiphenylamine	15.30	169	235040	96.25 ug/ml	100
57) 1,2-Diphenylhydrazine	15.35	77	281947	71.56 ug/ml	100
60) 4-Bromophenyl Phenyl Ether	15.88	248	112654	77.51 ug/ml	100
61) Hexachlorobenzene	15.95	284	157863	85.97 ug/ml	100
62) Pentachlorophenol	16.30	266	78230m	90.86 ug/ml	
63) Phenanthrene	16.62	178	440365	73.78 ug/ml	100
64) Anthracene	16.70	178	447452	75.54 ug/ml	100
65) Carbazole	16.99	167	447840	81.60 ug/ml	100
66) Di-n-butyl Phthalate	17.61	149	594776	80.92 ug/ml	100
67) Fluoranthene	18.54	202	507577	88.13 ug/ml	100
69) Benzidine	18.80	184	114549	69.73 ug/ml	100
70) Pyrene	18.89	202	555326	82.53 ug/ml	100
72) Butyl Benzyl Phthalate	20.03	149	255926	83.02 ug/ml	100

(#) = qualifier out of range (m) = manual integration
0930F008.D 093014BNC7.M Wed Oct 01 14:34:53 2014 Page 2

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:40:59 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.96	252	207708	84.32 ug/ml	100
74) Benz(a)anthracene	20.96	228	450355	80.79 ug/ml	100
75) Chrysene	21.03	228	462252	86.41 ug/ml	100
76) Bis(2-ethylhexyl) Phthalat	21.15	149	353439	82.86 ug/ml	100
78) Di-n-octyl Phthalate	22.59	149	676001	75.37 ug/ml	100
79) Benzo(b)fluoranthene	23.27	252	500668	84.82 ug/ml	100
80) Benzo(k)fluoranthene	23.34	252	482543	82.80 ug/ml	100
81) Benzo(a)pyrene	24.00	252	467587	82.25 ug/ml	100
82) Indeno(1,2,3-cd)pyrene	26.57	276	425371	77.39 ug/ml	100
83) Dibenz(a,h)anthracene	26.65	278	430203m	75.23 ug/ml	
84) Benzo(g,h,i)perylene	27.15	276	437747	74.32 ug/ml	100

10/2/14

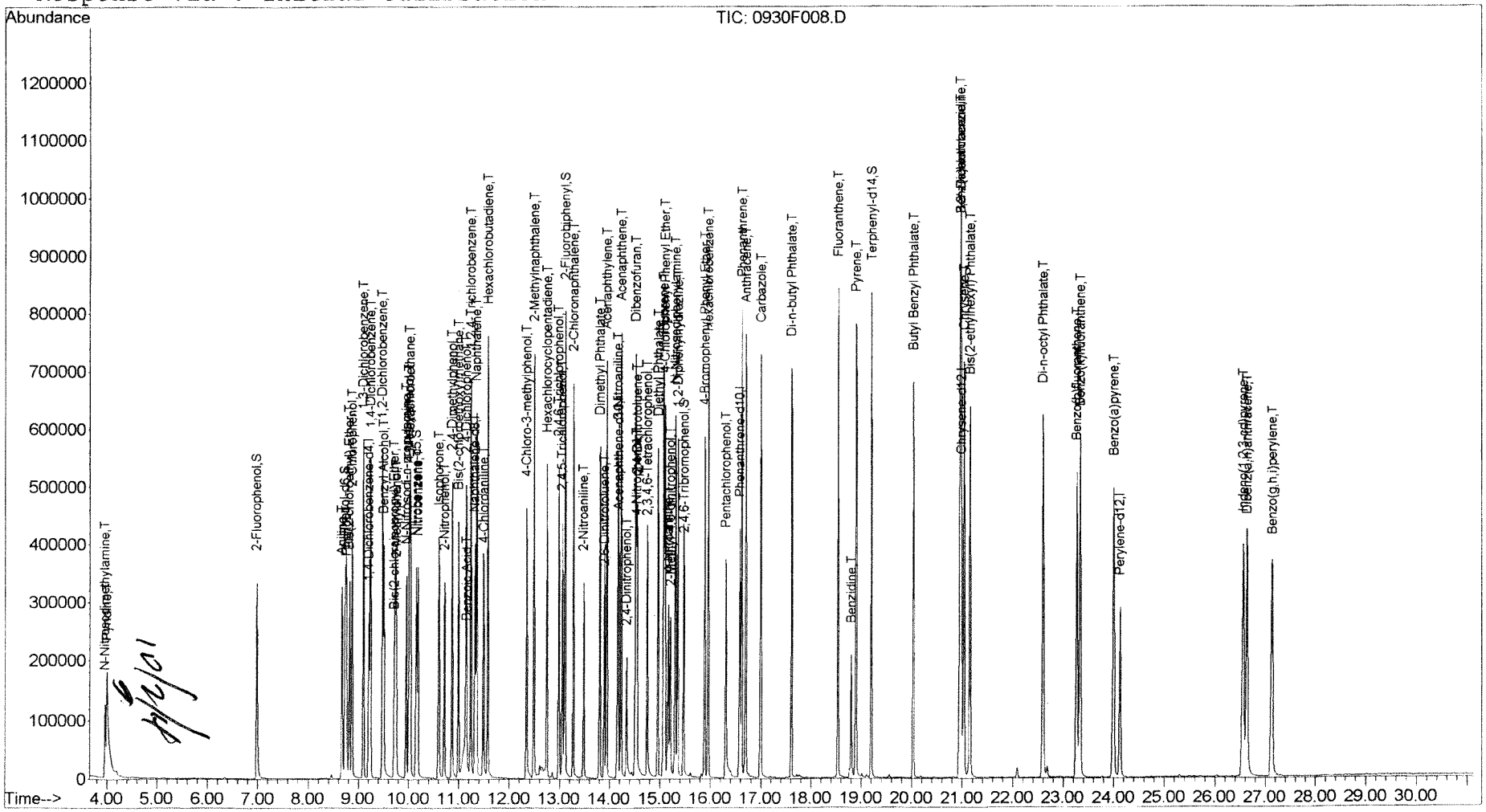
(#) = qualifier out of range (m) = manual integration
0930F008.D 093014BNC7.M Wed Oct 01 14:34:54 2014 Page 3

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:10 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2788

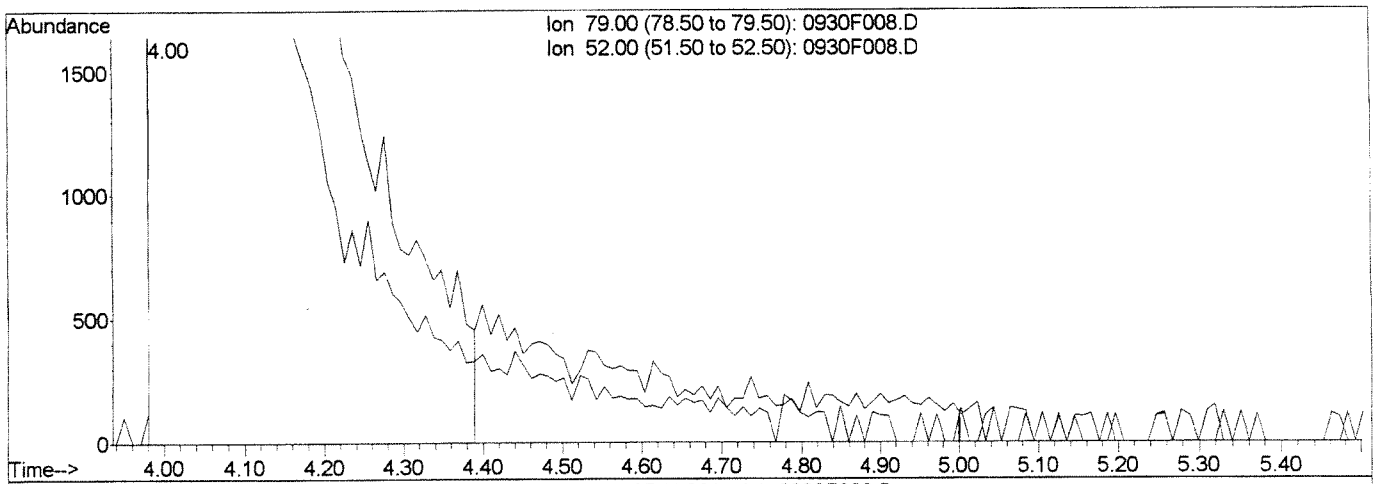
OCT 01 2014

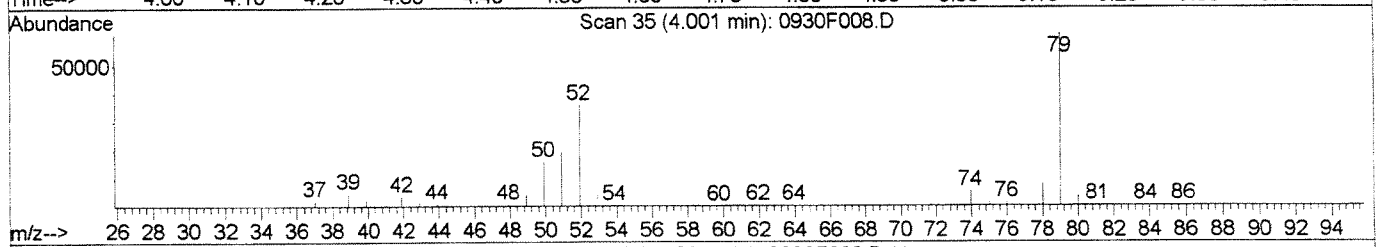
Quantitation Report (Qedit)

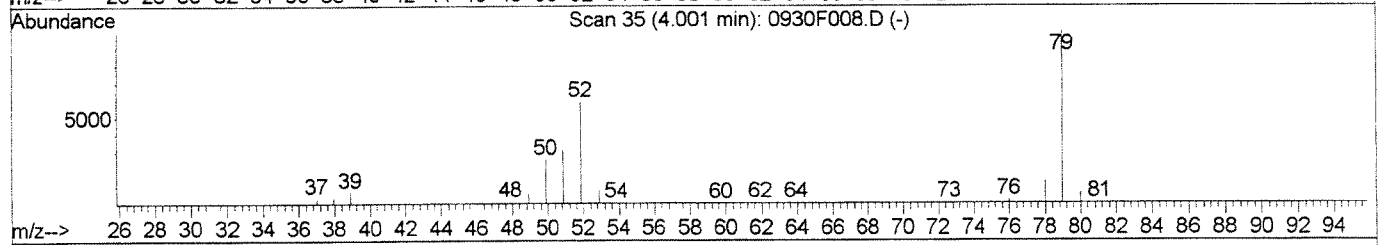
Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:41 2014

Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F008.D

(3) Pyridine (T)

4.00min 78.55ug/ml

response 215729

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.93
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

TRT

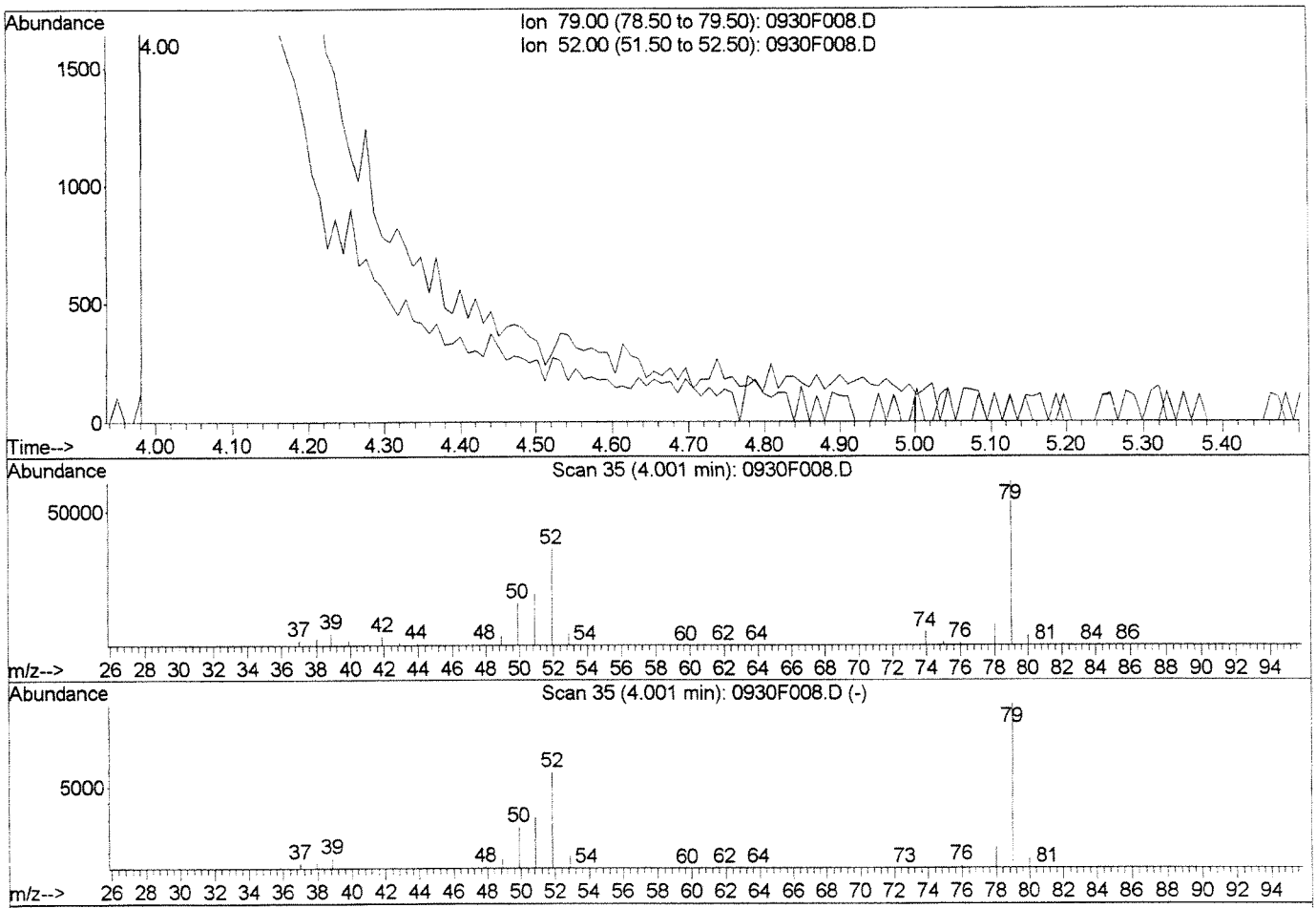
0930F008.D 093014BNC7.M Wed Oct 01 13:08:42 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:08 2014

Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F008.D

(3) Pyridine (T)

4.00min 81.90ug/ml m

response 224935

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	58.98
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

TRT

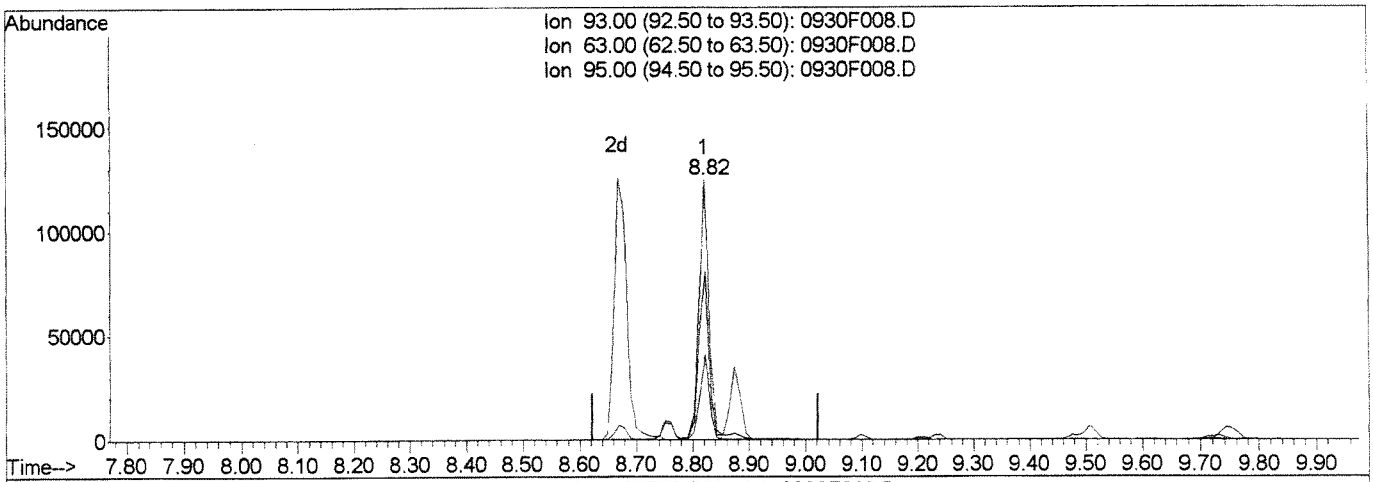
0930F008.D 093014BNC7.M Wed Oct 01 13:08:50 2014

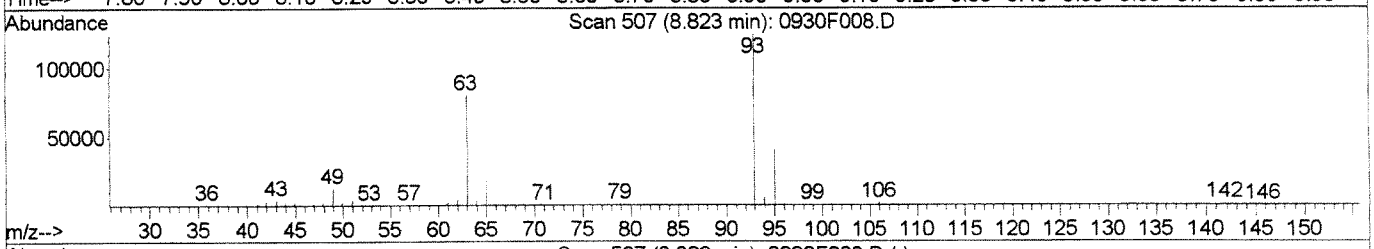
Quantitation Report (Qedit)

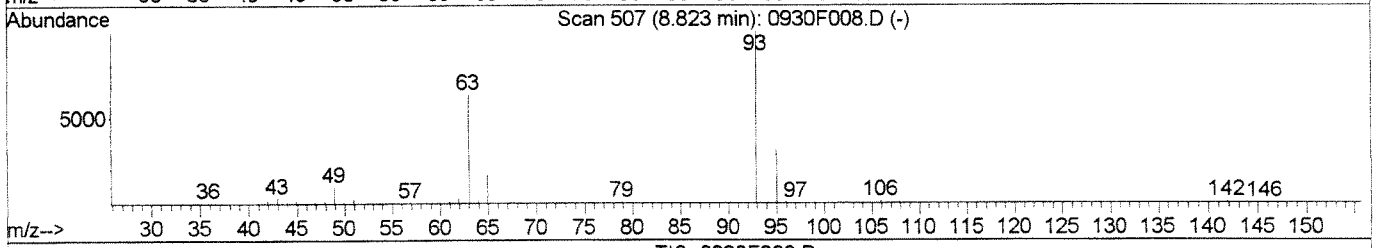
Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:08 2014

Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F008.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 67.46ug/ml

response 162019

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	63.81
95.00	32.50	31.87
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

TRT

0930F008.D 093014BNC7.M Wed Oct 01 13:08:59 2014

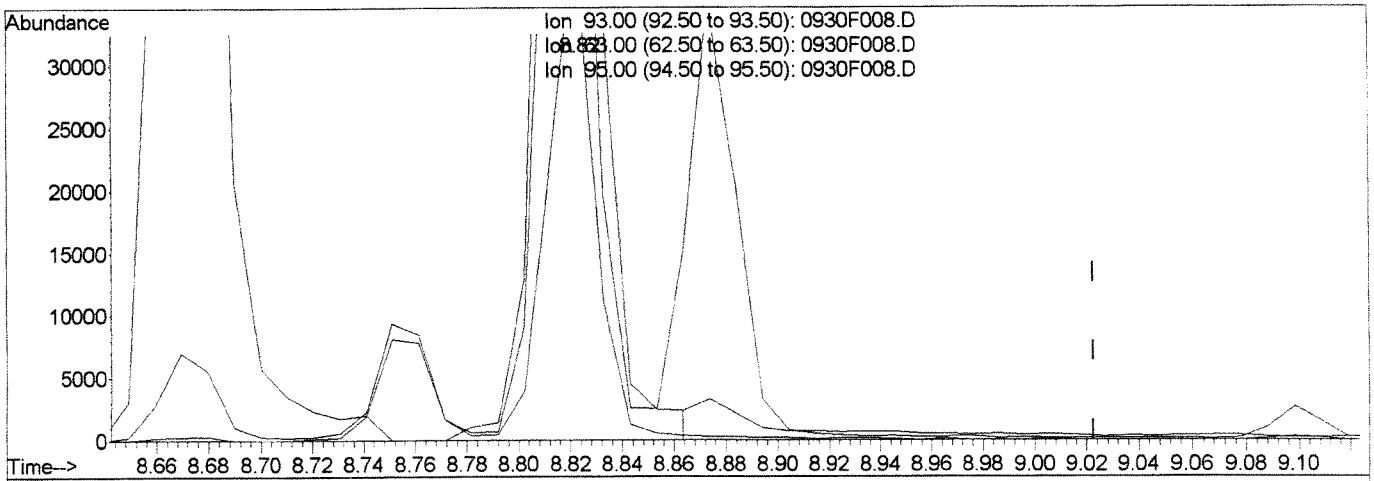
Quantitation Report (Qedit)

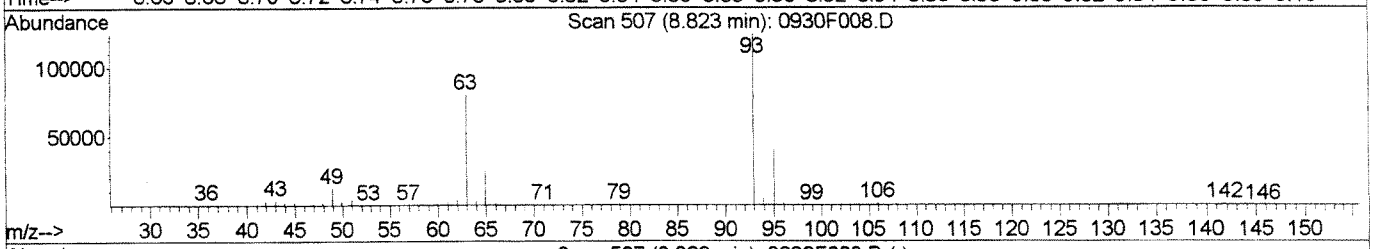
Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:09 2014

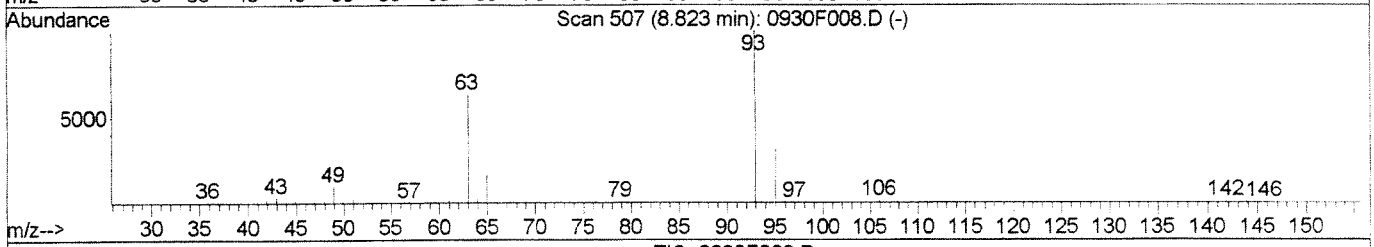
Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F008.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 64.62ug/ml m

response 155188

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.48
95.00	32.50	32.47
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

0930F008.D 093014BNC7.M Wed Oct 01 13:09:08 2014

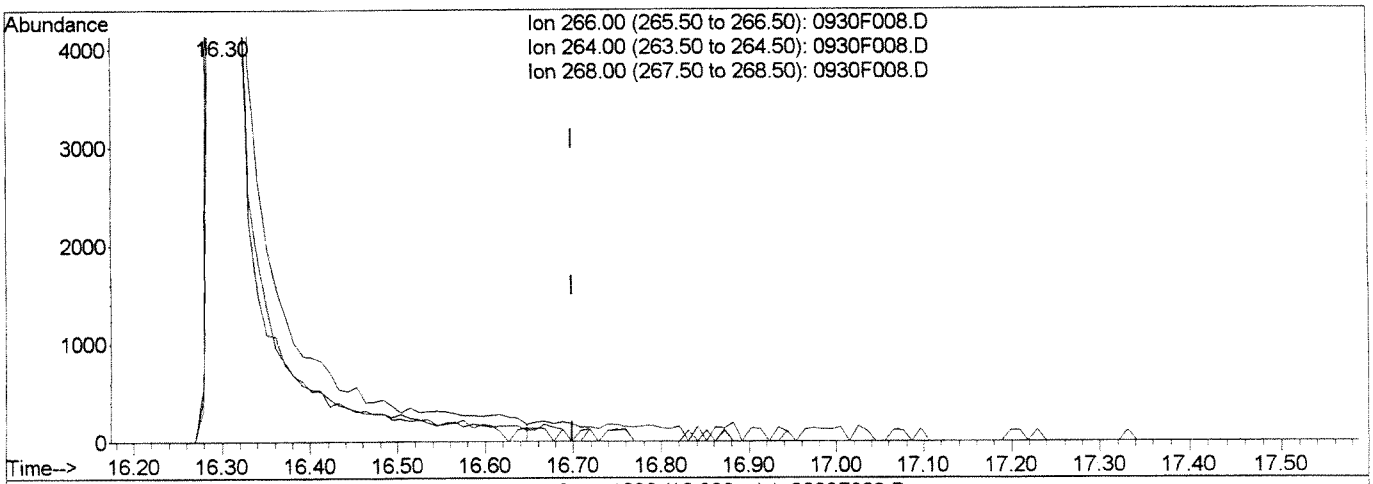
Quantitation Report (Qedit)

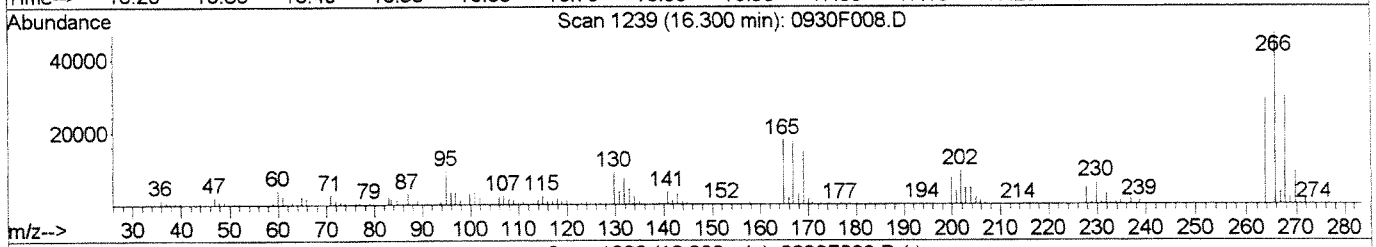
Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:09 2014

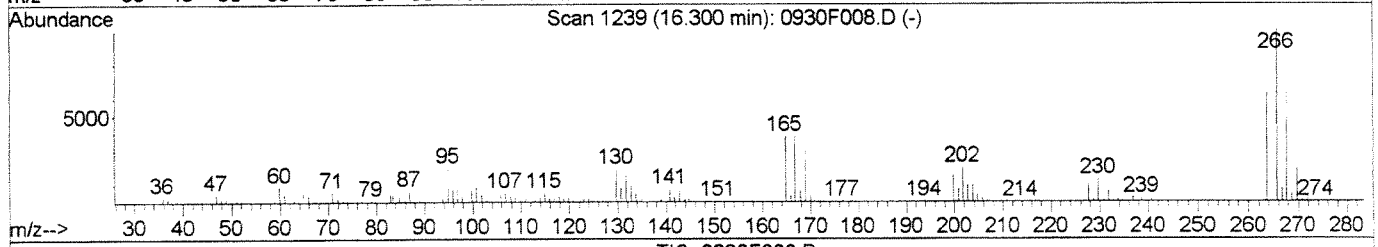
Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F008.D

(62) Pentachlorophenol (T)

16.30min 88.90ug/ml

response 76541

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.65
268.00	63.20	63.17
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

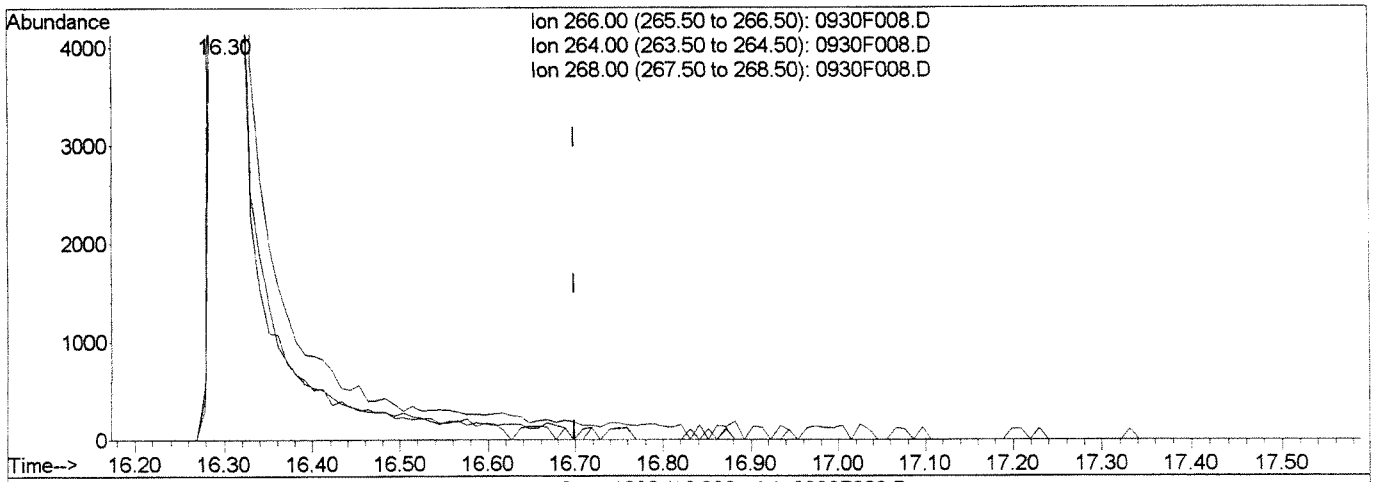
TRT

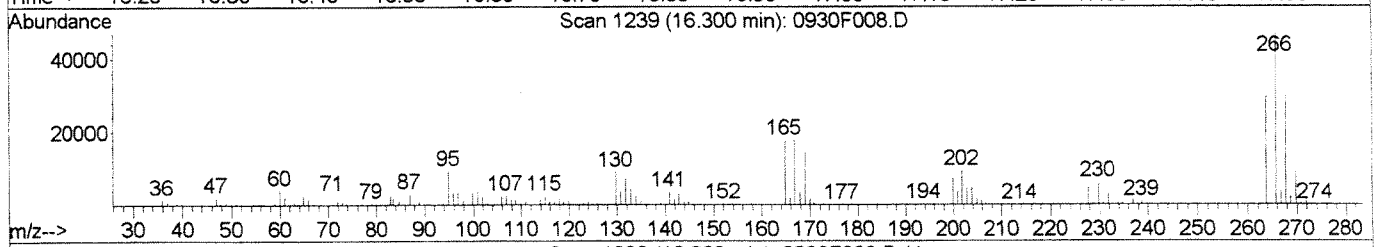
0930F008.D 093014BNC7.M Wed Oct 01 13:10:02 2014

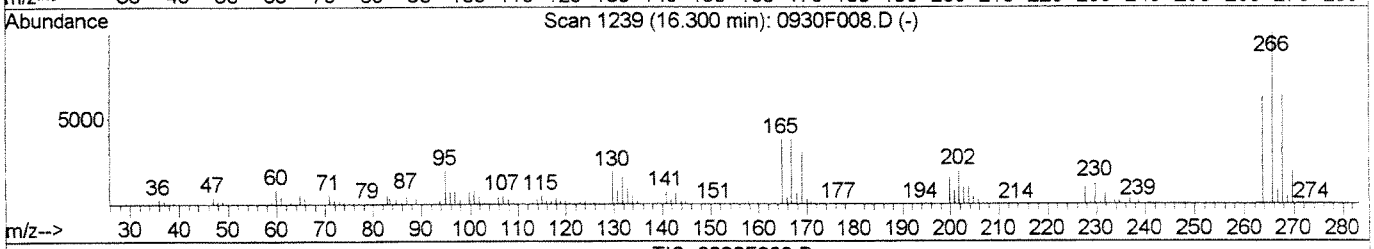
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:10 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F008.D

(62) Pentachlorophenol (T)

16.30min 90.86ug/ml m

response 78230

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.65
268.00	63.20	63.20
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/1/14

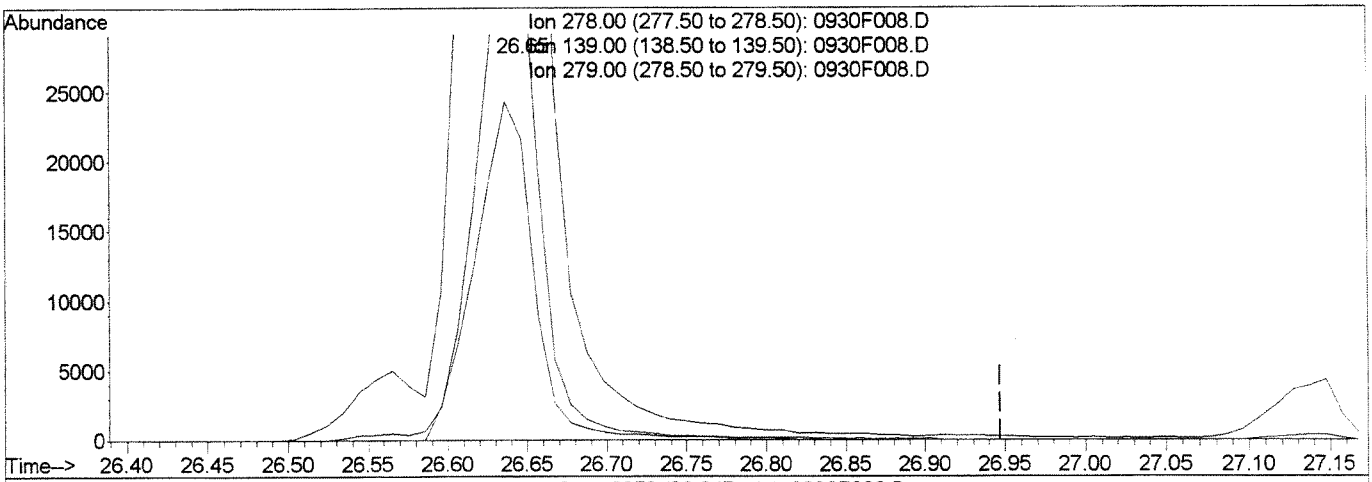
TR

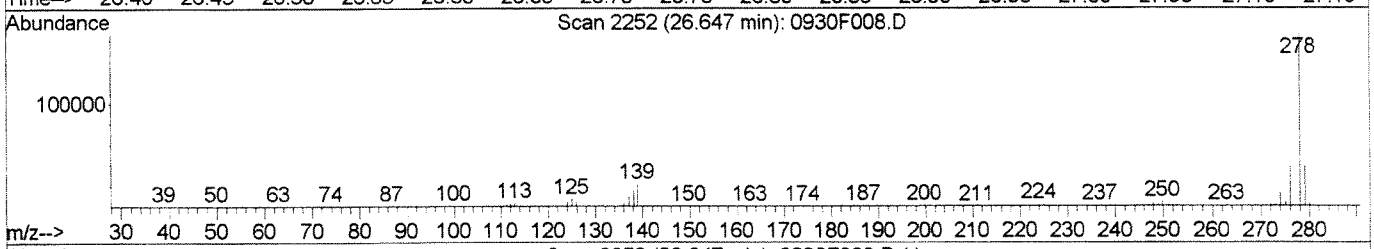
0930F008.D 093014BNC7.M Wed Oct 01 13:10:10 2014

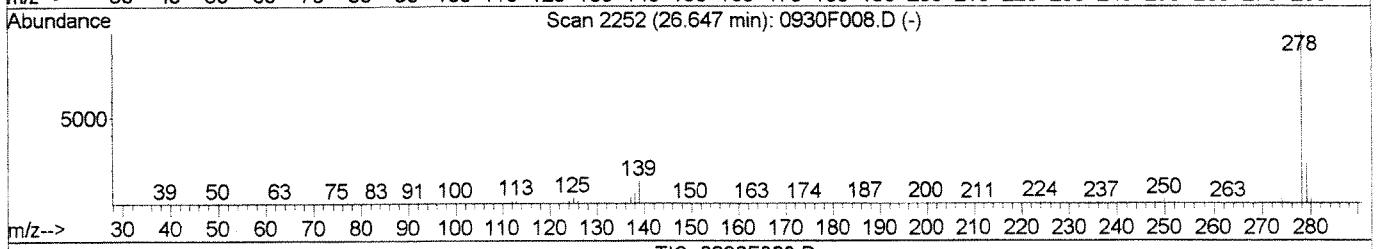
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F008.D Vial: 8
Acq On : 1 Oct 2014 12:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 80 ppm | SVM47-14G Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:10 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F008.D

(83) Dibenz(a,h)anthracene (T)

26.65min 77.78ug/ml

response 444764

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	12.98
279.00	23.50	23.54
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

TRT

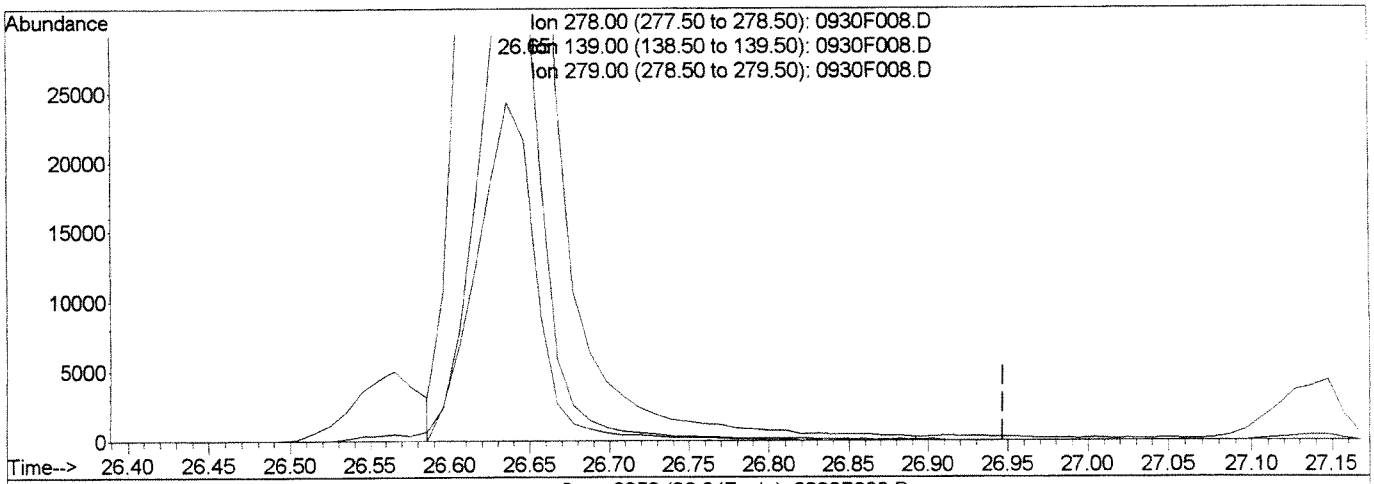
0930F008.D 093014BNC7.M Wed Oct 01 13:10:30 2014

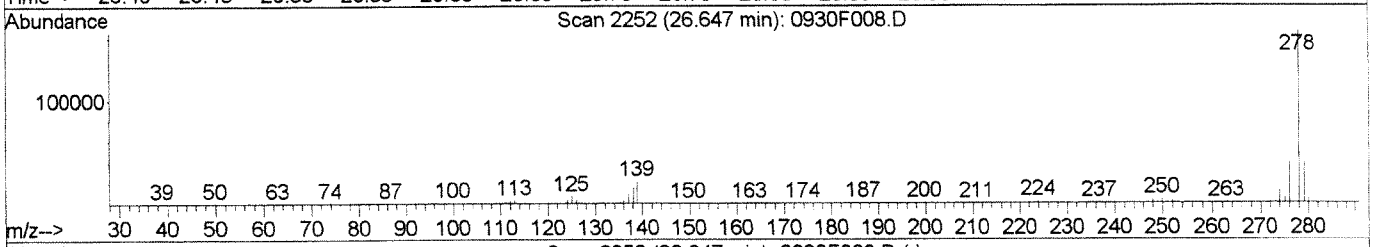
Quantitation Report (Qedit)

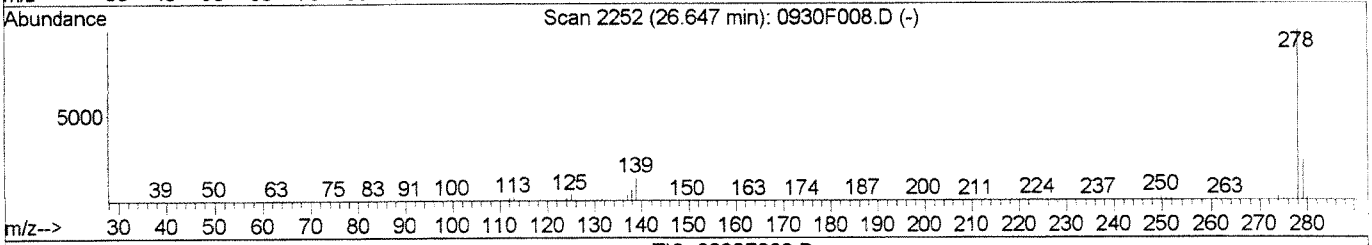
Data File : J:\MS07\DATA\093014\0930F008.D
Acq On : 1 Oct 2014 12:27 am
Sample : 8270 ICAL @ 80 ppm | SVM47-14G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:10 2014

Vial: 8
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F008.D

(83) Dibenz(a,h)anthracene (T)

26.65min 75.23ug/ml m

response 430203

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.00
279.00	23.50	23.52
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

TRT

0930F008.D 093014BNC7.M Wed Oct 01 13:10:48 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:01 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	72648	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	248377	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	111703	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	218463	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	227940	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	233876	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	220874	94.94	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 63.29%			
7) Phenol-d6	8.74	99	238025	82.58	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 55.05%			
19) Nitrobenzene-d5	10.15	82	221733	86.67	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 86.67%			
38) 2-Fluorobiphenyl	13.11	172	424923	107.67	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 107.67%			
59) 2,4,6-Tribromophenol	15.47	330	129228	118.45	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 78.97%			
71) Terphenyl-d14	19.20	244	499284	109.10	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 109.10%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	106644	108.47	ug/ml	98
3) Pyridine	4.00	79	284691m	99.59	ug/ml	
5) Aniline	8.68	93	238237	78.87	ug/ml	87
6) Bis(2-chloroethyl) Ether	8.82	93	196141	78.46	ug/ml	96
8) Phenol	8.76	94	218837	76.18	ug/ml	93
9) 2-Chlorophenol	8.88	128	235498	96.37	ug/ml	95
10) 1,3-Dichlorobenzene	9.11	146	267846	100.80	ug/ml	98
11) 1,4-Dichlorobenzene	9.24	146	254549	93.78	ug/ml	98
12) 1,2-Dichlorobenzene	9.49	146	244409	95.16	ug/ml	97
13) Benzyl Alcohol	9.52	108	120970	90.96	ug/ml	97
14) Bis(2-chloroisopropyl) Eth	9.73	45	190097	56.47	ug/ml	86
15) 2-Methylphenol	9.74	107	154375	89.51	ug/ml	88
16) Hexachloroethane	10.04	117	104696	92.68	ug/ml	76
17) N-Nitrosodi-n-propylamine	9.96	70	135684	82.47	ug/ml	98
18) 4-Methylphenol	10.02	107	217601	87.20	ug/ml	97
20) Nitrobenzene	10.19	77	189118	80.14	ug/ml	95
22) Isophorone	10.61	82	336447	80.46	ug/ml	98
23) 2-Nitrophenol	10.71	139	138691	115.12	ug/ml	98
24) 2,4-Dimethylphenol	10.86	122	161241	99.01	ug/ml	98
25) Bis(2-chloroethoxy)methane	10.99	93	219569	82.37	ug/ml	99

(#) = qualifier out of range (m) = manual integration
0930F009.D 093014BNC7.M Wed Oct 01 14:34:56 2014 Page 1

OCT 01 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:01 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	190486	109.52 ug/ml	97
27) Benzoic Acid	11.17	122	117465	109.82 ug/ml	97
28) 1,2,4-Trichlorobenzene	11.23	180	211465	106.20 ug/ml	99
29) Naphthalene	11.35	128	544764	97.44 ug/ml	99
30) 4-Chloroaniline	11.49	127	221489	94.43 ug/ml	97
31) Hexachlorobutadiene	11.57	225	150378	122.23 ug/ml	98
32) 4-Chloro-3-methylphenol	12.35	107	158828	98.57 ug/ml#	66
33) 2-Methylnaphthalene	12.49	142	344106	100.00 ug/ml	100
35) Hexachlorocyclopentadiene	12.74	237	151053	113.02 ug/ml	99
36) 2,4,6-Trichlorophenol	12.99	196	135904	117.97 ug/ml	99
37) 2,4,5-Trichlorophenol	13.05	196	151920	118.27 ug/ml	95
39) 2-Chloronaphthalene	13.27	162	355817	104.12 ug/ml	97
40) 2-Nitroaniline	13.49	65	97643	98.98 ug/ml	88
41) Acenaphthylene	13.95	152	567423	109.34 ug/ml	99
42) Dimethyl Phthalate	13.81	163	430302	115.47 ug/ml	99
43) 2,6-Dinitrotoluene	13.90	165	99768	115.65 ug/ml	88
44) Acenaphthene	14.24	154	292433	102.04 ug/ml	99
45) 3-Nitroaniline	14.16	138	106535	112.22 ug/ml	98
46) 2,4-Dinitrophenol	14.34	184	69174	143.35 ug/ml	98
47) Dibenzofuran	14.51	168	488431	109.61 ug/ml	99
48) 4-Nitrophenol	14.53	109	61696	143.89 ug/ml	95
49) 2,4-Dinitrotoluene	14.55	165	138480	126.38 ug/ml	90
50) 2,3,4,6-Tetrachlorophenol	14.75	232	120835	122.93 ug/ml	92
51) Fluorene	15.07	166	362825	112.08 ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	192649	112.91 ug/ml	98
53) Diethyl Phthalate	14.96	149	428092	114.23 ug/ml	99
54) 4-Nitroaniline	15.17	138	123324	131.31 ug/ml	99
55) 2-Methyl-4,6-dinitrophenol	15.21	198	91127	155.47 ug/ml	100
56) N-Nitrosodiphenylamine	15.31	169	288083	122.97 ug/ml	98
57) 1,2-Diphenylhydrazine	15.35	77	339843	89.91 ug/ml	97
60) 4-Bromophenyl Phenyl Ether	15.89	248	136083	100.78 ug/ml	91
61) Hexachlorobenzene	15.95	284	192373	112.77 ug/ml	95
62) Pentachlorophenol	16.31	266	101476m	126.86 ug/ml	
63) Phenanthrene	16.62	178	528466	95.31 ug/ml	99
64) Anthracene	16.71	178	527245	95.81 ug/ml	99
65) Carbazole	17.00	167	535774	105.08 ug/ml	99
66) Di-n-butyl Phthalate	17.62	149	683692	100.12 ug/ml	99
67) Fluoranthene	18.55	202	607882	113.61 ug/ml	98
69) Benzidine	18.80	184	134774	82.23 ug/ml	98
70) Pyrene	18.90	202	661104	98.48 ug/ml	98
72) Butyl Benzyl Phthalate	20.04	149	304251	98.92 ug/ml	90

(#) = qualifier out of range (m) = manual integration 10/2/14
0930F009.D 093014BNC7.M Wed Oct 01 14:34:57 2014 Page 2

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:01 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.97	252	261709	106.49 ug/ml	95
74) Benz(a)anthracene	20.96	228	558569	100.43 ug/ml	99
75) Chrysene	21.04	228	549438	102.95 ug/ml	98
76) Bis(2-ethylhexyl) Phthalat	21.15	149	432166	101.56 ug/ml	99
78) Di-n-octyl Phthalate	22.60	149	777896	88.97 ug/ml	98
79) Benzo(b)fluoranthene	23.27	252	587355	102.07 ug/ml	99
80) Benzo(k)fluoranthene	23.34	252	578393	101.82 ug/ml	99
81) Benzo(a)pyrene	24.01	252	554211	100.01 ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.57	276	520951	97.23 ug/ml	98
83) Dibenz(a,h)anthracene	26.65	278	518341m	92.99 ug/ml	
84) Benzo(g,h,i)perylene	27.15	276	525735	91.57 ug/ml	98

(#) = qualifier out of range (m) = manual integration
0930F009.D 093014BNC7.M Wed Oct 01 14:34:57 2014 Page 3

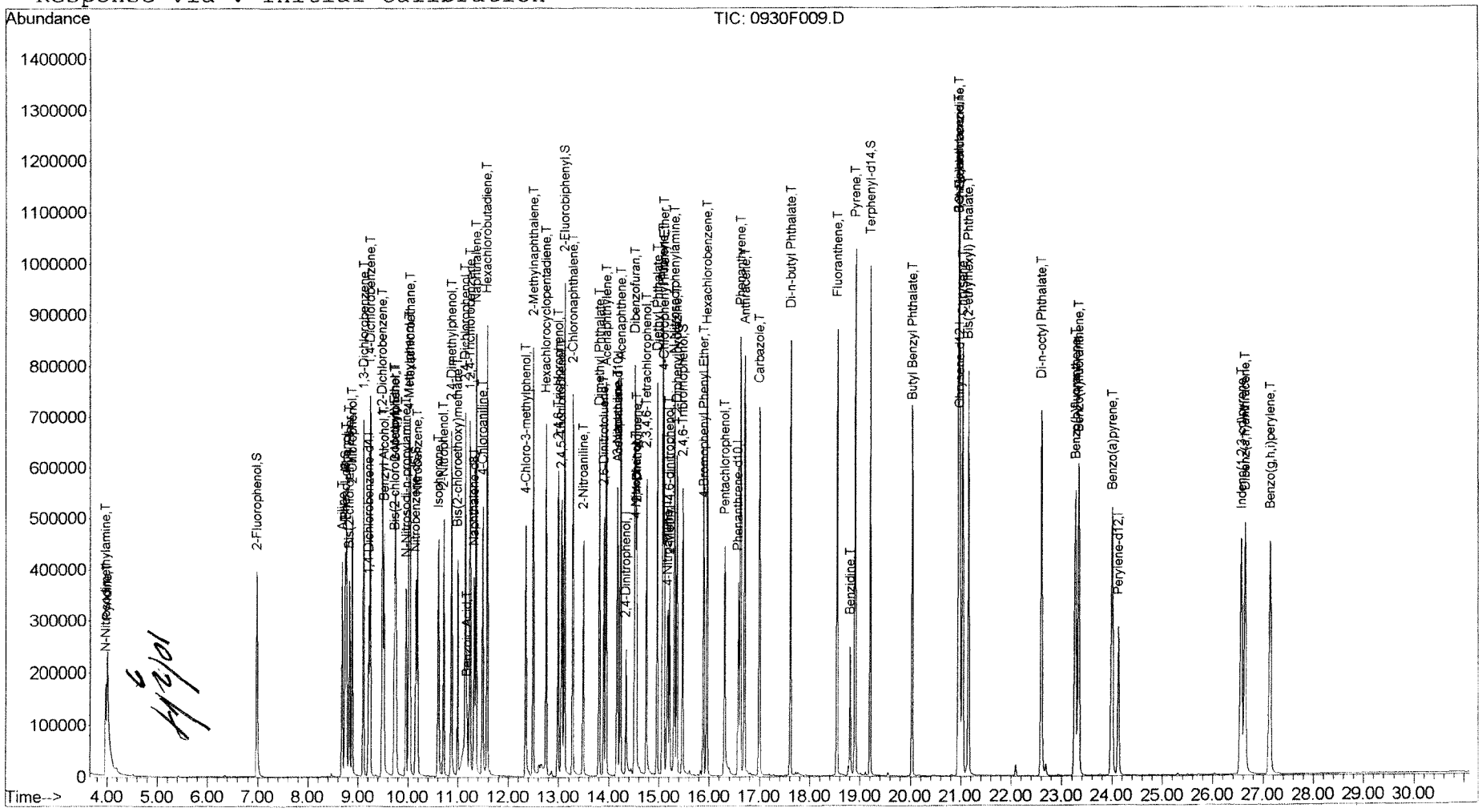
10/2/14

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:12 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2800

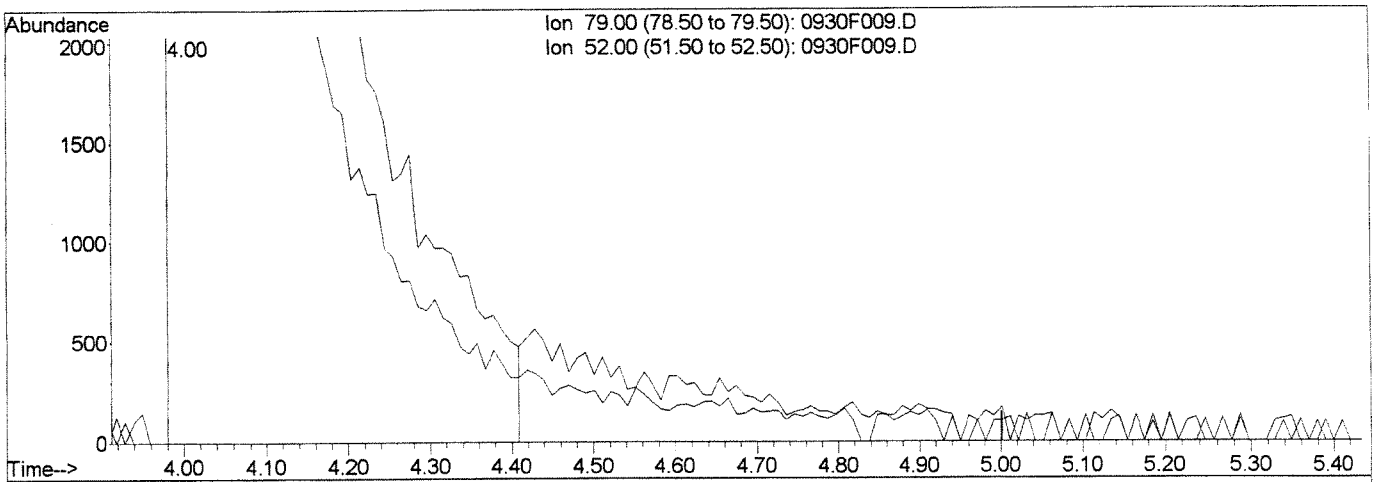
OCT 01 2014

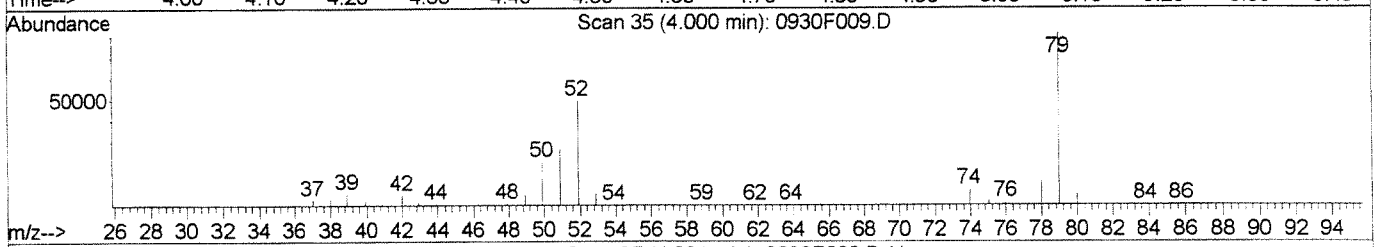
Quantitation Report (Qedit)

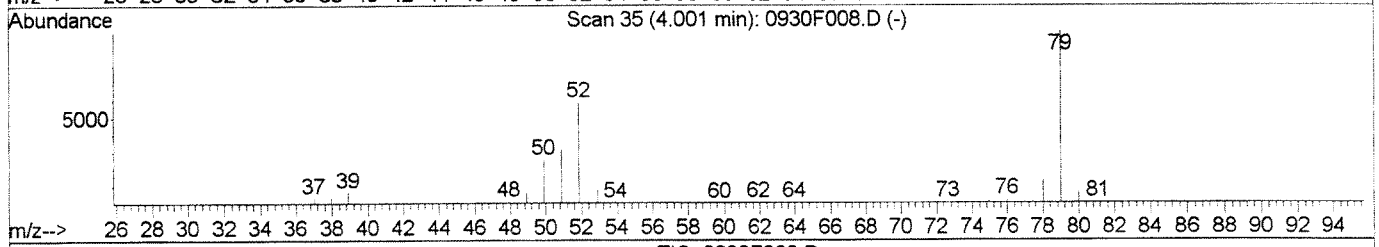
Data File : J:\MS07\DATA\093014\0930F009.D
Acq On : 1 Oct 2014 1:07 am
Sample : 8270 ICAL @ 100 ppm | SVM47-14H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:41 2014

Vial: 9
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F009.D

(3) Pyridine (T)

4.00min 96.72ug/ml

response 276509

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	61.25
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

TRT

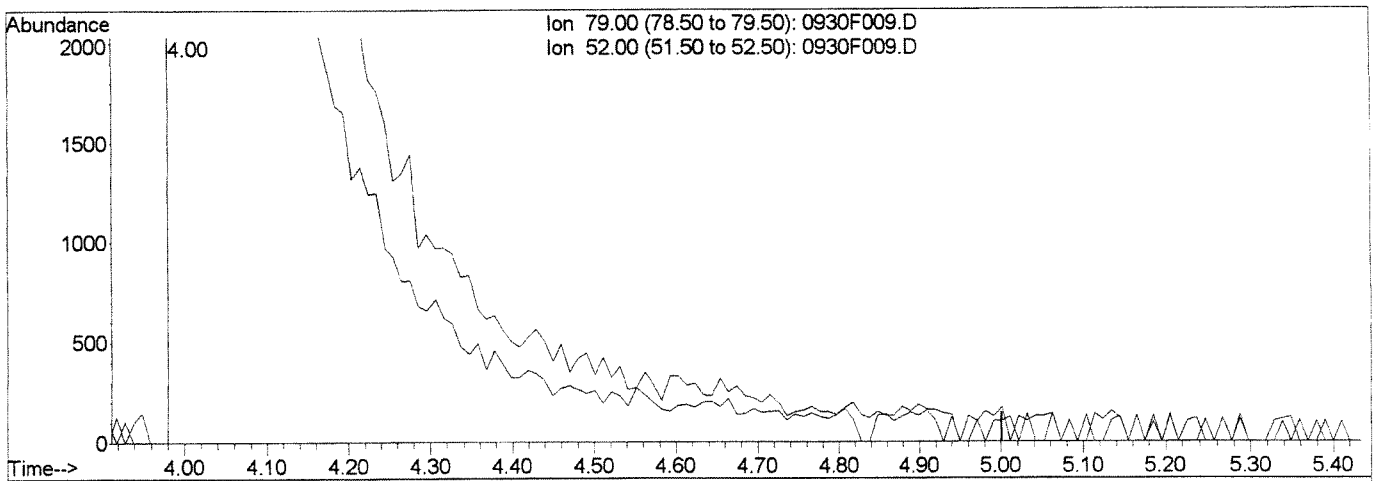
0930F009.D 093014BNC7.M Wed Oct 01 13:11:08 2014

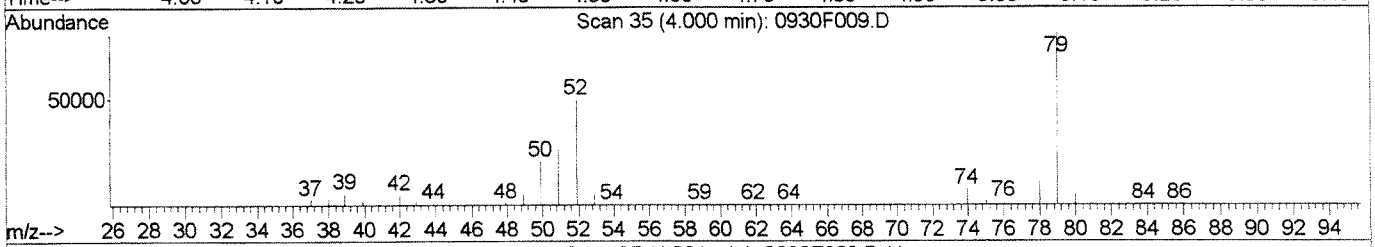
Quantitation Report (Qedit)

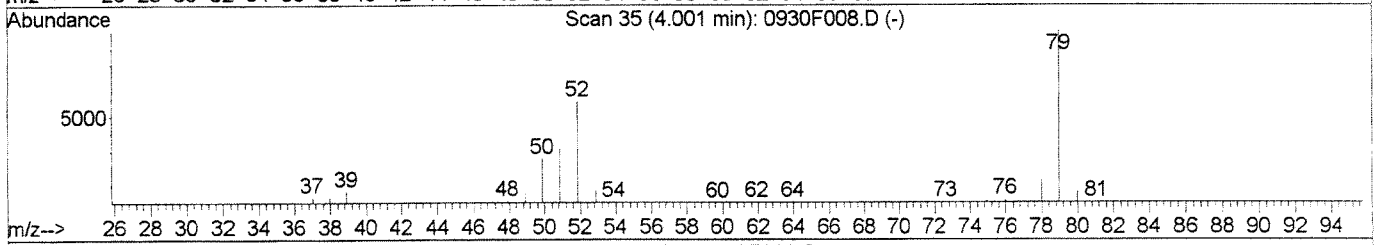
Data File : J:\MS07\DATA\093014\0930F009.D
Acq On : 1 Oct 2014 1:07 am
Sample : 8270 ICAL @ 100 ppm | SVM47-14H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:11 2014

Vial: 9
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F009.D

(3) Pyridine (T)

4.00min 99.59ug/ml m

response 284691

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	61.27
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

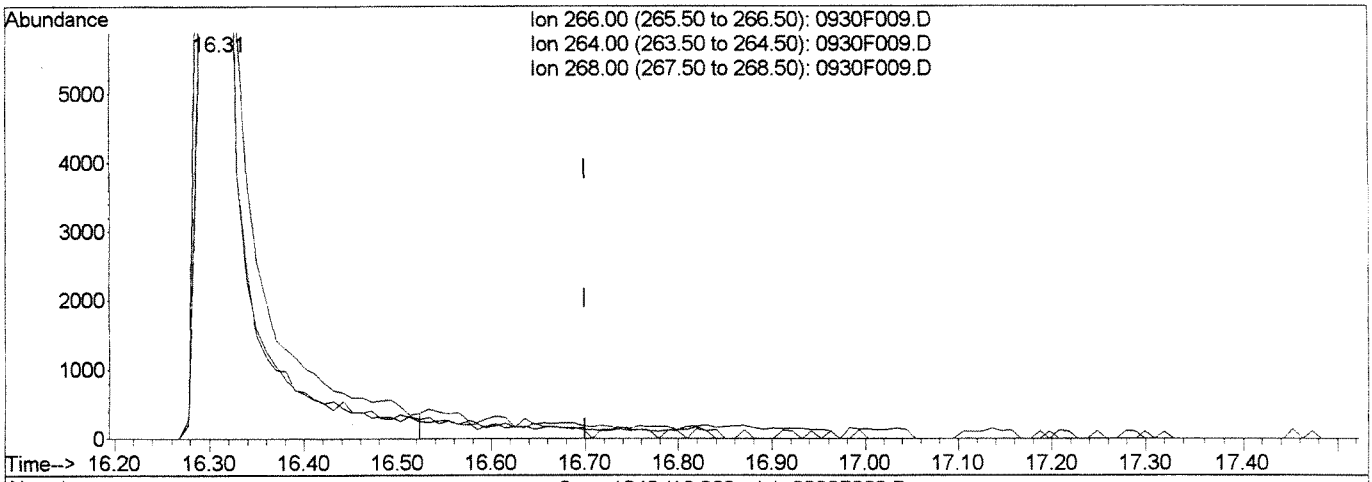
10/01/14

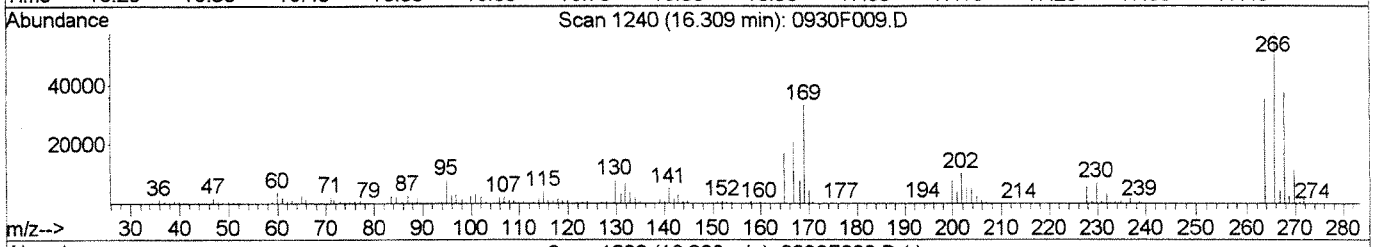
0930F009.D 093014BNC7.M Wed Oct 01 13:11:18 2014

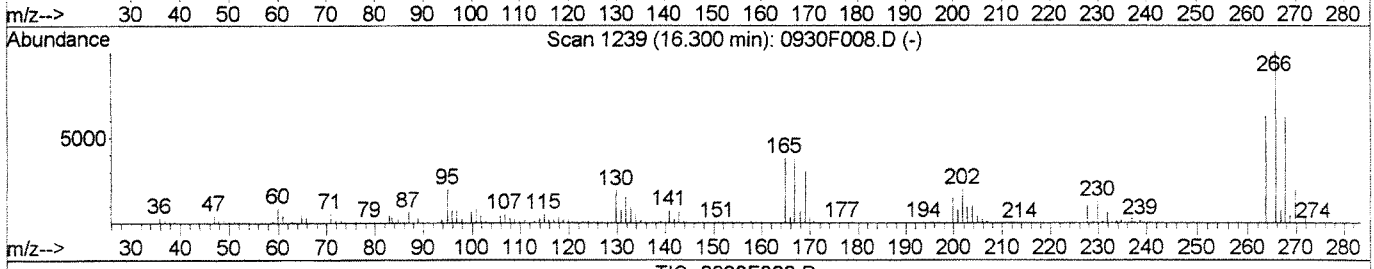
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:11 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F009.D

(62) Pentachlorophenol (T)

16.31min 120.09ug/ml

response 96064

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.38
268.00	63.20	64.94
0.00	0.00	0.00

Manual Integration:

Before

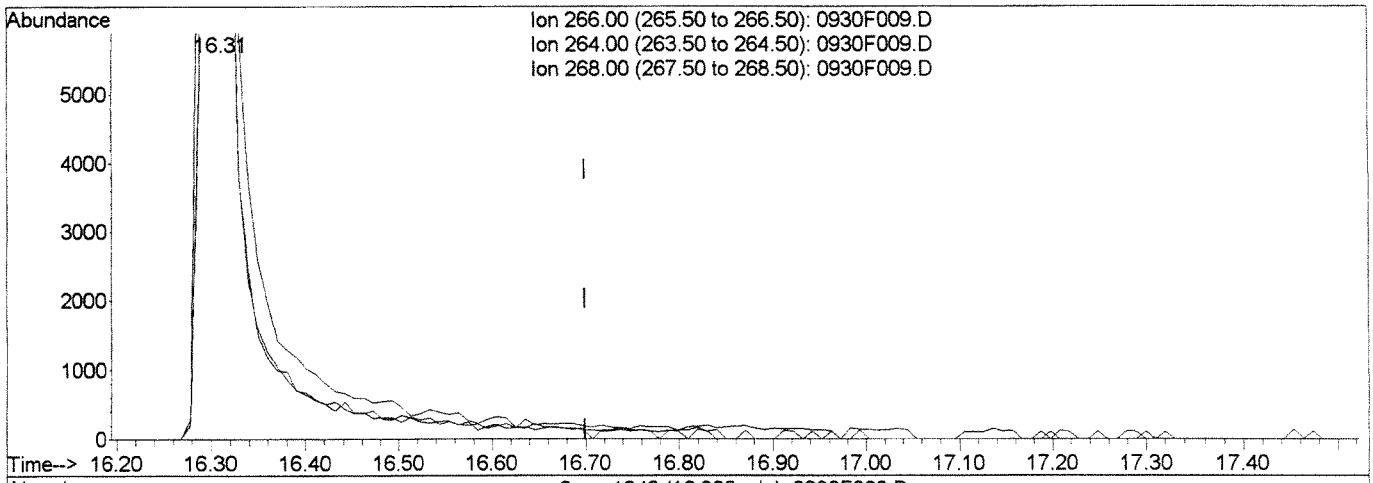
10/01/14

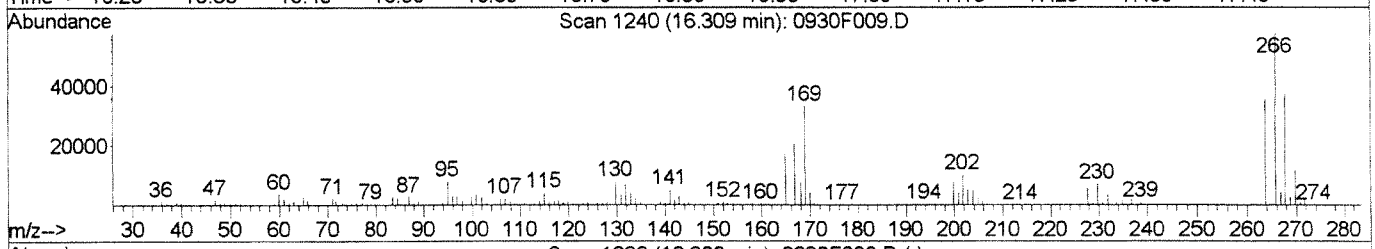
0930F009.D 093014BNC7.M Wed Oct 01 13:12:18 2014

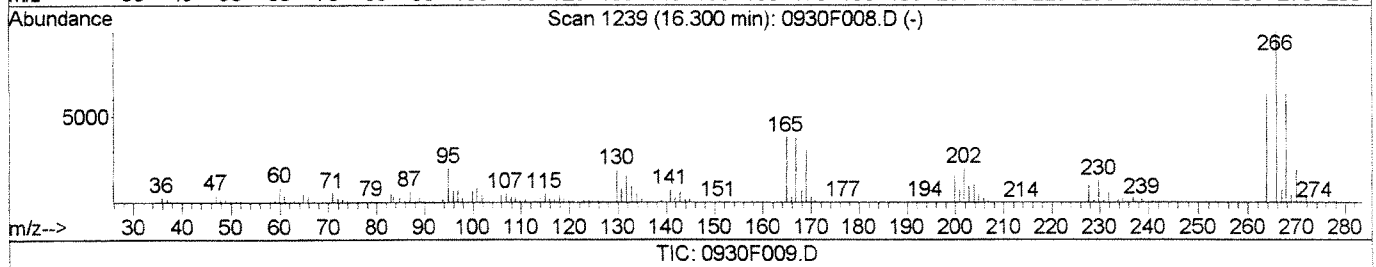
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:12 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F009.D

(62) Pentachlorophenol (T)

16.31min 126.86ug/ml m

response 101476

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.42
268.00	63.20	64.95
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/3/14

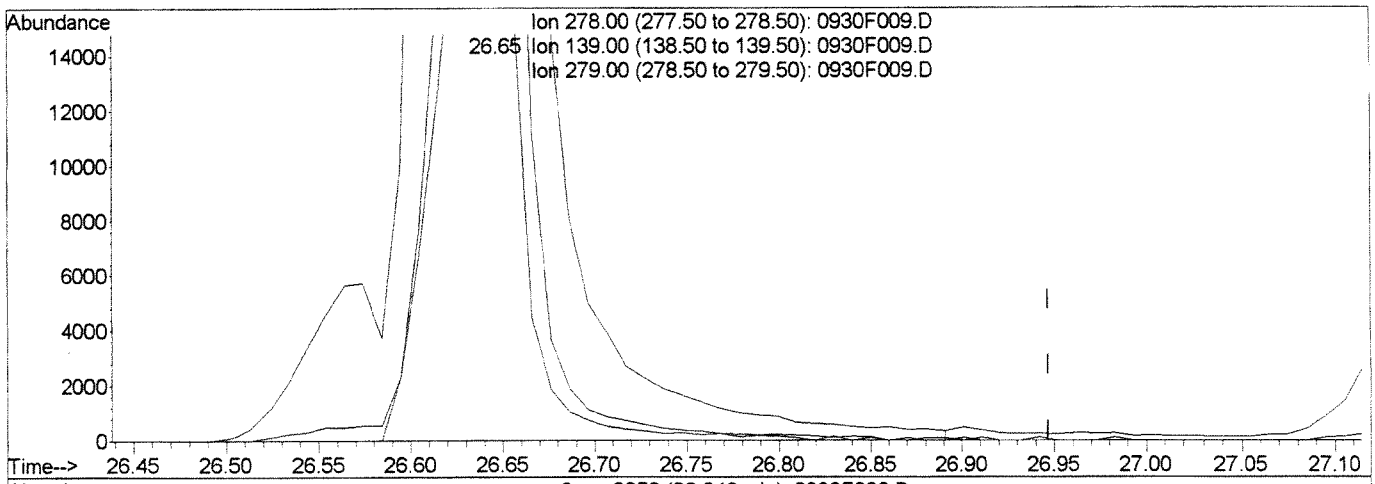
RT

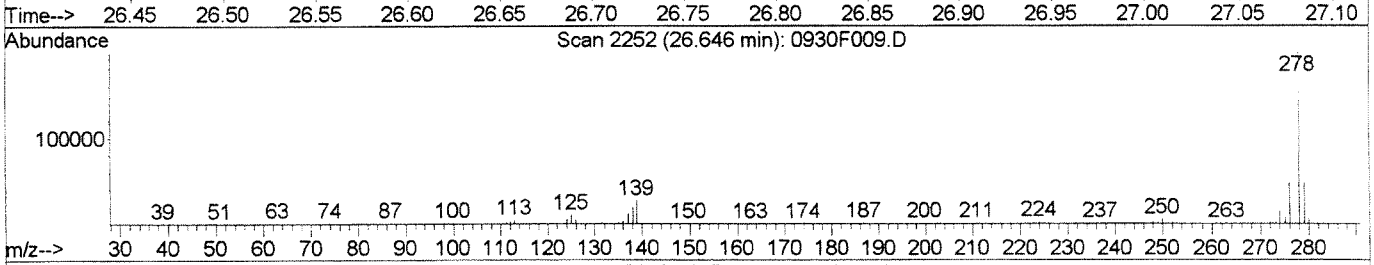
0930F009.D 093014BNC7.M Wed Oct 01 13:12:28 2014

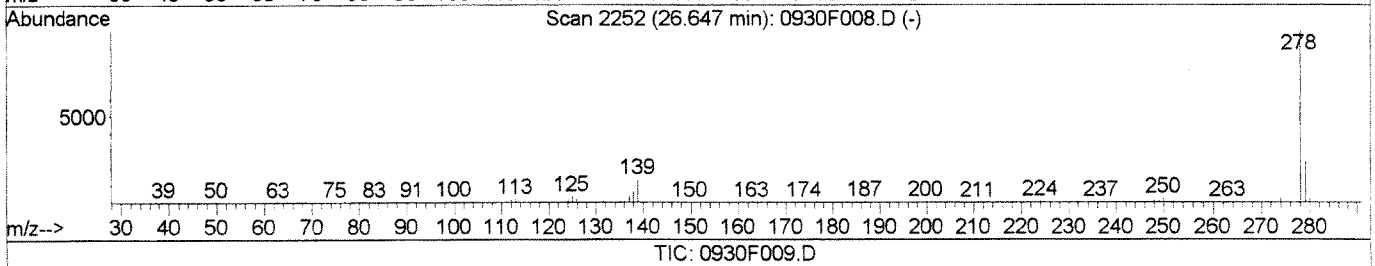
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F009.D Vial: 9
Acq On : 1 Oct 2014 1:07 am Operator: T. THOMAS
Sample : 8270 ICAL @ 100 ppm | SVM47-14H Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:12 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F009.D

(83) Dibenz(a,h)anthracene (T)

26.65min 95.93ug/ml

response 534724

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.79
279.00	23.50	23.72
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

DRT

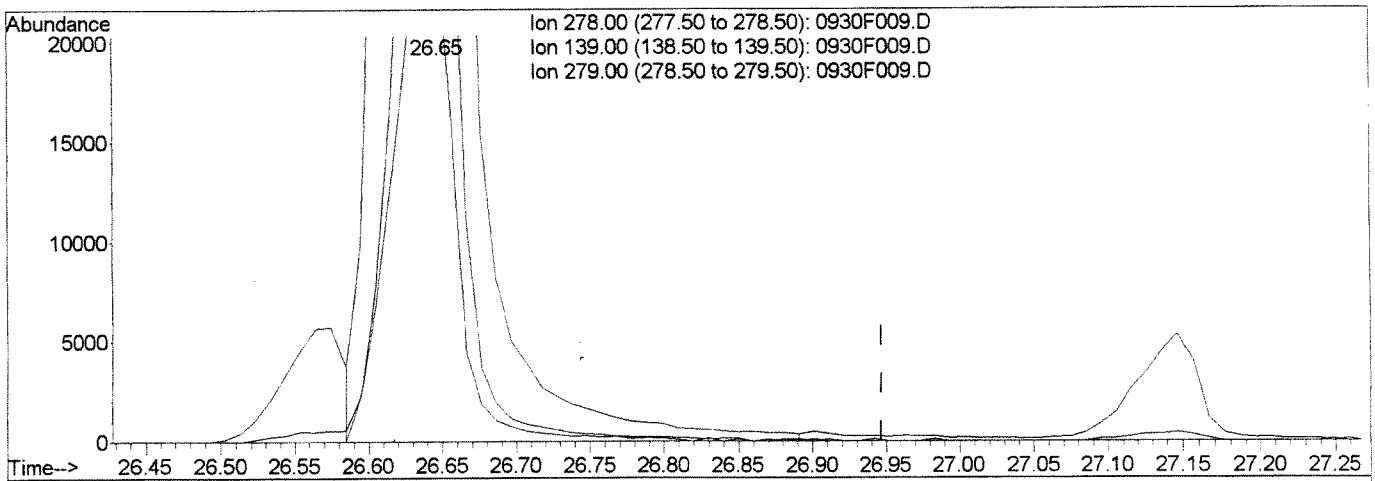
0930F009.D 093014BNC7.M Wed Oct 01 13:12:52 2014

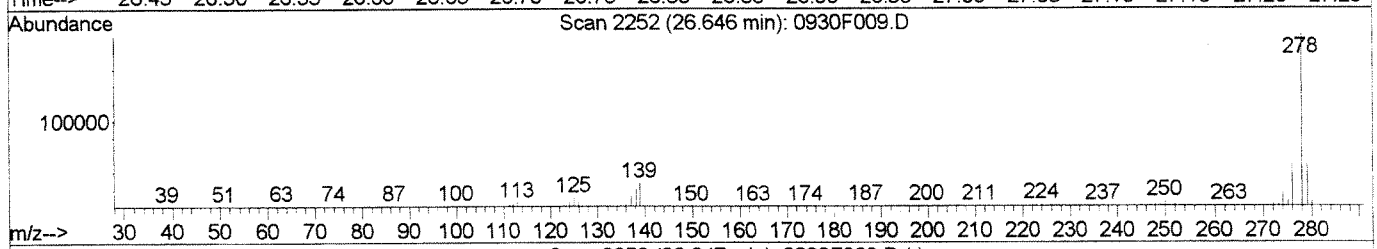
Quantitation Report (Qedit)

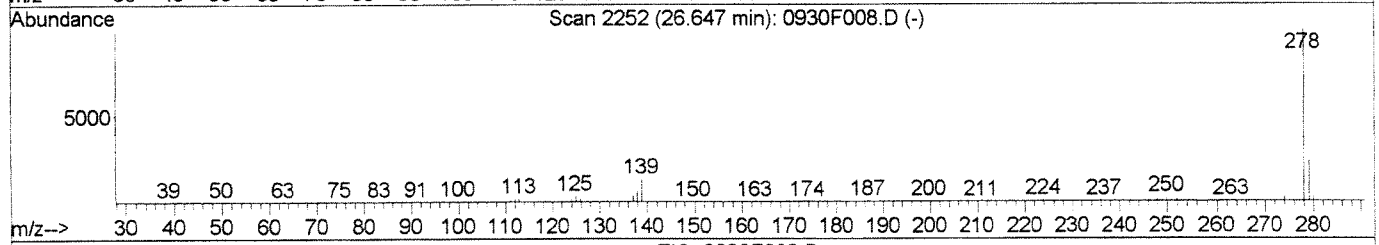
Data File : J:\MS07\DATA\093014\0930F009.D
Acq On : 1 Oct 2014 1:07 am
Sample : 8270 ICAL @ 100 ppm | SVM47-14H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:12 2014

Vial: 9
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F009.D

(83) Dibenz(a,h)anthracene (T)

26.65min 92.99ug/ml m

response 518341

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.78
279.00	23.50	23.72
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

TAT

0930F009.D 093014BNC7.M Wed Oct 01 13:13:10 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:03 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	73154	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	249672	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	113569	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	228723	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	218904	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	221064	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	248357	106.01	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery =	70.67%		
7) Phenol-d6	8.74	99	288904	99.53	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery =	66.35%		
19) Nitrobenzene-d5	10.16	82	257240	99.85	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery =	99.85%		
38) 2-Fluorobiphenyl	13.11	172	512214	127.66	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	127.66%#		
59) 2,4,6-Tribromophenol	15.47	330	157904	138.24	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	92.16%		
71) Terphenyl-d14	19.20	244	570393	129.79	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	129.79%		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	132508	133.84	ug/ml	99
3) Pyridine	4.00	79	323571m	112.40	ug/ml	
5) Aniline	8.68	93	284749	93.61	ug/ml	98
6) Bis(2-chloroethyl) Ether	8.83	93	221311m	87.91	ug/ml	
8) Phenol	8.77	94	274712	94.97	ug/ml	98
9) 2-Chlorophenol	8.88	128	271828	110.47	ug/ml	96
10) 1,3-Dichlorobenzene	9.11	146	305003	113.99	ug/ml	98
11) 1,4-Dichlorobenzene	9.24	146	308789	112.98	ug/ml	98
12) 1,2-Dichlorobenzene	9.48	146	279832	108.20	ug/ml	99
13) Benzyl Alcohol	9.51	108	144030	107.55	ug/ml	99
14) Bis(2-chloroisopropyl) Eth	9.72	45	221970	65.48	ug/ml	95
15) 2-Methylphenol	9.75	107	177358	102.13	ug/ml	97
16) Hexachloroethane	10.03	117	119246	104.83	ug/ml	80
17) N-Nitrosodi-n-propylamine	9.96	70	141402	85.35	ug/ml	97
18) 4-Methylphenol	10.01	107	246589	98.13	ug/ml	98
20) Nitrobenzene	10.19	77	226265	95.22	ug/ml	97
22) Isophorone	10.62	82	417537	99.34	ug/ml	97
23) 2-Nitrophenol	10.71	139	155893	128.73	ug/ml	98
24) 2,4-Dimethylphenol	10.87	122	189036	115.47	ug/ml	99
25) Bis(2-chloroethoxy)methane	10.99	93	274083	102.28	ug/ml	99

(#) = qualifier out of range (m) = manual integration
0930F010.D 093014BNC7.M Wed Oct 01 14:35:00 2014 Page 1

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:03 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	216589	123.88 ug/ml	96
27) Benzoic Acid	11.19	122	144239	134.16 ug/ml	98
28) 1,2,4-Trichlorobenzene	11.24	180	255079	127.43 ug/ml	97
29) Naphthalene	11.35	128	640853	114.03 ug/ml	99
30) 4-Chloroaniline	11.49	127	255037	108.17 ug/ml	95
31) Hexachlorobutadiene	11.58	225	176077	142.37 ug/ml	98
32) 4-Chloro-3-methylphenol	12.34	107	197292	121.80 ug/ml	75
33) 2-Methylnaphthalene	12.50	142	407434	117.79 ug/ml	97
35) Hexachlorocyclopentadiene	12.74	237	191386	140.85 ug/ml	99
36) 2,4,6-Trichlorophenol	12.99	196	164515	140.46 ug/ml	98
37) 2,4,5-Trichlorophenol	13.06	196	178804	136.92 ug/ml	98
39) 2-Chloronaphthalene	13.28	162	430377	123.87 ug/ml	99
40) 2-Nitroaniline	13.49	65	110228	109.90 ug/ml	97
41) Acenaphthylene	13.95	152	654766	124.09 ug/ml	99
42) Dimethyl Phthalate	13.81	163	512180	135.18 ug/ml	100
43) 2,6-Dinitrotoluene	13.91	165	129808	148.00 ug/ml	99
44) Acenaphthene	14.23	154	360372	123.69 ug/ml	98
45) 3-Nitroaniline	14.17	138	129784	134.46 ug/ml	97
46) 2,4-Dinitrophenol	14.35	184	89388	182.20 ug/ml	97
47) Dibenzofuran	14.52	168	571070	126.05 ug/ml	100
48) 4-Nitrophenol	14.54	109	76336	175.11 ug/ml	98
49) 2,4-Dinitrotoluene	14.55	165	159353	143.04 ug/ml	98
50) 2,3,4,6-Tetrachlorophenol	14.74	232	153750	153.85 ug/ml	88
51) Fluorene	15.07	166	436730	132.69 ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	15.10	204	229075	132.05 ug/ml	95
53) Diethyl Phthalate	14.97	149	529684	139.02 ug/ml	100
54) 4-Nitroaniline	15.18	138	146382	153.30 ug/ml	98
55) 2-Methyl-4,6-dinitrophenol	15.21	198	116237	195.05 ug/ml	100
56) N-Nitrosodiphenylamine	15.31	169	336623	141.33 ug/ml	99
57) 1,2-Diphenylhydrazine	15.36	77	393828m	102.48 ug/ml	
60) 4-Bromophenyl Phenyl Ether	15.89	248	170545	120.64 ug/ml	96
61) Hexachlorobenzene	15.96	284	229004	128.22 ug/ml	95
62) Pentachlorophenol	16.31	266	126257m	150.76 ug/ml	
63) Phenanthrene	16.62	178	624938	107.65 ug/ml	99
64) Anthracene	16.70	178	641322	111.32 ug/ml	99
65) Carbazole	17.00	167	642394	120.34 ug/ml	99
66) Di-n-butyl Phthalate	17.61	149	833684	116.61 ug/ml	99
67) Fluoranthene	18.54	202	728082	129.98 ug/ml	99
69) Benzidine	18.80	184	167457	106.39 ug/ml	98
70) Pyrene	18.90	202	778980	120.83 ug/ml	99
72) Butyl Benzyl Phthalate	20.03	149	379960	128.64 ug/ml	95

(#) = qualifier out of range (m) = manual integration

10/2/14

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:03 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.96	252	321673	136.30 ug/ml	98
74) Benz(a)anthracene	20.95	228	689686	129.13 ug/ml	99
75) Chrysene	21.04	228	670682	130.86 ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	526198	128.76 ug/ml	98
78) Di-n-octyl Phthalate	22.60	149	970982	117.49 ug/ml	100
79) Benzo(b)fluoranthene	23.27	252	697088	128.17 ug/ml	99
80) Benzo(k)fluoranthene	23.34	252	663190	123.51 ug/ml	99
81) Benzo(a)pyrene	24.01	252	665286	127.01 ug/ml	99
82) Indeno(1,2,3-cd)pyrene	26.57	276	612883	121.02 ug/ml	99
83) Dibenz(a,h)anthracene	26.65	278	597191m	113.35 ug/ml	
84) Benzo(g,h,i)perylene	27.15	276	630589	116.19 ug/ml	99

10/2/14

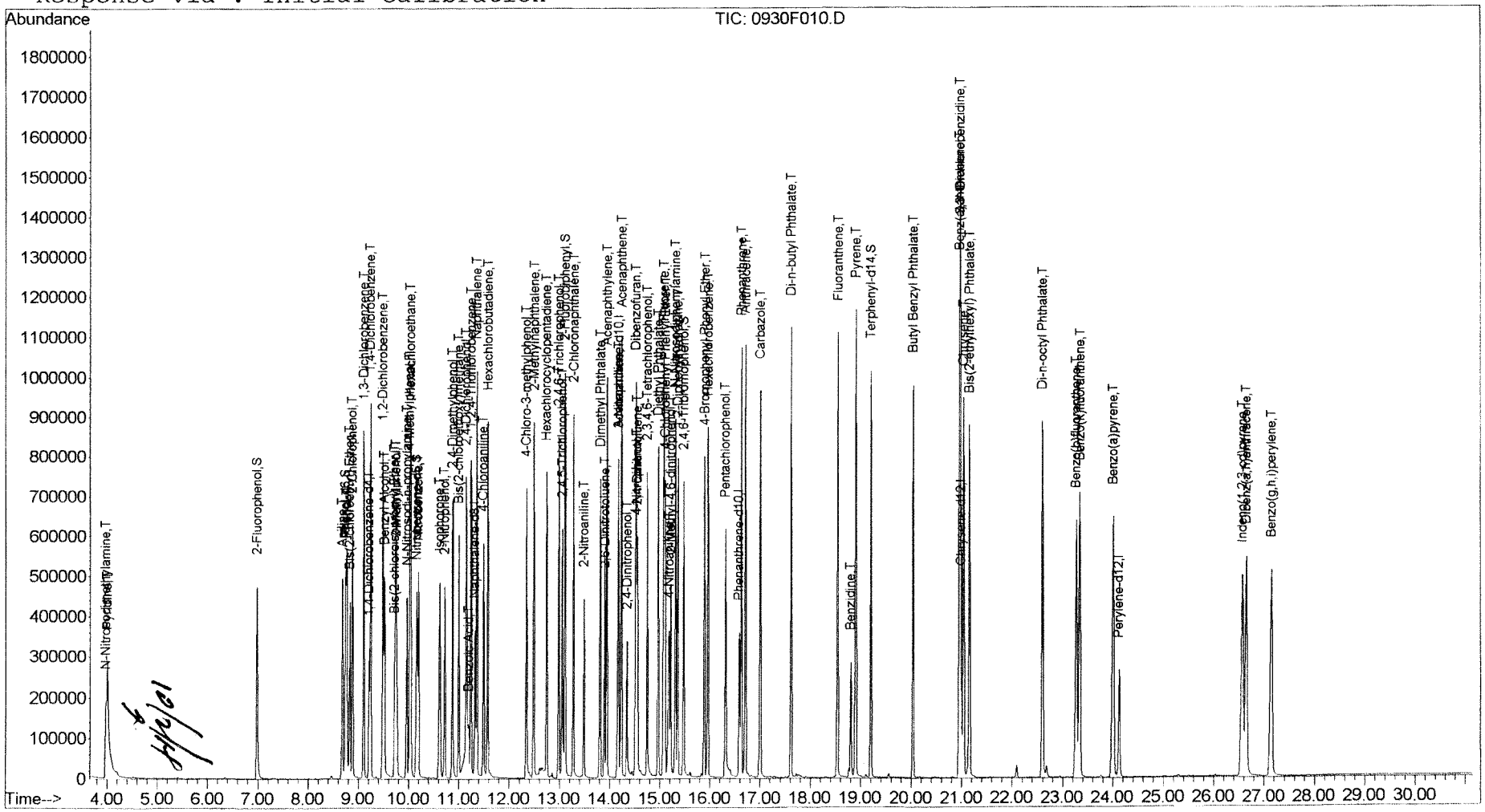
(#) = qualifier out of range (m) = manual integration
0930F010.D 093014BNC7.M Wed Oct 01 14:35:00 2014 Page 3

OCT 01 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:16 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



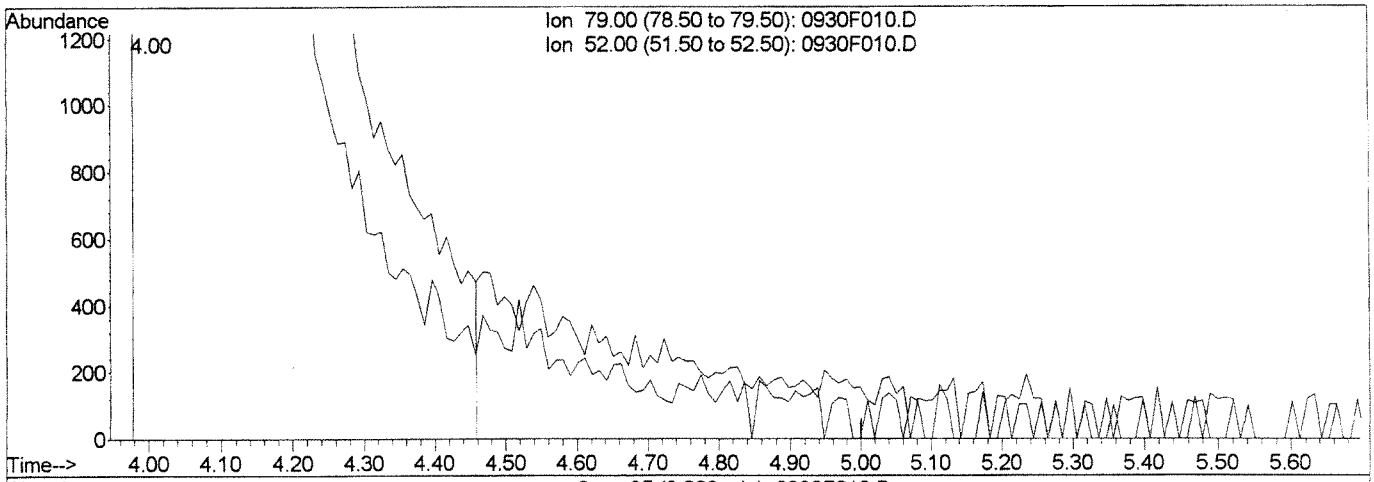
2810

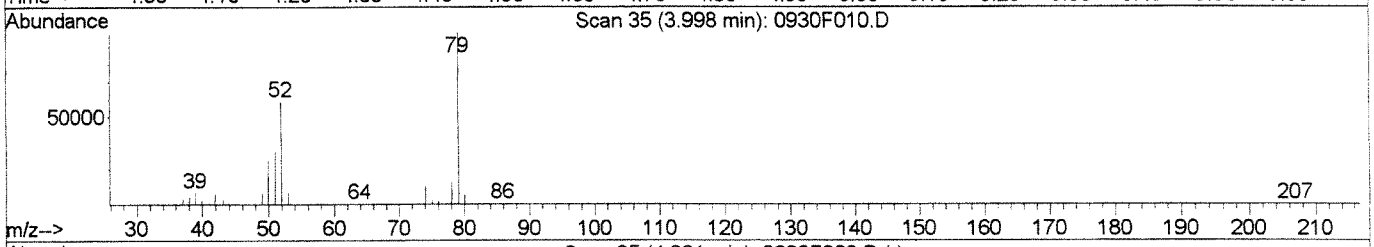
OCT 10 2014

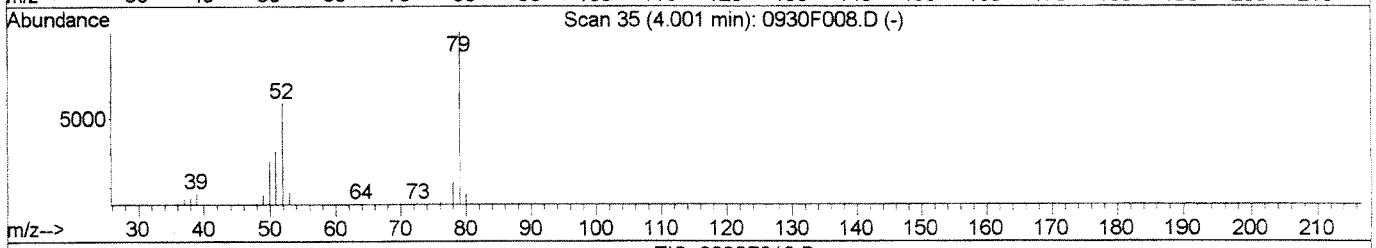
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:41 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(3) Pyridine (T)

4.00min 109.31ug/ml

response 314661

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	60.16
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TRT

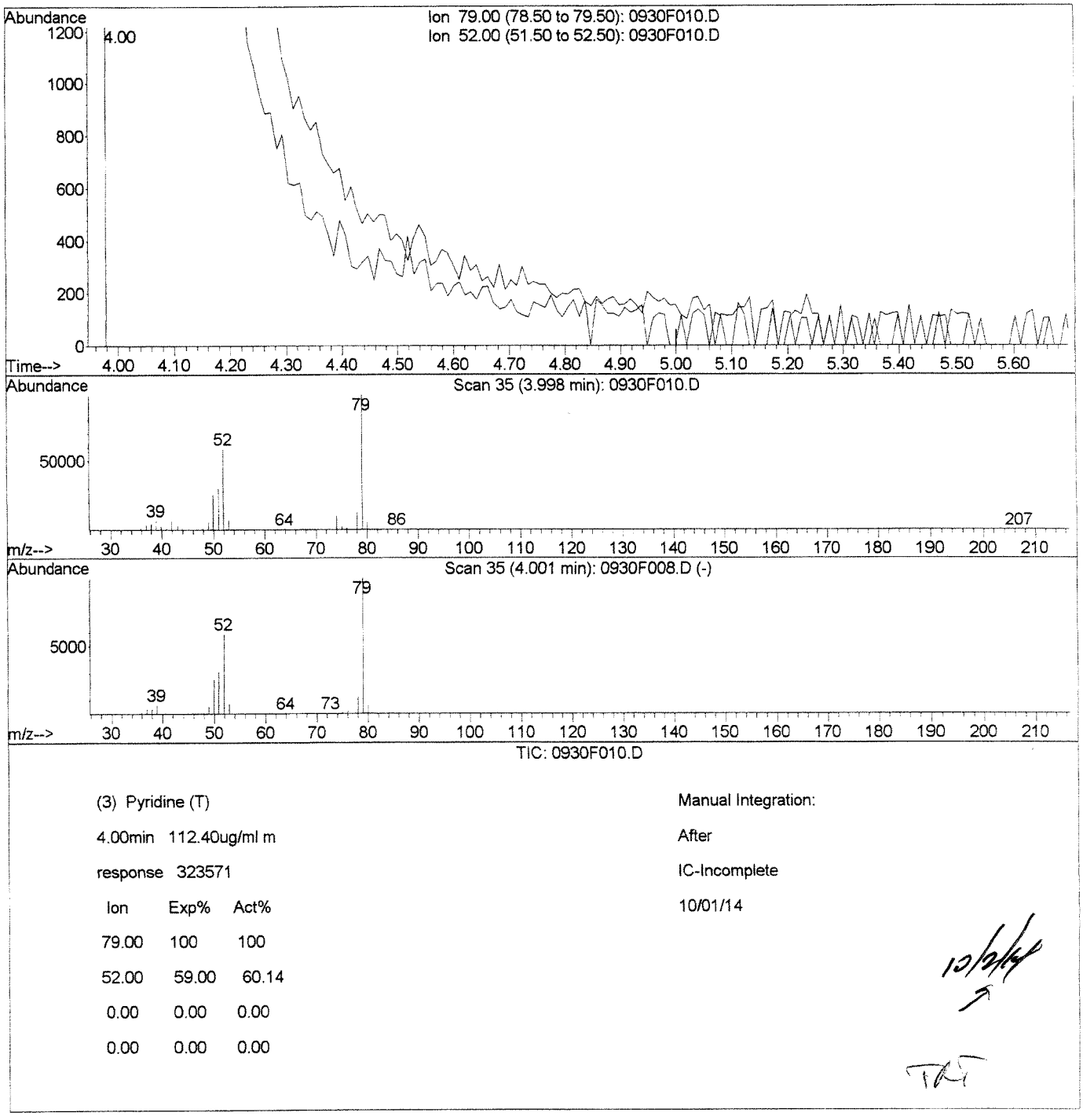
0930F010.D 093014BNC7.M Wed Oct 01 13:13:44 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D
Acq On : 1 Oct 2014 1:47 am
Sample : 8270 ICAL @ 120 ppm | SVM47-14I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:13 2014

Vial: 10
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F010.D

(3) Pyridine (T)

4.00min 112.40ug/ml m

response 323571

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	60.14
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/1/14

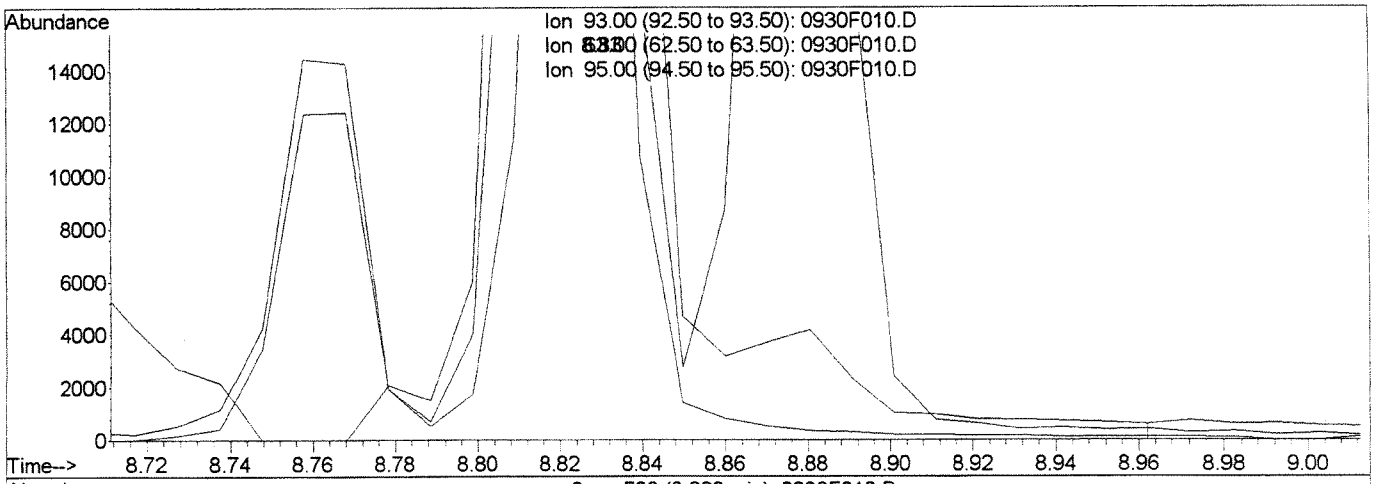
TAT

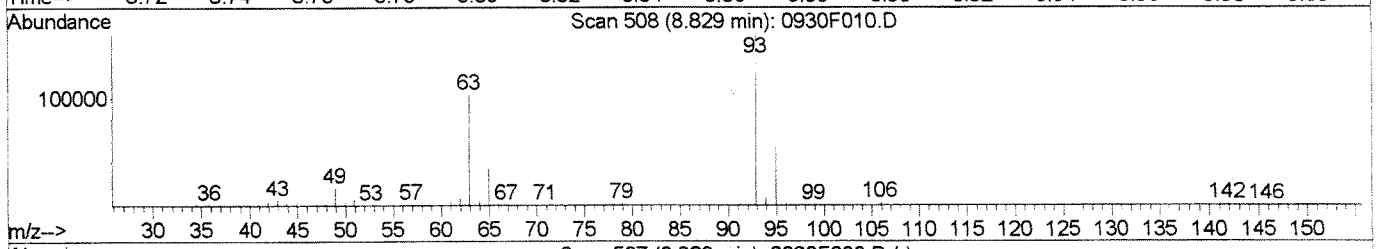
0930F010.D 093014BNC7.M Wed Oct 01 13:13:53 2014

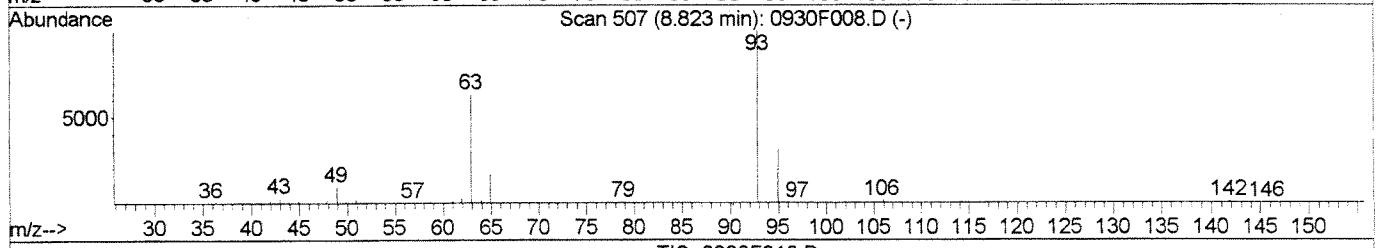
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:13 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(6) Bis(2-chloroethyl) Ether (T)

8.83min 92.60ug/ml

response 233121

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	60.01
95.00	32.50	29.50
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/1/14

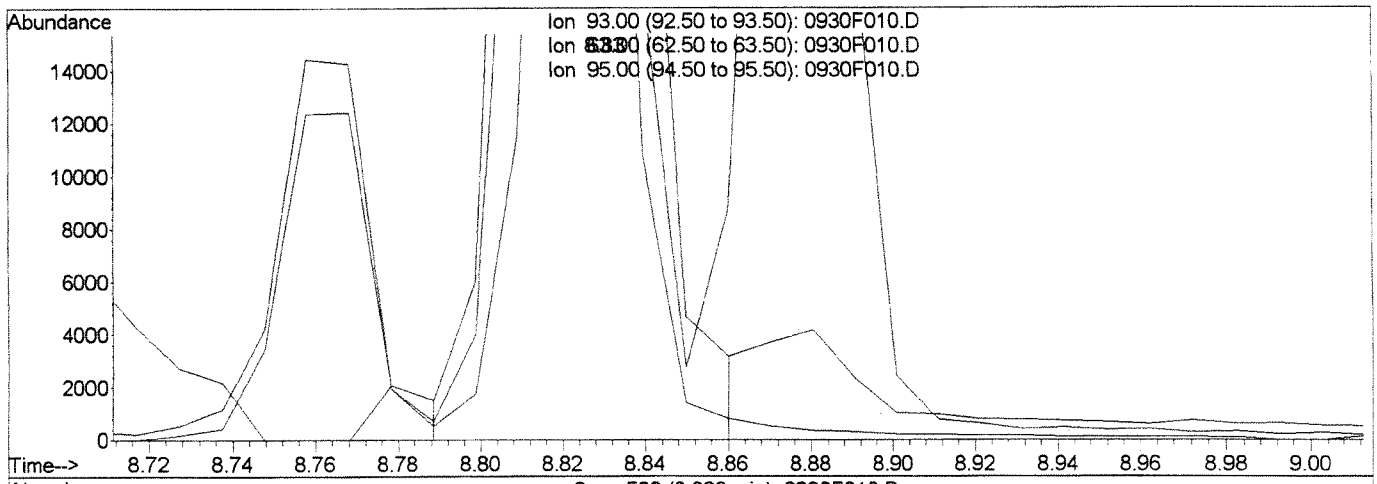
TRT

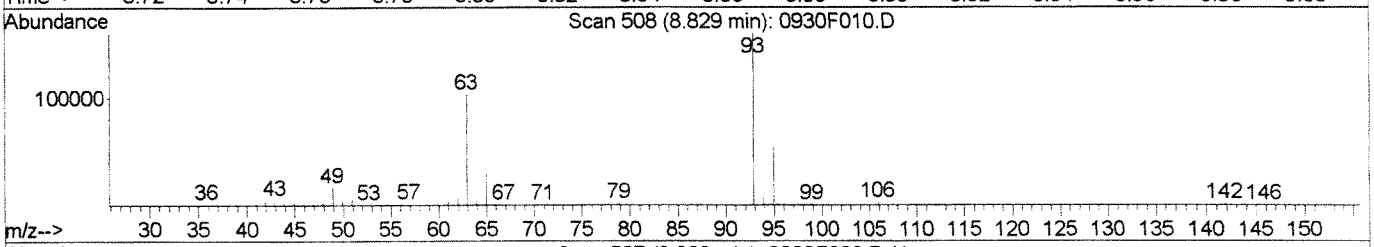
0930F010.D 093014BNC7.M Wed Oct 01 13:14:12 2014

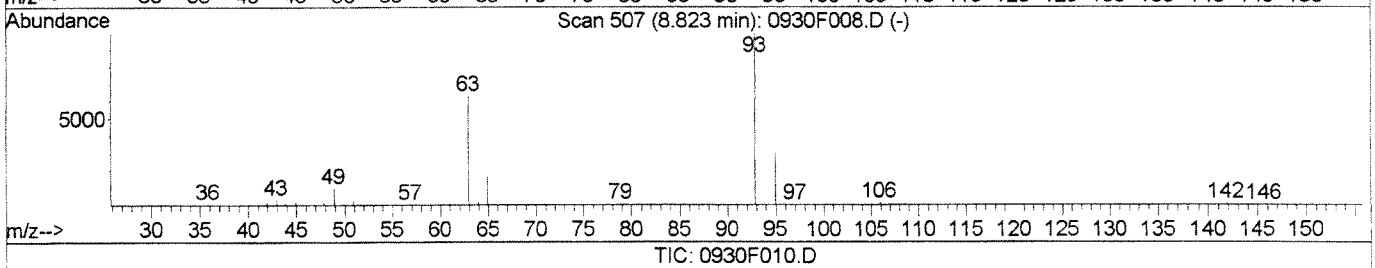
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:14 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(6) Bis(2-chloroethyl) Ether (T)

8.83min 87.91ug/ml m

response 221311

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.50
95.00	32.50	33.38
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

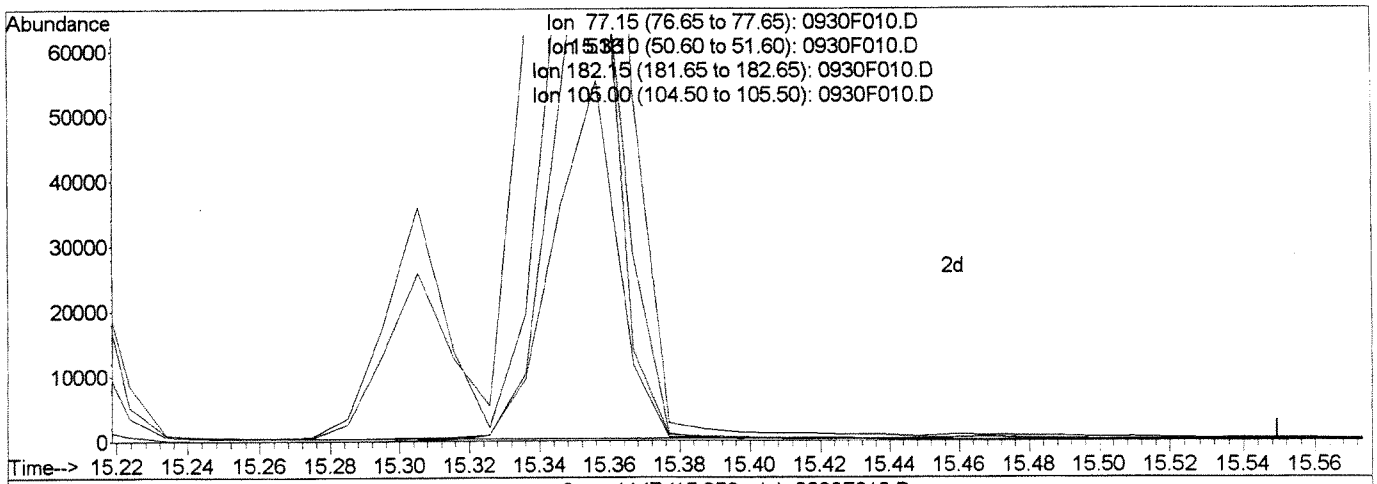
RT

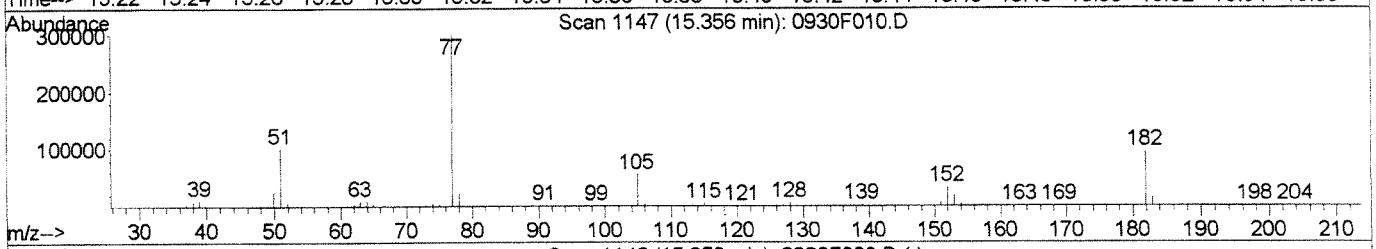
0930F010.D 093014BNC7.M Wed Oct 01 13:14:19 2014

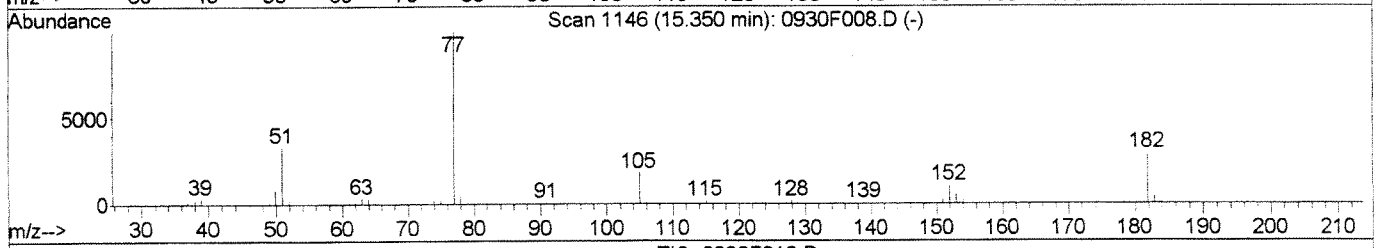
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:14 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 111.14ug/ml

response 427138

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	34.04
182.15	29.00	31.88
105.00	17.70	18.37

Manual Integration:

Before

10/01/14

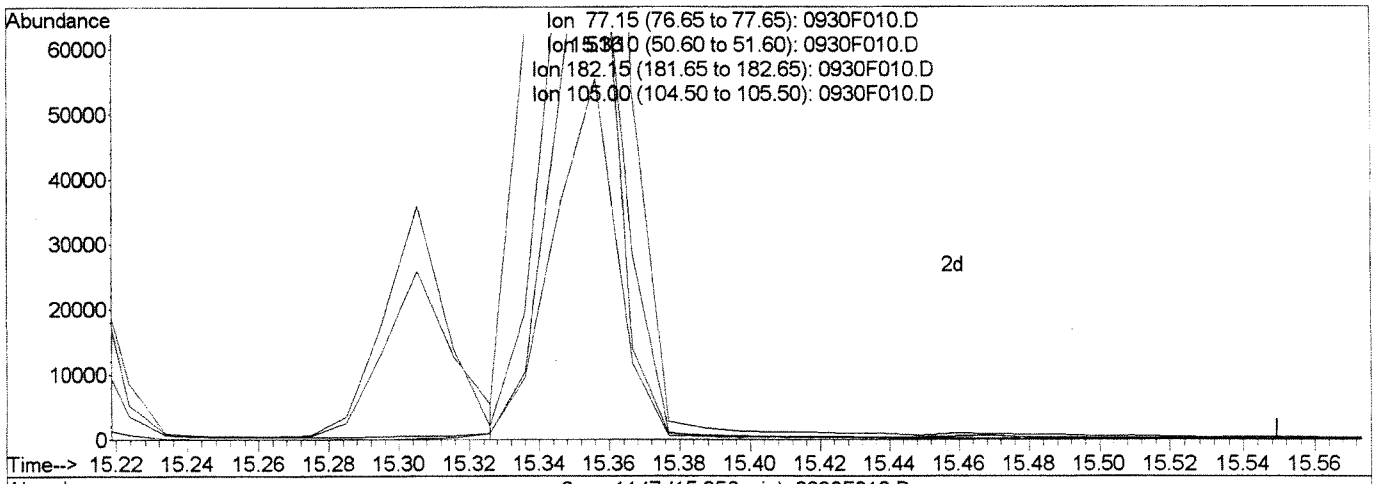
TRT

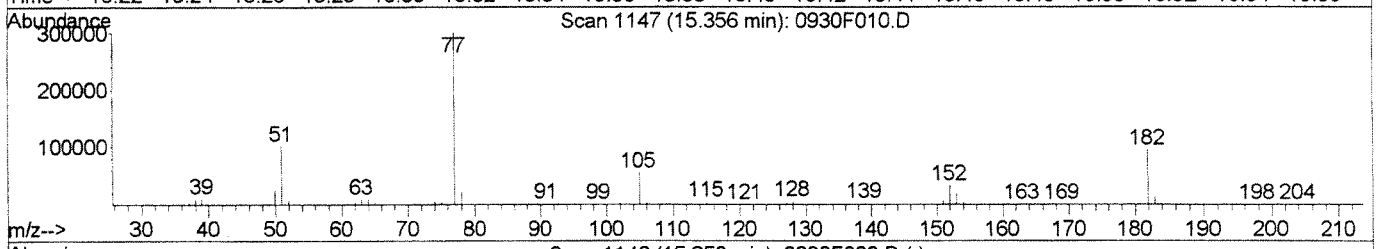
0930F010.D 093014BNC7.M Wed Oct 01 13:15:20 2014

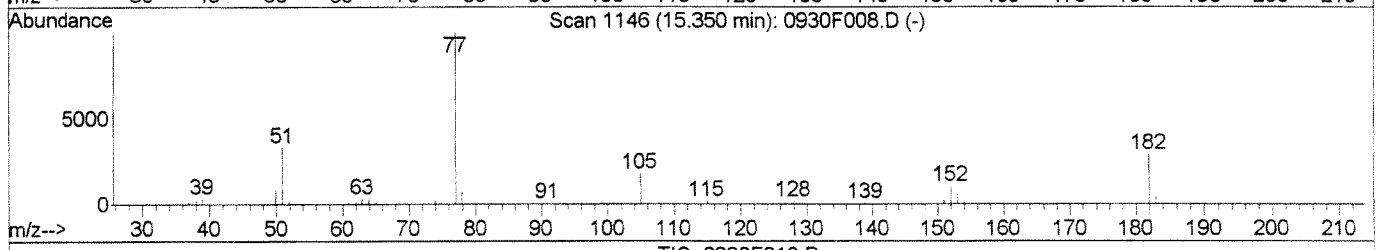
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:15 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 102.48ug/ml m

response 393828

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	34.14
182.15	29.00	31.85
105.00	17.70	18.44

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

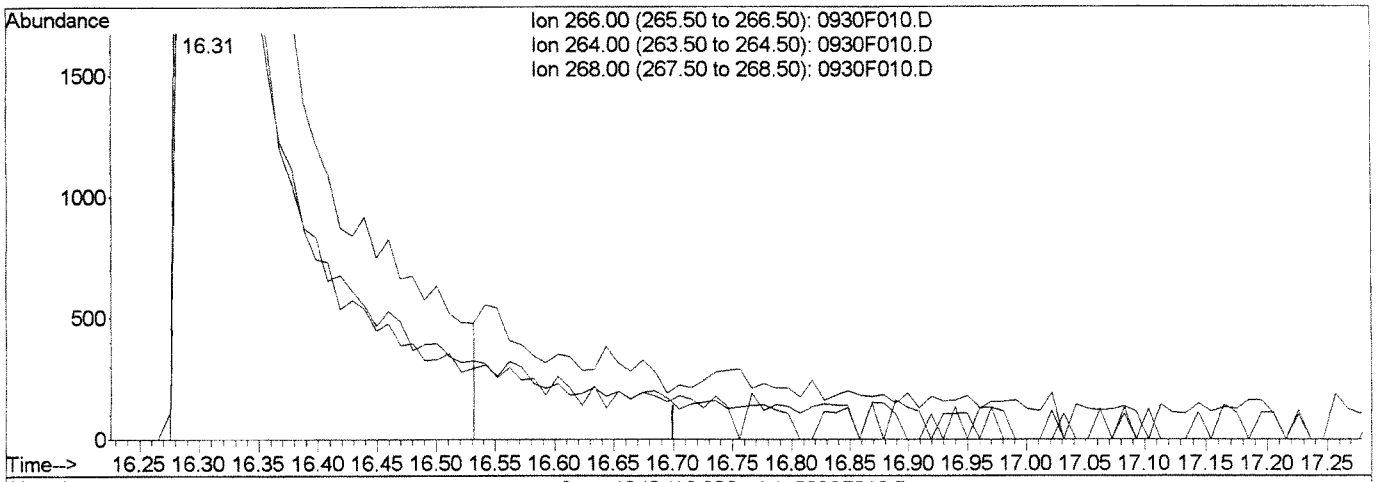
TRT

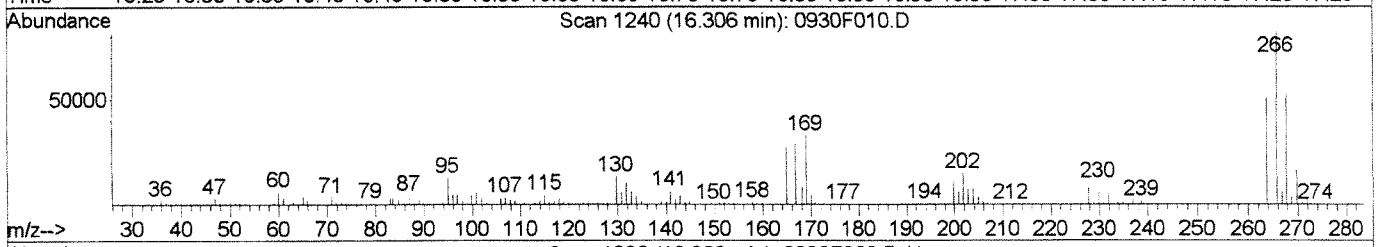
0930F010.D 093014BNC7.M Wed Oct 01 13:15:27 2014

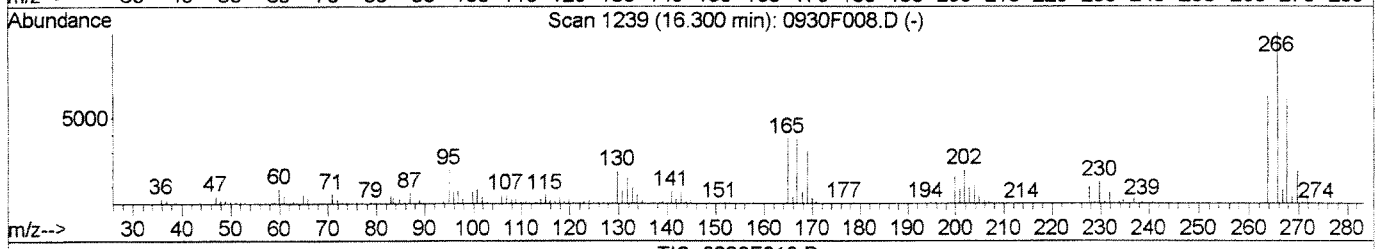
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:15 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F010.D

(62) Pentachlorophenol (T)

16.31min 142.22ug/ml

response 119110

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.83
268.00	63.20	64.18
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

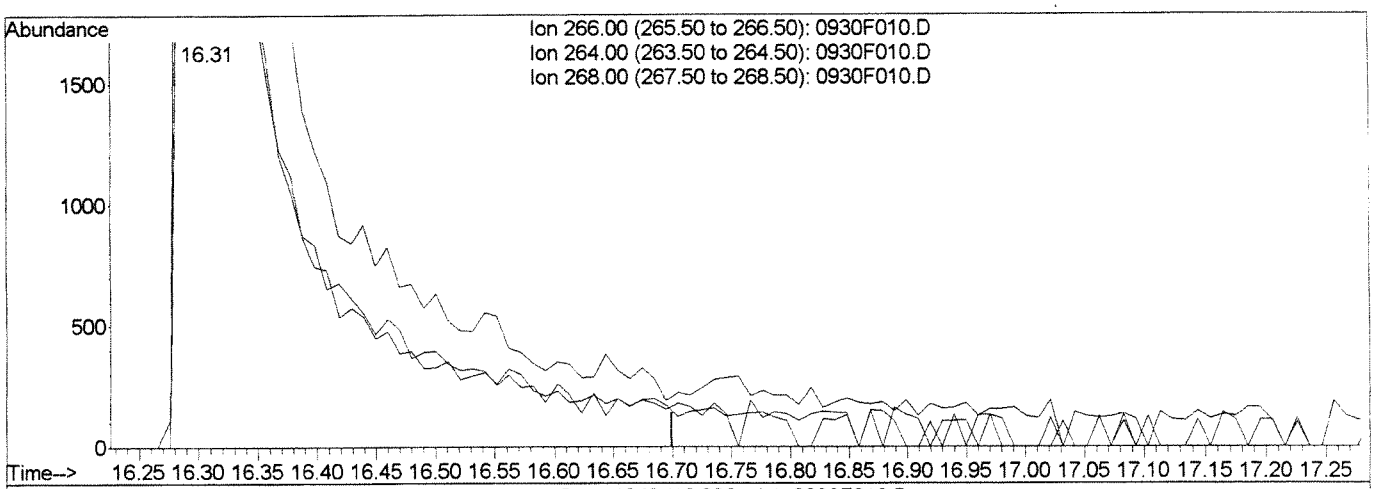
TA

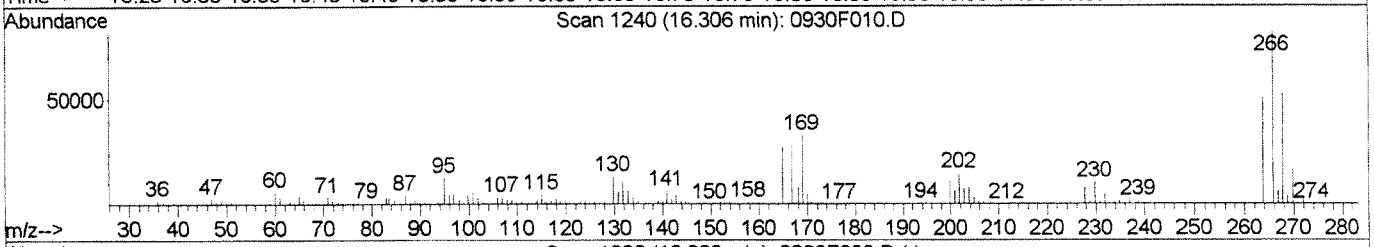
0930F010.D 093014BNC7.M Wed Oct 01 13:15:42 2014

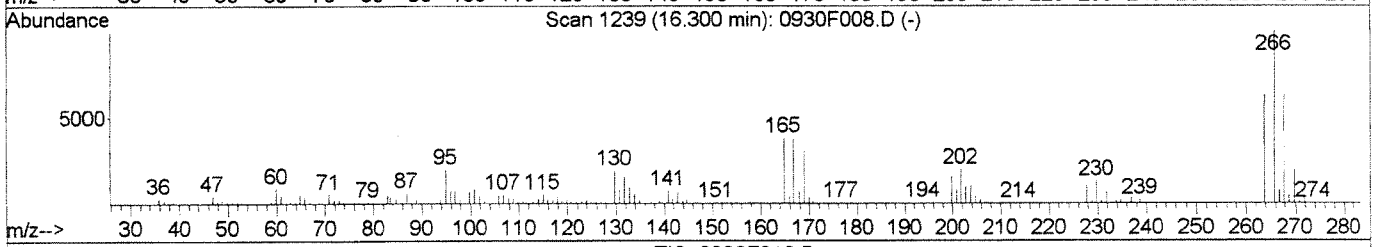
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:15 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F010.D

(62) Pentachlorophenol (T)

16.31min 150.76ug/ml m

response 126257

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.83
268.00	63.20	64.19
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

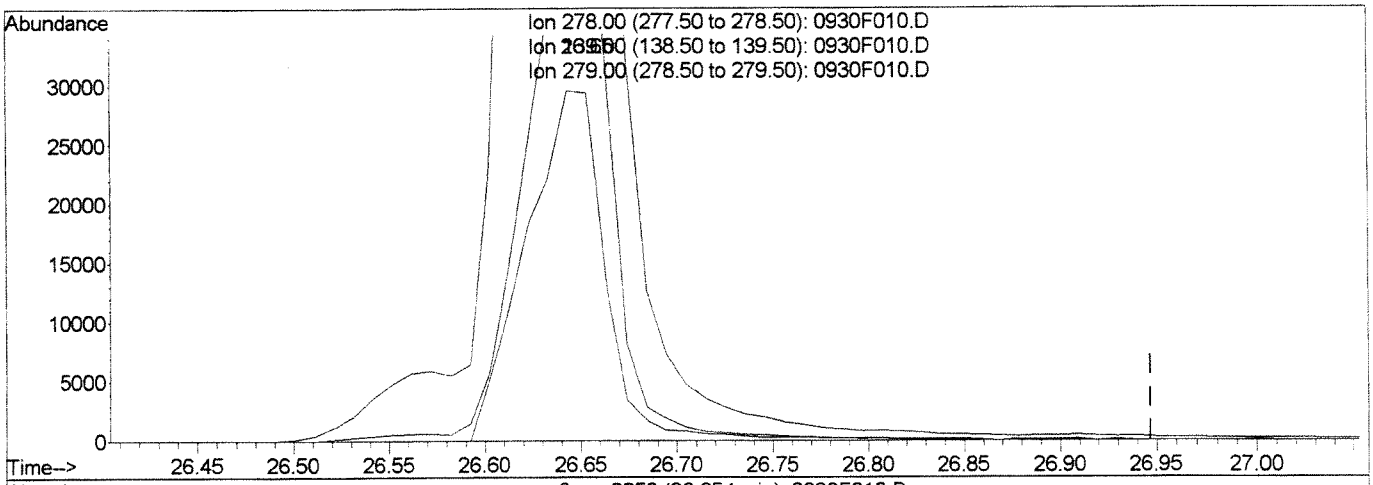
10/2/14

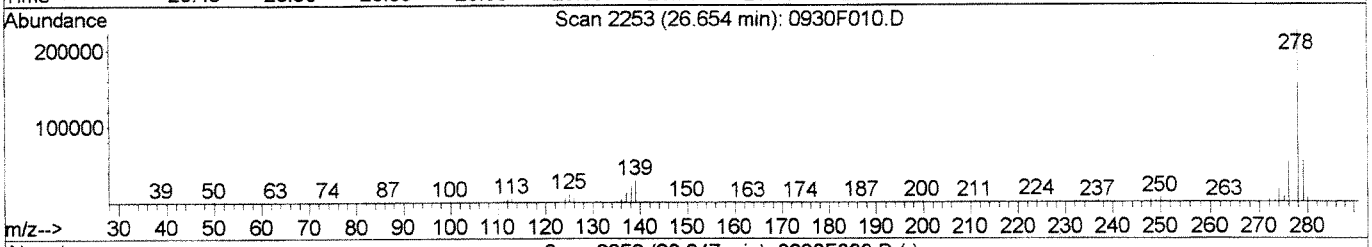
0930F010.D 093014BNC7.M Wed Oct 01 13:15:48 2014

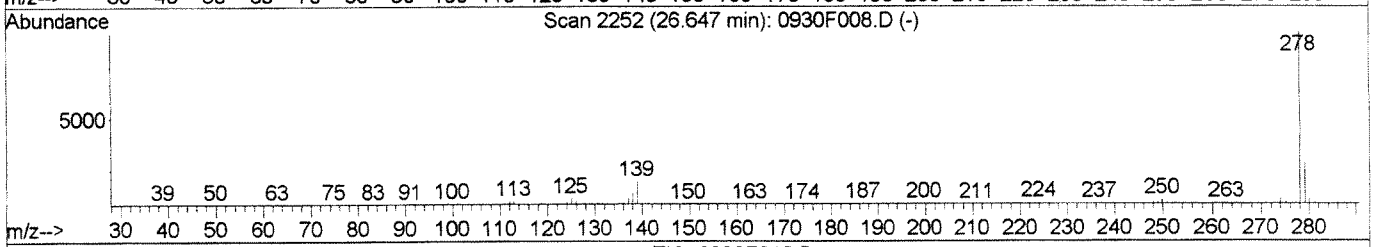
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F010.D Vial: 10
Acq On : 1 Oct 2014 1:47 am Operator: T. THOMAS
Sample : 8270 ICAL @ 120 ppm | SVM47-14I Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:15 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(83) Dibenz(a,h)anthracene (T)

26.65min 116.74ug/ml

response 615045

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.06
279.00	23.50	24.41
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

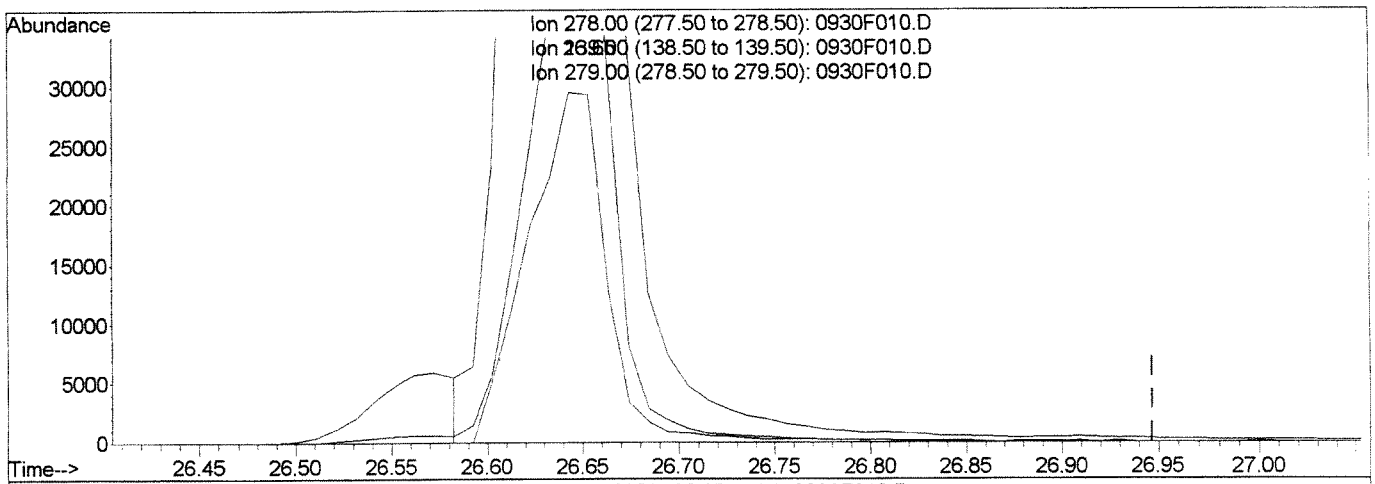
0930F010.D 093014BNC7.M Wed Oct 01 13:16:16 2014

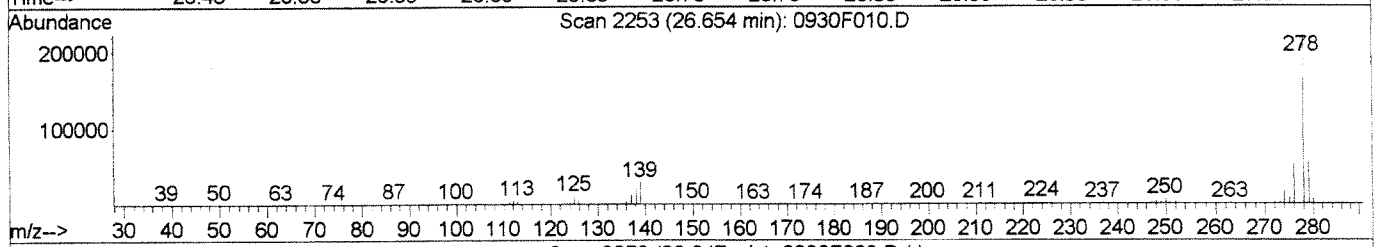
Quantitation Report (Qedit)

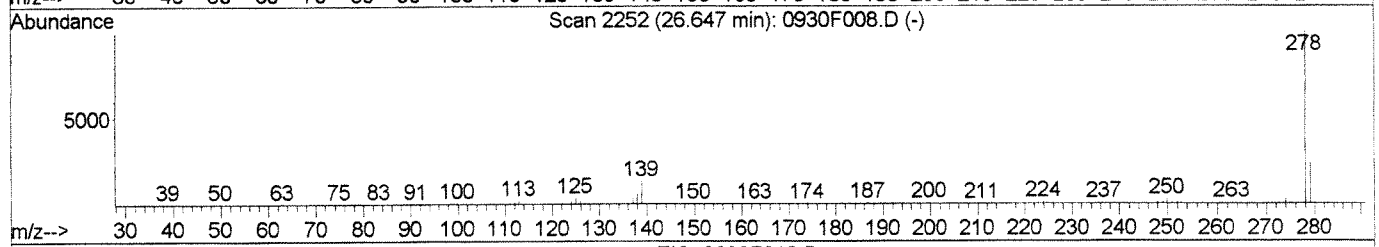
Data File : J:\MS07\DATA\093014\0930F010.D
Acq On : 1 Oct 2014 1:47 am
Sample : 8270 ICAL @ 120 ppm | SVM47-14I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:16 2014

Vial: 10
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F010.D

(83) Dibenz(a,h)anthracene (T)
26.65min 113.35ug/ml m
response 597191

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.05
279.00	23.50	24.42
0.00	0.00	0.00

Manual Integration:
After
IC-Overintegrated
10/01/14

10/2/14

0930F010.D 093014BNC7.M Wed Oct 01 13:16:23 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:04 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	68549	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	245546	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	113280	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	236123	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	221393	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	223753	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	297368	135.46	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 90.31%			
7) Phenol-d6	8.74	99	345557	127.05	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 84.70%			
19) Nitrobenzene-d5	10.16	82	321453	133.16	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 133.16%#			
38) 2-Fluorobiphenyl	13.12	172	634527	158.55	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 158.55%#			
59) 2,4,6-Tribromophenol	15.48	330	214728	182.10	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 121.40%			
71) Terphenyl-d14	19.21	244	738803	166.22	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 166.22%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.98	42	160564	173.07	ug/ml	99
3) Pyridine	4.00	79	400351m	148.42	ug/ml	
5) Aniline	8.68	93	340901	119.60	ug/ml	81
6) Bis(2-chloroethyl) Ether	8.83	93	271406m	115.05	ug/ml	
8) Phenol	8.77	94	326793	120.57	ug/ml	90
9) 2-Chlorophenol	8.88	128	333764	144.75	ug/ml	96
10) 1,3-Dichlorobenzene	9.11	146	373952	149.15	ug/ml	99
11) 1,4-Dichlorobenzene	9.24	146	368349	143.82	ug/ml	97
12) 1,2-Dichlorobenzene	9.48	146	345092	142.40	ug/ml	98
13) Benzyl Alcohol	9.52	108	181996	145.03	ug/ml	99
14) Bis(2-chloroisopropyl) Eth	9.72	45	258080	81.25	ug/ml	94
15) 2-Methylphenol	9.75	107	207370	127.43	ug/ml	98
16) Hexachloroethane	10.03	117	141155	132.43	ug/ml	82
17) N-Nitrosodi-n-propylamine	9.97	70	192370	123.92	ug/ml	99
18) 4-Methylphenol	10.02	107	301961	128.24	ug/ml	99
20) Nitrobenzene	10.20	77	277336	124.55	ug/ml	96
22) Isophorone	10.62	82	550845	133.26	ug/ml	100
23) 2-Nitrophenol	10.72	139	197996	166.24	ug/ml	92
24) 2,4-Dimethylphenol	10.87	122	238464	148.11	ug/ml	98
25) Bis(2-chloroethoxy)methane	10.99	93	323580	122.79	ug/ml	99

(#) = qualifier out of range (m) = manual integration

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:04 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.15	162	281182	163.53 ug/ml	100
27) Benzoic Acid	11.21	122	199065	188.26 ug/ml	97
28) 1,2,4-Trichlorobenzene	11.24	180	311723	158.35 ug/ml	99
29) Naphthalene	11.35	128	782057	141.49 ug/ml	99
30) 4-Chloroaniline	11.50	127	329563	142.13 ug/ml	98
31) Hexachlorobutadiene	11.58	225	207466	170.57 ug/ml	98
32) 4-Chloro-3-methylphenol	12.34	107	255322	160.28 ug/ml#	68
33) 2-Methylnaphthalene	12.50	142	514901	151.36 ug/ml	99
35) Hexachlorocyclopentadiene	12.75	237	247719	182.77 ug/ml	99
36) 2,4,6-Trichlorophenol	12.99	196	215671	184.61 ug/ml	100
37) 2,4,5-Trichlorophenol	13.06	196	241596	185.47 ug/ml	98
39) 2-Chloronaphthalene	13.28	162	542690	156.60 ug/ml	99
40) 2-Nitroaniline	13.50	65	148646	148.59 ug/ml	92
41) Acenaphthylene	13.95	152	847730	161.08 ug/ml	99
42) Dimethyl Phthalate	13.82	163	690625	182.74 ug/ml	99
43) 2,6-Dinitrotoluene	13.91	165	168226	192.29 ug/ml	78
44) Acenaphthene	14.23	154	471392	162.20 ug/ml	99
45) 3-Nitroaniline	14.18	138	175655	182.45 ug/ml	98
46) 2,4-Dinitrophenol	14.36	184	125333	256.12 ug/ml	97
47) Dibenzofuran	14.52	168	759033	167.97 ug/ml	99
48) 4-Nitrophenol	14.54	109	105628	242.92 ug/ml	92
49) 2,4-Dinitrotoluene	14.56	165	219004	197.08 ug/ml	99
50) 2,3,4,6-Tetrachlorophenol	14.75	232	201902	202.55 ug/ml	98
51) Fluorene	15.08	166	581335	177.07 ug/ml	96
52) 4-Chlorophenyl Phenyl Ethe	15.10	204	302041	174.56 ug/ml	100
53) Diethyl Phthalate	14.97	149	686689	180.68 ug/ml	97
54) 4-Nitroaniline	15.19	138	193706	203.37 ug/ml	96
55) 2-Methyl-4,6-dinitrophenol	15.22	198	150646	253.44 ug/ml	100
56) N-Nitrosodiphenylamine	15.32	169	434223	182.77 ug/ml	98
57) 1,2-Diphenylhydrazine	15.36	77	512985m	133.82 ug/ml	
60) 4-Bromophenyl Phenyl Ether	15.89	248	228971	156.90 ug/ml	97
61) Hexachlorobenzene	15.96	284	311661	169.03 ug/ml	98
62) Pentachlorophenol	16.31	266	180299m	208.54 ug/ml	
63) Phenanthrene	16.62	178	811715	135.44 ug/ml	100
64) Anthracene	16.71	178	855742	143.88 ug/ml	99
65) Carbazole	17.00	167	823116	149.36 ug/ml	99
66) Di-n-butyl Phthalate	17.61	149	1035714	140.33 ug/ml	99
67) Fluoranthene	18.54	202	916219	158.44 ug/ml	99
69) Benzidine	18.81	184	211060	132.59 ug/ml	98
70) Pyrene	18.91	202	998652	153.16 ug/ml	98
72) Butyl Benzyl Phthalate	20.03	149	497882	166.67 ug/ml	97

(#) = qualifier out of range (m) = manual integration

OCT 0 1 2014 TN

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:04 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.97	252	401788	168.33 ug/ml	98
74) Benz(a)anthracene	20.96	228	852481	157.81 ug/ml	99
75) Chrysene	21.05	228	863498	166.58 ug/ml	100
76) Bis(2-ethylhexyl) Phthalat	21.16	149	663523	160.53 ug/ml	98
78) Di-n-octyl Phthalate	22.61	149	1215950	145.37 ug/ml	98
79) Benzo(b)fluoranthene	23.28	252	928275	168.62 ug/ml	98
80) Benzo(k)fluoranthene	23.35	252	828704	152.48 ug/ml	100
81) Benzo(a)pyrene	24.02	252	855516	161.37 ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.59	276	808807	157.79 ug/ml	97
83) Dibenz(a,h)anthracene	26.66	278	831360	155.90 ug/ml	100
84) Benzo(g,h,i)perylene	27.16	276	828913	150.90 ug/ml	98

10/2/14

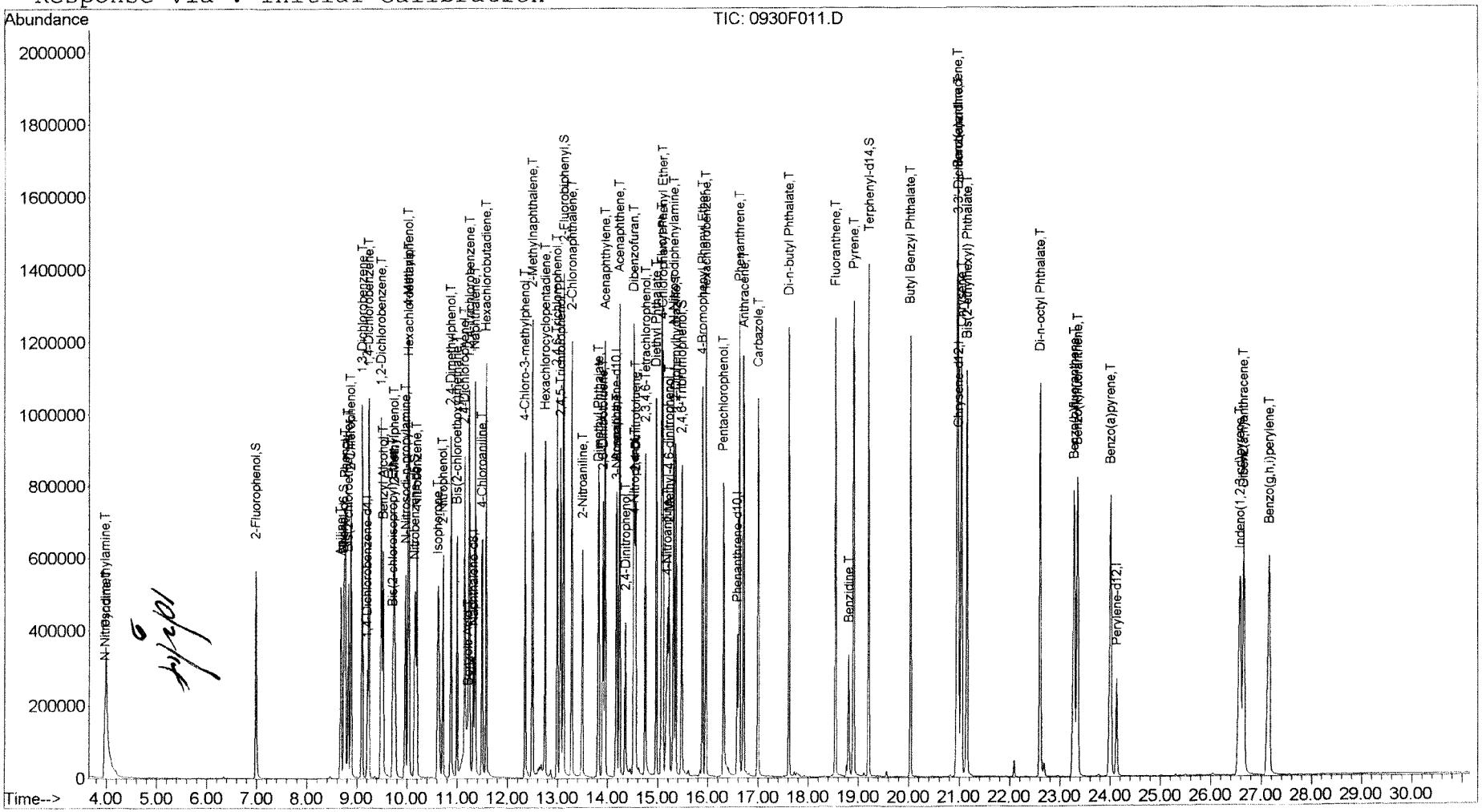
(#) = qualifier out of range (m) = manual integration
0930F011.D 093014BNC7.M Wed Oct 01 14:35:03 2014 Page 3

OCT 0 1 2014 TNT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:19 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



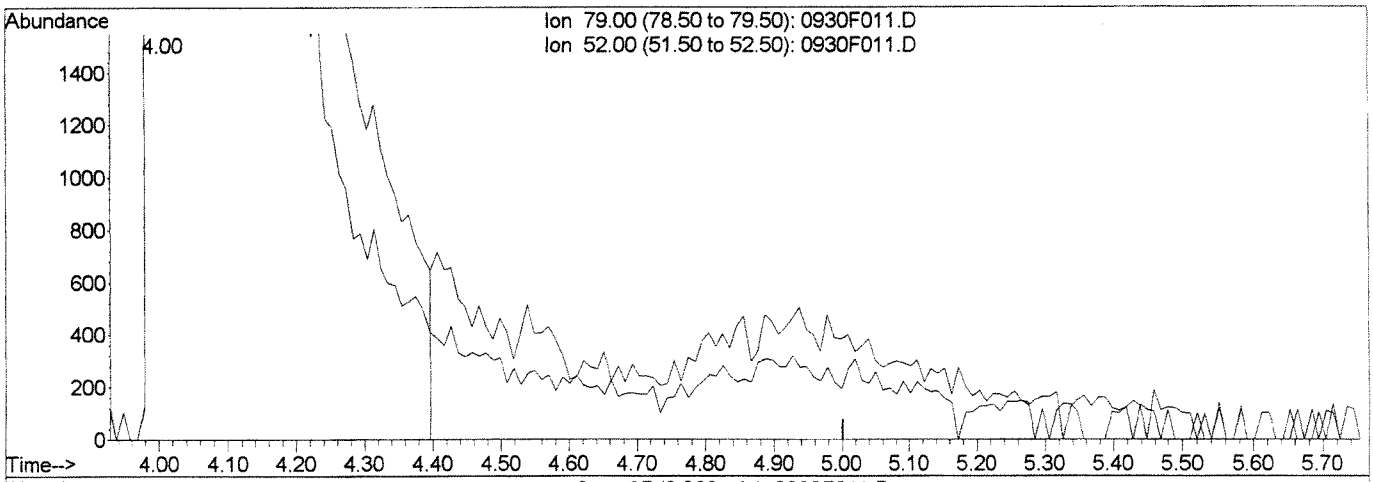
2824

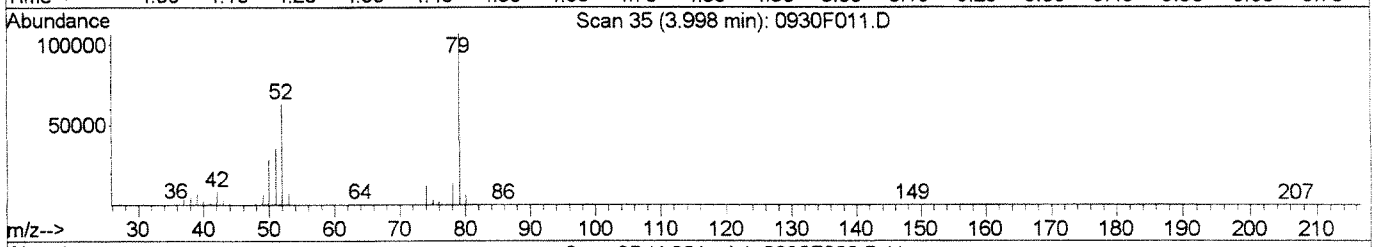
OCT 01 2014

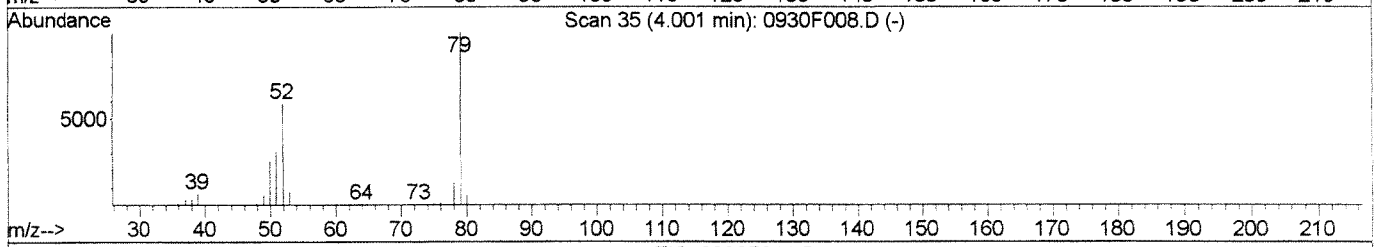
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:41 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F011.D

(3) Pyridine (T)

4.00min 141.69ug/ml

response 382202

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	59.16
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

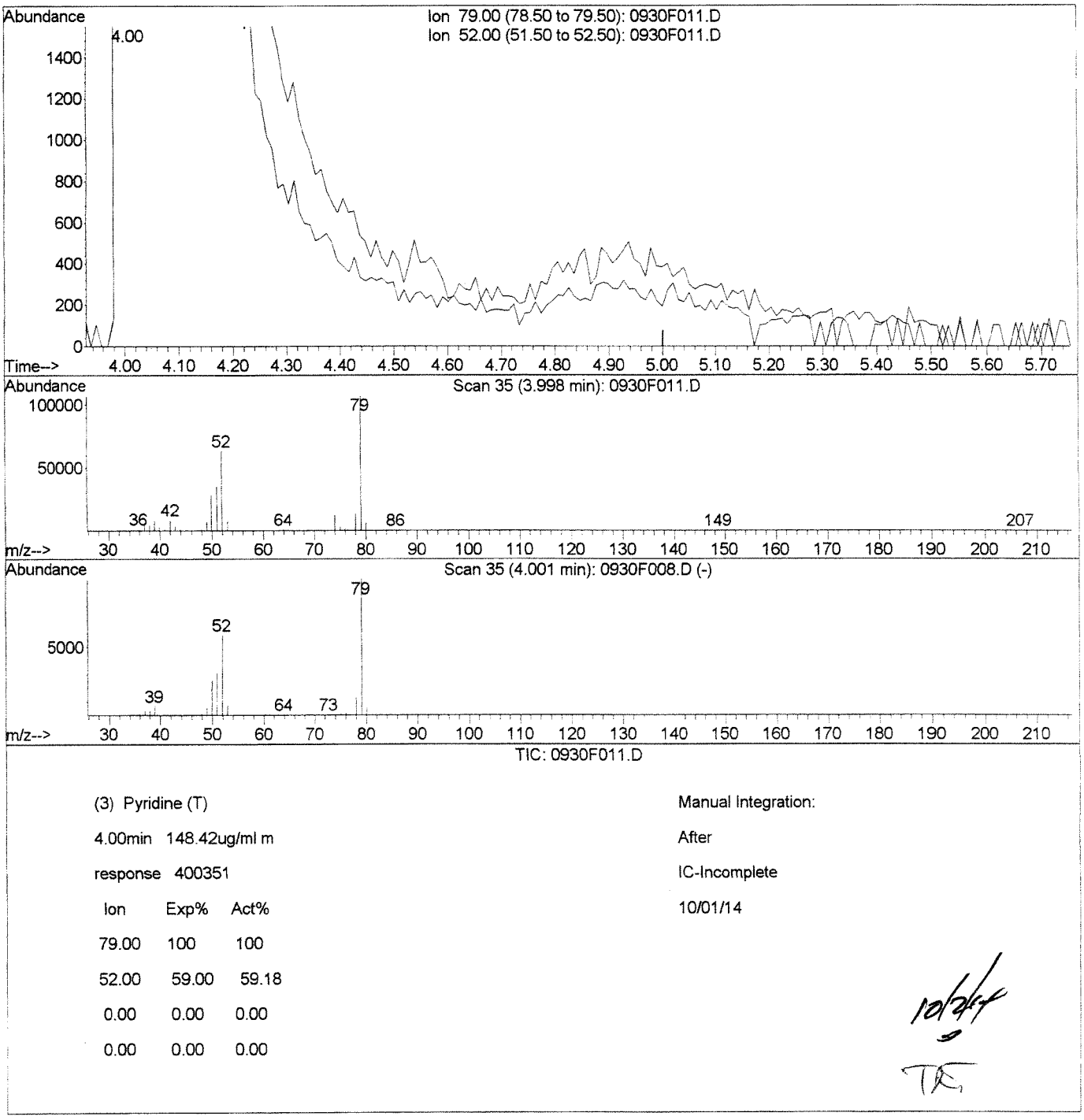
TRT

0930F011.D 093014BNC7.M Wed Oct 01 13:16:45 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:16 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration



TIC: 0930F011.D

(3) Pyridine (T)

4.00min 148.42ug/ml m

response 400351

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	59.18
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

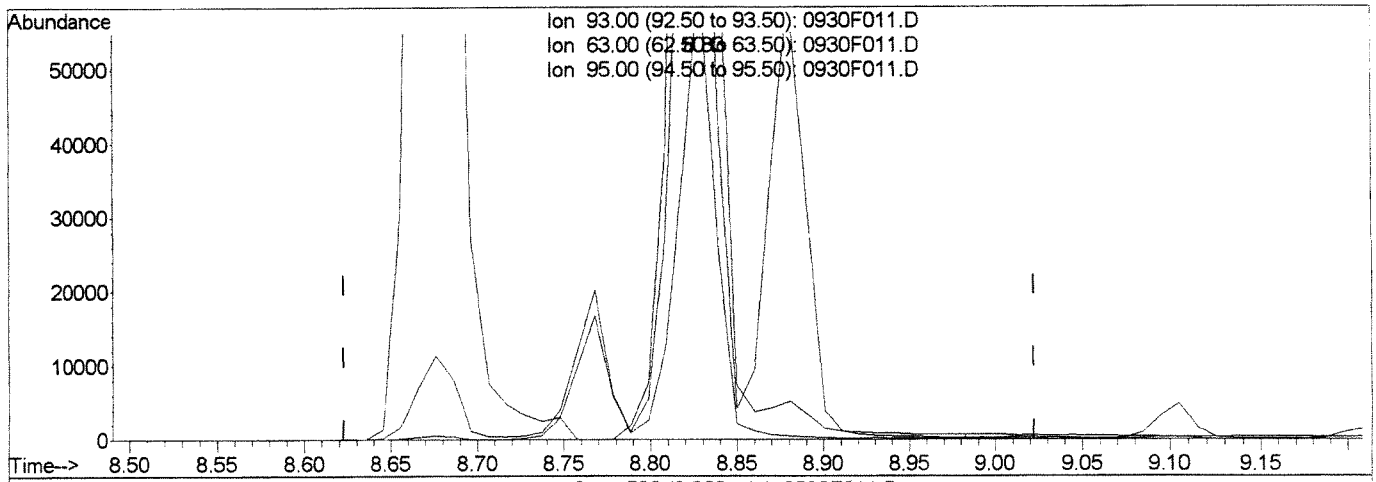
TR

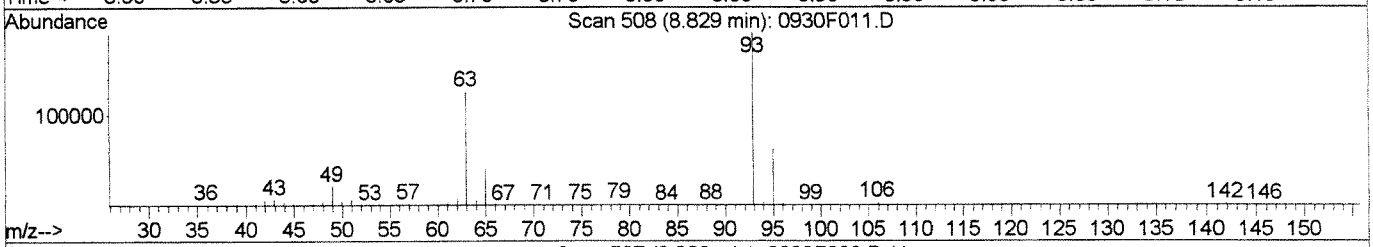
0930F011.D 093014BNC7.M Wed Oct 01 13:16:53 2014

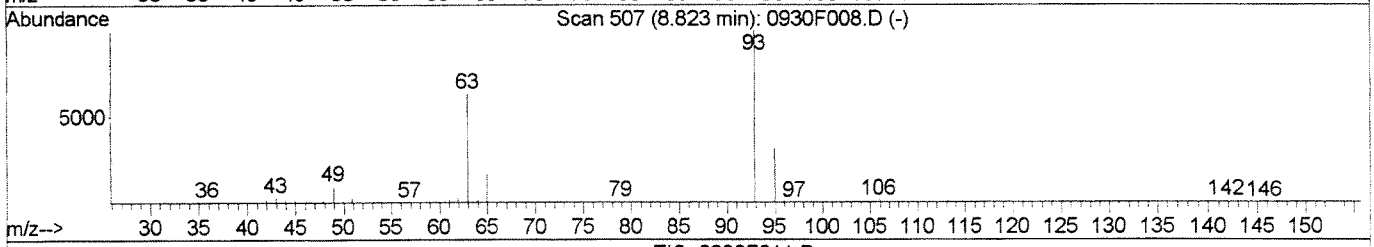
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:16 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F011.D

(6) Bis(2-chloroethyl) Ether (T)

8.83min 120.46ug/ml

response 284147

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.38
95.00	32.50	31.10
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

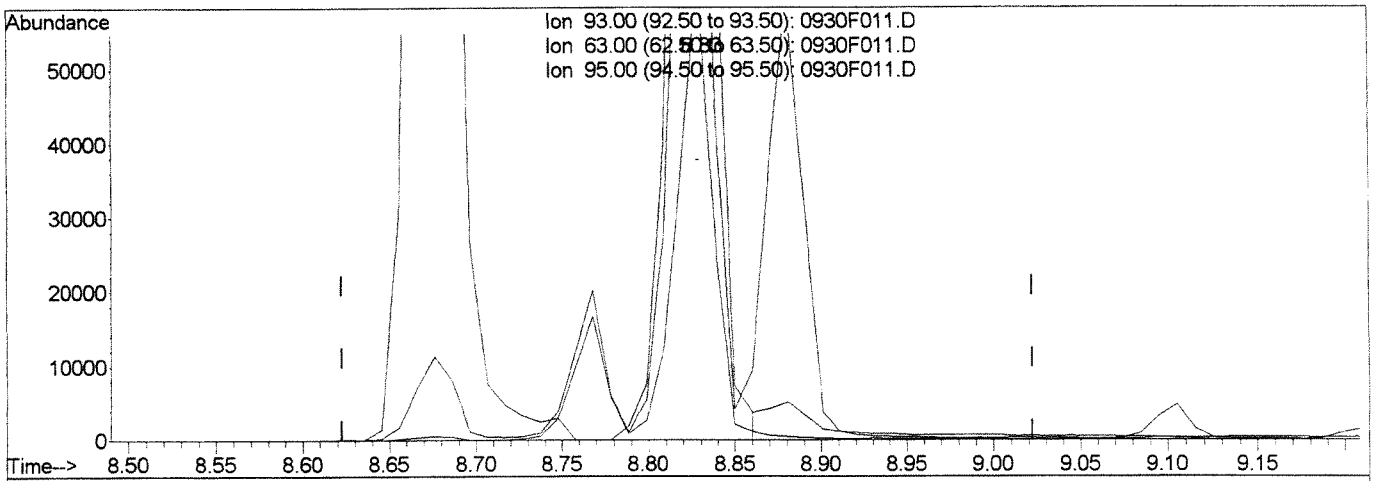
TR

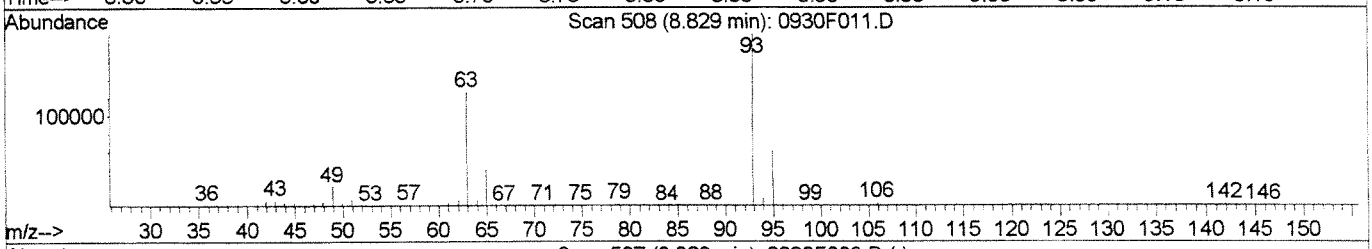
0930F011.D 093014BNC7.M Wed Oct 01 13:17:09 2014

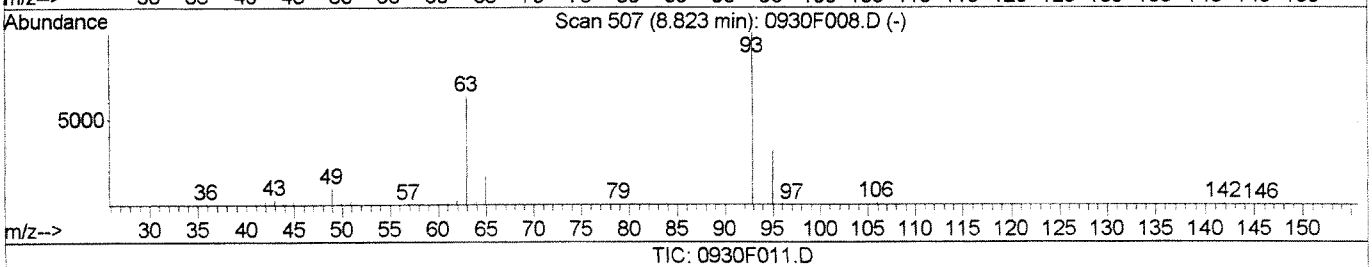
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:17 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F011.D

(6) Bis(2-chloroethyl) Ether (T)

8.83min 115.05ug/ml m

response 271406

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	65.92
95.00	32.50	32.59
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

12/1/14

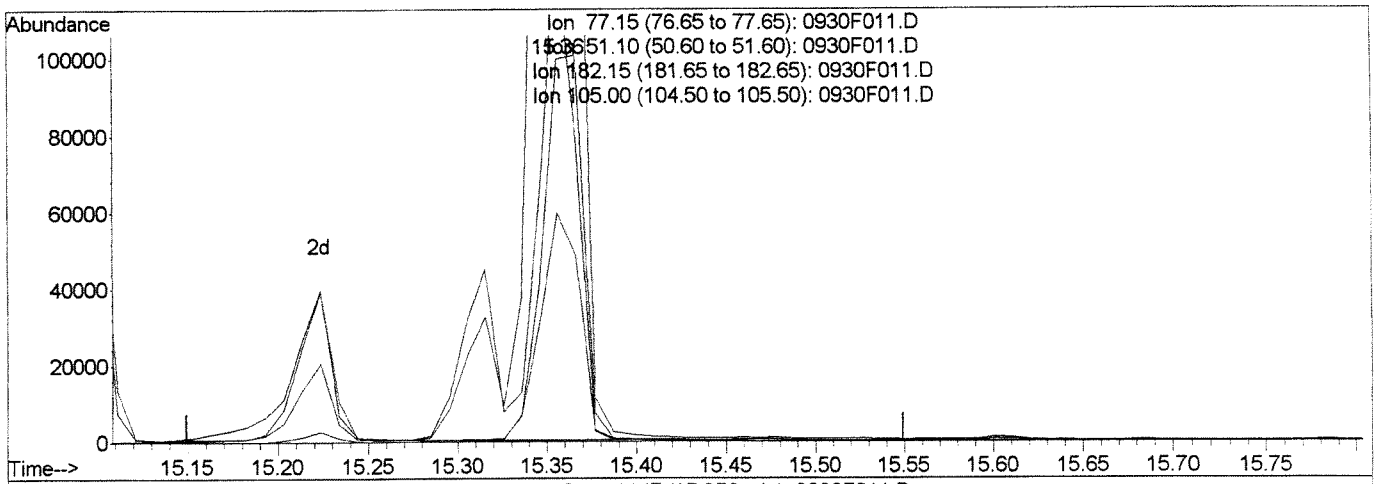
TKT

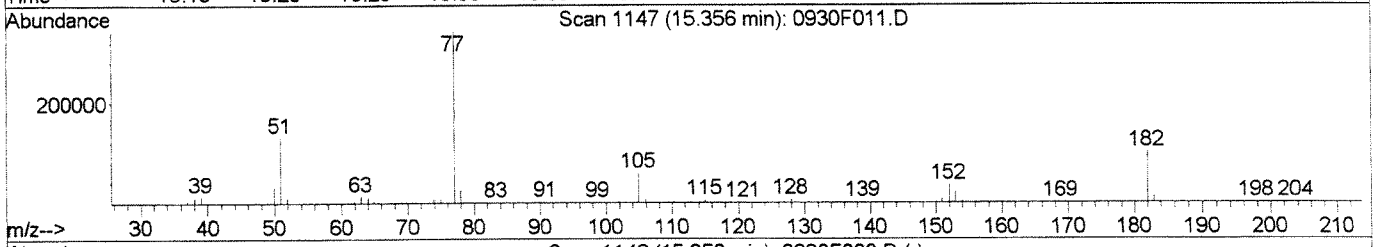
0930F011.D 093014BNC7.M Wed Oct 01 13:17:16 2014

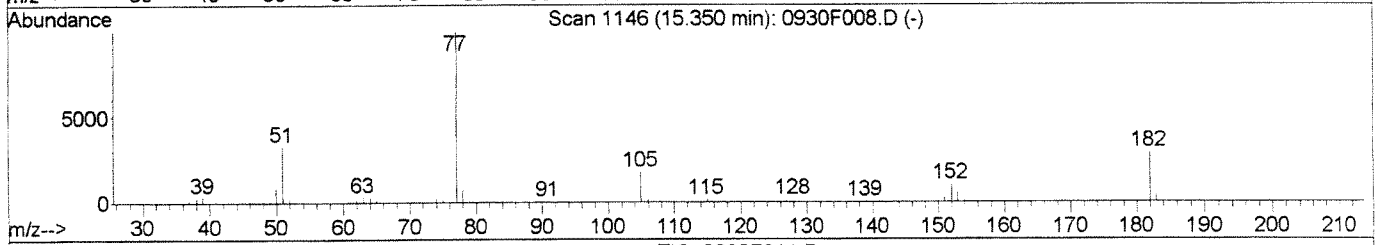
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:17 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F011.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 143.89ug/ml

response 551593

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	38.30
182.15	29.00	29.16
105.00	17.70	17.36

Manual Integration:

Before

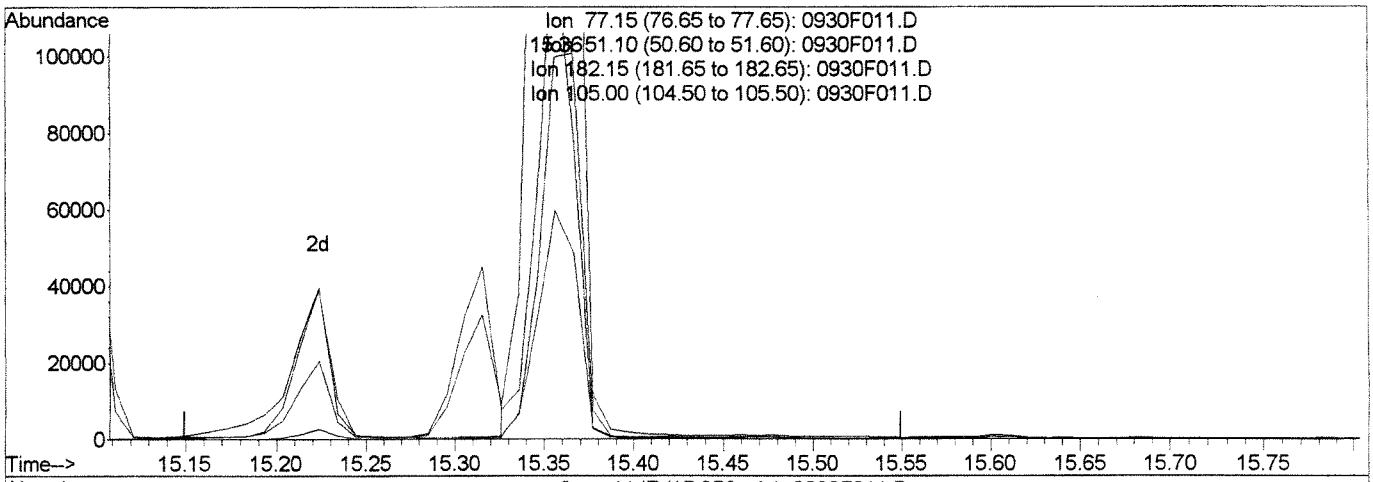
10/01/14

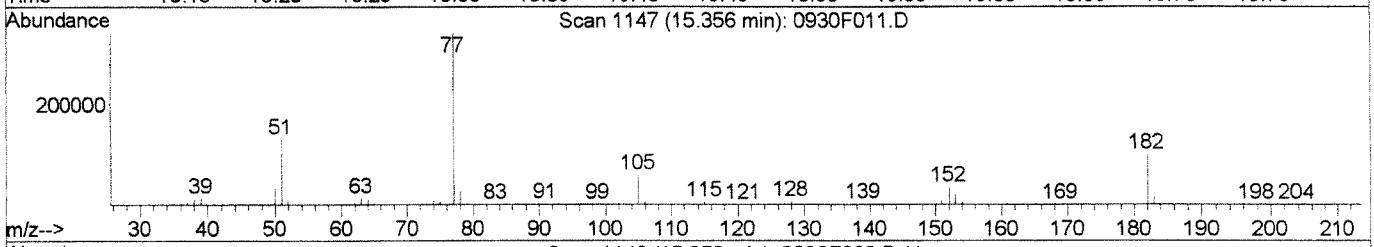
0930F011.D 093014BNC7.M Wed Oct 01 13:18:19 2014

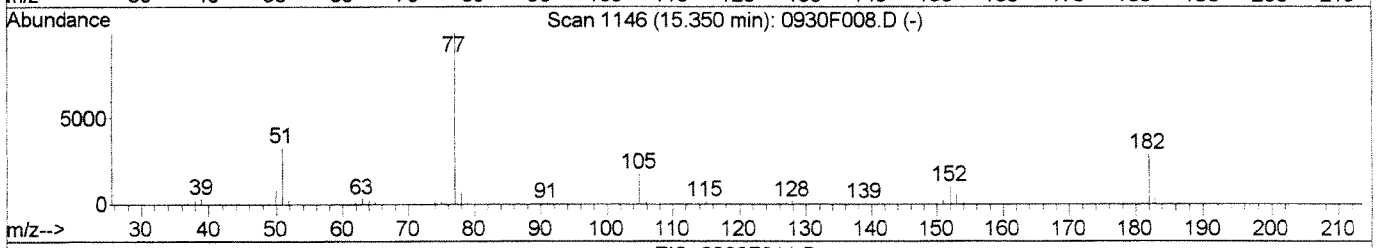
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F011.D Vial: 11
Acq On : 1 Oct 2014 2:27 am Operator: T. THOMAS
Sample : 8270 ICAL @ 160 ppm | SVM47-14J Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:18 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F011.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 133.82ug/ml m

response 512985

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	38.40
182.15	29.00	29.13
105.00	17.70	17.44

Manual Integration:

After

IC-Overintegrated

10/01/14

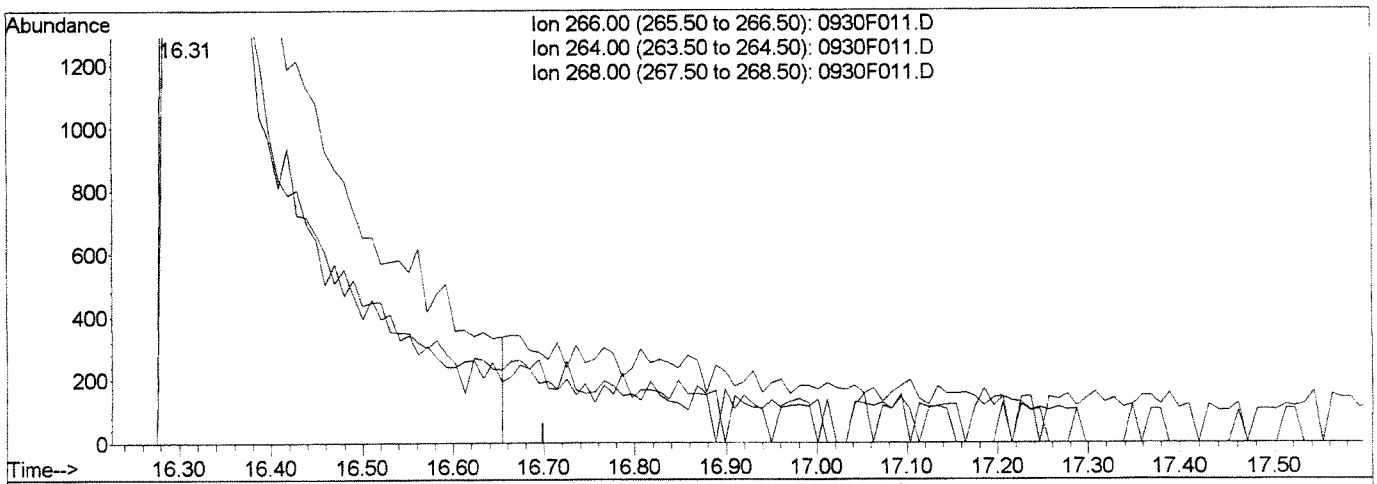
0930F011.D 093014BNC7.M Wed Oct 01 13:18:42 2014

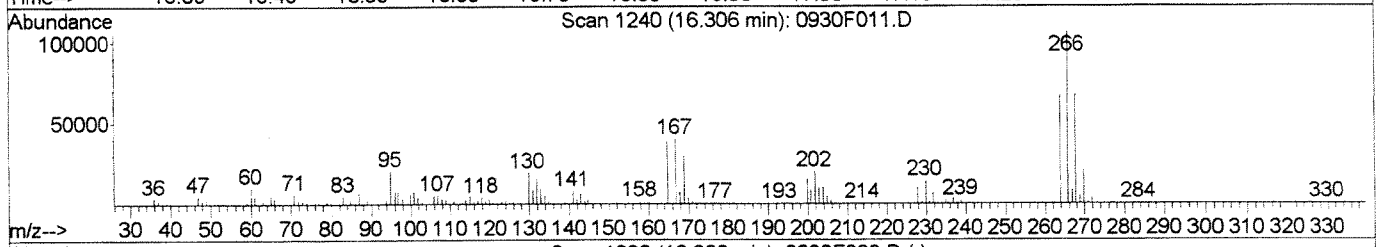
Quantitation Report (Qedit)

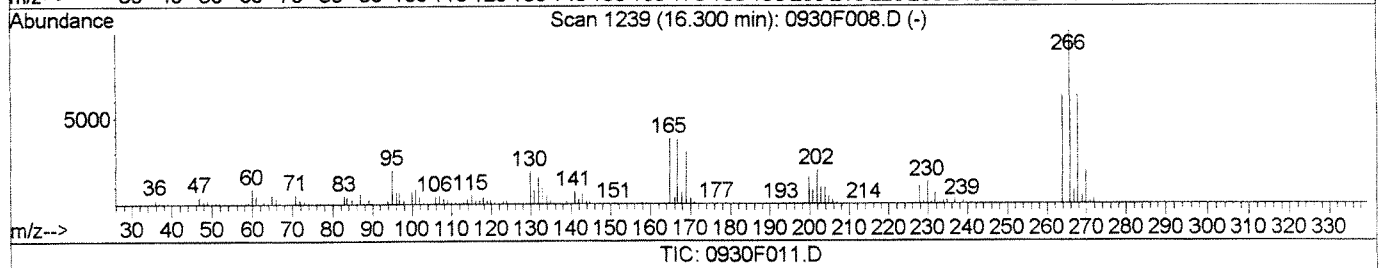
Data File : J:\MS07\DATA\093014\0930F011.D
Acq On : 1 Oct 2014 2:27 am
Sample : 8270 ICAL @ 160 ppm | SVM47-14J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:18 2014

Vial: 11
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F011.D

(62) Pentachlorophenol (T)

16.31min 200.45ug/ml

response 173307

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	63.27
268.00	63.20	63.79
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

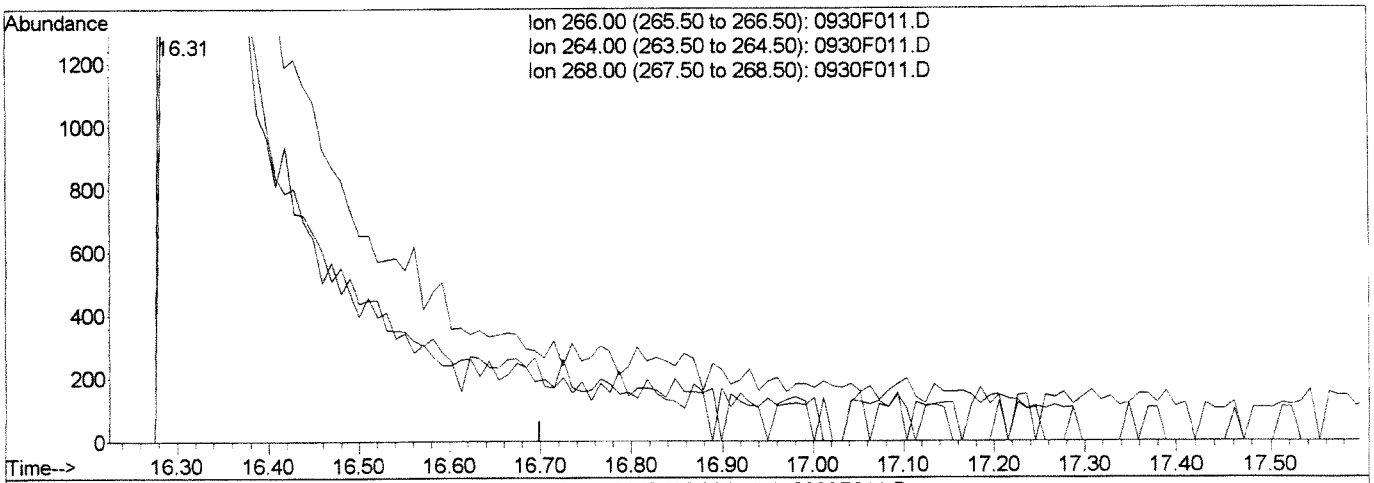
0930F011.D 093014BNC7.M Wed Oct 01 13:18:56 2014

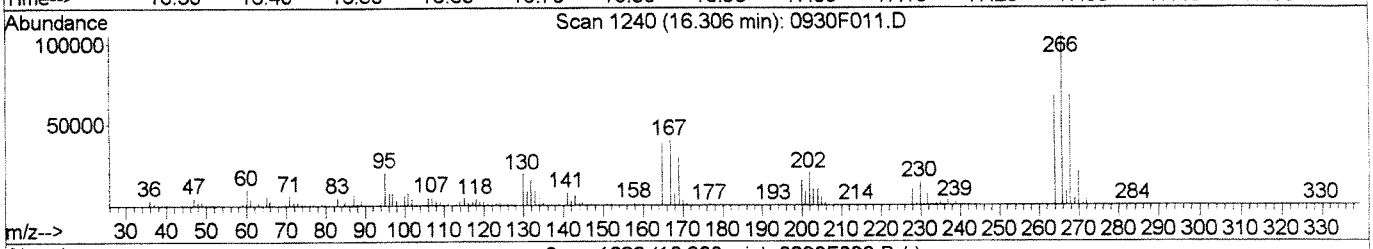
Quantitation Report (Qedit)

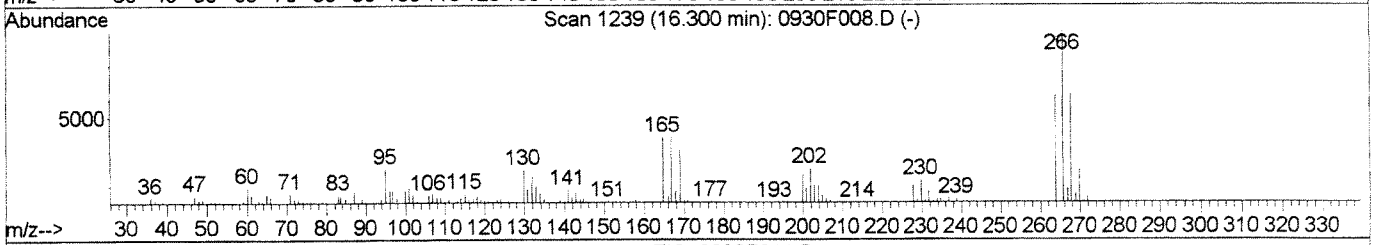
Data File : J:\MS07\DATA\093014\0930F011.D
Acq On : 1 Oct 2014 2:27 am
Sample : 8270 ICAL @ 160 ppm | SVM47-14J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:19 2014

Vial: 11
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F011.D

(62) Pentachlorophenol (T)

16.31min 208.54ug/ml m

response 180299

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	63.27
268.00	63.20	63.80
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

TRT

0930F011.D 093014BNC7.M Wed Oct 01 13:19:04 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:06 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	74142	40.00	ug/ml	0.00
21) Naphthalene-d8	11.32	136	257880	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	110975	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	239990	40.00	ug/ml	0.00
68) Chrysene-d12	20.99	240	227248	40.00	ug/ml	0.00
77) Perylene-d12	24.13	264	222028	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.98	112	389101	163.88	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery =	109.25%#		
7) Phenol-d6	8.75	99	426984	145.15	ug/ml	0.02
Spiked Amount 150.000	Range 10 - 94		Recovery =	96.77%#		
19) Nitrobenzene-d5	10.17	82	417195	159.79	ug/ml	0.02
Spiked Amount 100.000	Range 35 - 114		Recovery =	159.79%#		
38) 2-Fluorobiphenyl	13.12	172	795625	202.93	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery =	202.93%#		
59) 2,4,6-Tribromophenol	15.48	330	260049	216.98	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery =	144.65%#		
71) Terphenyl-d14	19.21	244	901089	197.50	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery =	197.50%#		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.99	42	218076	217.33	ug/ml	83
3) Pyridine	4.00	79	521988m	178.92	ug/ml	
5) Aniline	8.69	93	437725	141.99	ug/ml	95
6) Bis(2-chloroethyl) Ether	8.84	93	344950m	135.20	ug/ml	
8) Phenol	8.78	94	396315	135.19	ug/ml	93
9) 2-Chlorophenol	8.89	128	412929	165.58	ug/ml	95
10) 1,3-Dichlorobenzene	9.11	146	471014	173.69	ug/ml	99
11) 1,4-Dichlorobenzene	9.24	146	464964	167.85	ug/ml	97
12) 1,2-Dichlorobenzene	9.49	146	446120	170.20	ug/ml	100
13) Benzyl Alcohol	9.54	108	225194	165.91	ug/ml	98
14) Bis(2-chloroisopropyl) Eth	9.72	45	332603	96.81	ug/ml	94
15) 2-Methylphenol	9.75	107	264720	150.40	ug/ml	94
16) Hexachloroethane	10.04	117	173931	150.87	ug/ml	80
17) N-Nitrosodi-n-propylamine	9.98	70	235664	140.36	ug/ml	95
18) 4-Methylphenol	10.03	107	349742	137.32	ug/ml	98
20) Nitrobenzene	10.20	77	361565	150.13	ug/ml	98
22) Isophorone	10.63	82	694007	159.86	ug/ml	98
23) 2-Nitrophenol	10.72	139	245402	196.19	ug/ml	97
24) 2,4-Dimethylphenol	10.89	122	298738	176.67	ug/ml	99
25) Bis(2-chloroethoxy)methane	11.01	93	414032	149.59	ug/ml	98

(#) = qualifier out of range (m) = manual integration
0930F012.D 093014BNC7.M Wed Oct 01 14:35:06 2014 Page 1

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:06 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	2,4-Dichlorophenol	11.15	162	345795	191.49	ug/ml	97
27)	Benzoic Acid	11.25	122	246404m	221.88	ug/ml	
28)	1,2,4-Trichlorobenzene	11.24	180	394735	190.93	ug/ml	99
29)	Naphthalene	11.37	128	976789	168.27	ug/ml	99
30)	4-Chloroaniline	11.50	127	396159	162.68	ug/ml	97
31)	Hexachlorobutadiene	11.58	225	278731	218.21	ug/ml	99
32)	4-Chloro-3-methylphenol	12.35	107	296613	177.29	ug/ml#	67
33)	2-Methylnaphthalene	12.50	142	594997	166.54	ug/ml	100
35)	Hexachlorocyclopentadiene	12.75	237	314831	237.11	ug/ml	95
36)	2,4,6-Trichlorophenol	12.99	196	242696	212.06	ug/ml	100
37)	2,4,5-Trichlorophenol	13.06	196	280475	219.79	ug/ml	98
39)	2-Chloronaphthalene	13.29	162	656732	193.44	ug/ml	98
40)	2-Nitroaniline	13.50	65	172799	176.32	ug/ml	92
41)	Acenaphthylene	13.95	152	984987	191.04	ug/ml	99
42)	Dimethyl Phthalate	13.83	163	787767	212.78	ug/ml	100
43)	2,6-Dinitrotoluene	13.91	165	197432	230.36	ug/ml	74
44)	Acenaphthene	14.24	154	539712	189.57	ug/ml	100
45)	3-Nitroaniline	14.18	138	209121	221.73	ug/ml	99
46)	2,4-Dinitrophenol	14.36	184	151734	316.51	ug/ml	99
47)	Dibenzofuran	14.52	168	849439	191.88	ug/ml	99
48)	4-Nitrophenol	14.55	109	128052	300.61	ug/ml	92
49)	2,4-Dinitrotoluene	14.56	165	265252	243.66	ug/ml	98
50)	2,3,4,6-Tetrachlorophenol	14.76	232	244100	249.96	ug/ml	96
51)	Fluorene	15.08	166	646725	201.08	ug/ml	99
52)	4-Chlorophenyl Phenyl Ethe	15.10	204	346187	204.23	ug/ml	99
53)	Diethyl Phthalate	14.98	149	796976	214.05	ug/ml	98
54)	4-Nitroaniline	15.21	138	223975	240.04	ug/ml	95
55)	2-Methyl-4,6-dinitrophenol	15.24	198	181944	312.45	ug/ml	100
56)	N-Nitrosodiphenylamine	15.32	169	525130	225.63	ug/ml	100
57)	1,2-Diphenylhydrazine	15.36	77	603350m	160.66	ug/ml	
60)	4-Bromophenyl Phenyl Ether	15.89	248	263096	177.37	ug/ml	99
61)	Hexachlorobenzene	15.96	284	359370	191.77	ug/ml	96
62)	Pentachlorophenol	16.31	266	222334m	253.02	ug/ml	
63)	Phenanthrene	16.63	178	946992	155.47	ug/ml	99
64)	Anthracene	16.72	178	982619	162.55	ug/ml	99
65)	Carbazole	17.00	167	988555	176.49	ug/ml	100
66)	Di-n-butyl Phthalate	17.62	149	1251536	166.84	ug/ml	100
67)	Fluoranthene	18.55	202	1110625	188.96	ug/ml	99
69)	Benzidine	18.81	184	238963	146.25	ug/ml	97
70)	Pyrene	18.91	202	1206510	180.27	ug/ml	98
72)	Butyl Benzyl Phthalate	20.04	149	593463	193.55	ug/ml	97

(#) = qualifier out of range (m) = manual integration
0930F012.D 093014BNC7.M Wed Oct 01 14:35:06 2014 Page 2

10/2/14

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 12:41:06 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.98	252	515701	210.48	ug/ml	98
74) Benz(a)anthracene	20.97	228	1079943	194.77	ug/ml	99
75) Chrysene	21.06	228	1082670	203.48	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.16	149	805738	189.92	ug/ml	98
78) Di-n-octyl Phthalate	22.61	149	1560576	188.01	ug/ml	100
79) Benzo(b)fluoranthene	23.30	252	1116279	204.35	ug/ml	99
80) Benzo(k)fluoranthene	23.37	252	1072393m	198.85	ug/ml	
81) Benzo(a)pyrene	24.03	252	1057858	201.09	ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.60	276	991496	194.93	ug/ml	98
83) Dibenz(a,h)anthracene	26.68	278	999300	188.84	ug/ml	98
84) Benzo(g,h,i)perylene	27.18	276	1017991	186.76	ug/ml	99

10/2/14

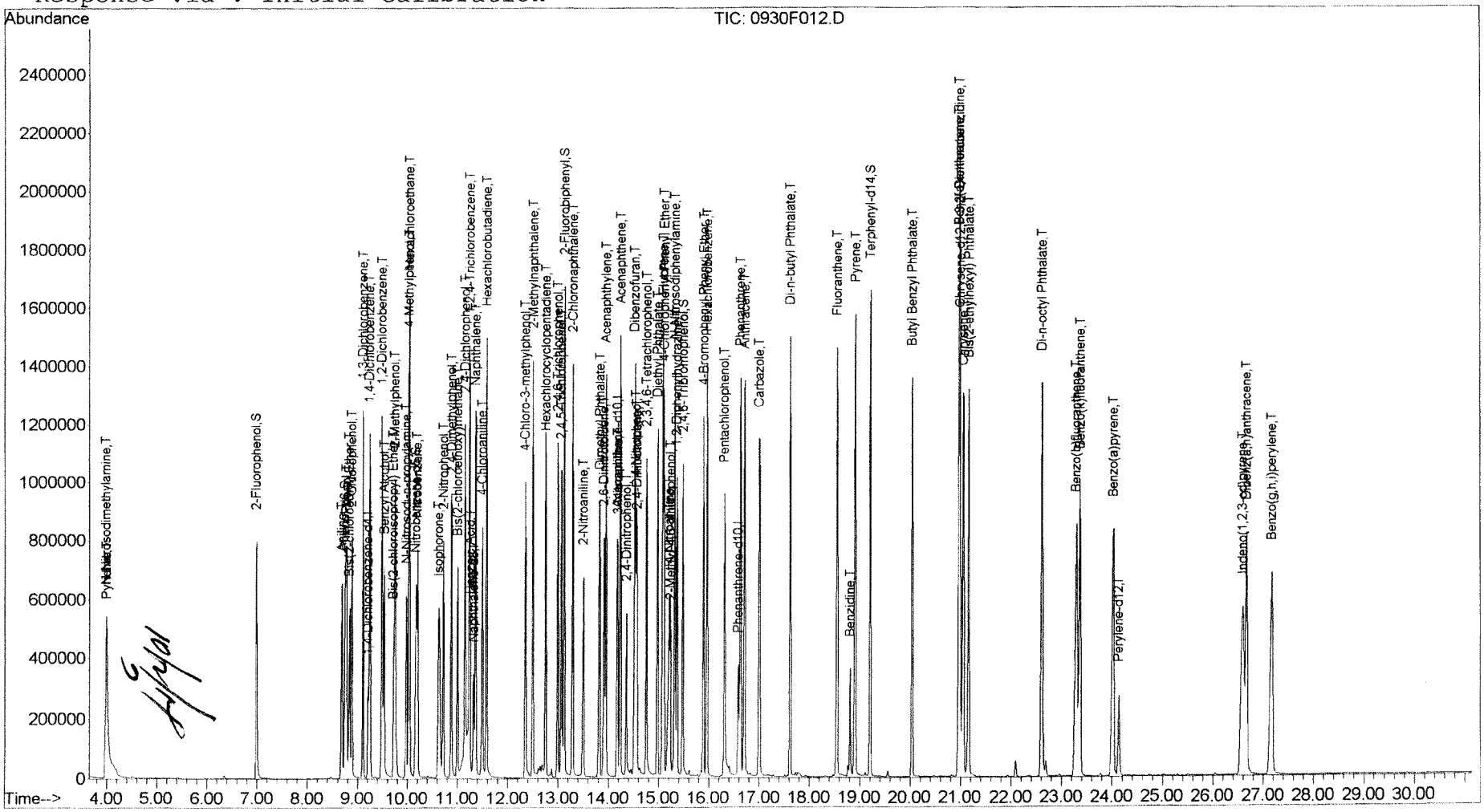
(#) = qualifier out of range (m) = manual integration
0930F012.D 093014BNC7.M Wed Oct 01 14:35:07 2014 Page 3

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:23 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2836

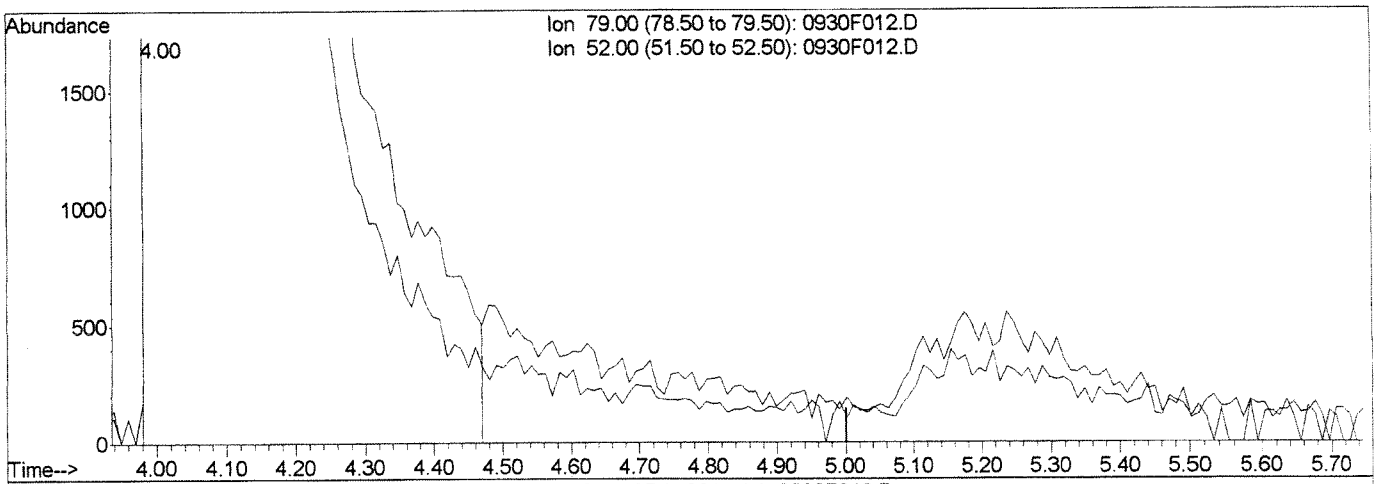
OCT 01 2014

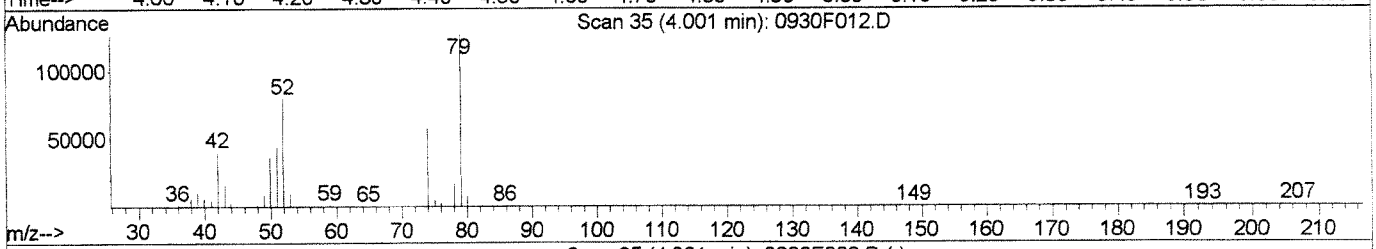
Quantitation Report (Qedit)

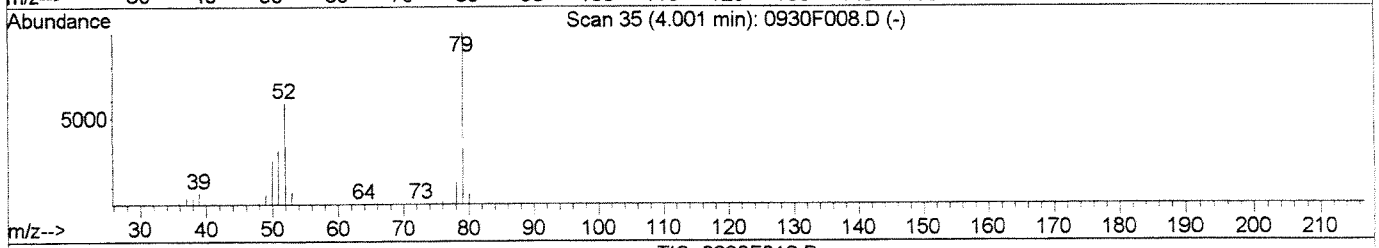
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 12:41 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(3) Pyridine (T)

4.00min 171.80ug/ml

response 501224

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	62.90
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

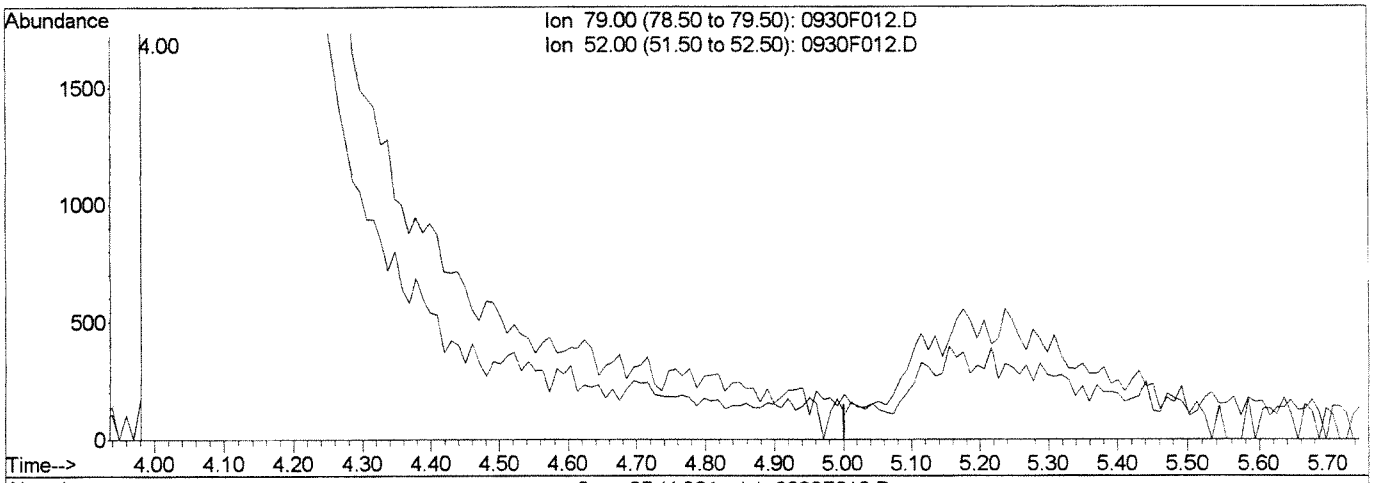
TAT

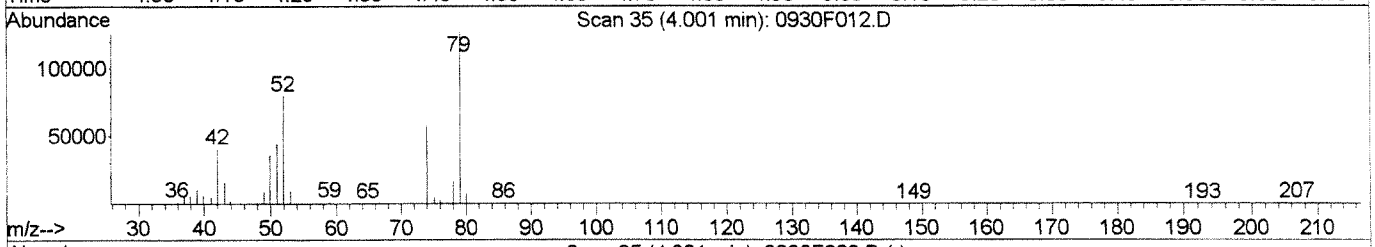
0930F012.D 093014BNC7.M Wed Oct 01 13:20:08 2014

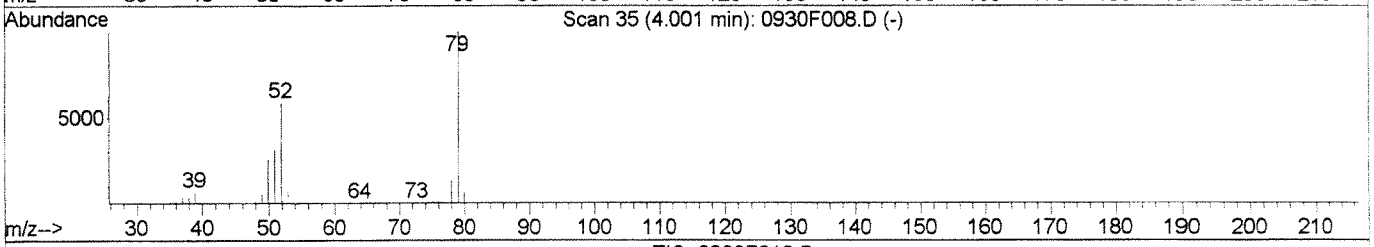
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:20 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(3) Pyridine (T)

4.00min 178.92ug/ml m

response 521988

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	62.91
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

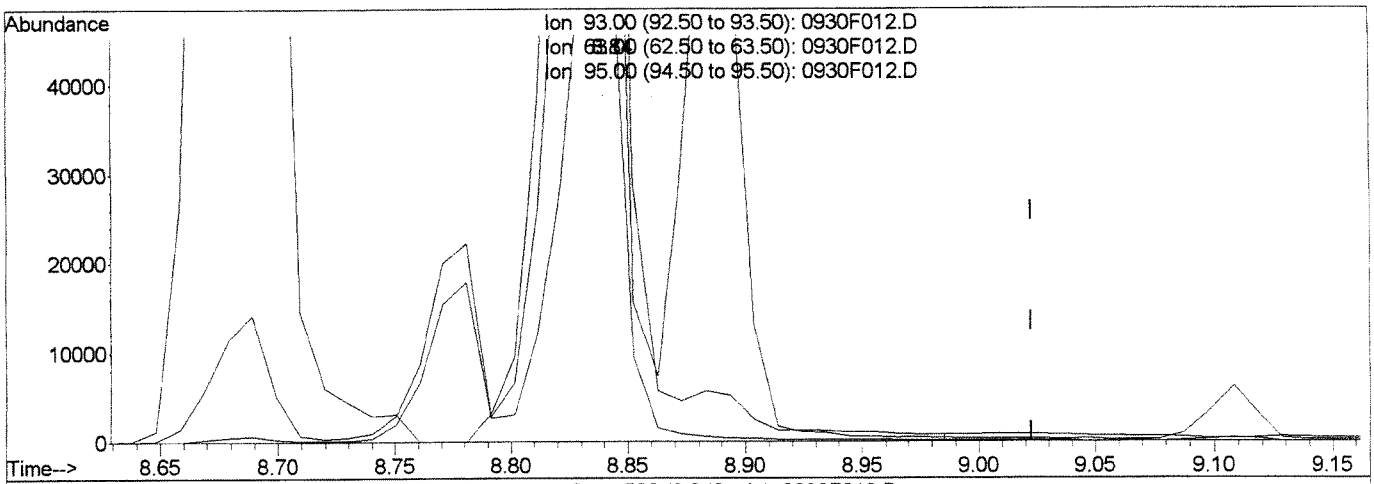
0930F012.D 093014BNC7.M Wed Oct 01 13:20:22 2014

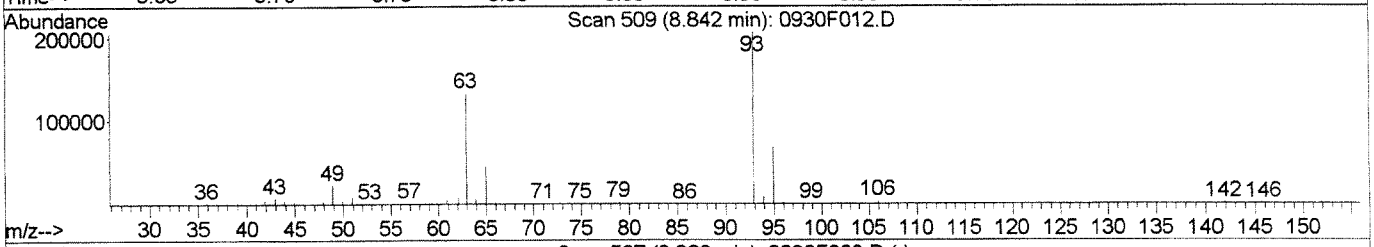
Quantitation Report (Qedit)

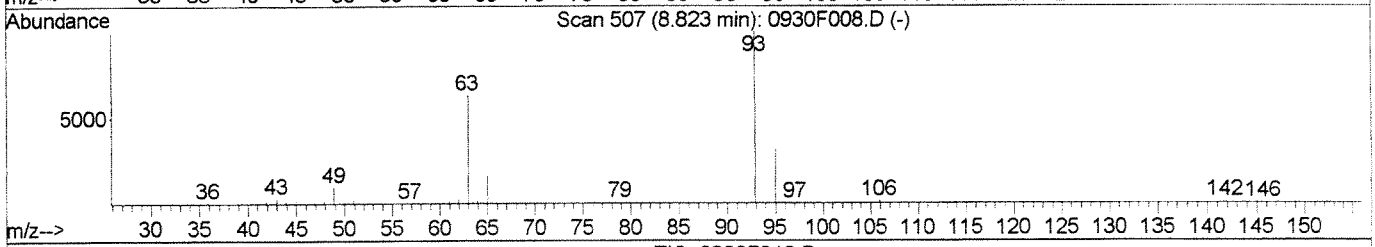
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:20 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(6) Bis(2-chloroethyl) Ether (T)

8.84min 140.40ug/ml

response 358205

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	59.11
95.00	32.50	28.43
0.00	0.00	0.00

Manual Integration:

Before

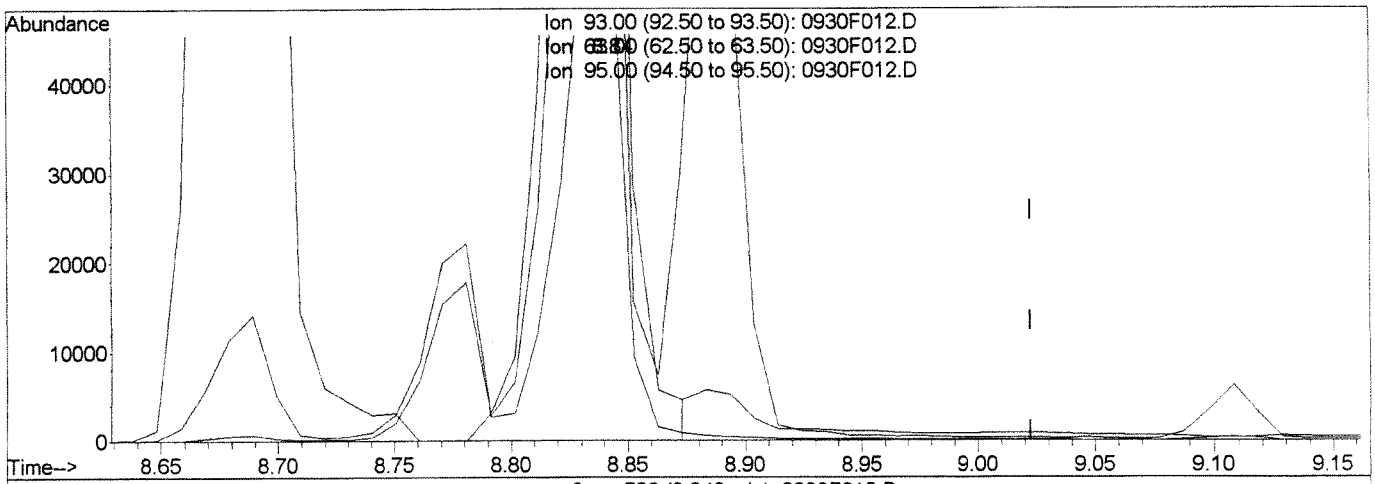
10/01/14

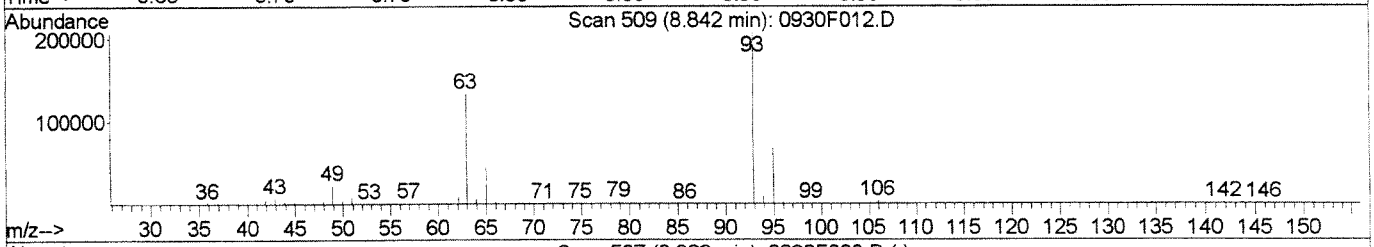
0930F012.D 093014BNC7.M Wed Oct 01 13:20:36 2014

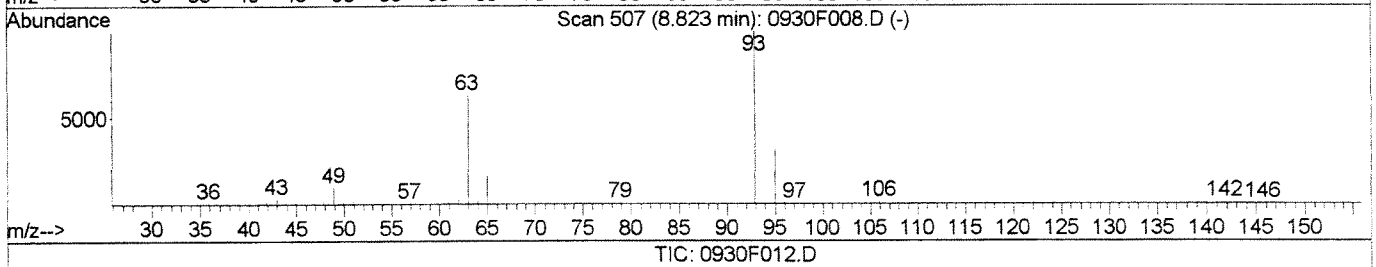
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:20 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(6) Bis(2-chloroethyl) Ether (T)

8.84min 135.20ug/ml m

response 344950

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.47
95.00	32.50	32.72
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

12bbf
2

TRT

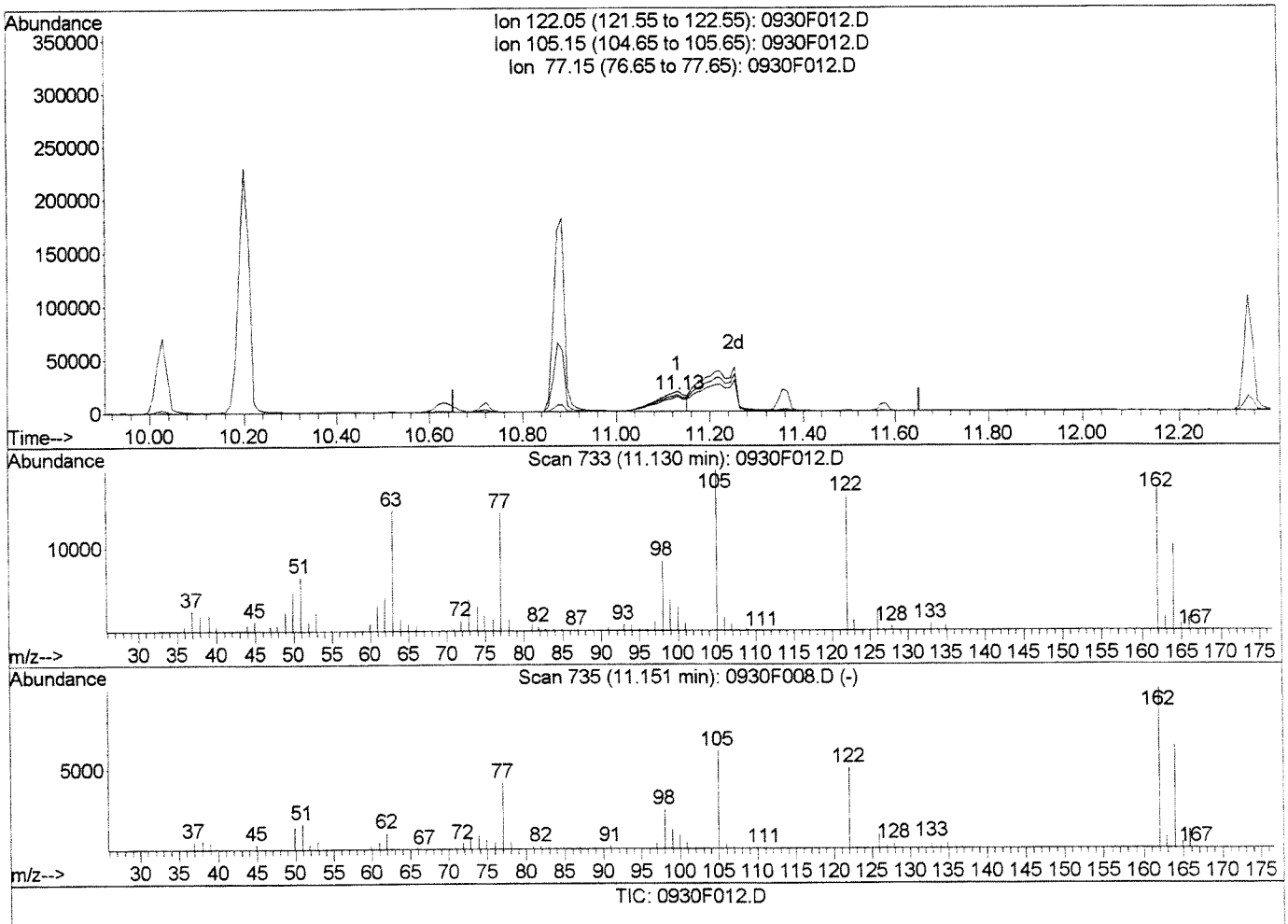
0930F012.D 093014BNC7.M Wed Oct 01 13:20:42 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:20 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration



TIC: 0930F012.D

(27) Benzoic Acid (T)

11.13min 64.49ug/ml

response 71618

Ion	Exp%	Act%
122.05	100	100
105.15	120.40	122.12
77.15	80.10	87.38
0.00	0.00	0.00

Manual Integration:

Before

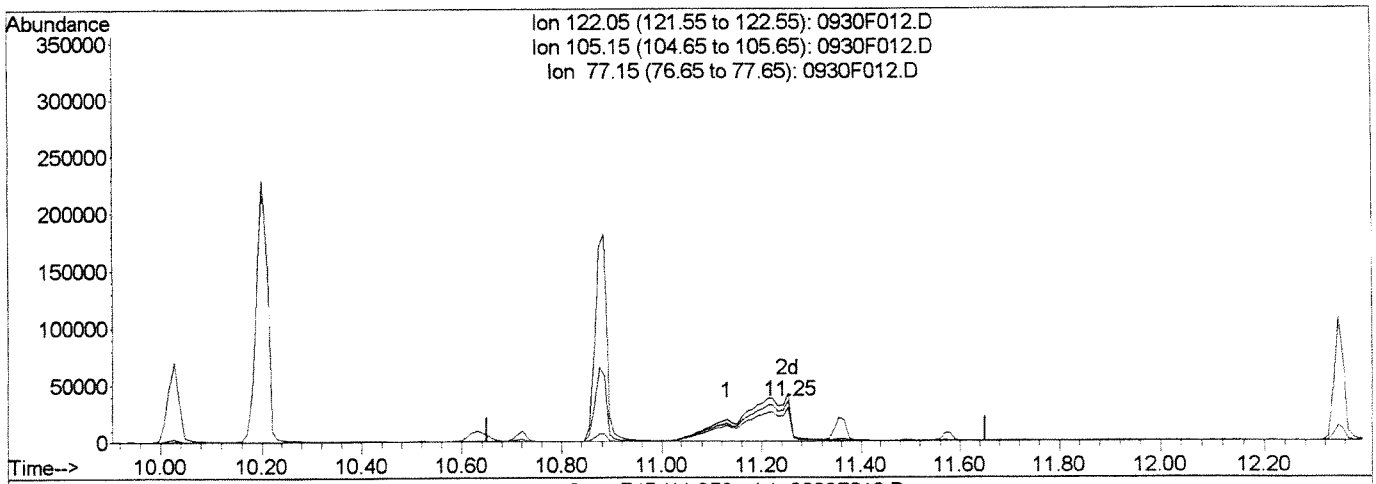
10/01/14

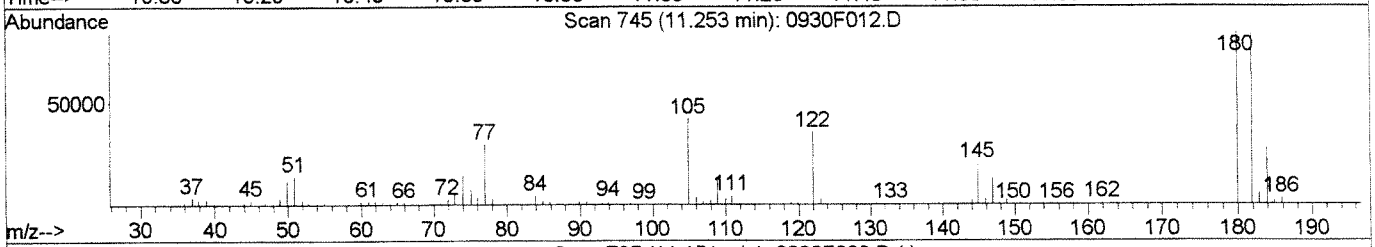
0930F012.D 093014BNC7.M Wed Oct 01 13:21:13 2014

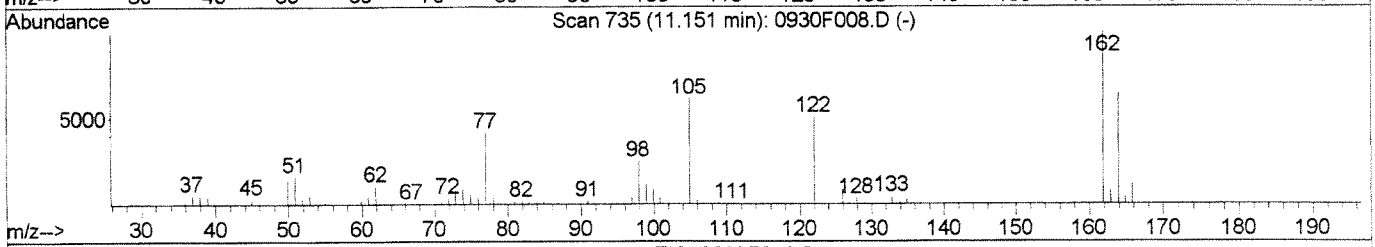
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:21 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F012.D

(27) Benzoic Acid (T)

11.25min 221.88ug/ml m

response 246404

Ion	Exp%	Act%
122.05	100	100
105.15	120.40	118.56
77.15	80.10	83.49
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

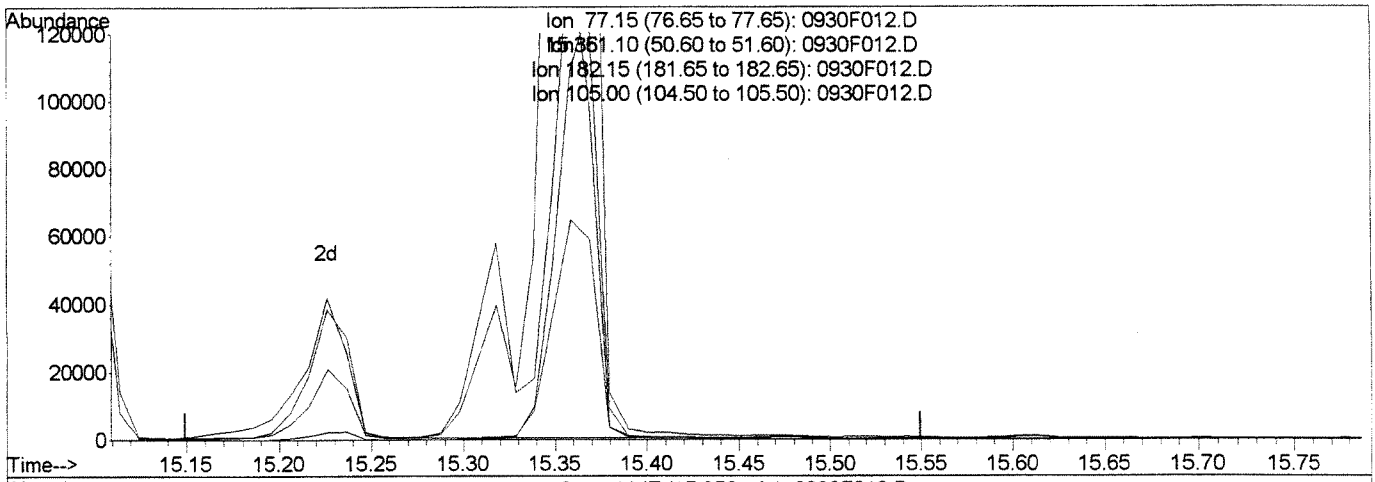
TRT

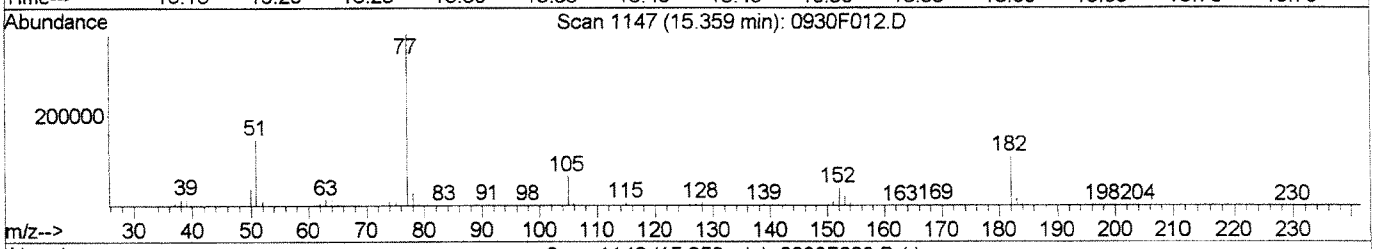
0930F012.D 093014BNC7.M Wed Oct 01 13:21:26 2014

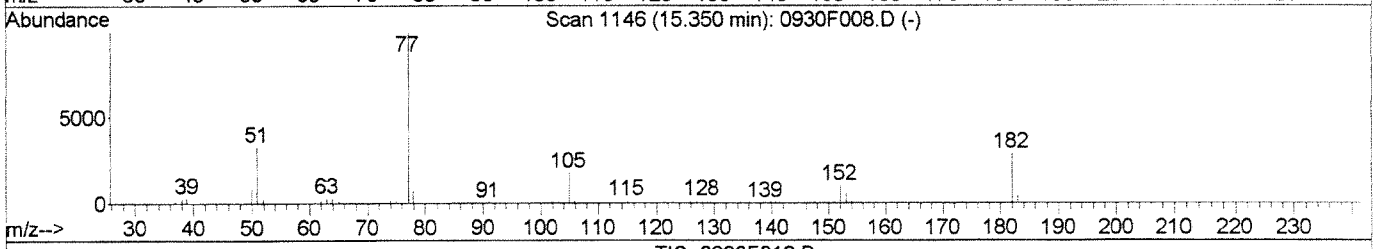
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F012.D Vial: 12
Acq On : 1 Oct 2014 3:08 am Operator: T. THOMAS
Sample : 8270 ICAL @ 200 ppm | SVM47-14K Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:21 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 173.59ug/ml

response 651888

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	38.31
182.15	29.00	28.63
105.00	17.70	16.84

Manual Integration:

Before

10/01/14

10/1/14

TRT

0930F012.D 093014BNC7.M Wed Oct 01 13:21:58 2014

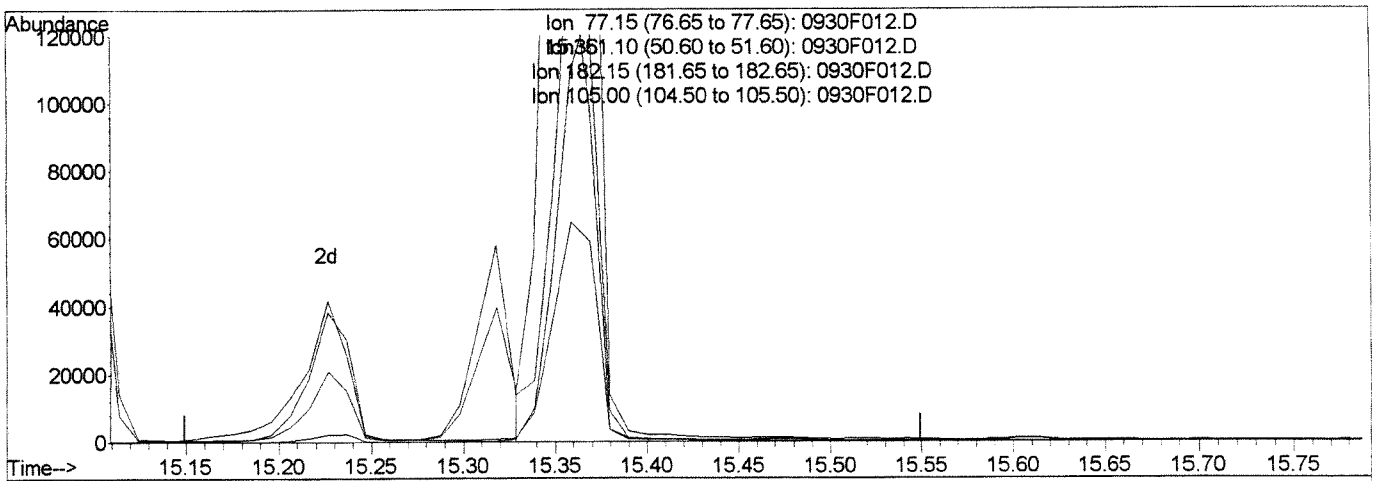
Quantitation Report (Qedit)

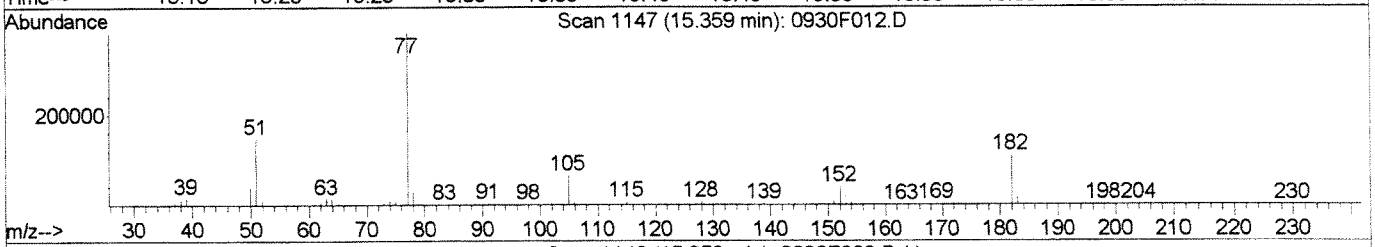
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:22 2014

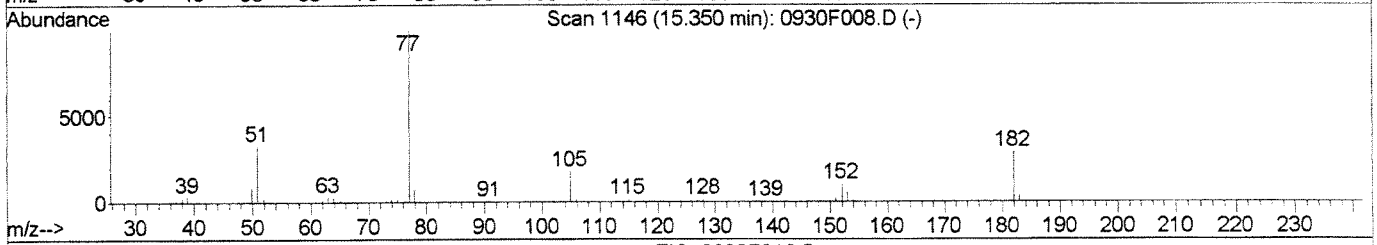
Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(57) 1,2-Diphenylhydrazine (T)

15.36min 160.66ug/ml m

response 603350

Ion	Exp%	Act%
77.15	100	100
51.10	33.10	38.39
182.15	29.00	28.60
105.00	17.70	16.94

Manual Integration:

After

IC-Overintegrated

10/01/14

10/2/14

TQT

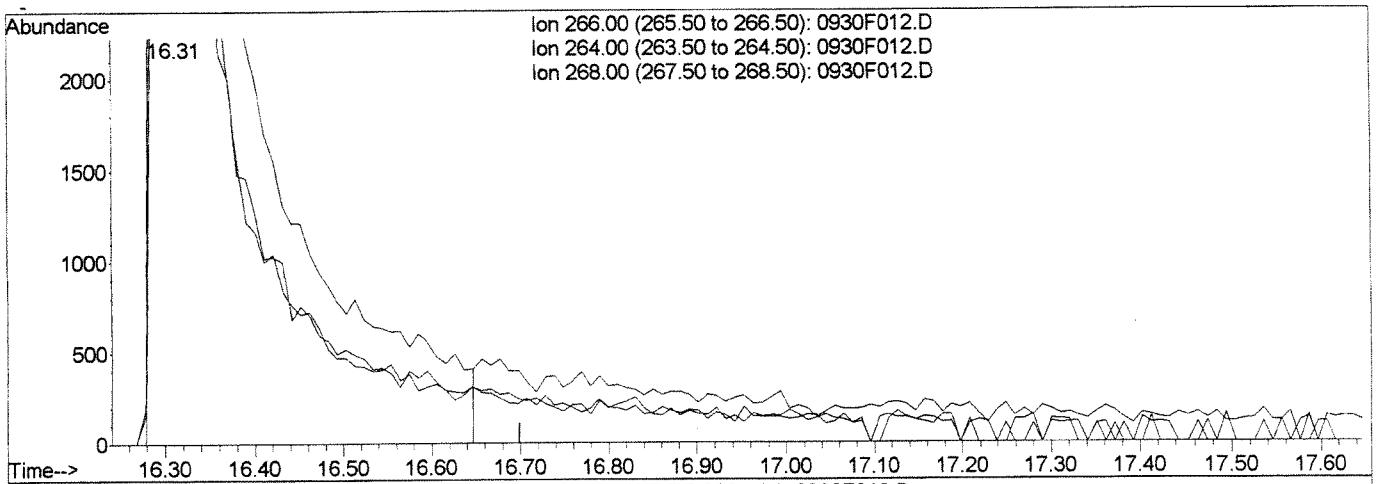
0930F012.D 093014BNC7.M Wed Oct 01 13:22:09 2014

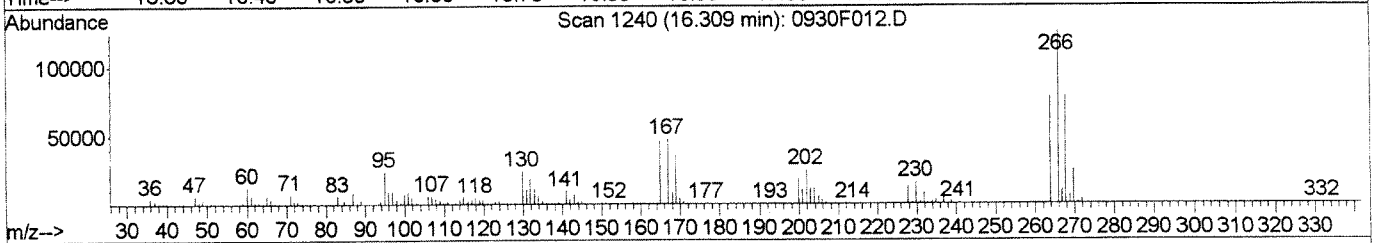
Quantitation Report (Qedit)

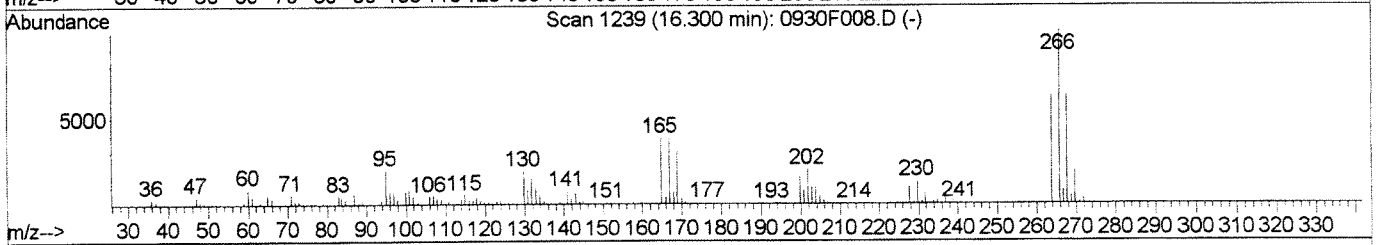
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:22 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F012.D

(62) Pentachlorophenol (T)

16.31min 239.15ug/ml

response 210151

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.05
268.00	63.20	62.56
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

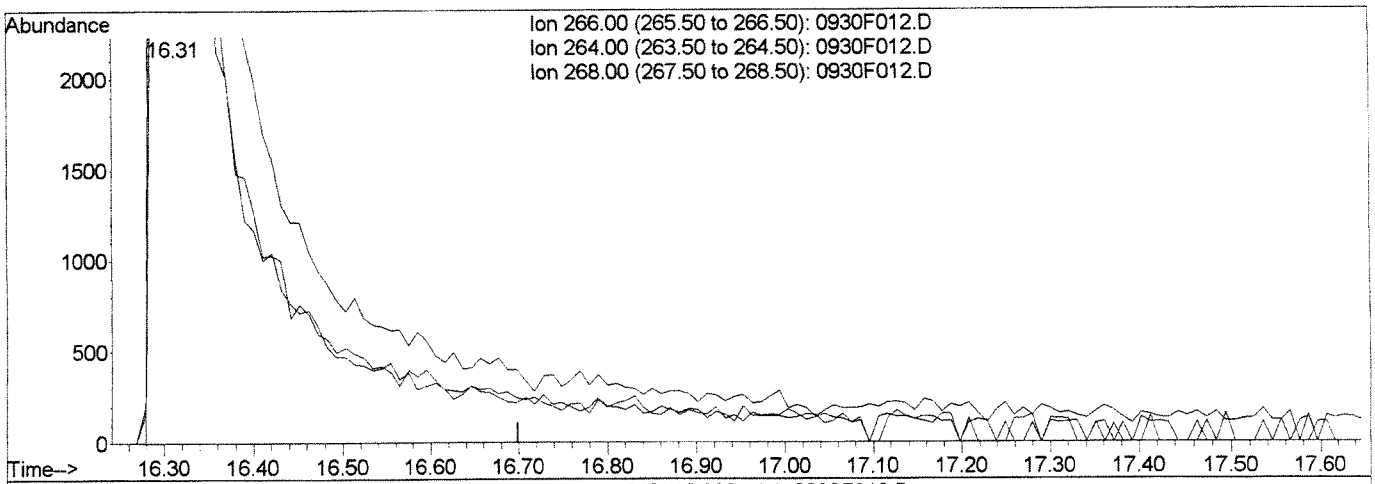
0930F012.D 093014BNC7.M Wed Oct 01 13:22:23 2014

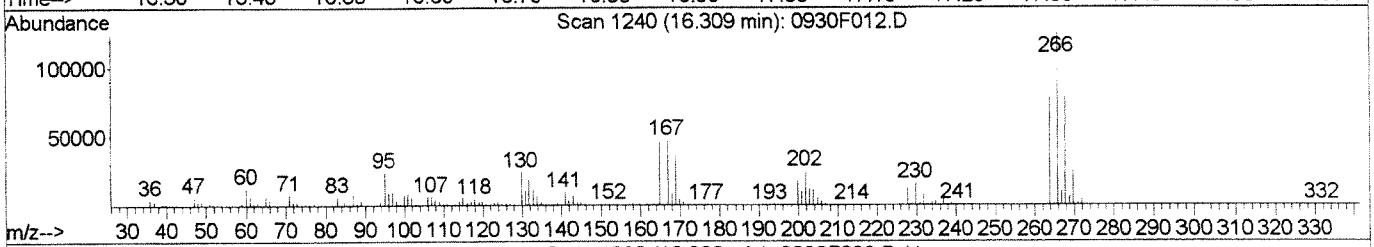
Quantitation Report (Qedit)

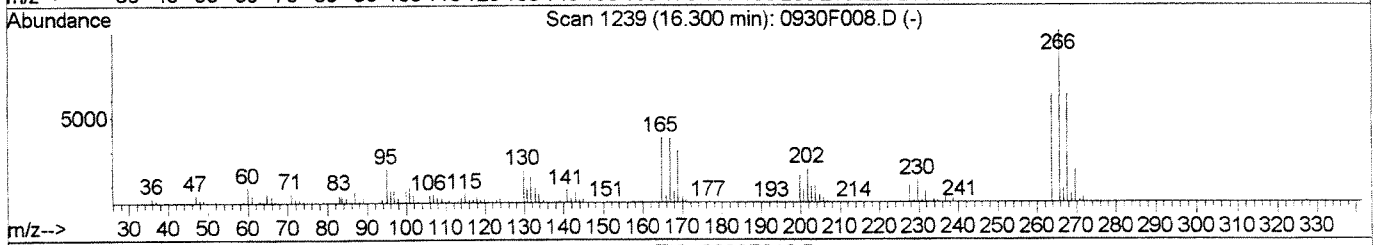
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:22 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Single Level Calibration







TIC: 0930F012.D

(62) Pentachlorophenol (T)

16.31min 253.02ug/ml m

response 222334

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.07
268.00	63.20	62.58
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

TRT

0930F012.D 093014BNC7.M Wed Oct 01 13:22:30 2014

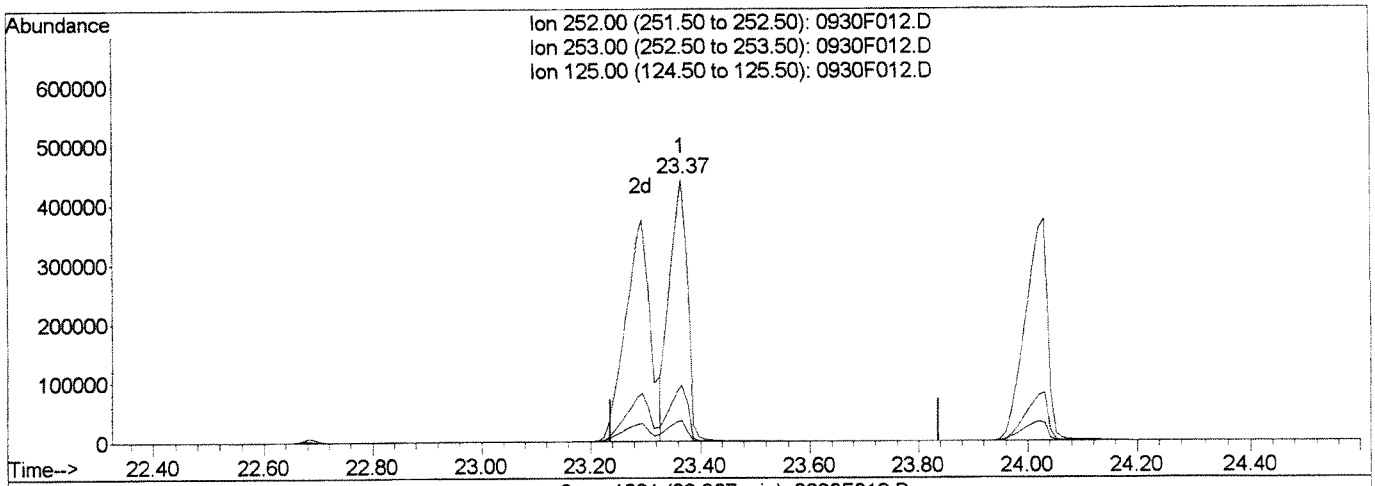
Quantitation Report (Qedit)

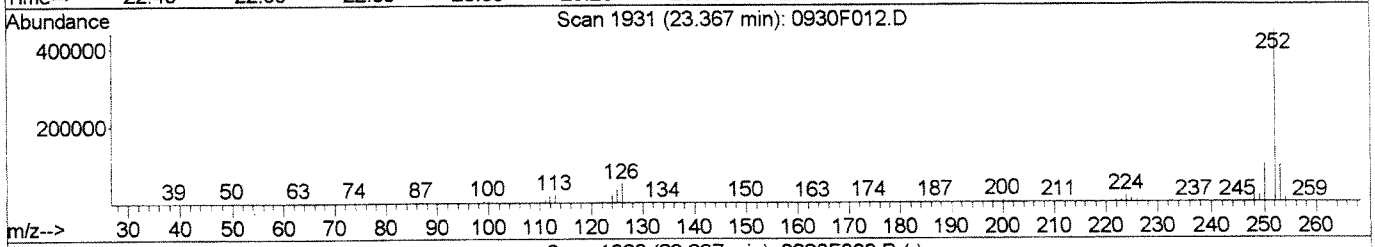
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:22 2014

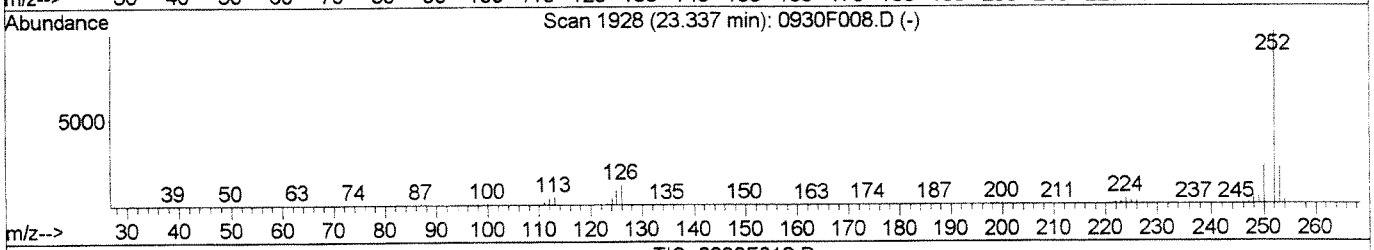
Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(80) Benzo(k)fluoranthene (T)

23.37min 185.39ug/ml

response 999769

Ion	Exp%	Act%
252.00	100	100
253.00	21.30	21.38
125.00	8.40	7.45
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

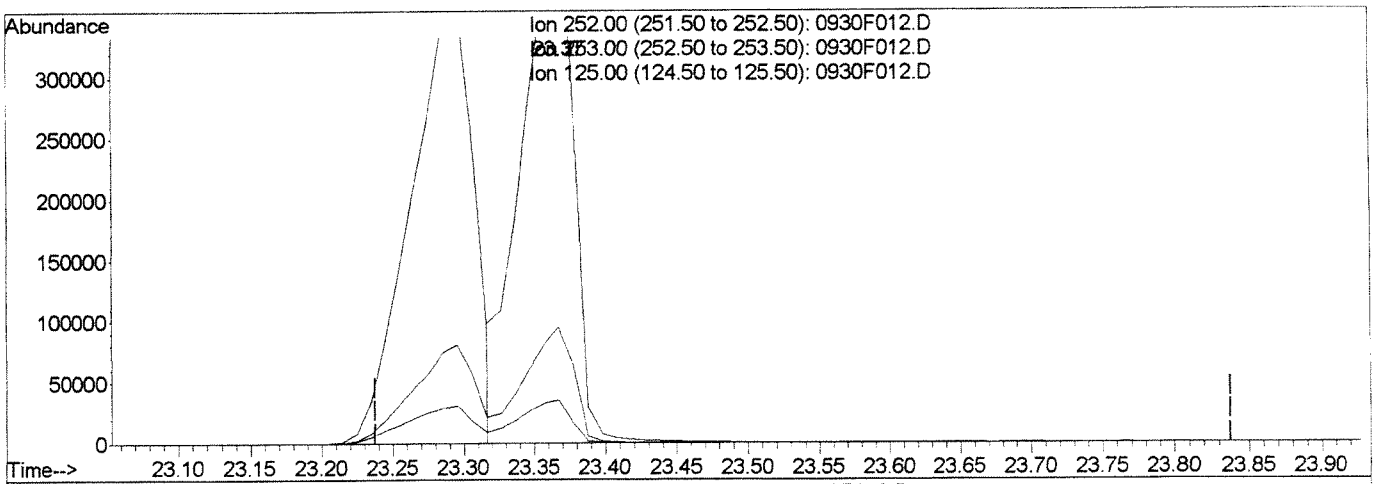
0930F012.D 093014BNC7.M Wed Oct 01 13:22:56 2014

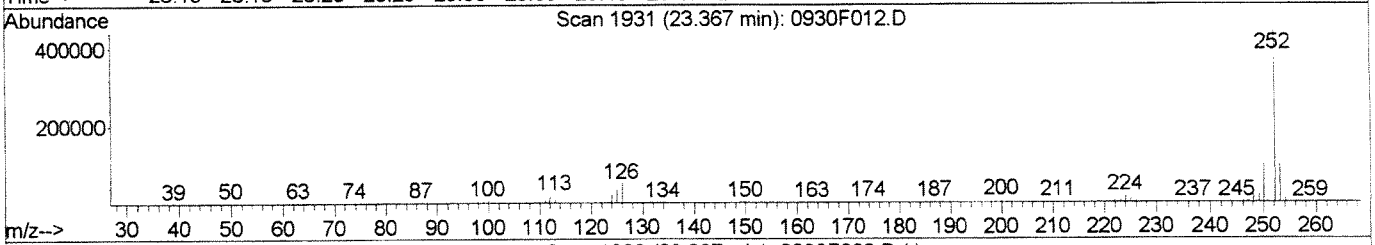
Quantitation Report (Qedit)

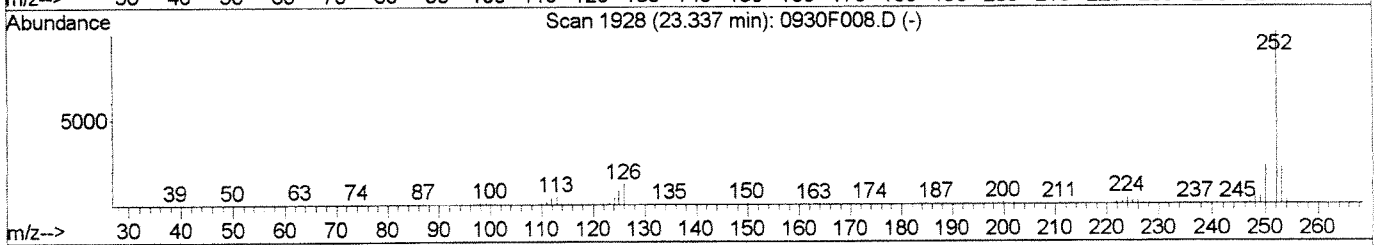
Data File : J:\MS07\DATA\093014\0930F012.D
Acq On : 1 Oct 2014 3:08 am
Sample : 8270 ICAL @ 200 ppm | SVM47-14K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 13:23 2014

Vial: 12
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 12:40:25 2014
Response via : Multiple Level Calibration







TIC: 0930F012.D

(80) Benzo(k)fluoranthene (T)

23.37min 198.85ug/ml m

response 1072393

Ion	Exp%	Act%
252.00	100	100
253.00	21.30	21.50
125.00	8.40	7.93
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

0930F012.D 093014BNC7.M Wed Oct 01 13:23:32 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 14:24:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	81527	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	271954	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	128045	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.57	188	255939	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	248601	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	255129	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	173421	74.15	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 49.43%			
7) Phenol-d6	8.73	99	201517	73.09	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 48.73%			
19) Nitrobenzene-d5	10.15	82	185953	75.41	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 75.41%			
38) 2-Fluorobiphenyl	13.11	172	364013	75.37	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 75.37%			
59) 2,4,6-Tribromophenol	15.47	330	107501	76.32	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 50.88%			
71) Terphenyl-d14	19.20	244	421675	77.62	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 77.62%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.96	42	73288	64.54	ug/ml	100
3) Pyridine	4.00	79	226699m	76.50	ug/ml	
5) Aniline	8.67	93	195679	68.65	ug/ml	93
6) Bis(2-chloroethyl) Ether	8.82	93	175581m	78.06	ug/ml	
8) Phenol	8.76	94	203035	76.62	ug/ml	100
9) 2-Chlorophenol	8.87	128	204358	77.99	ug/ml	98
10) 1,3-Dichlorobenzene	9.11	146	222120	72.55	ug/ml	97
11) 1,4-Dichlorobenzene	9.24	146	224545	73.76	ug/ml	98
12) 1,2-Dichlorobenzene	9.47	146	214371	74.59	ug/ml	99
13) Benzyl Alcohol	9.51	108	110308	82.27	ug/ml	97
14) Bis(2-chloroisopropyl) Eth	9.71	45	146649m	62.73	ug/ml	
15) 2-Methylphenol	9.74	107	137389	78.62	ug/ml	93
16) Hexachloroethane	10.03	117	91367	74.07	ug/ml	96
17) N-Nitrosodi-n-propylamine	9.95	70	105794	69.67	ug/ml	99
18) 4-Methylphenol	10.01	107	194316	77.20	ug/ml	99
20) Nitrobenzene	10.19	77	167792	74.02	ug/ml	91
22) Isophorone	10.61	82	298385	74.02	ug/ml	97
23) 2-Nitrophenol	10.71	139	116769	84.65	ug/ml	95
24) 2,4-Dimethylphenol	10.86	122	139655	76.84	ug/ml	100
25) Bis(2-chloroethoxy)methane	10.99	93	200700	77.43	ug/ml	99

(#) = qualifier out of range (m) = manual integration 10/2/14
0930F013.D 093014BNC7.M Wed Oct 01 14:35:09 2014 Page 1

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 14:24:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	166223	81.76 ug/ml	99
27) Benzoic Acid	11.15	122	97609	81.43 ug/ml	97
28) 1,2,4-Trichlorobenzene	11.23	180	191549	78.57 ug/ml	100
29) Naphthalene	11.35	128	481025	77.83 ug/ml	99
30) 4-Chloroaniline	11.49	127	176868	70.81 ug/ml	96
31) Hexachlorobutadiene	11.57	225	126818	78.92 ug/ml	100
32) 4-Chloro-3-methylphenol	12.33	107	143659	79.28 ug/ml	93
33) 2-Methylnaphthalene	12.49	142	307253	76.81 ug/ml	99
35) Hexachlorocyclopentadiene	12.74	237	115003	75.29 ug/ml	97
36) 2,4,6-Trichlorophenol	12.99	196	114988	80.64 ug/ml	98
37) 2,4,5-Trichlorophenol	13.06	196	133759	82.83 ug/ml	99
39) 2-Chloronaphthalene	13.27	162	306534	74.68 ug/ml	99
40) 2-Nitroaniline	13.49	65	84789	81.72 ug/ml#	80
41) Acenaphthylene	13.94	152	459728	73.30 ug/ml	98
42) Dimethyl Phthalate	13.81	163	352432	74.95 ug/ml	100
43) 2,6-Dinitrotoluene	13.90	165	91639	81.69 ug/ml	92
44) Acenaphthene	14.22	154	269301	78.80 ug/ml	100
45) 3-Nitroaniline	14.16	138	92222	77.57 ug/ml	97
46) 2,4-Dinitrophenol	14.34	184	60095	80.66 ug/ml	97
47) Dibenzofuran	14.51	168	412629	74.61 ug/ml	100
48) 4-Nitrophenol	14.53	109	54352	81.15 ug/ml	99
49) 2,4-Dinitrotoluene	14.54	165	121185	82.77 ug/ml	94
50) 2,3,4,6-Tetrachlorophenol	14.75	232	110030	85.25 ug/ml	97
51) Fluorene	15.07	166	327922	78.47 ug/ml	97
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	168385	76.03 ug/ml	98
53) Diethyl Phthalate	14.96	149	371548	76.14 ug/ml	99
54) 4-Nitroaniline	15.16	138	103088	81.90 ug/ml	97
55) 2-Methyl-4,6-dinitrophenol	15.20	198	79496	80.92 ug/ml#	100
56) N-Nitrosodiphenylamine	15.30	169	232217	73.85 ug/ml	98
57) 1,2-Diphenylhydrazine	15.35	77	299310	75.29 ug/ml	98
60) 4-Bromophenyl Phenyl Ether	15.88	248	119120	73.11 ug/ml	97
61) Hexachlorobenzene	15.95	284	163628	75.15 ug/ml	96
62) Pentachlorophenol	16.30	266	83561m	76.80 ug/ml	
63) Phenanthrene	16.61	178	470004	75.37 ug/ml	99
64) Anthracene	16.70	178	457874	72.37 ug/ml	100
65) Carbazole	16.99	167	472715	78.02 ug/ml	99
66) Di-n-butyl Phthalate	17.62	149	655419	82.21 ug/ml	98
67) Fluoranthene	18.53	202	542781	77.39 ug/ml	99
69) Benzidine	18.80	184	45886	24.53 ug/ml	99
70) Pyrene	18.90	202	557371	75.70 ug/ml	98
72) Butyl Benzyl Phthalate	20.03	149	287021	84.87 ug/ml	100

(#) = qualifier out of range (m) = manual integration
0930F013.D 093014BNC7.M Wed Oct 01 14:35:10 2014 Page 2

10/2/14

OCT 0 1 2014 TRT

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 14:24:58 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.96	252	215796	78.46	ug/ml	96
74) Benz(a)anthracene	20.96	228	487153	77.65	ug/ml	100
75) Chrysene	21.03	228	494136	79.97	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	389579	87.54	ug/ml	99
78) Di-n-octyl Phthalate	22.59	149	707285	84.63	ug/ml	99
79) Benzo(b)fluoranthene	23.26	252	549756	88.44	ug/ml	98
80) Benzo(k)fluoranthene	23.34	252	532854	87.60	ug/ml	100
81) Benzo(a)pyrene	24.00	252	477020	79.13	ug/ml	99
82) Indeno(1,2,3-cd)pyrene	26.56	276	456763	84.02	ug/ml	99
83) Dibenz(a,h)anthracene	26.63	278	458190m	81.86	ug/ml	
84) Benzo(g,h,i)perylene	27.14	276	466521	78.25	ug/ml	96

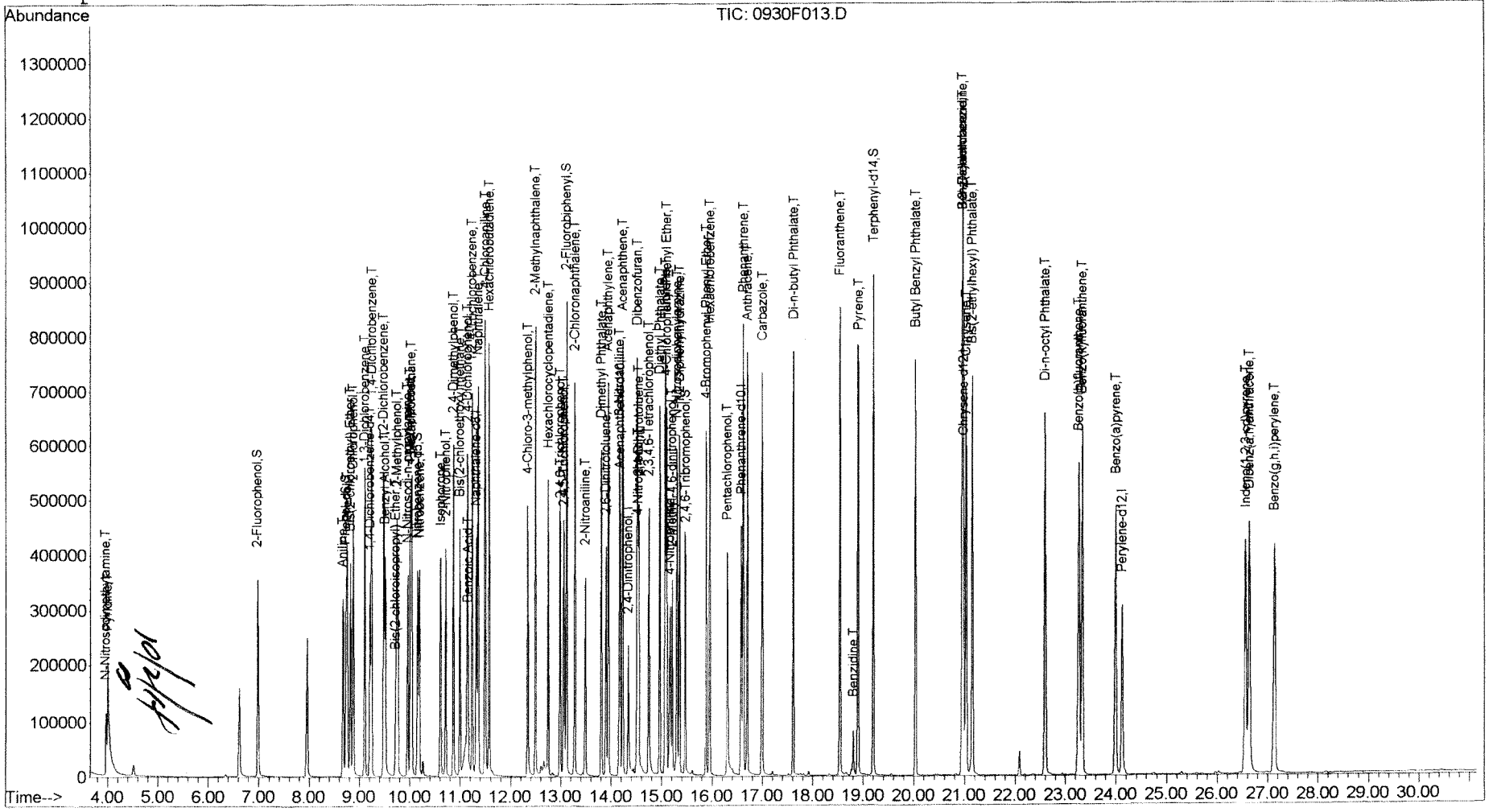
(#) = qualifier out of range (m) = manual integration
0930F013.D 093014BNC7.M Wed Oct 01 14:35:10 2014 Page 3

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:28 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



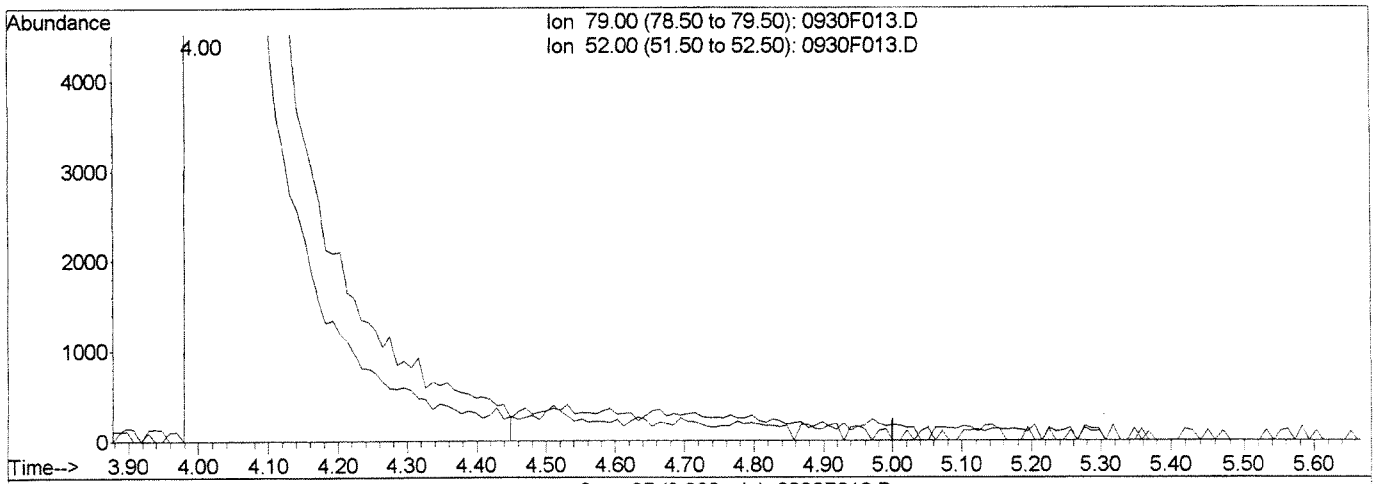
2852

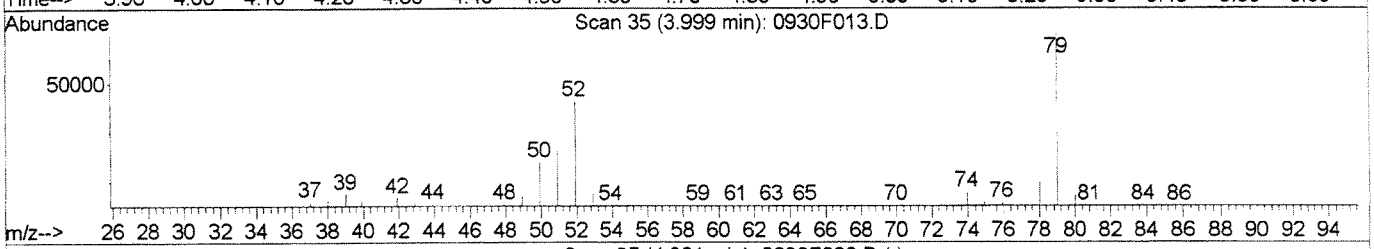
OCT 01 2014

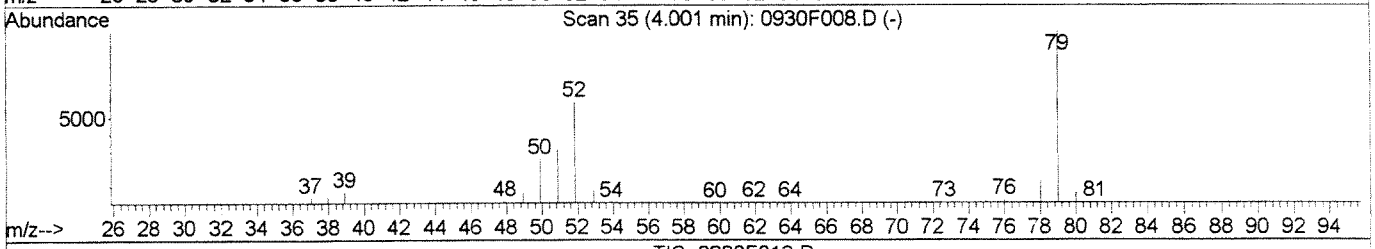
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:25 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(3) Pyridine (T)

4.00min 73.55ug/ml

response 217975

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	60.64
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

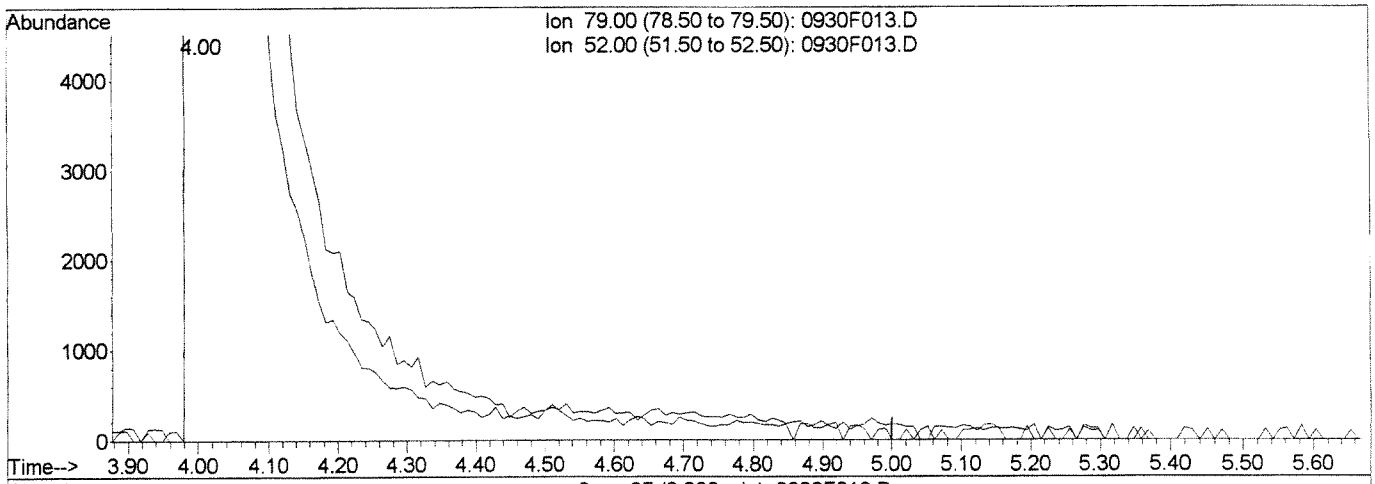
10/01/14

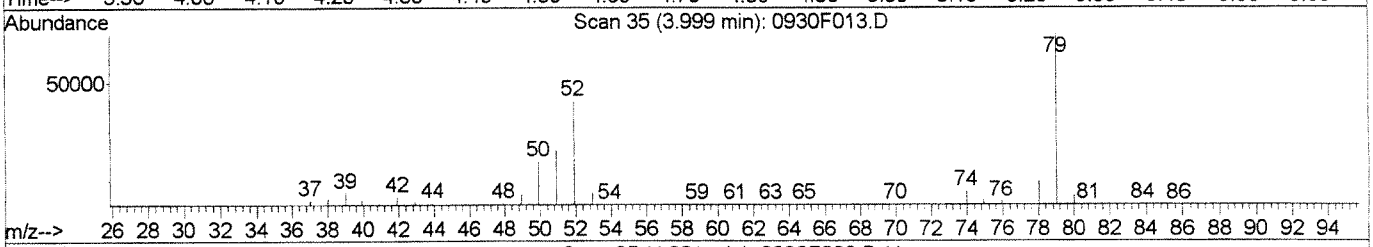
0930F013.D 093014BNC7.M Wed Oct 01 14:25:27 2014

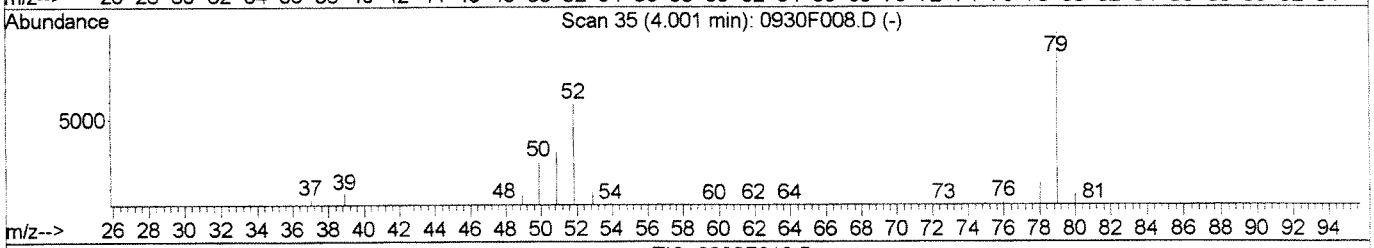
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:25 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(3) Pyridine (T)

4.00min 76.50ug/ml m

response 226699

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	60.82
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

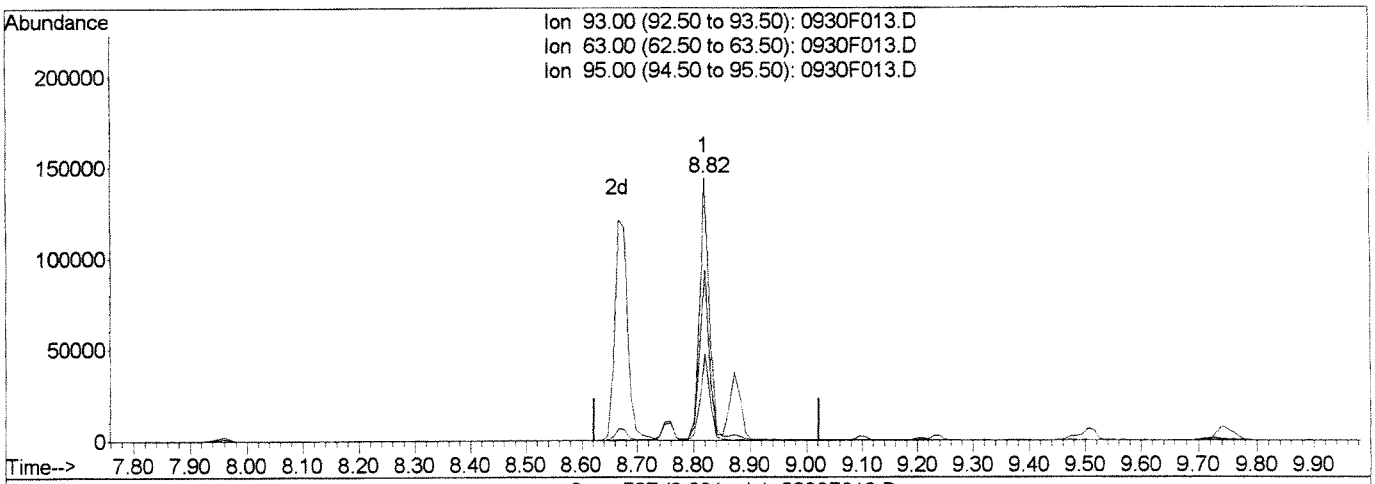
TR

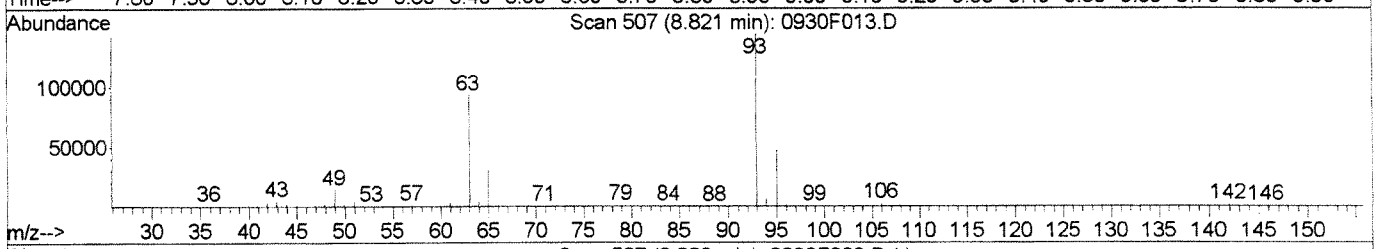
0930F013.D 093014BNC7.M Wed Oct 01 14:25:35 2014

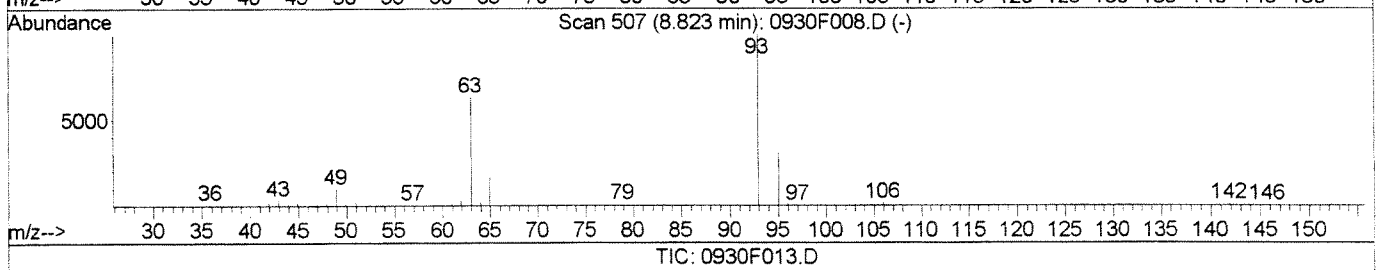
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:25 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 81.82ug/ml

response 184039

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	61.08
95.00	32.50	29.64
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TRT

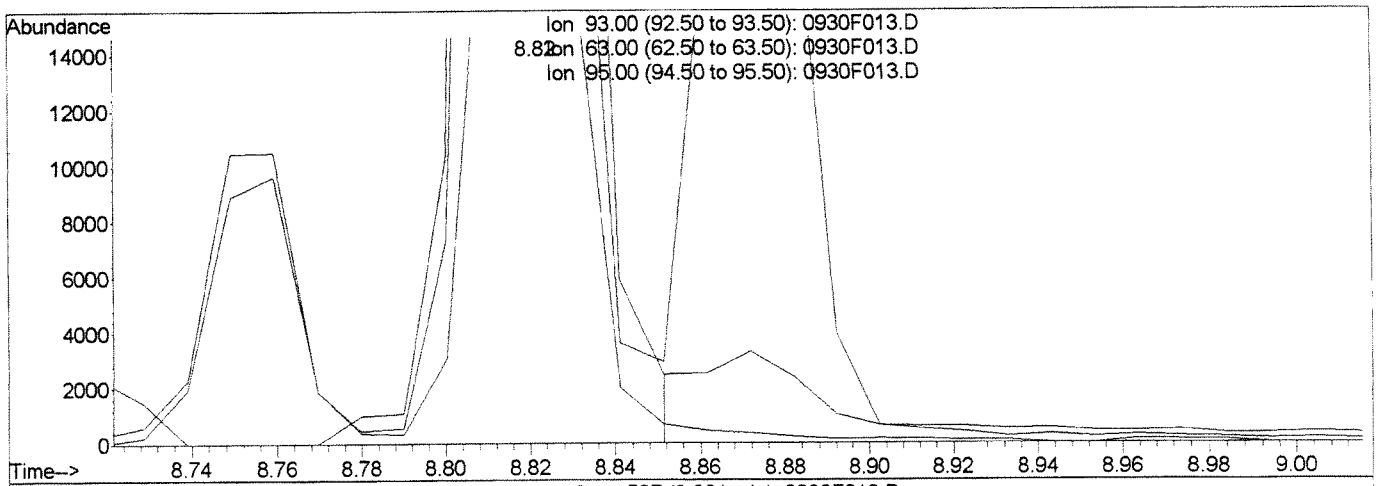
0930F013.D 093014BNC7.M Wed Oct 01 14:25:45 2014

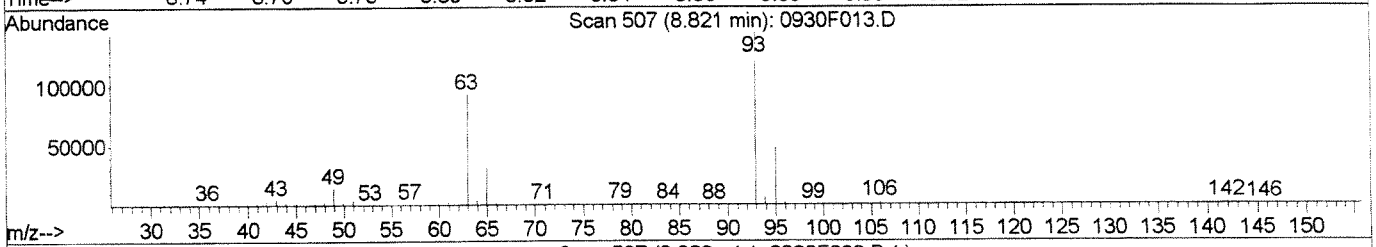
Quantitation Report (Qedit)

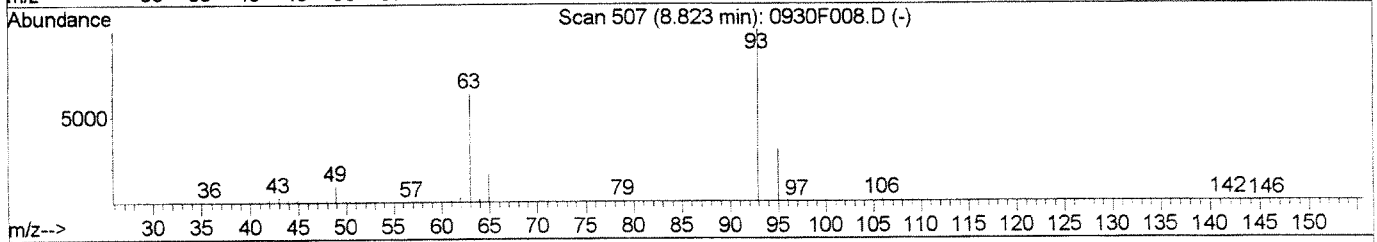
Data File : J:\MS07\DATA\093014\0930F013.D
Acq On : 1 Oct 2014 3:48 am
Sample : 8270 ICV @ 80 ppm | SVM46-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:25 2014

Vial: 13
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 78.06ug/ml m

response 175581

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	64.73
95.00	32.50	32.99
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

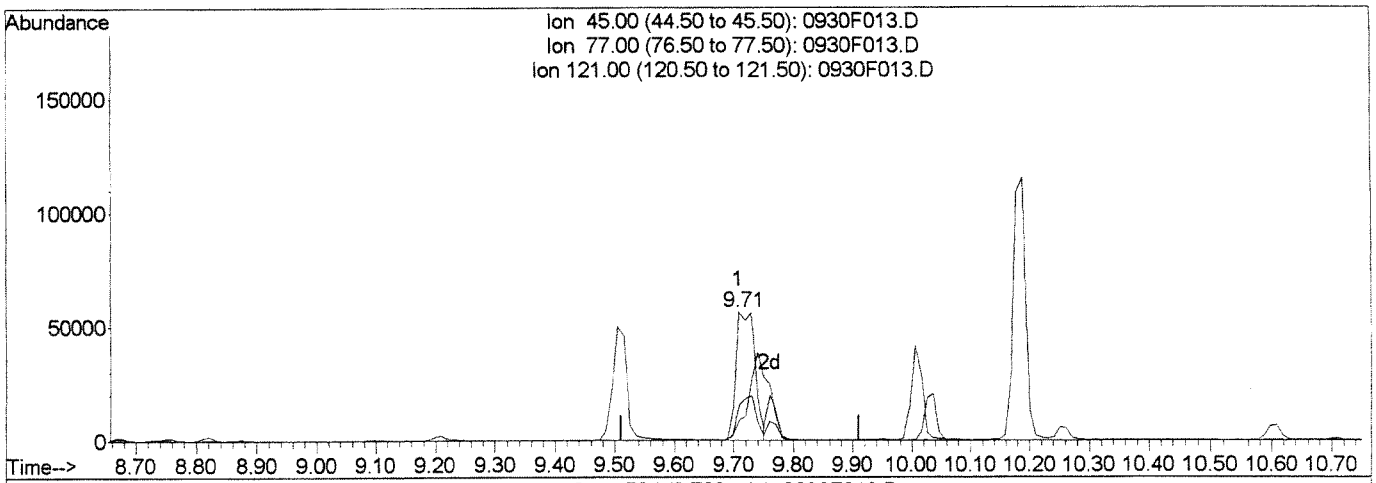
10/01/14

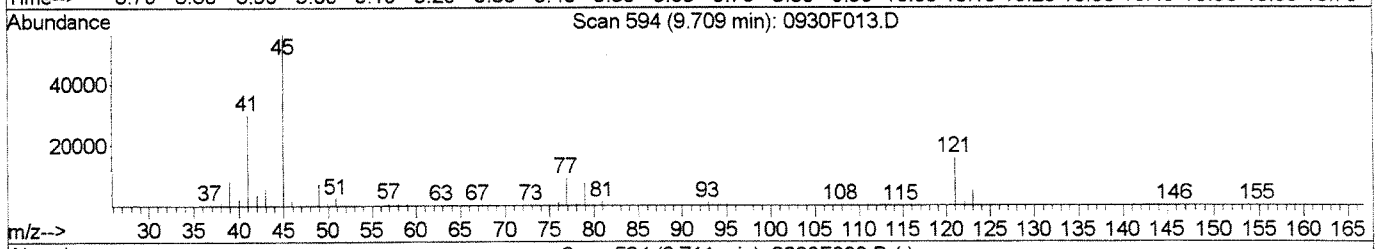
0930F013.D 093014BNC7.M Wed Oct 01 14:25:56 2014

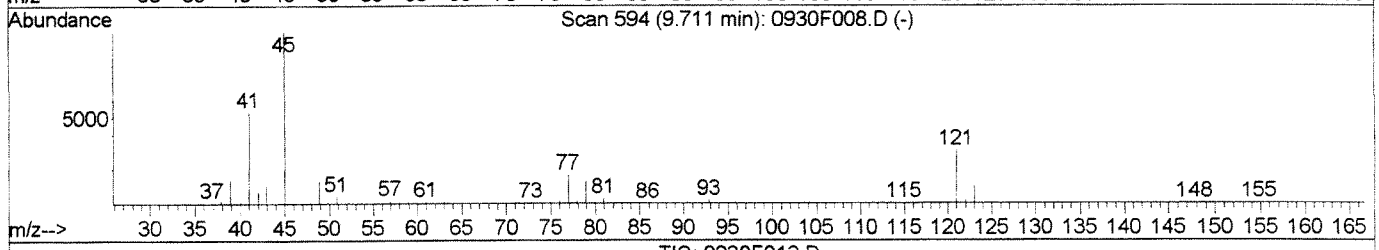
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:25 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(14) Bis(2-chloroisopropyl) Ether (T)

9.71min 53.16ug/ml

response 124280

Ion	Exp%	Act%
45.00	100	100
77.00	16.60	0.00
121.00	30.60	27.58
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

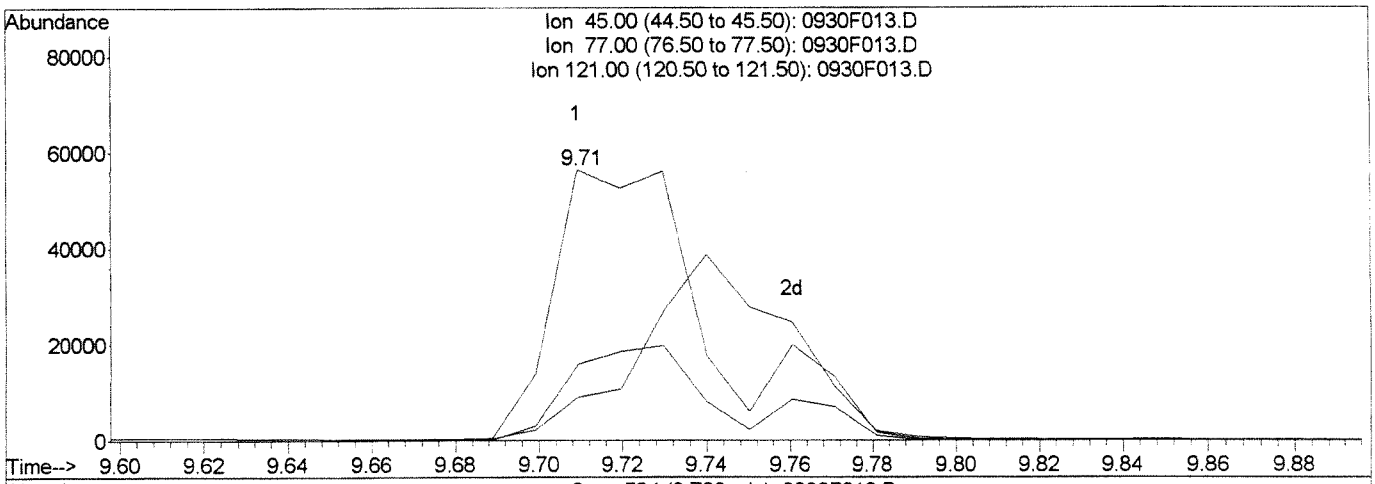
TK

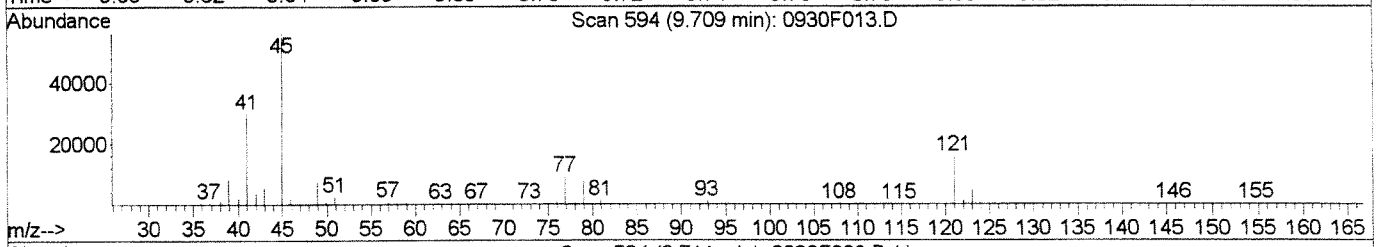
0930F013.D 093014BNC7.M Wed Oct 01 14:26:12 2014

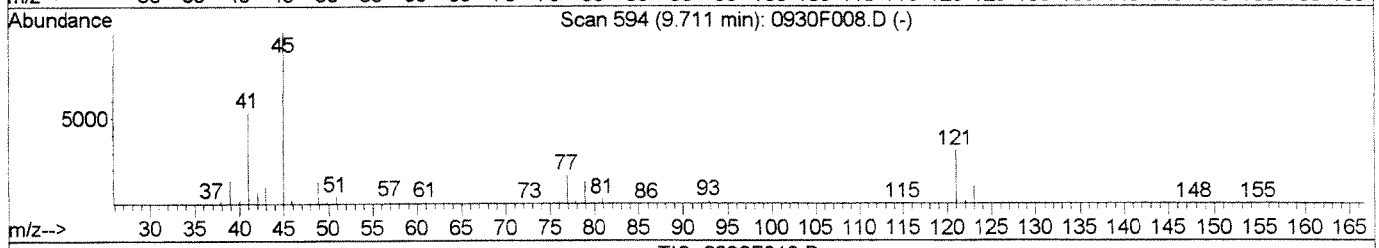
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\093014\0930F013.D Vial: 13
Acq On : 1 Oct 2014 3:48 am Operator: T. THOMAS
Sample : 8270 ICV @ 80 ppm | SVM46-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:26 2014 Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(14) Bis(2-chloroisopropyl) Ether (T)

9.71min 62.73ug/ml m

response 146649

Ion	Exp%	Act%
45.00	100	100
77.00	16.60	15.95
121.00	30.60	28.10
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/2/14

TRT

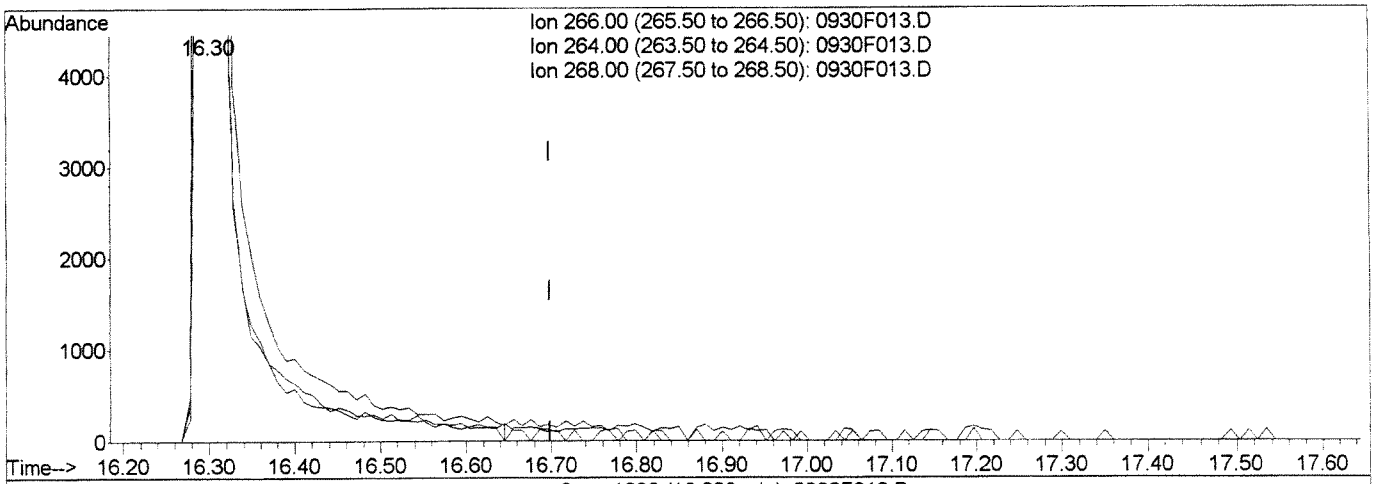
0930F013.D 093014BNC7.M Wed Oct 01 14:26:41 2014

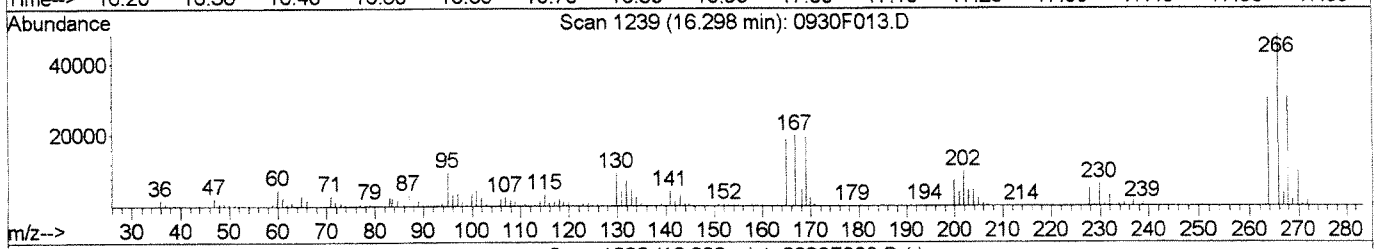
Quantitation Report (Qedit)

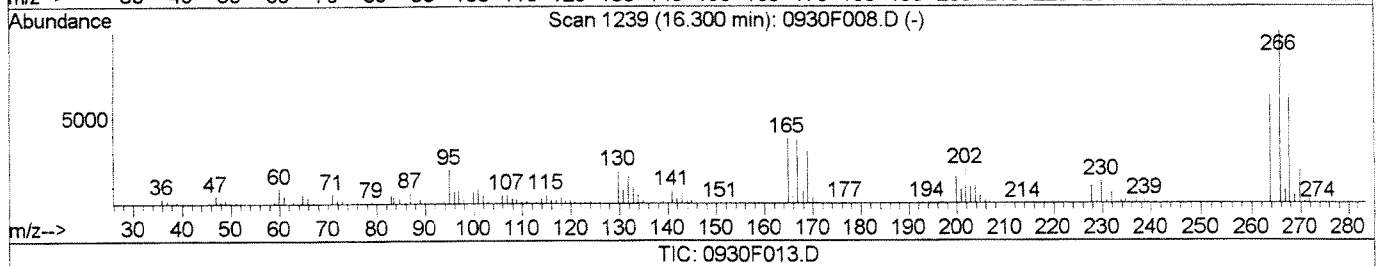
Data File : J:\MS07\DATA\093014\0930F013.D
Acq On : 1 Oct 2014 3:48 am
Sample : 8270 ICV @ 80 ppm | SVM46-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:26 2014

Vial: 13
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration







TIC: 0930F013.D

(62) Pentachlorophenol (T)

16.30min 75.17ug/ml

response 81521

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.98
268.00	63.20	63.45
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2/14

TR

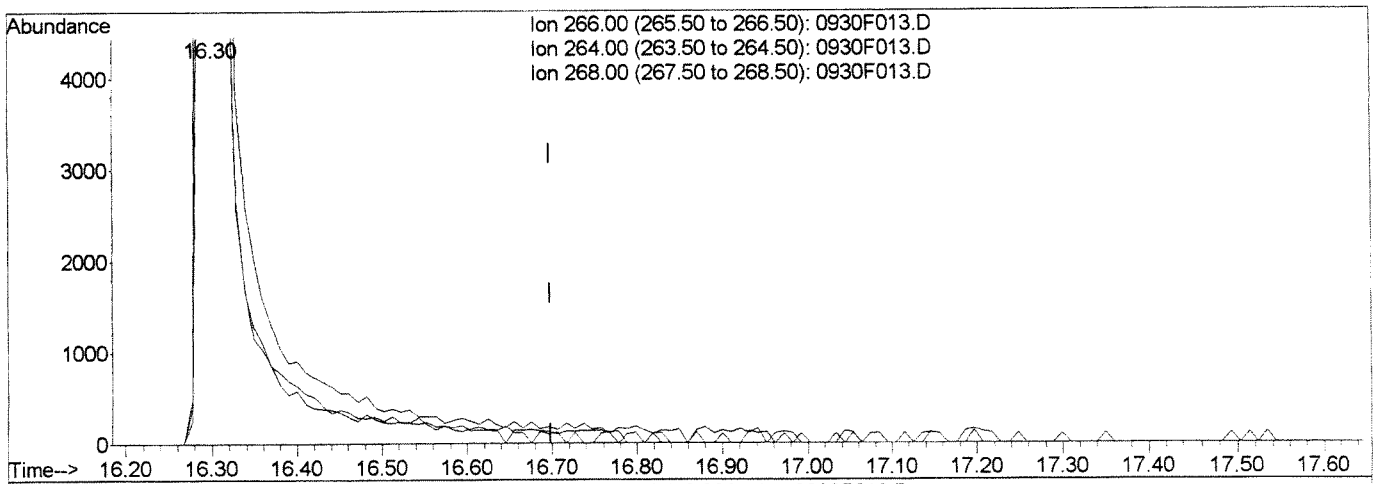
0930F013.D 093014BNC7.M Wed Oct 01 14:28:03 2014

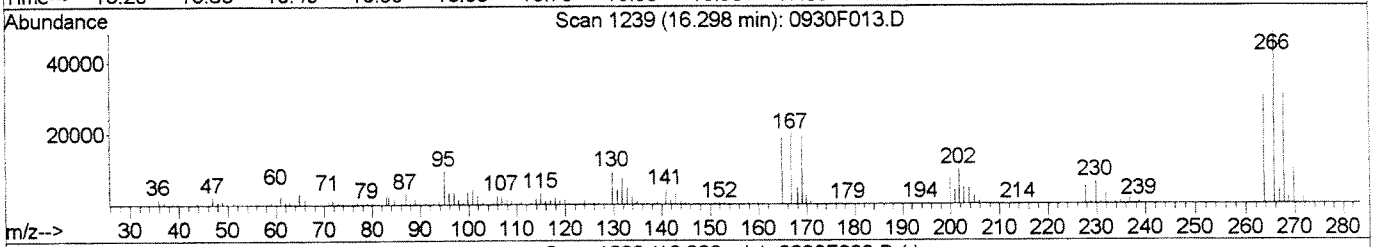
Quantitation Report (Qedit)

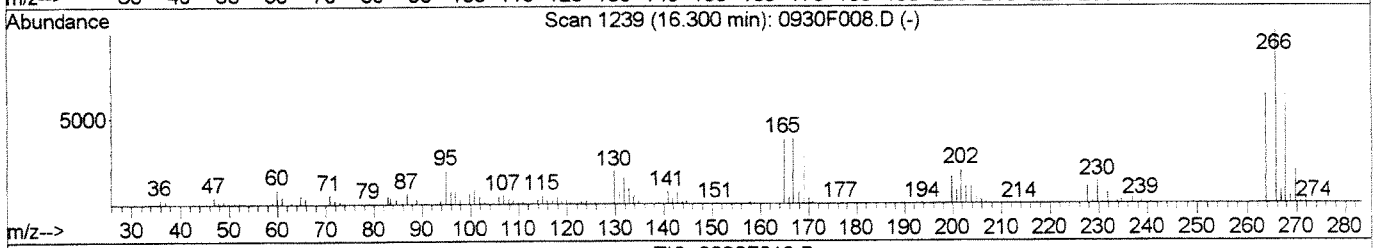
Data File : J:\MS07\DATA\093014\0930F013.D
Acq On : 1 Oct 2014 3:48 am
Sample : 8270 ICV @ 80 ppm | SVM46-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:28 2014

Vial: 13
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration







TIC: 0930F013.D

(62) Pentachlorophenol (T)

16.30min 76.80ug/ml m

response 83561

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.87
268.00	63.20	63.54
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

0930F013.D 093014BNC7.M Wed Oct 01 14:28:10 2014

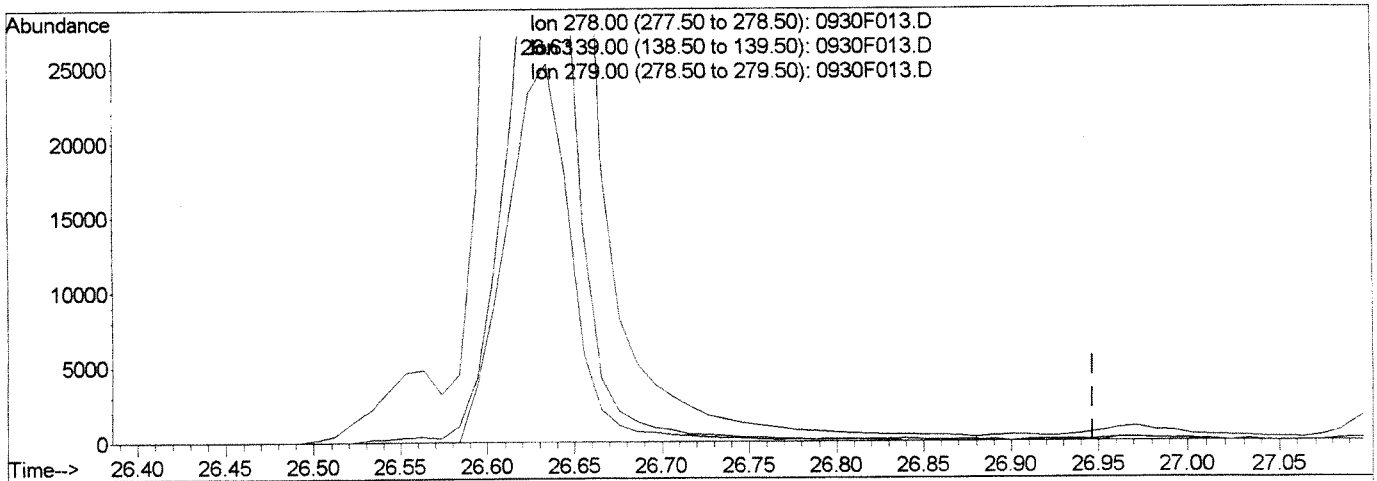
Quantitation Report (Qedit)

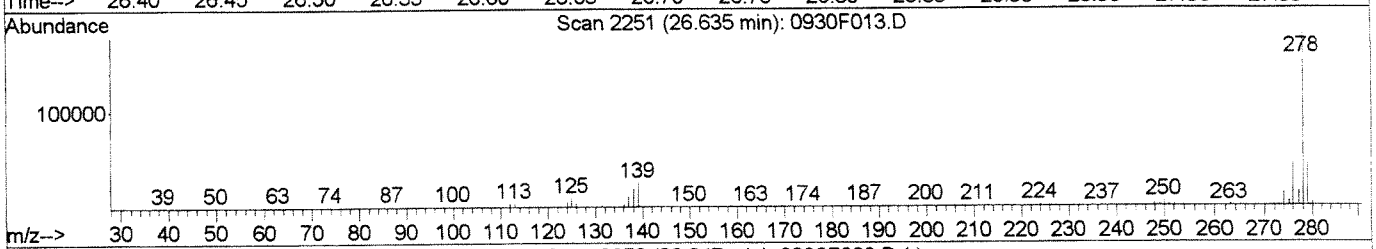
Data File : J:\MS07\DATA\093014\0930F013.D
Acq On : 1 Oct 2014 3:48 am
Sample : 8270 ICV @ 80 ppm | SVM46-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:28 2014

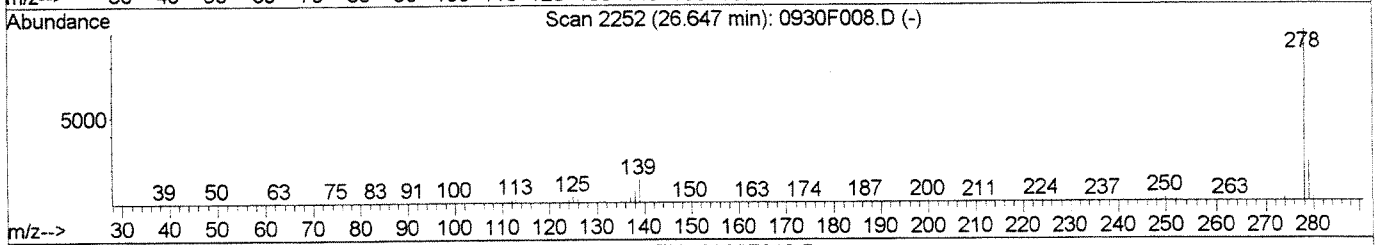
Vial: 13
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(83) Dibenz(a,h)anthracene (T)

26.63min 84.07ug/ml

response 470575

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	14.20
279.00	23.50	24.18
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

0930F013.D 093014BNC7.M Wed Oct 01 14:28:52 2014

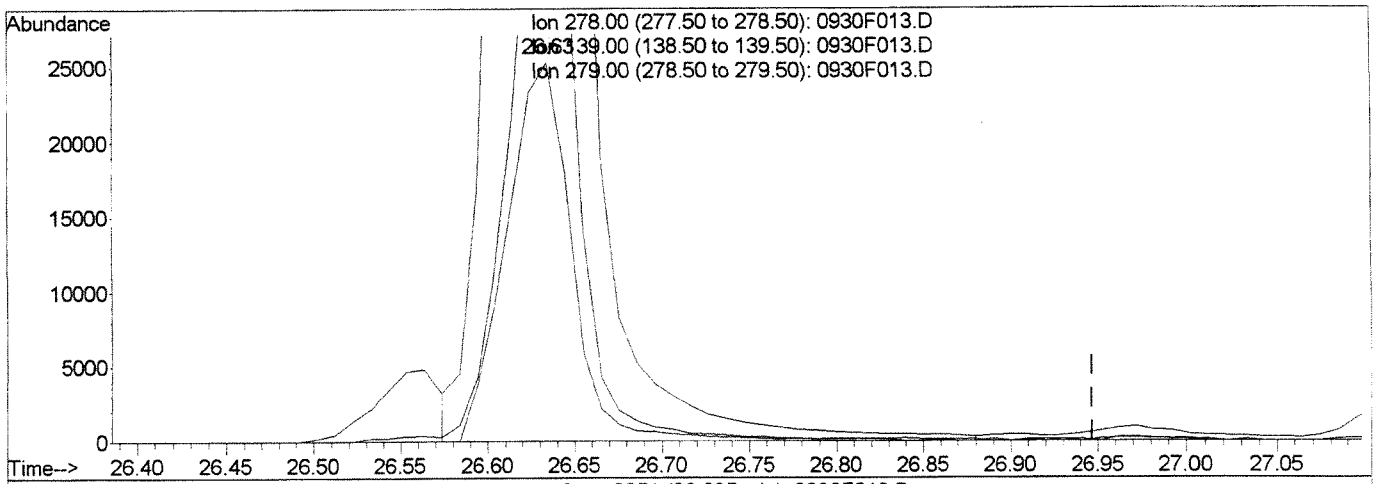
Quantitation Report (Qedit)

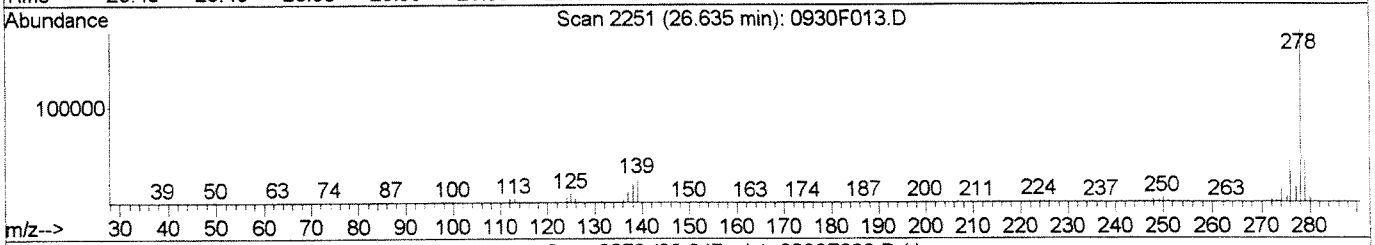
Data File : J:\MS07\DATA\093014\0930F013.D
Acq On : 1 Oct 2014 3:48 am
Sample : 8270 ICV @ 80 ppm | SVM46-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:28 2014

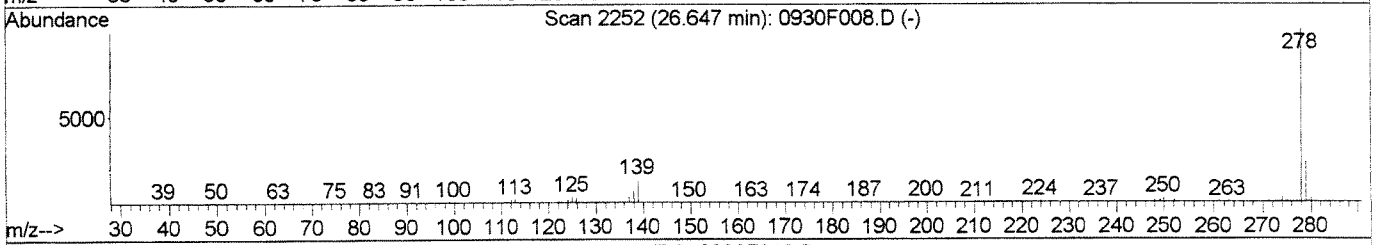
Vial: 13
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration







TIC: 0930F013.D

(83) Dibenz(a,h)anthracene (T)

26.63min 81.86ug/ml m

response 458190

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	14.19
279.00	23.50	24.20
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

0930F013.D 093014BNC7.M Wed Oct 01 14:28:59 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F015.D Vial: 15
Acq On : 1 Oct 2014 5:08 am Operator: T. THOMAS
Sample : BENZ ICV @ 50 ppm | SVM46-10D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 01 14:29:41 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.20	152	79552	40.00	ug/ml	-0.01
21) Naphthalene-d8	11.30	136	267046	40.00	ug/ml	-0.01
34) Acenaphthene-d10	14.16	164	142347	40.00	ug/ml	-0.01
58) Phenanthrene-d10	16.57	188	273234	40.00	ug/ml	0.00
68) Chrysene-d12	20.97	240	289475	40.00	ug/ml	-0.01
77) Perylene-d12	24.11	264	286420	40.00	ug/ml	-0.01

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0	0.00	ug/ml
Spiked Amount 150.000	Range 21 - 100		Recovery =	0.00%#	
7) Phenol-d6	0.00	99	0	0.00	ug/ml
Spiked Amount 150.000	Range 10 - 94		Recovery =	0.00%#	
19) Nitrobenzene-d5	0.00	82	0	0.00	ug/ml
Spiked Amount 100.000	Range 35 - 114		Recovery =	0.00%#	
38) 2-Fluorobiphenyl	0.00	172	0	0.00	ug/ml
Spiked Amount 100.000	Range 43 - 116		Recovery =	0.00%#	
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/ml
Spiked Amount 150.000	Range 10 - 123		Recovery =	0.00%#	
71) Terphenyl-d14	0.00	244	0	0.00	ug/ml
Spiked Amount 100.000	Range 33 - 141		Recovery =	0.00%#	

Target Compounds						Qvalue
69) Benzidine	18.80	184	233795	136.52	ug/ml	99
73) 3,3'-Dichlorobenzidine	20.95	252	149418	46.66	ug/ml	98

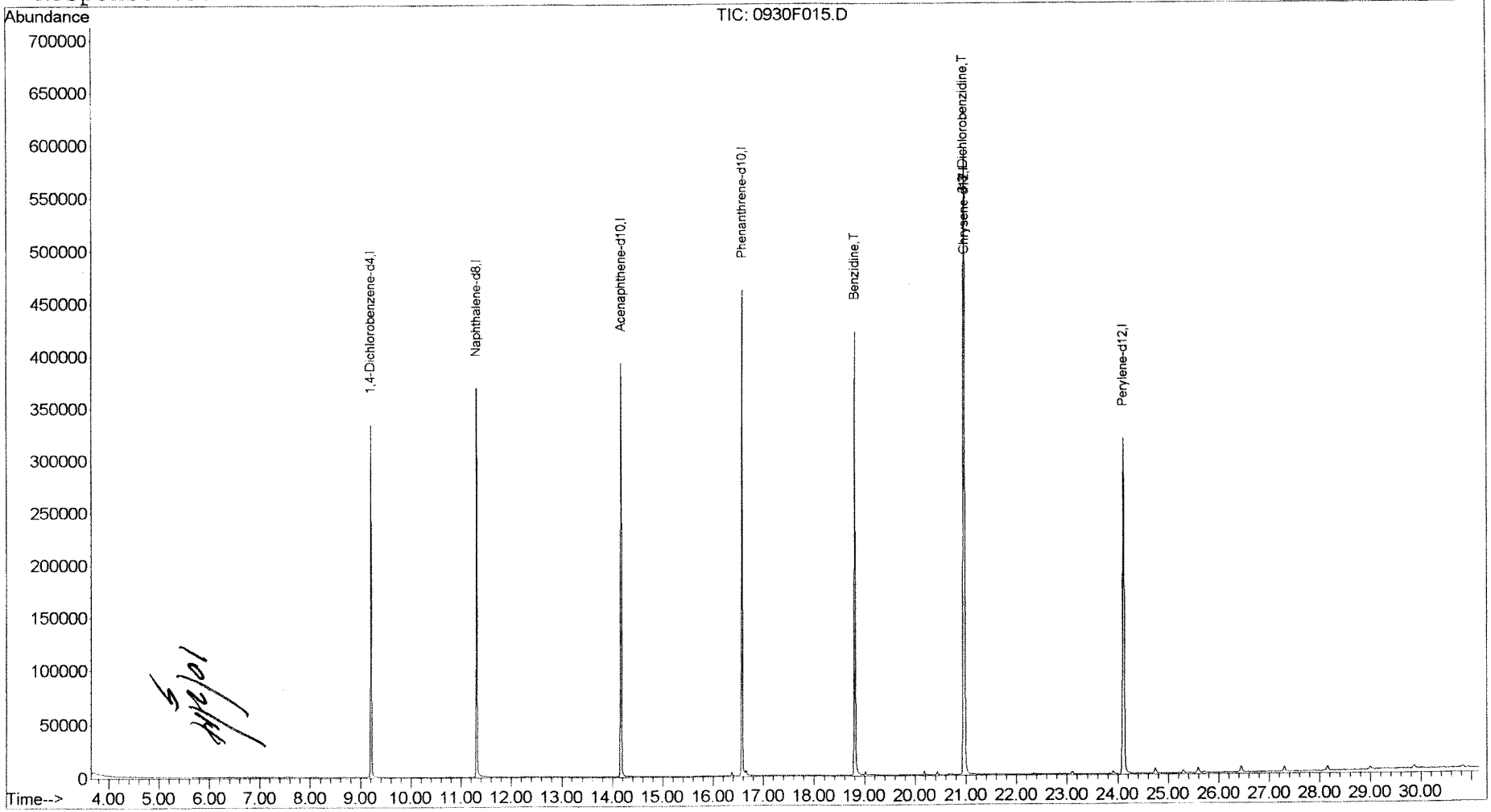
(#) = qualifier out of range (m) = manual integration
0930F015.D 093014BNC7.M Wed Oct 01 14:35:12 2014 Page 1

OCT 0 1 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\093014\0930F015.D Vial: 15
Acq On : 1 Oct 2014 5:08 am Operator: T. THOMAS
Sample : BENZ ICV @ 50 ppm | SVM46-10D Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 1 14:30 2014 Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



2864

OCT 01 2014

Injection Log

Directory: J:\MS07\DATA\100114

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1001F001.D	1.	DFTPP @ 50 ppm | SVM47-35C		1 Oct 2014 19:06
2	2	1001F002.D	1.	8270 CCV @ 80 ppm | SVM47-65B		1 Oct 2014 19:46
3	3	1001F003.D	1.	KWG1412851-05 | MB		1 Oct 2014 20:31
4	4	1001F004.D	1.	KWG1412851-03 | LCS		1 Oct 2014 21:12
5	5	1001F005.D	1.	KWG1412851-04 | DLCS		1 Oct 2014 21:52
6	6	1001F006.D	1.	K1409921-011 MS		1 Oct 2014 22:33
7	7	1001F007.D	1.	K1409921-011 DMS		1 Oct 2014 23:13
8	8	1001F008.D	1.	K1409921-011		1 Oct 2014 23:54
9	9	1001F009.D	1.	K1409921-010		2 Oct 2014 00:34
10	10	1001F010.D	1.	K1409921-009		2 Oct 2014 01:15
11	11	1001F011.D	1.	K1409921-008		2 Oct 2014 01:55
12	12	1001F012.D	1.	K1409921-007		2 Oct 2014 02:36
13	13	1001F013.D	1.	K1409921-006		2 Oct 2014 03:16
14	14	1001F014.D	1.	K1409921-005		2 Oct 2014 03:57
15	15	1001F015.D	1.	K1409921-004		2 Oct 2014 04:37
16	16	1001F016.D	1.	KWG1412687-03 | MB		2 Oct 2014 05:17
17	17	1001F017.D	1.	KWG1412687-01 | LCS		2 Oct 2014 05:58
18	18	1001F018.D	1.	KWG1412687-02 | DLCS		2 Oct 2014 06:38
19	19	1001F019.D	1.	K1409782-001		2 Oct 2014 07:19
20	20	1001F020.D	1.	KWG1412929-03 | MB		2 Oct 2014 07:59
21	21	1001F021.D	1.	KWG1412929-01 | LCS		2 Oct 2014 08:40
22	22	1001F022.D	1.	KWG1412929-02 | DLCS		2 Oct 2014 09:20
23	23	1001F023.D	1.	K1410089-005		2 Oct 2014 10:01
24	24	1001F024.D	1.	KWG1413101-03 | MB		2 Oct 2014 10:41
25	25	1001F025.D	1.	KWG1413101-01 | LCS		2 Oct 2014 11:22
26	26	1001F026.D	1.	KWG1413101-02 | DLCS		2 Oct 2014 12:03
27	27	1001F027.D	1.	K1410418-001		2 Oct 2014 12:43
28	28	1001F028.D	1.	K1410418-002		2 Oct 2014 13:24
29	29	1001F029.D	1.	KWG1413206-05 | MB		2 Oct 2014 14:04
30	30	1001F030.D	1.	KWG1413206-03 | LCS		2 Oct 2014 14:45
31	31	1001F031.D	1.	KWG1413206-04 | DLCS		2 Oct 2014 15:26
32	32	1001F032.D	1.	K1410553-002 MS		2 Oct 2014 16:06
33	33	1001F033.D	1.	K1410553-002 DMS		2 Oct 2014 16:46
34	34	1001F034.D	1.	K1410553-002		2 Oct 2014 17:26
35	35	1001F035.D	1.	K1410551-001		2 Oct 2014 18:07
36	36	1001F036.D	1.	K1410295-001		2 Oct 2014 18:47

ICAL 13580
Sta-Lims 414217
TRT 10/2/14 10/2/14
S

Exception Report

Data File: J:\MS07\DATA\100114\1001F001.D
Lab ID: KWG1413431-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 10/01/2014 19:06
Date Quantitated:
Batch ID: KWG1413431
Analysis Method: DFTPP
ListJoinID: LJ1747

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: OCT 0 2 2014 TRT

Secondary Review: 10/3/14

Printed: 10/02/2014 20:47:57
u:\Stealth\Crystal rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F001.D		**Quant Date:**	**Instrument:**	MS07
Acqu Date:	10/01/2014 19:06			**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG1413431-1			**Soln Conc. Units:**	
Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/02/2014
Analysis Lot:	KWG1413431	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			
Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:				**Report List ID:**	LJ1747
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	38.5	17096	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	55.2	24520	Pass
70	69	0	2	0.0	0	Pass
127	198	25	75	51.3	22800	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	44432	Pass
199	198	5	9	6.7	2989	Pass
275	198	10	30	22.0	9788	Pass
365	198	0.75	100	2.3	1017	Pass
441	443	0.01	100	80.9	3784	Pass
442	198	40	110	53.8	23912	Pass
443	442	15	24	19.6	4680	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

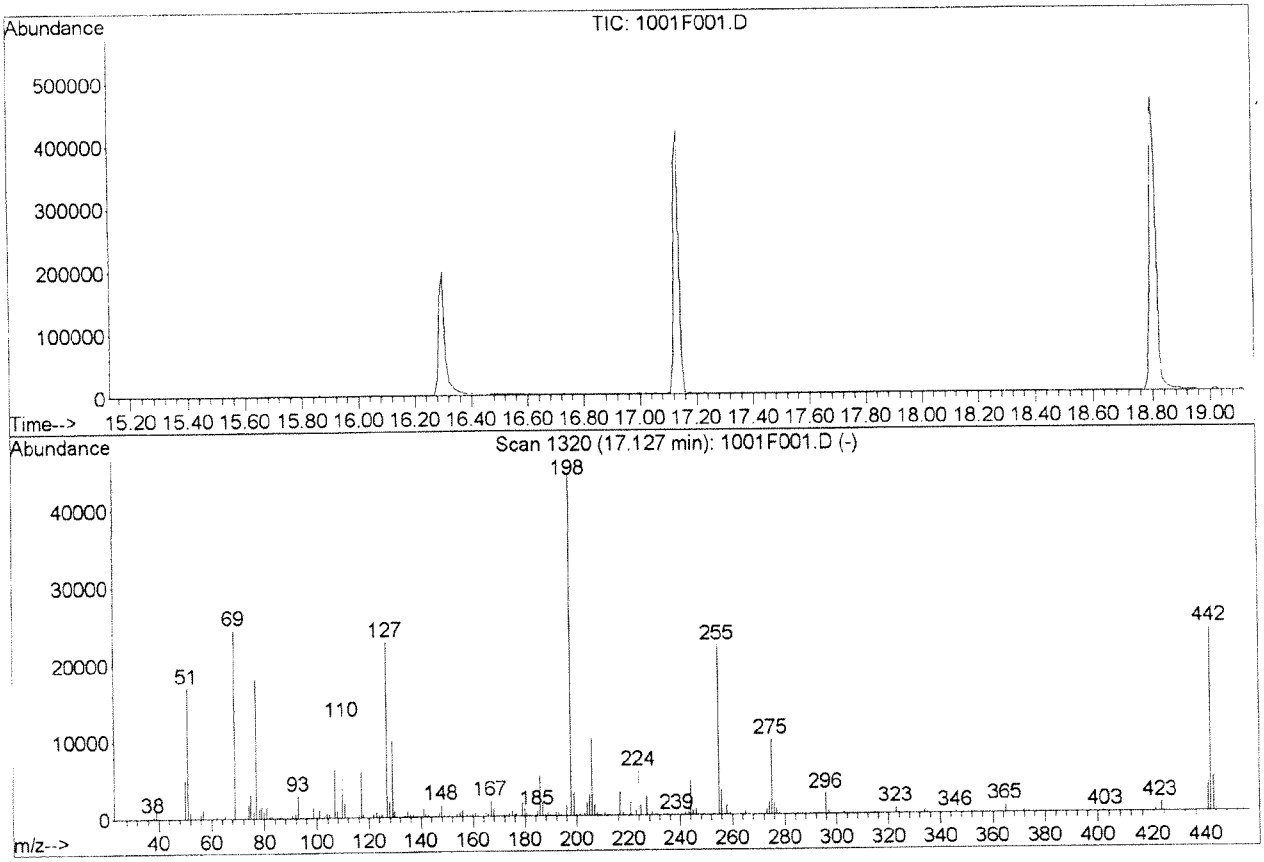
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS07\DATA\100114\1001F001.D
Acq On : 1 Oct 2014 7:06 pm
Sample : DFTPP @ 50 ppm | SVM47-35C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07

Vial: 1
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00



Spectrum Information: Scan 1320

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	38.5	17096	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	55.2	24520	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	51.3	22800	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	44432	PASS
199	198	5	9	6.7	2989	PASS
275	198	10	30	22.0	9788	PASS
365	198	0.75	100	2.3	1017	PASS
441	443	0.01	100	80.9	3784	PASS
442	198	40	110	53.8	23912	PASS
443	442	15	24	19.6	4680	PASS

1001F001.D 093014BNC7.M Wed Oct 01 19:39:51 2014

Scan 1320 (17.127 min): 1001F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.80	112	62.95	580	80.90	1487	97.95	1926
37.90	318	63.75	109	81.90	352	98.85	1397
38.90	1215	64.95	319	82.90	319	99.95	178
43.90	116	68.85	24520	84.90	275	100.85	1001
49.90	5068	73.85	1788	85.90	487	102.95	305
50.90	17096	74.90	3221	86.90	230	103.85	656
51.90	863	76.00	1062	90.80	394	104.85	511
55.95	582	77.00	18256	91.90	503	106.95	6345
56.95	1225	78.00	1311	92.90	2899	107.85	974
60.85	205	78.90	1589	93.80	225	109.85	12578
61.85	300	79.90	955	95.95	113	110.85	1969

Scan 1320 (17.127 min): 1001F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
111.85	204	129.80	919	142.85	308	157.80	266
116.00	426	130.80	174	145.85	194	158.80	211
116.90	6010	131.70	115	146.85	670	159.90	329
117.90	476	133.95	296	147.85	1560	160.90	541
121.90	570	134.95	778	148.85	275	161.80	161
122.90	797	135.85	282	150.85	165	164.90	551
123.90	417	136.95	398	152.90	386	165.90	378
124.90	462	137.65	104	153.90	311	166.90	2091
126.90	22800	139.75	120	154.90	628	167.80	1027
127.90	2074	140.85	1182	155.90	835	168.90	211
128.90	9988	141.95	420	156.90	253	169.90	104

Scan 1320 (17.127 min): 1001F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
170.80	110	183.95	184	195.90	1352	208.80	154
171.85	224	184.85	815	197.90	44432	210.85	440
172.85	296	185.85	5254	198.90	2989	214.85	126
173.95	426	186.85	1737	199.90	201	215.95	318
174.95	812	187.75	169	201.40	243	216.85	3040
175.85	280	188.85	456	202.90	316	217.85	422
176.85	338	189.75	105	203.90	1634	220.95	1844
178.85	1787	190.80	184	204.90	2717	222.85	649
179.85	1014	191.90	576	205.90	10015	223.95	5797
180.85	508	192.90	569	206.90	1409	224.85	1321
181.85	117	193.90	185	207.80	445	226.85	2472

Scan 1320 (17.127 min): 1001F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
227.85	322	243.90	4536	264.85	565	295.85	2718
228.85	433	244.90	641	265.75	139	296.85	447
230.90	221	245.90	826	270.90	123	302.85	309
233.80	212	246.80	199	272.90	704	313.90	138
234.80	175	248.85	152	273.90	1712	314.80	314
235.80	137	252.95	135	274.90	9788	315.80	176
236.80	186	254.85	22072	275.90	1400	322.90	848
238.80	124	255.85	3282	276.90	790	323.80	178
241.00	122	256.95	225	277.80	145	326.85	168
241.90	298	257.85	1309	284.90	177	327.95	103
242.90	420	258.85	272	292.85	187	333.85	510

Scan 1320 (17.127 min): 1001F001.D
DFTPP @ 50 ppm | SVM47-35C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
334.85	153	420.85	202				
345.80	183	422.90	1250				
351.90	233	423.90	235				
352.90	148	441.00	3784				
353.90	221	441.95	23912				
364.85	1017	442.95	4680				
365.85	126	443.95	481				
371.85	398						
372.75	116						
401.90	156						
402.80	222						

Exception Report

Data File: J:\MS07\DATA\100114\1001F002.D
Lab ID: KWG1413431-2
RunType: CCV
Matrix: WATER

Date Acquired: 10/01/2014 19:46
Date Quantitated: 10/01/2014 20:20
Batch ID: KWG1413431
Analysis Method: 625
MethodJoinID: MJ104

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK

Primary Review: OCT 02 2014 JRT

Secondary Review: 10/3/14

Printed: 10/02/2014 20:48:00
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100114\1001F002.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 19:46	**Quant Date:**	10/01/2014 20:20	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413431-2			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/02/2014

Analysis Lot:	KWG1413431	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:					
Tune Ref:	J:\MS07\DATA\100114\1001F001.D			**Method ID:**	MJ1284
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.21	0.00	152	66521	40.00	OK
2	Naphthalene-d8	11.31	0.00	136	228760	40.00	OK
3	Acenaphthene-d10	14.17	0.00	164	109822	40.00	OK
4	Phenanthrene-d10	16.58	0.00	188	212160	40.00	OK
5	Chrysene-d12	20.98	0.00	240	211461	40.00	OK
6	Perylene-d12	24.12	0.00	264	211926	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	6.97			112	163084	85.46		20-83	NA	
1	Phenol-d6	8.73			99	176864	78.62		26-106	NA	
1	Nitrobenzene-d5	10.15			82	169093	84.04		29-116	NA	
3	2-Fluorobiphenyl	13.11			172	315494	76.16		32-104	NA	
4	2,4,6-Tribromophenol	15.47			330	92153	78.93		20-123	NA	
5	Terphenyl-d14	19.20			244	372423	80.59		37-133	NA	

Final Conc. Units:

Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.97			42	76458	82.52			
1	Pyridine	4.00			79	215122m	88.97			
1	Aniline	8.67			93	216493	93.08			
1	Bis(2-chloroethyl) Ether	8.82			93	149520m	81.47			
1	Phenol	8.75			94	167769	77.60			
1	2-Chlorophenol	8.87			128	173356	81.08			
1	1,3-Dichlorobenzene	9.10			146	195050	78.08			
1	1,4-Dichlorobenzene	9.24			146	193958	78.09			
1	1,2-Dichlorobenzene	9.48			146	193987	82.73			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F002.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 19:46	**Quant Date:**	10/01/2014 20:20	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413431-2			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.51			108	104178	95.22			
1	Bis(2-chloroisopropyl) Ether	9.71			45	152643	80.03			
1	2-Methylphenol	9.74			107	111787	78.40			
1	Hexachloroethane	10.03			117	80661	80.14			
1	N-Nitrosodi-n-propylamine	9.96			70	105473	85.13			
1	4-Methylphenol	10.01			107	172195	83.84			
1	Nitrobenzene	10.18			77	155171	83.90			
2	Isophorone	10.60			82	273682	80.71			
2	2-Nitrophenol	10.71			139	102300	88.16			
2	2,4-Dimethylphenol	10.87			122	127266	83.25			
2	Bis(2-chloroethoxy)methane	10.99			93	187115	85.82			
2	2,4-Dichlorophenol	11.14			162	148738	86.98			
2	Benzoic Acid	11.15			122	93104	92.34			
2	1,2,4-Trichlorobenzene	11.23			180	165506	80.71			
2	Naphthalene	11.35			128	406636	78.22			
2	4-Chloroaniline	11.48			127	184947	88.03			
2	Hexachlorobutadiene	11.57			225	110597	81.82			
2	4-Chloro-3-methylphenol	12.34			107	128715	84.44			
2	2-Methylnaphthalene	12.49			142	261207	77.63			
3	Hexachlorocyclopentadiene	12.74			237	104691	79.17			
3	2,4,6-Trichlorophenol	12.98			196	102208	83.57			
3	2,4,5-Trichlorophenol	13.05			196	112788	81.44			
3	2-Chloronaphthalene	13.28			162	283108	80.42			
3	2-Nitroaniline	13.48			65	76555	86.03			
3	Acenaphthylene	13.94			152	416480	77.42			
3	Dimethyl Phthalate	13.81			163	320207	79.39			
3	2,6-Dinitrotoluene	13.90			165	83711	87.00			
3	Acenaphthene	14.23			154	236937	80.84			
3	3-Nitroaniline	14.16			138	84623	82.99			
3	2,4-Dinitrophenol	14.34			184	49937	78.67			
3	Dibenzofuran	14.51			168	364115	76.76			
3	4-Nitrophenol	14.53			109	45661	79.49			
3	2,4-Dinitrotoluene	14.54			165	104708	83.38			
3	2,3,4,6-Tetrachlorophenol	14.75			232	94776	85.62			
3	Fluorene	15.06			166	283474	79.09			
3	4-Chlorophenyl Phenyl Ether	15.09			204	151039	79.51			
3	Diethyl Phthalate	14.96			149	330166	78.88			
3	4-Nitroaniline	15.17			138	94823	87.83			
3	2-Methyl-4,6-dinitrophenol	15.21			198	74281	88.16			
3	N-Nitrosodiphenylamine	15.30			169	204584	75.86			
3	1,2-Diphenylhydrazine	15.35			77	276169	81.00			
4	4-Bromophenyl Phenyl Ether	15.88			248	106762	79.05			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100114\1001F002.D			**Instrument:**	MS07
Acqu Date:	10/01/2014 19:46	**Quant Date:**	10/01/2014 20:20	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413431-2			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.95			284	142951	79.21			
4	Pentachlorophenol	16.30			266	72417m	79.83			
4	Phenanthrene	16.62			178	400173	77.42			
4	Anthracene	16.70			178	419354	79.96			
4	Carbazole	16.99			167	409215	81.47			
4	Di-n-butyl Phthalate	17.62			149	551955	83.52			
4	Fluoranthene	18.54			202	467864	80.48			
5	Benzidine	18.80			184	201196	168.57			
5	Pyrene	18.89			202	533761	85.23			
5	Butyl Benzyl Phthalate	20.03			149	246252	85.60			
5	3,3'-Dichlorobenzidine	20.96			252	200808	85.84			
5	Benz(a)anthracene	20.96			228	439610	82.38			
5	Chrysene	21.03			228	433641	82.50			
5	Bis(2-ethylhexyl) Phthalate	21.15			149	338212	89.34			
6	Di-n-octyl Phthalate	22.59			149	586116	84.42			
6	Benzo(b)fluoranthene	23.27			252	451472	87.44			
6	Benzo(k)fluoranthene	23.33			252	442131	87.51			
6	Benzo(a)pyrene	24.00			252	435278	86.92			
6	Indeno(1,2,3-cd)pyrene	26.55			276	396343	87.77			
6	Dibenz(a,h)anthracene	26.64			278	403984	86.89			
6	Benzo(g,h,i)perylene	27.14			276	407494	82.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 20:18:13 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.21	152	66521	40.00	ug/ml	0.00
21) Naphthalene-d8	11.31	136	228760	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.17	164	109822	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.58	188	212160	40.00	ug/ml	0.00
68) Chrysene-d12	20.98	240	211461	40.00	ug/ml	0.00
77) Perylene-d12	24.12	264	211926	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.97	112	163084	85.46	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 56.97%			
7) Phenol-d6	8.73	99	176864	78.62	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 52.41%			
19) Nitrobenzene-d5	10.15	82	169093	84.04	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 84.04%			
38) 2-Fluorobiphenyl	13.11	172	315494	76.16	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 76.16%			
59) 2,4,6-Tribromophenol	15.47	330	92153	78.93	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 52.62%			
71) Terphenyl-d14	19.20	244	372423	80.59	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 80.59%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	76458	82.52	ug/ml	96
3) Pyridine	4.00	79	215122m	88.97	ug/ml	
5) Aniline	8.67	93	216493	93.08	ug/ml	100
6) Bis(2-chloroethyl) Ether	8.82	93	149520m	81.47	ug/ml	
8) Phenol	8.75	94	167769	77.60	ug/ml	91
9) 2-Chlorophenol	8.87	128	173356	81.08	ug/ml	96
10) 1,3-Dichlorobenzene	9.10	146	195050	78.08	ug/ml	100
11) 1,4-Dichlorobenzene	9.24	146	193958	78.09	ug/ml	99
12) 1,2-Dichlorobenzene	9.48	146	193987	82.73	ug/ml	100
13) Benzyl Alcohol	9.51	108	104178	95.22	ug/ml	98
14) Bis(2-chloroisopropyl) Eth	9.71	45	152643	80.03	ug/ml	95
15) 2-Methylphenol	9.74	107	111787	78.40	ug/ml	92
16) Hexachloroethane	10.03	117	80661	80.14	ug/ml	98
17) N-Nitrosodi-n-propylamine	9.96	70	105473	85.13	ug/ml	98
18) 4-Methylphenol	10.01	107	172195	83.84	ug/ml	99
20) Nitrobenzene	10.18	77	155171	83.90	ug/ml	98
22) Isophorone	10.60	82	273682	80.71	ug/ml	99
23) 2-Nitrophenol	10.71	139	102300	88.16	ug/ml	100
24) 2,4-Dimethylphenol	10.87	122	127266	83.25	ug/ml	99
25) Bis(2-chloroethoxy)methane	10.99	93	187115	85.82	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 20:18:13 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.14	162	148738	86.98 ug/ml	97
27) Benzoic Acid	11.15	122	93104	92.34 ug/ml	98
28) 1,2,4-Trichlorobenzene	11.23	180	165506	80.71 ug/ml	100
29) Naphthalene	11.35	128	406636	78.22 ug/ml	100
30) 4-Chloroaniline	11.48	127	184947	88.03 ug/ml	95
31) Hexachlorobutadiene	11.57	225	110597	81.82 ug/ml	99
32) 4-Chloro-3-methylphenol	12.34	107	128715	84.44 ug/ml#	67
33) 2-Methylnaphthalene	12.49	142	261207	77.63 ug/ml	99
35) Hexachlorocyclopentadiene	12.74	237	104691	79.17 ug/ml	99
36) 2,4,6-Trichlorophenol	12.98	196	102208	83.57 ug/ml	99
37) 2,4,5-Trichlorophenol	13.05	196	112788	81.44 ug/ml	97
39) 2-Chloronaphthalene	13.28	162	283108	80.42 ug/ml	99
40) 2-Nitroaniline	13.48	65	76555	86.03 ug/ml	98
41) Acenaphthylene	13.94	152	416480	77.42 ug/ml	99
42) Dimethyl Phthalate	13.81	163	320207	79.39 ug/ml	100
43) 2,6-Dinitrotoluene	13.90	165	83711	87.00 ug/ml	99
44) Acenaphthene	14.23	154	236937	80.84 ug/ml	98
45) 3-Nitroaniline	14.16	138	84623	82.99 ug/ml	99
46) 2,4-Dinitrophenol	14.34	184	49937	78.67 ug/ml	92
47) Dibenzofuran	14.51	168	364115	76.76 ug/ml	99
48) 4-Nitrophenol	14.53	109	45661	79.49 ug/ml	93
49) 2,4-Dinitrotoluene	14.54	165	104708	83.38 ug/ml	99
50) 2,3,4,6-Tetrachlorophenol	14.75	232	94776	85.62 ug/ml	98
51) Fluorene	15.06	166	283474	79.09 ug/ml	98
52) 4-Chlorophenyl Phenyl Ethe	15.09	204	151039	79.51 ug/ml	99
53) Diethyl Phthalate	14.96	149	330166	78.88 ug/ml	99
54) 4-Nitroaniline	15.17	138	94823	87.83 ug/ml	99
55) 2-Methyl-4,6-dinitrophenol	15.21	198	74281	88.16 ug/ml#	100
56) N-Nitrosodiphenylamine	15.30	169	204584	75.86 ug/ml	98
57) 1,2-Diphenylhydrazine	15.35	77	276169	81.00 ug/ml	100
60) 4-Bromophenyl Phenyl Ether	15.88	248	106762	79.05 ug/ml	97
61) Hexachlorobenzene	15.95	284	142951	79.21 ug/ml	95
62) Pentachlorophenol	16.30	266	72417m	79.83 ug/ml	
63) Phenanthrene	16.62	178	400173	77.42 ug/ml	99
64) Anthracene	16.70	178	419354	79.96 ug/ml	99
65) Carbazole	16.99	167	409215	81.47 ug/ml	99
66) Di-n-butyl Phthalate	17.62	149	551955	83.52 ug/ml	98
67) Fluoranthene	18.54	202	467864	80.48 ug/ml	99
69) Benzidine	18.80	184	201196	168.57 ug/ml	100
70) Pyrene	18.89	202	533761	85.23 ug/ml	99
72) Butyl Benzyl Phthalate	20.03	149	246252	85.60 ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 20:18:13 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.96	252	200808	85.84	ug/ml	98
74) Benz(a)anthracene	20.96	228	439610	82.38	ug/ml	99
75) Chrysene	21.03	228	433641	82.50	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.15	149	338212	89.34	ug/ml	100
78) Di-n-octyl Phthalate	22.59	149	586116	84.42	ug/ml	100
79) Benzo(b)fluoranthene	23.27	252	451472	87.44	ug/ml	99
80) Benzo(k)fluoranthene	23.33	252	442131	87.51	ug/ml	99
81) Benzo(a)pyrene	24.00	252	435278	86.92	ug/ml	99
82) Indeno(1,2,3-cd)pyrene	26.55	276	396343	87.77	ug/ml	98
83) Dibenz(a,h)anthracene	26.64	278	403984	86.89	ug/ml	99
84) Benzo(g,h,i)perylene	27.14	276	407494	82.28	ug/ml	99

(#) = qualifier out of range (m) = manual integration

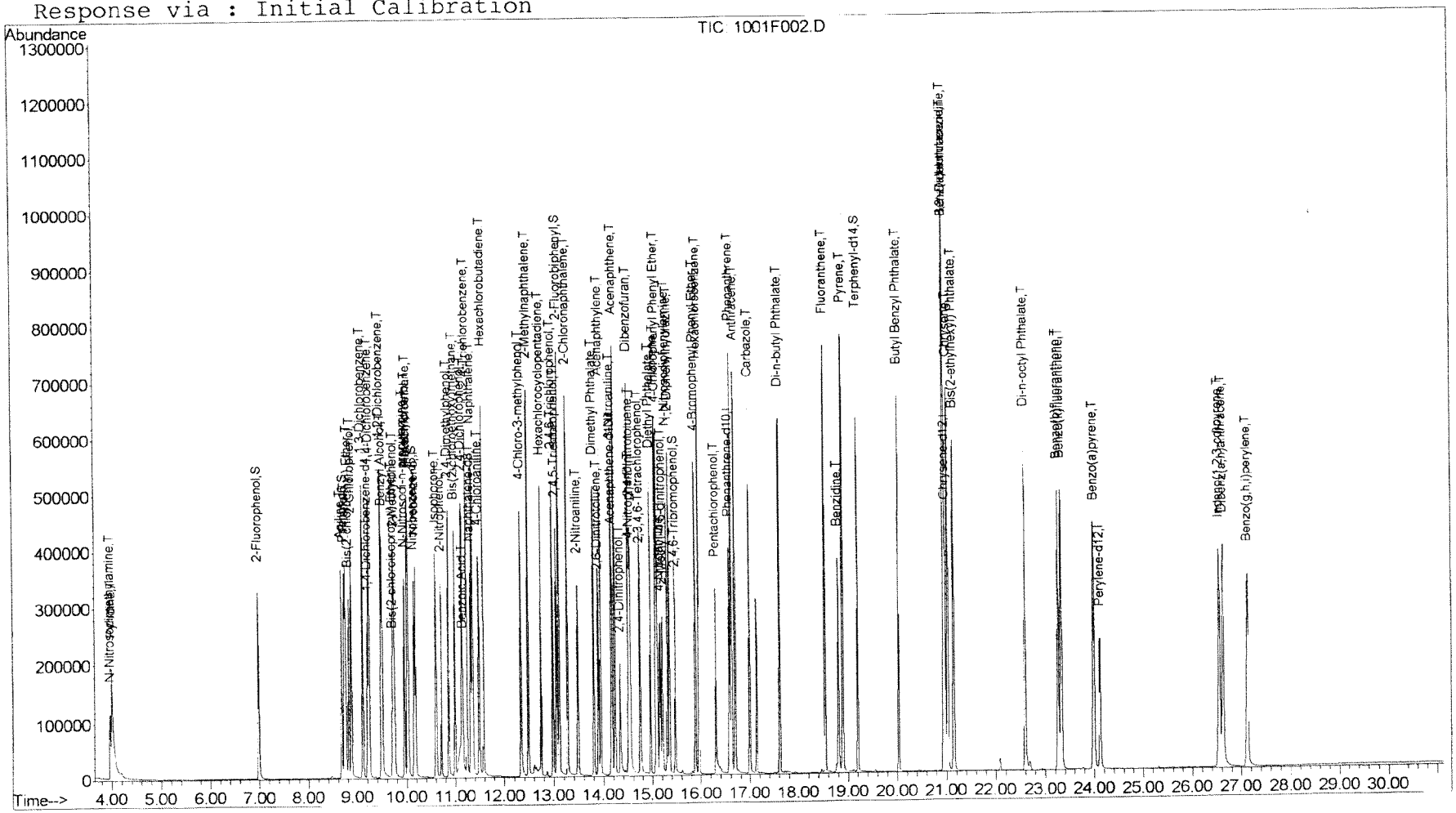
Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:20 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Initial Calibration



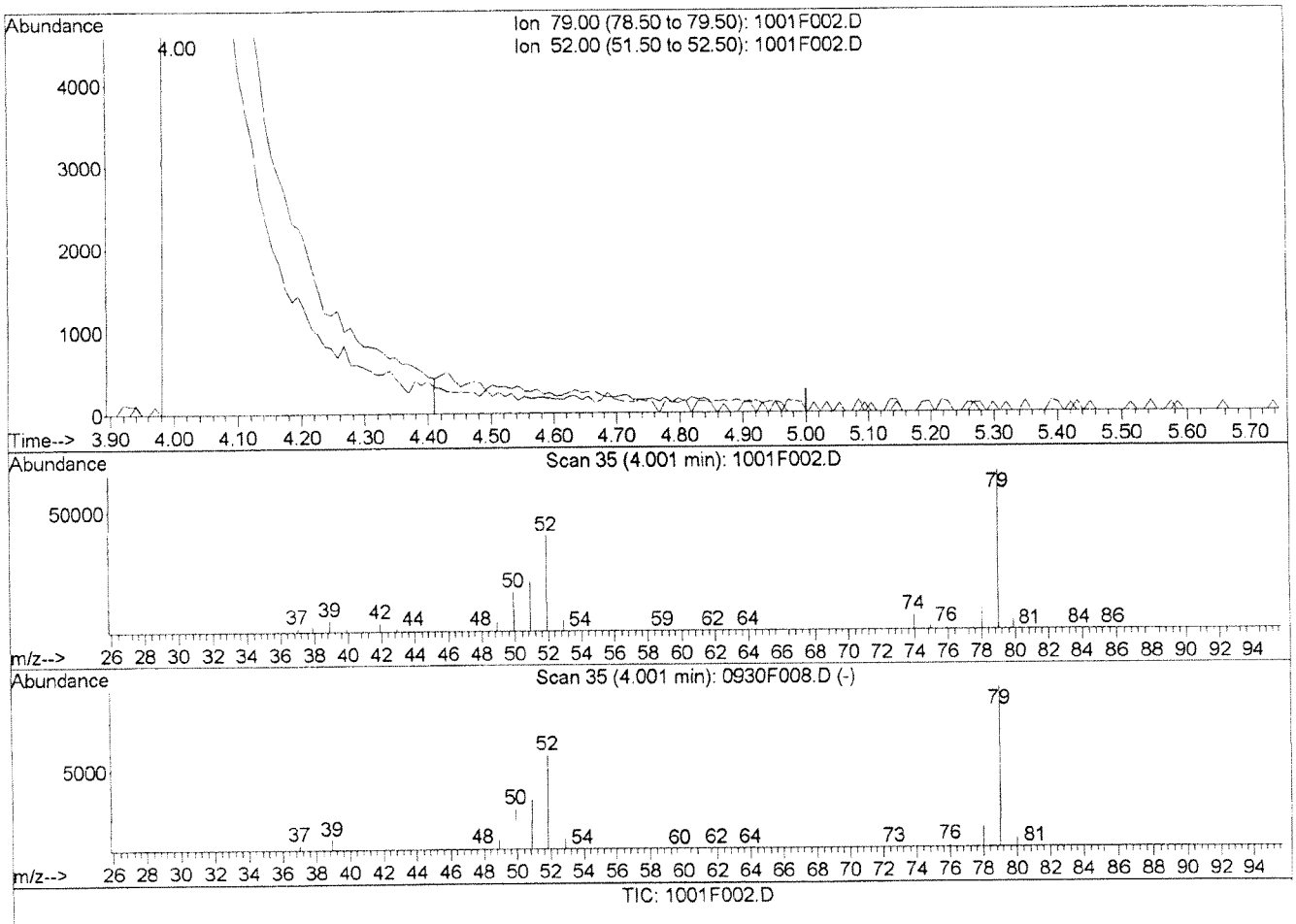
2878

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



(3) Pyridine (T)

4.00min 85.89ug/ml

response 207681

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	59.92
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/3/14

5

RT

1001F002.D 093014BNC7.M Wed Oct 01 20:18:31 2014

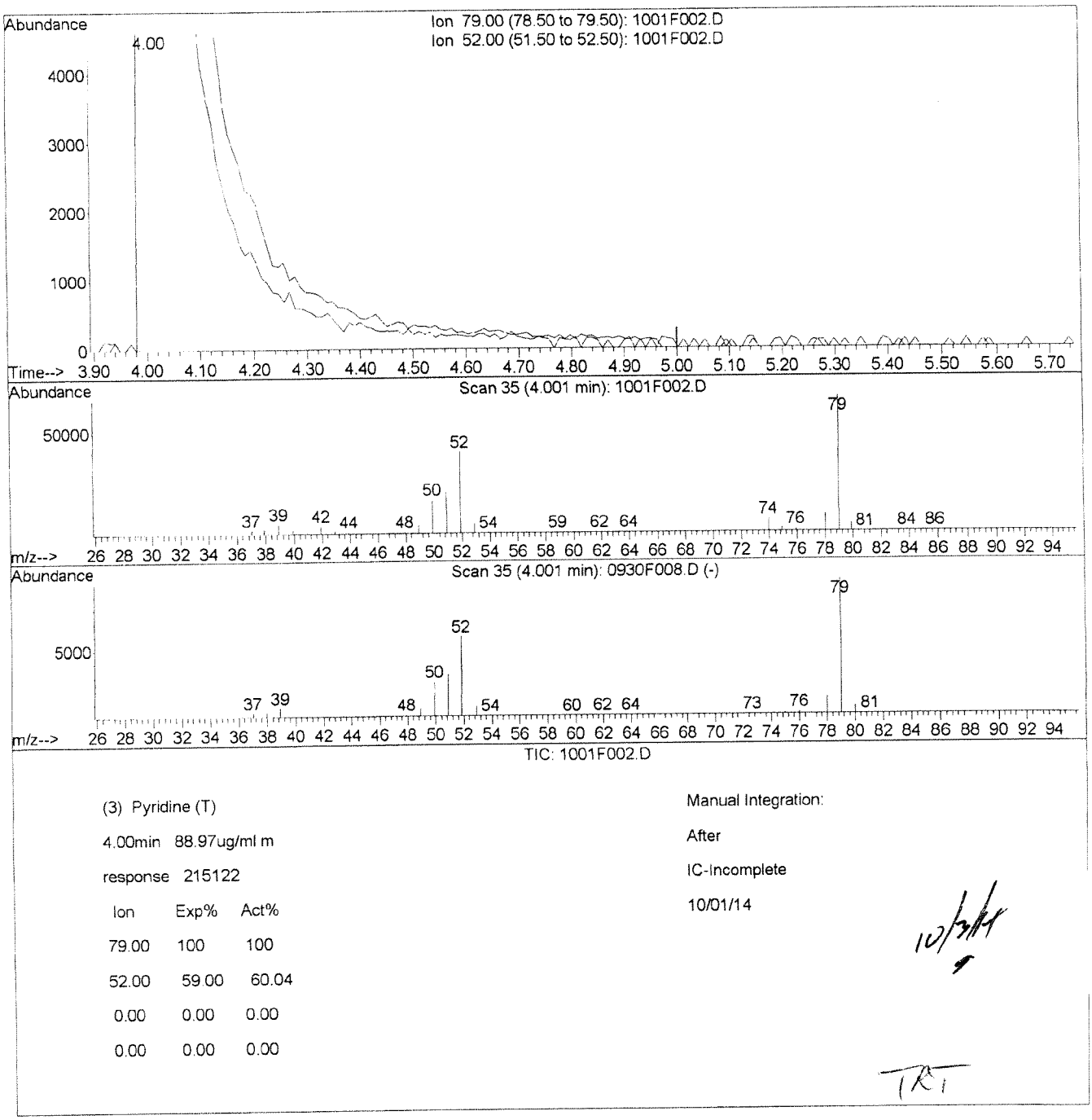
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



(3) Pyridine (T)

4.00min 88.97ug/ml m

response 215122

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	60.04
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/3/14

TRT

1001F002.D 093014BNC7.M Wed Oct 01 20:18:39 2014

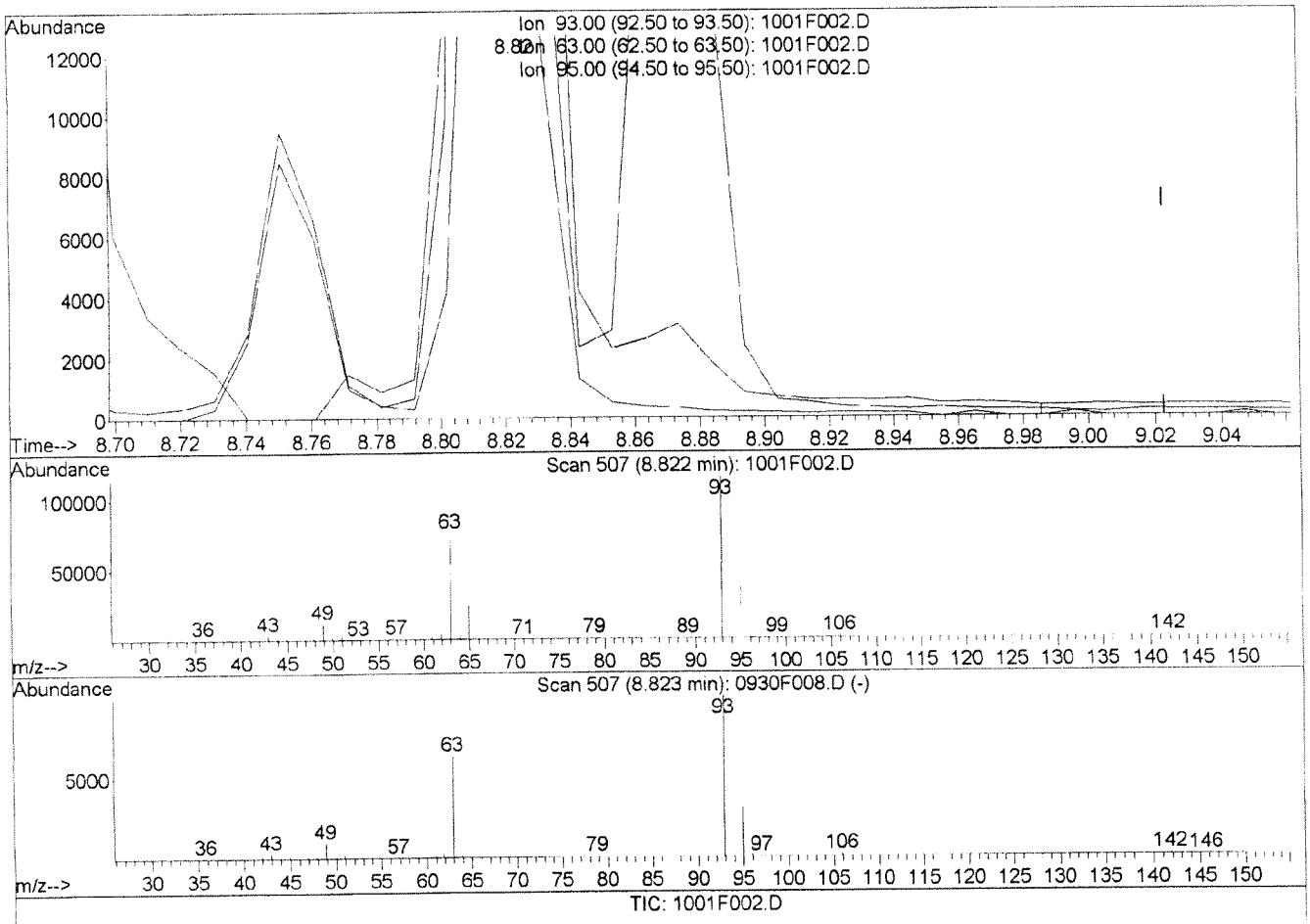
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F002.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 86.61ug/ml

response 158954

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	63.36
95.00	32.50	29.75
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/3/14

TRT

1001F002.D 093014BNC7.M Wed Oct 01 20:18:51 2014

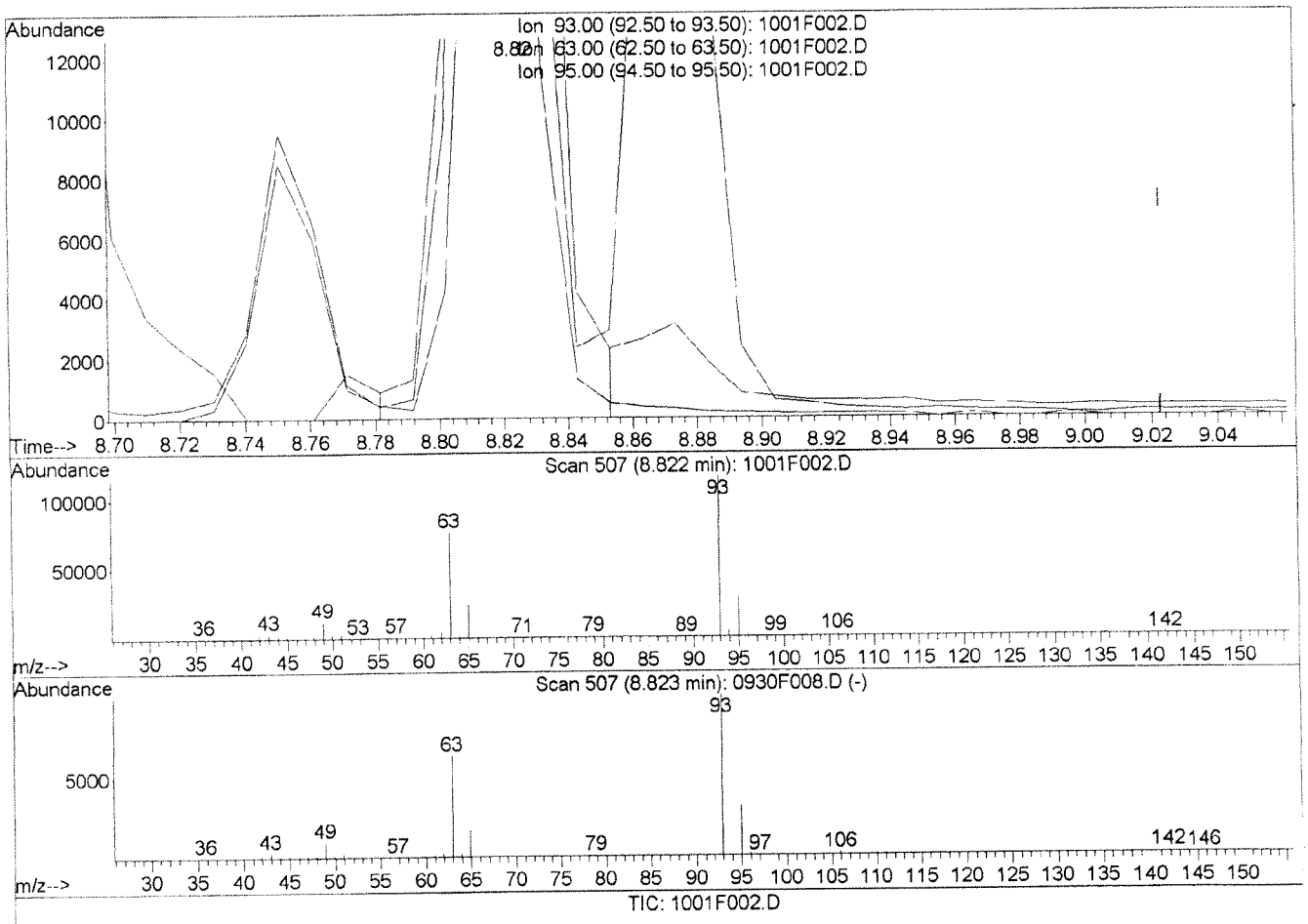
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Multiple Level Calibration



TIC: 1001F002.D

(6) Bis(2-chloroethyl) Ether (T)

8.82min 81.47ug/ml m

response 149520

Ion	Exp%	Act%
93.00	100	100
63.00	64.50	66.21
95.00	32.50	32.30
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/01/14

10/3/14

TA

1001F002.D 093014BNC7.M Wed Oct 01 20:18:58 2014

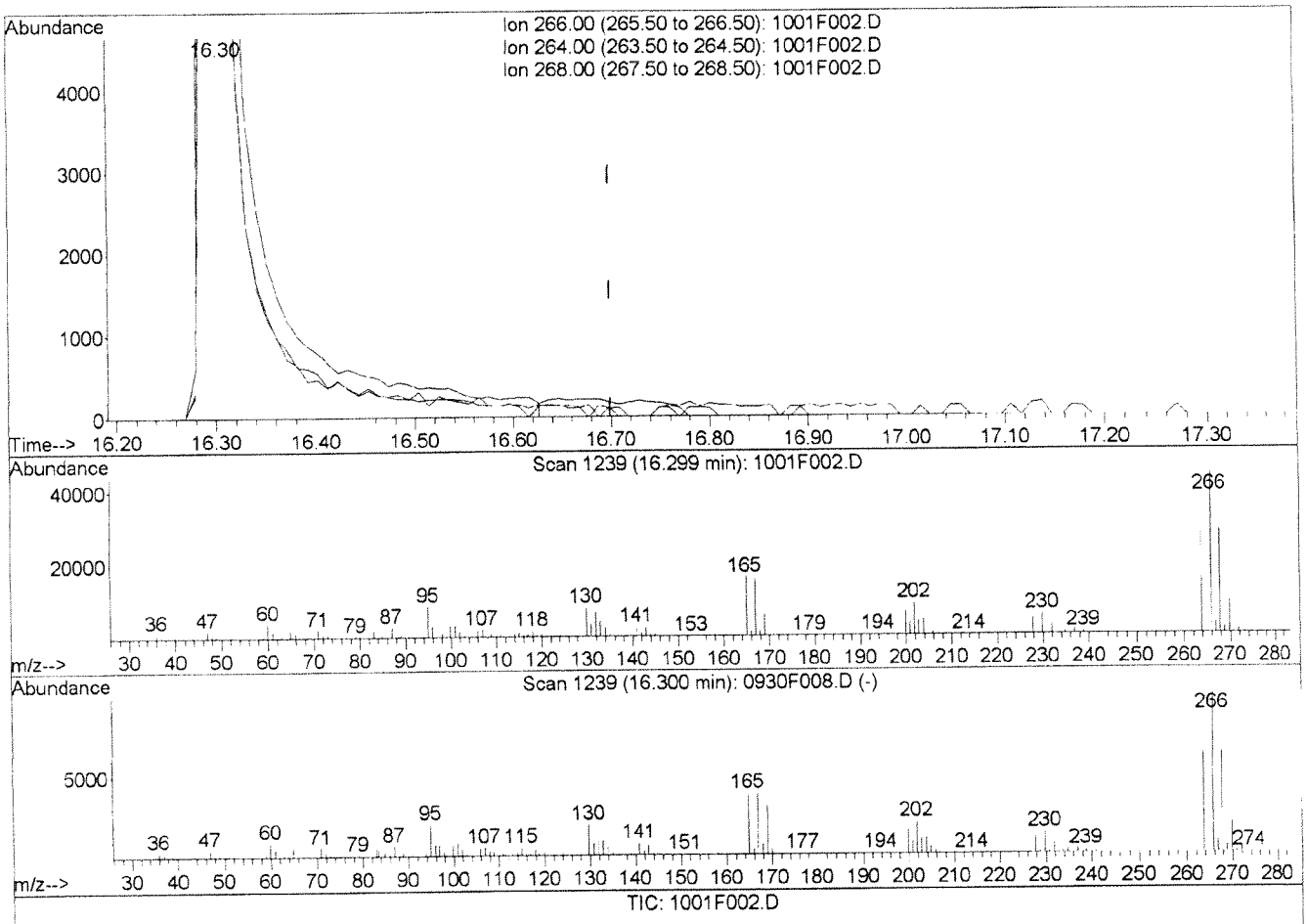
Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration



(62) Pentachlorophenol (T)

16.30min 77.56ug/ml

response 70055

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.46
268.00	63.20	64.70
0.00	0.00	0.00

Manual Integration:

Before

10/01/14

10/2 KT

TKT

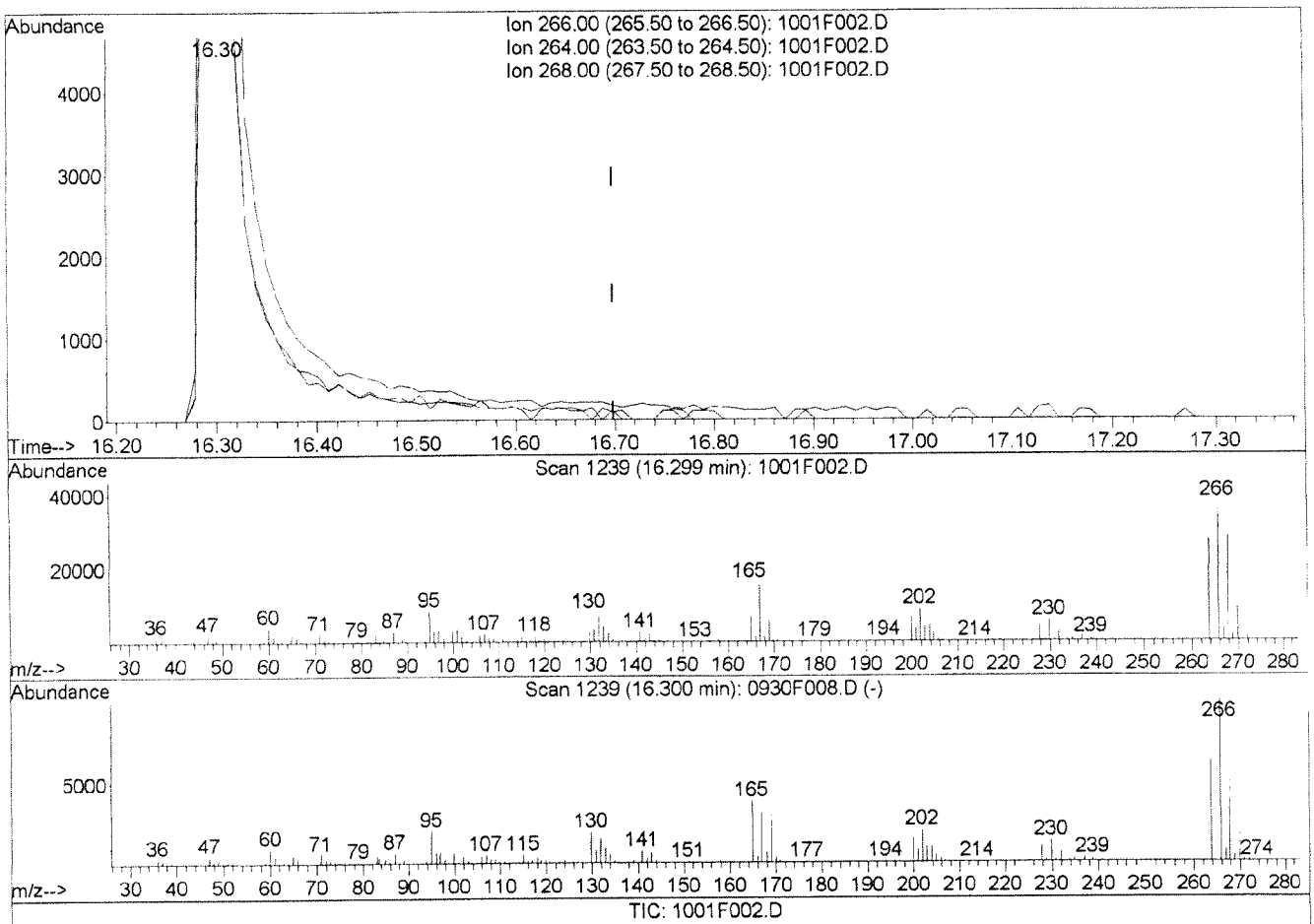
1001F002.D 093014BNC7.M Wed Oct 01 20:20:17 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100114\1001F002.D
Acq On : 1 Oct 2014 7:46 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 20:20 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Wed Oct 01 14:24:16 2014
Response via : Single Level Calibration



(62) Pentachlorophenol (T)

16.30min 79.83ug/ml m

response 72417

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.49
268.00	63.20	64.75
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/01/14

10/3/14

TR

1001F002.D 093014BNC7.M Wed Oct 01 20:20:24 2014

Injection Log

Directory: J:\MS07\DATA\100314

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1003A002.D	1.	8270 CCV @ 80 ppm | SVM47-65B		3 Oct 2014 14:40
2	1	1003F001.D	1.	DFTPP @ 50 ppm | SVM47-35C – MR		3 Oct 2014 13:58
3	2	1003F002.D	1.	8270 CCV @ 80 ppm | SVM47-65B - TUNE		3 Oct 2014 14:40
4	3	1003F003.D	1.	~~8270 MB~~ KWG1413390-01 MB TRT 10/7/14		3 Oct 2014 15:35
5	4	1003F004.D	1.	K1409358-001		3 Oct 2014 16:15
6	5	1003F005.D	1.	K1409358-002		3 Oct 2014 16:56
7	6	1003F006.D	1.	K1409358-003		3 Oct 2014 17:37
8	7	1003F007.D	1.	K1409358-004		3 Oct 2014 18:17
9	8	1003F008.D	1.	K1409358-005		3 Oct 2014 18:57
10	9	1003F009.D	1.	KWG1413312-05 | MB		3 Oct 2014 19:38
11	10	1003F010.D	1.	KWG1413312-04 | MB	Leachate Blank	3 Oct 2014 20:18
12	11	1003F011.D	1.	KWG1413312-03 | LCS		3 Oct 2014 20:59
13	12	1003F012.D	1.	K1410531-001 MS		3 Oct 2014 21:39
14	13	1003F013.D	1.	K1410531-001		3 Oct 2014 22:19
15	14	1003F014.D	5.	K1409921-007 5X		3 Oct 2014 23:00
16	15	1003F015.D	1.	KWG1413272-05 | MB		3 Oct 2014 23:40
17	16	1003F016.D	1.	KWG1413272-03 | LCS		4 Oct 2014 00:21
18	17	1003F017.D	1.	KWG1413272-04 | DLCS		4 Oct 2014 01:01
19	18	1003F018.D	1.	K1409699-001		4 Oct 2014 01:42
20	19	1003F019.D	1.	K1409699-002		4 Oct 2014 02:22
21	20	1003F020.D	2.	KWG1413101-01 | LCS 2X		4 Oct 2014 03:03
22	21	1003F021.D	2.	KWG1413101-02 | DLCS 2X		4 Oct 2014 03:43
~~23~~	~~100~~	~~1003F022.D~~	~~1.~~	~~IB PRIMER~~		~~4 Oct 2014 04:24~~
24	99	1003F023.D	1.	BN SURROGATE CHECK		~~4 Oct 2014~~ 05:04
25	100	1003F024.D	1.	IB PRIMER		4 Oct 2014 05:45
26	100	1003F025.D	1.	IB PRIMER		4 Oct 2014 06:25
27	100	1003F026.D	1.	PR		6 Oct 2014 12:52

ICAL 13580
StarLims 414600
TRT 10/6/14

10/7/14

Page 1

06 Oct 2014 14:18

DILUTION LOG MS 07

Date: 10/2/14 Prepared by: Terry Thomas Solvent Lot #: DCM VJ 327

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
K140992-007	100uL	500uL	5X	
KWG13101-01	100uL	200uL	2X	
KWG13101-02	100uL	200uL	2X	

10/3/14

R:\SVM\DILUTION LOG.DOC

Exception Report

Data File: J:\MS07\DATA\100314A\1003A002.D
Lab ID: KWG1413542-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 10/03/2014 14:40
Date Quantitated:
Batch ID: KWG1413542
Analysis Method: DFTPP
ListJoinID: LJ1747

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

OCT 06 2014

Primary Review: _____

Secondary Review: 10/7/14

Printed: 10/06/2014 16:16:39
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100314\1003A002.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 14:40	**Quant Date:**		**Vial:**	2
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG1413542-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413542	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M	**Calibration ID:**	CAL13580
Title:		**Report List ID:**	LJ1747
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	33.7	4878	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	47.6	6887	Pass
70	69	0	2	0.6	43	Pass
127	198	25	75	45.7	6607	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	14455	Pass
199	198	5	9	7.1	1028	Pass
275	198	10	30	25.3	3663	Pass
365	198	0.75	100	2.5	355	Pass
441	443	0.01	100	82.8	1462	Pass
442	198	40	110	62.9	9091	Pass
443	442	15	24	19.4	1766	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

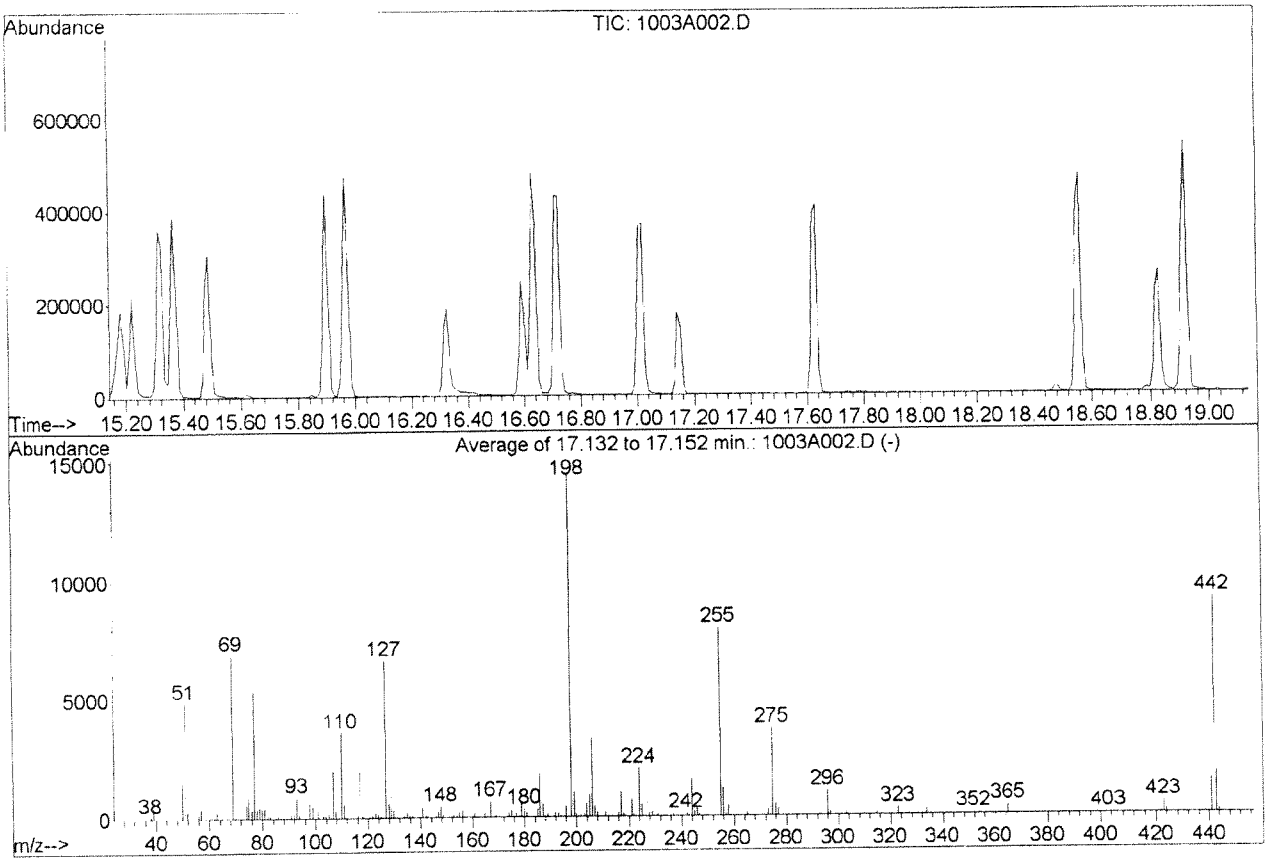
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

* Result fails acceptance criteria
# Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS07\DATA\100314A\1003A002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00



Spectrum Information: Average of 17.132 to 17.152 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	33.7	4878	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.6	6887	PASS
70	69	0.00	2	0.6	43	PASS
127	198	25	75	45.7	6607	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	14455	PASS
199	198	5	9	7.1	1028	PASS
275	198	10	30	25.3	3663	PASS
365	198	0.75	100	2.5	355	PASS
441	443	0.01	100	82.8	1462	PASS
442	198	40	110	62.9	9091	PASS
443	442	15	24	19.4	1766	PASS

1003A002.D 093014BNC7.M Fri Oct 03 15:57:23 2014

Average of 17.132 to 17.152 min.: 1003A002.D
8270 CCV @ 80 ppm | SVM47-65B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.90	89	64.85	67	80.80	55	93.90	124
38.20	34	68.85	6887	80.95	433	97.95	632
38.90	477	69.85	43	81.95	111	98.95	511
49.90	1506	72.95	46	82.95	102	99.85	39
50.95	4878	73.90	620	84.90	56	100.85	285
51.90	283	75.00	895	85.90	133	102.90	95
55.95	152	76.05	343	86.90	52	103.90	138
56.95	412	76.95	5335	87.90	35	104.90	205
60.95	53	78.00	399	90.85	160	105.85	36
61.85	52	78.95	468	91.90	159	106.95	1981
62.95	267	79.95	371	92.90	899	107.85	321

Average of 17.132 to 17.152 min.: 1003A002.D
8270 CCV @ 80 ppm | SVM47-65B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
108.95	54	126.90	6607	141.90	99	154.90	195
109.95	3592	127.95	584	142.75	58	155.95	282
110.95	556	128.90	3103	145.85	44	157.00	41
111.85	42	129.90	294	146.85	204	157.90	44
116.00	99	133.90	92	147.85	469	159.85	106
116.90	1942	134.90	201	148.85	99	160.90	161
117.90	115	135.90	92	150.85	42	161.90	39
121.85	142	136.90	116	151.65	39	164.80	171
122.90	211	138.95	38	152.10	36	165.95	46
123.95	128	139.85	34	152.90	129	166.90	669
124.95	116	140.85	402	153.95	86	167.90	438

Average of 17.132 to 17.152 min.: 1003A002.D
8270 CCV @ 80 ppm | SVM47-65B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
168.90	89	183.95	35	195.95	436	209.90	34
171.85	34	184.95	306	197.90	14455	210.90	144
172.95	37	185.95	1823	198.90	1028	215.95	119
173.95	149	186.95	554	199.80	105	216.85	1021
174.95	280	187.95	35	201.50	40	217.85	116
175.95	94	188.85	124	202.90	114	220.95	715
176.90	144	190.90	36	203.90	554	221.75	84
178.00	61	191.90	173	204.90	908	222.90	231
178.85	638	192.90	176	205.95	3279	223.95	2012
179.90	340	193.90	34	206.90	442	224.95	480
180.85	178	194.90	34	207.90	151	226.85	870

Average of 17.132 to 17.152 min.: 1003A002.D
8270 CCV @ 80 ppm | SVM47-65B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
227.80	143	245.85	287	272.90	256	322.90	297
228.85	169	246.80	72	273.90	653	326.85	49
230.90	77	248.85	36	274.90	3663	333.90	208
233.90	34	252.85	34	275.90	482	345.80	38
234.90	36	254.95	7938	276.90	296	351.90	54
235.90	41	255.95	1156	284.90	37	352.90	37
236.90	83	256.90	84	292.85	33	353.90	62
241.90	107	257.85	449	295.95	1019	364.90	355
242.90	47	258.85	49	296.85	147	371.95	143
243.90	1575	264.85	142	302.95	102	401.90	36
244.95	197	265.75	39	314.85	102	402.90	46

Average of 17.132 to 17.152 min.: 1003A002.D
8270 CCV @ 80 ppm | SVM47-65B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
420.85	58						
421.85	53						
422.95	497						
423.90	127						
438.80	44						
440.95	1462						
441.95	9091						
442.95	1766						
443.95	166						

Exception Report

Data File: J:\MS07\DATA\100314\1003F002.D
Lab ID: KWG1413542-2
RunType: CCV
Matrix: WATER

Date Acquired: 10/03/2014 14:40
Date Quantitated: 10/03/2014 15:19
Batch ID: KWG1413542
Analysis Method: 8270D
MethodJoinID: MJ1283

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Benzidine	173.0	NA	30	OK

Primary Review: OCT 06 2014 TRT

Secondary Review: 10/7/14

Printed: 10/06/2014 16:16:36
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS07\DATA\100314\1003F002.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 14:40	**Quant Date:**	10/03/2014 15:19	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413542-2			**Soln Conc. Units:**	ug/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO	**Collect Date:**		**Receive Date:**	10/06/2014

Analysis Lot:	KWG1413542	**Prep Lot:**	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	J:\MS07\METHODS\8270_625\093014BNC7.M			**Calibration ID:**	CAL13580
Title:					
Tune Ref:	J:\MS07\DATA\100314\1003A002.D			**Method ID:**	MJ1283
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	9.22	0.01	152	45462	40.00	OK
2	Naphthalene-d8	11.33	0.02	136	155388	40.00	OK
3	Acenaphthene-d10	14.19	0.02	164	87775	40.00	OK
4	Phenanthrene-d10	16.59	0.01	188	139076	40.00	OK
5	Chrysene-d12	21.00	0.02	240	146988	40.00	OK
6	Perylene-d12	24.16	0.04	264	135594	40.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	6.99			112	108014	82.83		39-103 NA	
1	Phenol-d6	8.76			99	117679	76.54		38-107 NA	
1	Nitrobenzene-d5	10.17			82	120886	87.91		46-115 NA	
3	2-Fluorobiphenyl	13.13			172	250745	75.74		48-114 NA	
4	2,4,6-Tribromophenol	15.49			330	67795	88.58		46-127 NA	
5	Terphenyl-d14	19.22			244	242009	75.34		32-149 NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	3.97			42	63626	100.48			
1	Pyridine	4.00			79	133404m	80.73			
1	Aniline	8.68			93	154460	97.18			
1	Bis(2-chloroethyl) Ether	8.84			93	95496	76.14			
1	Phenol	8.78			94	116857	79.08			
1	2-Chlorophenol	8.89			128	115620	79.12			
1	1,3-Dichlorobenzene	9.11			146	137647	80.62			
1	1,4-Dichlorobenzene	9.25			146	136614	80.48			
1	1,2-Dichlorobenzene	9.49			146	135403	84.49			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100314\1003F002.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 14:40	**Quant Date:**	10/03/2014 15:19	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413542-2			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl alcohol	9.53			108	71385	95.47			
1	Bis(2-chloroisopropyl) Ether	9.73			45	98783	75.78			
1	2-Methylphenol	9.77			107	84806	87.03			
1	Hexachloroethane	10.04			117	52799	76.76			
1	N-Nitrosodi-n-propylamine	9.97			70	75791	89.51			
1	4-Methylphenol	10.03			107	116779	83.20			
1	Nitrobenzene	10.20			77	115242	91.17			
2	Isophorone	10.62			82	215920	93.74			
2	2-Nitrophenol	10.73			139	75540	95.84			
2	2,4-Dimethylphenol	10.88			122	90887	87.52			
2	Bis(2-chloroethoxy)methane	11.00			93	128123	86.51			
2	2,4-Dichlorophenol	11.16			162	109462	94.23			
2	Benzoic acid	11.18			122	58704	85.72			
2	1,2,4-Trichlorobenzene	11.25			180	122175	87.71			
2	Naphthalene	11.36			128	303137	85.85			
2	4-Chloroaniline	11.50			127	137102	96.07			
2	Hexachlorobutadiene	11.59			225	84515	92.04			
2	4-Chloro-3-methylphenol	12.36			107	101349	97.88			
2	2-Methylnaphthalene	12.50			142	213018	93.20			
3	Hexachlorocyclopentadiene	12.76			237	84364	79.71			
3	2,4,6-Trichlorophenol	13.01			196	84248	86.19			
3	2,4,5-Trichlorophenol	13.08			196	91757	82.89			
3	2-Chloronaphthalene	13.29			162	219568	78.04			
3	2-Nitroaniline	13.51			65	59222	83.27			
3	Acenaphthylene	13.96			152	327464	76.16			
3	Dimethyl Phthalate	13.82			163	237669	73.73			
3	2,6-Dinitrotoluene	13.91			165	60216	78.30			
3	Acenaphthene	14.24			154	190561	81.35			
3	3-Nitroaniline	14.18			138	59835	73.42			
3	2,4-Dinitrophenol	14.35			184	31875	66.12			
3	Dibenzofuran	14.53			168	294804	77.76			
3	4-Nitrophenol	14.56			109	30206	65.79			
3	2,4-Dinitrotoluene	14.57			165	72788	72.52			
3	2,3,4,6-Tetrachlorophenol	14.76			232	69870	78.97			
3	Fluorene	15.09			166	217245	75.84			
3	4-Chlorophenyl Phenyl Ether	15.11			204	116272	76.59			
3	Diethyl Phthalate	14.98			149	229071	68.48			
3	4-Nitroaniline	15.18			138	55422	64.23			
3	2-Methyl-4,6-dinitrophenol	15.22			198	46252	68.68			
3	N-Nitrosodiphenylamine	15.32			169	144098	66.85			
3	1,2-Diphenylhydrazine	15.36			77	199775	73.31			
4	4-Bromophenyl Phenyl Ether	15.90			248	83528	94.35			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS07\DATA\100314\1003F002.D			**Instrument:**	MS07
Acqu Date:	10/03/2014 14:40	**Quant Date:**	10/03/2014 15:19	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413542-2			**Soln Conc. Units:**	ug/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	Hexachlorobenzene	15.97			284	105310	89.01			
4	Pentachlorophenol	16.33			266	44108**m**	74.89			
4	Phenanthrene	16.63			178	279999	82.63			
4	Anthracene	16.72			178	289343	84.16			
4	Carbazole	17.02			167	255714	77.67			
4	Di-n-butyl Phthalate	17.63			149	348308	80.40			
4	Fluoranthene	18.56			202	307261	80.62			
5	Benzidine	18.83			184	154684	193.40			
5	Pyrene	18.92			202	324266	74.49			
5	Butyl Benzyl Phthalate	20.05			149	176504	88.27			
5	3,3'-Dichlorobenzidine	20.98			252	143968	88.53			
5	Benz(a)anthracene	20.98			228	308037	83.04			
5	Chrysene	21.05			228	293966	80.46			
5	Bis(2-ethylhexyl) Phthalate	21.17			149	233818	88.86			
6	Di-n-octyl Phthalate	22.62			149	377006	84.87			
6	Benzo(b)fluoranthene	23.30			252	294900	89.27			
6	Benzo(k)fluoranthene	23.36			252	294058	90.96			
6	Benzo(a)pyrene	24.03			252	290923	90.80			
6	Indeno(1,2,3-cd)pyrene	26.60			276	256399**m**	88.74			
6	Dibenz(a,h)anthracene	26.67			278	263804**m**	88.68			
6	Benzo(g,h,i)perylene	27.18			276	272457	85.98			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 03 15:16:23 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.22	152	45462	40.00	ug/ml	0.00
21) Naphthalene-d8	11.33	136	155388	40.00	ug/ml	0.00
34) Acenaphthene-d10	14.19	164	87775	40.00	ug/ml	0.00
58) Phenanthrene-d10	16.59	188	139076	40.00	ug/ml	0.00
68) Chrysene-d12	21.00	240	146988	40.00	ug/ml	0.00
77) Perylene-d12	24.16	264	135594	40.00	ug/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.99	112	108014	82.83	ug/ml	0.00
Spiked Amount 150.000	Range 21 - 100		Recovery = 55.22%			
7) Phenol-d6	8.76	99	117679	76.54	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 94		Recovery = 51.03%			
19) Nitrobenzene-d5	10.17	82	120886	87.91	ug/ml	0.00
Spiked Amount 100.000	Range 35 - 114		Recovery = 87.91%			
38) 2-Fluorobiphenyl	13.13	172	250745	75.74	ug/ml	0.00
Spiked Amount 100.000	Range 43 - 116		Recovery = 75.74%			
59) 2,4,6-Tribromophenol	15.49	330	67795	88.58	ug/ml	0.00
Spiked Amount 150.000	Range 10 - 123		Recovery = 59.05%			
71) Terphenyl-d14	19.22	244	242009	75.34	ug/ml	0.00
Spiked Amount 100.000	Range 33 - 141		Recovery = 75.34%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.97	42	63626	100.48	ug/ml	78
3) Pyridine	4.00	79	133404m	80.73	ug/ml	
5) Aniline	8.68	93	154460	97.18	ug/ml	94
6) Bis(2-chloroethyl) Ether	8.84	93	95496	76.14	ug/ml	98
8) Phenol	8.78	94	116857	79.08	ug/ml	86
9) 2-Chlorophenol	8.89	128	115620	79.12	ug/ml	98
10) 1,3-Dichlorobenzene	9.11	146	137647	80.62	ug/ml	99
11) 1,4-Dichlorobenzene	9.25	146	136614	80.48	ug/ml	97
12) 1,2-Dichlorobenzene	9.49	146	135403	84.49	ug/ml	99
13) Benzyl Alcohol	9.53	108	71385	95.47	ug/ml	97
14) Bis(2-chloroisopropyl) Eth	9.73	45	98783	75.78	ug/ml	95
15) 2-Methylphenol	9.77	107	84806	87.03	ug/ml	92
16) Hexachloroethane	10.04	117	52799	76.76	ug/ml	86
17) N-Nitrosodi-n-propylamine	9.97	70	75791	89.51	ug/ml	94
18) 4-Methylphenol	10.03	107	116779	83.20	ug/ml	97
20) Nitrobenzene	10.20	77	115242	91.17	ug/ml	98
22) Isophorone	10.62	82	215920	93.74	ug/ml	98
23) 2-Nitrophenol	10.73	139	75540	95.84	ug/ml	96
24) 2,4-Dimethylphenol	10.88	122	90887	87.52	ug/ml	92
25) Bis(2-chloroethoxy)methane	11.00	93	128123	86.51	ug/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 03 15:16:23 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) 2,4-Dichlorophenol	11.16	162	109462	94.23 ug/ml	98
27) Benzoic Acid	11.18	122	58704	85.72 ug/ml	96
28) 1,2,4-Trichlorobenzene	11.25	180	122175	87.71 ug/ml	99
29) Naphthalene	11.36	128	303137	85.85 ug/ml	99
30) 4-Chloroaniline	11.50	127	137102	96.07 ug/ml	97
31) Hexachlorobutadiene	11.59	225	84515	92.04 ug/ml	98
32) 4-Chloro-3-methylphenol	12.36	107	101349	97.88 ug/ml	84
33) 2-Methylnaphthalene	12.50	142	213018	93.20 ug/ml	100
35) Hexachlorocyclopentadiene	12.76	237	84364	79.71 ug/ml	97
36) 2,4,6-Trichlorophenol	13.01	196	84248	86.19 ug/ml	98
37) 2,4,5-Trichlorophenol	13.08	196	91757	82.89 ug/ml	95
39) 2-Chloronaphthalene	13.29	162	219568	78.04 ug/ml	98
40) 2-Nitroaniline	13.51	65	59222	83.27 ug/ml	97
41) Acenaphthylene	13.96	152	327464	76.16 ug/ml	99
42) Dimethyl Phthalate	13.82	163	237669	73.73 ug/ml	100
43) 2,6-Dinitrotoluene	13.91	165	60216	78.30 ug/ml	81
44) Acenaphthene	14.24	154	190561	81.35 ug/ml	98
45) 3-Nitroaniline	14.18	138	59835	73.42 ug/ml	92
46) 2,4-Dinitrophenol	14.35	184	31875	66.12 ug/ml	98
47) Dibenzofuran	14.53	168	294804	77.76 ug/ml	100
48) 4-Nitrophenol	14.56	109	30206	65.79 ug/ml	86
49) 2,4-Dinitrotoluene	14.57	165	72788	72.52 ug/ml	89
50) 2,3,4,6-Tetrachlorophenol	14.76	232	69870	78.97 ug/ml	89
51) Fluorene	15.09	166	217245	75.84 ug/ml	100
52) 4-Chlorophenyl Phenyl Ethe	15.11	204	116272	76.59 ug/ml	100
53) Diethyl Phthalate	14.98	149	229071	68.48 ug/ml	99
54) 4-Nitroaniline	15.18	138	55422	64.23 ug/ml	85
55) 2-Methyl-4,6-dinitrophenol	15.22	198	46252	68.68 ug/ml	100
56) N-Nitrosodiphenylamine	15.32	169	144098	66.85 ug/ml	99
57) 1,2-Diphenylhydrazine	15.36	77	199775	73.31 ug/ml	95
60) 4-Bromophenyl Phenyl Ether	15.90	248	83528	94.35 ug/ml	95
61) Hexachlorobenzene	15.97	284	105310	89.01 ug/ml	95
62) Pentachlorophenol	16.33	266	44108m	74.89 ug/ml	
63) Phenanthrene	16.63	178	279999	82.63 ug/ml	99
64) Anthracene	16.72	178	289343	84.16 ug/ml	99
65) Carbazole	17.02	167	255714	77.67 ug/ml	98
66) Di-n-butyl Phthalate	17.63	149	348308	80.40 ug/ml	99
67) Fluoranthene	18.56	202	307261	80.62 ug/ml	98
69) Benzidine	18.83	184	154684	193.40 ug/ml	96
70) Pyrene	18.92	202	324266	74.49 ug/ml	98
72) Butyl Benzyl Phthalate	20.05	149	176504	88.27 ug/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100314\1003F002.D Vial: 2
Acq On : 3 Oct 2014 2:40 pm Operator: T. THOMAS
Sample : 8270 CCV @ 80 ppm | SVM47-65B Inst : MS07
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 03 15:16:23 2014 Quant Results File: 093014BNC7.RES

Quant Method : J:\MS07\M...\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration
DataAcq Meth : 8270_1

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) 3,3'-Dichlorobenzidine	20.98	252	143968	88.53	ug/ml	98
74) Benz(a)anthracene	20.98	228	308037	83.04	ug/ml	99
75) Chrysene	21.05	228	293966	80.46	ug/ml	99
76) Bis(2-ethylhexyl) Phthalat	21.17	149	233818	88.86	ug/ml	98
78) Di-n-octyl Phthalate	22.62	149	377006	84.87	ug/ml	99
79) Benzo(b)fluoranthene	23.30	252	294900	89.27	ug/ml	98
80) Benzo(k)fluoranthene	23.36	252	294058	90.96	ug/ml	99
81) Benzo(a)pyrene	24.03	252	290923	90.80	ug/ml	98
82) Indeno(1,2,3-cd)pyrene	26.60	276	256399m	88.74	ug/ml	
83) Dibenz(a,h)anthracene	26.67	278	263804m	88.68	ug/ml	
84) Benzo(g,h,i)perylene	27.18	276	272457	85.98	ug/ml	99

(#) = qualifier out of range (m) = manual integration

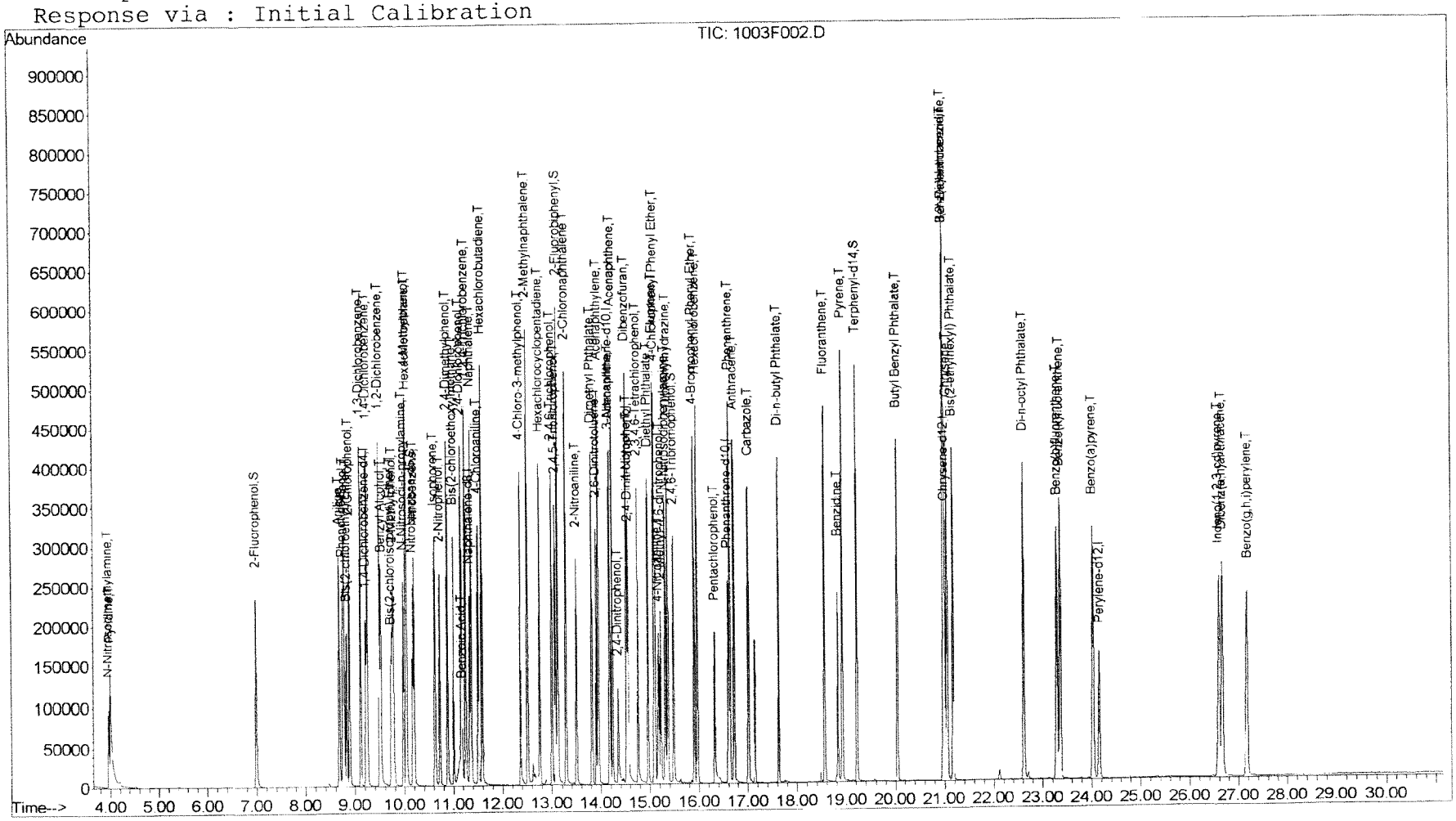
Quantitation Report (QT Reviewed)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:19 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00

Quant Results File: 093014BNC7.RES

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Initial Calibration



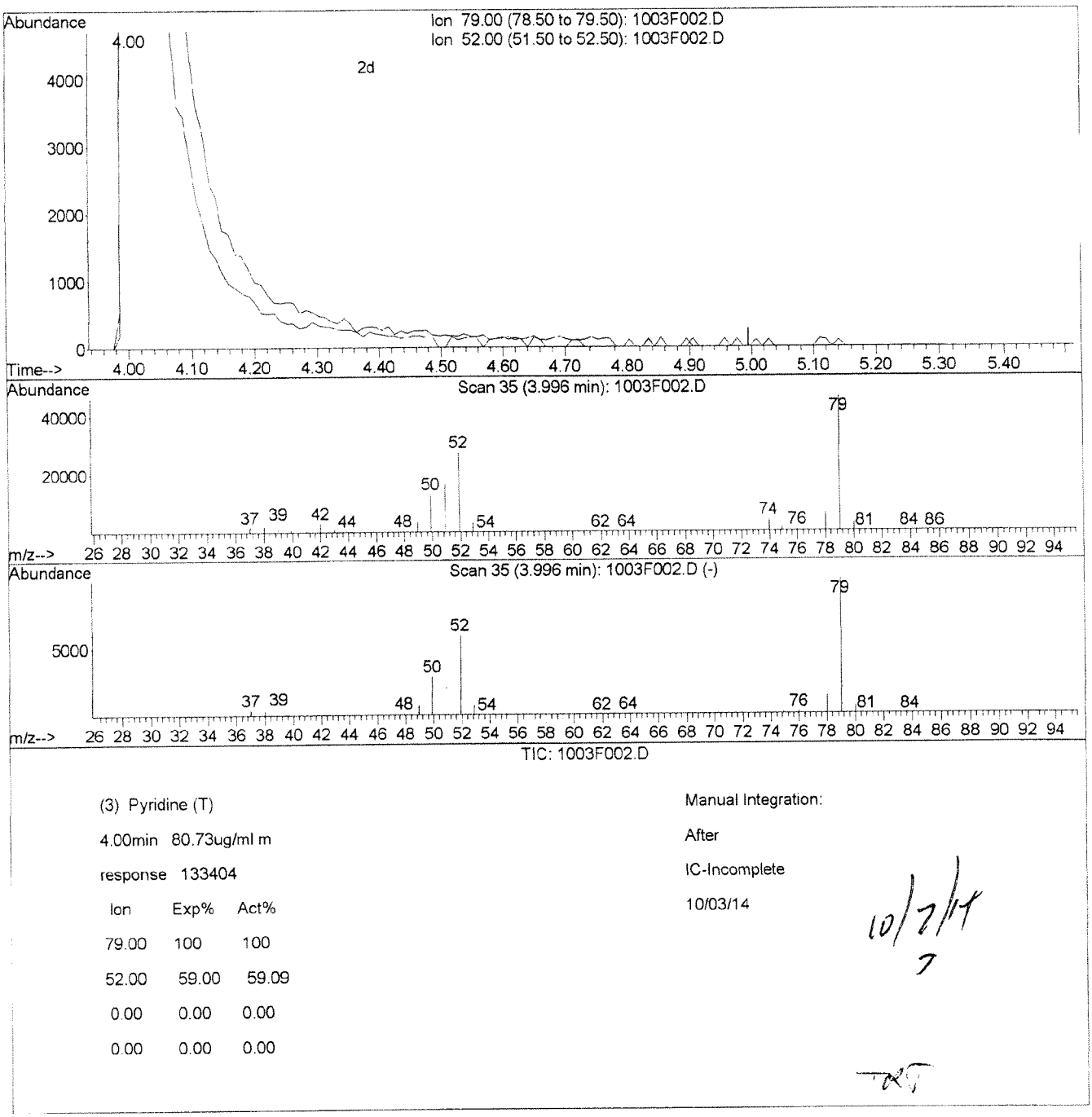
2899

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:16 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Multiple Level Calibration



TIC: 1003F002.D

(3) Pyridine (T)

4.00min 80.73ug/ml m

response 133404

Ion	Exp%	Act%
79.00	100	100
52.00	59.00	59.09
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/03/14

10/7/14

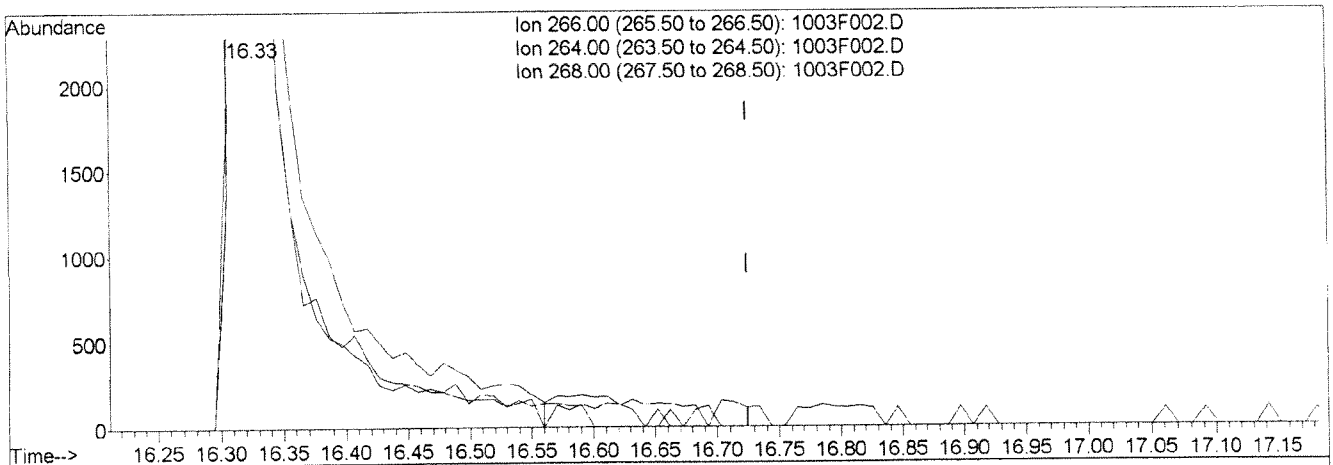
1003F002.D 093014BNC7.M Fri Oct 03 15:16:56 2014

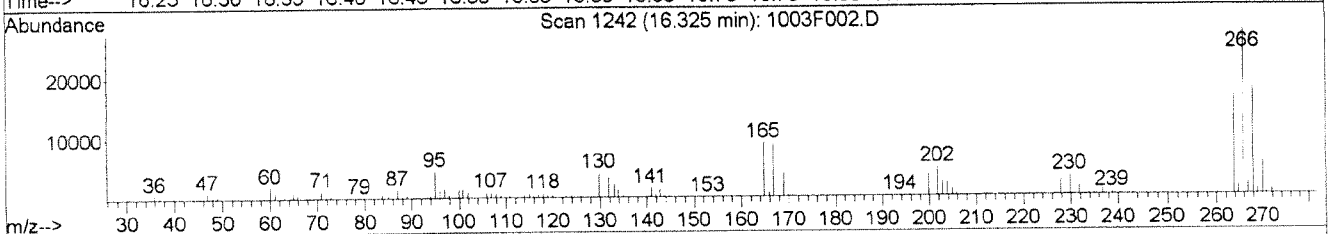
Quantitation Report (Qedit)

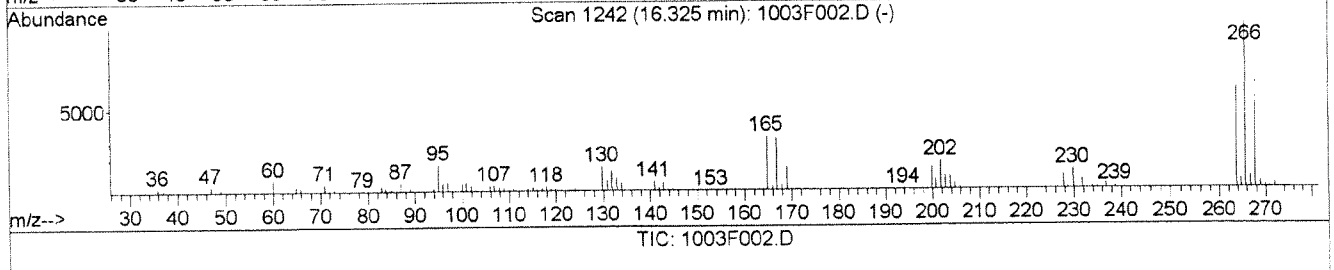
Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:16 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Single Level Calibration







TIC: 1003F002.D

(62) Pentachlorophenol (T)

16.33min 73.21ug/ml

response 42973

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.33
268.00	63.20	64.95
0.00	0.00	0.00

Manual Integration:

Before

10/03/14

10/3/14

TRT

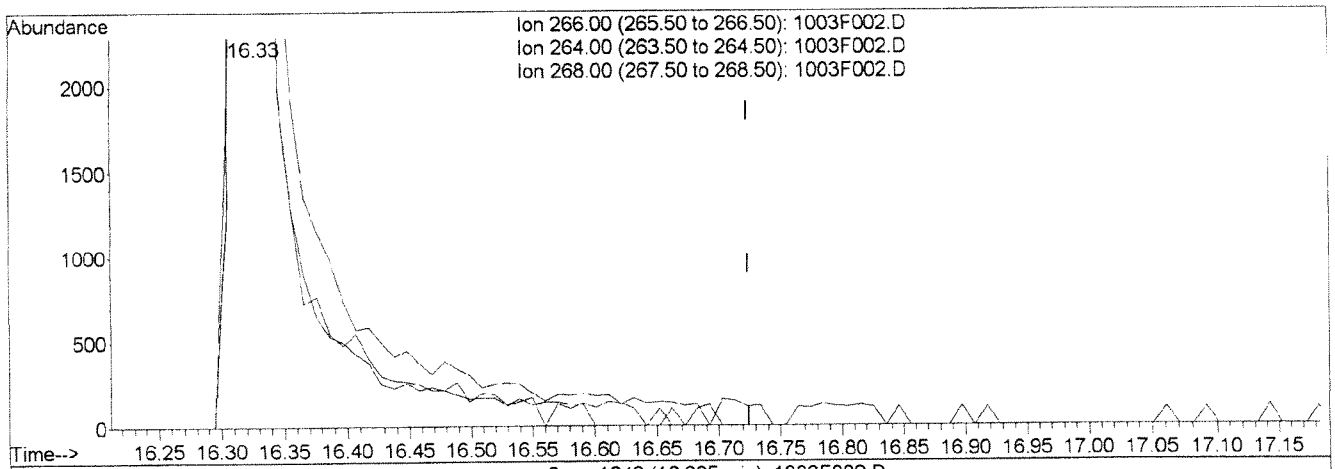
1003F002.D 093014BNC7.M Fri Oct 03 15:18:36 2014

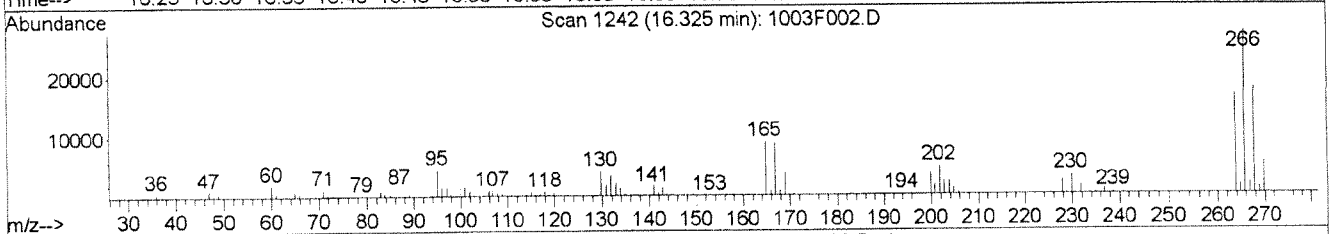
Quantitation Report (Qedit)

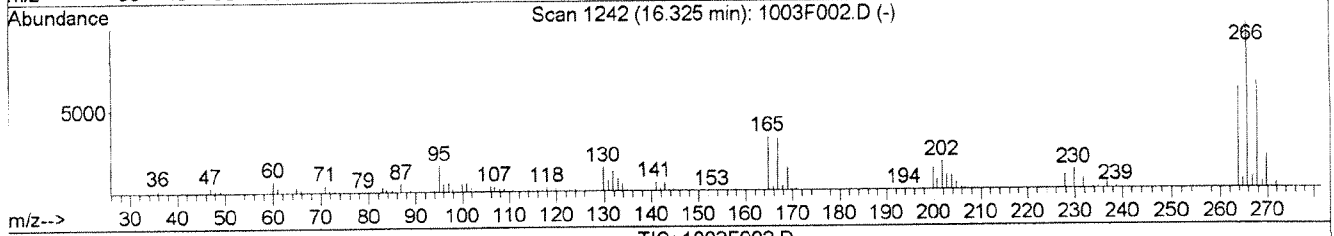
Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Single Level Calibration







TIC: 1003F002.D

(62) Pentachlorophenol (T)

16.33min 74.89ug/ml m

response 44108

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	61.16
268.00	63.20	65.04
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

10/03/14

10/7/14

TRT

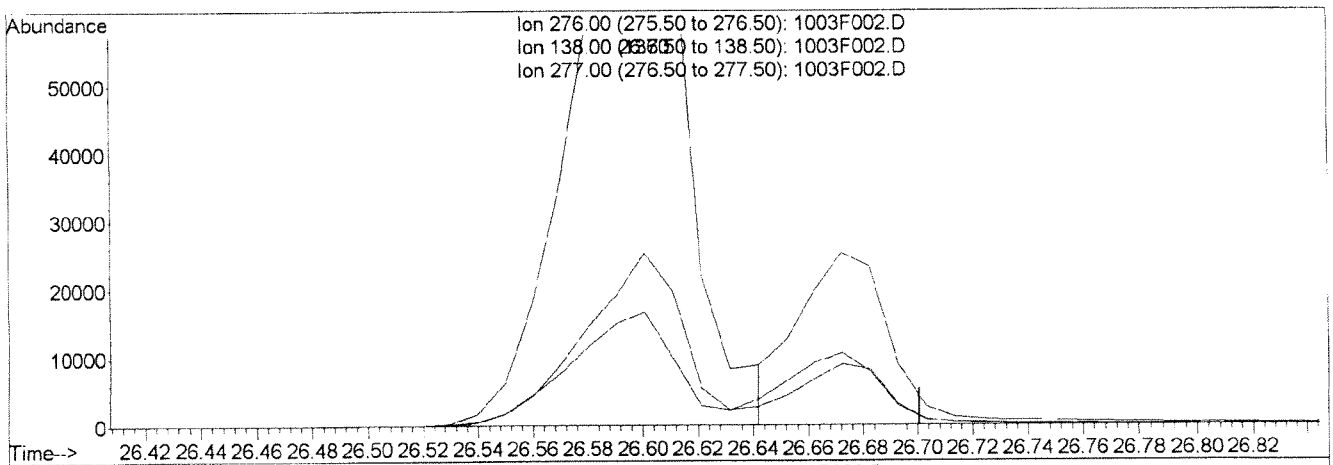
1003F002.D 093014BNC7.M Fri Oct 03 15:18:41 2014

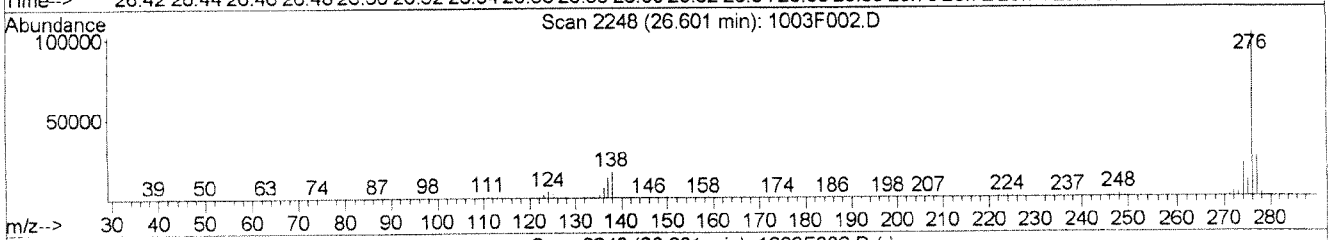
Quantitation Report (Qedit)

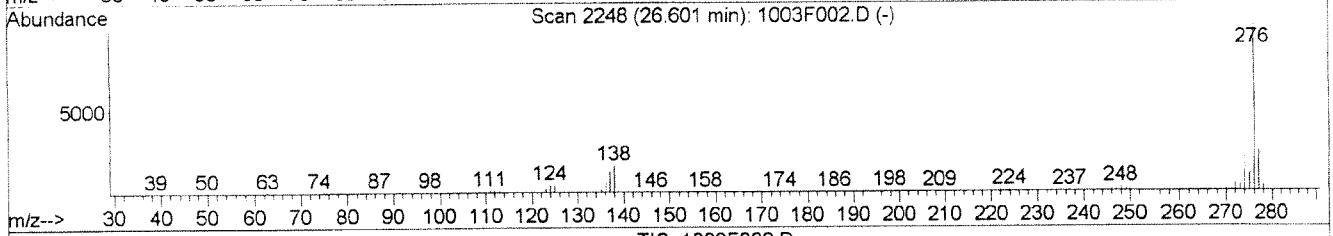
Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:18 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Multiple Level Calibration







TIC: 1003F002.D

(82) Indeno(1,2,3-cd)pyrene (T)

26.60min 90.61ug/ml

response 261795

Ion	Exp%	Act%
276.00	100	100
138.00	16.30	15.00
277.00	23.10	24.36
0.00	0.00	0.00

Manual Integration:

Before

10/03/14

10/7/14

TRT

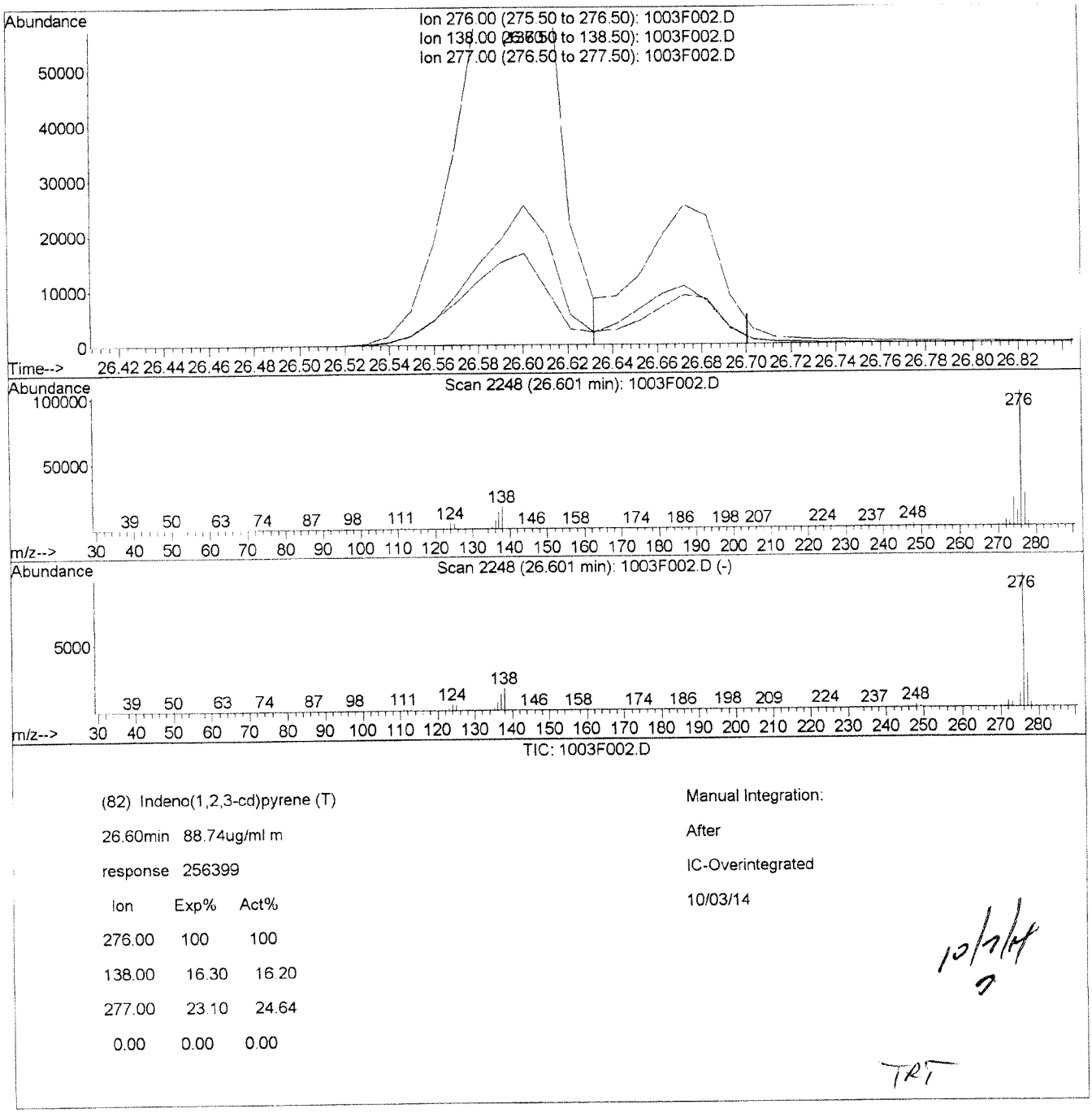
1003F002.D 093014BNC7.M Fri Oct 03 15:19:10 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:19 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Multiple Level Calibration



(82) Indeno(1,2,3-cd)pyrene (T)

26.60min 88.74ug/ml m

response 256399

Ion	Exp%	Act%
276.00	100	100
138.00	16.30	16.20
277.00	23.10	24.64
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/03/14

10/3/14

TRT

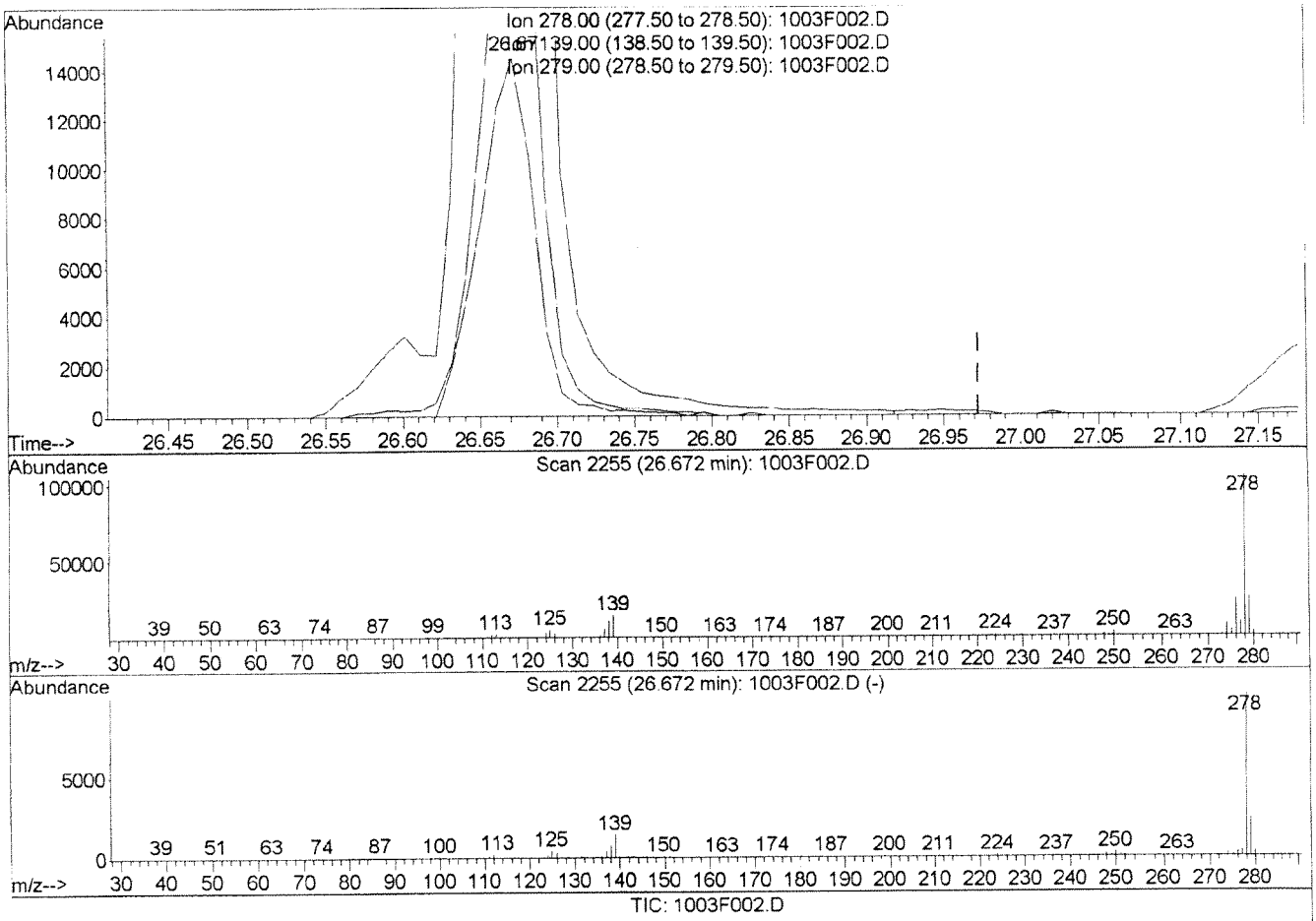
1003F002.D 093014BNC7.M Fri Oct 03 15:19:17 2014

Quantitation Report (Qedit)

Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:19 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Multiple Level Calibration



TIC: 1003F002.D

(83) Dibenz(a,h)anthracene (T)

26.67min 91.75ug/ml

response 272920

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.80
279.00	23.50	23.76
0.00	0.00	0.00

Manual Integration:

Before

10/03/14

10/7/14
5

TRT

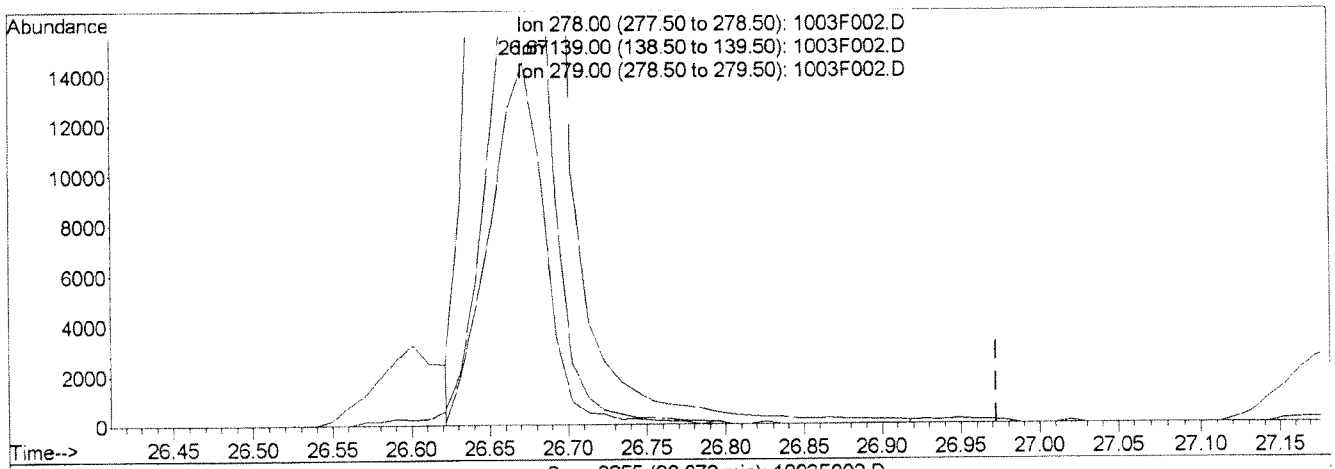
1003F002.D 093014BNC7.M Fri Oct 03 15:19:26 2014

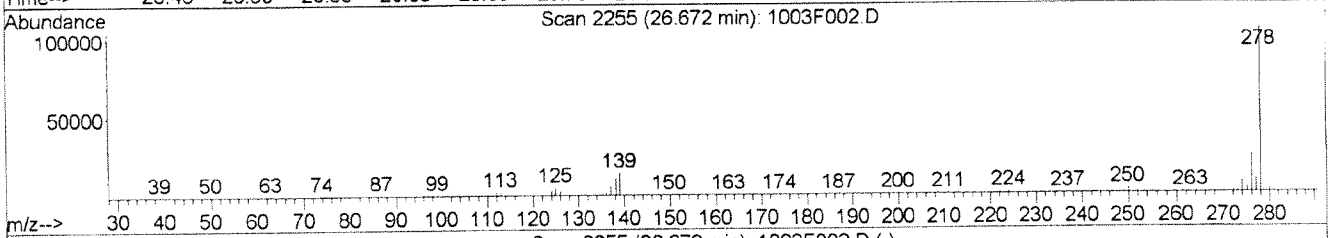
Quantitation Report (Qedit)

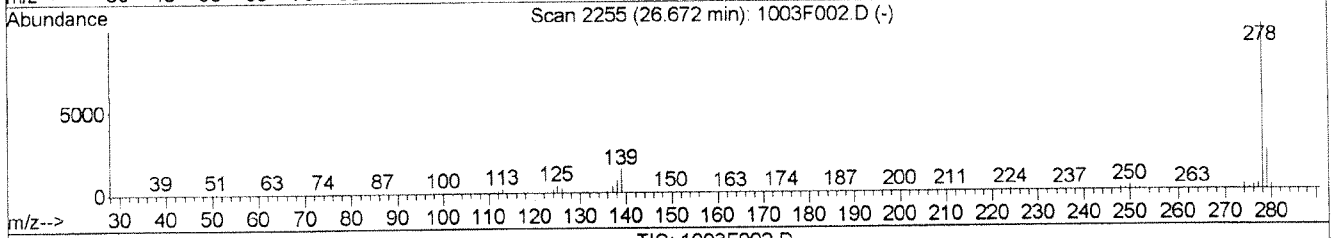
Data File : J:\MS07\DATA\100314\1003F002.D
Acq On : 3 Oct 2014 2:40 pm
Sample : 8270 CCV @ 80 ppm | SVM47-65B
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 3 15:19 2014

Vial: 2
Operator: T. THOMAS
Inst : MS07
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS07\METHODS\8270_625\093014BNC7.M (RTE Integrator)
Title : BNA Calibration Rtx-5MS 30m x 0.25mm MS07
Last Update : Fri Oct 03 15:16:05 2014
Response via : Multiple Level Calibration







TIC: 1003F002.D

(83) Dibenz(a,h)anthracene (T)

26.67min 88.68ug/ml m

response 263804

Ion	Exp%	Act%
278.00	100	100
139.00	13.00	13.79
279.00	23.50	23.75
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

10/03/14

10/7/14

TRT

1003F002.D 093014BNC7.M Fri Oct 03 15:19:40 2014

Preparation Information

Group ID:	KWG1412851	**Prep Method:**	EPA 3541	**Prep Date:**	09/22/14 12:38
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1409921-004	SE-091514-RB-SD11	8270D SVO	SEDIMENT	40.337g	1ml	
K1409921-005	SE-091514-RB-SD10	8270D SVO	SEDIMENT	40.481g	1ml	
K1409921-006	SE-091514-RB-SD09	8270D SVO	SEDIMENT	40.372g	1ml	
K1409921-007	SE-091514-RB-SD08	8270D SVO	SEDIMENT	40.408g	1ml	
K1409921-008	SE-091514-RB-SD07	8270D SVO	SEDIMENT	40.062g	1ml	
K1409921-009	SE-091514-RB-SD06	8270D SVO	SEDIMENT	40.490g	1ml	
K1409921-010	SE-091514-RB-SD05	8270D SVO	SEDIMENT	40.330g	1ml	
K1409921-011	SE-091514-RB-SD12	8270D SVO	SEDIMENT	40.240g	1ml	
KWG1412851-1	Matrix Spike	8270D SVO	SEDIMENT	40.017g	1ml	
KWG1412851-2	Duplicate Matrix Spike	8270D SVO	SEDIMENT	40.410g	1ml	
KWG1412851-3	Lab Control Sample	8270D SVO	SEDIMENT	30.000g	1ml	
KWG1412851-4	Duplicate Lab Control Sampl	8270D SVO	SEDIMENT	30.000g	1ml	
KWG1412851-5	Method Blank	8270D SVO	SEDIMENT	40.490g	1ml	

Lab Code	Parent Lab Code	Comments
KWG1412851-1	K1409921-011	
KWG1412851-2	K1409921-011	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1409921-004	1376325	SVM46-67C	1ml			KClark
K1409921-005	1376326	SVM46-67C	1ml			KClark
K1409921-006	1376327	SVM46-67C	1ml			KClark
K1409921-007	1376328	SVM46-67C	1ml			OFlores
K1409921-008	1376329	SVM46-67C	1ml			OFlores
K1409921-009	1376330	SVM46-67C	1ml			OFlores
K1409921-010	1376331	SVM46-67C	1ml			OFlores
K1409921-011	1376324	SVM46-67C	1ml			OFlores
KWG1412851-1	1376332	SVM46-67C	1ml	SVM47-41C	1ml	KClark
KWG1412851-2	1376333	SVM46-67C	1ml	SVM47-41C	1ml	KClark
KWG1412851-3	1376334	SVM46-67C	1ml	SVM47-41C	1ml	KClark
KWG1412851-4	1376335	SVM46-67C	1ml	SVM47-41C	1ml	KClark
KWG1412851-5	1376336	SVM46-67C	1ml			KClark

Comments: IS: SVM45-76W

Started By: CHarvey Assisted By: _____ Training: Yes / No

Completed By: SSujka Assisted By: _____ Yes / No

Reviewed By: Christine R Hart Date: 09.29.14 Storage: SVM Lab

Chain of Custody

Relinquished By: _____ Date: 9/29/14

Received By: _____ Date: 10/1/14

Extracts Examined: Yes / No

Preparation Information

Due 9/22/14

Group ID:	KWG1412851	**Prep Method:**	EPA 3541	**Prep Date:**	09/22/14 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. 9	pH	Int. Vol. 10	Final Vol. 1	Surr. Added	Spike Added
1	K1409921-004 W,S	SE-091514-RB-SD11	.03	/	8270D SVO	SEDIMENT	40.337	N/A	10	1	1mL	2
2	K1409921-005 R,O	SE-091514-RB-SD10	.02	/	8270D SVO	SEDIMENT	40.481		10	1		—
3	K1409921-006 R,O	SE-091514-RB-SD09	.03	/	8270D SVO	SEDIMENT	40.372		10	1		—
4	K1409921-007 R,O	SE-091514-RB-SD08	.03	/	8270D SVO	SEDIMENT	40.408		10	1		—
5	K1409921-008 O	SE-091514-RB-SD07	.02	/	8270D SVO	SEDIMENT	40.062		10	1		—
6	K1409921-009 R,O	SE-091514-RB-SD06	.03	/	8270D SVO	SEDIMENT	40.490		10	1		—
7	K1409921-010 O	SE-091514-RB-SD05	.03	/	8270D SVO	SEDIMENT	40.350		10	1		—
8	K1409921-011 O,S	SE-091514-RB-SD12	.02	/	8270D SVO	SEDIMENT	40.240		10	1		—
9	KWG1412851-1 O,S	Matrix Spike K1409921-011	.02	/	8270D SVO	SEDIMENT	40.017		10	1		1mL
10	KWG1412851-2 O,S	Duplicate Matrix Spike K1409921-011	.02	/	8270D SVO	SEDIMENT	40.410		10	1		
11	KWG1412851-3	Lab Control Sample			8270D SVO	SEDIMENT	30.000		10	1		
12	KWG1412851-4	Duplicate Lab Control Sample			8270D SVO	SEDIMENT	30.000		10	1		
13	KWG1412851-5	Method Blank			8270D SVO	SEDIMENT	40.490		10	1		—

Comments: #218641 O=organic material S=Sand R=rocks W=standing water on top of sample

Surrogate ID: SVM46-60C, 100/150ppm, exp 12/5/14, 1mL, 4F epp

Spike ID: SVM47-41C, 100ppm, exp D3/02/15, 1mL, 4F epp

Witness: K Clark 9/22/14 9/22/14

Started By: C Harvey 9/22/14 Assisted By: TB Jackson 9/22/14

Completed By: 9/29/14 Assisted By:

SEQUENCE REPORT V.2

SEQUENCE NAME : 2014926_1.seq

MAT NAME : ALS Mat.m2k

SAMPLE	STATUS	TYPE	METHOD	REV.	VOLUME (uL)	TYPE	ID	BATCH
1	PROCESSED	GPC	BNA.gmf	3	5000		BLANK	
2	PROCESSED	GPC	BNA.gmf	3	5000		KWG1412978-5 MB	
3	PROCESSED	GPC	BNA.gmf	3	5000		12978-3 LCS	
4	PROCESSED	GPC	BNA.gmf	3	5000		12978-4 DLCS	
5	PROCESSED	GPC	BNA.gmf	3	5000		K1410193-001	
6	PROCESSED	GPC	BNA.gmf	3	5000		10193-002	
7	PROCESSED	GPC	BNA.gmf	3	5000		10193-003	
8	PROCESSED	GPC	BNA.gmf	3	5000		10193-004	
9	PROCESSED	GPC	BNA.gmf	3	5000		10193-001 MS	
10	PROCESSED	GPC	BNA.gmf	3	5000		10193-001 DMS	
11	PROCESSED	GPC	BNA.gmf	3	5000		BLANK	
12	PROCESSED	GPC	BNA.gmf	3	5000		KWG1412851-5 MB	
13	PROCESSED	GPC	BNA.gmf	3	5000		12851-3 LCS	
14	PROCESSED	GPC	BNA.gmf	3	5000		12851-4 DLCS	
15	PROCESSED	GPC	BNA.gmf	3	5000		K1409921-004	
16	PROCESSED	GPC	BNA.gmf	3	5000		9921-005	
17	PROCESSED	GPC	BNA.gmf	3	5000		9921-006	
18	PROCESSED	GPC	BNA.gmf	3	5000		9921-007	
19	PROCESSED	GPC	BNA.gmf	3	5000		9921-008	
20	PROCESSED	GPC	BNA.gmf	3	5000		9921-009	
21	PROCESSED	GPC	BNA.gmf	3	5000		9921-010	
22	PROCESSED	GPC	BNA.gmf	3	5000		9921-011	
23	PROCESSED	GPC	BNA.gmf	3	5000		9921-011 MS	
24	PROCESSED	GPC	BNA.gmf	3	5000		9921-011 DMS	
25	PROCESSED	GPC	BNA.gmf	3	5000		BLANK	

START TIME : 9/26/2014 2:15:39 PM
END TIME : 9/27/2014 6:59:37 PM

PREPARED BY: System 9/29/2014 7:44:53 AM

2909

Additional Prep Information for EPA 3541

8270 and 8270-LL

Service Request K1409921 **Workgroup** KWG1412851

Sulfate Lot # 138246 DCM (GC^2) Lot # DL130 Glass Wool Lot # 26911999

Date/Time/Initials Weighed: 9/22/14 / 0900 / CH Balance ID: K-03 Calibration Verified ☑

Storage Location (if not extracted same day): N/A

Soxtherm Start (Time/Date/Initial): 12:38 / 9-22-14 / CH

Soxtherm Stop (Time/Date/Initial): 0816 / 9-23-14 / CH

N-Evap (Time/Date/Initial): 0910 9/24/14 SS N-Evap Therm. ID: SVMPOOL
Temp as measured: 35.0 °C Correction factor: 0.0 °C Adjusted temp: 35.0 °C

GPC Clean-up (3640): Start 1415 9/26/14 SS (Time/Date/Initial)
Stop 1859 9/27/14 SS (Time/Date/Initial)

S-Evap (Time/Date/Initial): 1030 9/29/14 S-Evap Therm. ID: SVM12
Temp as measured: 75.0 °C Correction factor: 0.0 °C Adjusted temp: 75.0 °C

N-Evap (Time/Date/Initial): 1310 9/29/14 SS N-Evap Therm. ID: SVMPOOL
Temp as measured: 35.0 °C Correction factor: 0.0 °C Adjusted temp: 35.0 °C

Extract Storage: Nutty

Completed (Time/Date/Initial): 1415 9/29/14 SS

Comments/Observations: _____

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason: _____)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☐ Signed service request with Form V, if applicable, has been attached

Semi-Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

Exception Report

Data File: J:\MS06\DATA\092514\0925F013.D
Lab ID: K1409921-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 02:44
Date Quantitated: 09/26/2014 16:32
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK < 40%. Narrative in Advisory 09/26/14
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	

Primary Review: SEP 26 2014

Secondary Review:

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F013.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 02:44	**Quant Date:**	09/26/2014 16:32	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-012			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376877	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	20173	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	77459	1,000.00	OK
3	Acenaphthene-d10	13.60	-0.01	164	41121	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	62913	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	61357	1,000.00	OK
6	Perylene-d12	24.32	0.00	264	65538	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.40	0.00	0.00	99	87491	2,836	76	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	68513	2,108	84	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	117540	1,856	74	31-94	OK	
5	Terphenyl-d14	18.70	0.00	0.00	244	132017	2,272	91	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.063	U	
1	2-Methylphenol				107	0		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0**d**		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate				149	0**d**		0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0**d**		0.020	U	
5	Pyrene				202	0		0.019	U	
5	Butyl Benzyl Phthalate				149	0		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F013.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 02:44	**Quant Date:**	09/26/2014 16:32	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-012			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.81		0.00	149	2646	44.74	0.13	U	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1060 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F013.D Vial: 12
Acq On : 26 Sep 2014 2:44 am Operator: TLorr
Sample : K1409921-012 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:05 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

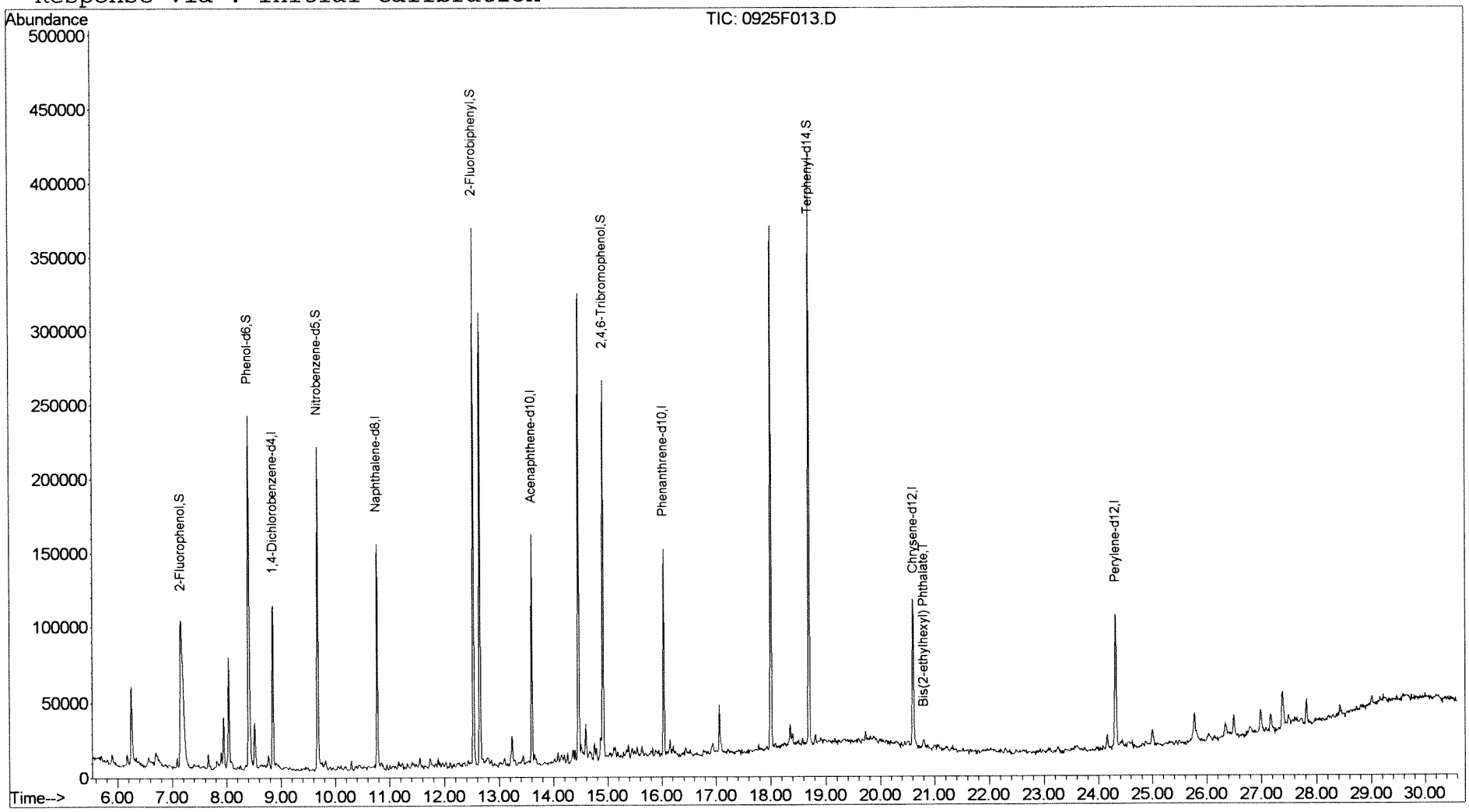
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	20173	1000.00	ng/ml	-0.02
22) Naphthalene-d8	10.77	136	77459	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.60	164	41121	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	62913	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.61	240	61357	1000.00	ng/ml	-0.05
79) Perylene-d12	24.32	264	65538	1000.00	ng/ml	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	66163	2759.73	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 73.59%			
6) Phenol-d6	8.40	99	87491	2836.21	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 75.63%			
20) Nitrobenzene-d5	9.67	82	68513	2108.31	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 84.33%			
40) 2-Fluorobiphenyl	12.53	172	117540	1856.48	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 74.26%			
61) 2,4,6-Tribromophenol	14.91	330	30993	3312.31	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 88.33%			
73) Terphenyl-d14	18.70	244	132017	2271.74	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 90.87%			
Target Compounds						Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.81	149	2646	44.74	ng/ml	93

(#) = qualifier out of range (m) = manual integration

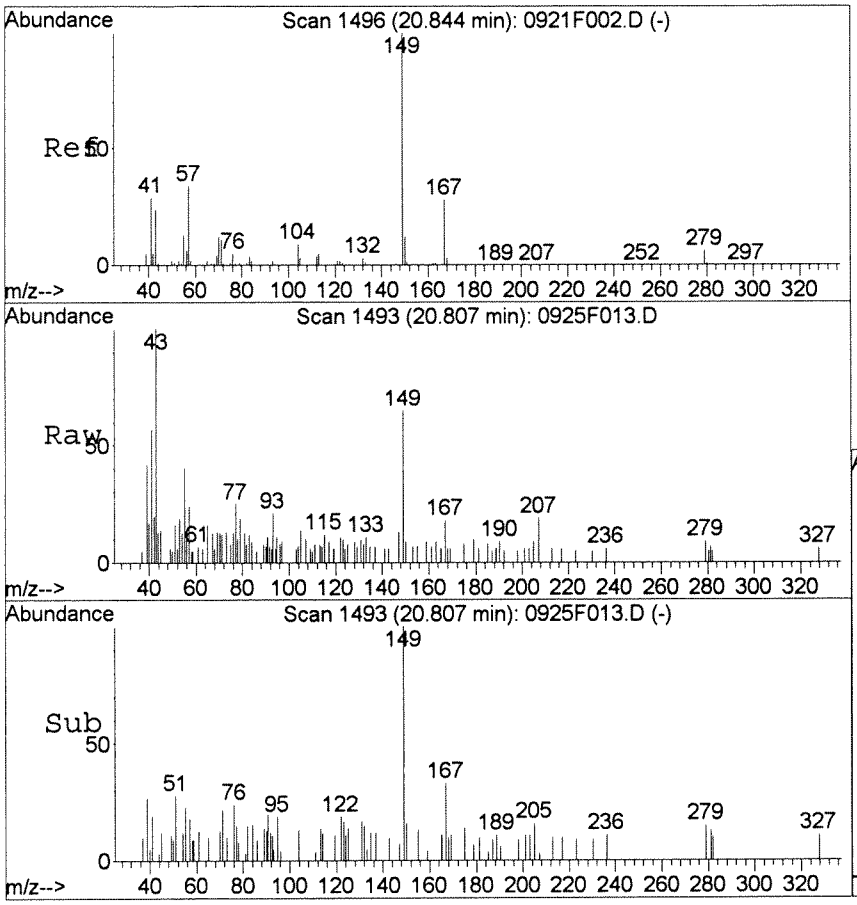
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F013.D Vial: 12
Acq On : 26 Sep 2014 2:44 am Operator: TLorr
Sample : K1409921-012 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:32 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



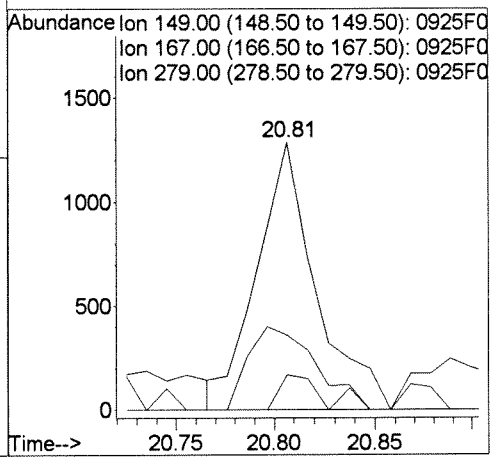
2916



#78
Bis(2-ethylhexyl) Phthalate
Concen: 44.74 ng/ml
RT: 20.81 min Scan# 1493
Delta R.T. -0.05 min
Lab File: 0925F013.D
Acq: 26 Sep 2014 2:44 am

Tgt Ion:149 Resp: 2646

Ion	Ratio	Lower	Upper
149	100		
167	28.1	1.2	61.2
279	13.2	0.0	38.5



Exception Report

Data File: J:\MS06\DATA\092514\0925F014.D
Lab ID: K1409921-013
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 03:23
Date Quantitated: 09/26/2014 16:34
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, <40%.
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 9/26/14

Printed: 09/26/2014 17:40:32
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F014.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 03:23	**Quant Date:**	09/26/2014 16:34	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-013			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376878	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	19478	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	65682	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	37292	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	55699	1,000.00	OK
5	Chrysene-d12	20.62	0.00	240	64745	1,000.00	OK
6	Perylene-d12	24.32	0.00	264	61262	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.41	0.01	0.00	99	77530	2,603	69	23-106	OK	
1	Nitrobenzene-d5	9.68	0.00	0.00	82	59325	1,891	76	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	101742	1,772	71	31-94	OK	
5	Terphenyl-d14	18.70	0.00	0.00	244	134060	2,186	87	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.063	U	
1	2-Methylphenol				107	0		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0**d**		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate				149	0**d**		0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0**d**		0.020	U	
5	Pyrene				202	0**d**		0.019	U	
5	Butyl Benzyl Phthalate				149	0		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F014.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 03:23	**Quant Date:**	09/26/2014 16:34	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-013			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.81		0.00	149	1740**m**	27.88	0.13	U	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1060 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F014.D Vial: 13
Acq On : 26 Sep 2014 3:23 am Operator: TLorr
Sample : K1409921-013 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:07 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

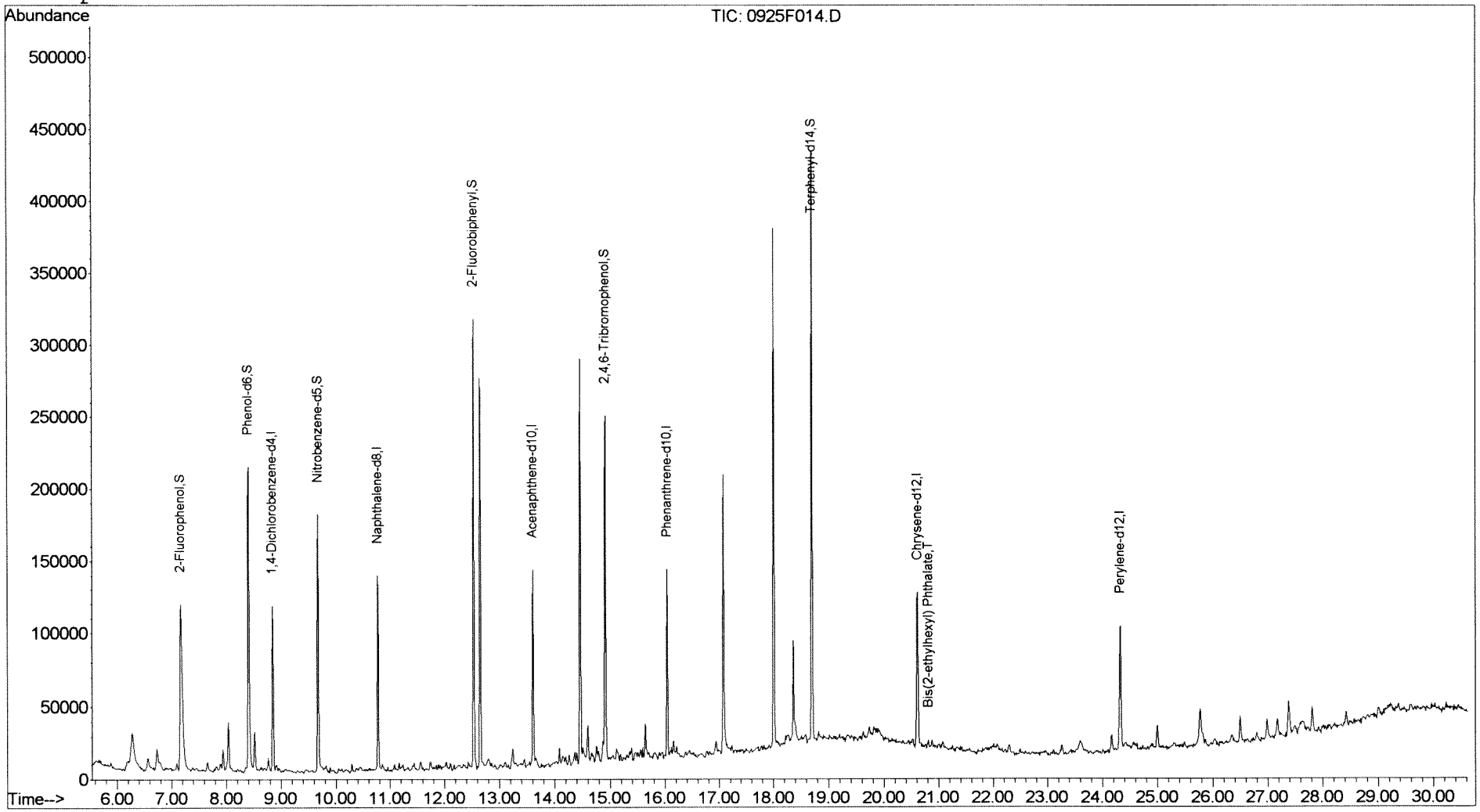
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	19478	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	65682	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	37292	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	55699	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.62	240	64745	1000.00	ng/ml	-0.05
79) Perylene-d12	24.32	264	61262	1000.00	ng/ml	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	61853	2672.01	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 71.25%			
6) Phenol-d6	8.41	99	77530	2602.98	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 69.41%			
20) Nitrobenzene-d5	9.68	82	59325	1890.72	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 75.63%			
40) 2-Fluorobiphenyl	12.53	172	101742	1771.95	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 70.88%			
61) 2,4,6-Tribromophenol	14.92	330	28515	3442.18	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 91.79%			
73) Terphenyl-d14	18.70	244	134060	2186.18	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 87.45%			
Target Compounds						Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.81	149	1740m	27.88	ng/ml	

(#) = qualifier out of range (m) = manual integration

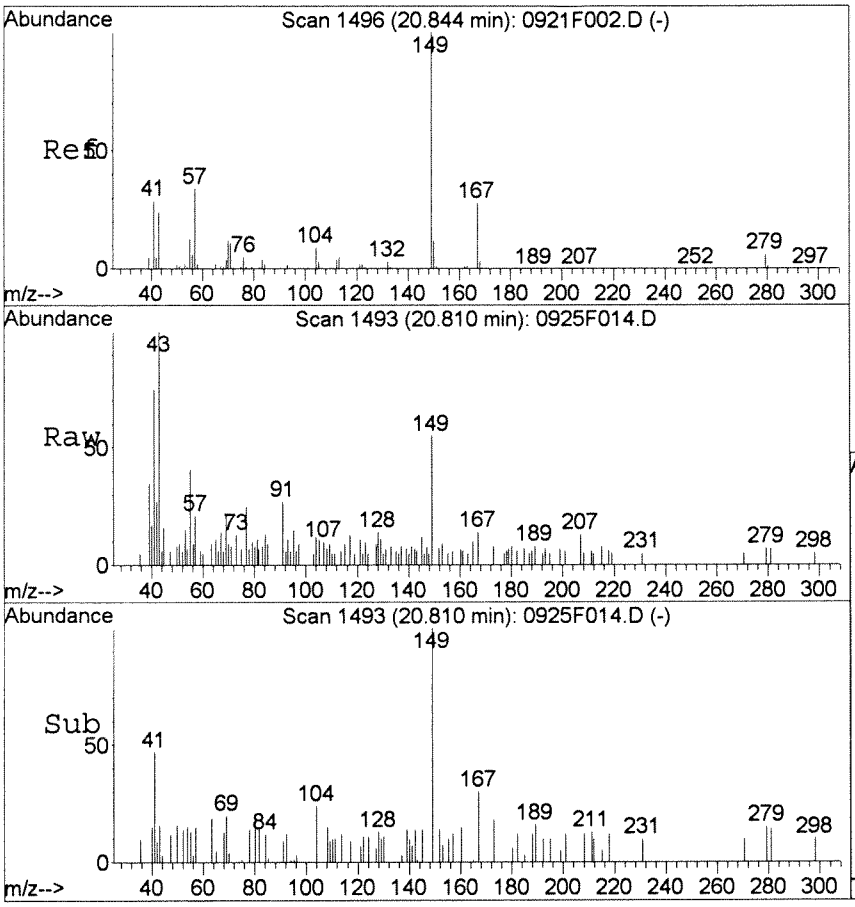
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F014.D Vial: 13
Acq On : 26 Sep 2014 3:23 am Operator: TLorr
Sample : K1409921-013 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:34 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



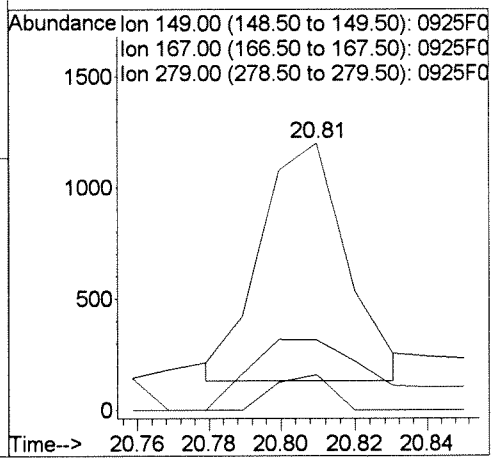
2922



#78
Bis(2-ethylhexyl) Phthalate
Concen: 27.88 ng/ml m
RT: 20.81 min Scan# 1493
Delta R.T. -0.05 min
Lab File: 0925F014.D
Acq: 26 Sep 2014 3:23 am

Tgt Ion:149 Resp: 1740

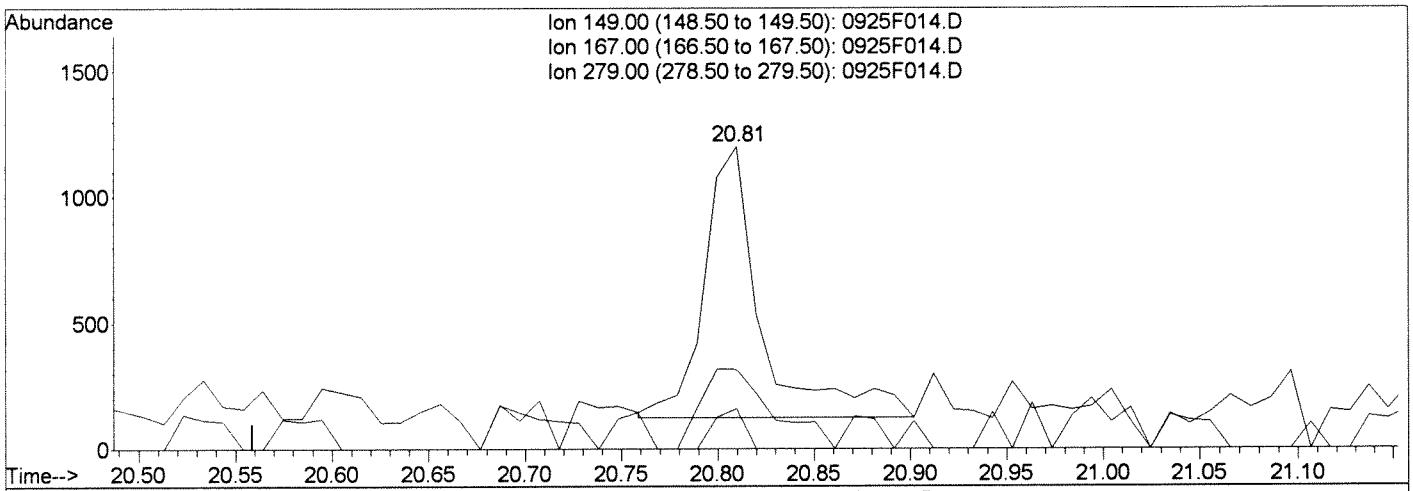
Ion	Ratio	Lower	Upper
149	100		
167	26.3	1.2	61.2
279	13.3	0.0	38.5

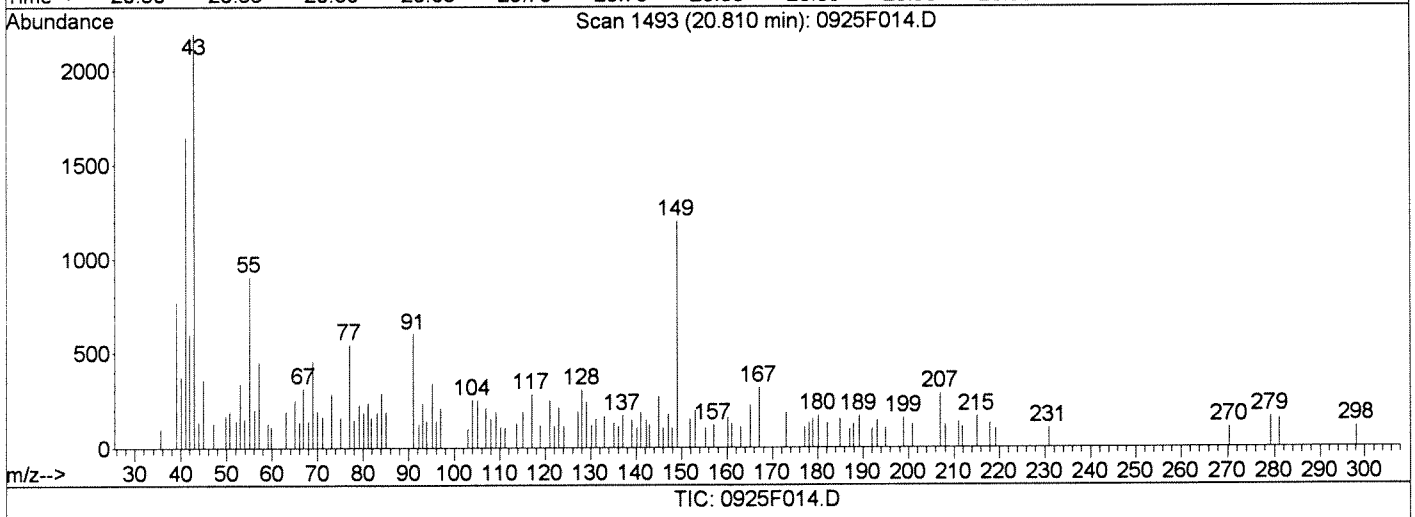


Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F014.D Vial: 13
Acq On : 26 Sep 2014 3:23 am Operator: TLorr
Sample : K1409921-013 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:33 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration





TIC: 0925F014.D

(78) Bis(2-ethylhexyl) Phthalate (T)

20.81min 35.92ng/ml

response 2242

Ion	Exp%	Act%
149.00	100	100
167.00	31.20	19.02
279.00	8.50	14.84
0.00	0.00	0.00

Manual Integration:

Before

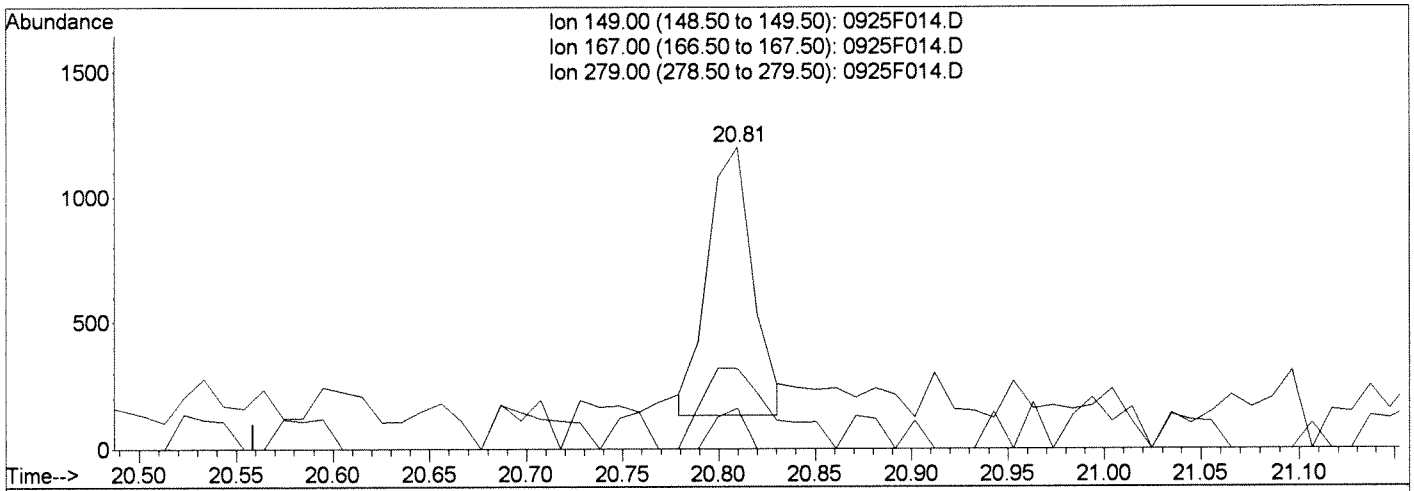
09/26/14

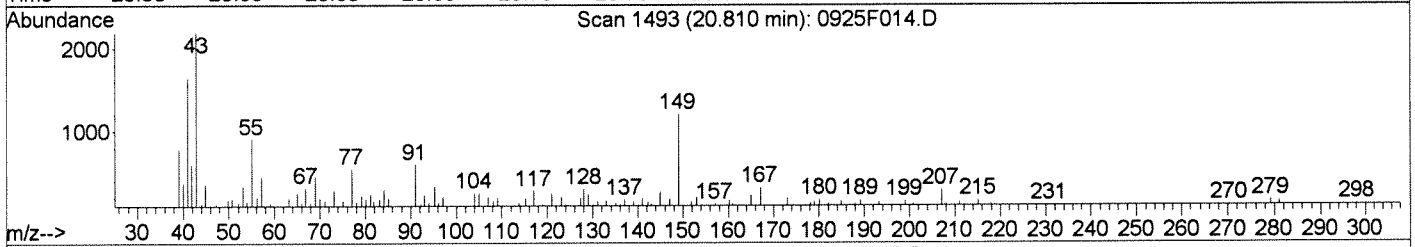
10/16/14

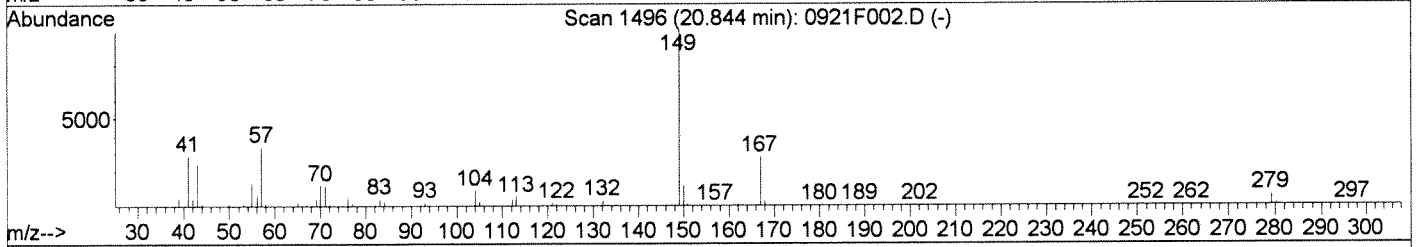
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F014.D Vial: 13
Acq On : 26 Sep 2014 3:23 am Operator: TLorr
Sample : K1409921-013 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:33 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration







TIC: 0925F014.D

(78) Bis(2-ethylhexyl) Phthalate (T)

20.81min 27.88ng/ml m

response 1740

Ion	Exp%	Act%
149.00	100	100
167.00	31.20	26.29
279.00	8.50	13.31
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

09/26/14

0925F014.D 092414_BNLL.M Fri Sep 26 16:34:01 2014

Exception Report

Data File: J:\MS06\DATA\092514\0925F015.D
Lab ID: K1409921-014
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 04:02
Date Quantitated: 09/26/2014 16:35
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, <40%
Method Blank	Bis(2-ethylhexyl) Phthalate	0.96	NA	1.0	Narrate
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 9/26/14

Printed: 09/26/2014 17:40:35
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F015.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 04:02	**Quant Date:**	09/26/2014 16:35	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-014			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376879	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	18521	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	47866	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	36485	1,000.00	OK
4	Phenanthrene-d10	16.03	-0.01	188	66754	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	57404	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	60594	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.41	0.01	0.00	99	68313	2,412	64	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	48268	1,618	65	26-110	OK	
3	2-Fluorobiphenyl	12.52	-0.01	0.00	172	95654	1,703	68	31-94	OK	
5	Terphenyl-d14	18.70	0.00	0.00	244	124023	2,281	91	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.063	U	
1	2-Methylphenol				107	0		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0d		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate				149	0		0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0d		0.020	U	
5	Pyrene				202	0d		0.019	U	
5	Butyl Benzyl Phthalate				149	0d		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F015.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 04:02	**Quant Date:**	09/26/2014 16:35	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-014			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	3606	65.17	0.13	BJ	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1000 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F015.D Vial: 14
Acq On : 26 Sep 2014 4:02 am Operator: TLorr
Sample : K1409921-014 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:09 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

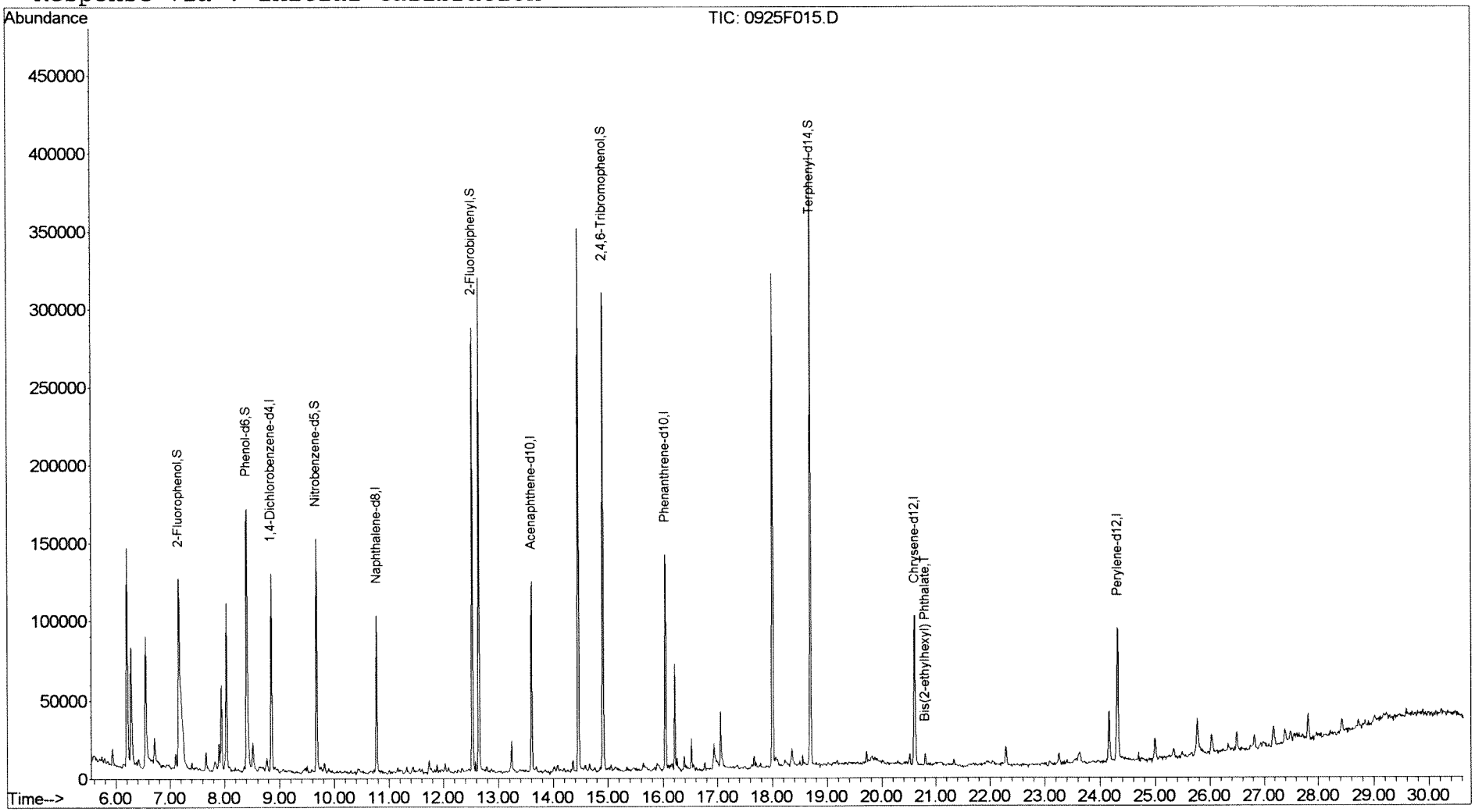
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	18521	1000.00	ng/ml	-0.02
22) Naphthalene-d8	10.77	136	47866	1000.00	ng/ml	-0.02
36) Acenaphthene-d10	13.61	164	36485	1000.00	ng/ml	-0.02
60) Phenanthrene-d10	16.03	188	66754	1000.00	ng/ml	-0.05
70) Chrysene-d12	20.61	240	57404	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	60594	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	65289	2966.18	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 79.10%			
6) Phenol-d6	8.41	99	68313	2412.04	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 64.32%			
20) Nitrobenzene-d5	9.67	82	48268	1617.81	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 64.71%			
40) 2-Fluorobiphenyl	12.52	172	95654	1702.77	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 68.11%			
61) 2,4,6-Tribromophenol	14.91	330	35101	3535.50	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 94.28%			
73) Terphenyl-d14	18.70	244	124023	2281.14	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 91.25%			
Target Compounds						Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.80	149	3606	65.17	ng/ml	89

(#) = qualifier out of range (m) = manual integration

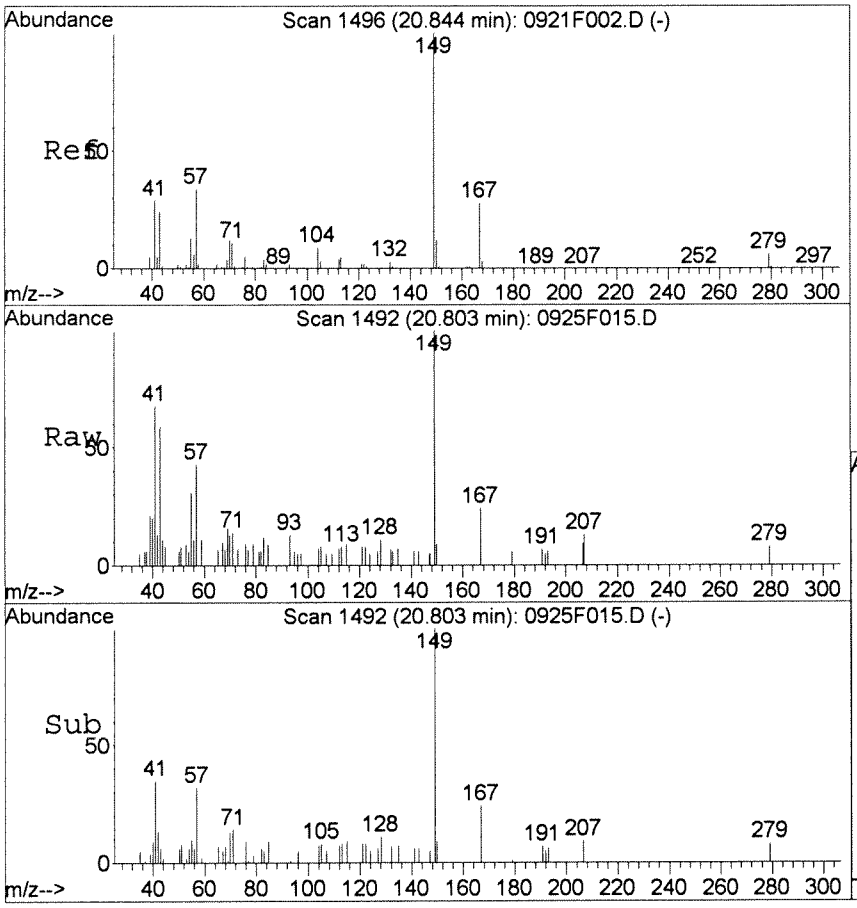
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F015.D Vial: 14
Acq On : 26 Sep 2014 4:02 am Operator: TLorr
Sample : K1409921-014 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:35 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



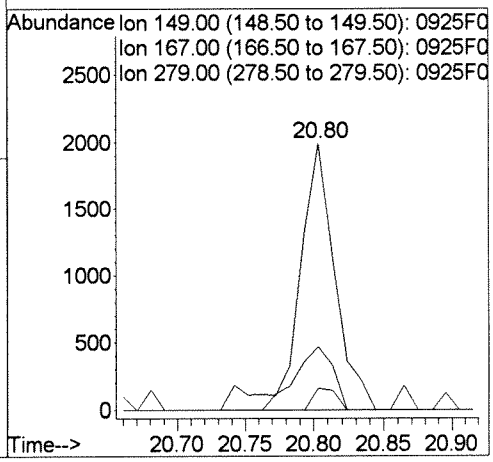
2930



#78
Bis(2-ethylhexyl) Phthalate
Concen: 65.17 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F015.D
Acq: 26 Sep 2014 4:02 am

Tgt Ion:149 Resp: 3606

Ion	Ratio	Lower	Upper
149	100		
167	23.5	1.2	61.2
279	8.0	0.0	38.5



Exception Report

Data File: J:\MS06\DATA\092514\0925F016.D
Lab ID: K1409921-015
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 04:41
Date Quantitated: 09/26/2014 16:37
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, LCS/D
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 10/6/14

Printed: 09/26/2014 17:40:38
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F016.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 04:41	**Quant Date:**	09/26/2014 16:37	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-015			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376880	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	17261	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	64840	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	37092	1,000.00	OK
4	Phenanthrene-d10	16.03	-0.01	188	58464	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	63823	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	63681	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.41	0.01	0.00	99	83271	3,155	84	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	60058	2,160	86	26-110	OK	
3	2-Fluorobiphenyl	12.52	-0.01	0.00	172	103181	1,807	72	31-94	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	118435	1,959	78	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.063	U	
1	2-Methylphenol				107	0		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate				149	0		0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0d		0.020	U	
5	Pyrene				202	0		0.019	U	
5	Butyl Benzyl Phthalate				149	0		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F016.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 04:41	**Quant Date:**	09/26/2014 16:37	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-015			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	3040	49.41	0.13	U	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1060 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F016.D Vial: 15
Acq On : 26 Sep 2014 4:41 am Operator: TLorr
Sample : K1409921-015 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:11 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

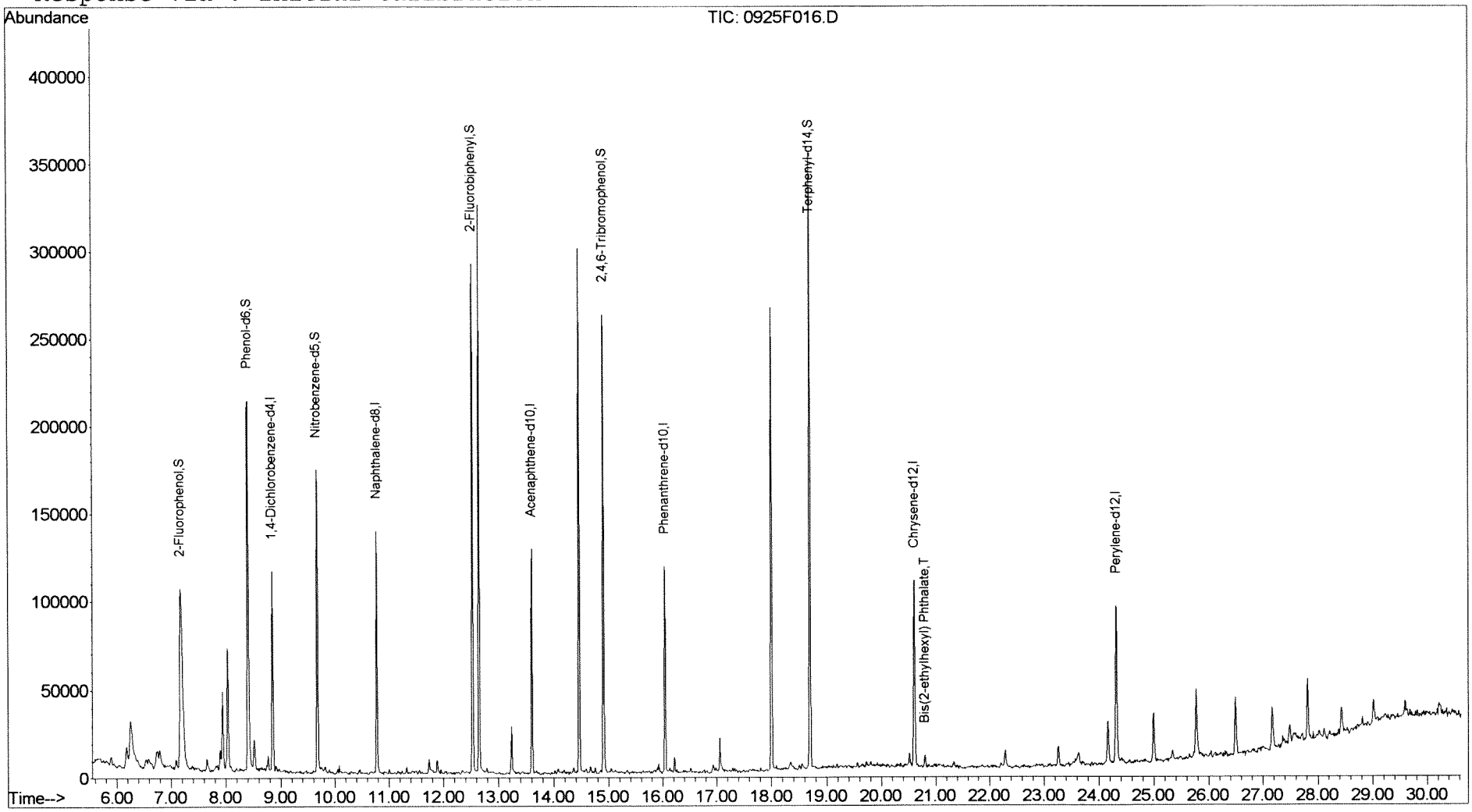
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	17261	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	64840	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	37092	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.03	188	58464	1000.00	ng/ml	-0.05
70) Chrysene-d12	20.61	240	63823	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	63681	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	65715	3203.46	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 85.43%			
6) Phenol-d6	8.41	99	83271	3154.81	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 84.13%			
20) Nitrobenzene-d5	9.67	82	60058	2159.92	ng/ml	-0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 86.40%			
40) 2-Fluorobiphenyl	12.52	172	103181	1806.70	ng/ml	-0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 72.27%			
61) 2,4,6-Tribromophenol	14.91	330	29699	3415.56	ng/ml	-0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 91.08%			
73) Terphenyl-d14	18.69	244	118435	1959.28	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 78.37%			
Target Compounds						Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.80	149	3040	49.41	ng/ml	85

(#) = qualifier out of range (m) = manual integration
0925F016.D 092414_BNLL.M Fri Sep 26 16:37:40 2014 Page 1

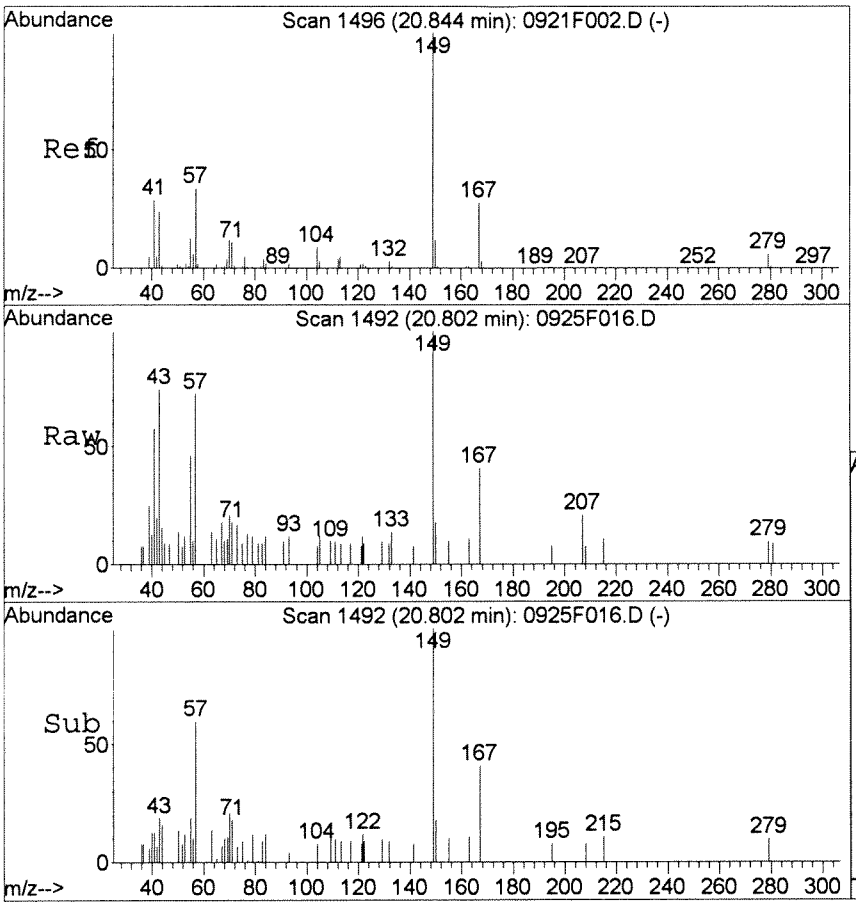
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F016.D Vial: 15
Acq On : 26 Sep 2014 4:41 am Operator: TLorr
Sample : K1409921-015 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:37 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



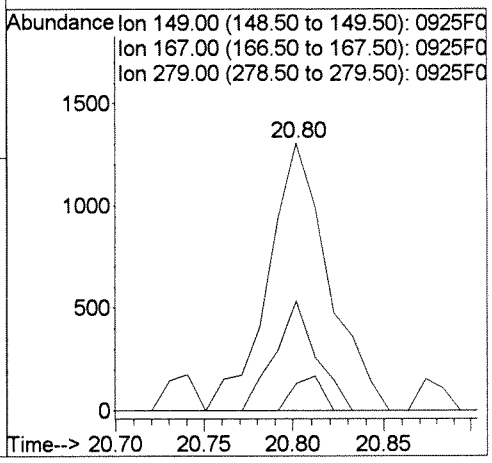
2936



#78
Bis(2-ethylhexyl) Phthalate
Concen: 49.41 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F016.D
Acq: 26 Sep 2014 4:41 am

Tgt Ion:149 Resp: 3040

Ion	Ratio	Lower	Upper
149	100		
167	40.7	1.2	61.2
279	10.2	0.0	38.5



Exception Report

Data File: J:\MS06\DATA\092514\0925F017.D
Lab ID: K1409921-016
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 05:21
Date Quantitated: 09/26/2014 16:39
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, LCVO.
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 10/6/14

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F017.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 05:21	**Quant Date:**	09/26/2014 16:39	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-016			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376881	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.84	-0.01	152	16704	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	60939	1,000.00	OK
3	Acenaphthene-d10	13.60	-0.01	164	39484	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	63617	1,000.00	OK
5	Chrysene-d12	20.60	-0.02	240	63923	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	60171	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.40	0.00	0.00	99	70010	2,741	73	23-106	OK	
1	Nitrobenzene-d5	9.66	-0.02	0.00	82	52980	1,969	79	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	101590	1,671	67	31-94	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	125817	2,078	83	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.063	U	
1	2-Methylphenol				107	0		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0d		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate				149	0		0.015	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0		0.020	U	
5	Pyrene				202	0		0.019	U	
5	Butyl Benzyl Phthalate				149	0		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F017.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 05:21	**Quant Date:**	09/26/2014 16:39	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-016			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	2646	42.94	0.13	U	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1060 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F017.D Vial: 16
Acq On : 26 Sep 2014 5:21 am Operator: TLorr
Sample : K1409921-016 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:13 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

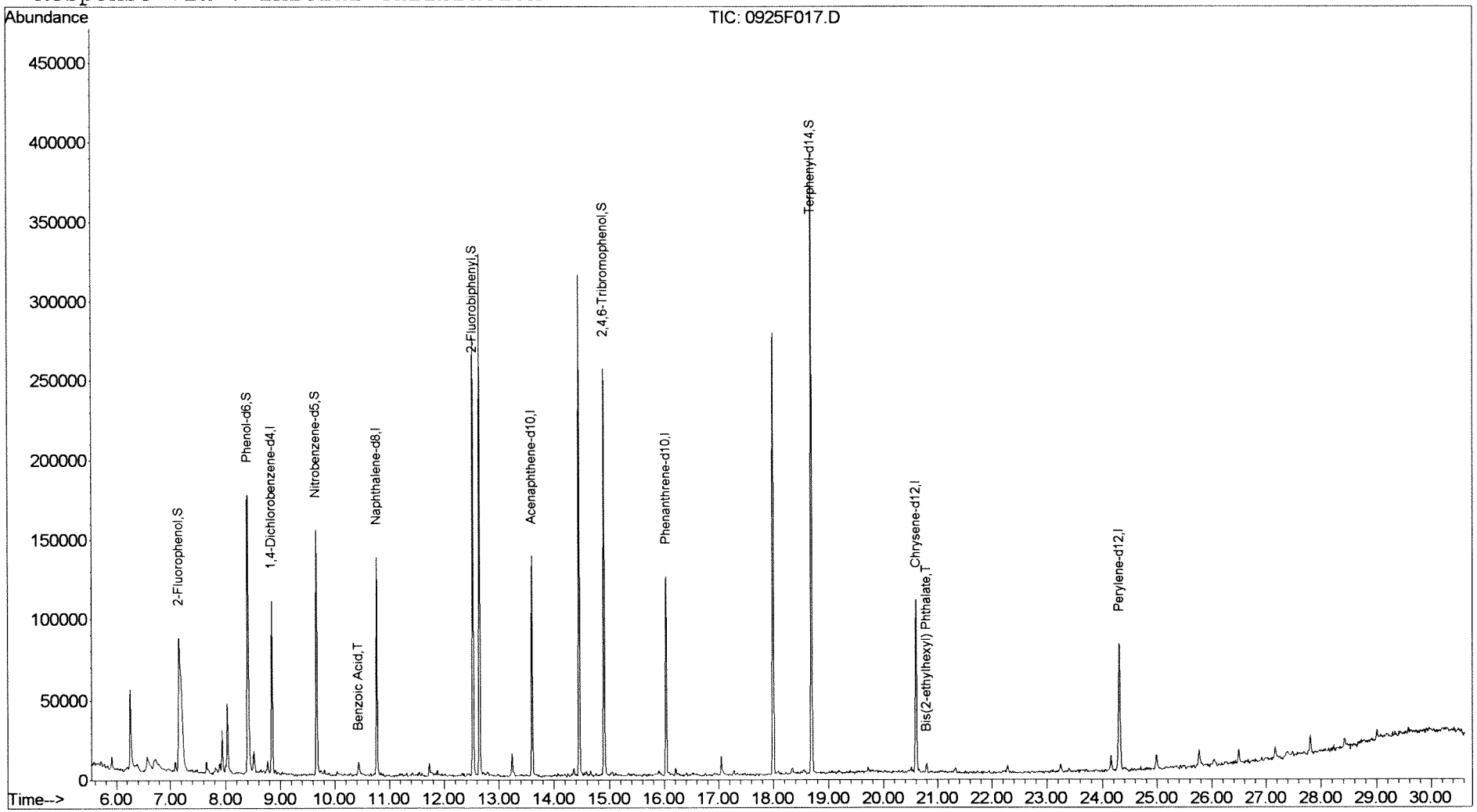
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.84	152	16704	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	60939	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.60	164	39484	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	63617	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.60	240	63923	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	60171	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	54938	2767.41	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 73.80%			
6) Phenol-d6	8.40	99	70010	2740.85	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 73.09%			
20) Nitrobenzene-d5	9.66	82	52980	1968.90	ng/ml	-0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 78.76%			
40) 2-Fluorobiphenyl	12.53	172	101590	1671.08	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 66.84%			
61) 2,4,6-Tribromophenol	14.90	330	29552	3123.36	ng/ml	-0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 83.29%			
73) Terphenyl-d14	18.69	244	125817	2078.14	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 83.13%			
Target Compounds						Qvalue
28) Benzoic Acid	10.43	122	2342	33.45	ng/ml	80
78) Bis(2-ethylhexyl) Phthalat	20.80	149	2646	42.94	ng/ml	97

(#) = qualifier out of range (m) = manual integration
0925F017.D 092414_BNLL.M Fri Sep 26 16:39:13 2014 Page 1

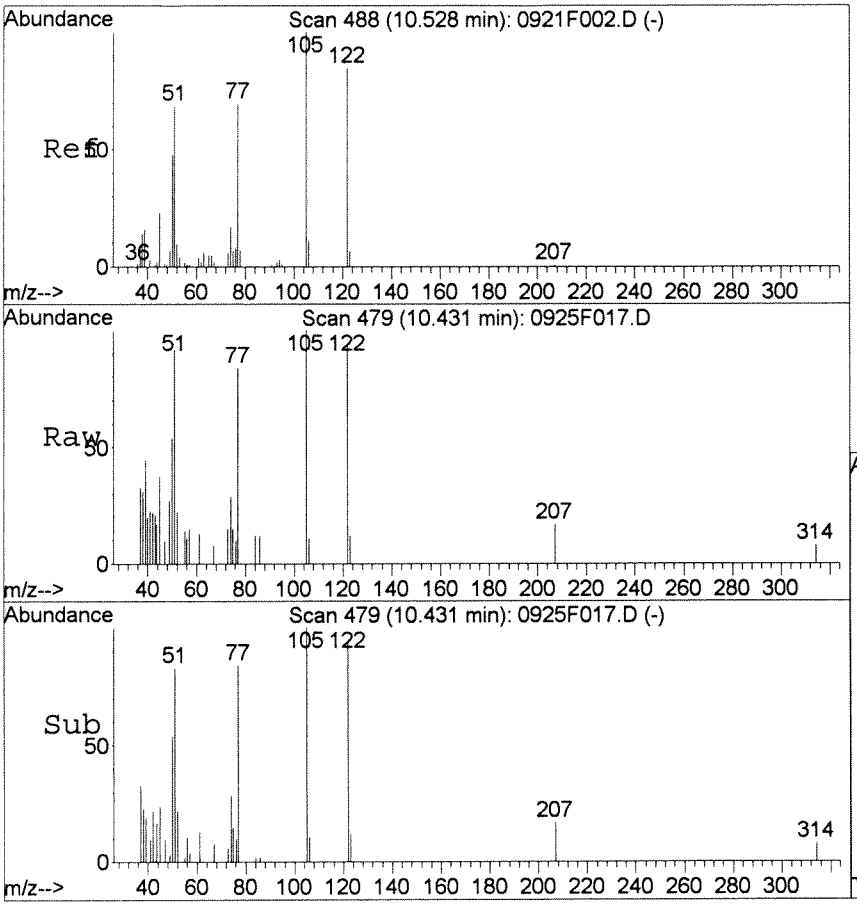
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F017.D Vial: 16
Acq On : 26 Sep 2014 5:21 am Operator: TLorr
Sample : K1409921-016 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:39 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



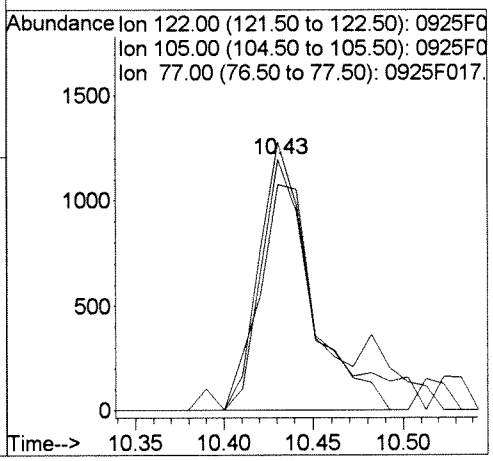
2942

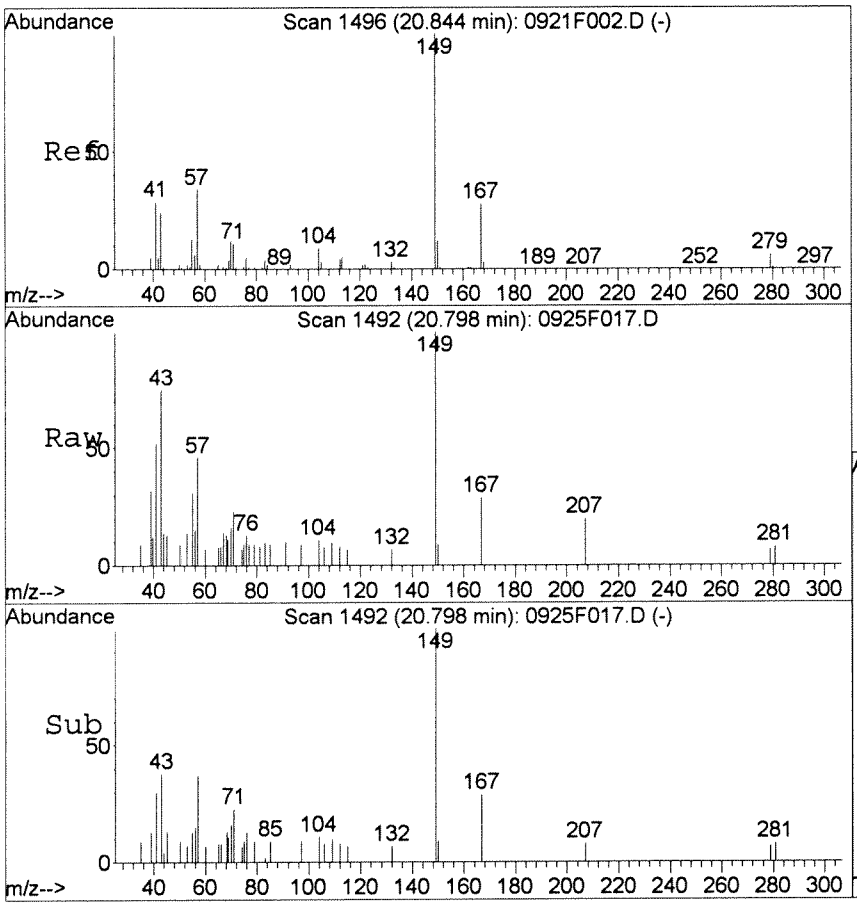


#28
Benzoic Acid
Concen: 33.45 ng/ml
RT: 10.43 min Scan# 479
Delta R.T. -0.10 min
Lab File: 0925F017.D
Acq: 26 Sep 2014 5:21 am

Tgt Ion:122 Resp: 2342

Ion	Ratio	Lower	Upper
122	100		
105	98.3	97.5	157.5
77	89.9	72.5	132.5

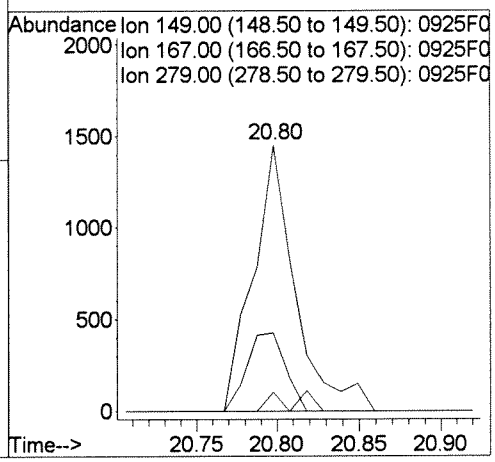




#78
Bis(2-ethylhexyl) Phthalate
Concen: 42.94 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F017.D
Acq: 26 Sep 2014 5:21 am

Tgt Ion:149 Resp: 2646

Ion	Ratio	Lower	Upper
149	100		
167	29.3	1.2	61.2
279	7.2	0.0	38.5



Exception Report

Data File: J:\MS06\DATA\092514\0925F018.D
Lab ID: K1409921-017
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 06:00
Date Quantitated: 09/26/2014 17:48
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, <40%.
Method Blank	Bis(2-ethylhexyl) Phthalate	0.96	NA	1.0	Narrate
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 10/6/14

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F018.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 06:00	**Quant Date:**	09/26/2014 17:48	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-017			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376882	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	19344	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	63270	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	35373	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	58705	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	56374	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	59613	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.41	0.01	0.00	99	77092	2,606	69	23-106	OK	
1	Nitrobenzene-d5	9.68	0.00	0.00	82	56214	1,804	72	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	91110**m**	1,673	67	31-94	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	122443	2,293	92	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0		0.065	U	
1	2-Methylphenol				107	0		0.12	U	
1	4-Methylphenol				107	0		0.13	U	
2	2,4-Dimethylphenol				122	0**d**		2.3	U	
2	Hexachlorobutadiene				225	0		0.028	U	
3	Diethyl Phthalate				149	0		0.016	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.026	U	
4	Fluoranthene				202	0**d**		0.021	U	
5	Pyrene				202	0		0.020	U	
5	Butyl Benzyl Phthalate				149	0**d**		0.022	U	
5	Chrysene				228	0**d**		0.029	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F018.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 06:00	**Quant Date:**	09/26/2014 17:48	**Vial:**	17
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-017			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	19163	352.64	0.72	BJ	
6	Di-n-octyl Phthalate				149	0**d**		0.034	U	

Prep Amount: 980 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F018.D Vial: 17
Acq On : 26 Sep 2014 6:00 am Operator: TLorr
Sample : K1409921-017 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:15 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

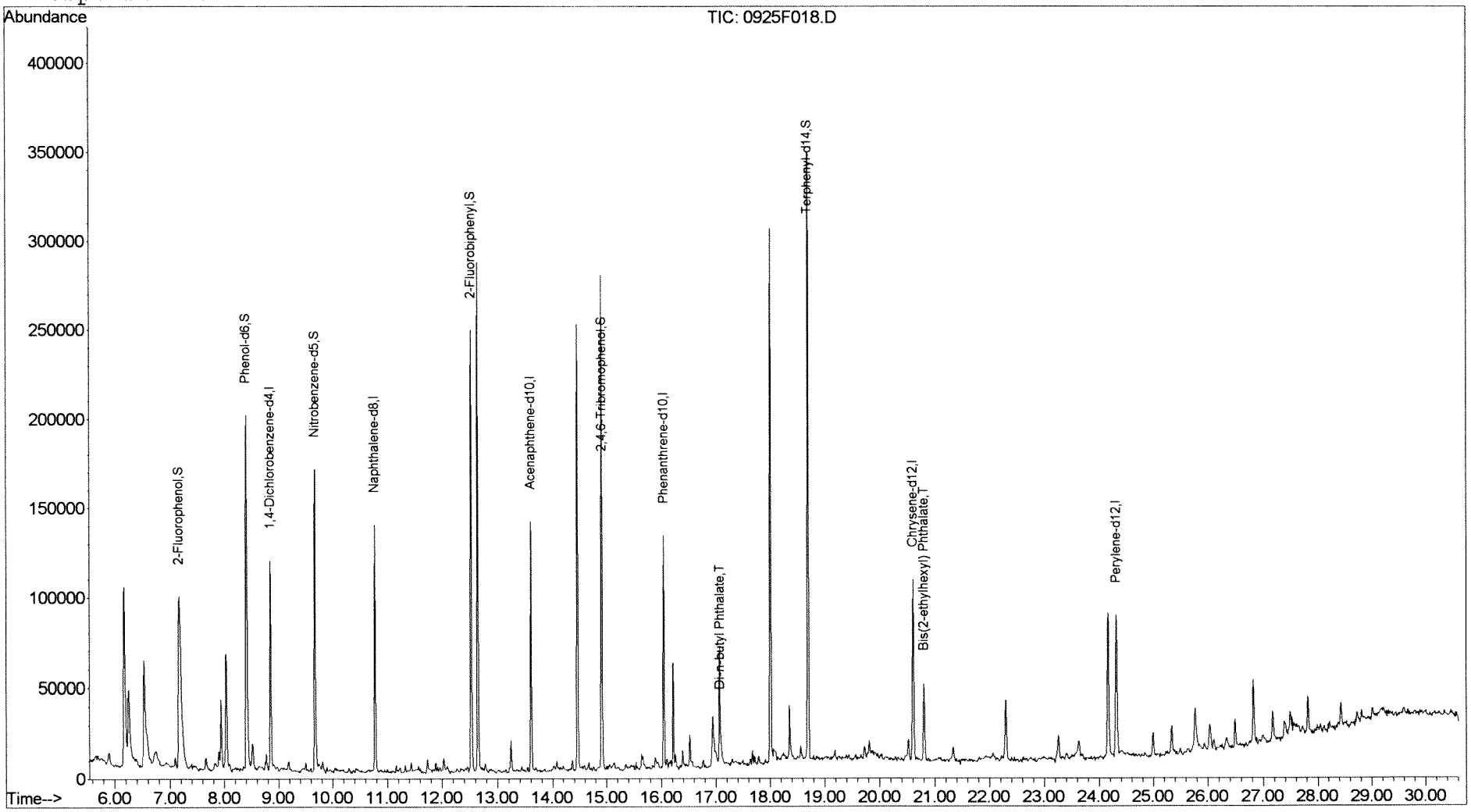
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	19344	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	63270	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	35373	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	58705	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.61	240	56374	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	59613	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	59797	2601.08	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 69.36%			
6) Phenol-d6	8.41	99	77092	2606.21	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 69.50%			
20) Nitrobenzene-d5	9.68	82	56214	1803.98	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 72.16%			
40) 2-Fluorobiphenyl	12.53	172	91110m	1672.87	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 66.91%			
61) 2,4,6-Tribromophenol	14.92	330	30459	3488.58	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 93.03%			
73) Terphenyl-d14	18.69	244	122443	2293.23	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 91.73%			
Target Compounds						Qvalue
28) Benzoic Acid	10.43	122	718	Below Cal	#	62
68) Di-n-butyl Phthalate	17.08	149	2093	23.71	ng/ml	89
78) Bis(2-ethylhexyl) Phthalat	20.80	149	19163	352.64	ng/ml	92

(#) = qualifier out of range (m) = manual integration

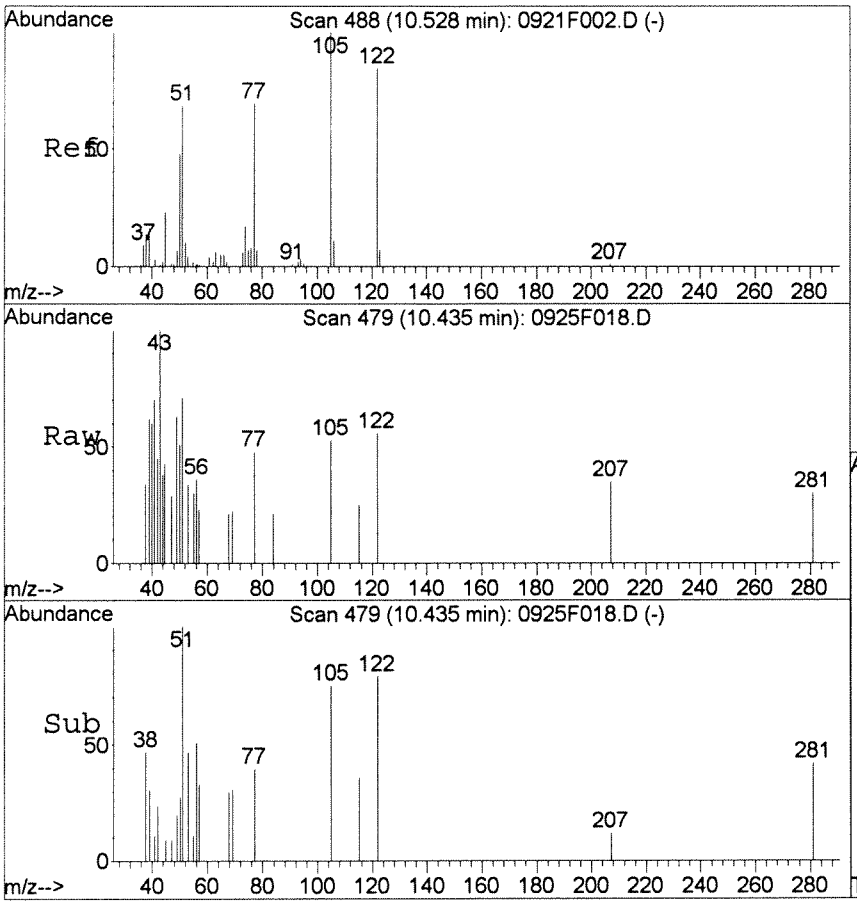
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F018.D Vial: 17
Acq On : 26 Sep 2014 6:00 am Operator: TLorr
Sample : K1409921-017 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 17:48 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration

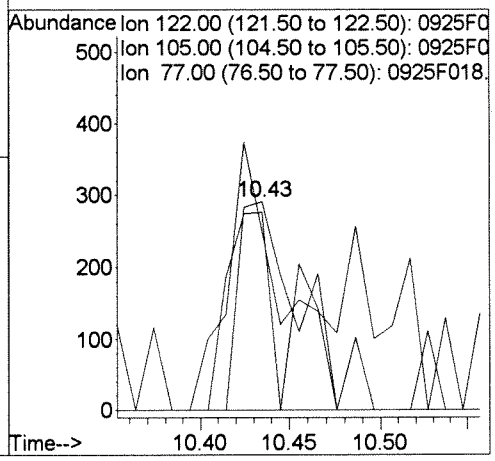


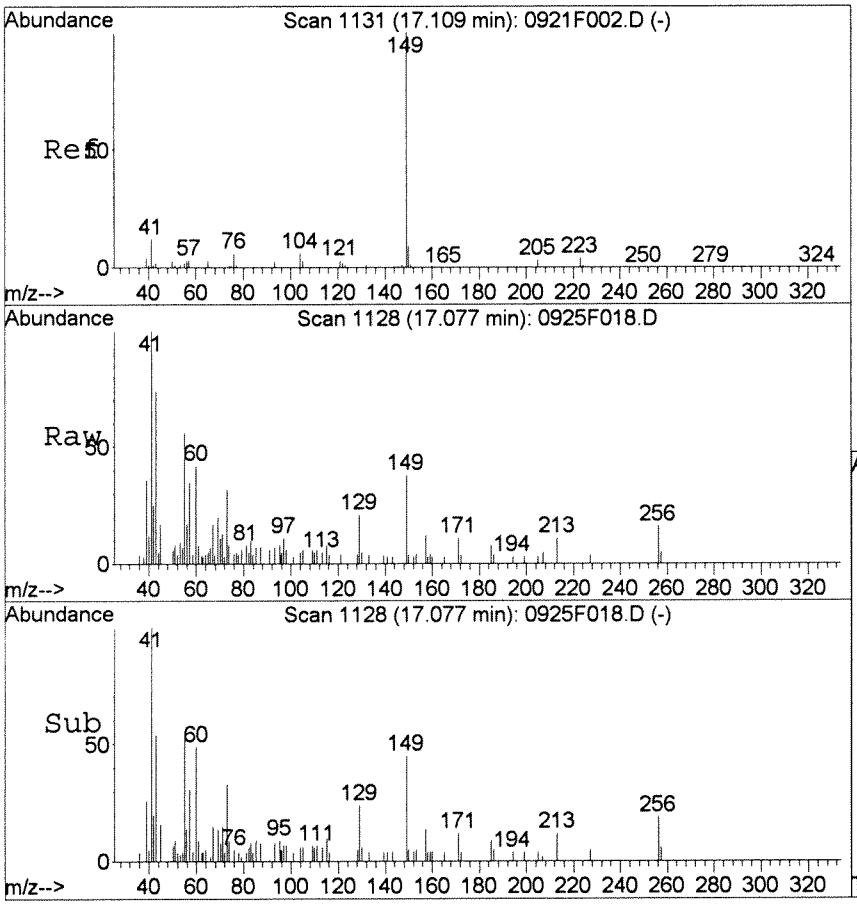
2948



#28
Benzoic Acid
Concen: Below Cal
RT: 10.43 min Scan# 479
Delta R.T. -0.10 min
Lab File: 0925F018.D
Acq: 26 Sep 2014 6:00 am

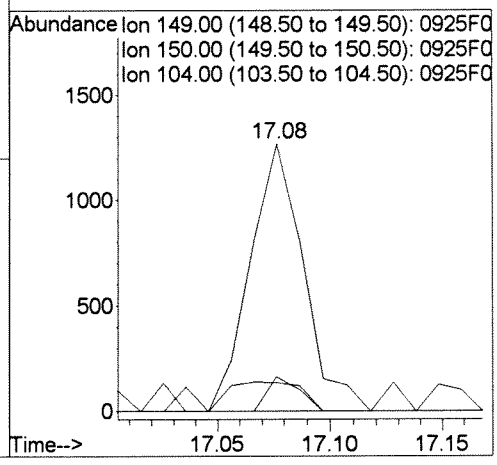
Tgt Ion:122	Resp:	718	
Ion	Ratio	Lower	Upper
122	100		
105	94.8	97.5	157.5#
77	50.9	72.5	132.5#

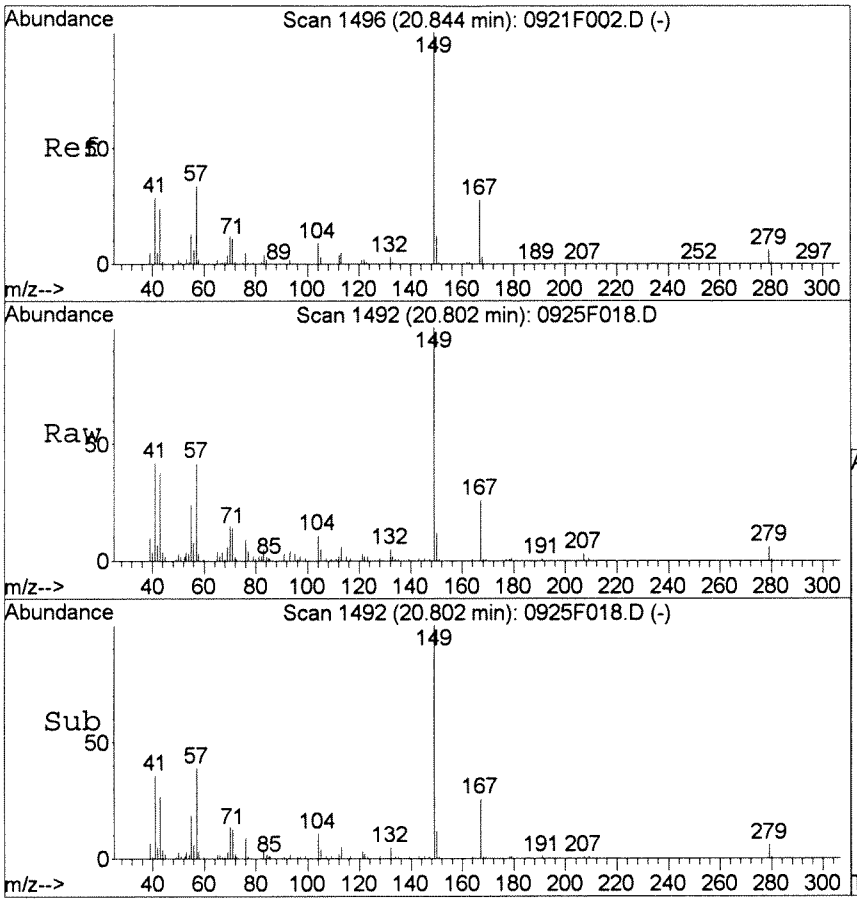




#68
Di-n-butyl Phthalate
Concen: 23.71 ng/ml
RT: 17.08 min Scan# 1128
Delta R.T. -0.04 min
Lab File: 0925F018.D
Acq: 26 Sep 2014 6:00 am

Tgt Ion:149	Resp:	2093	
Ion	Ratio	Lower	Upper
149	100		
150	10.9	0.0	39.3
104	13.1	0.0	36.0

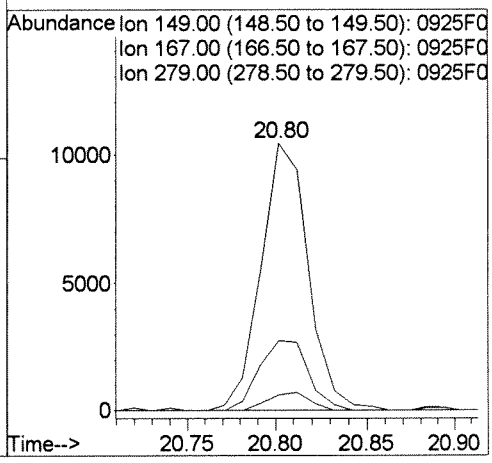




#78
Bis(2-ethylhexyl) Phthalate
Concen: 352.64 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F018.D
Acq: 26 Sep 2014 6:00 am

Tgt Ion:149 Resp: 19163

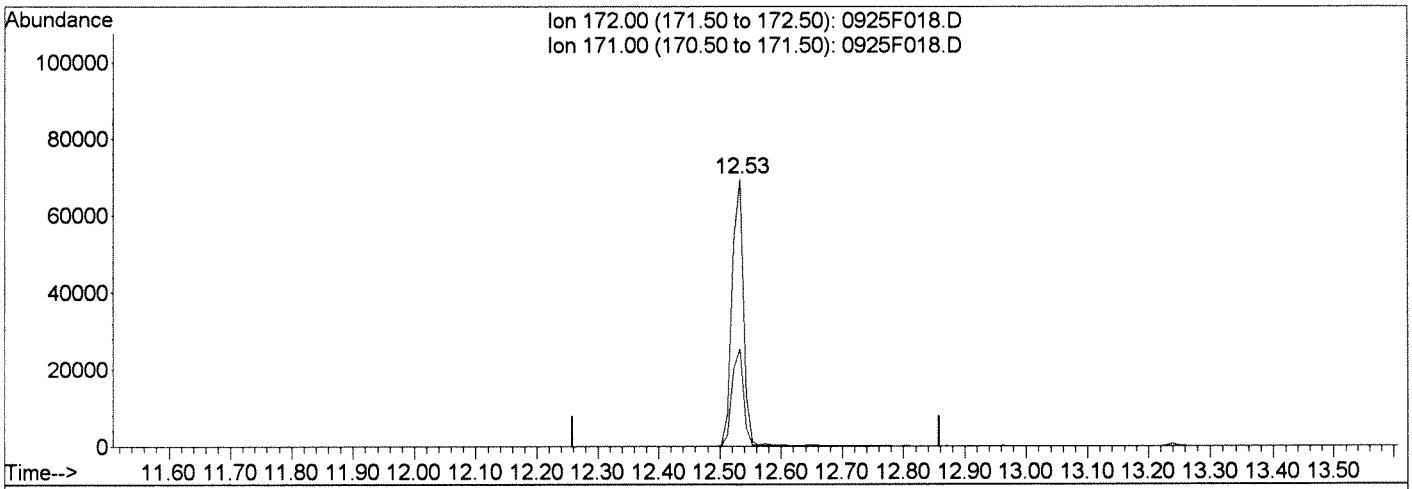
Ion	Ratio	Lower	Upper
149	100		
167	26.4	1.2	61.2
279	5.9	0.0	38.5

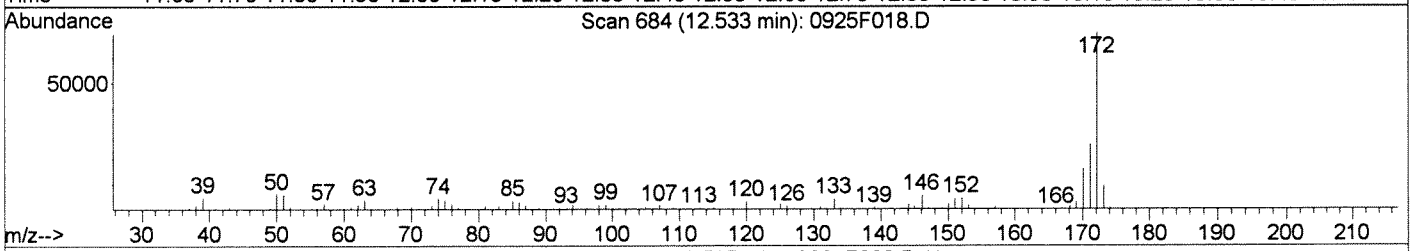


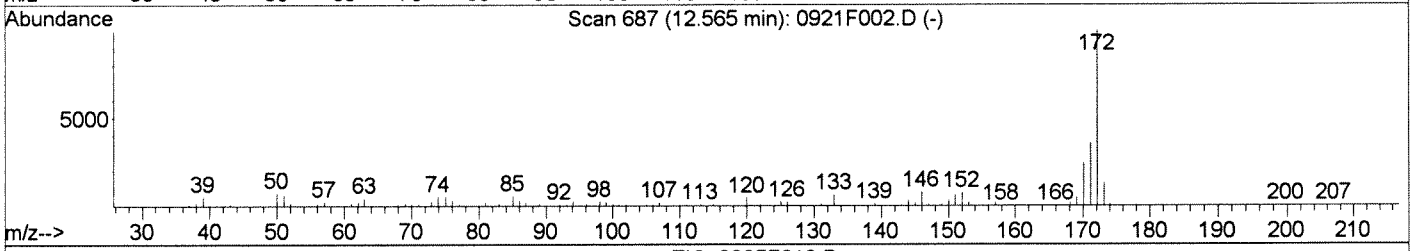
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F018.D Vial: 17
Acq On : 26 Sep 2014 6:00 am Operator: TLorr
Sample : K1409921-017 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 17:48 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration







TIC: 0925F018.D

(40) 2-Fluorobiphenyl (S)

12.53min 1672.87ng/ml m

response 91110

Ion	Exp%	Act%
172.00	100	100
171.00	35.10	36.79
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Accidentally deleted, reintegrated

09/26/14

10/6/14

0925F018.D 092414_BNLL.M Fri Sep 26 17:48:04 2014

Exception Report

Data File: J:\MS06\DATA\092514\0925F019.D
Lab ID: K1409921-018
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2014 06:40
Date Quantitated: 09/26/2014 16:44
Batch ID: KWG1413176
Analysis Method: 8270D
ListJoinID: LJ16525

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA		x
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, <40%.
Method Blank	Bis(2-ethylhexyl) Phthalate	0.96	NA	1.0	Narrate
Duplicate Lab Control Spike	Bis(2-ethylhexyl) Phthalate	143	61	118	Advisory

Primary Review: SEP 26 2014

Secondary Review: 10/6/14

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F019.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 06:40	**Quant Date:**	09/26/2014 16:44	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**	09/15/2014	**Receive Date:**	09/16/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	K1409921
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
Prep Ref:	1376876	**Prep Date:**	09/22/2014		

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ16525
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.86	0.01	152	23213	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	62416	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	29333	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	79755	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	67807	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	64367	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Phenol-d6	8.40	0.00	0.00	99	85417	2,406	64	23-106	OK	
1	Nitrobenzene-d5	9.68	0.00	0.00	82	61175	1,636	65	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	77889	1,725	69	31-94	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	138046	2,150	86	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0d		0.063	U	
1	2-Methylphenol				107	0d		0.11	U	
1	4-Methylphenol				107	0		0.12	U	
2	2,4-Dimethylphenol				122	0		2.2	U	
2	Hexachlorobutadiene				225	0		0.027	U	
3	Diethyl Phthalate	14.37	-0.01	0.00	149	13492	260.75	0.49		
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
4	Fluoranthene				202	0		0.020	U	
5	Pyrene				202	0		0.019	U	
5	Butyl Benzyl Phthalate				149	0d		0.021	U	
5	Chrysene				228	0		0.028	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F019.D			**Instrument:**	MS06
Acqu Date:	09/26/2014 06:40	**Quant Date:**	09/26/2014 16:44	**Vial:**	18
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1409921-018			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	219538	3,359	6.3	B	
6	Di-n-octyl Phthalate				149	0**d**		0.033	U	

Prep Amount: 1060 ml **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F019.D Vial: 18
Acq On : 26 Sep 2014 6:40 am Operator: TLorr
Sample : K1409921-018 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:39:17 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

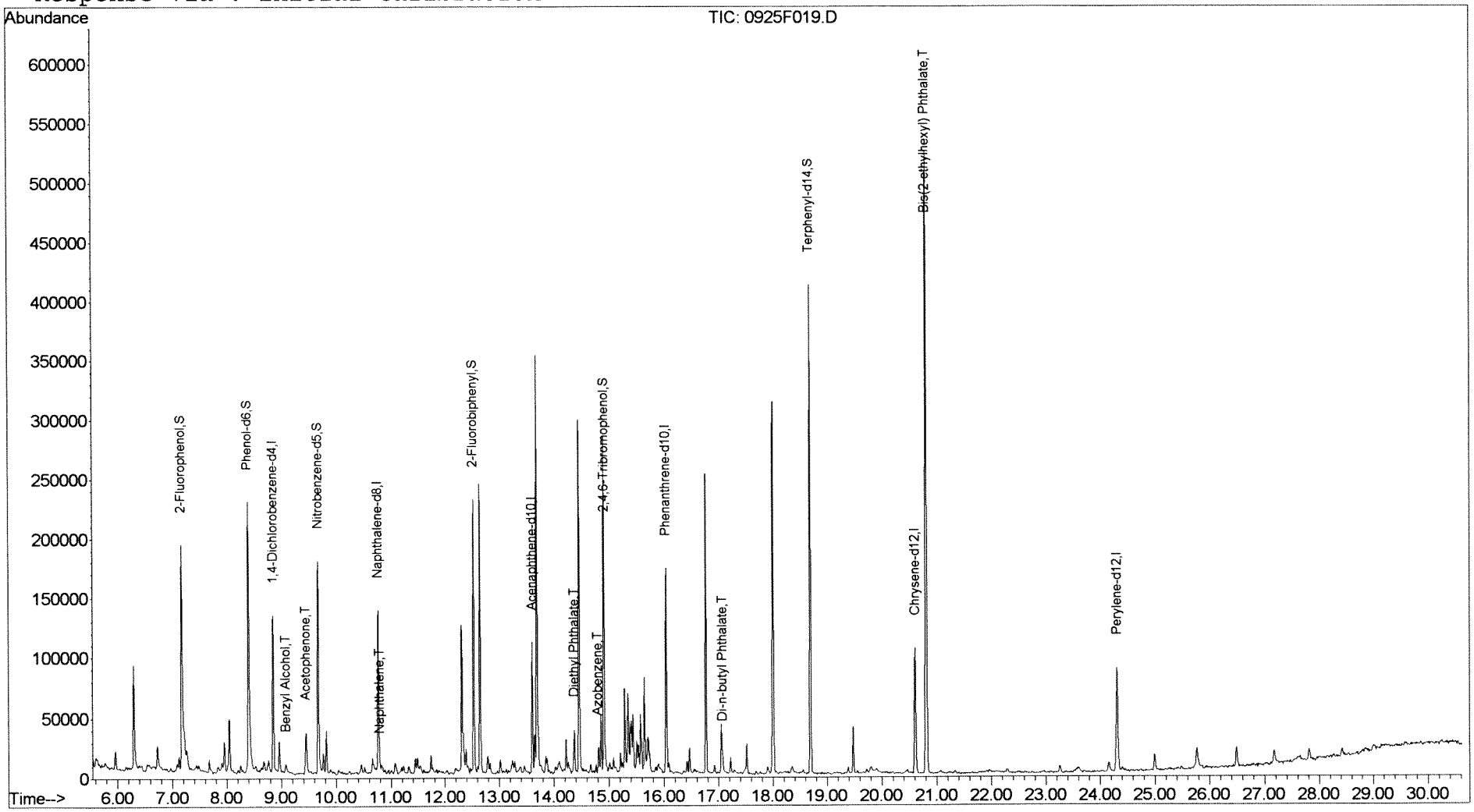
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.86	152	23213	1000.00	ng/ml	-0.02
22) Naphthalene-d8	10.77	136	62416	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	29333	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	79755	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.61	240	67807	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	64367	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	71036	2574.95	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 68.67%			
6) Phenol-d6	8.40	99	85417	2406.35	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 64.17%			
20) Nitrobenzene-d5	9.68	82	61175	1635.97	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 65.44%			
40) 2-Fluorobiphenyl	12.53	172	77889	1724.60	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 68.98%			
61) 2,4,6-Tribromophenol	14.92	330	34017	2867.78	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 76.47%			
73) Terphenyl-d14	18.69	244	138046	2149.52	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 85.98%			
Target Compounds						Qvalue
13) Benzyl Alcohol	9.08	108	1046	57.37	ng/ml#	75
16) Acetophenone	9.45	105	8596	196.04	ng/ml	88
30) Naphthalene	10.80	128	1165	16.80	ng/ml	79
55) Diethyl Phthalate	14.37	149	13492	260.75	ng/ml	97
59) Azobenzene	14.80	77	7448	154.39	ng/ml#	57
68) Di-n-butyl Phthalate	17.08	149	7568	63.10	ng/ml	90
78) Bis(2-ethylhexyl) Phthalat	20.80	149	219538	3358.81	ng/ml	98

(#) = qualifier out of range (m) = manual integration

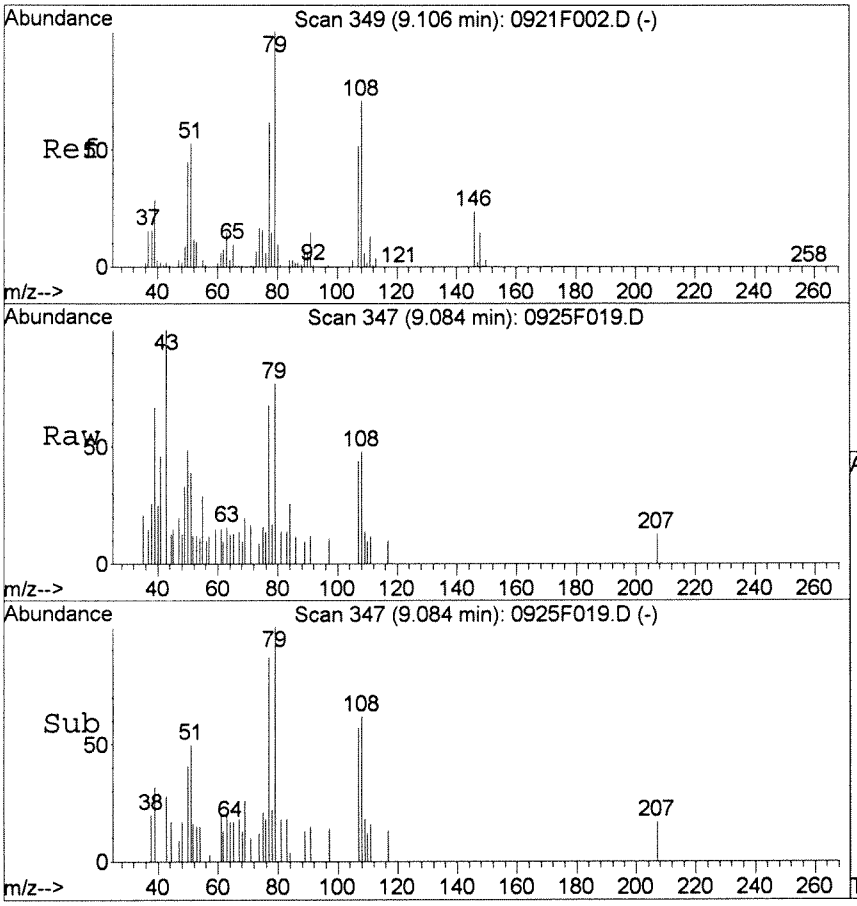
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F019.D Vial: 18
Acq On : 26 Sep 2014 6:40 am Operator: TLorr
Sample : K1409921-018 Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 16:44 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



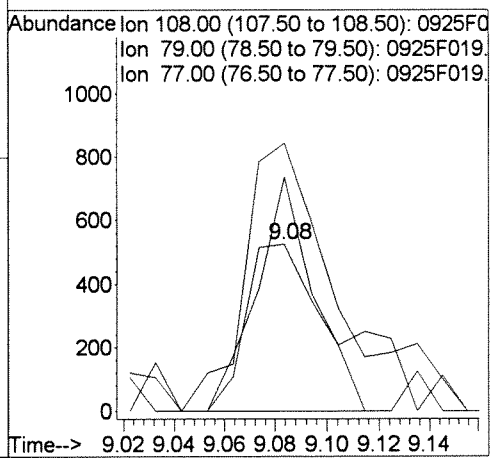
2956

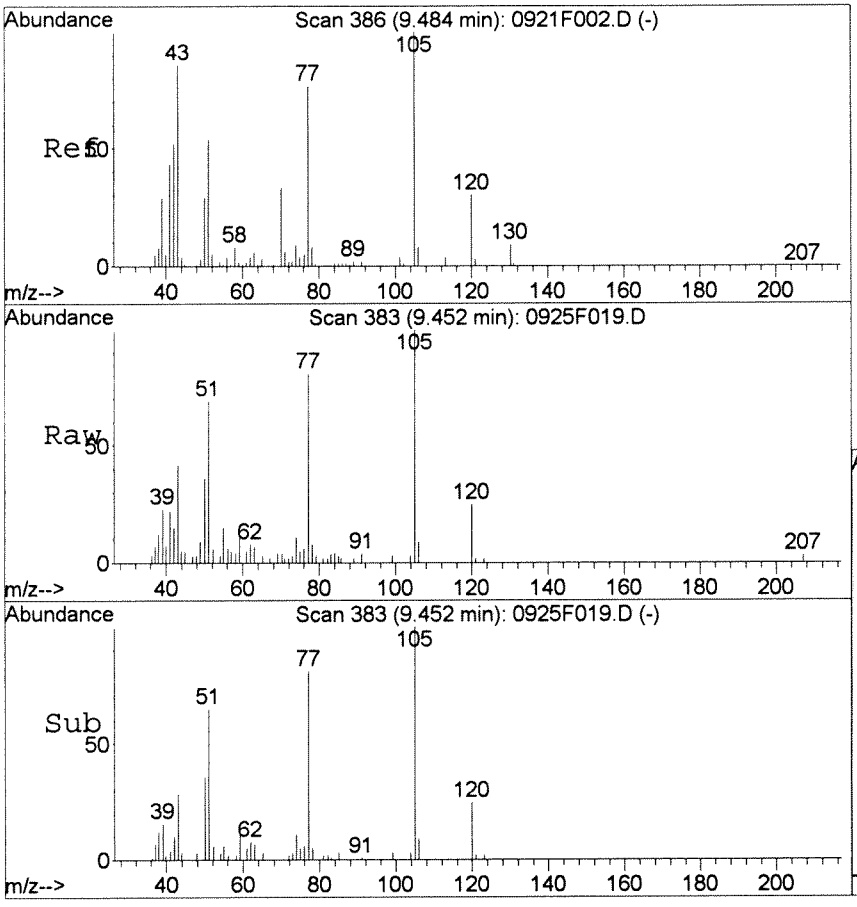


#13
Benzyl Alcohol
Concen: 57.37 ng/ml
RT: 9.08 min Scan# 347
Delta R.T. -0.02 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:108 Resp: 1046

Ion	Ratio	Lower	Upper
108	100		
79	138.1	123.4	183.4
77	140.4	65.0	125.0#

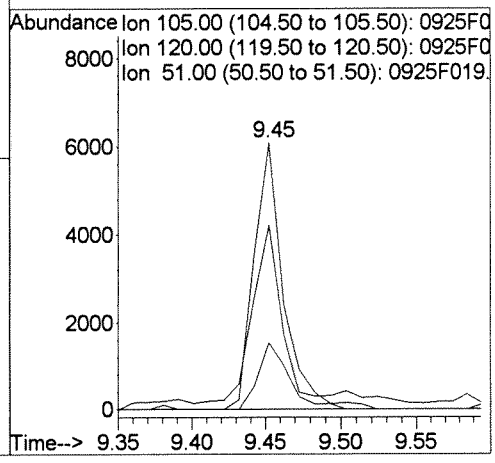


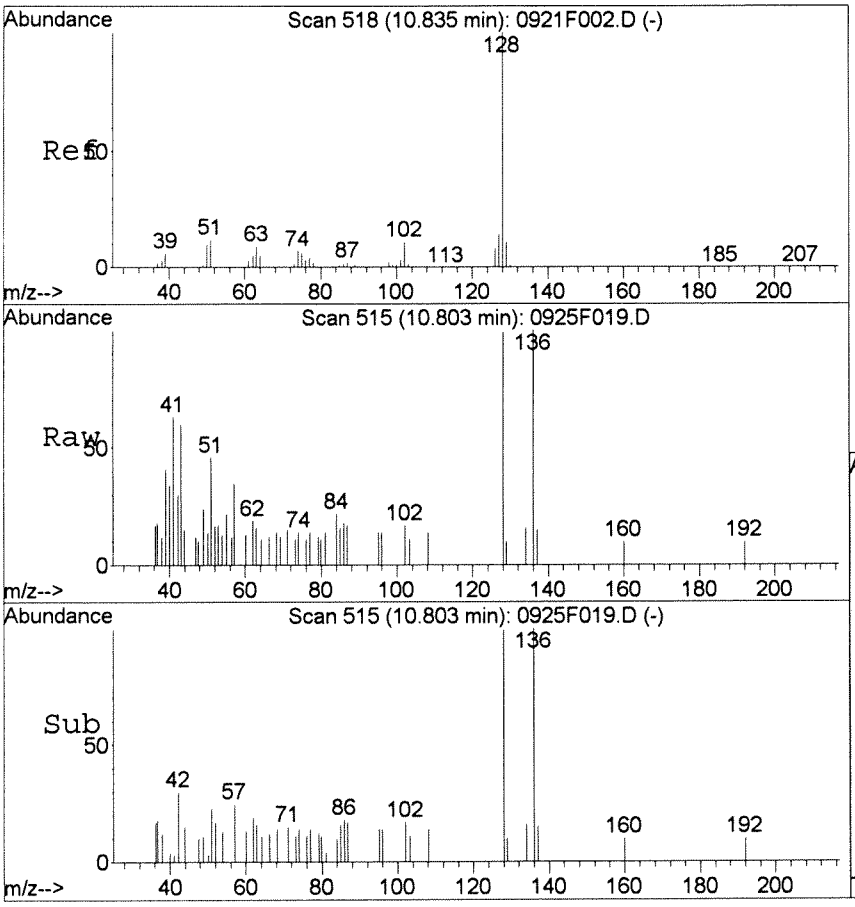


#16
Acetophenone
Concen: 196.04 ng/ml
RT: 9.45 min Scan# 383
Delta R.T. -0.03 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:105 Resp: 8596

Ion	Ratio	Lower	Upper
105	100		
120	25.3	0.3	60.3
51	66.2	26.5	86.5

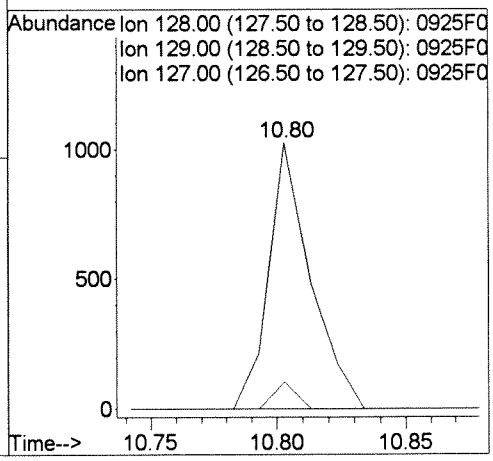


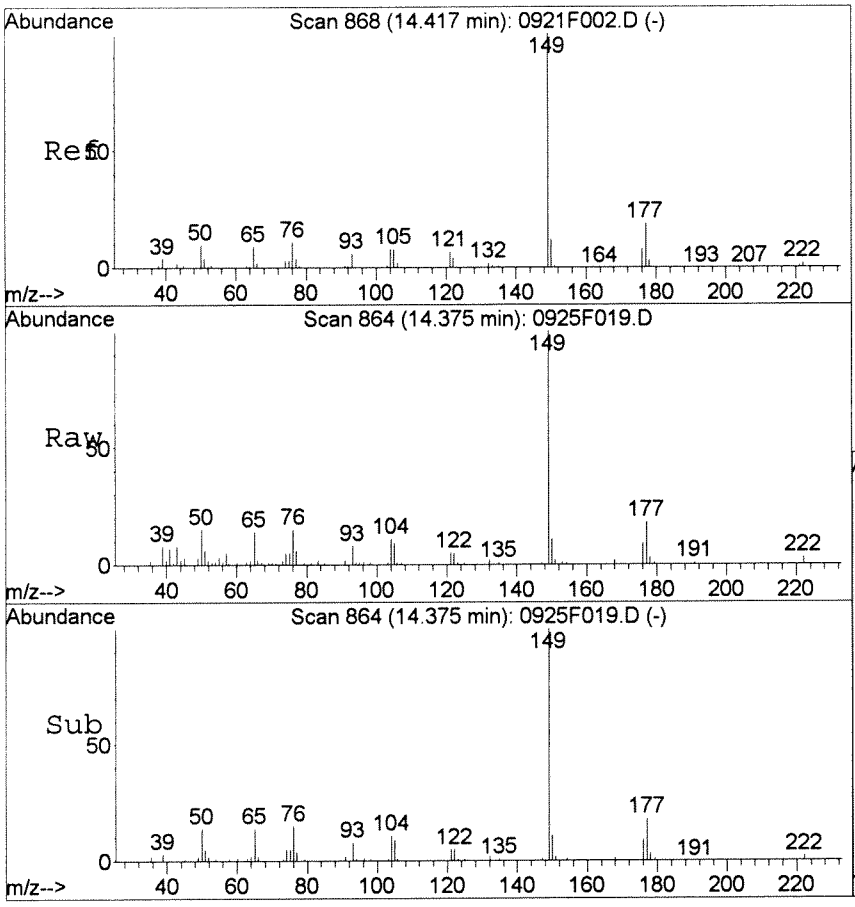


#30
Naphthalene
Concen: 16.80 ng/ml
RT: 10.80 min Scan# 515
Delta R.T. -0.04 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:128 Resp: 1165

Ion	Ratio	Lower	Upper
128	100		
129	10.2	0.0	40.5
127	0.0	0.0	44.6

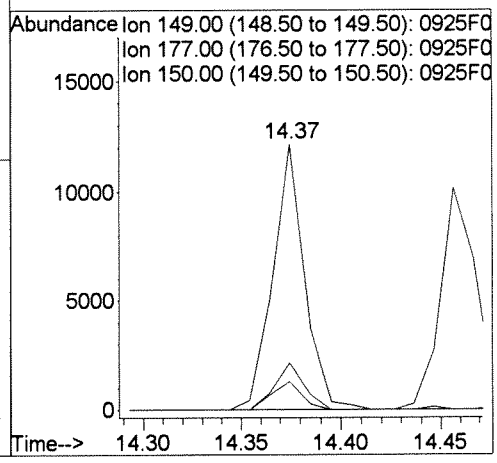


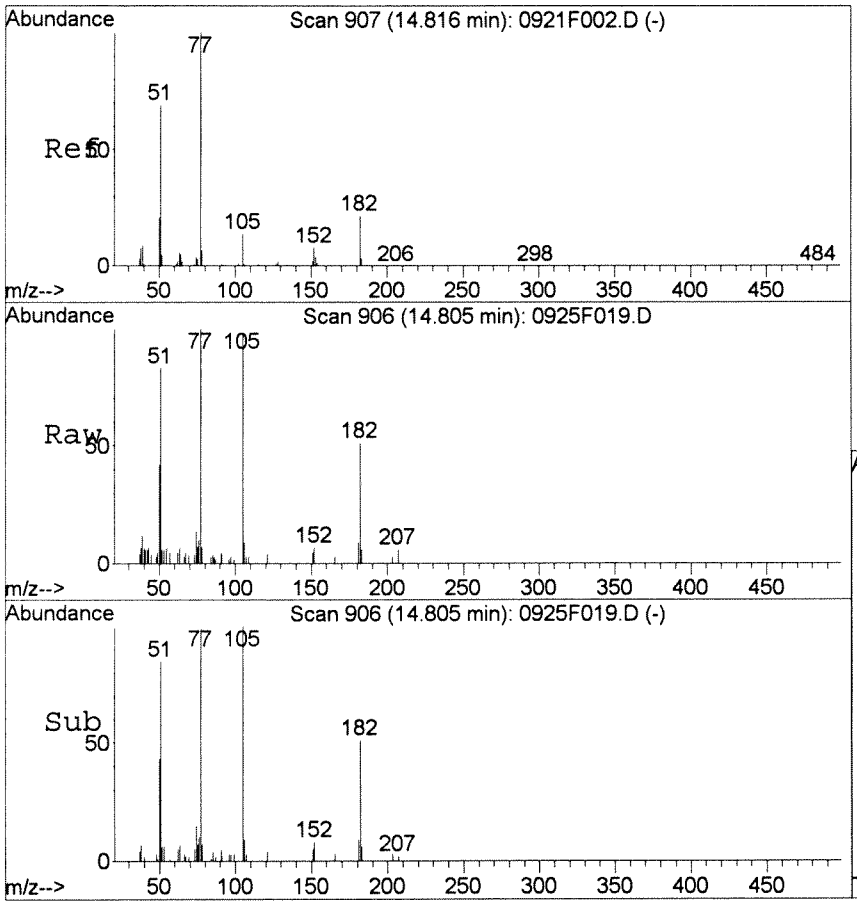


#55
Diethyl Phthalate
Concen: 260.75 ng/ml
RT: 14.37 min Scan# 864
Delta R.T. -0.04 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:149 Resp: 13492

Ion	Ratio	Lower	Upper
149	100		
177	17.7	0.0	48.8
150	10.7	0.0	42.0

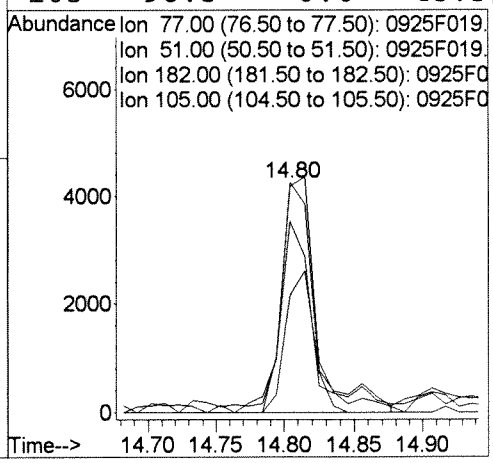


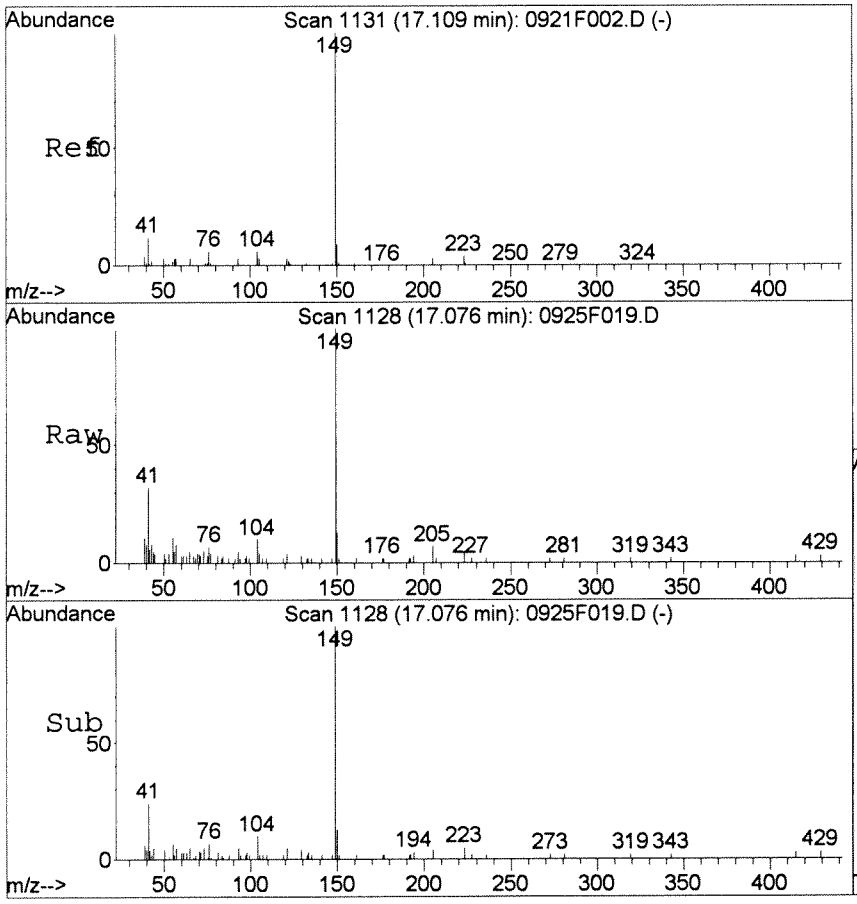


#59
Azobenzene
Concen: 154.39 ng/ml
RT: 14.80 min Scan# 906
Delta R.T. -0.02 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion: 77 Resp: 7448

Ion	Ratio	Lower	Upper
77	100		
51	79.3	42.0	102.0
182	50.6	0.0	55.6
105	98.3	0.0	43.5#

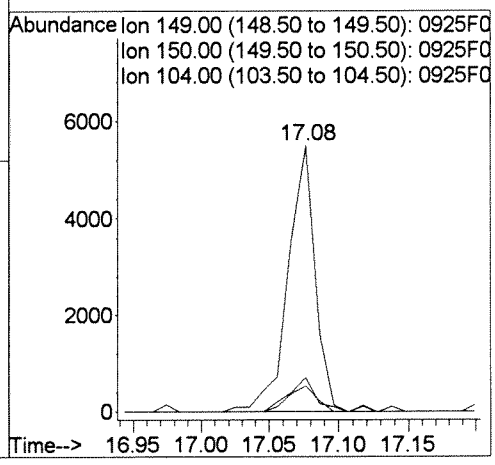


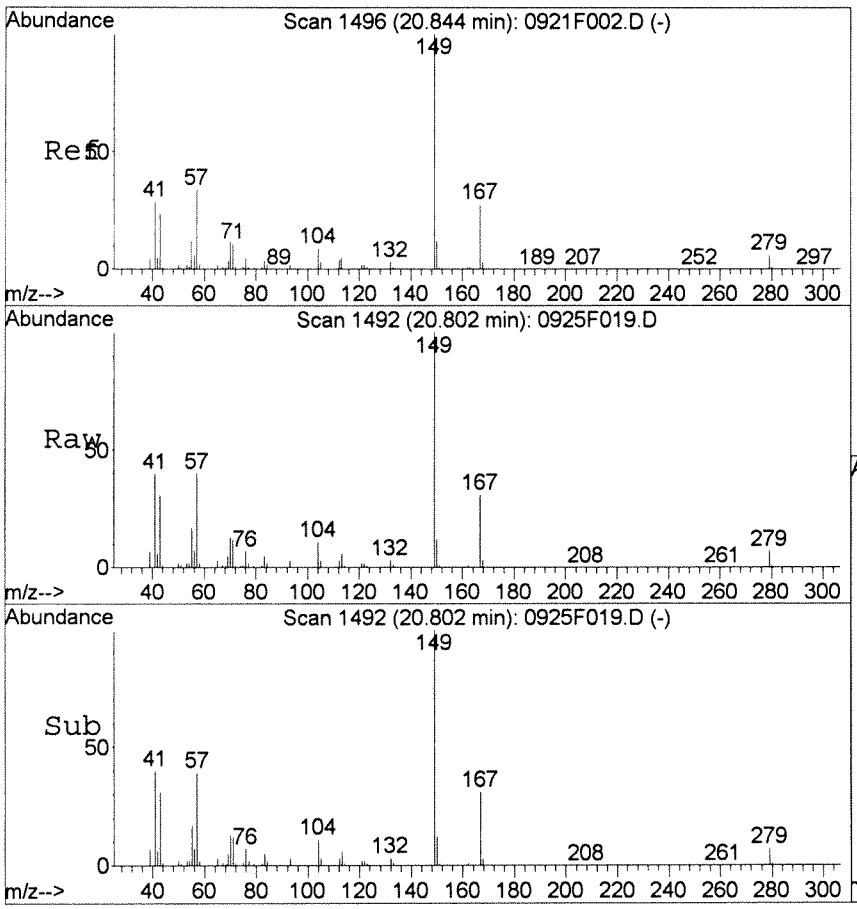


#68
Di-n-butyl Phthalate
Concen: 63.10 ng/ml
RT: 17.08 min Scan# 1128
Delta R.T. -0.04 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:149 Resp: 7568

Ion	Ratio	Lower	Upper
149	100		
150	12.8	0.0	39.3
104	9.7	0.0	36.0

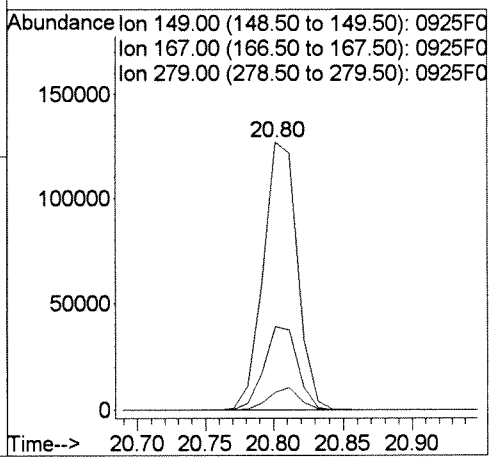




#78
Bis(2-ethylhexyl) Phthalate
Concen: 3358.81 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F019.D
Acq: 26 Sep 2014 6:40 am

Tgt Ion:149 Resp: 219538

Ion	Ratio	Lower	Upper
149	100		
167	30.8	1.2	61.2
279	6.7	0.0	38.5



Exception Report

Data File: J:\MS06\DATA\092514\0925F005.D
Lab ID: KWG1412928-3
RunType: MB
Matrix: WATER

Date Acquired: 09/25/2014 21:28
Date Quantitated: 09/26/2014 15:09
Batch ID: KWG1413176
Analysis Method: 8270D
MethodJoinID: MJ1293

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC
K1409921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Bis(2-chloroisopropyl) Ether	-39.2	NA	30	NR
	N-Nitrosodi-n-propylamine	-41.2	NA	30	"
	Nitrobenzene	-31.1	NA	30	"
	Benzoic Acid	39.2	NA	30	"
Continuing Calibration Recovery	Nitrobenzene-d5	36.6	NA	20	OK, <40%

Primary Review: 9 SEP 26 2014

Secondary Review: 09/26/14

Printed: 09/26/2014 17:40:05
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F005.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 21:28	**Quant Date:**	09/26/2014 15:09	**Vial:**	4
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412928-3			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**		**Receive Date:**	09/25/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
		Prep Date:	09/22/2014		
Prep Ref:	1376885				

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.			**Calibration ID:**	CAL13569
Title:					
Tune Ref:	J:\MS06\DATA\092514\0925F002.D			**Method ID:**	MJ1293
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	18003	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	78997	1,000.00	OK
3	Acenaphthene-d10	13.60	-0.01	164	40932	1,000.00	OK
4	Phenanthrene-d10	16.03	-0.01	188	72463	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	62057	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	71431	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.14	-0.01	0.00	112	63039m	2,946	79	12-109	OK	
1	Phenol-d6	8.39	-0.01	0.00	99	84593	3,073	82	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	64325	2,218	89	26-110	OK	
3	2-Fluorobiphenyl	12.52	-0.01	0.00	172	121908	1,934	77	31-94	OK	
4	2,4,6-Tribromophenol	14.91	-0.01	0.00	330	29385	2,727	73	23-127	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	136101	2,316	93	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				42	0d		0.42	U	
1	Pyridine				79	0		1.4	U	
1	Bis(2-chloroethyl) Ether				93	0		0.035	U	
1	Phenol				94	0		0.063	U	
1	Aniline				93	0		0.054	U	
1	2-Chlorophenol				128	0		0.054	U	
1	1,3-Dichlorobenzene				146	0		0.021	U	
1	1,4-Dichlorobenzene				146	0		0.029	U	
1	1,2-Dichlorobenzene				146	0		0.022	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F005.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 21:28	**Quant Date:**	09/26/2014 15:09	**Vial:**	4
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412928-3			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol				108	0		0.073	U	
1	Bis(2-chloroisopropyl) Ether				45	0		0.026	U	
1	2-Methylphenol				107	0		0.11	U	
1	Acetophenone				105	0d		0.19	U	
1	Hexachloroethane				117	0		0.024	U	
1	N-Nitrosodi-n-propylamine				70	0d		0.037	U	
1	4-Methylphenol				107	0		0.12	U	
1	Nitrobenzene				77	0d		0.028	U	
2	Isophorone				82	0		0.016	U	
2	2-Nitrophenol				139	0		0.063	U	
2	2,4-Dimethylphenol				122	0		2.2	U	
2	Bis(2-chloroethoxy)methane				93	0		0.024	U	
2	2,4-Dichlorophenol				162	0		0.047	U	
2	Benzoic Acid				122	0		1.1	U	
2	1,2,4-Trichlorobenzene				180	0		0.016	U	
2	Naphthalene				128	0		0.022	U	
2	4-Chloroaniline				127	0		0.061	U	
2	Hexachlorobutadiene				225	0		0.027	U	
2	4-Chloro-3-methylphenol				107	0		0.037	U	
2	2-Methylnaphthalene				141	0		0.027	U	
2	1-Methylnaphthalene				141	0		0.021	U	
3	Hexachlorocyclopentadiene				237	0		0.19	U	
3	2,4,6-Trichlorophenol				196	0		0.058	U	
3	2,4,5-Trichlorophenol				196	0		0.031	U	
3	2-Chloronaphthalene				162	0d		0.041	U	
3	2-Nitroaniline				65	0		0.024	U	
3	Acenaphthylene				152	0		0.015	U	
3	Dimethyl Phthalate				163	0		0.021	U	
3	2,6-Dinitrotoluene				165	0		0.033	U	
3	Acenaphthene				154	0		0.026	U	
3	3-Nitroaniline				138	0		0.029	U	
3	2,4-Dinitrophenol				184	0		0.17	U	
3	Dibenzofuran				168	0		0.018	U	
3	4-Nitrophenol				109	0		0.28	U	
3	2,4-Dinitrotoluene				165	0		0.018	U	
3	2,3,4,6-Tetrachlorophenol				232	0		0.038	U	
3	Fluorene				166	0		0.027	U	
3	4-Chlorophenyl Phenyl Ether				204	0		0.027	U	
3	Diethyl Phthalate				149	0		0.015	U	
3	4-Nitroaniline				138	0		0.019	U	
3	2-Methyl-4,6-dinitrophenol				198	0		0.025	U	
3	N-Nitrosodiphenylamine				169	0d		0.048	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F005.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 21:28	**Quant Date:**	09/26/2014 15:09	**Vial:**	4
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1412928-3			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Azobenzene				77	0		0.021	U	
4	4-Bromophenyl Phenyl Ether				248	0		0.026	U	
4	Hexachlorobenzene				284	0		0.022	U	
4	Pentachlorophenol				266	0		0.34	U	
4	Phenanthrene				178	0		0.022	U	
4	Anthracene				178	0		0.024	U	
4	Carbazole				167	0		0.018	U	
4	Di-n-butyl Phthalate				149	0d		0.023	U	
4	Fluoranthene				202	0		0.020	U	
5	Benzidine				184	0		1.9	U	
5	Pyrene				202	0		0.019	U	
5	Butyl Benzyl Phthalate				149	0		0.021	U	
5	3,3'-Dichlorobenzidine				252	0		0.43	U	
5	Benz(a)anthracene				228	0		0.018	U	
5	Chrysene				228	0		0.028	U	
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	30346	507.30	0.957		
6	Di-n-octyl Phthalate				149	0d		0.033	U	
6	Benzo(b)fluoranthene				252	0		0.017	U	
6	Benzo(k)fluoranthene				252	0		0.024	U	
6	Benzo(a)pyrene				252	0		0.031	U	
6	Indeno(1,2,3-cd)pyrene				276	0		0.021	U	
6	Dibenz(a,h)anthracene				278	0		0.017	U	
6	Benzo(g,h,i)perylene				276	0		0.019	U	
	1,4-Dinitrobenzene				0	0		0.48	U	NR
	Diphenylamine				0	0		0.19	U	NR
	Dibenzo(a,i)pyrene				0	0		0.48	U	NR
	Dibenzo(a,h)pyrene				0	0		0.48	U	NR
	Dibenzo(a,e)pyrene				0	0		0.48	U	NR
	Perylene				0	0		0.19	U	NR
	Dibenz(a,j)acridine				0	0		0.48	U	NR
	Dibenz(a,h)acridine				0	0		0.48	U	NR
	1,2-Dinitrobenzene				0	0		0.48	U	NR
	Bis(chloromethyl) Ether				0	0		0.48	U	NR
	3-Methylcholanthrene				0	0		0.48	U	NR
	2,3,5,6-Tetrachlorophenol				0	0		0.95	U	NR

Prep Amount:	1060 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F005.D Vial: 4
Acq On : 25 Sep 2014 9:28 pm Operator: TLorr
Sample : KWG1412928-3 | MB Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:38:46 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

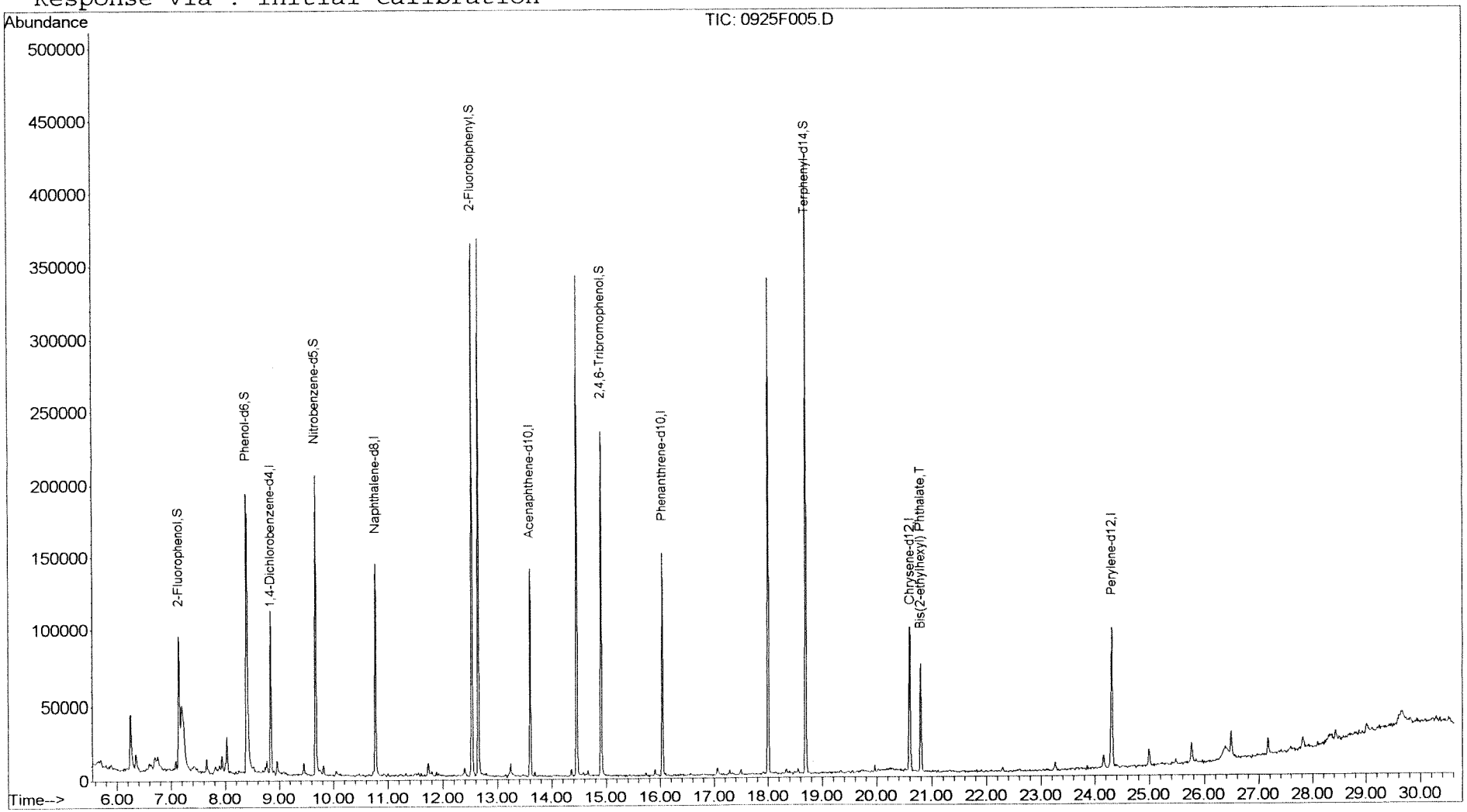
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	18003	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	78997	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.60	164	40932	1000.00	ng/ml	-0.04
60) Phenanthrene-d10	16.03	188	72463	1000.00	ng/ml	-0.05
70) Chrysene-d12	20.61	240	62057	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	71431	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.14	112	63039m	2946.36	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 78.57%			
6) Phenol-d6	8.39	99	84593	3072.81	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 81.94%			
20) Nitrobenzene-d5	9.67	82	64325	2218.03	ng/ml	-0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 88.72%			
40) 2-Fluorobiphenyl	12.52	172	121908	1934.36	ng/ml	-0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 77.37%			
61) 2,4,6-Tribromophenol	14.91	330	29385	2726.58	ng/ml	-0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 72.71%			
73) Terphenyl-d14	18.69	244	136101	2315.60	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 92.62%			
Target Compounds						Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.80	149	30346	507.30	ng/ml	93

(#) = qualifier out of range (m) = manual integration

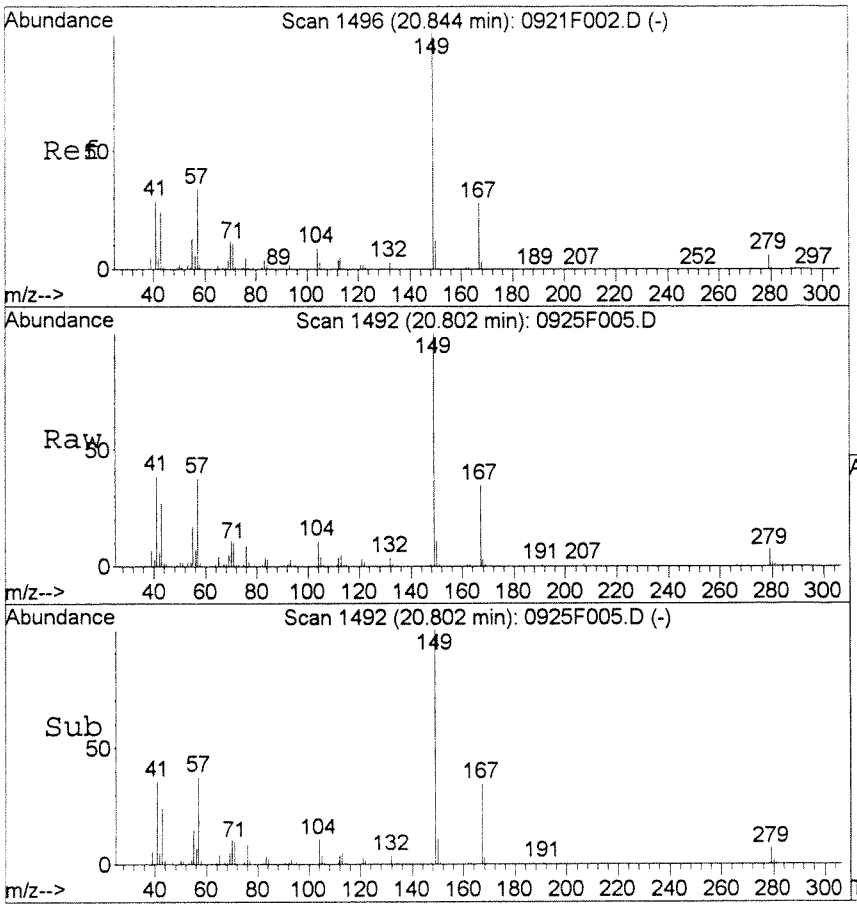
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F005.D Vial: 4
Acq On : 25 Sep 2014 9:28 pm Operator: TLorr
Sample : KWG1412928-3 | MB Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:09 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



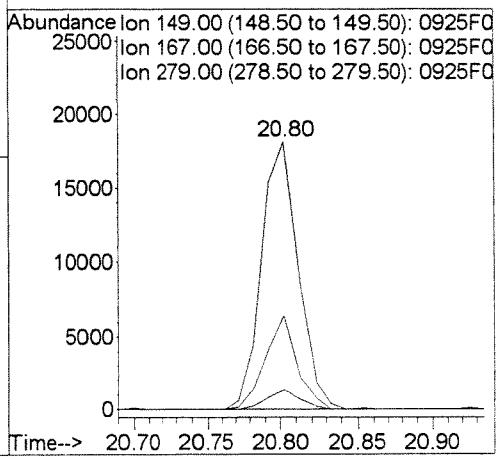
2966



#78
Bis(2-ethylhexyl) Phthalate
Concen: 507.30 ng/ml
RT: 20.80 min Scan# 1492
Delta R.T. -0.06 min
Lab File: 0925F005.D
Acq: 25 Sep 2014 9:28 pm

Tgt Ion:149 Resp: 30346

Ion	Ratio	Lower	Upper
149	100		
167	35.5	1.2	61.2
279	7.4	0.0	38.5

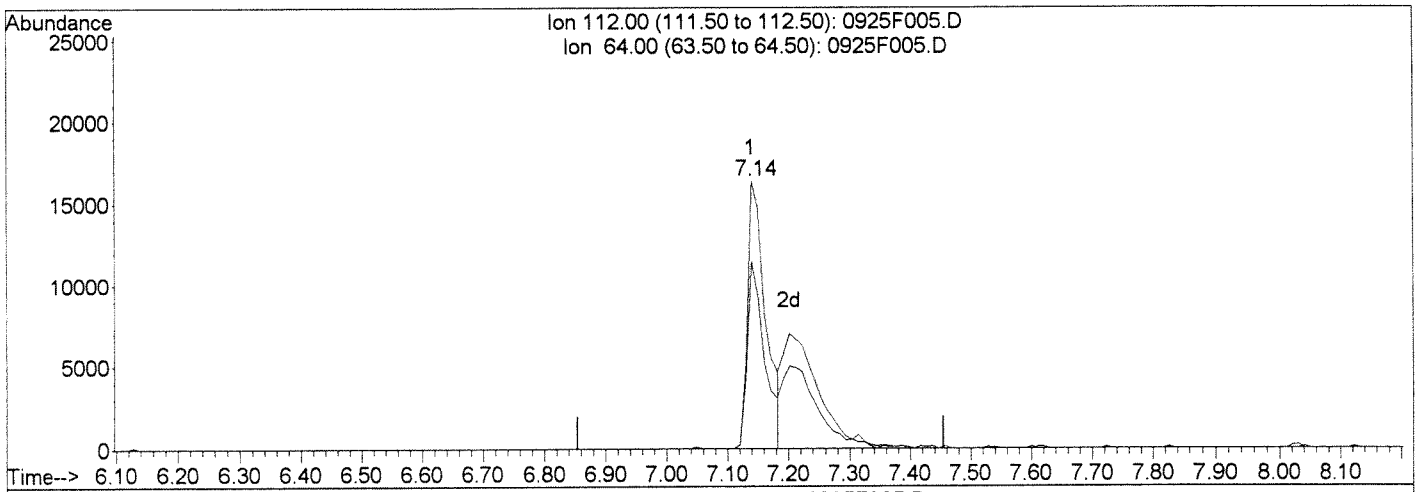


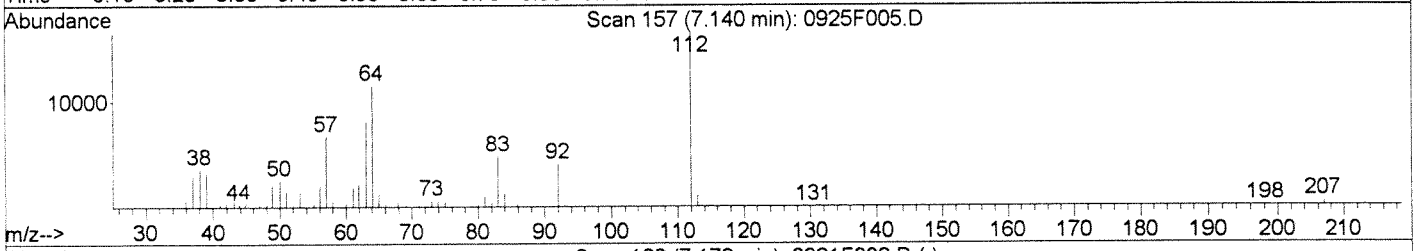
Quantitation Report (Qedit)

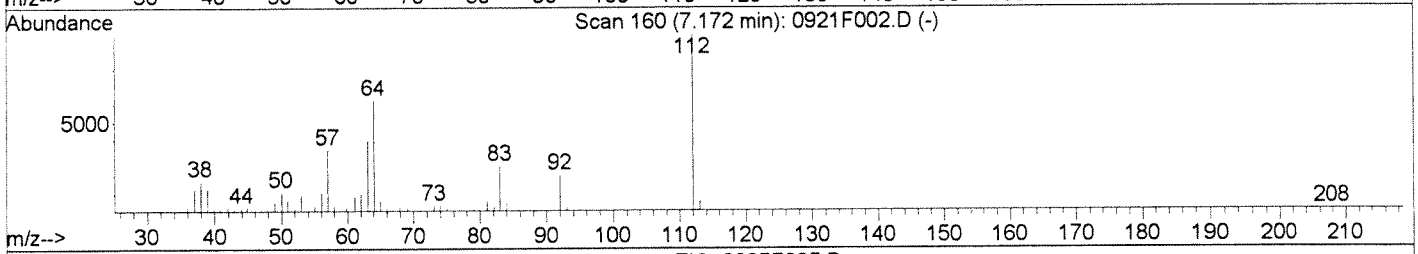
Data File : J:\MS06\DATA\092514\0925F005.D
Acq On : 25 Sep 2014 9:28 pm
Sample : KWG1412928-3 | MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:05 2014

Vial: 4
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration







TIC: 0925F005.D

(4) 2-Fluorophenol (S)

7.14min 1582.20ng/ml

response 33852

Ion	Exp%	Act%
112.00	100	100
64.00	68.80	70.31
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/26/14

10/6/14

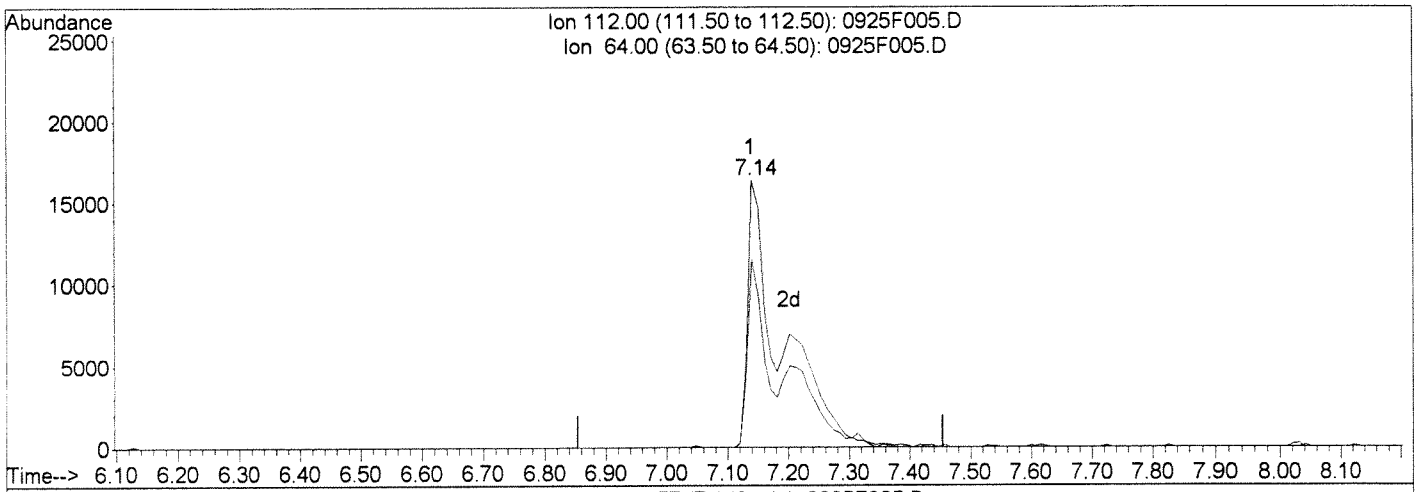
0925F005.D 092414_BNLL.M Fri Sep 26 15:07:19 2014

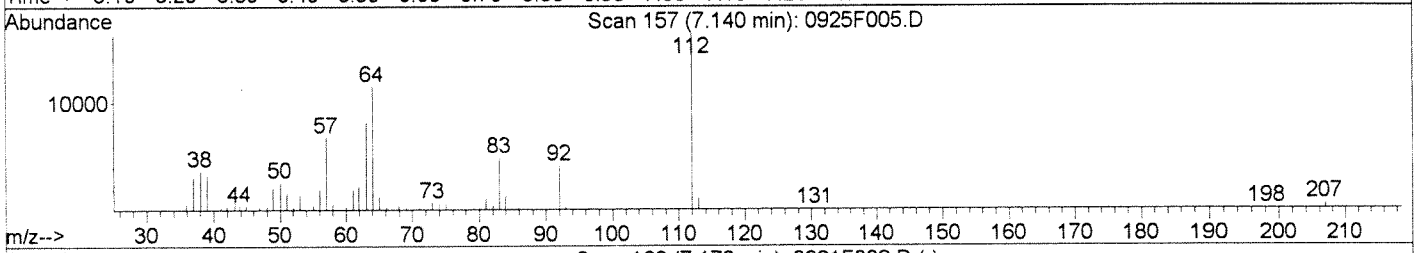
Quantitation Report (Qedit)

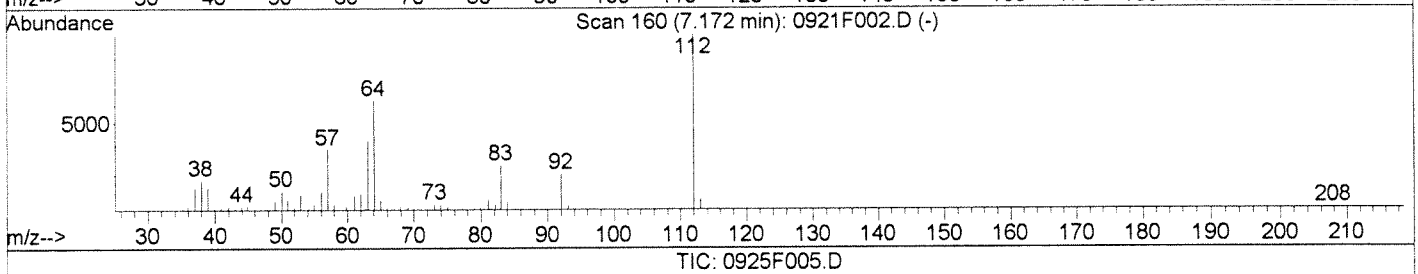
Data File : J:\MS06\DATA\092514\0925F005.D
Acq On : 25 Sep 2014 9:28 pm
Sample : KWG1412928-3 | MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:07 2014

Vial: 4
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration







TIC: 0925F005.D

(4) 2-Fluorophenol (S)

7.14min 2946.36ng/ml m

response 63039

Ion	Exp%	Act%
112.00	100	100
64.00	68.80	70.31
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/26/14

10 1/64 5

0925F005.D 092414_BNLL.M Fri Sep 26 15:07:37 2014

Exception Report

Data File: J:\MS06\DATA\092514\0925F006.D
Lab ID: KWG1412928-1
RunType: LCS
Matrix: WATER

Date Acquired: 09/25/2014 22:08
Date Quantitated: 09/26/2014 15:11
Batch ID: KWG1413176
Analysis Method: 8270D
MethodJoinID: MJ1293

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC

K1409921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Bis(2-chloroisopropyl) Ether	-39.2	NA	30	NR
	N-Nitrosodi-n-propylamine	-41.2	NA	30	"
	Nitrobenzene	-31.1	NA	30	"
	Benzoic Acid	39.2	NA	30	"
Continuing Calibration Recovery	Benzyl Alcohol	47.0	NA	20	NT
	2-Methylphenol	30.1	NA	20	OK, <40%.
	Hexachloroethane	26.3	NA	20	"
	N-Nitrosodi-n-propylamine	36.6	NA	20	REPREP/LCS NR
	4-Methylphenol	46.9	NA	20	LCSOL, no hits >MRL
	Nitrobenzene-d5	36.6	NA	20	OK, <40%.
	Nitrobenzene	30.6	NA	20	" NR

REPREP/LCS 9/26/14

9/26 SEP 2 6 2014

Primary Review: _____

Secondary Review: 09/30/14

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F006.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:08	**Quant Date:**	09/26/2014 15:11	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412928-1			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**		**Receive Date:**	09/25/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
		Prep Date:	09/22/2014		
Prep Ref:	1376883				

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.			**Calibration ID:**	CAL13569
Title:					
Tune Ref:	J:\MS06\DATA\092514\0925F002.D			**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.84	-0.01	152	19411	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	72374	1,000.00	OK
3	Acenaphthene-d10	13.60	-0.01	164	41251	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	62814	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	72448	1,000.00	OK
6	Perylene-d12	24.32	0.00	264	67819	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.14	-0.01	0.00	112	62041	2,689	72	12-109	OK	
1	Phenol-d6	8.38	-0.02	0.00	99	84235	2,838	76	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	66107	2,114	85	26-110	OK	
3	2-Fluorobiphenyl	12.53	0.00	0.00	172	117046	1,843	74	31-94	OK	
4	2,4,6-Tribromophenol	14.91	-0.01	0.00	330	35432	3,793	101	23-127	OK	
5	Terphenyl-d14	18.70	0.00	0.00	244	138940	2,025	81	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.70	-0.01	0.00	42	60271m	2,114	4.23		
1	Pyridine				79	0		1.4	U	
1	Bis(2-chloroethyl) Ether	8.47	-0.01	0.00	93	45645	1,872	3.74		
1	Phenol	8.40	-0.01	0.00	94	63044	1,908	3.82		
1	Aniline	8.39	-0.01	0.00	93	10542	317.47	0.635	J	
1	2-Chlorophenol	8.57		0.00	128	58354	2,082	4.16		
1	1,3-Dichlorobenzene	8.76	-0.01	0.00	146	38231	1,198	2.40		
1	1,4-Dichlorobenzene	8.87	-0.01	0.00	146	40830	1,234	2.47		
1	1,2-Dichlorobenzene	9.09		0.00	146	42453	1,342	2.68		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F006.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:08	**Quant Date:**	09/26/2014 15:11	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412928-1			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.07		0.00	108	32136	2,108	4.22		
1	Bis(2-chloroisopropyl) Ether	9.25	-0.01	0.00	45	90543	1,886	3.77		
1	2-Methylphenol	9.26	-0.01	0.00	107	43518	2,150	4.30		
1	Acetophenone				105	0d		0.19	U	
1	Hexachloroethane	9.58		0.00	117	15528	979.97	1.96		
1	N-Nitrosodi-n-propylamine	9.46		0.00	70	43700	1,870	3.74		
1	4-Methylphenol	9.50		0.00	107	62226	2,091	4.18		
1	Nitrobenzene	9.69	-0.02	0.00	77	68109	2,151	4.30		
2	Isophorone	10.07	-0.02	0.00	82	105529	2,049	4.10		
2	2-Nitrophenol	10.18	-0.01	0.00	139	35780	2,128	4.26		
2	2,4-Dimethylphenol	10.30	-0.01	0.00	122	47774	2,246	4.49		
2	Bis(2-chloroethoxy)methane	10.42	-0.01	0.00	93	62809	2,065	4.13		
2	2,4-Dichlorophenol	10.59	-0.01	0.00	162	56460	2,096	4.19		
2	Benzoic Acid	10.44	-0.06	-0.01	122	4502	455.74	1.1	U	
2	1,2,4-Trichlorobenzene	10.69		0.00	180	40942	1,321	2.64		
2	Naphthalene	10.81		0.00	128	129633	1,613	3.23		
2	4-Chloroaniline	10.91	-0.01	0.00	127	29821	898.92	1.80		
2	Hexachlorobutadiene	11.01	-0.01	0.00	225	17940	830.18	1.66		
2	4-Chloro-3-methylphenol	11.75		0.00	107	55021	2,140	4.28		
2	2-Methylnaphthalene	11.91	-0.01	0.00	141	72994	1,586	3.17		
2	1-Methylnaphthalene	12.07	-0.01	0.00	141	72820	1,724	3.45		
3	Hexachlorocyclopentadiene	12.17		0.00	237	2117	390.74	0.781	J	
3	2,4,6-Trichlorophenol	12.40	-0.01	0.00	196	38519	2,180	4.36		
3	2,4,5-Trichlorophenol	12.49		0.00	196	42964	2,256	4.51		
3	2-Chloronaphthalene	12.70	-0.01	0.00	162	94208	1,789	3.58		
3	2-Nitroaniline	12.90		0.00	65	45003	2,262	4.52		
3	Acenaphthylene	13.37	-0.01	0.00	152	150623	1,932	3.86		
3	Dimethyl Phthalate	13.21	-0.02	0.00	163	145108	2,220	4.44		
3	2,6-Dinitrotoluene	13.31		0.00	165	35040	2,205	4.41		
3	Acenaphthene	13.65	-0.02	0.00	154	89656	1,890	3.78		
3	3-Nitroaniline	13.58	-0.01	0.00	138	29660	1,982	3.96		
3	2,4-Dinitrophenol	13.75	-0.01	0.00	184	6192	1,447	2.89	J	
3	Dibenzofuran	13.94	-0.01	0.00	168	143827	1,907	3.81		
3	4-Nitrophenol	13.97		0.00	109	28728	2,521	5.04		
3	2,4-Dinitrotoluene	13.96		0.00	165	48779	2,175	4.35		
3	2,3,4,6-Tetrachlorophenol	14.18		0.00	232	33456	2,357	4.71		
3	Fluorene	14.51	-0.01	0.00	166	120987	2,047	4.09		
3	4-Chlorophenyl Phenyl Ether	14.53	-0.01	0.00	204	64896	2,013	4.03		
3	Diethyl Phthalate	14.38		0.00	149	161043	2,213	4.43		
3	4-Nitroaniline	14.58	-0.02	0.00	138	29977	2,164	4.33		
3	2-Methyl-4,6-dinitrophenol	14.63		0.00	198	17312	1,721	3.44		
3	N-Nitrosodiphenylamine	14.74		0.00	169	85937	2,204	4.41		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F006.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:08	**Quant Date:**	09/26/2014 15:11	**Vial:**	5
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1412928-1			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Azobenzene	14.79		0.00	77	130748	1,927	3.85		
4	4-Bromophenyl Phenyl Ether	15.33	-0.01	0.00	248	37345	2,275	4.55		
4	Hexachlorobenzene	15.40	-0.01	0.00	284	44705	2,360	4.72		
4	Pentachlorophenol	15.76		0.00	266	17683	2,070	4.14		
4	Phenanthrene	16.08		0.00	178	161044	2,271	4.54		
4	Anthracene	16.16		0.00	178	164051	2,268	4.54		
4	Carbazole	16.46		0.00	167	154372	2,324	4.65		
4	Di-n-butyl Phthalate	17.07		0.00	149	235907	2,497	4.99		
4	Fluoranthene	18.03	-0.01	0.00	202	188255	2,628	5.26		
5	Benzidine				184	0		2.0	U	
5	Pyrene	18.40	-0.01	0.00	202	206835	2,135	4.27		
5	Butyl Benzyl Phthalate	19.56		0.00	149	114469	2,292	4.58		
5	3,3'-Dichlorobenzidine	20.58	-0.02	0.00	252	41182	1,307	2.61		
5	Benz(a)anthracene	20.59	-0.01	0.00	228	195622	2,315	4.63		
5	Chrysene	20.67	-0.01	0.00	228	184136	2,326	4.65		
5	Bis(2-ethylhexyl) Phthalate	20.81		0.00	149	195368	2,798	5.60		
6	Di-n-octyl Phthalate	22.61	-0.01	0.00	149	271333	2,274	4.55		
6	Benzo(b)fluoranthene	23.38	-0.01	0.00	252	182326	2,363	4.73		
6	Benzo(k)fluoranthene	23.45	-0.02	0.00	252	173402	2,210	4.42		
6	Benzo(a)pyrene	24.18	-0.02	0.00	252	177544	2,363	4.73		
6	Indeno(1,2,3-cd)pyrene	26.58	-0.01	0.00	276	156328	2,140	4.28		
6	Dibenz(a,h)anthracene	26.64	-0.01	0.00	278	166078	2,174	4.35		
6	Benzo(g,h,i)perylene	27.05	-0.01	0.00	276	167642	2,136	4.27		
	1,4-Dinitrobenzene				0	0		0.50	U	NR
	Diphenylamine				0	0		0.20	U	NR
	Dibenzo(a,i)pyrene				0	0		0.50	U	NR
	Dibenzo(a,h)pyrene				0	0		0.50	U	NR
	Dibenzo(a,e)pyrene				0	0		0.50	U	NR
	Perylene				0	0		0.20	U	NR
	Dibenz(a,j)acridine				0	0		0.50	U	NR
	Dibenz(a,h)acridine				0	0		0.50	U	NR
	1,2-Dinitrobenzene				0	0		0.50	U	NR
	Bis(chloromethyl) Ether				0	0		0.50	U	NR
	3-Methylcholanthrene				0	0		0.50	U	NR
	2,3,5,6-Tetrachlorophenol				0	0		1.0	U	NR

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F006.D Vial: 5
Acq On : 25 Sep 2014 10:08 pm Operator: TLorr
Sample : KWG1412928-1 | LCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:10:20 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.84	152	19411	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	72374	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.60	164	41251	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	62814	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.61	240	72448	1000.00	ng/ml	-0.05
79) Perylene-d12	24.32	264	67819	1000.00	ng/ml	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.14	112	62041	2689.38	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 71.72%			
6) Phenol-d6	8.38	99	84235	2837.86	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 75.68%			
20) Nitrobenzene-d5	9.67	82	66107	2114.13	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 84.57%			
40) 2-Fluorobiphenyl	12.53	172	117046	1842.85	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 73.71%			
61) 2,4,6-Tribromophenol	14.91	330	35432	3792.69	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 101.14%			
73) Terphenyl-d14	18.70	244	138940	2024.85	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 80.99%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.70	42	60271m	2114.33	ng/ml	
5) Bis(2-chloroethyl) Ether	8.47	93	45645	1871.93	ng/ml	95
7) Phenol	8.40	94	63044	1908.33	ng/ml	86
8) Aniline	8.39	93	10542	317.47	ng/ml#	1
9) 2-Chlorophenol	8.57	128	58354	2082.19	ng/ml	98
10) 1,3-Dichlorobenzene	8.76	146	38231	1198.32	ng/ml	96
11) 1,4-Dichlorobenzene	8.87	146	40830	1234.08	ng/ml	97
12) 1,2-Dichlorobenzene	9.09	146	42453	1341.64	ng/ml	97
13) Benzyl Alcohol	9.07	108	32136	2107.88	ng/ml	81
14) Bis(2-chloroisopropyl) Eth	9.25	45	90543	1886.13	ng/ml	91
15) 2-Methylphenol	9.26	107	43518	2149.80	ng/ml	98
17) Hexachloroethane	9.58	117	15528	979.97	ng/ml	97
18) N-Nitrosodi-n-propylamine	9.46	70	43700	1870.29	ng/ml	87
19) 4-Methylphenol	9.50	107	62226	2091.09	ng/ml	97
21) Nitrobenzene	9.69	77	68109	2150.53	ng/ml	96
23) Isophorone	10.07	82	105529	2048.95	ng/ml	99
24) 2-Nitrophenol	10.18	139	35780	2127.60	ng/ml	87
25) 2,4-Dimethylphenol	10.30	122	47774	2246.05	ng/ml	97
26) Bis(2-chloroethoxy)methane	10.42	93	62809	2064.72	ng/ml	99
27) 2,4-Dichlorophenol	10.59	162	56460	2096.06	ng/ml	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F006.D Vial: 5
Acq On : 25 Sep 2014 10:08 pm Operator: TLorr
Sample : KWG1412928-1 | LCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:10:20 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28) Benzoic Acid	10.44	122	4502	455.74	ng/ml	93
29) 1,2,4-Trichlorobenzene	10.69	180	40942	1321.15	ng/ml	96
30) Naphthalene	10.81	128	129633	1612.52	ng/ml	98
31) 4-Chloroaniline	10.91	127	29821	898.92	ng/ml	96
32) Hexachlorobutadiene	11.01	225	17940	830.18	ng/ml	96
33) 4-Chloro-3-methylphenol	11.75	107	55021	2139.71	ng/ml	95
34) 2-Methylnaphthalene	11.91	141	72994	1586.31	ng/ml	95
35) 1-Methylnaphthalene	12.07	141	72820	1724.04	ng/ml	95
37) Hexachlorocyclopentadiene	12.17	237	2117	390.74	ng/ml	76
38) 2,4,6-Trichlorophenol	12.40	196	38519	2180.46	ng/ml	96
39) 2,4,5-Trichlorophenol	12.49	196	42964	2255.60	ng/ml	97
41) 2-Chloronaphthalene	12.70	162	94208	1788.53	ng/ml	99
42) 2-Nitroaniline	12.90	65	45003	2262.30	ng/ml	99
43) Acenaphthylene	13.37	152	150623	1932.14	ng/ml	99
44) Dimethyl Phthalate	13.21	163	145108	2219.99	ng/ml	97
45) 2,6-Dinitrotoluene	13.31	165	35040	2205.44	ng/ml	97
46) Acenaphthene	13.65	154	89656	1890.33	ng/ml	97
47) 3-Nitroaniline	13.58	138	29660	1981.89	ng/ml	96
48) 2,4-Dinitrophenol	13.75	184	6192	1446.90	ng/ml#	65
49) Dibenzofuran	13.94	168	143827	1906.62	ng/ml	93
50) 4-Nitrophenol	13.97	109	28728	2520.73	ng/ml#	2
51) 2,4-Dinitrotoluene	13.96	165	48779	2175.28	ng/ml	92
52) 2,3,4,6-Tetrachlorophenol	14.18	232	33456	2357.32	ng/ml	98
53) Fluorene	14.51	166	120987	2046.59	ng/ml	99
54) 4-Chlorophenyl Phenyl Ethe	14.53	204	64896	2013.21	ng/ml	98
55) Diethyl Phthalate	14.38	149	161043	2213.12	ng/ml	99
56) 4-Nitroaniline	14.58	138	29977	2164.10	ng/ml	91
57) 2-Methyl-4,6-dinitrophenol	14.63	198	17312	1720.66	ng/ml	72
58) N-Nitrosodiphenylamine	14.74	169	85937	2203.74	ng/ml	99
59) Azobenzene	14.79	77	130748	1927.27	ng/ml	97
62) 4-Bromophenyl Phenyl Ether	15.33	248	37345	2275.20	ng/ml	93
63) Hexachlorobenzene	15.40	284	44705	2360.25	ng/ml	89
64) Pentachlorophenol	15.76	266	17683	2070.32	ng/ml	91
65) Phenanthrene	16.08	178	161044	2271.08	ng/ml	99
66) Anthracene	16.16	178	164051	2268.13	ng/ml	99
67) Carbazole	16.46	167	154372	2323.82	ng/ml	98
68) Di-n-butyl Phthalate	17.07	149	235907	2497.34	ng/ml	98
69) Fluoranthene	18.03	202	188255	2628.36	ng/ml	100
72) Pyrene	18.40	202	206835	2135.21	ng/ml	98
74) Butyl Benzyl Phthalate	19.56	149	114469	2292.31	ng/ml	99
75) 3,3'-Dichlorobenzidine	20.58	252	41182	1307.12	ng/ml	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F006.D Vial: 5
Acq On : 25 Sep 2014 10:08 pm Operator: TLorr
Sample : KWG1412928-1 | LCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:10:20 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76)	Benz(a)anthracene	20.59	228	195622	2315.27	ng/ml	99
77)	Chrysene	20.67	228	184136	2325.95	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.81	149	195368	2797.55	ng/ml	99
80)	Di-n-octyl Phthalate	22.61	149	271333	2273.60	ng/ml	98
81)	Benzo(b)fluoranthene	23.38	252	182326	2362.50	ng/ml	95
82)	Benzo(k)fluoranthene	23.45	252	173402	2209.98	ng/ml	97
83)	Benzo(a)pyrene	24.18	252	177544	2362.83	ng/ml	97
84)	Indeno(1,2,3-cd)pyrene	26.58	276	156328	2140.10	ng/ml	96
85)	Dibenz(a,h)anthracene	26.64	278	166078	2173.64	ng/ml	96
86)	Benzo(g,h,i)perylene	27.05	276	167642	2135.93	ng/ml	97

(#) = qualifier out of range (m) = manual integration

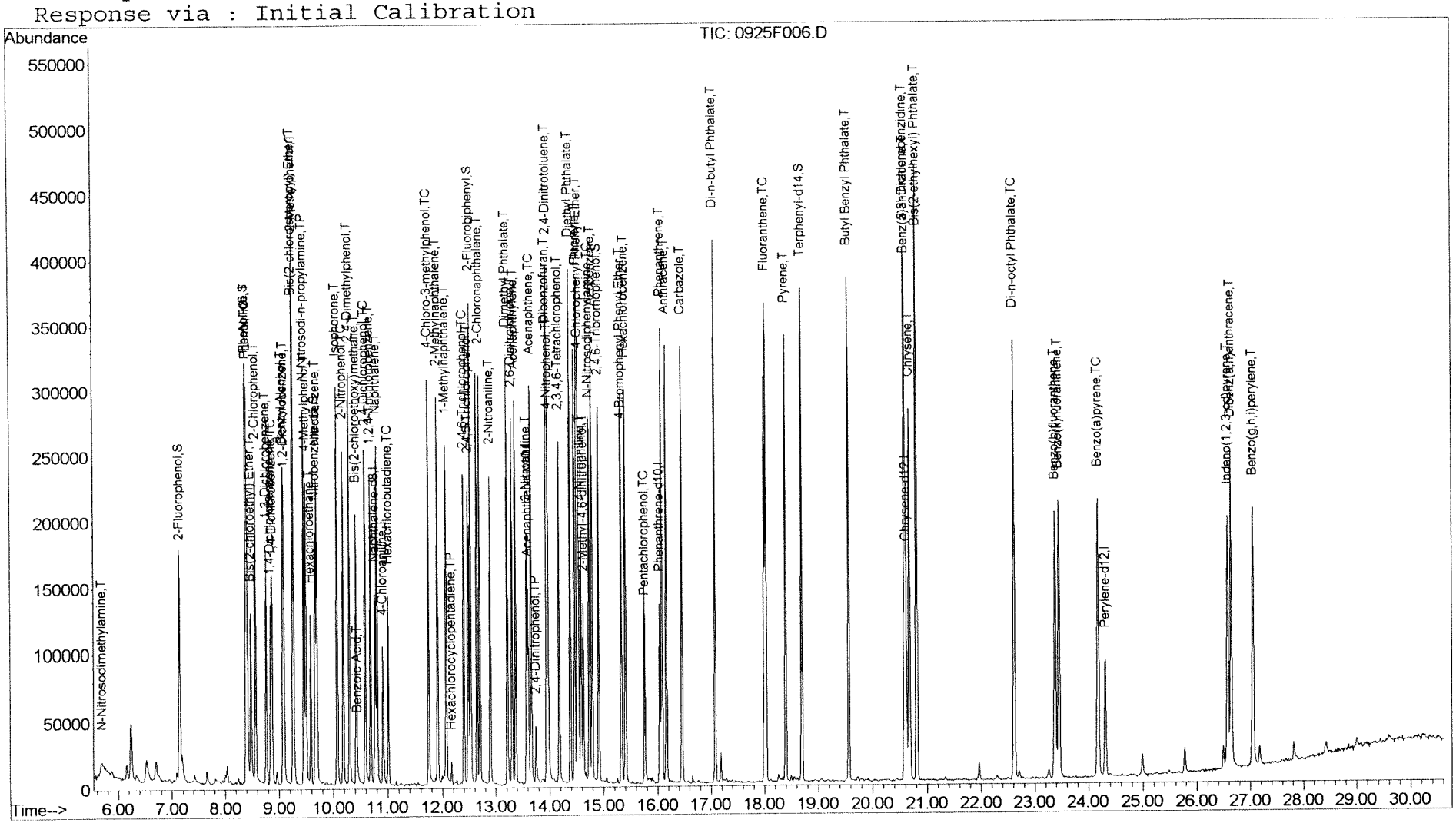
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F006.D
Acq On : 25 Sep 2014 10:08 pm
Sample : KWG1412928-1 | LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:11 2014

Vial: 5
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration



2977

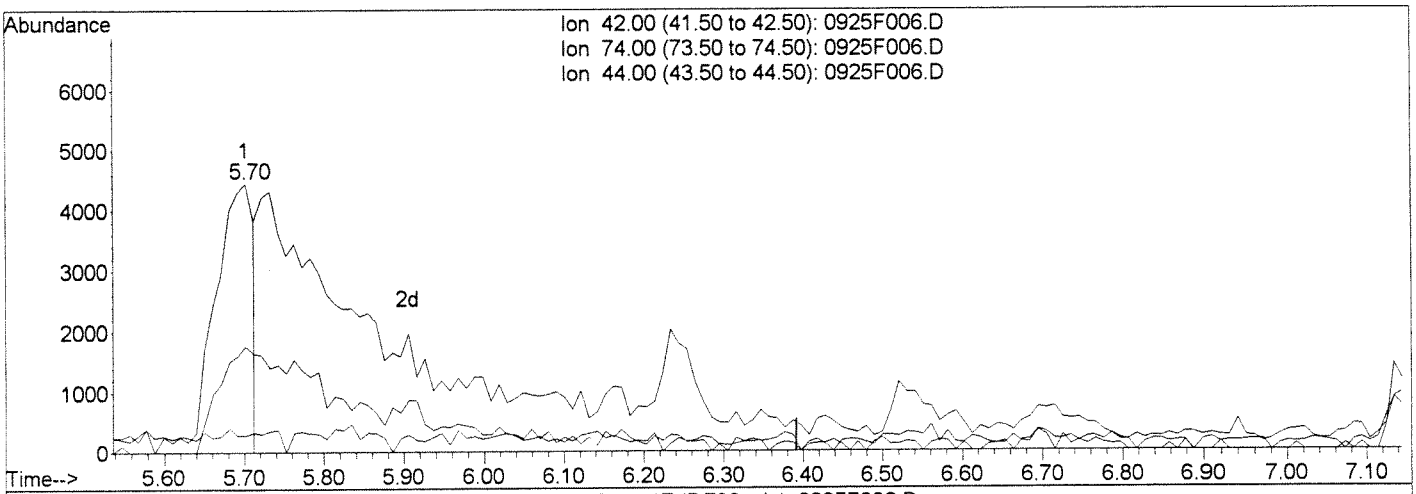
Quantitation Report (Qedit)

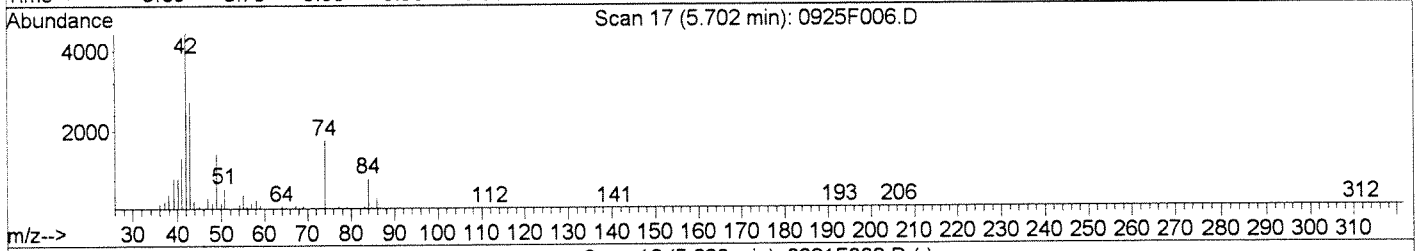
Data File : J:\MS06\DATA\092514\0925F006.D
Acq On : 25 Sep 2014 10:08 pm
Sample : KWG1412928-1 | LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:10 2014

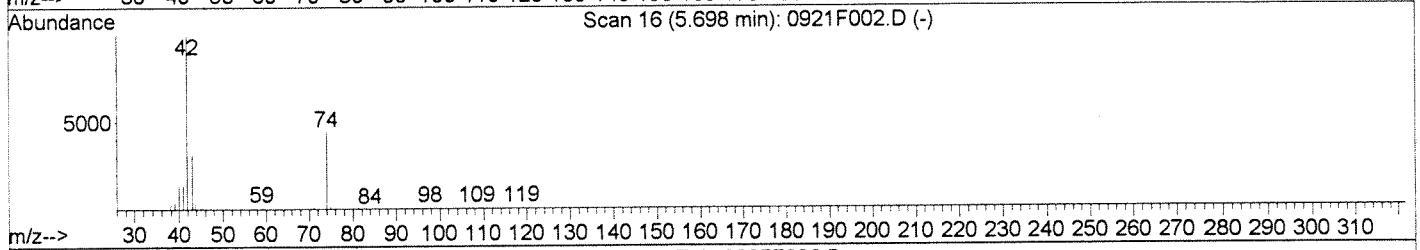
Vial: 5
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F006.D

(2) N-Nitrosodimethylamine (T)

5.70min 536.20ng/ml

response 15285

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	39.78
44.00	4.70	0.99
0.00	0.00	0.00

Manual Integration:

Before

09/26/14

10/1/14

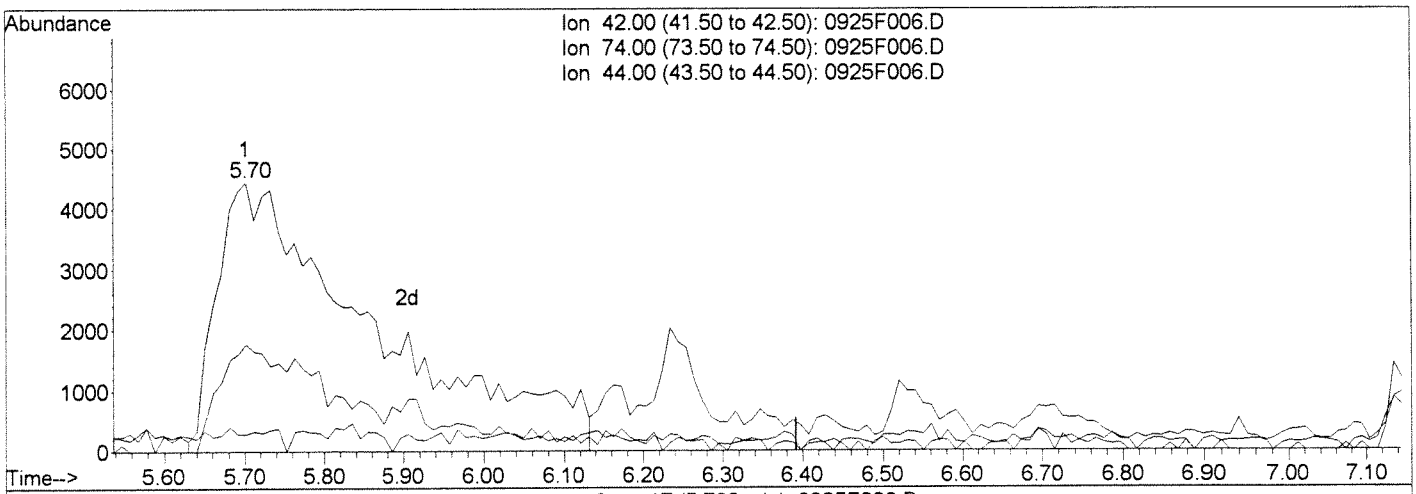
0925F006.D 092414_BNLL.M Fri Sep 26 15:10:31 2014

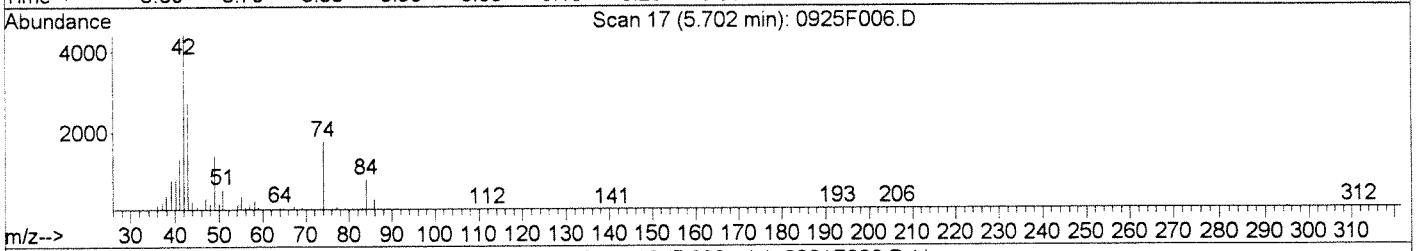
Quantitation Report (Qedit)

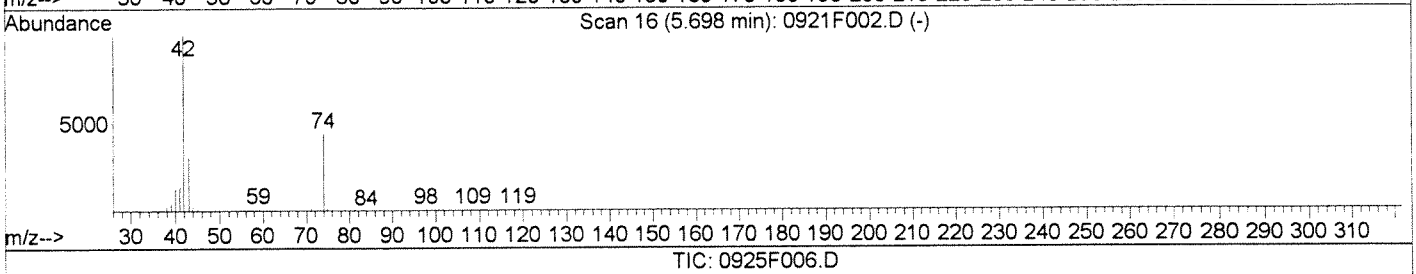
Data File : J:\MS06\DATA\092514\0925F006.D
Acq On : 25 Sep 2014 10:08 pm
Sample : KWG1412928-1 | LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:10 2014

Vial: 5
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F006.D

(2) N-Nitrosodimethylamine (T)

5.70min 2114.33ng/ml m

response 60271

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	39.78
44.00	4.70	6.49
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/26/14

10/1/14

0925F006.D 092414_BNLL.M Fri Sep 26 15:10:58 2014

Exception Report

Data File: J:\MS06\DATA\092514\0925F007.D
Lab ID: KWG1412928-2
RunType: DLCS
Matrix: WATER

Date Acquired: 09/25/2014 22:47
Date Quantitated: 09/26/2014 15:13
Batch ID: KWG1413176
Analysis Method: 8270D
MethodJoinID: MJ1293

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC

K1409921

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Bis(2-chloroisopropyl) Ether	-39.2	NA	30	NA
	N-Nitrosodi-n-propylamine	-41.2	NA	30	
	Nitrobenzene	-31.1	NA	30	
	Benzoic Acid	39.2	NA	30	
Continuing Calibration Recovery	Benzyl Alcohol	47.0	NA	20	NT
	2-Methylphenol	30.1	NA	20	OK, <40%
	Hexachloroethane	26.3	NA	20	
	N-Nitrosodi-n-propylamine	36.6	NA	20	NA Re-prep/run
	4-Methylphenol	46.9	NA	20	LCS OK, results > MRL
	Nitrobenzene-d5	36.6	NA	20	OK, <40%
	Nitrobenzene	30.6	NA	20	NA Re-prep/run

Primary Review: SEP 26 2014

Secondary Review: 10/6/14

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F007.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:47	**Quant Date:**	09/26/2014 15:13	**Vial:**	6
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412928-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**		**Receive Date:**	09/25/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	KWG1412928	**Report Group:**	
Analysis Method:	8270D	**Prep Method:**	EPA 3520C		
		Prep Date:	09/22/2014		
Prep Ref:	1376884				

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.	**Calibration ID:**	CAL13569
Title:			
Tune Ref:	J:\MS06\DATA\092514\0925F002.D	**Method ID:**	MJ1293
MB Ref:	J:\MS06\DATA\092514\0925F005.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	0.00	152	15818	1,000.00	OK
2	Naphthalene-d8	10.77	0.00	136	77250	1,000.00	OK
3	Acenaphthene-d10	13.61	0.00	164	40608	1,000.00	OK
4	Phenanthrene-d10	16.04	0.00	188	70380	1,000.00	OK
5	Chrysene-d12	20.61	-0.01	240	65820	1,000.00	OK
6	Perylene-d12	24.31	-0.01	264	71511	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.14	-0.01	0.00	112	46445	2,471	66	12-109	OK	
1	Phenol-d6	8.39	-0.01	0.00	99	68299	2,824	75	23-106	OK	
1	Nitrobenzene-d5	9.67	-0.01	0.00	82	58832	2,309	92	26-110	OK	
3	2-Fluorobiphenyl	12.52	-0.01	0.00	172	109161	1,746	70	31-94	OK	
4	2,4,6-Tribromophenol	14.91	-0.01	0.00	330	32878	3,141	84	23-127	OK	
5	Terphenyl-d14	18.69	-0.01	0.00	244	118615	1,903	76	40-127	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.66	-0.05	-0.01	42	52066m	2,241	4.48		
1	Pyridine				79	0		1.4	U	
1	Bis(2-chloroethyl) Ether	8.47	-0.01	0.00	93	38826	1,954	3.91		
1	Phenol	8.41		0.00	94	47221	1,754	3.51		
1	Aniline	8.40		0.00	93	11664	431.05	0.862	J	
1	2-Chlorophenol	8.56	-0.01	0.00	128	43574	1,908	3.82		
1	1,3-Dichlorobenzene	8.76	-0.01	0.00	146	28260	1,087	2.17		
1	1,4-Dichlorobenzene	8.87	-0.01	0.00	146	32302	1,198	2.40		
1	1,2-Dichlorobenzene	9.08	-0.01	0.00	146	33821	1,312	2.62		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F007.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:47	**Quant Date:**	09/26/2014 15:13	**Vial:**	6
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412928-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.07		0.00	108	30754	2,475	4.95		
1	Bis(2-chloroisopropyl) Ether	9.26		0.00	45	77757	1,988	3.98		
1	2-Methylphenol	9.26	-0.01	0.00	107	37073	2,247	4.49		
1	Acetophenone				105	0d		0.19	U	
1	Hexachloroethane	9.59	0.01	0.00	117	13970	1,082	2.16		
1	N-Nitrosodi-n-propylamine	9.45	-0.01	0.00	70	43051	2,261	4.52		
1	4-Methylphenol	9.49	-0.01	0.00	107	58417	2,409	4.82		
1	Nitrobenzene	9.70	-0.01	0.00	77	59969	2,324	4.65		
2	Isophorone	10.07	-0.02	0.00	82	104707	1,905	3.81		
2	2-Nitrophenol	10.18	-0.01	0.00	139	34054	1,897	3.79		
2	2,4-Dimethylphenol	10.30	-0.01	0.00	122	44889	1,977	3.95	J	
2	Bis(2-chloroethoxy)methane	10.42	-0.01	0.00	93	60818	1,873	3.75		
2	2,4-Dichlorophenol	10.59	-0.01	0.00	162	55173	1,919	3.84		
2	Benzoic Acid	10.44	-0.06	-0.01	122	5008	496.93	1.1	U	
2	1,2,4-Trichlorobenzene	10.69		0.00	180	41232	1,247	2.49		
2	Naphthalene	10.80	-0.01	0.00	128	130670	1,523	3.05		
2	4-Chloroaniline	10.92		0.00	127	52602	1,486	2.97		
2	Hexachlorobutadiene	11.01	-0.01	0.00	225	19840	860.15	1.72		
2	4-Chloro-3-methylphenol	11.74	-0.01	0.00	107	51137	1,863	3.73		
2	2-Methylnaphthalene	11.92		0.00	141	71689	1,460	2.92		
2	1-Methylnaphthalene	12.07	-0.01	0.00	141	71231	1,580	3.16		
3	Hexachlorocyclopentadiene	12.17		0.00	237	1720	374.53	0.749	J	
3	2,4,6-Trichlorophenol	12.40	-0.01	0.00	196	34638	1,992	3.98		
3	2,4,5-Trichlorophenol	12.48	-0.01	0.00	196	37270	1,988	3.98		
3	2-Chloronaphthalene	12.70	-0.01	0.00	162	88471	1,706	3.41		
3	2-Nitroaniline	12.90		0.00	65	40268	2,056	4.11		
3	Acenaphthylene	13.37	-0.01	0.00	152	137562	1,793	3.59		
3	Dimethyl Phthalate	13.22	-0.01	0.00	163	132580	2,060	4.12		
3	2,6-Dinitrotoluene	13.30	-0.01	0.00	165	30844	1,972	3.94		
3	Acenaphthene	13.66	-0.01	0.00	154	83610	1,791	3.58		
3	3-Nitroaniline	13.58	-0.01	0.00	138	29666	2,014	4.03		
3	2,4-Dinitrophenol	13.75	-0.01	0.00	184	6449	1,501	3.00	J	
3	Dibenzofuran	13.94	-0.01	0.00	168	131169	1,766	3.53		
3	4-Nitrophenol	13.97		0.00	109	28533	2,543	5.09		
3	2,4-Dinitrotoluene	13.97	0.01	0.00	165	43915	1,989	3.98		
3	2,3,4,6-Tetrachlorophenol	14.17	-0.01	0.00	232	29924	2,142	4.28		
3	Fluorene	14.51	-0.01	0.00	166	111060	1,908	3.82		
3	4-Chlorophenyl Phenyl Ether	14.53	-0.01	0.00	204	61814	1,948	3.90		
3	Diethyl Phthalate	14.37	-0.01	0.00	149	151067	2,109	4.22		
3	4-Nitroaniline	14.58	-0.02	0.00	138	29919	2,194	4.39		
3	2-Methyl-4,6-dinitrophenol	14.62	-0.01	0.00	198	18316	1,834	3.67		
3	N-Nitrosodiphenylamine	14.73	-0.01	0.00	169	81130	2,113	4.23		

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d: Compound manually deleted
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?: Insufficient information to determine acceptance
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Data File:	J:\MS06\DATA\092514\0925F007.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 22:47	**Quant Date:**	09/26/2014 15:13	**Vial:**	6
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1412928-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Azobenzene	14.78	-0.01	0.00	77	127966	1,916	3.83		
4	4-Bromophenyl Phenyl Ether	15.33	-0.01	0.00	248	36851	2,004	4.01		
4	Hexachlorobenzene	15.41		0.00	284	43727	2,060	4.12		
4	Pentachlorophenol	15.76		0.00	266	17696	1,889	3.78		
4	Phenanthrene	16.07	-0.01	0.00	178	163242	2,055	4.11		
4	Anthracene	16.17	0.01	0.00	178	166999	2,061	4.12		
4	Carbazole	16.45	-0.01	0.00	167	162309	2,181	4.36		
4	Di-n-butyl Phthalate	17.08	0.01	0.00	149	238843	2,257	4.51		
4	Fluoranthene	18.03	-0.01	0.00	202	175369	2,185	4.37		
5	Benzidine				184	0		2.0	U	
5	Pyrene	18.40	-0.01	0.00	202	189279	2,151	4.30		
5	Butyl Benzyl Phthalate	19.56		0.00	149	98372	2,168	4.34		
5	3,3'-Dichlorobenzidine	20.59	-0.01	0.00	252	34141	1,193	2.39		
5	Benz(a)anthracene	20.59	-0.01	0.00	228	173868	2,265	4.53		
5	Chrysene	20.67	-0.01	0.00	228	165235	2,297	4.59		
5	Bis(2-ethylhexyl) Phthalate	20.80	-0.01	0.00	149	227426	3,585	7.17		
6	Di-n-octyl Phthalate	22.61	-0.01	0.00	149	280572	2,230	4.46		
6	Benzo(b)fluoranthene	23.38	-0.01	0.00	252	182744	2,246	4.49		
6	Benzo(k)fluoranthene	23.45	-0.02	0.00	252	183439	2,217	4.43		
6	Benzo(a)pyrene	24.18	-0.02	0.00	252	180369	2,277	4.55		
6	Indeno(1,2,3-cd)pyrene	26.57	-0.02	0.00	276	163268**m**	2,120	4.24		
6	Dibenz(a,h)anthracene	26.64	-0.01	0.00	278	170250	2,113	4.23		
6	Benzo(g,h,i)perylene	27.05	-0.01	0.00	276	176425	2,132	4.26		
	1,4-Dinitrobenzene				0	0		0.50	U	NR
	Diphenylamine				0	0		0.20	U	NR
	Dibenzo(a,i)pyrene				0	0		0.50	U	NR
	Dibenzo(a,h)pyrene				0	0		0.50	U	NR
	Dibenzo(a,e)pyrene				0	0		0.50	U	NR
	Perylene				0	0		0.20	U	NR
	Dibenz(a,j)acridine				0	0		0.50	U	NR
	Dibenz(a,h)acridine				0	0		0.50	U	NR
	1,2-Dinitrobenzene				0	0		0.50	U	NR
	Bis(chloromethyl) Ether				0	0		0.50	U	NR
	3-Methylcholanthrene				0	0		0.50	U	NR
	2,3,5,6-Tetrachlorophenol				0	0		1.0	U	NR

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
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m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F007.D Vial: 6
Acq On : 25 Sep 2014 10:47 pm Operator: TLorr
Sample : KWG1412928-2 | DLCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:38:50 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	15818	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	77250	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	40608	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	70380	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.61	240	65820	1000.00	ng/ml	-0.06
79) Perylene-d12	24.31	264	71511	1000.00	ng/ml	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	7.14	112	46445	2470.64	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 65.88%			
6) Phenol-d6	8.39	99	68299	2823.64	ng/ml	-0.02
Spiked Amount 3750.000	Range 43 - 128		Recovery = 75.30%			
20) Nitrobenzene-d5	9.67	82	58832	2308.85	ng/ml	-0.03
Spiked Amount 2500.000	Range 30 - 139		Recovery = 92.35%			
40) 2-Fluorobiphenyl	12.52	172	109161	1745.92	ng/ml	-0.04
Spiked Amount 2500.000	Range 37 - 126		Recovery = 69.84%			
61) 2,4,6-Tribromophenol	14.91	330	32878	3140.97	ng/ml	-0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 83.76%			
73) Terphenyl-d14	18.69	244	118615	1902.72	ng/ml	-0.04
Spiked Amount 2500.000	Range 54 - 158		Recovery = 76.11%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.66	42	52066m	2241.37	ng/ml	
5) Bis(2-chloroethyl) Ether	8.47	93	38826	1953.96	ng/ml	97
7) Phenol	8.41	94	47221	1754.05	ng/ml	83
8) Aniline	8.40	93	11664	431.05	ng/ml#	1
9) 2-Chlorophenol	8.56	128	43574	1907.97	ng/ml	93
10) 1,3-Dichlorobenzene	8.76	146	28260	1086.99	ng/ml	96
11) 1,4-Dichlorobenzene	8.87	146	32302	1198.09	ng/ml	99
12) 1,2-Dichlorobenzene	9.08	146	33821	1311.62	ng/ml	97
13) Benzyl Alcohol	9.07	108	30754	2475.44	ng/ml	91
14) Bis(2-chloroisopropyl) Eth	9.26	45	77757	1987.71	ng/ml	93
15) 2-Methylphenol	9.26	107	37073	2247.42	ng/ml	95
17) Hexachloroethane	9.59	117	13970	1081.91	ng/ml	87
18) N-Nitrosodi-n-propylamine	9.45	70	43051	2261.03	ng/ml	86
19) 4-Methylphenol	9.49	107	58417	2409.00	ng/ml	94
21) Nitrobenzene	9.70	77	59969	2323.62	ng/ml	98
23) Isophorone	10.07	82	104707	1904.67	ng/ml	96
24) 2-Nitrophenol	10.18	139	34054	1897.15	ng/ml	84
25) 2,4-Dimethylphenol	10.30	122	44889	1977.21	ng/ml	99
26) Bis(2-chloroethoxy)methane	10.42	93	60818	1873.07	ng/ml	98
27) 2,4-Dichlorophenol	10.59	162	55173	1918.99	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F007.D Vial: 6
Acq On : 25 Sep 2014 10:47 pm Operator: TLorr
Sample : KWG1412928-2 | DLCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:38:50 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28) Benzoic Acid	10.44	122	5008	496.93	ng/ml	99
29) 1,2,4-Trichlorobenzene	10.69	180	41232	1246.53	ng/ml	98
30) Naphthalene	10.80	128	130670	1522.82	ng/ml	100
31) 4-Chloroaniline	10.92	127	52602	1485.55	ng/ml	97
32) Hexachlorobutadiene	11.01	225	19840	860.15	ng/ml	96
33) 4-Chloro-3-methylphenol	11.74	107	51137	1863.14	ng/ml	89
34) 2-Methylnaphthalene	11.92	141	71689	1459.61	ng/ml	96
35) 1-Methylnaphthalene	12.07	141	71231	1579.98	ng/ml	95
37) Hexachlorocyclopentadiene	12.17	237	1720	374.53	ng/ml	95
38) 2,4,6-Trichlorophenol	12.40	196	34638	1991.81	ng/ml	99
39) 2,4,5-Trichlorophenol	12.48	196	37270	1987.65	ng/ml	99
41) 2-Chloronaphthalene	12.70	162	88471	1706.21	ng/ml	96
42) 2-Nitroaniline	12.90	65	40268	2056.32	ng/ml	90
43) Acenaphthylene	13.37	152	137562	1792.53	ng/ml	99
44) Dimethyl Phthalate	13.22	163	132580	2060.45	ng/ml	99
45) 2,6-Dinitrotoluene	13.30	165	30844	1972.08	ng/ml	83
46) Acenaphthene	13.66	154	83610	1790.77	ng/ml	97
47) 3-Nitroaniline	13.58	138	29666	2013.68	ng/ml	97
48) 2,4-Dinitrophenol	13.75	184	6449	1501.47	ng/ml	69
49) Dibenzofuran	13.94	168	131169	1766.35	ng/ml	89
50) 4-Nitrophenol	13.97	109	28533	2542.82	ng/ml#	1
51) 2,4-Dinitrotoluene	13.97	165	43915	1989.38	ng/ml	88
52) 2,3,4,6-Tetrachlorophenol	14.17	232	29924	2141.84	ng/ml	84
53) Fluorene	14.51	166	111060	1908.42	ng/ml	98
54) 4-Chlorophenyl Phenyl Ethe	14.53	204	61814	1947.96	ng/ml	94
55) Diethyl Phthalate	14.37	149	151067	2108.90	ng/ml	98
56) 4-Nitroaniline	14.58	138	29919	2194.11	ng/ml	91
57) 2-Methyl-4,6-dinitrophenol	14.62	198	18316	1833.83	ng/ml#	38
58) N-Nitrosodiphenylamine	14.73	169	81130	2113.42	ng/ml	97
59) Azobenzene	14.78	77	127966	1916.13	ng/ml	96
62) 4-Bromophenyl Phenyl Ether	15.33	248	36851	2003.75	ng/ml	96
63) Hexachlorobenzene	15.41	284	43727	2060.43	ng/ml	97
64) Pentachlorophenol	15.76	266	17696	1889.05	ng/ml	97
65) Phenanthrene	16.07	178	163242	2054.60	ng/ml	98
66) Anthracene	16.17	178	166999	2060.68	ng/ml	99
67) Carbazole	16.45	167	162309	2180.64	ng/ml	98
68) Di-n-butyl Phthalate	17.08	149	238843	2256.61	ng/ml	98
69) Fluoranthene	18.03	202	175369	2185.23	ng/ml	97
72) Pyrene	18.40	202	189279	2150.74	ng/ml	99
74) Butyl Benzyl Phthalate	19.56	149	98372	2168.33	ng/ml	93
75) 3,3'-Dichlorobenzidine	20.59	252	34141	1192.76	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F007.D Vial: 6
Acq On : 25 Sep 2014 10:47 pm Operator: TLorr
Sample : KWG1412928-2 | DLCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:38:50 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76)	Benz(a)anthracene	20.59	228	173868	2265.02	ng/ml	99
77)	Chrysene	20.67	228	165235	2297.37	ng/ml	97
78)	Bis(2-ethylhexyl) Phthalat	20.80	149	227426	3584.53	ng/ml	99
80)	Di-n-octyl Phthalate	22.61	149	280572	2229.64	ng/ml	99
81)	Benzo(b)fluoranthene	23.38	252	182744	2245.66	ng/ml	97
82)	Benzo(k)fluoranthene	23.45	252	183439	2217.19	ng/ml	98
83)	Benzo(a)pyrene	24.18	252	180369	2276.50	ng/ml	99
84)	Indeno(1,2,3-cd)pyrene	26.57	276	163268m	2119.72	ng/ml	
85)	Dibenz(a,h)anthracene	26.64	278	170250	2113.21	ng/ml	95
86)	Benzo(g,h,i)perylene	27.05	276	176425	2131.78	ng/ml	98

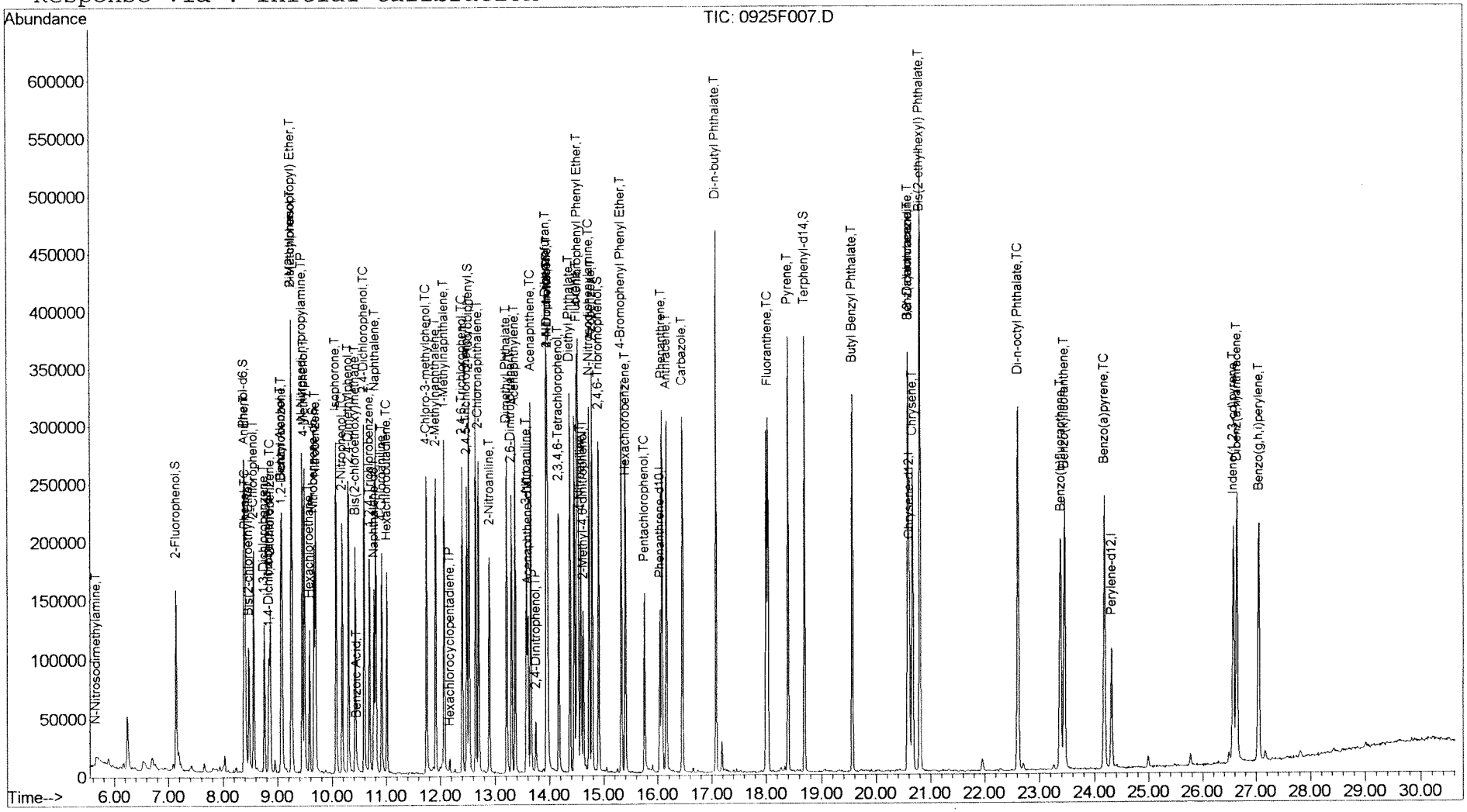
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS06\DATA\092514\0925F007.D
Acq On : 25 Sep 2014 10:47 pm
Sample : KWG1412928-2 | DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:13 2014

Vial: 6
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration

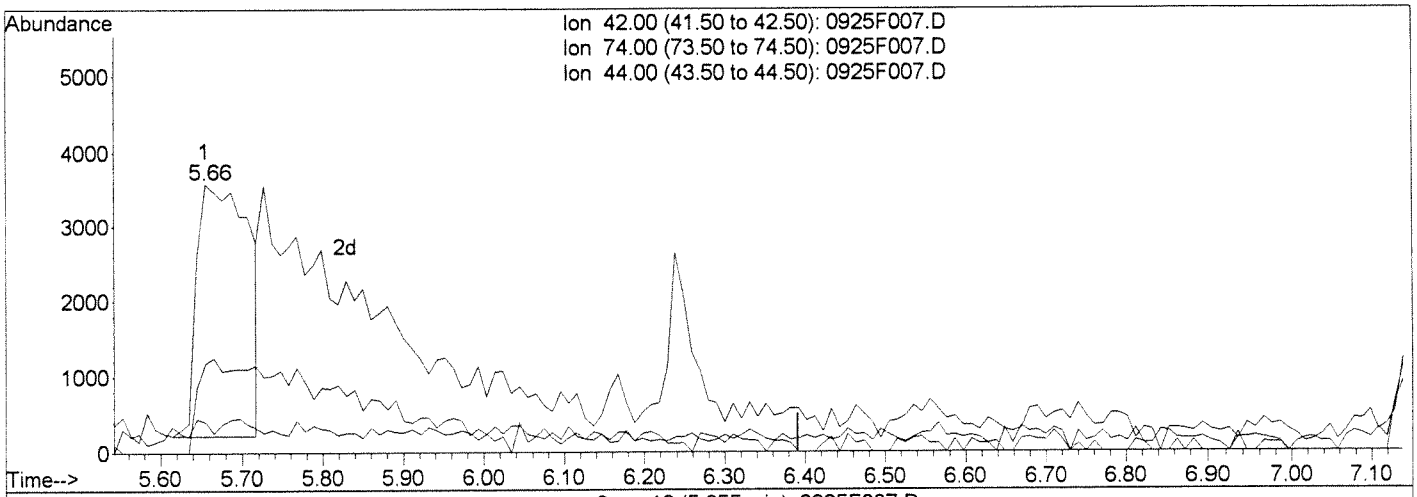


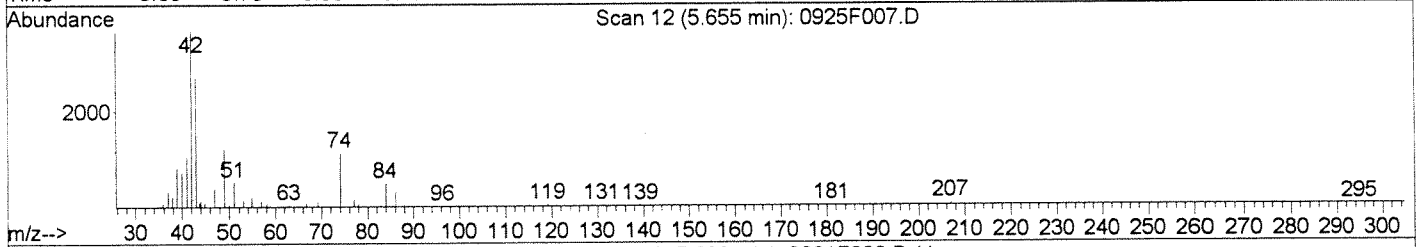
Quantitation Report (Qedit)

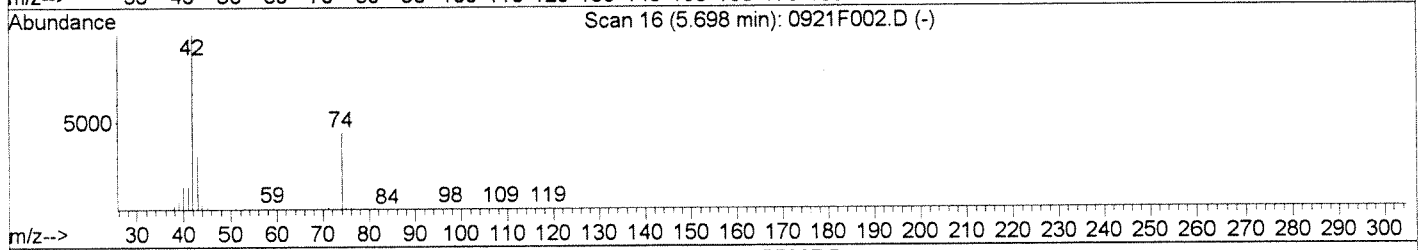
Data File : J:\MS06\DATA\092514\0925F007.D
Acq On : 25 Sep 2014 10:47 pm
Sample : KWG1412928-2 | DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 13:38 2014

Vial: 6
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F007.D

(2) N-Nitrosodimethylamine (T)

5.66min 633.89ng/ml

response 14725

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	35.20
44.00	4.70	2.30
0.00	0.00	0.00

Manual Integration:

Before

09/26/14

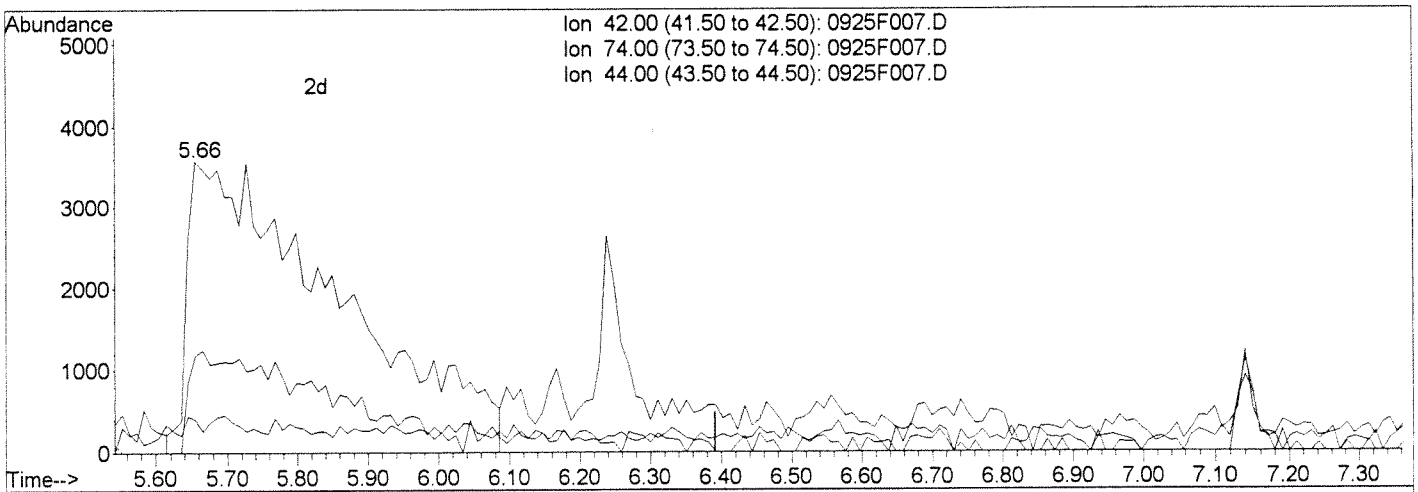
10/6/14

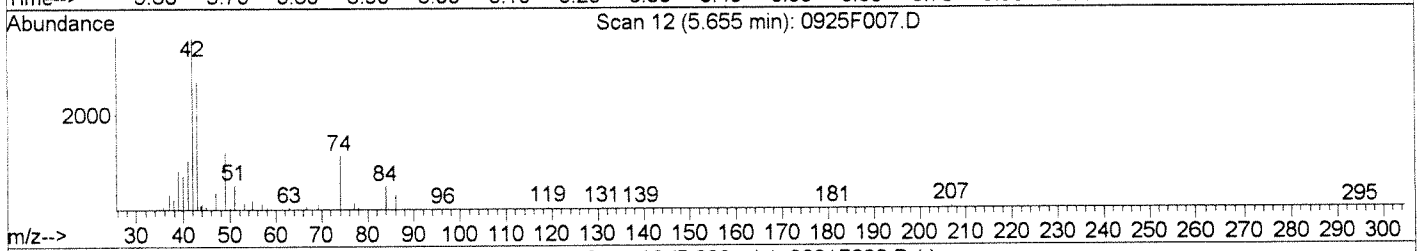
0925F007.D 092414_BNLL.M Fri Sep 26 15:12:13 2014

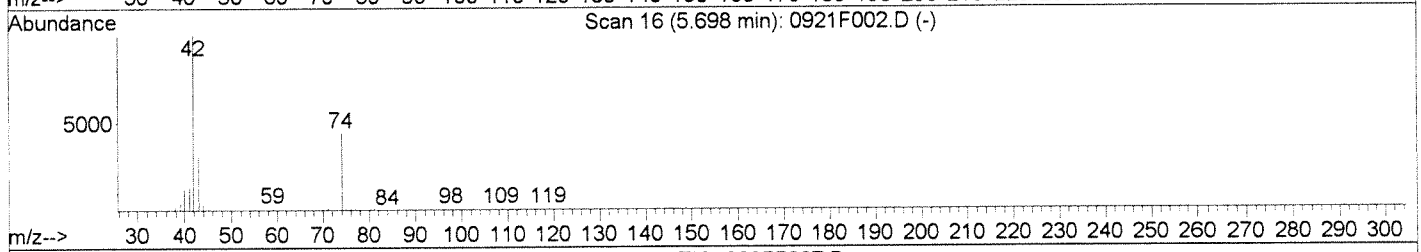
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F007.D Vial: 6
Acq On : 25 Sep 2014 10:47 pm Operator: TLorr
Sample : KWG1412928-2 | DLCS Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:12 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F007.D

(2) N-Nitrosodimethylamine (T)

5.66min 2241.37ng/ml m

response 52066

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	33.01
44.00	4.70	6.07
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/26/14

10/6/14

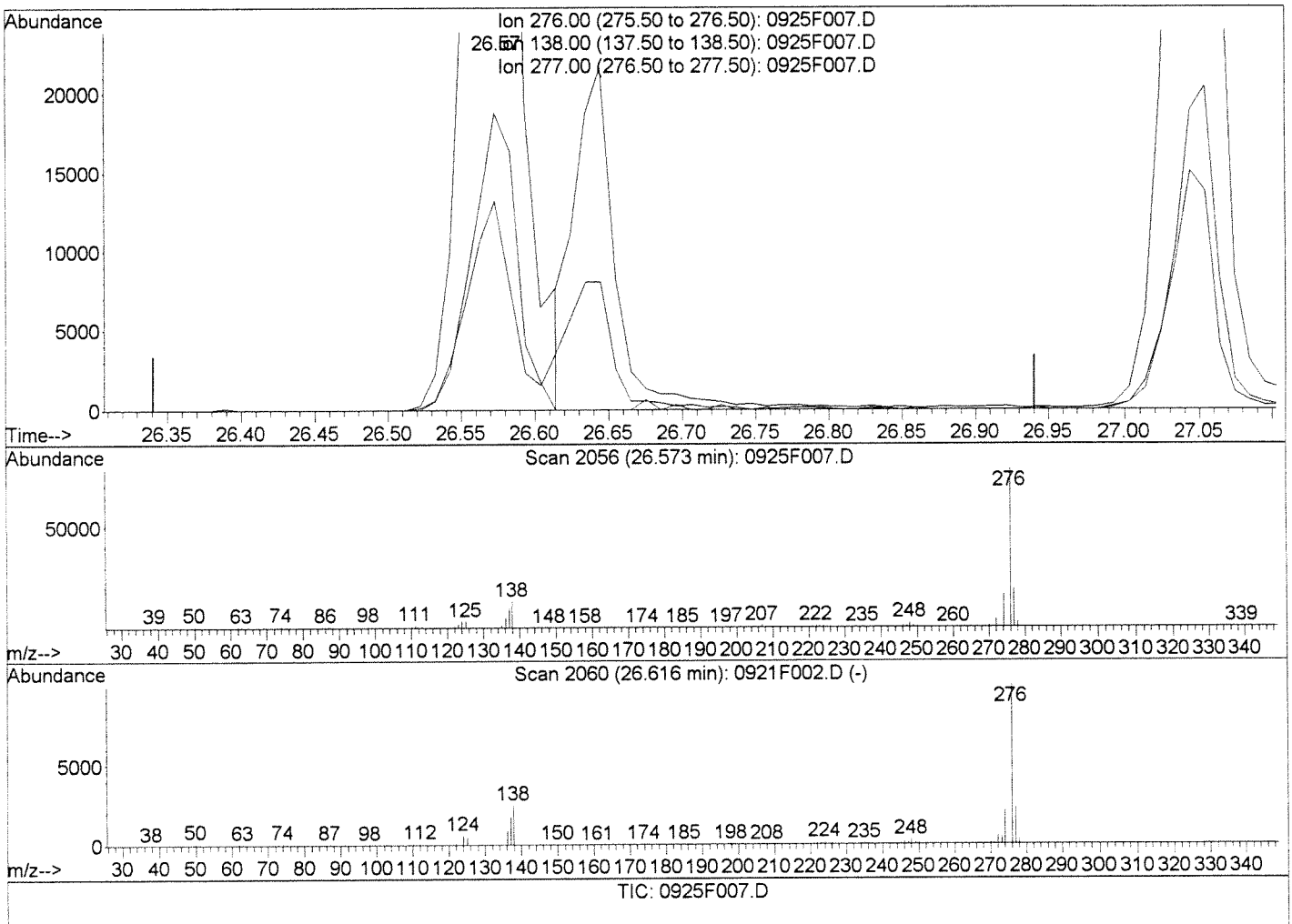
0925F007.D 092414_BNLL.M Fri Sep 26 15:12:25 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F007.D
Acq On : 25 Sep 2014 10:47 pm
Sample : KWG1412928-2 | DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:12 2014

Vial: 6
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration



TIC: 0925F007.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.57min 2180.53ng/ml

response 167952

Ion	Exp%	Act%
276.00	100	100
138.00	17.90	16.88
277.00	24.00	24.05
0.00	0.00	0.00

Manual Integration:

Before

09/26/14

10/6/14

0925F007.D 092414_BNLL.M Fri Sep 26 15:13:16 2014

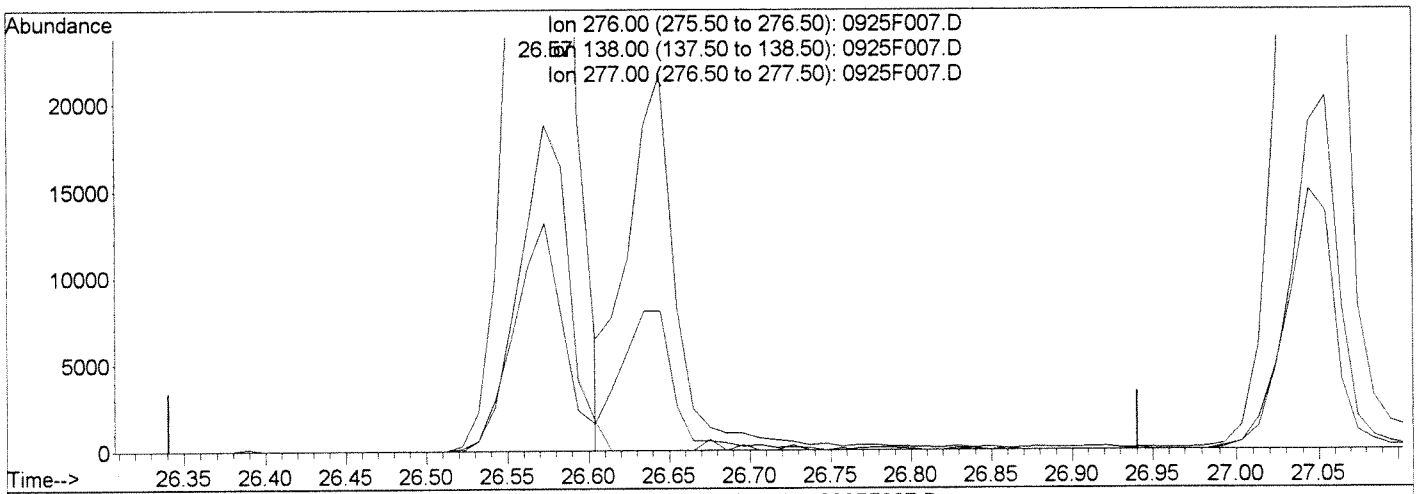
Quantitation Report (Qedit)

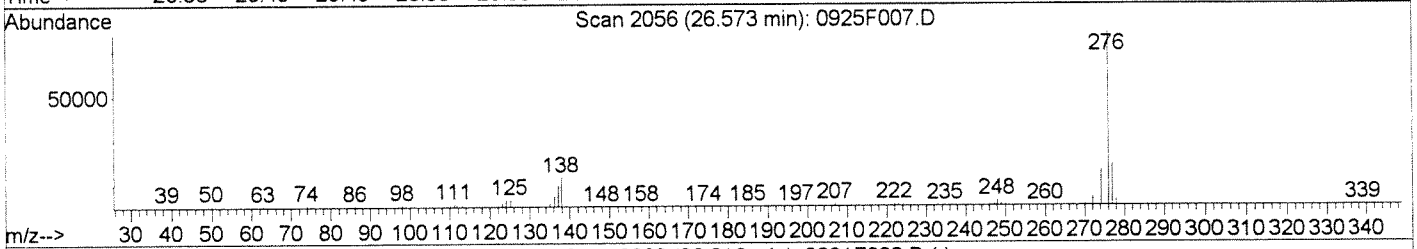
Data File : J:\MS06\DATA\092514\0925F007.D
Acq On : 25 Sep 2014 10:47 pm
Sample : KWG1412928-2 | DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 26 15:13 2014

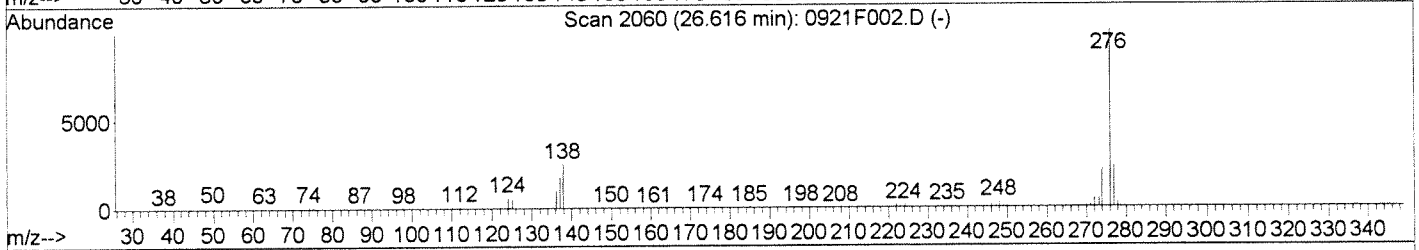
Vial: 6
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Multiple Level Calibration







TIC: 0925F007.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.57min 2119.72ng/ml m

response 163268

Ion	Exp%	Act%
276.00	100	100
138.00	17.90	16.88
277.00	24.00	24.05
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

09/26/14

12/6/14

0925F007.D 092414_BNLL.M Fri Sep 26 15:13:20 2014

Injection Log

Directory: J:\MS06\DATA\092414

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		0924A011.D	1.			
2	13	0924A015.D	1.	SVO_LL ICV @ 3.0ppm | SVM46-42M		25 Sep 2014 00:5
3	100	0924F001.D	1.	PRIMER NR		24 Sep 2014 15:1
4	1	0924F002.D	1.	DFTPP @ 2.5ppm | SVM47-56C NR-failed-ran target tune		24 Sep 2014 15:5
5	1	0924F003.D	1.	DFTPP @ 2.5ppm | SVM47-56C		24 Sep 2014 17:0
6	2	0924F004.D	1.	IB		24 Sep 2014 17:4
7	3	0924F005.D	1.	SVO_LL ICAL @ 0.05ppm | SVM46-42C		24 Sep 2014 18:2
8	4	0924F006.D	1.	SVO_LL ICAL @ 0.10ppm | SVM46-42D		24 Sep 2014 19:0
9	5	0924F007.D	1.	SVO_LL ICAL @ 0.20ppm | SVM46-42E		24 Sep 2014 19:4
10	6	0924F008.D	1.	SVO_LL ICAL @ 0.50ppm | SVM46-42F		24 Sep 2014 20:2
11	7	0924F009.D	1.	SVO_LL ICAL @ 1.0ppm | SVM46-42G		24 Sep 2014 21:0
12	8	0924F010.D	1.	SVO_LL ICAL @ 2.0ppm | SVM46-42H		24 Sep 2014 21:4
13	9	0924F011.D	1.	SVO_LL ICAL @ 3.0ppm | SVM46-42I		24 Sep 2014 22:1
14	10	0924F012.D	1.	SVO_LL ICAL @ 5.0ppm | SVM46-42J		24 Sep 2014 22:5
15	11	0924F013.D	1.	SVO_LL ICAL @ 7.0ppm | SVM46-42K		24 Sep 2014 23:3
16	12	0924F014.D	1.	SVO_LL ICAL @ 10ppm | SVM46-42L		25 Sep 2014 00:1
17	13	0924F015.D	1.	SVO_LL ICV @ 3.0ppm | SVM46-42M		25 Sep 2014 00:5
18	14	0924F016.D	1.	SVO_LL PAH ICV @ 3.0ppm | SVM46-64B		25 Sep 2014 01:3
19	35	0924F017.D	1.	SPIKE CHECK @3.0ppm | SVM47-55B		25 Sep 2014 02:1
20	2	0924F018.D	1.	IB		25 Sep 2014 02:5
21	1	0924F019.D	1.	DFTPP @ 2.5ppm | SVM47-56C		25 Sep 2014 03:3
22	15	0924F020.D	1.	SVO_LL CCV @ 3.0ppm | SVM46-56D		25 Sep 2014 04:1
23	16	0924F021.D	1.	SVO_LL CLP ICV @ 3.0ppm | SVM45-72H		25 Sep 2014 04:5
24	17	0924F022.D	1.	KWG1411908-5 | MB		25 Sep 2014 05:3
25	18	0924F023.D	1.	KWG1411908-3 | LCS		25 Sep 2014 06:1
26	19	0924F024.D	1.	KWG1411908-4 | DLCS		25 Sep 2014 06:5
27	20	0924F025.D	1.	KWG1411908-1 | K1408804-025MS		25 Sep 2014 07:3
28	21	0924F026.D	1.	KWG1411908-2 | K1408804-025DMS		25 Sep 2014 08:1
29	22	0924F027.D	1.	K1408804-025		25 Sep 2014 08:5
30	23	0924F028.D	1.	K1408804-004		25 Sep 2014 09:2
31	24	0924F029.D	1.	K1408804-005		25 Sep 2014 10:0
32	25	0924F030.D	1.	K1408804-023		25 Sep 2014 10:4
33	26	0924F031.D	1.	K1408804-026		25 Sep 2014 11:2
34	27	0924F032.D	1.	K1408804-030		25 Sep 2014 12:0
35	28	0924F033.D	1.	K1408804-031		25 Sep 2014 12:4

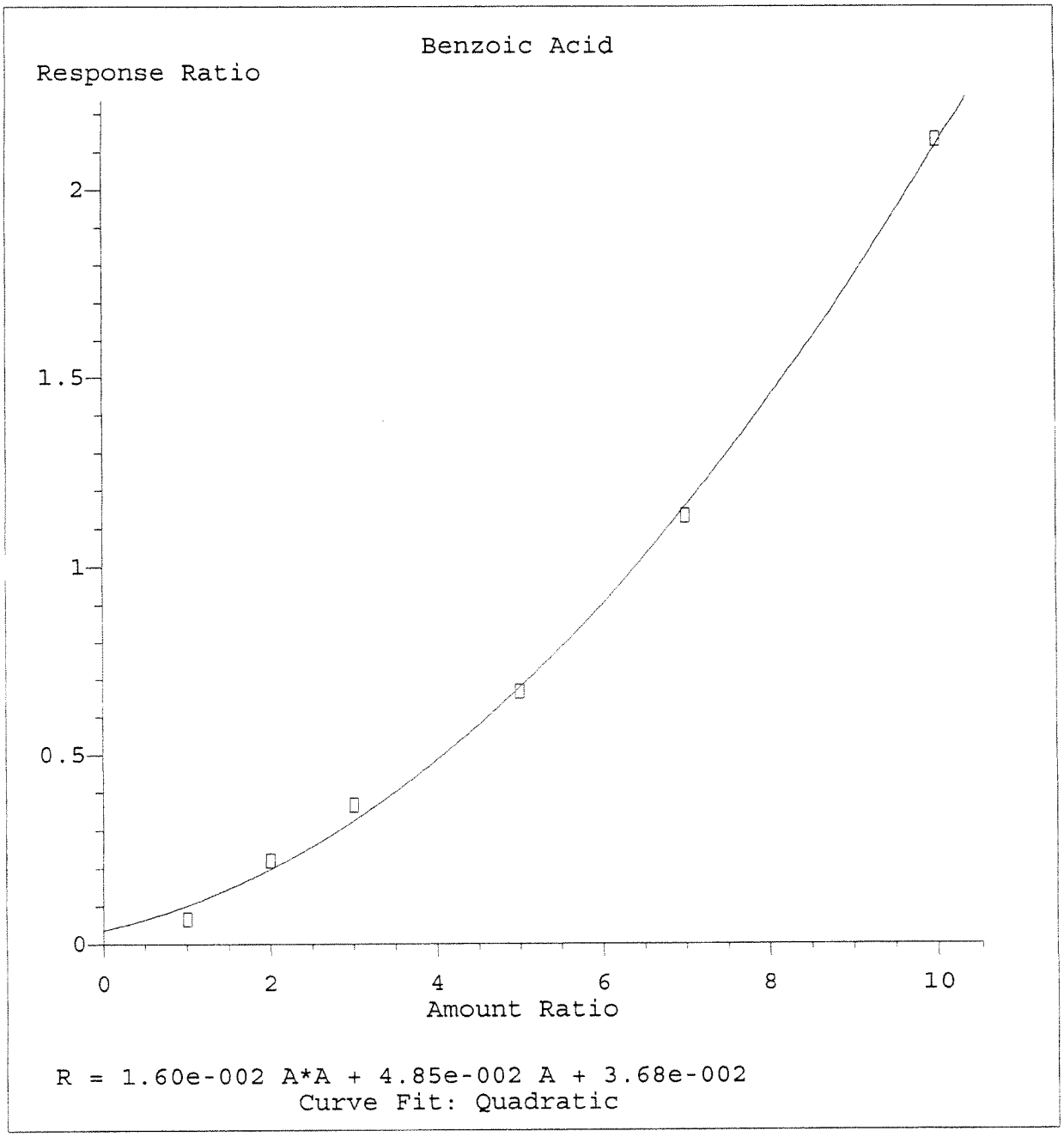
Curve fails criteria for benzoic acid

ICV fails criteria for bis(~~2-chloroe~~ RE qualeski 2-chloroisopropyl) ether, N-nitrosodi-n-propylamine, nitrobenzene, and benzoic acid. 9/29/25/14

10/6/14

8270 LL
CAL # 13569

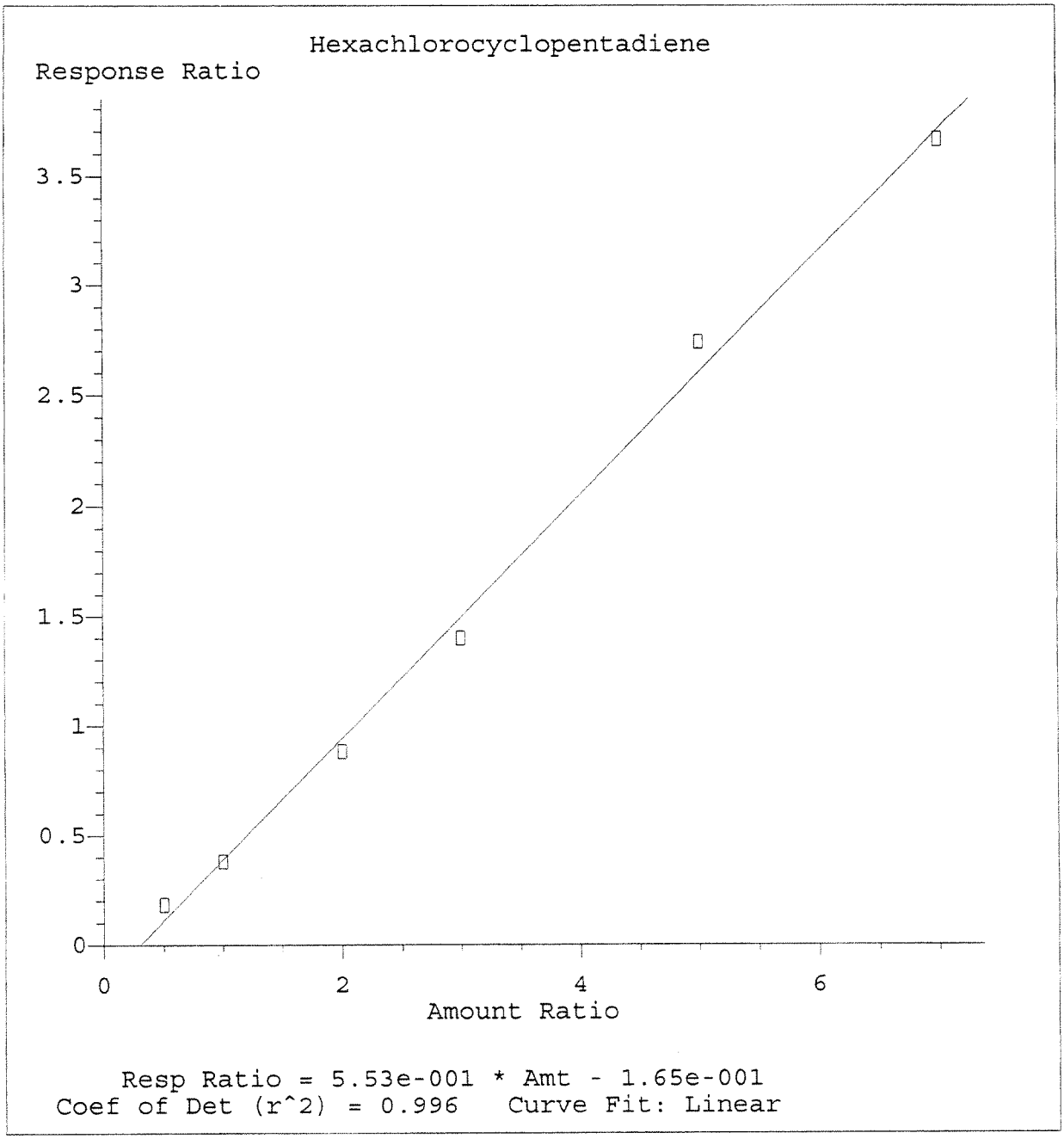
SEP 25 2014



Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

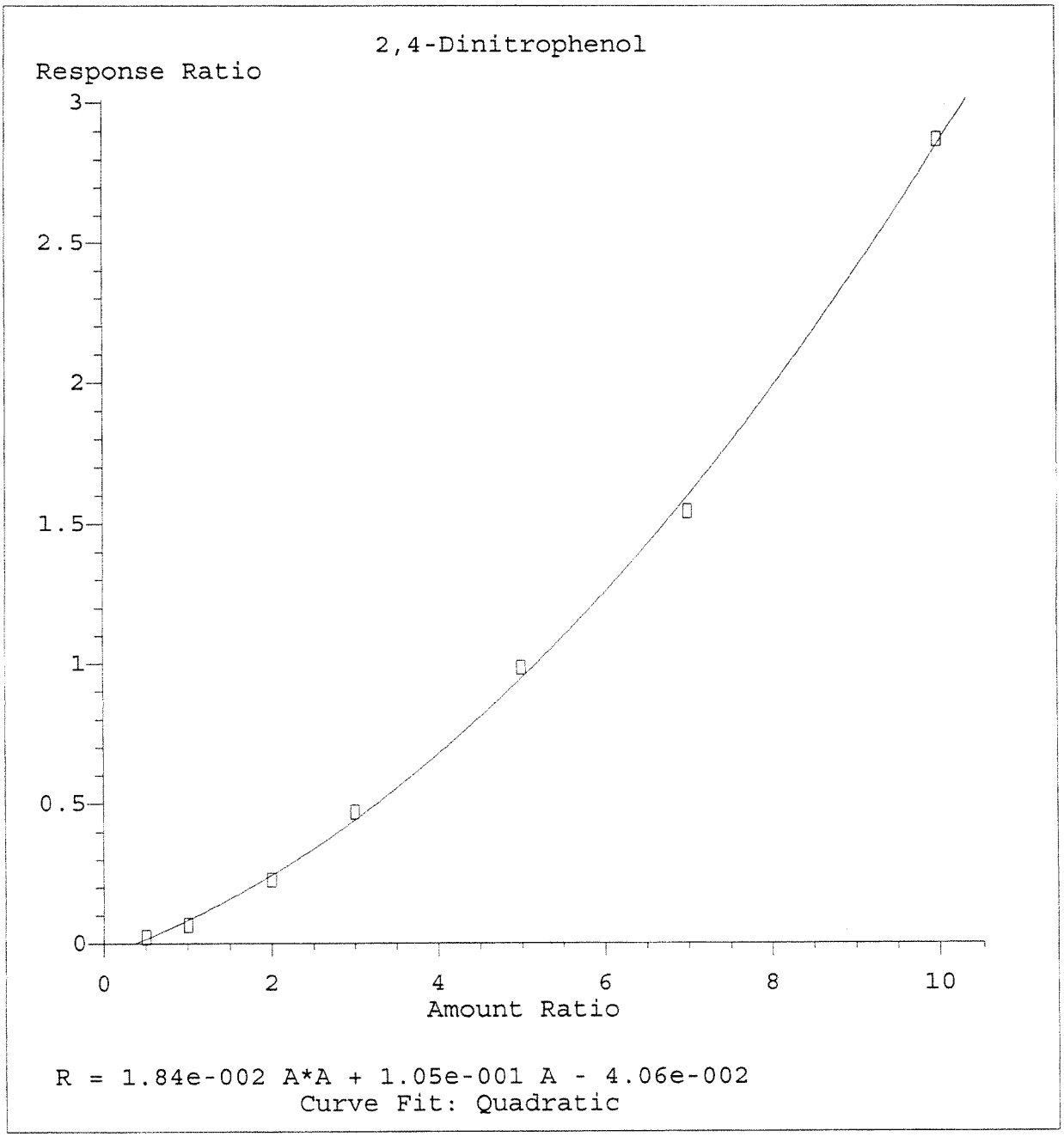
10/6/14

SEP 25 2014



Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

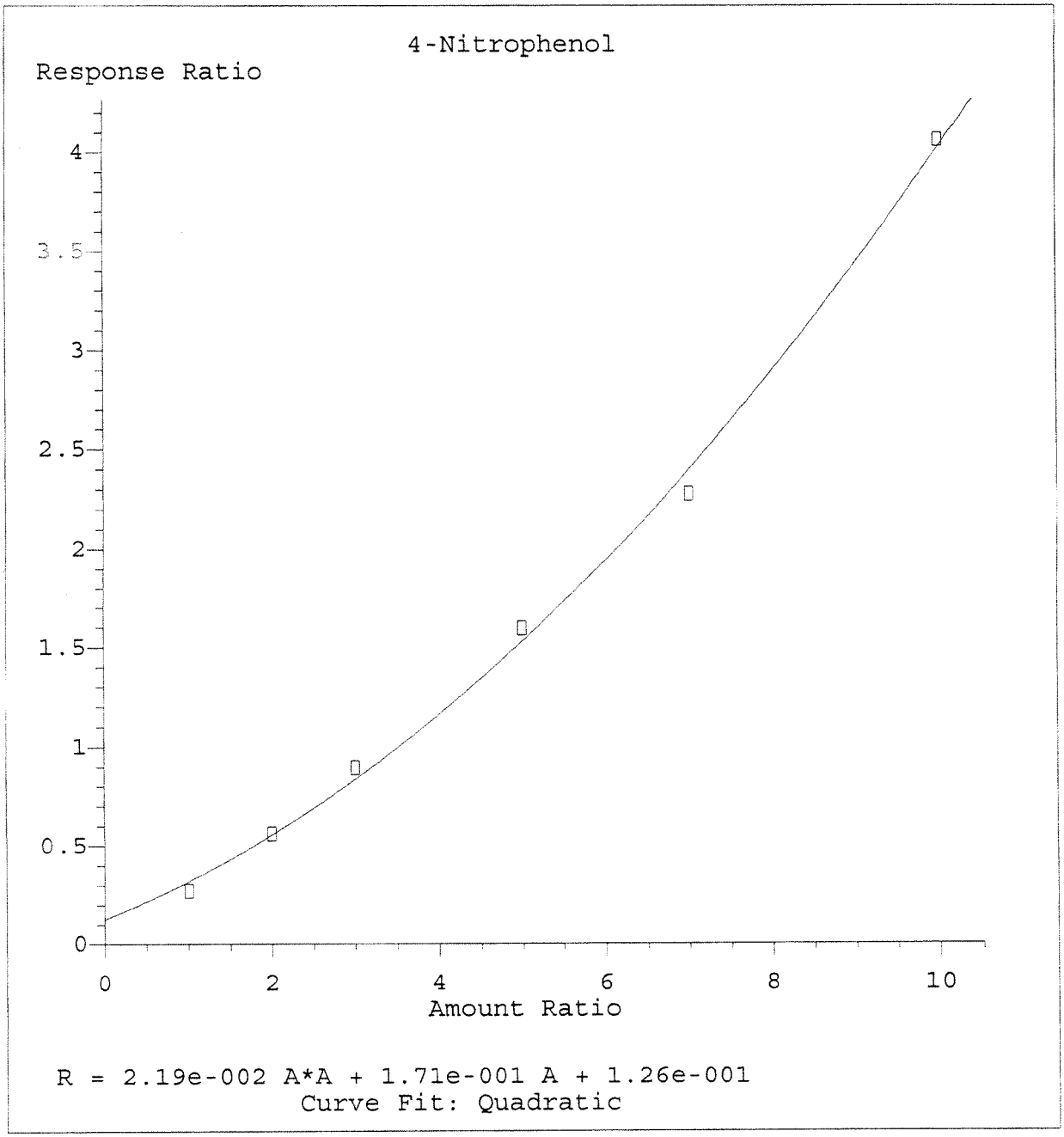
10/6/14 SEP 25 2014



Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

10/16/14

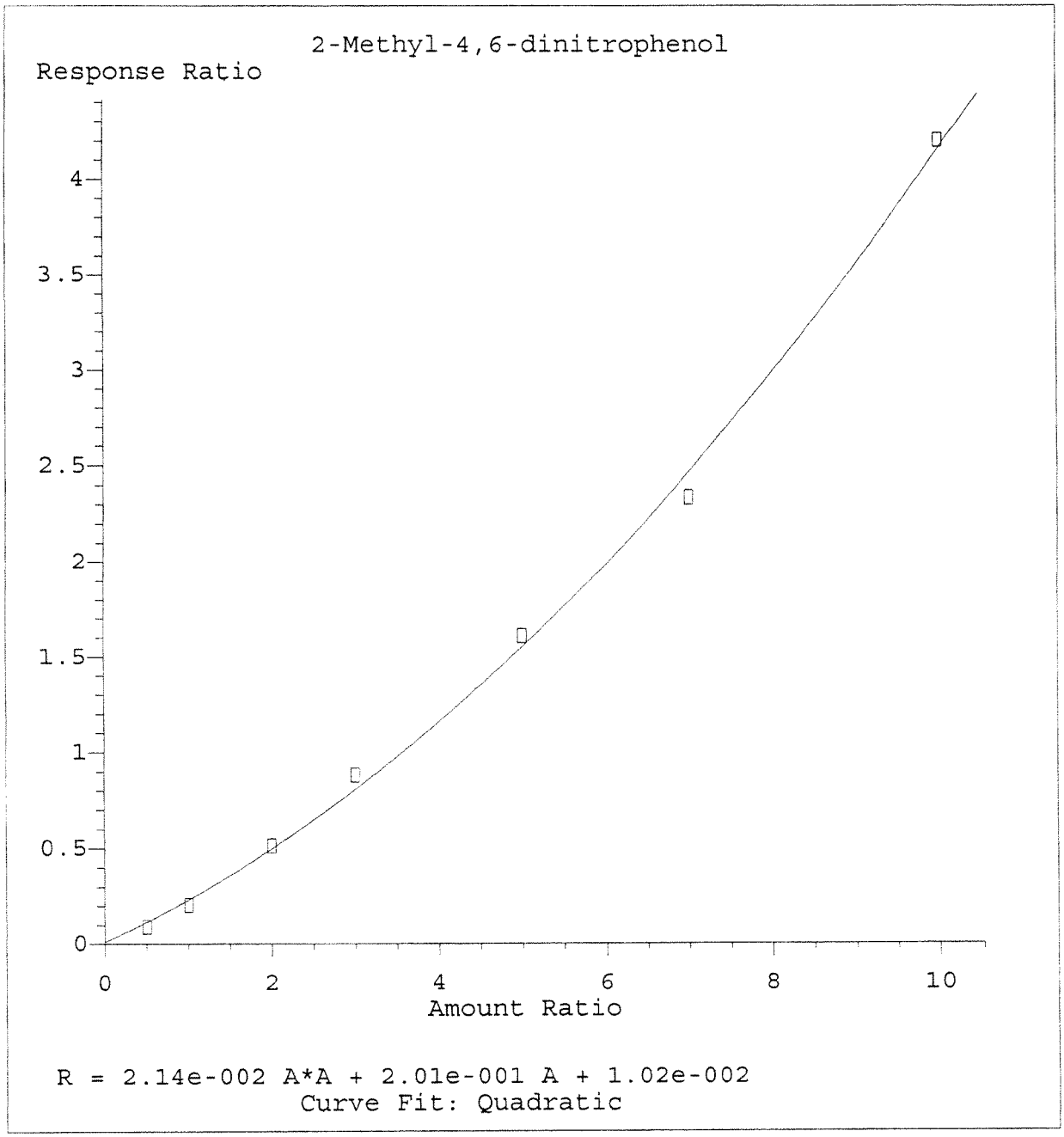
SEP 25 2014



Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

10/1/14

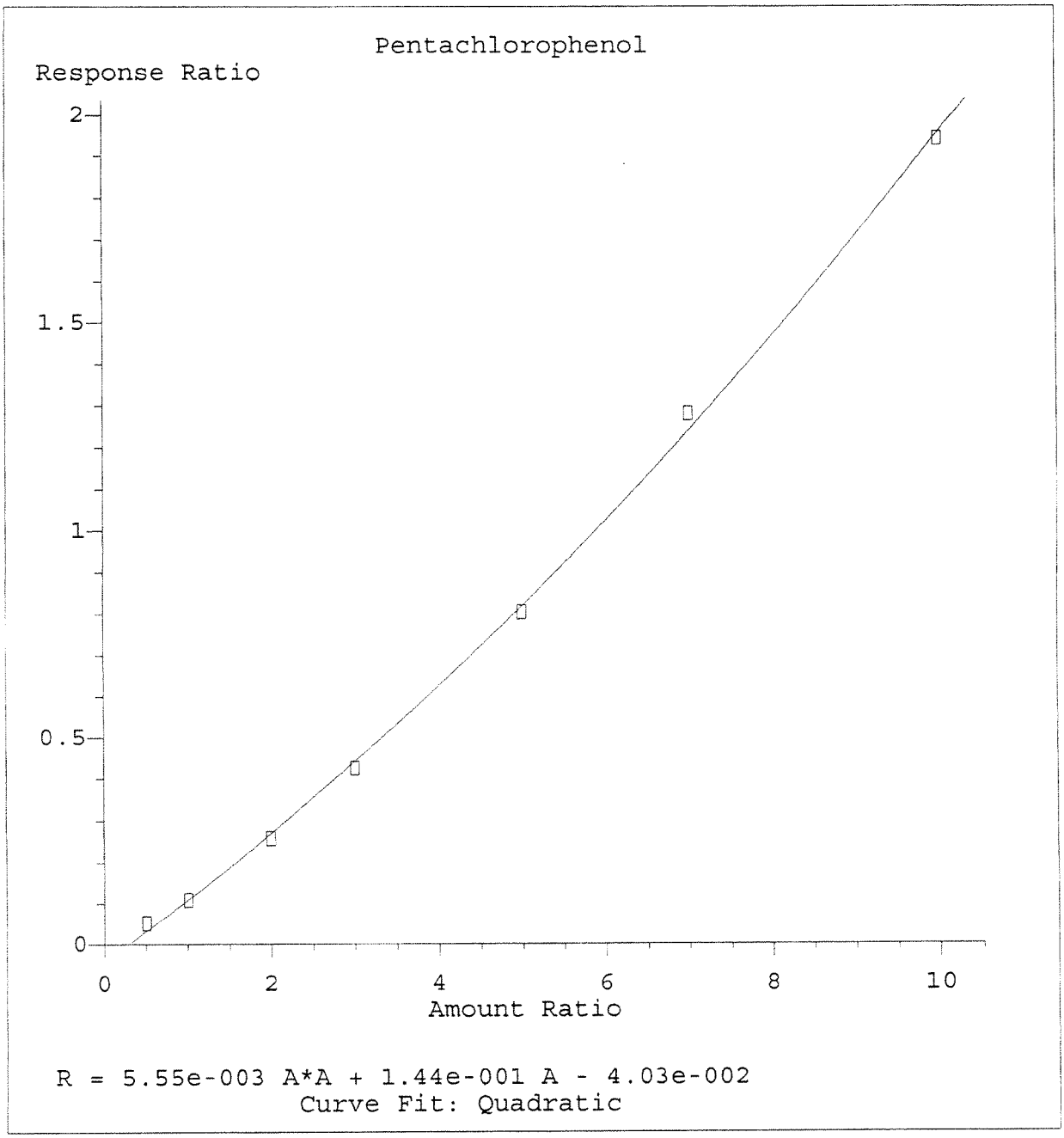
SEP 25 2014



Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

10/1/14

SEP 25 2014



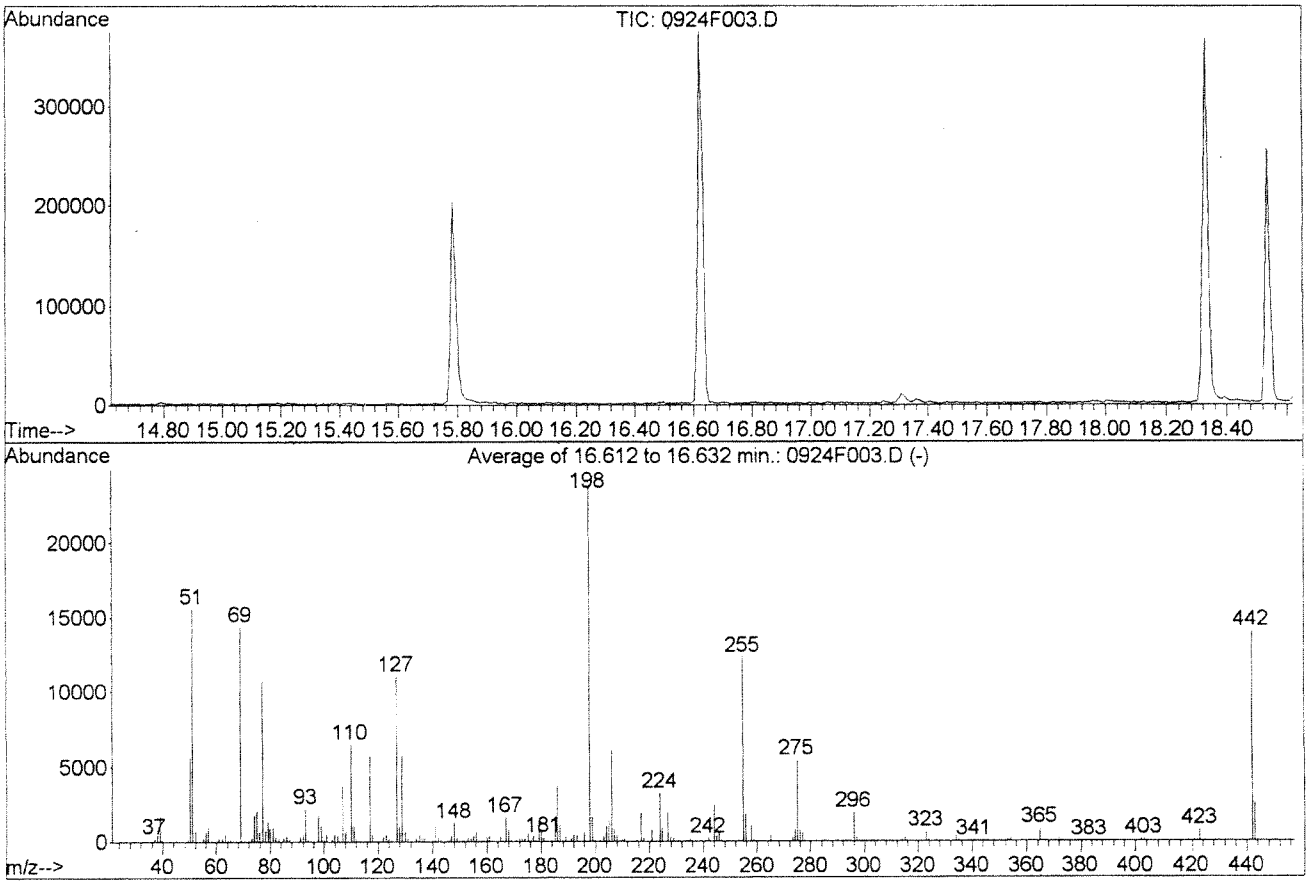
Method Name: J:\MS06\METHODS\BNA\092414_BNLL.M
Calibration Table Last Updated: Thu Sep 25 09:32:17 2014

SEP 25 2014

DFTPP

Data File : J:\MS06\DATA\092414\0924F003.D
Acq On : 24 Sep 2014 5:03 pm
Sample : DFTPP @ 2.5ppm | SVM47-56C
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 1
Operator: TLorr
Inst : MS06
Multiplr: 1.00



AutoFind: Scans 1083, 1084, 1085; Background Corrected with Scan 1079

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	65.7	15606	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	60.6	14390	PASS
70	69	0.00	2	0.0	0	PASS
127	198	25	75	46.6	11074	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	23755	PASS
199	198	5	9	6.9	1640	PASS
275	198	10	30	22.9	5432	PASS
365	198	0.75	100	3.5	842	PASS
441	443	0.01	100	2.6	69	PASS
442	198	40	110	59.3	14076	PASS
443	442	15	24	18.8	2642	PASS

10/6/14

0924F003.D 092414_BNLL.M Thu Sep 25 07:46:57 2014

SEP 25 2014

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.15	49	45.40	41	62.00	206	68.95	14390
35.55	59	45.70	37	62.45	43	72.85	122
36.00	79	49.10	122	63.05	498	73.05	265
36.90	237	50.00	5620	63.85	46	74.00	1808
37.95	451	51.00	15606	64.15	112	74.95	2061
38.15	86	52.05	709	64.65	50	75.95	698
39.05	1667	55.00	217	64.95	174	77.00	10726
39.85	200	56.00	576	65.15	42	78.10	720
42.55	34	56.90	972	66.05	44	79.00	1343
43.65	52	60.10	37	66.85	61	79.90	885
44.85	78	60.90	224	67.15	42	80.95	992

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.95	314	96.75	34	107.95	624	119.90	84
83.00	181	97.95	1763	110.00	6519	120.70	43
84.90	268	98.95	1038	111.00	1107	121.95	343
85.95	377	99.95	130	111.95	157	123.00	461
86.95	161	100.95	527	113.30	41	124.00	222
90.95	321	102.95	120	113.50	34	125.05	160
91.95	423	103.15	47	115.10	38	127.05	11074
93.05	2214	103.95	458	115.70	44	128.00	1004
94.00	130	104.95	411	116.95	5764	128.95	5744
94.95	33	105.75	44	117.90	457	129.95	639
96.10	114	106.95	3708	118.90	46	131.00	174

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.95	211	146.90	437	157.75	48	168.85	62
134.65	59	147.95	1285	158.05	116	169.85	34
135.00	449	149.00	250	158.85	78	171.00	84
135.95	264	150.00	44	159.65	33	172.00	213
136.90	252	150.95	101	160.00	323	172.90	35
139.60	38	151.70	78	161.00	378	173.05	172
140.00	103	152.95	250	161.95	49	173.70	87
140.95	959	154.05	206	165.00	350	174.05	217
142.00	281	155.00	416	165.85	65	175.00	577
142.90	195	156.05	638	166.95	1646	176.00	104
145.90	137	157.15	63	168.00	820	176.20	55

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.95	363	188.95	332	199.85	140	210.05	148
177.90	78	191.05	214	201.60	104	210.70	169
178.95	1301	191.95	448	202.10	43	210.90	133
179.95	685	192.55	36	203.00	359	214.80	48
180.95	321	193.05	433	204.05	1001	215.60	75
181.90	40	193.95	79	204.90	131	216.90	1940
183.90	120	194.55	44	205.05	1487	217.75	38
185.05	613	195.05	43	206.00	6093	217.90	201
186.00	3651	196.00	652	207.00	825	220.75	60
187.00	1142	197.95	23755	207.95	383	220.95	780
187.90	110	198.95	1640	209.00	51	221.25	58

SEP 2 5 2014

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.85	48	235.70	47	246.00	622	265.90	36
223.95	3266	236.00	61	246.90	103	271.50	34
224.95	902	237.00	95	248.75	65	273.20	249
226.95	1958	238.80	42	252.15	40	274.00	765
227.75	268	239.10	85	253.10	93	274.95	5432
228.95	270	240.00	58	254.95	12344	275.95	741
230.05	50	240.95	109	255.95	1847	276.90	589
230.95	127	241.85	211	257.90	1033	277.90	87
232.15	44	242.50	39	259.00	185	281.95	35
233.95	114	244.00	2504	264.80	45	284.25	34
235.00	144	244.95	339	265.00	429	285.00	100

Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
289.95	45	315.85	44	345.75	48	383.15	40
292.90	108	316.05	39	345.95	66	401.95	130
294.55	36	321.15	51	352.00	167	403.00	130
296.00	1926	322.95	626	353.00	103	403.90	37
297.00	299	323.95	125	353.95	156	421.05	108
301.80	41	326.75	110	363.80	38	422.00	43
302.60	71	327.90	42	364.90	842	422.95	765
302.90	98	332.90	57	365.90	60	423.90	49
304.00	47	334.05	377	371.85	249	424.10	66
313.80	88	334.90	124	373.00	39	439.65	47
315.00	233	340.95	72	382.95	33	440.95	69

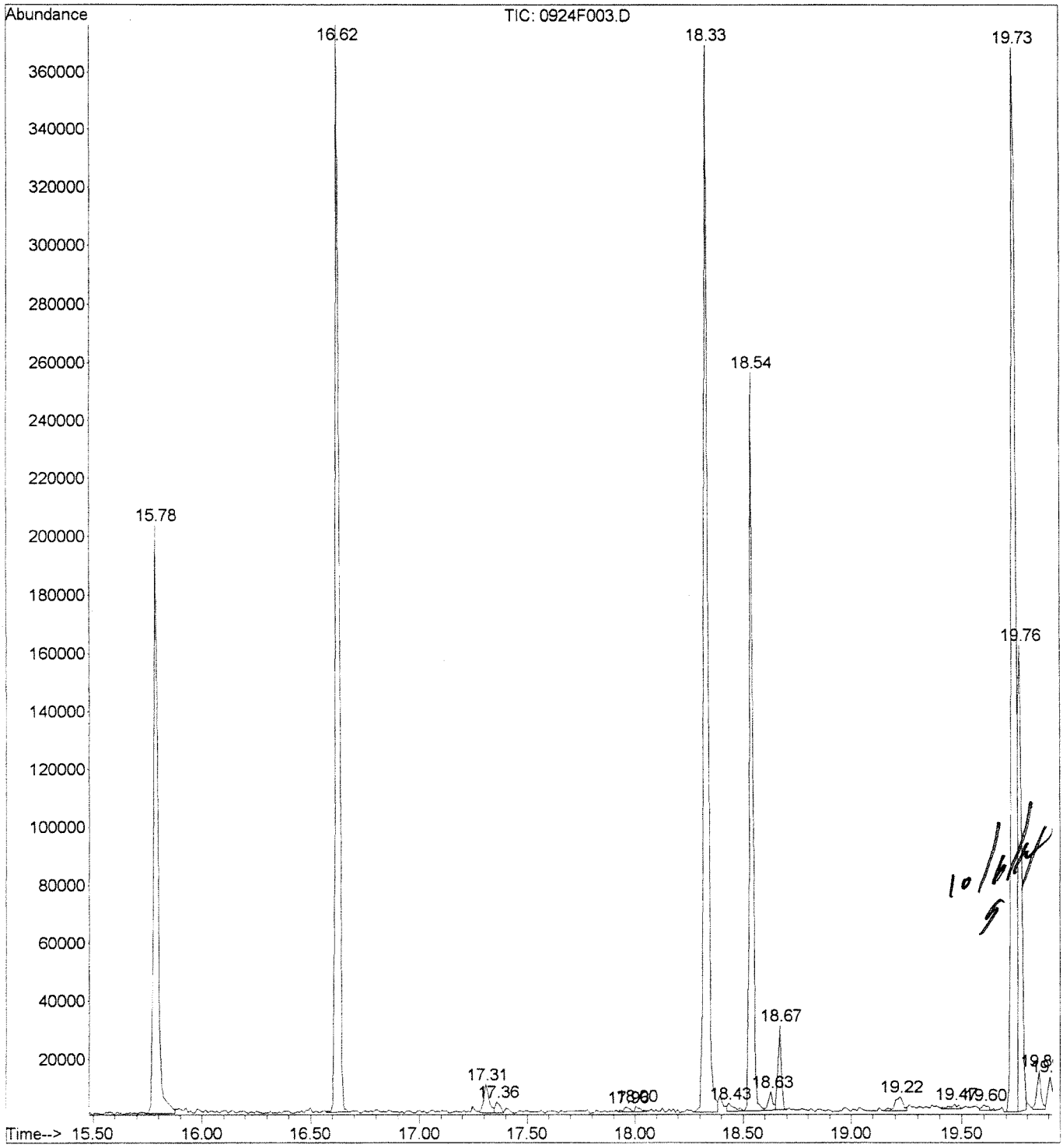
Average of 16.612 to 16.632 min.: 0924F003.D
DFTPP @ 2.5ppm | SVM47-56C
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
442.00	14076						
442.95	2642						
443.95	88						

10/6/14
g

SEP 25 2014

File : J:\MS06\DATA\092414\0924F003.D
Operator : TLorr
Acquired : 24 Sep 2014 5:03 pm using AcqMethod BNALL
Instrument : MS06
Sample Name: DFTPP @ 2.5ppm | SVM47-56C
Misc Info :
Vial Number: 1



SEP 2 5 2014

Area Percent Report

Data File : J:\MS06\DATA\092414\0924F003.D
Acq On : 24 Sep 2014 5:03 pm
Sample : DFTPP @ 2.5ppm | SVM47-56C
Misc :
MS Integration Params: RTEINT.P

Vial: 1
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Smoothing : ON
Sampling : 1
Start Thrs: 0.01
Stop Thrs : 0.001

Filtering: 5
Min Area: 600 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.662	12	13	18	rBV5	1732	3856	0.67%	0.103%
2	5.846	29	31	33	rBV3	3500	3940	0.68%	0.105%
3	5.897	33	36	39	rVV5	1727	4130	0.71%	0.110%
4	6.348	73	80	83	rBV7	2752	7487	1.29%	0.199%
5	6.470	90	92	100	rVB6	1779	5515	0.95%	0.147%
6	6.644	106	109	115	rBV6	3507	14581	2.52%	0.388%
7	6.808	121	125	130	rVV5	2759	9941	1.72%	0.265%
8	6.890	130	133	137	rVV5	1665	4018	0.69%	0.107%
9	6.972	137	141	145	rVB8	1657	5005	0.86%	0.133%
10	7.146	156	158	163	rBV6	1362	3801	0.66%	0.101%
11	7.432	183	186	192	rVB6	2041	4829	0.83%	0.129%
12	7.698	205	212	213	rVV5	1733	4919	0.85%	0.131%
13	7.739	213	216	218	rVV3	2734	4113	0.71%	0.110%
14	8.067	242	248	251	rVB4	1493	4877	0.84%	0.130%
15	8.149	251	256	257	rBV5	1755	4633	0.80%	0.123%
16	8.456	281	286	289	rBV7	2287	6182	1.07%	0.165%
17	9.059	342	345	348	rBV3	1680	3940	0.68%	0.105%
18	9.285	360	367	373	rVB8	2694	9292	1.60%	0.247%
19	9.387	373	377	383	rBV4	2419	7216	1.25%	0.192%
20	10.185	452	455	461	rBV5	1432	3640	0.63%	0.097%
21	11.065	536	541	544	rBV4	1831	4143	0.72%	0.110%
22	11.219	549	556	558	rVV3	5577	9743	1.68%	0.259%
23	11.270	558	561	568	rVB3	11076	20879	3.60%	0.556%
24	11.771	602	610	619	rBV3	4530	13876	2.40%	0.369%
25	12.600	690	691	700	rVB3	1158	4918	0.85%	0.131%
26	13.276	752	757	763	rBV3	6493	13813	2.38%	0.368%
27	14.207	843	848	852	rBV5	2440	6557	1.13%	0.175%
28	14.401	862	867	869	rVB3	1629	4141	0.71%	0.110%
29	14.790	899	905	910	rBV3	2567	6570	1.13%	0.175%
30	15.435	965	968	974	rVB3	1380	4314	0.74%	0.115%
31	15.783	998	1002	1011	rBV	202650	284280	49.08%	7.569%
32	16.622	1079	1084	1090	rVB2	374483	442088	76.32%	11.771%
33	17.308	1148	1151	1155	rVV2	9942	17713	3.06%	0.472%
34	17.359	1155	1156	1159	rVV3	3896	5303	0.92%	0.141%

10/6/14
9

SEP 25 201

35	17.963	1211	1215	1218	rVB6	1601	3724	0.64%	0.099%	
36	18.004	1218	1219	1224	rBV	2154	3715	0.64%	0.099%	
37	18.331	1245	1251	1256	rVV	367809	479427	82.77%	12.765%	
38	18.434	1260	1261	1268	rVV4	2756	5659	0.98%	0.151%	
39	18.536	1268	1271	1277	rVV	254468	283408	48.93%	7.546%	
40	18.628	1277	1280	1282	rVV	6355	9187	1.59%	0.245%	
41	18.669	1282	1284	1287	rVB	29146	32225	5.56%	0.858%	
42	19.222	1331	1338	1341	rBV5	4837	12407	2.14%	0.330%	no DDD
43	19.467	1356	1362	1365	rVB5	1705	4158	0.72%	0.111%	
44	19.600	1373	1375	1380	rVB4	1884	3752	0.65%	0.100%	
45	19.733	1385	1388	1390	rM	366933	579223	100.00%	15.423%	DDT
46	19.764	1390	1391	1394	rM 2	160989	169101	29.19%	4.503%	
47	19.856	1397	1400	1403	rVV	13410	18466	3.19%	0.492%	
48	19.907	1403	1405	1409	rVB	11363	16328	2.82%	0.435%	Breakdown
49	20.071	1418	1421	1428	rBV	13784	31199	5.39%	0.831%	of
50	20.572	1463	1470	1475	rBV	9143	18583	3.21%	0.495%	peaks/m
51	21.064	1514	1518	1520	rBV4	1511	4360	0.75%	0.116%	
52	21.115	1520	1523	1528	rVB5	2319	4630	0.80%	0.123%	
53	21.279	1536	1539	1544	rVV4	1749	3934	0.68%	0.105%	
54	21.391	1544	1550	1556	rVV2	17682	33333	5.75%	0.888%	
55	21.524	1558	1563	1567	rBV4	1312	4355	0.75%	0.116%	
56	22.241	1632	1633	1639	rBV2	1004	3597	0.62%	0.096%	
57	22.363	1639	1645	1651	rVV2	15497	33599	5.80%	0.895%	
58	23.325	1732	1739	1747	rVB	28294	63391	10.94%	1.688%	
59	23.806	1783	1786	1790	rBV4	1710	3622	0.63%	0.096%	
60	23.909	1790	1796	1798	rBV4	3986	6807	1.18%	0.181%	
61	24.226	1822	1827	1839	rVV	34432	72726	12.56%	1.936%	
62	24.656	1865	1869	1873	rBV3	1545	3992	0.69%	0.106%	
63	24.850	1880	1888	1893	rVB6	2186	9672	1.67%	0.258%	
64	25.055	1903	1908	1920	rBV	50651	105193	18.16%	2.801%	
65	25.567	1953	1958	1962	rVB5	1362	4088	0.71%	0.109%	
66	25.833	1979	1984	1993	rBV	46747	112041	19.34%	2.983%	
67	25.996	1997	2000	2005	rVB6	2522	5814	1.00%	0.155%	
68	26.283	2026	2028	2032	rVV6	2997	7267	1.25%	0.193%	
69	26.375	2032	2037	2041	rVB6	4092	10876	1.88%	0.290%	
70	26.549	2049	2054	2065	rVV	50692	112204	19.37%	2.988%	
71	26.774	2071	2076	2079	rVB7	2343	5259	0.91%	0.140%	
72	26.846	2082	2083	2088	rVB4	2195	5139	0.89%	0.137%	
73	26.989	2088	2097	2099	rBV9	4234	13933	2.41%	0.371%	
74	27.071	2101	2105	2107	rVB5	3579	8552	1.48%	0.228%	
75	27.122	2107	2110	2114	rBV5	2494	5944	1.03%	0.158%	
76	27.224	2114	2120	2132	rBV	36246	98062	16.93%	2.611%	10/6/14
77	27.450	2138	2142	2149	rBV4	12581	36514	6.30%	0.972%	
78	27.552	2149	2152	2155	rVV5	3272	7921	1.37%	0.211%	
79	27.593	2155	2156	2165	rVB9	2394	9224	1.59%	0.246%	
80	27.705	2165	2167	2169	rBV2	3388	4927	0.85%	0.131%	
81	27.869	2174	2183	2194	rBV2	29308	80339	13.87%	2.139%	
82	27.992	2194	2195	2198	rBV3	2189	3583	0.62%	0.095%	
83	28.156	2205	2211	2215	rBV9	3327	9792	1.69%	0.261%	
84	28.350	2226	2230	2235	rBV8	3066	9331	1.61%	0.248%	SEP 25 201
85	28.483	2238	2243	2254	rBV5	15586	57566	9.94%	1.533%	
86	28.647	2254	2259	2263	rBV8	3245	12008	2.07%	0.320%	

87	28.759	2269	2270	2274	rBV4	1982	4553	0.79%	0.121%
88	28.882	2280	2282	2284	rVB3	2807	4024	0.69%	0.107%
89	28.985	2291	2292	2296	rBV4	2491	5217	0.90%	0.139%
90	29.056	2296	2299	2305	rBV7	13252	37995	6.56%	1.012%
91	29.210	2313	2314	2317	rVB3	3160	4706	0.81%	0.125%
92	29.281	2317	2321	2326	rBV8	3458	13420	2.32%	0.357%
93	29.414	2330	2334	2336	rBV5	3877	8234	1.42%	0.219%
94	29.650	2350	2357	2364	rBV5	7153	24230	4.18%	0.645%
95	29.742	2364	2366	2370	rVB4	3668	6413	1.11%	0.171%
96	29.793	2370	2371	2374	rVB3	3449	5581	0.96%	0.149%
97	29.844	2374	2376	2377	rBV2	3648	5523	0.95%	0.147%
98	30.008	2388	2392	2394	rBV5	2676	5392	0.93%	0.144%
99	30.192	2408	2410	2413	rVB4	2660	5078	0.88%	0.135%
100	30.284	2413	2419	2422	rBV8	6726	20922	3.61%	0.557%
101	30.520	2441	2442	2447	rBV5	3028	5970	1.03%	0.159%

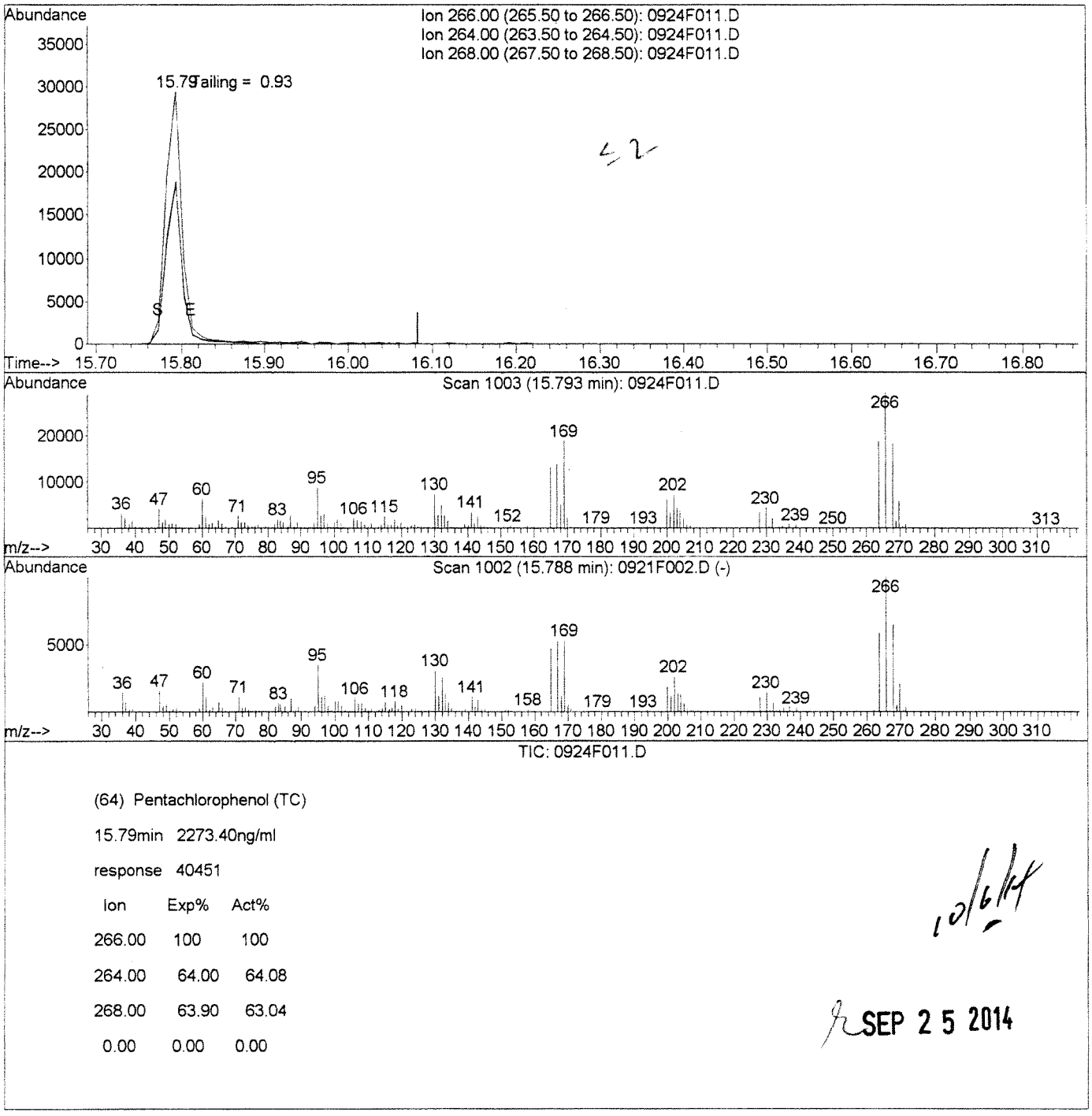
Sum of corrected areas: 3755668

SEP 25 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



(64) Pentachlorophenol (TC)

15.79min 2273.40ng/ml

response 40451

Ion	Exp%	Act%
266.00	100	100
264.00	64.00	64.08
268.00	63.90	63.04
0.00	0.00	0.00

10/6/14

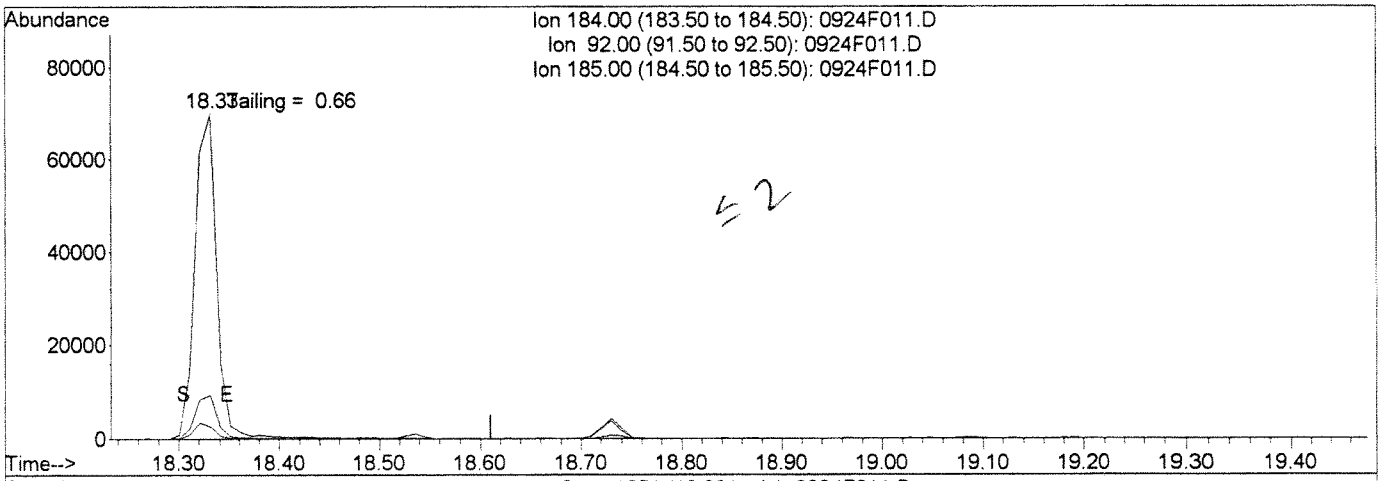
SEP 25 2014

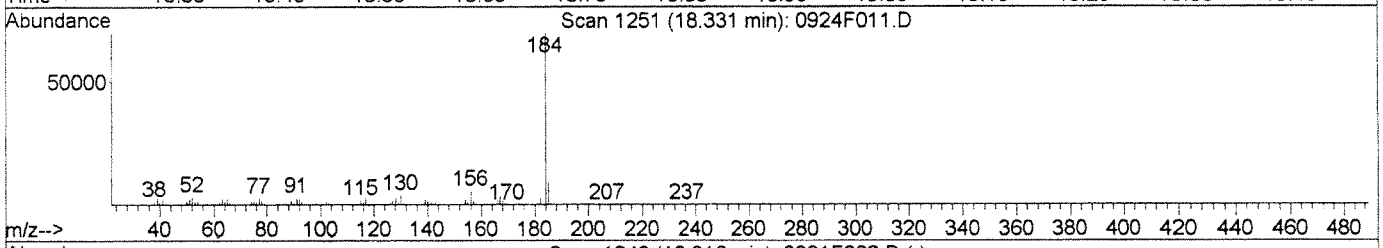
0924F011.D 092414_BNLL.M Thu Sep 25 08:02:23 2014

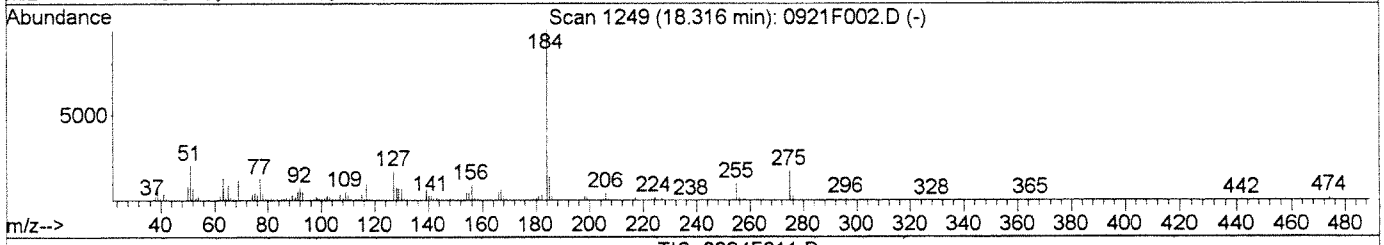
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F011.D

(71) Benzidine (T)

18.33min 2480.64ng/ml

response 105381

Ion	Exp%	Act%
184.00	100	100
92.00	6.90	3.84
185.00	13.50	13.44
0.00	0.00	0.00

10/6/14

SEP 25 2014

0924F011.D 092414_BNLL.M Thu Sep 25 08:02:33 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F004.D Vial: 2
Acq On : 24 Sep 2014 5:44 pm Operator: TLorr
Sample : IB Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:12 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	20646	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	72145	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	58133	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.08	188	98284	1000.00	ng/ml	0.02
70) Chrysene-d12	20.65	240	78433	1000.00	ng/ml	0.00
79) Perylene-d12	24.37	264	72960	1000.00	ng/ml	0.04

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 110		Recovery = 0.00%#			
6) Phenol-d6	0.00	99	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 43 - 128		Recovery = 0.00%#			
20) Nitrobenzene-d5	0.00	82	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 30 - 139		Recovery = 0.00%#			
40) 2-Fluorobiphenyl	0.00	172	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 37 - 126		Recovery = 0.00%#			
61) 2,4,6-Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery = 0.00%#			
73) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 54 - 158		Recovery = 0.00%#			

Target Compounds Qvalue

10/6/14

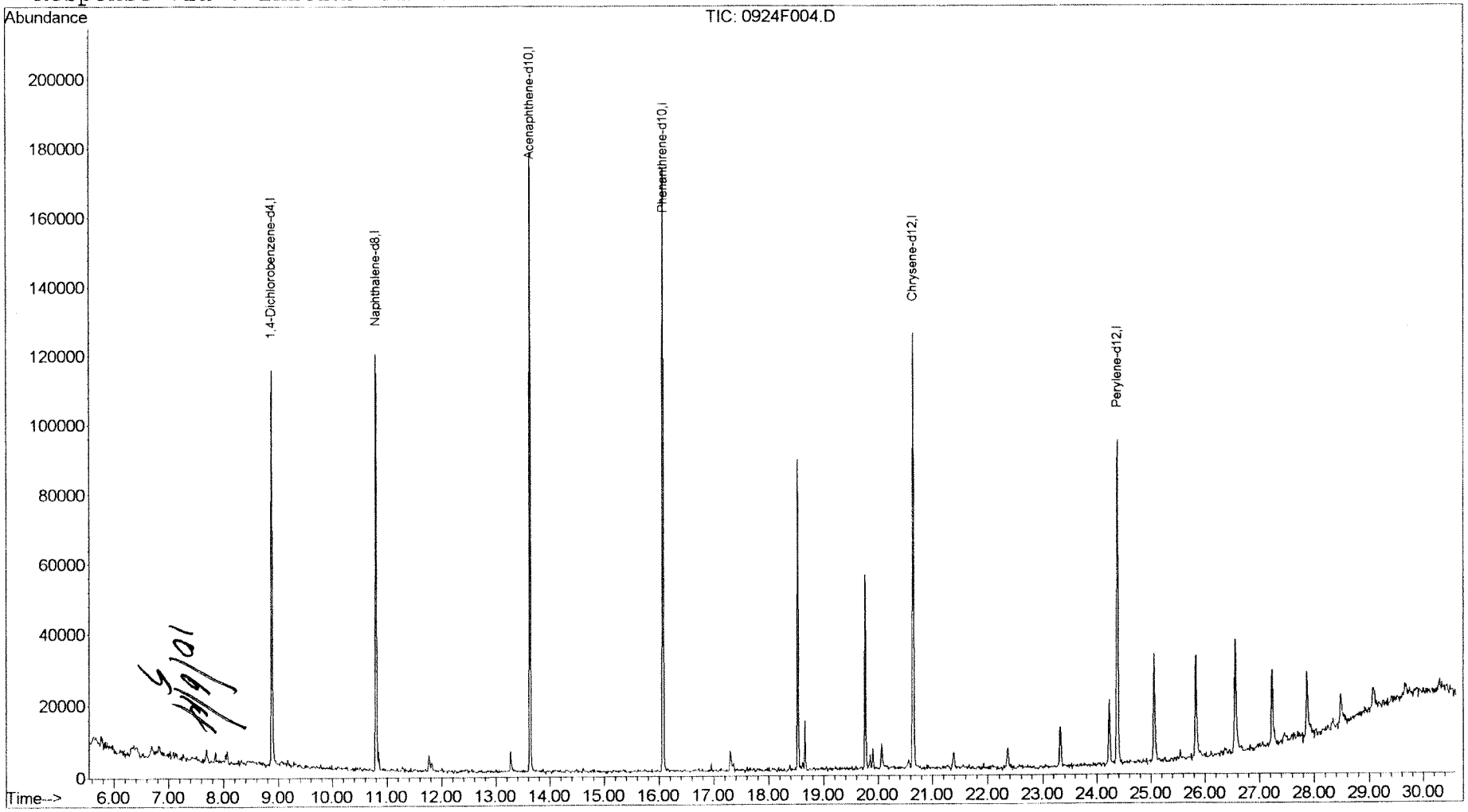
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F004.D 092414_BNLL.M Thu Sep 25 08:01:27 2014 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F004.D Vial: 2
Acq On : 24 Sep 2014 5:44 pm Operator: TLorr
Sample : IB Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:56 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



3009

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F005.D Vial: 3
Acq On : 24 Sep 2014 6:23 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.05ppm | SVM46-42C Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:14 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	22171	1000.00	ng/ml	-0.01
22) Naphthalene-d8	10.80	136	98531	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	49458	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	85872	1000.00	ng/ml	0.00
70) Chrysene-d12	20.65	240	72703	1000.00	ng/ml	0.00
79) Perylene-d12	24.37	264	81012	1000.00	ng/ml	0.03

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 110		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0d	0.00	ng/ml	
Spiked Amount 3750.000	Range 43 - 128		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	ng/ml	
Spiked Amount 2500.000	Range 30 - 139		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ng/ml	
Spiked Amount 2500.000	Range 37 - 126		Recovery =	0.00%#		
61) 2,4,6-Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery =	0.00%#		
73) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 2500.000	Range 54 - 158		Recovery =	0.00%#		

10/6/14

Target Compounds						Qvalue
30) Naphthalene	10.83	128	5393	51.12	ng/ml	97
34) 2-Methylnaphthalene	11.94	141	3209	58.21	ng/ml	86
35) 1-Methylnaphthalene	12.10	141	2509	49.95	ng/ml#	91
43) Acenaphthylene	13.40	152	4755	47.20	ng/ml	92
46) Acenaphthene	13.68	154	2808	48.47	ng/ml	85
49) Dibenzofuran	13.97	168	4222	46.04	ng/ml	79
53) Fluorene	14.53	166	3486	49.08	ng/ml	90
65) Phenanthrene	16.11	178	5078	51.54	ng/ml	82
66) Anthracene	16.19	178	4800	46.55	ng/ml	97
67) Carbazole	16.48	167	4540	46.25	ng/ml	98
69) Fluoranthene	18.06	202	5068	49.49	ng/ml	95
72) Pyrene	18.42	202	5500	53.98	ng/ml	95
76) Benz(a)anthracene	20.63	228	4515	53.88	ng/ml	93
77) Chrysene	20.70	228	3866	47.31	ng/ml	89
81) Benzo(b)fluoranthene	23.42	252	3626	38.35	ng/ml	86
82) Benzo(k)fluoranthene	23.50	252	4183	42.46	ng/ml	80
83) Benzo(a)pyrene	24.23	252	4423	50.31	ng/ml	68
84) Indeno(1,2,3-cd)pyrene	26.62	276	4102	54.05	ng/ml	84
85) Dibenz(a,h)anthracene	26.68	278	4329	56.75	ng/ml	91
86) Benzo(g,h,i)perylene	27.08	276	4950	60.20	ng/ml	89

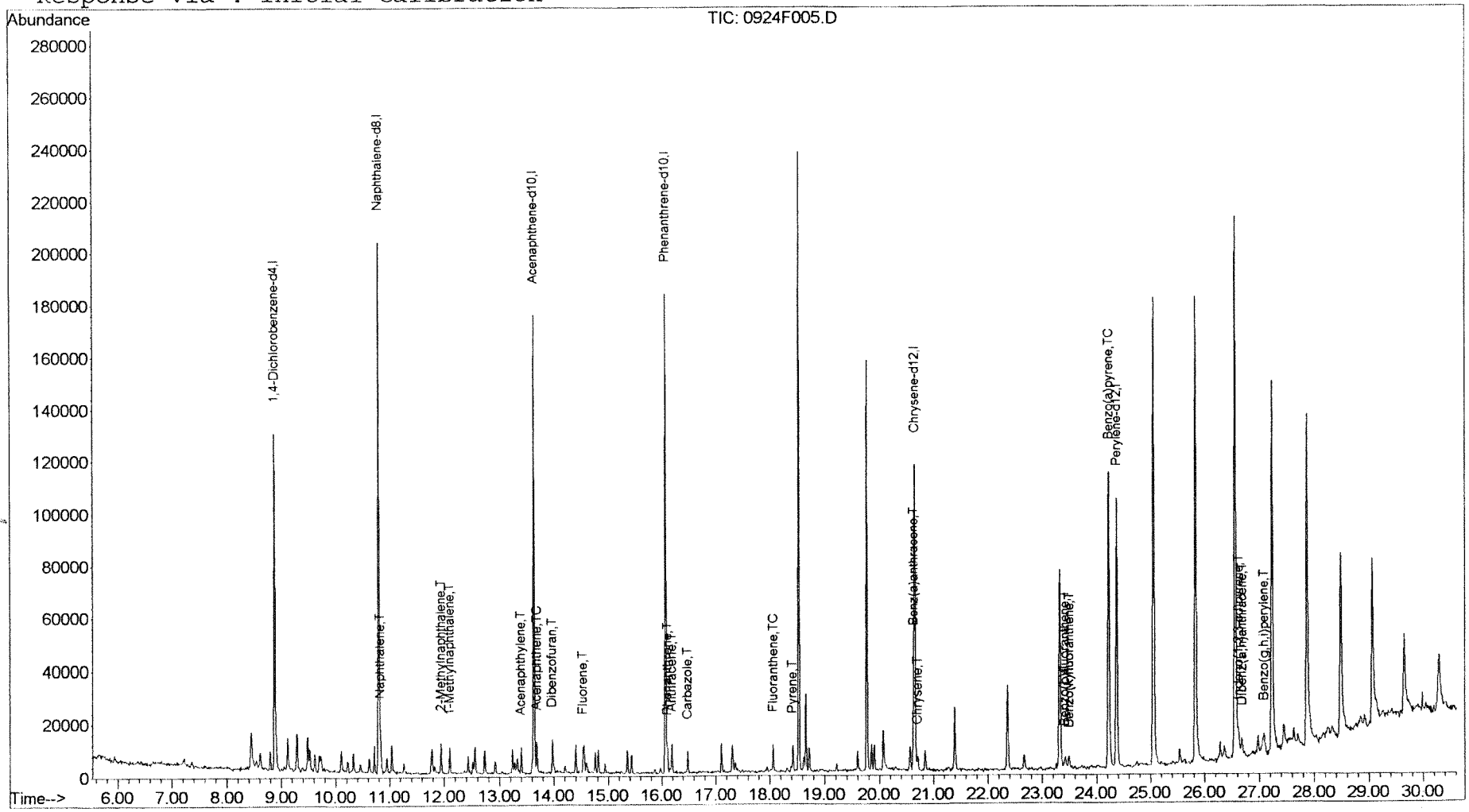
(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F005.D Vial: 3
Acq On : 24 Sep 2014 6:23 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.05ppm | SVM46-42C Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:07 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



3011

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:16 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	24221	1000.00	ng/ml	-0.01
22) Naphthalene-d8	10.80	136	101156	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	53576	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	93707	1000.00	ng/ml	0.00
70) Chrysene-d12	20.65	240	77156	1000.00	ng/ml	0.00
79) Perylene-d12	24.37	264	87821	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.21	112	3210	117.86	ng/ml	0.03
Spiked Amount 3750.000	Range 38 - 110		Recovery =	3.14%#		
6) Phenol-d6	8.42	99	3900	100.29	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery =	2.67%#		
20) Nitrobenzene-d5	9.69	82	4211	120.03	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery =	4.80%#		
40) 2-Fluorobiphenyl	12.56	172	8487	102.91	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery =	4.12%#		
61) 2,4,6-Tribromophenol	14.93	330	1025	78.90	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery =	2.10%#		
73) Terphenyl-d14	18.73	244	8165	112.79	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	4.51%#		
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.52	93	3811	132.51	ng/ml	92
7) Phenol	8.44	94	5088	127.32	ng/ml#	52
8) Aniline	8.43	93	5058	127.47	ng/ml#	20
9) 2-Chlorophenol	8.60	128	4051	106.56	ng/ml	75
10) 1,3-Dichlorobenzene	8.79	146	3544	91.06	ng/ml	91
11) 1,4-Dichlorobenzene	8.89	146	3977	98.05	ng/ml	95
12) 1,2-Dichlorobenzene	9.12	146	3958	98.27	ng/ml	97
13) Benzyl Alcohol	9.11	108	1740	86.42	ng/ml#	70
14) Bis(2-chloroisopropyl) Eth	9.28	45	6136	87.73	ng/ml#	61
15) 2-Methylphenol	9.28	107	2664m	97.33	ng/ml	
16) Acetophenone	9.48	105	4806	109.28	ng/ml	92
17) Hexachloroethane	9.61	117	2029	108.68	ng/ml	94
18) N-Nitrosodi-n-propylamine	9.48	70	3147	124.44	ng/ml#	73
19) 4-Methylphenol	9.52	107	3293	82.60	ng/ml	87
21) Nitrobenzene	9.72	77	4878	136.97	ng/ml	93
23) Isophorone	10.10	82	6667	118.17	ng/ml	91
24) 2-Nitrophenol	10.21	139	1692	88.20	ng/ml	60
25) 2,4-Dimethylphenol	10.32	122	3010	104.41	ng/ml#	68
26) Bis(2-chloroethoxy)methane	10.45	93	4021	107.41	ng/ml	90
27) 2,4-Dichlorophenol	10.61	162	3324	109.53	ng/ml	95

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:16 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28) Benzoic Acid	10.32	122	3010	899.31	ng/ml#	40
29) 1,2,4-Trichlorobenzene	10.72	180	4280	118.14	ng/ml	93
30) Naphthalene	10.83	128	11682	107.86	ng/ml	97
31) 4-Chloroaniline	10.94	127	4037	94.39	ng/ml	80
32) Hexachlorobutadiene	11.04	225	2989	146.99	ng/ml	86
33) 4-Chloro-3-methylphenol	11.78	107	2988	112.08	ng/ml	98
34) 2-Methylnaphthalene	11.94	141	6132	108.35	ng/ml	87
35) 1-Methylnaphthalene	12.10	141	5835	113.15	ng/ml#	93
38) 2,4,6-Trichlorophenol	12.43	196	2009	85.98	ng/ml	93
39) 2,4,5-Trichlorophenol	12.52	196	2058	80.90	ng/ml	92
41) 2-Chloronaphthalene	12.73	162	6759	92.35	ng/ml	96
42) 2-Nitroaniline	12.92	65	2735	125.56	ng/ml#	62
43) Acenaphthylene	13.40	152	9446	86.56	ng/ml	98
44) Dimethyl Phthalate	13.23	163	8132	97.75	ng/ml	97
45) 2,6-Dinitrotoluene	13.33	165	1938	98.41	ng/ml	71
46) Acenaphthene	13.68	154	6201	98.80	ng/ml	91
47) 3-Nitroaniline	13.59	138	1710	79.83	ng/ml	82
49) Dibenzofuran	13.97	168	9454	95.18	ng/ml	86
51) 2,4-Dinitrotoluene	13.98	165	2076	79.45	ng/ml#	41
52) 2,3,4,6-Tetrachlorophenol	14.21	232	1350	71.72	ng/ml	86
53) Fluorene	14.53	166	6888	89.53	ng/ml	94
54) 4-Chlorophenyl Phenyl Ethe	14.55	204	4208	106.86	ng/ml	94
55) Diethyl Phthalate	14.40	149	8965	98.04	ng/ml	98
56) 4-Nitroaniline	14.59	138	1526	69.99	ng/ml#	44
58) N-Nitrosodiphenylamine	14.76	169	4878	92.71	ng/ml	96
59) Azobenzene	14.81	77	8124	109.76	ng/ml	74
62) 4-Bromophenyl Phenyl Ether	15.36	248	2231	97.87	ng/ml	90
63) Hexachlorobenzene	15.43	284	2692	104.60	ng/ml	94
65) Phenanthrene	16.11	178	10538	98.01	ng/ml	97
66) Anthracene	16.19	178	10043	89.25	ng/ml	98
67) Carbazole	16.48	167	9917	92.57	ng/ml	96
68) Di-n-butyl Phthalate	17.10	149	13545	93.38	ng/ml	96
69) Fluoranthene	18.06	202	10906	97.60	ng/ml	95
71) Benzidine	18.32	184	2730	78.66	ng/ml	85
72) Pyrene	18.43	202	12159	112.46	ng/ml	95
74) Butyl Benzyl Phthalate	19.60	149	5317	97.22	ng/ml	96
75) 3,3'-Dichlorobenzidine	20.63	252	3095	97.43	ng/ml	89
76) Benz(a)anthracene	20.63	228	9208	103.54	ng/ml	97
77) Chrysene	20.71	228	9222	106.34	ng/ml	95
78) Bis(2-ethylhexyl) Phthalat	20.85	149	7342	94.84	ng/ml	94
80) Di-n-octyl Phthalate	22.66	149	12344	76.64	ng/ml	86

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:16 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	Benzo(b)fluoranthene	23.42	252	10038	97.93	ng/ml	90
82)	Benzo(k)fluoranthene	23.50	252	9956m	93.22	ng/ml	
83)	Benzo(a)pyrene	24.22	252	10288	107.94	ng/ml	82
84)	Indeno(1,2,3-cd)pyrene	26.62	276	9325	113.35	ng/ml	87
85)	Dibenz(a,h)anthracene	26.68	278	9873	119.38	ng/ml	89
86)	Benzo(g,h,i)perylene	27.09	276	10396	116.64	ng/ml	94

10/6/14
S

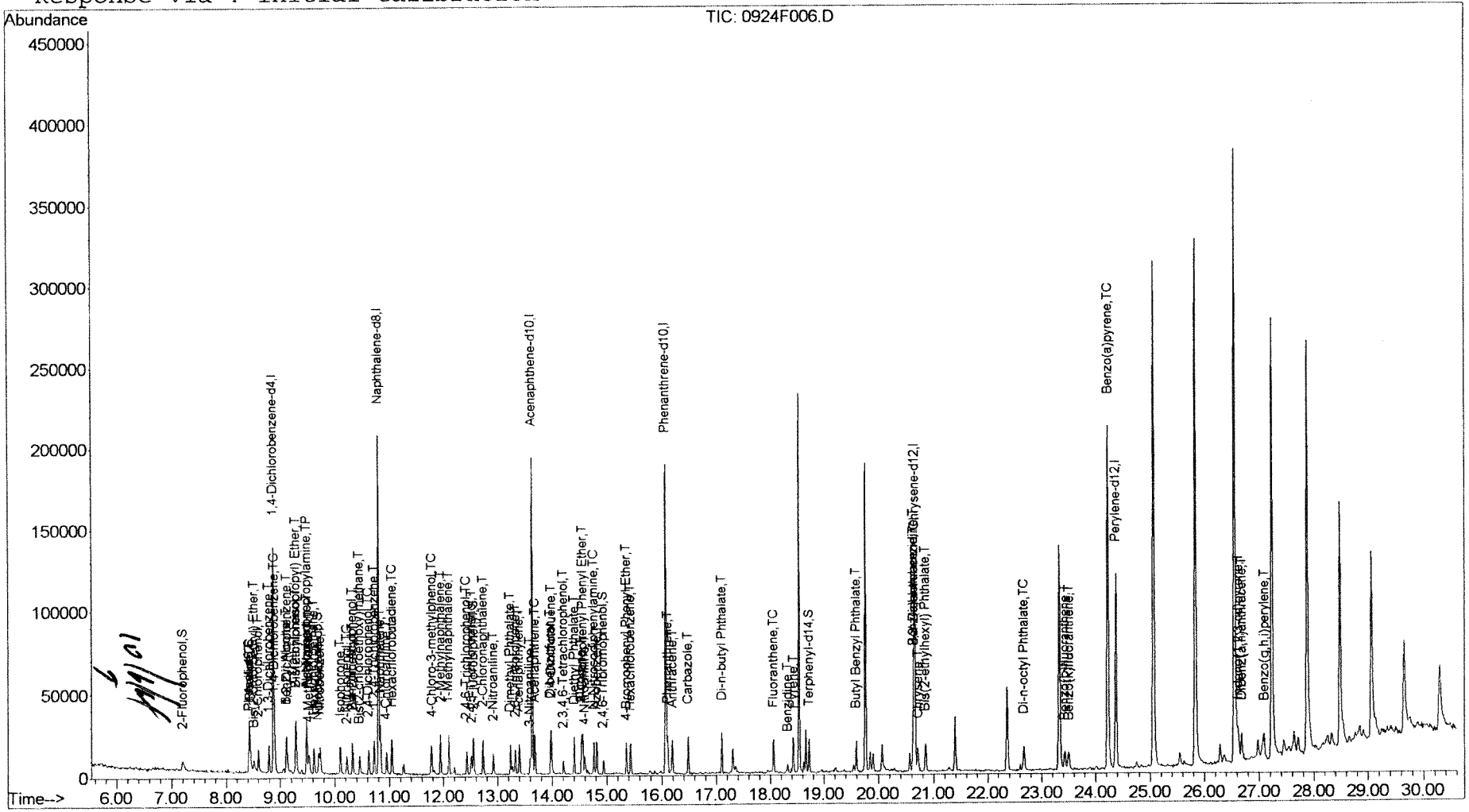
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F006.D 092414_BNLL.M Thu Sep 25 09:28:20 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 9:28 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:27:52 2014
Response via : Initial Calibration



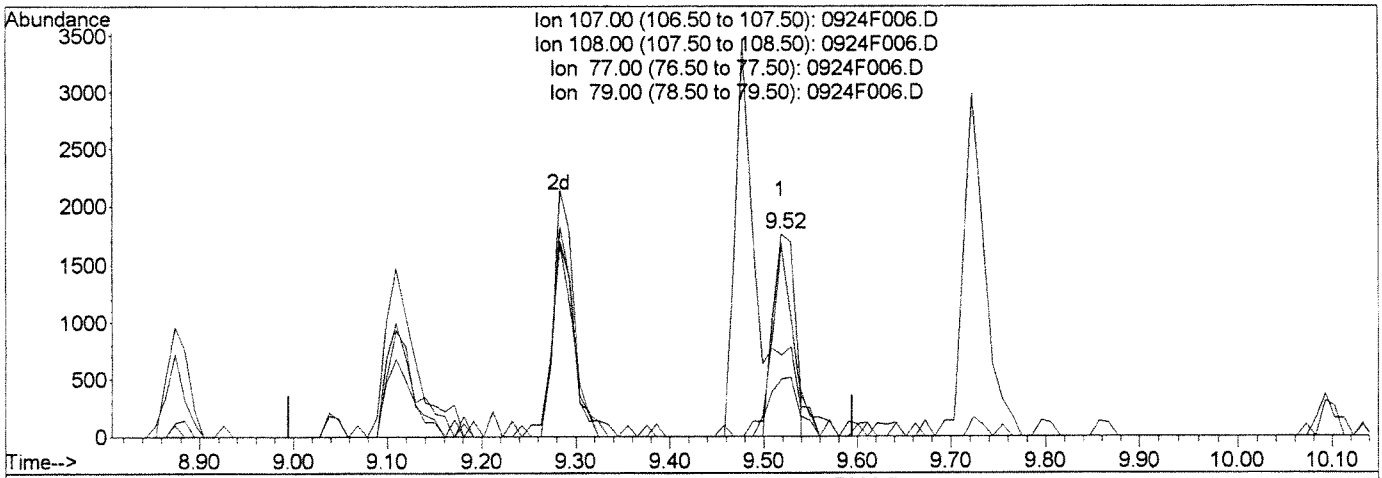
3015

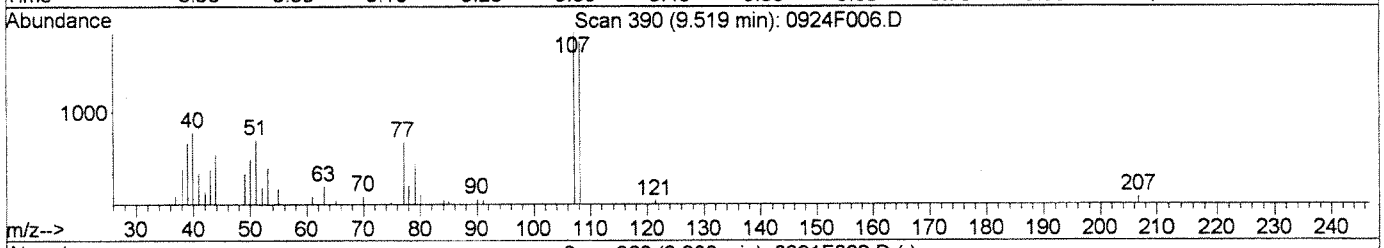
SEP 2 5 2014

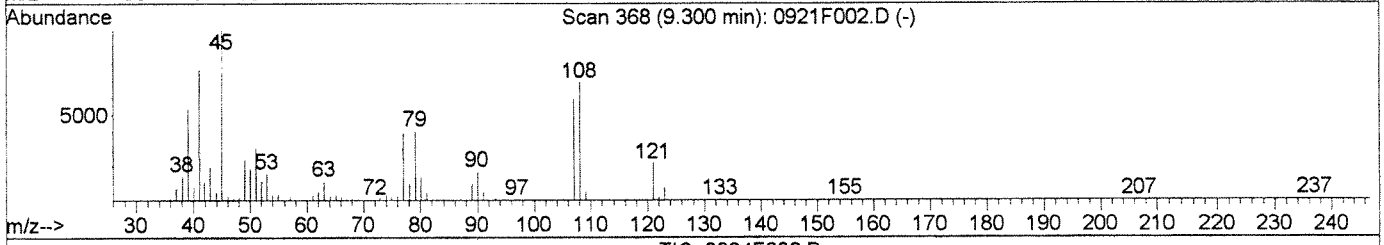
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:08 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F006.D

(15) 2-Methylphenol (T)

9.52min 109.75ng/ml

response 3004

Ion	Exp%	Act%
107.00	100	100
108.00	114.80	95.18
77.00	44.30	25.71
79.00	44.30	21.00

Manual Integration:

Before

09/25/14

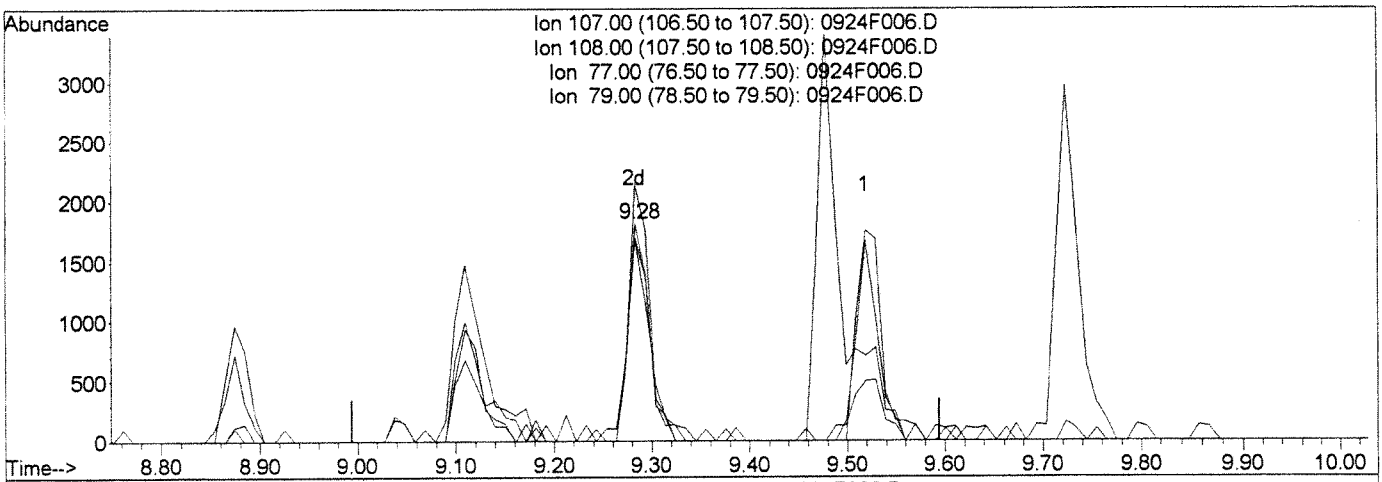
10/6/14

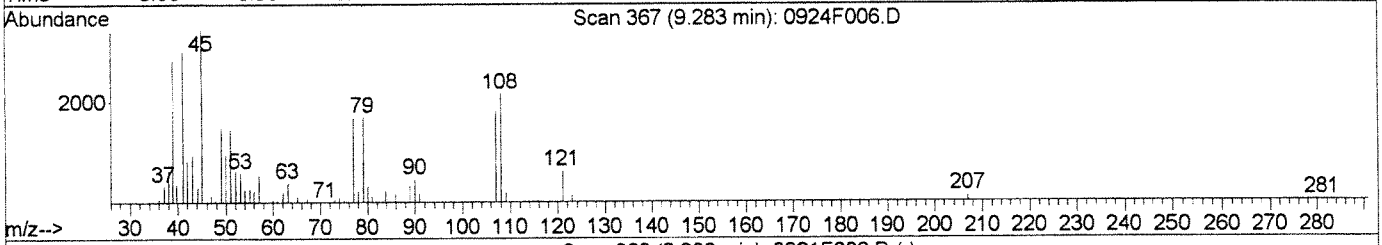
0924F006.D 092414_BNLL.M Thu Sep 25 08:10:55 2014

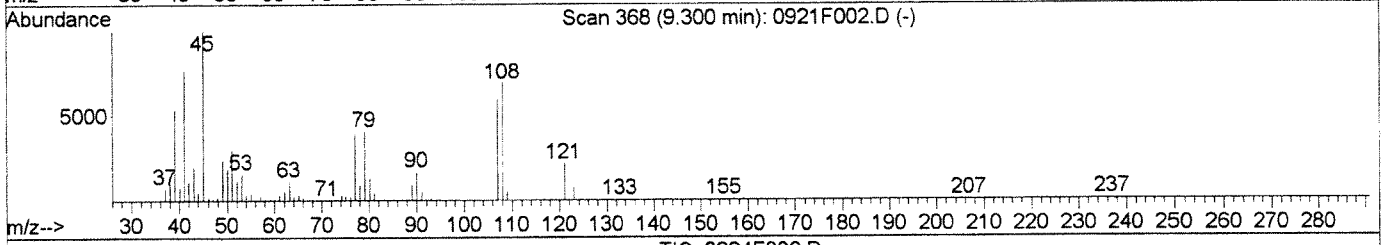
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 9:28 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:18:37 2014
Response via : Multiple Level Calibration







TIC: 0924F006.D

(15) 2-Methylphenol (T)

9.28min 97.33ng/ml m

response 2664

Ion	Exp%	Act%
107.00	100	100
108.00	114.80	117.78
77.00	44.30	92.48#
79.00	44.30	93.58#

Manual Integration:

After

WP

09/25/14

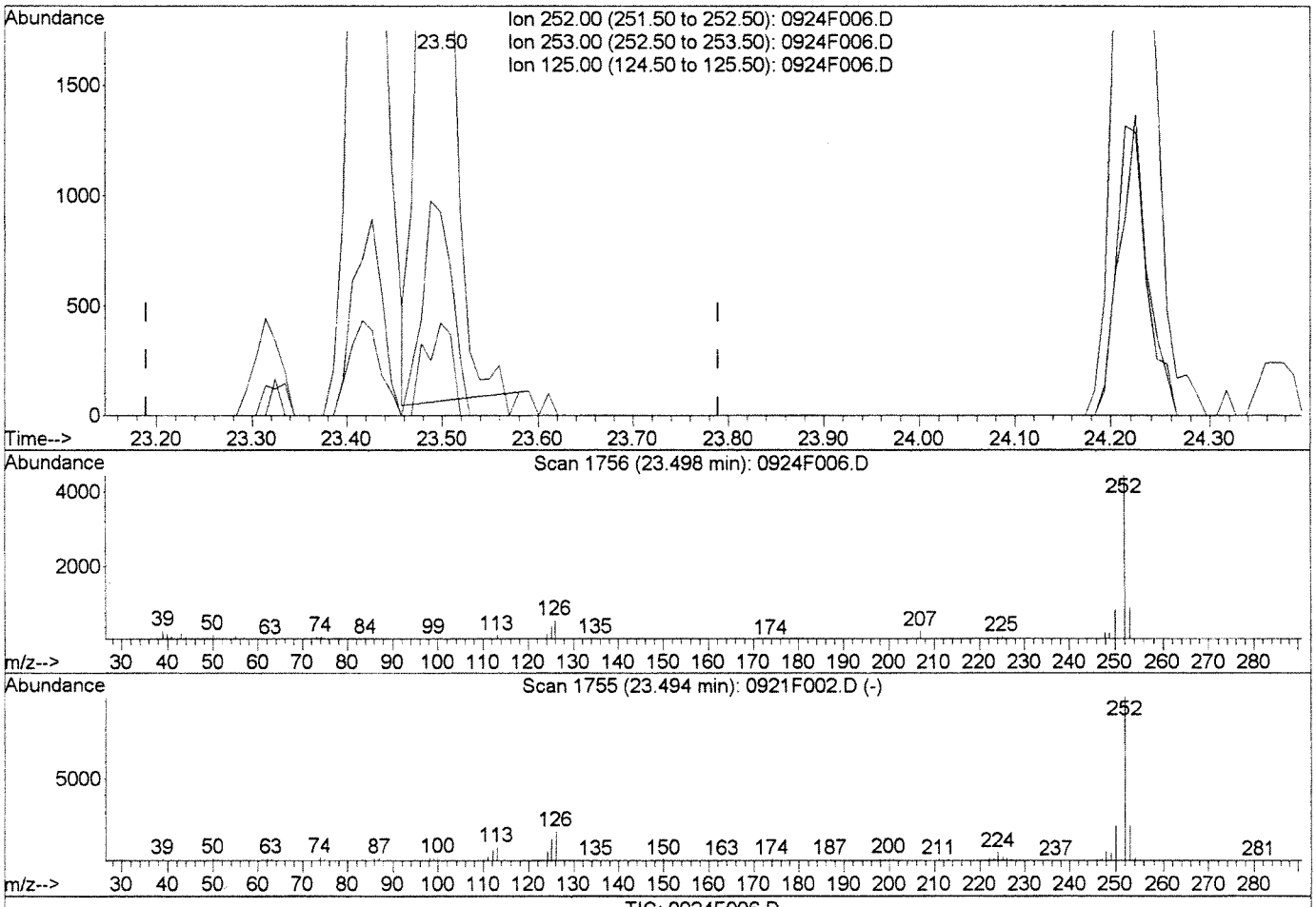
10/6/14

0924F006.D 092414_BNLL.M Thu Sep 25 09:28:12 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVQ_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:11 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F006.D

(82) Benzo(k)fluoranthene (T)

23.50min 88.55ng/ml

response 9457

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	21.35
125.00	13.30	9.75
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

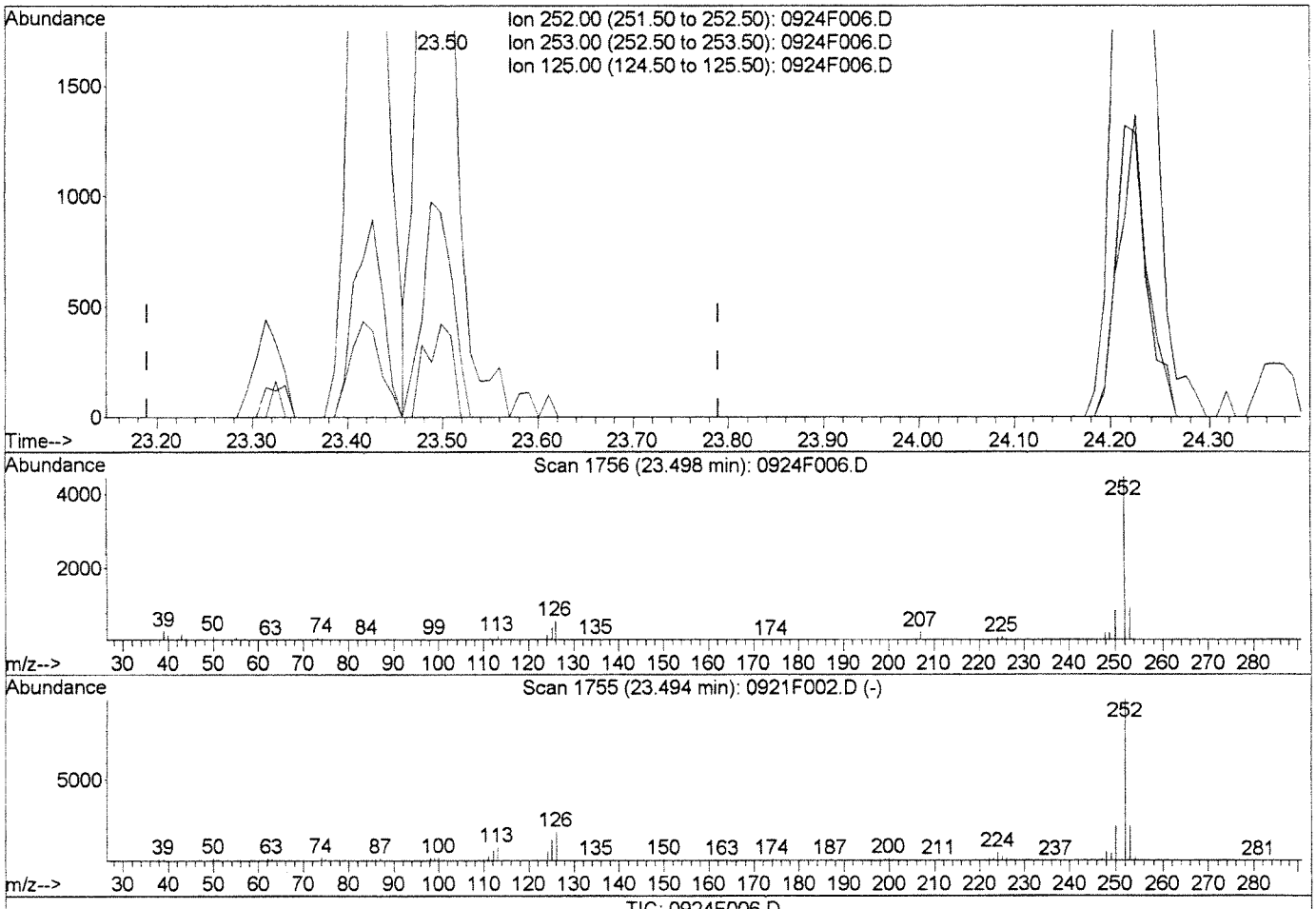
10/6/14

0924F006.D 092414_BNLL.M Thu Sep 25 08:12:10 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F006.D Vial: 4
Acq On : 24 Sep 2014 7:02 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.10ppm | SVM46-42D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:12 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F006.D

(82) Benzo(k)fluoranthene (T)

23.50min 93.22ng/ml m

response 9956

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	20.84
125.00	13.30	9.52
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/6/14

0924F006.D 092414_BNLL.M Thu Sep 25 08:12:16 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:19 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	23083	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.79	136	78910	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	56910	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	98855	1000.00	ng/ml	0.00
70) Chrysene-d12	20.65	240	85377	1000.00	ng/ml	0.00
79) Perylene-d12	24.36	264	79800	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.19	112	5355	206.31	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 5.50%#			
6) Phenol-d6	8.42	99	6459	174.29	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 4.65%#			
20) Nitrobenzene-d5	9.69	82	6626	198.18	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 7.93%#			
40) 2-Fluorobiphenyl	12.55	172	18322	209.14	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 8.37%#			
61) 2,4,6-Tribromophenol	14.94	330	2444	178.34	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 4.76%#			
73) Terphenyl-d14	18.73	244	16423	205.02	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 8.20%#			
Target Compounds						Qvalue
5) Bis(2-chloroethyl) Ether	8.51	93	5305m	193.55	ng/ml	
7) Phenol	8.43	94	6842	179.65	ng/ml#	14
8) Aniline	8.43	93	7674	202.93	ng/ml#	19
9) 2-Chlorophenol	8.59	128	6292	173.68	ng/ml	82
10) 1,3-Dichlorobenzene	8.79	146	7824	210.95	ng/ml	94
11) 1,4-Dichlorobenzene	8.90	146	8119	210.04	ng/ml	94
12) 1,2-Dichlorobenzene	9.12	146	7341	191.25	ng/ml	94
13) Benzyl Alcohol	9.11	108	3716	193.66	ng/ml#	54
14) Bis(2-chloroisopropyl) Eth	9.28	45	11673	175.12	ng/ml	77
15) 2-Methylphenol	9.28	107	4584	175.73	ng/ml#	73
16) Acetophenone	9.47	105	8966	213.91	ng/ml	89
17) Hexachloroethane	9.61	117	3363	189.01	ng/ml	91
18) N-Nitrosodi-n-propylamine	9.48	70	5093	211.33	ng/ml	87
19) 4-Methylphenol	9.52	107	6817	179.43	ng/ml	94
21) Nitrobenzene	9.72	77	6670	196.52	ng/ml	86
23) Isophorone	10.10	82	13531	307.45	ng/ml	92
24) 2-Nitrophenol	10.21	139	4429	295.95	ng/ml	76
25) 2,4-Dimethylphenol	10.32	122	5341	237.50	ng/ml	89
26) Bis(2-chloroethoxy)methane	10.45	93	7019	240.34	ng/ml	96
27) 2,4-Dichlorophenol	10.61	162	6489	274.11	ng/ml	96

(#) = qualifier out of range (m) = manual integration
0924F007.D 092414_BNLL.M Thu Sep 25 08:29:36 2014 Page 1

10/4/14 S

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:19 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28) Benzoic Acid	10.32	122	5341	1097.49	ng/ml#	31
29) 1,2,4-Trichlorobenzene	10.71	180	6650	235.30	ng/ml	87
30) Naphthalene	10.83	128	17867	211.48	ng/ml	97
31) 4-Chloroaniline	10.94	127	8169	244.84	ng/ml	85
32) Hexachlorobutadiene	11.04	225	5170	325.93	ng/ml	97
33) 4-Chloro-3-methylphenol	11.78	107	6891	331.36	ng/ml	92
34) 2-Methylnaphthalene	11.94	141	10711	242.61	ng/ml	84
35) 1-Methylnaphthalene	12.09	141	10306	256.19	ng/ml#	89
37) Hexachlorocyclopentadiene	12.21	237	2025	72.91	ng/ml	96
38) 2,4,6-Trichlorophenol	12.42	196	4827	194.49	ng/ml	90
39) 2,4,5-Trichlorophenol	12.51	196	5263	194.77	ng/ml	91
41) 2-Chloronaphthalene	12.73	162	14394	185.15	ng/ml	91
42) 2-Nitroaniline	12.91	65	5683	245.62	ng/ml#	66
43) Acenaphthylene	13.40	152	21213	182.99	ng/ml	97
44) Dimethyl Phthalate	13.24	163	18901	213.89	ng/ml	97
45) 2,6-Dinitrotoluene	13.32	165	4315	206.27	ng/ml	55
46) Acenaphthene	13.69	154	13147	197.20	ng/ml	98
47) 3-Nitroaniline	13.60	138	4116	180.89	ng/ml	89
49) Dibenzofuran	13.97	168	21817	206.77	ng/ml	88
50) 4-Nitrophenol	14.00	109	1978	178.01	ng/ml#	71
51) 2,4-Dinitrotoluene	13.98	165	5393	194.30	ng/ml#	47
52) 2,3,4,6-Tetrachlorophenol	14.20	232	3408	170.45	ng/ml	93
53) Fluorene	14.53	166	16846	206.13	ng/ml	99
54) 4-Chlorophenyl Phenyl Ethe	14.56	204	8827	211.03	ng/ml	96
55) Diethyl Phthalate	14.40	149	19544	201.20	ng/ml	99
56) 4-Nitroaniline	14.59	138	3084	133.17	ng/ml#	36
58) N-Nitrosodiphenylamine	14.76	169	11165	199.77	ng/ml	98
59) Azobenzene	14.82	77	18709	237.96	ng/ml	85
62) 4-Bromophenyl Phenyl Ether	15.36	248	5321	221.27	ng/ml	96
63) Hexachlorobenzene	15.43	284	6316	232.63	ng/ml	96
65) Phenanthrene	16.11	178	22197	195.70	ng/ml	97
66) Anthracene	16.19	178	22753	191.67	ng/ml	100
67) Carbazole	16.48	167	20162	178.41	ng/ml	97
68) Di-n-butyl Phthalate	17.10	149	27087	177.02	ng/ml	96
69) Fluoranthene	18.06	202	20918	177.44	ng/ml	96
71) Benzidine	18.32	184	7066	184.00	ng/ml	97
72) Pyrene	18.43	202	22490	187.98	ng/ml	97
74) Butyl Benzyl Phthalate	19.60	149	11978	197.93	ng/ml	90
75) 3,3'-Dichlorobenzidine	20.63	252	7215	205.26	ng/ml	97
76) Benz(a)anthracene	20.63	228	21129	214.70	ng/ml	97
77) Chrysene	20.71	228	19518	203.39	ng/ml	95

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:19 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
78) Bis(2-ethylhexyl) Phthalat	20.84	149	16473	192.31	ng/ml	98
80) Di-n-octyl Phthalate	22.67	149	25719	175.72	ng/ml	90
81) Benzo(b)fluoranthene	23.42	252	18805	201.89	ng/ml	96
82) Benzo(k)fluoranthene	23.49	252	19358	199.47	ng/ml	95
83) Benzo(a)pyrene	24.22	252	17932	207.05	ng/ml	94
84) Indeno(1,2,3-cd)pyrene	26.62	276	16306	218.14	ng/ml	85
85) Dibenz(a,h)anthracene	26.68	278	16397	218.20	ng/ml	90
86) Benzo(g,h,i)perylene	27.09	276	16751	206.82	ng/ml	95

10/16/14

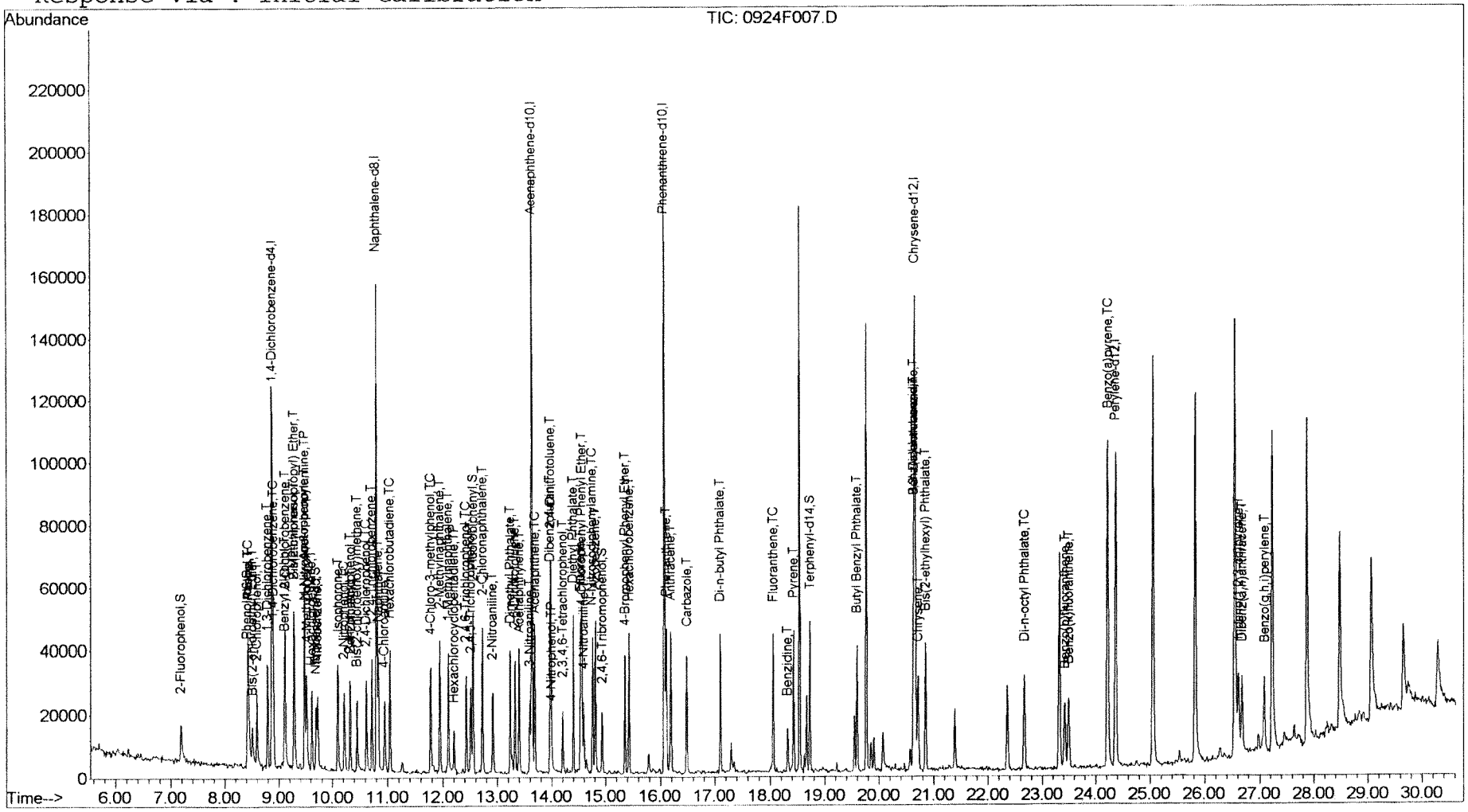
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F007.D 092414_BNLL.M Thu Sep 25 08:29:36 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:13 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration

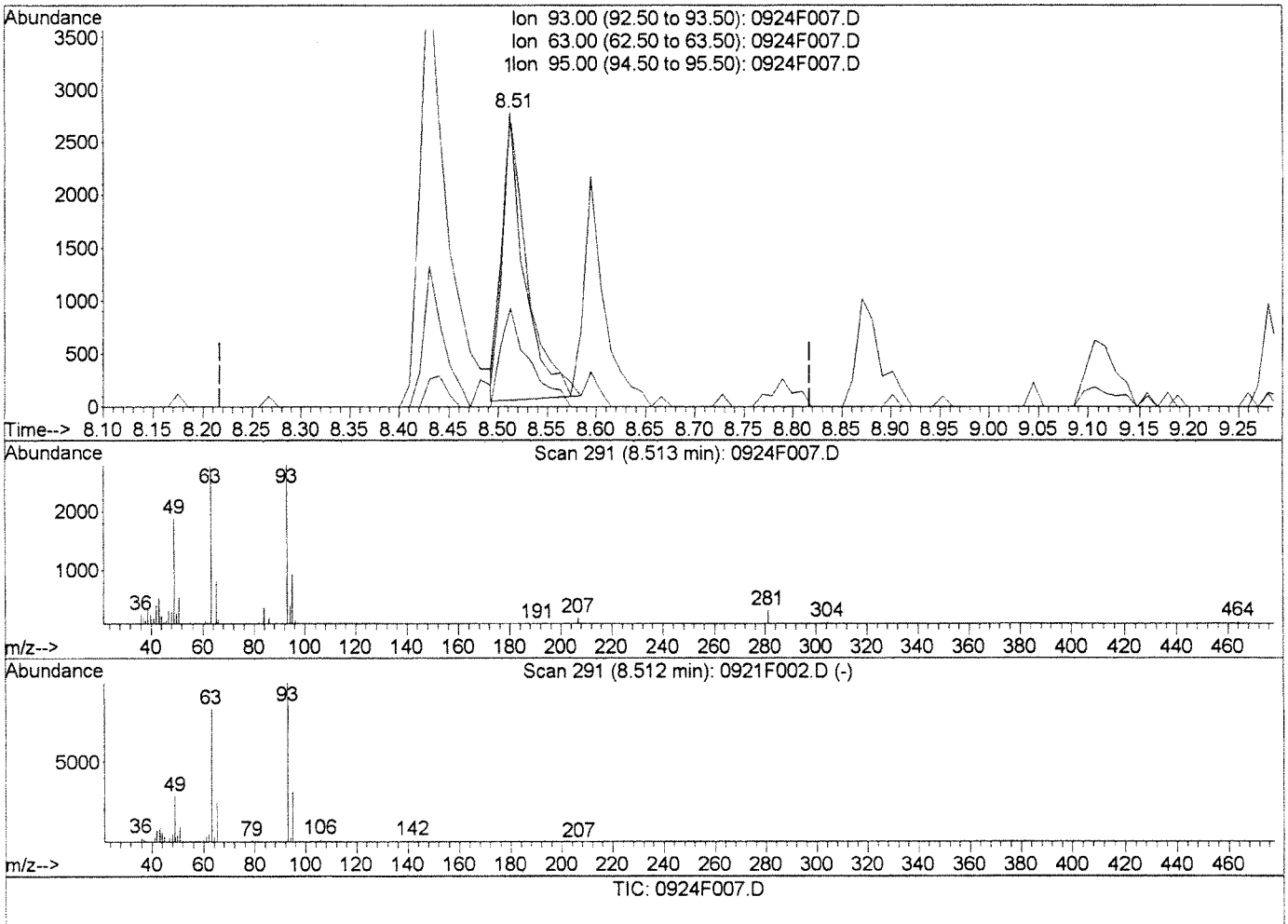


3023
SEP 25 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:12 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F007.D

(5) Bis(2-chloroethyl) Ether (T)

8.51min 177.72ng/ml

response 4871

Ion	Exp%	Act%
93.00	100	100
63.00	82.40	95.27
95.00	31.50	34.84
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

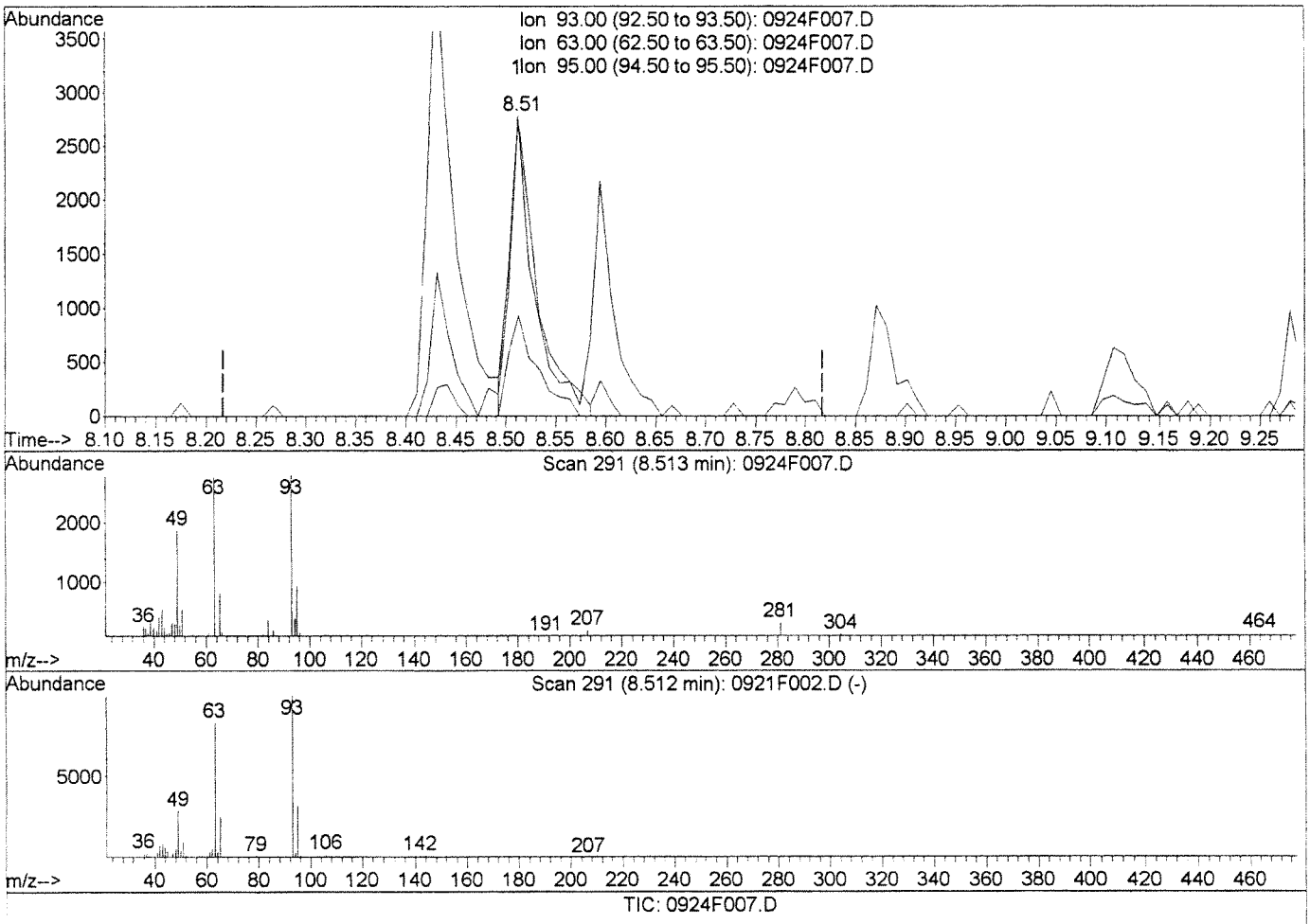
10/1/14

0924F007.D 092414_BNLL.M Thu Sep 25 08:12:56 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F007.D Vial: 5
Acq On : 24 Sep 2014 7:42 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.20ppm | SVM46-42E Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:12 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F007.D

(5) Bis(2-chloroethyl) Ether (T)

8.51min 193.55ng/ml m

response 5305

Ion	Exp%	Act%
93.00	100	100
63.00	82.40	98.92
95.00	31.50	33.55
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/6/14

0924F007.D 092414_BNLL.M Thu Sep 25 08:13:02 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:21 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	26765	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	126339	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	59974	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	111257	1000.00	ng/ml	0.01
70) Chrysene-d12	20.65	240	99669	1000.00	ng/ml	0.01
79) Perylene-d12	24.38	264	112374	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	15542	516.40	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 13.77%#			
6) Phenol-d6	8.40	99	23702	551.60	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 14.71%#			
20) Nitrobenzene-d5	9.69	82	26713	689.06	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 27.56%#			
40) 2-Fluorobiphenyl	12.55	172	47723	516.92	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 20.68%#			
61) 2,4,6-Tribromophenol	14.93	330	7966	516.48	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 13.77%#			
73) Terphenyl-d14	18.73	244	46013	492.04	ng/ml	0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 19.68%#			
Target Compounds						Qvalue
3) Pyridine	5.86	79	15251m	535.79	ng/ml	
5) Bis(2-chloroethyl) Ether	8.51	93	17794	559.90	ng/ml	97
7) Phenol	8.43	94	25336	573.72	ng/ml#	27
8) Aniline	8.43	93	26115	595.57	ng/ml#	1
9) 2-Chlorophenol	8.59	128	20280	482.77	ng/ml	80
10) 1,3-Dichlorobenzene	8.79	146	21819	507.36	ng/ml	93
11) 1,4-Dichlorobenzene	8.90	146	22619	504.65	ng/ml	94
12) 1,2-Dichlorobenzene	9.11	146	22542	506.48	ng/ml	85
13) Benzyl Alcohol	9.10	108	12308	553.20	ng/ml#	65
14) Bis(2-chloroisopropyl) Eth	9.29	45	38030	492.06	ng/ml#	65
15) 2-Methylphenol	9.29	107	17170	567.69	ng/ml#	74
16) Acetophenone	9.47	105	31496	648.07	ng/ml	96
17) Hexachloroethane	9.61	117	12824	621.60	ng/ml	97
18) N-Nitrosodi-n-propylamine	9.48	70	20365	728.77	ng/ml	91
19) 4-Methylphenol	9.51	107	25851	586.83	ng/ml	94
21) Nitrobenzene	9.71	77	26533	674.22	ng/ml	78
23) Isophorone	10.09	82	40935	580.94	ng/ml	93
24) 2-Nitrophenol	10.21	139	13396	559.09	ng/ml	63
25) 2,4-Dimethylphenol	10.32	122	18089	502.41	ng/ml	80
26) Bis(2-chloroethoxy)methane	10.44	93	24864	531.76	ng/ml	95

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:21 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27)	2,4-Dichlorophenol	10.62	162	21715	572.93 ng/ml	98
28)	Benzoic Acid	10.45	122	2448	844.86 ng/ml	89
29)	1,2,4-Trichlorobenzene	10.72	180	27153	600.09 ng/ml	97
30)	Naphthalene	10.83	128	68204	504.21 ng/ml	98
31)	4-Chloroaniline	10.94	127	27940	523.05 ng/ml	90
32)	Hexachlorobutadiene	11.04	225	18237	718.09 ng/ml	95
33)	4-Chloro-3-methylphenol	11.77	107	19049	572.11 ng/ml	94
34)	2-Methylnaphthalene	11.95	141	36139	511.27 ng/ml	89
35)	1-Methylnaphthalene	12.10	141	33968	527.39 ng/ml#	89
37)	Hexachlorocyclopentadiene	12.20	237	10906	372.62 ng/ml	99
38)	2,4,6-Trichlorophenol	12.43	196	13272	507.42 ng/ml	96
39)	2,4,5-Trichlorophenol	12.51	196	14347	503.82 ng/ml	97
41)	2-Chloronaphthalene	12.72	162	39863	486.56 ng/ml	94
42)	2-Nitroaniline	12.92	65	14432	591.88 ng/ml#	73
43)	Acenaphthylene	13.40	152	53465	437.65 ng/ml	98
44)	Dimethyl Phthalate	13.24	163	48150	517.05 ng/ml	98
45)	2,6-Dinitrotoluene	13.33	165	11428	518.38 ng/ml	59
46)	Acenaphthene	13.69	154	35272	502.04 ng/ml	96
47)	3-Nitroaniline	13.59	138	10526	438.97 ng/ml	76
48)	2,4-Dinitrophenol	13.78	184	1428	664.15 ng/ml#	35
49)	Dibenzofuran	13.97	168	55457	498.75 ng/ml	84
50)	4-Nitrophenol	13.99	109	7947	678.66 ng/ml#	68
51)	2,4-Dinitrotoluene	13.98	165	16770	573.34 ng/ml#	58
52)	2,3,4,6-Tetrachlorophenol	14.20	232	10611	503.59 ng/ml	98
53)	Fluorene	14.54	166	43848	509.11 ng/ml	97
54)	4-Chlorophenyl Phenyl Ethe	14.56	204	23129	524.70 ng/ml	85
55)	Diethyl Phthalate	14.40	149	53130	519.02 ng/ml	99
56)	4-Nitroaniline	14.60	138	10359	424.45 ng/ml#	38
57)	2-Methyl-4,6-dinitrophenol	14.65	198	5344	853.87 ng/ml#	60
58)	N-Nitrosodiphenylamine	14.76	169	28732	487.82 ng/ml	92
59)	Azobenzene	14.81	77	49712	599.97 ng/ml	79
62)	4-Bromophenyl Phenyl Ether	15.35	248	14268	527.19 ng/ml	84
63)	Hexachlorobenzene	15.44	284	15958	522.24 ng/ml	93
64)	Pentachlorophenol	15.78	266	5831	281.03 ng/ml	96
65)	Phenanthrene	16.11	178	61388	480.89 ng/ml	98
66)	Anthracene	16.19	178	62798	470.03 ng/ml	98
67)	Carbazole	16.48	167	59140	464.97 ng/ml	94
68)	Di-n-butyl Phthalate	17.10	149	84573	491.09 ng/ml	95
69)	Fluoranthene	18.07	202	61243	461.60 ng/ml	95
71)	Benzidine	18.32	184	18255	407.19 ng/ml	99
72)	Pyrene	18.43	202	67102	480.44 ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:21 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) Butyl Benzyl Phthalate	19.60	149	33423	473.09	ng/ml	90
75) 3,3'-Dichlorobenzidine	20.62	252	19872	484.27	ng/ml	97
76) Benz(a)anthracene	20.63	228	58630	510.34	ng/ml	98
77) Chrysene	20.72	228	55276	493.41	ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	20.85	149	51306	513.06	ng/ml	99
80) Di-n-octyl Phthalate	22.67	149	95359	462.67	ng/ml	95
81) Benzo(b)fluoranthene	23.43	252	63601	484.89	ng/ml	93
82) Benzo(k)fluoranthene	23.50	252	62607	458.12	ng/ml	95
83) Benzo(a)pyrene	24.23	252	61779	506.56	ng/ml	97
84) Indeno(1,2,3-cd)pyrene	26.62	276	57612	547.31	ng/ml	86
85) Dibenz(a,h)anthracene	26.69	278	59206	559.49	ng/ml	89
86) Benzo(g,h,i)perylene	27.09	276	62572	548.63	ng/ml	95

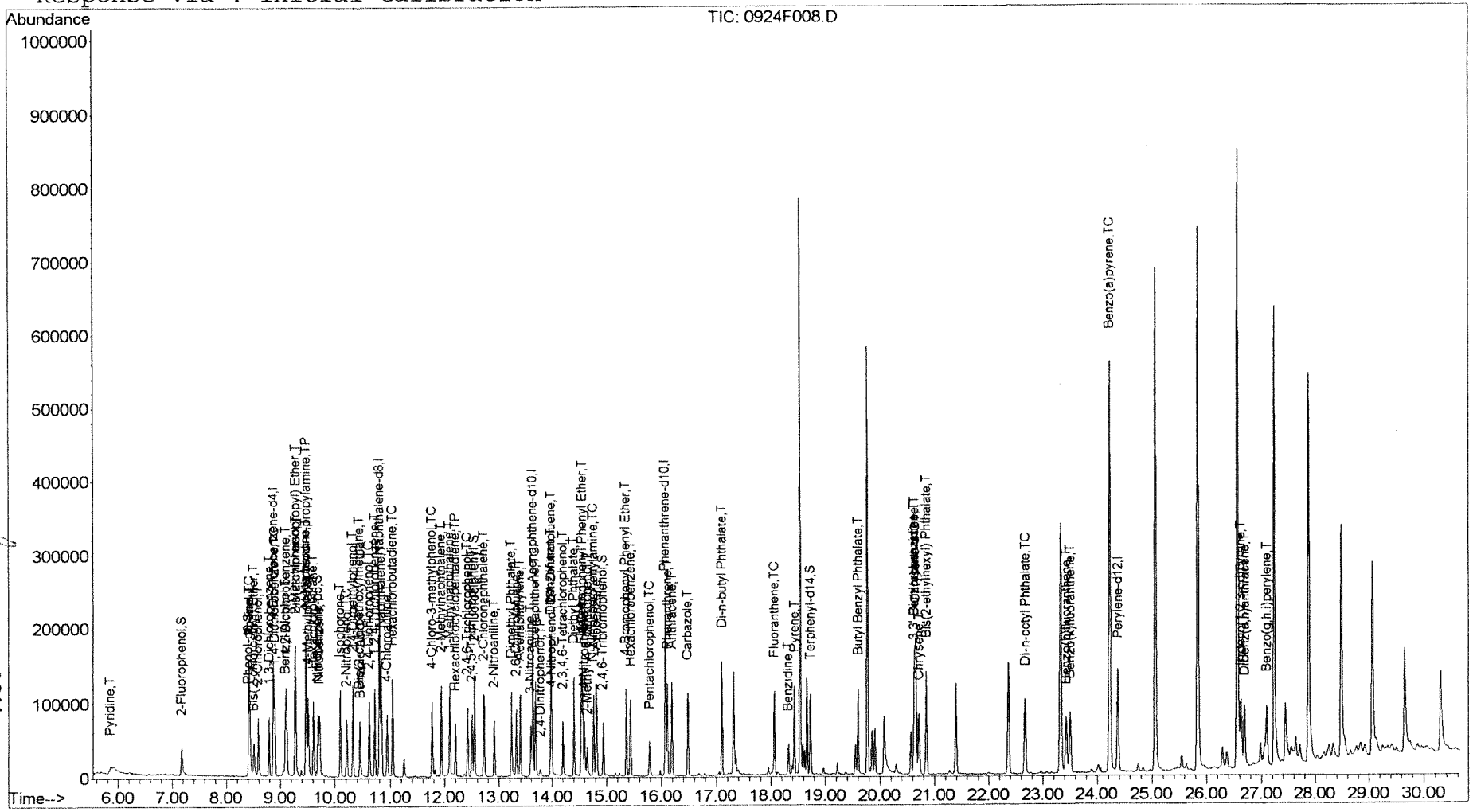
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F008.D 092414_BNLL.M Thu Sep 25 08:29:38 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:16 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



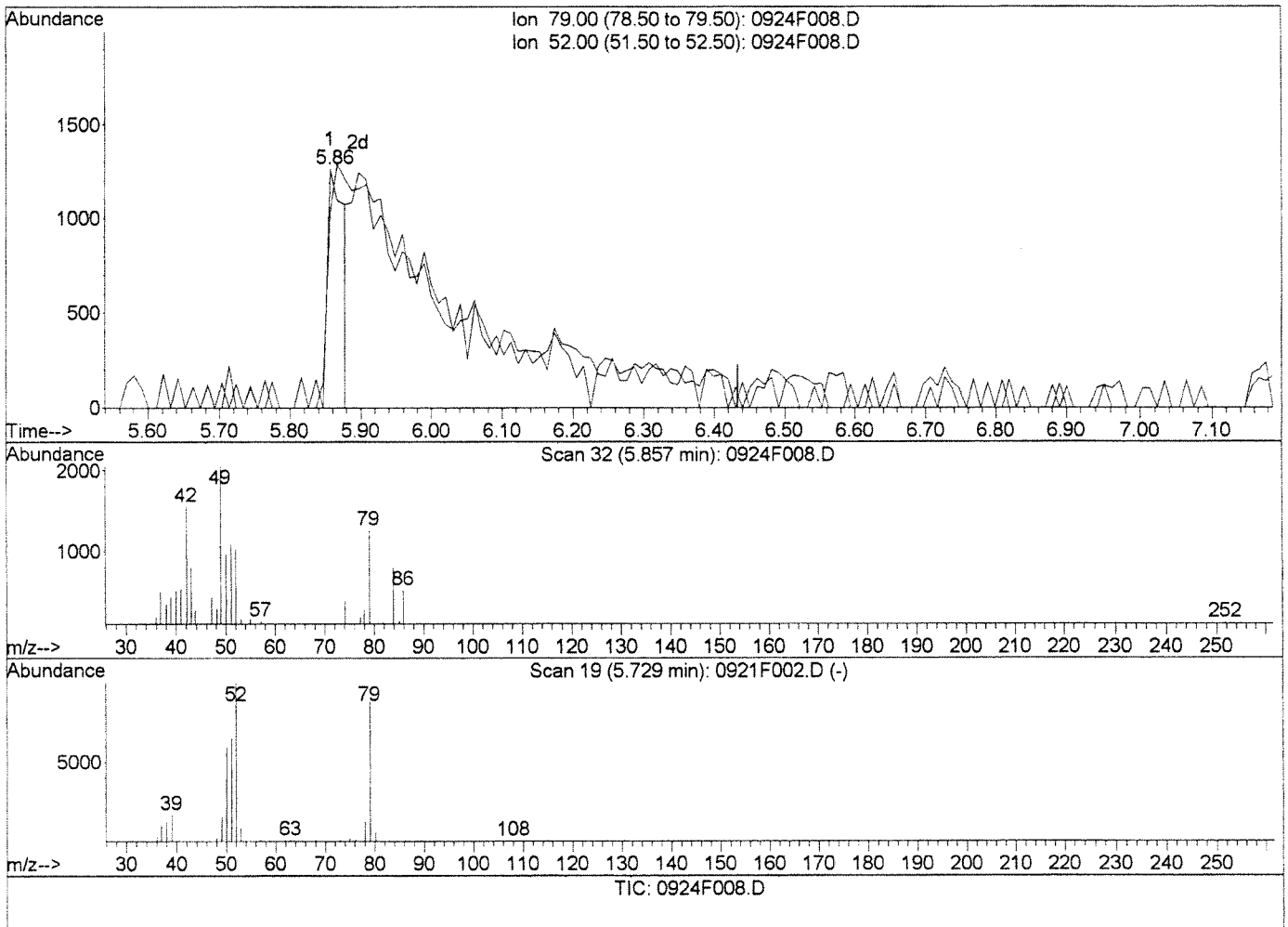
3029

SEP 25 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:15 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F008.D

(3) Pyridine (T)

5.86min 77.18ng/ml

response 2197

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	81.49
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

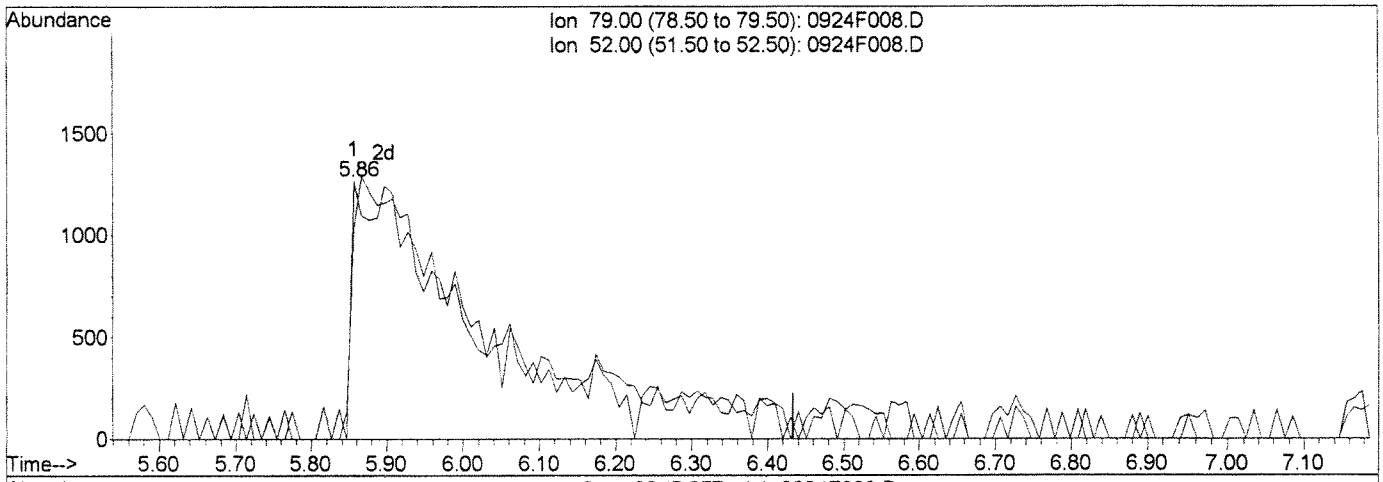
10/6/14

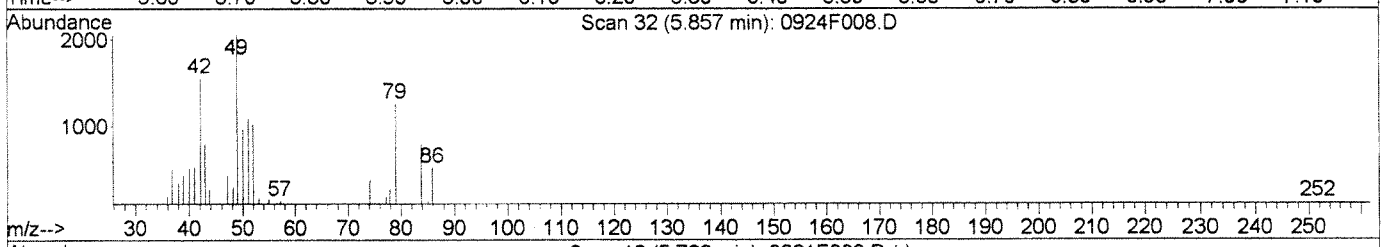
0924F008.D 092414_BNLL.M Thu Sep 25 08:16:03 2014

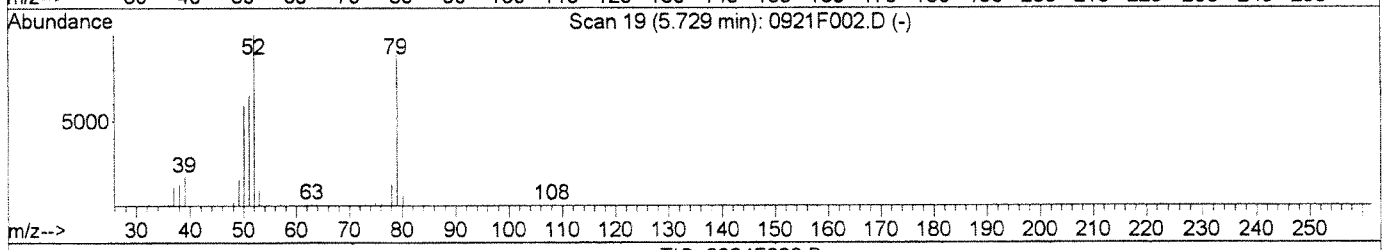
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F008.D Vial: 6
Acq On : 24 Sep 2014 8:21 pm Operator: TLorr
Sample : SVO_LL ICAL @ 0.50ppm | SVM46-42F Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:16 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F008.D

(3) Pyridine (T)

5.86min 535.79ng/ml m

response 15251

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	81.49
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

0924F008.D 092414_BNLL.M Thu Sep 25 08:16:10 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:24 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	28927	1000.00	ng/ml	-0.02
22) Naphthalene-d8	10.80	136	96474	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	51533	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	91390	1000.00	ng/ml	0.02
70) Chrysene-d12	20.66	240	89314	1000.00	ng/ml	0.02
79) Perylene-d12	24.37	264	77947	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.17	112	32288	992.61	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 26.47%#			
6) Phenol-d6	8.41	99	41164	886.38	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 23.64%#			
20) Nitrobenzene-d5	9.69	82	42732	1019.89	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 40.80%			
40) 2-Fluorobiphenyl	12.55	172	78557	990.27	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 39.61%			
61) 2,4,6-Tribromophenol	14.94	330	13149	1037.85	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 27.68%#			
73) Terphenyl-d14	18.73	244	83654	998.27	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 39.93%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.81	42	33592m	1199.96	ng/ml	
3) Pyridine	5.81	79	26925m	875.21	ng/ml	
5) Bis(2-chloroethyl) Ether	8.50	93	34198m	995.65	ng/ml	
7) Phenol	8.42	94	43707	915.75	ng/ml#	10
8) Aniline	8.42	93	47221	996.41	ng/ml#	15
9) 2-Chlorophenol	8.59	128	39409	868.03	ng/ml	87
10) 1,3-Dichlorobenzene	8.79	146	46881	1008.65	ng/ml	96
11) 1,4-Dichlorobenzene	8.90	146	47224	974.86	ng/ml	96
12) 1,2-Dichlorobenzene	9.12	146	44480	924.69	ng/ml	94
13) Benzyl Alcohol	9.10	108	20081	835.11	ng/ml#	70
14) Bis(2-chloroisopropyl) Eth	9.28	45	65950	789.53	ng/ml#	66
15) 2-Methylphenol	9.28	107	27579	843.69	ng/ml#	77
16) Acetophenone	9.47	105	48360	920.70	ng/ml	92
17) Hexachloroethane	9.62	117	22367	1003.14	ng/ml	87
18) N-Nitrosodi-n-propylamine	9.47	70	28480m	942.99	ng/ml	
19) 4-Methylphenol	9.52	107	39099	821.23	ng/ml	97
21) Nitrobenzene	9.72	77	41311m	971.28	ng/ml	
23) Isophorone	10.09	82	64390	1196.68	ng/ml	89
24) 2-Nitrophenol	10.21	139	21838	1193.56	ng/ml	75
25) 2,4-Dimethylphenol	10.32	122	26893	978.16	ng/ml	86

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:24 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Bis(2-chloroethoxy)methane	10.45	93	39029	1093.10	ng/ml	95
27) 2,4-Dichlorophenol	10.61	162	34205	1181.84	ng/ml	98
28) Benzoic Acid	10.47	122	6375	1089.13	ng/ml	96
29) 1,2,4-Trichlorobenzene	10.71	180	39374	1139.56	ng/ml	96
30) Naphthalene	10.84	128	102989	997.07	ng/ml	99
31) 4-Chloroaniline	10.94	127	42068	1031.32	ng/ml	81
32) Hexachlorobutadiene	11.04	225	26103	1346.00	ng/ml	98
33) 4-Chloro-3-methylphenol	11.77	107	31308	1231.38	ng/ml	90
34) 2-Methylnaphthalene	11.94	141	56583	1048.30	ng/ml	90
35) 1-Methylnaphthalene	12.10	141	54085	1099.68	ng/ml#	91
37) Hexachlorocyclopentadiene	12.21	237	19533	776.69	ng/ml	96
38) 2,4,6-Trichlorophenol	12.43	196	22156	985.83	ng/ml	91
39) 2,4,5-Trichlorophenol	12.50	196	23861	975.17	ng/ml	96
41) 2-Chloronaphthalene	12.73	162	65872	935.73	ng/ml	98
42) 2-Nitroaniline	12.92	65	25208	1203.15	ng/ml#	72
43) Acenaphthylene	13.40	152	95970	914.26	ng/ml	100
44) Dimethyl Phthalate	13.24	163	78884	985.83	ng/ml	99
45) 2,6-Dinitrotoluene	13.33	165	19263	1016.91	ng/ml	75
46) Acenaphthene	13.69	154	56109	929.44	ng/ml	96
47) 3-Nitroaniline	13.60	138	18819	913.37	ng/ml	82
48) 2,4-Dinitrophenol	13.77	184	3370	968.15	ng/ml#	38
49) Dibenzofuran	13.98	168	87703	917.94	ng/ml	75
50) 4-Nitrophenol	13.99	109	14025	1393.89	ng/ml#	83
51) 2,4-Dinitrotoluene	13.99	165	26539	1055.94	ng/ml#	68
52) 2,3,4,6-Tetrachlorophenol	14.20	232	17190	949.45	ng/ml	96
53) Fluorene	14.54	166	71613	967.69	ng/ml	97
54) 4-Chlorophenyl Phenyl Ethe	14.56	204	37513	990.41	ng/ml	94
55) Diethyl Phthalate	14.41	149	84992	966.27	ng/ml	98
56) 4-Nitroaniline	14.60	138	17711	844.56	ng/ml#	41
57) 2-Methyl-4,6-dinitrophenol	14.65	198	10565	1197.50	ng/ml	75
58) N-Nitrosodiphenylamine	14.76	169	46402	916.87	ng/ml	96
59) Azobenzene	14.82	77	77513	1088.74	ng/ml	83
62) 4-Bromophenyl Phenyl Ether	15.36	248	22778	1024.58	ng/ml	94
63) Hexachlorobenzene	15.43	284	26031	1037.07	ng/ml	94
64) Pentachlorophenol	15.79	266	9889	580.23	ng/ml	98
65) Phenanthrene	16.11	178	96209	917.51	ng/ml	99
66) Anthracene	16.20	178	100540	916.12	ng/ml	99
67) Carbazole	16.48	167	93720	897.03	ng/ml	94
68) Di-n-butyl Phthalate	17.11	149	138268	977.42	ng/ml	97
69) Fluoranthene	18.06	202	105536	968.37	ng/ml	97
71) Benzidine	18.33	184	47850	1191.07	ng/ml	99

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:24 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.43	202	115038	919.14	ng/ml	97
74)	Butyl Benzyl Phthalate	19.60	149	61356	969.16	ng/ml	83
75)	3,3'-Dichlorobenzidine	20.63	252	36790	1000.50	ng/ml	100
76)	Benz(a)anthracene	20.64	228	97187	944.04	ng/ml	98
77)	Chrysene	20.72	228	95346	949.77	ng/ml	100
78)	Bis(2-ethylhexyl) Phthalat	20.85	149	80789	901.56	ng/ml	99
80)	Di-n-octyl Phthalate	22.67	149	133412	933.20	ng/ml	93
81)	Benzo(b)fluoranthene	23.43	252	85237	936.86	ng/ml	94
82)	Benzo(k)fluoranthene	23.50	252	91562	965.91	ng/ml	94
83)	Benzo(a)pyrene	24.23	252	84392	997.60	ng/ml	93
84)	Indeno(1,2,3-cd)pyrene	26.63	276	81145	1111.34	ng/ml	87
85)	Dibenz(a,h)anthracene	26.69	278	82311	1121.38	ng/ml	93
86)	Benzo(g,h,i)perylene	27.10	276	88332	1116.56	ng/ml	93

10/6/14

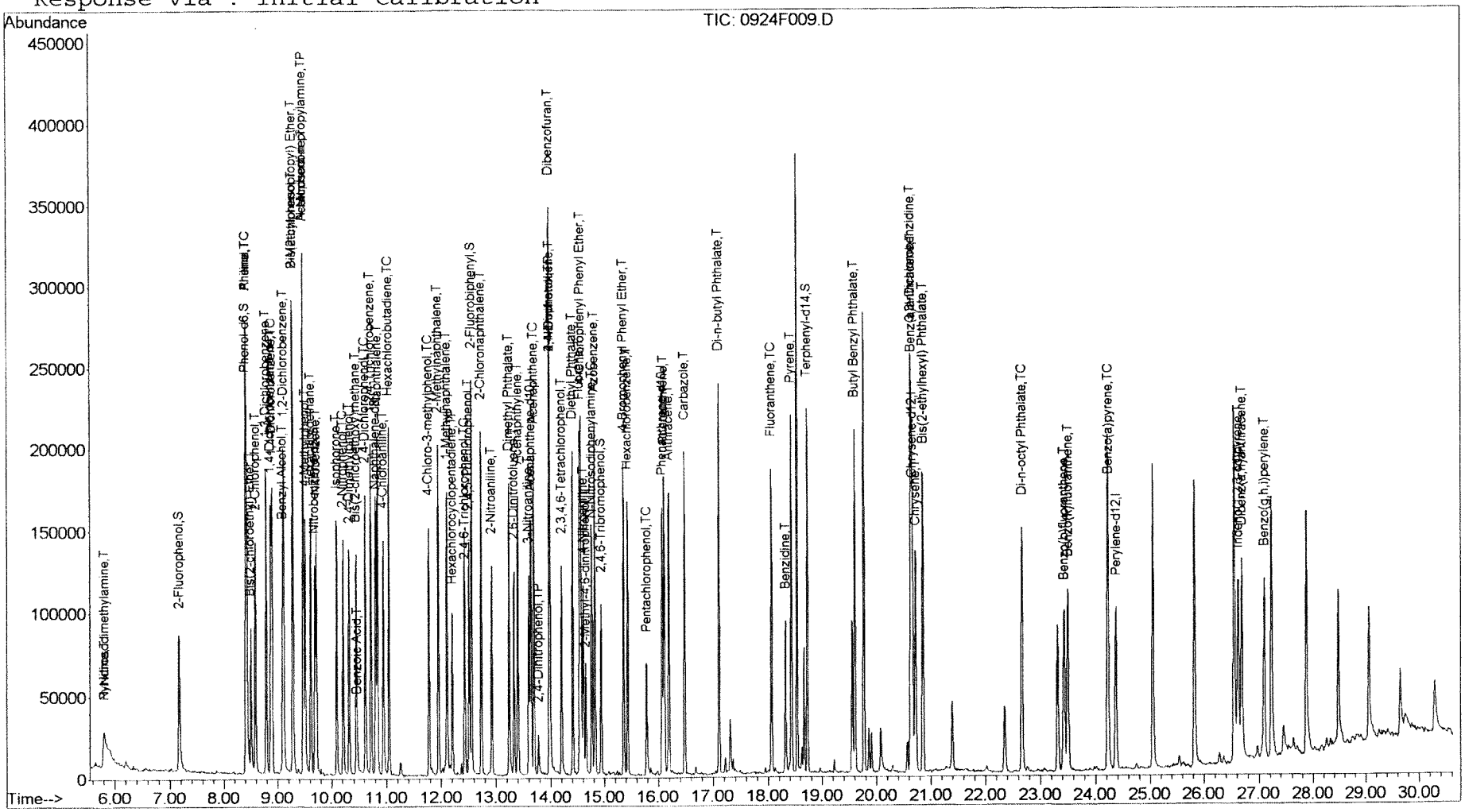
(#) = qualifier out of range (m) = manual integration
0924F009.D 092414_BNLL.M Thu Sep 25 08:58:11 2014 Page 3

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:56 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 08:57:52 2014
Response via : Initial Calibration

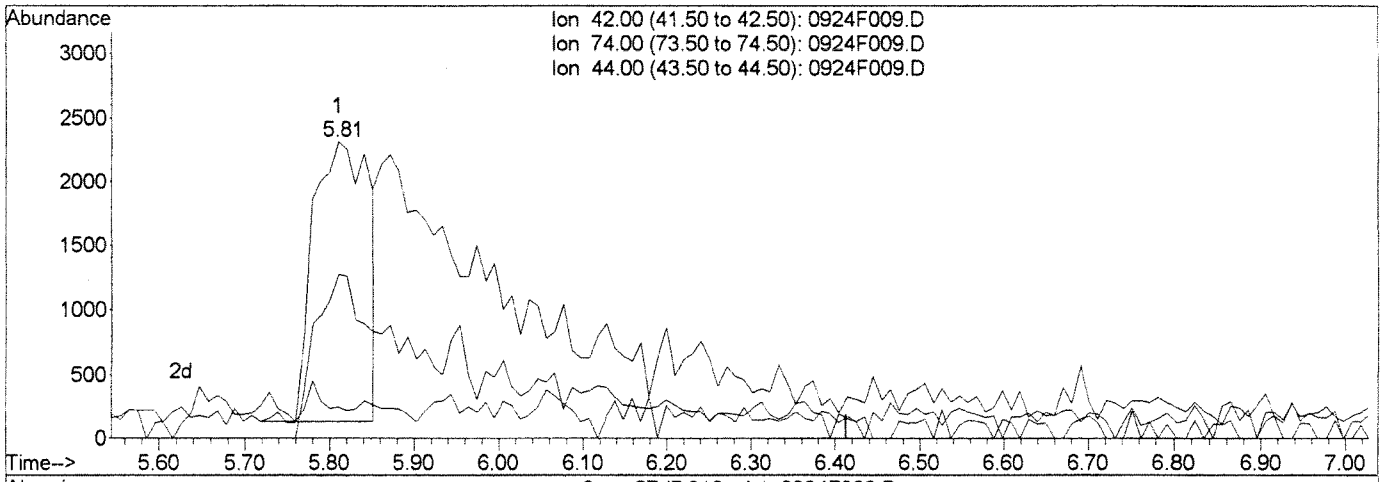


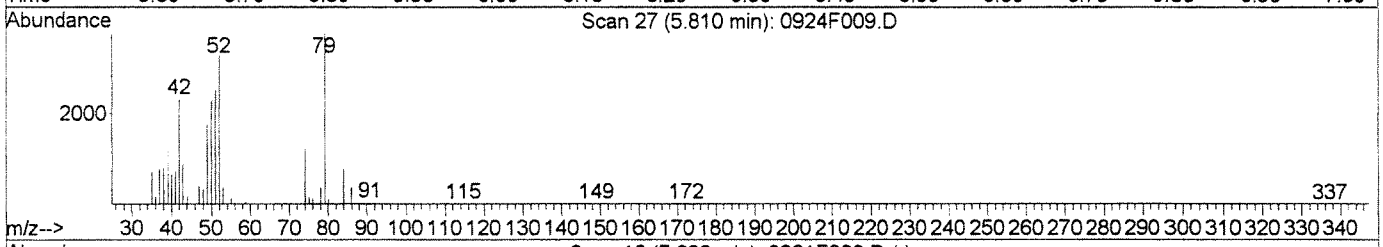
3035
SEP 25 2014

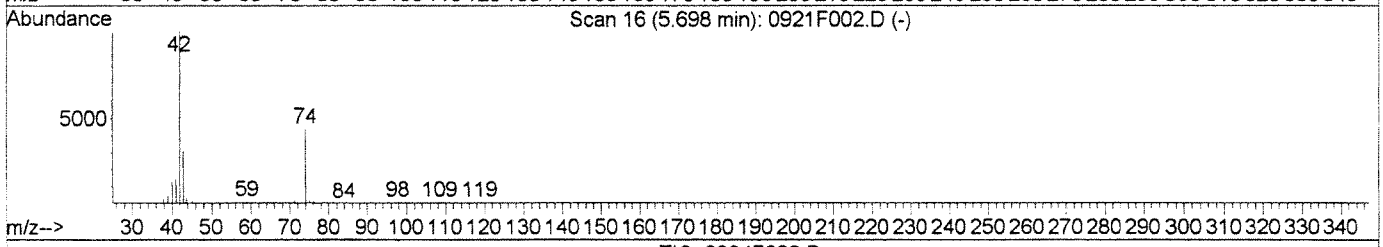
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(2) N-Nitrosodimethylamine (T)

5.81min 358.00ng/ml

response 10022

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	58.35
44.00	10.20	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

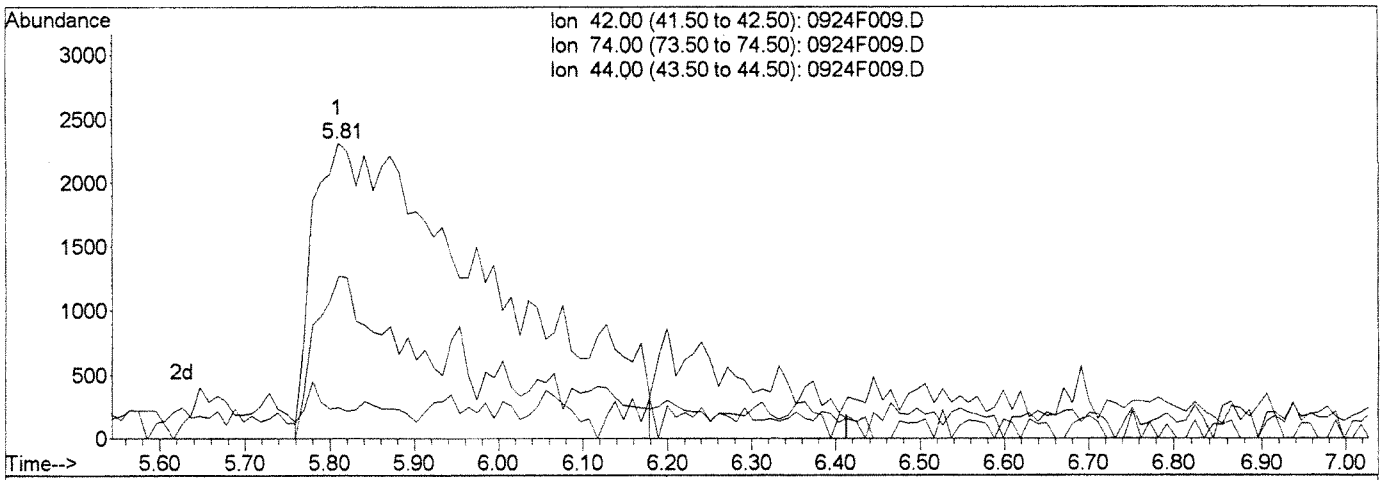
10/6/14

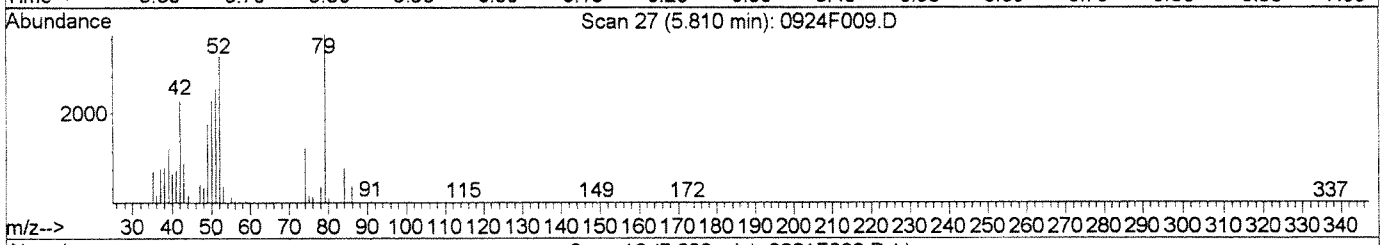
0924F009.D 092414_BNLL.M Thu Sep 25 08:17:25 2014

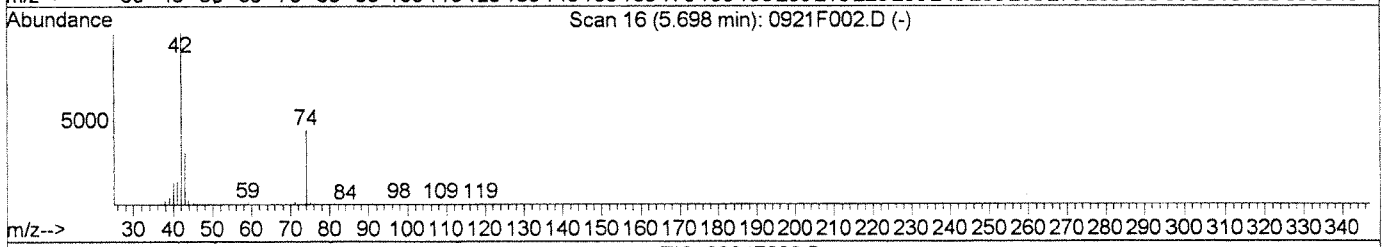
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(2) N-Nitrosodimethylamine (T)

5.81min 1199.96ng/ml m

response 33592

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	54.97
44.00	10.20	10.54
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

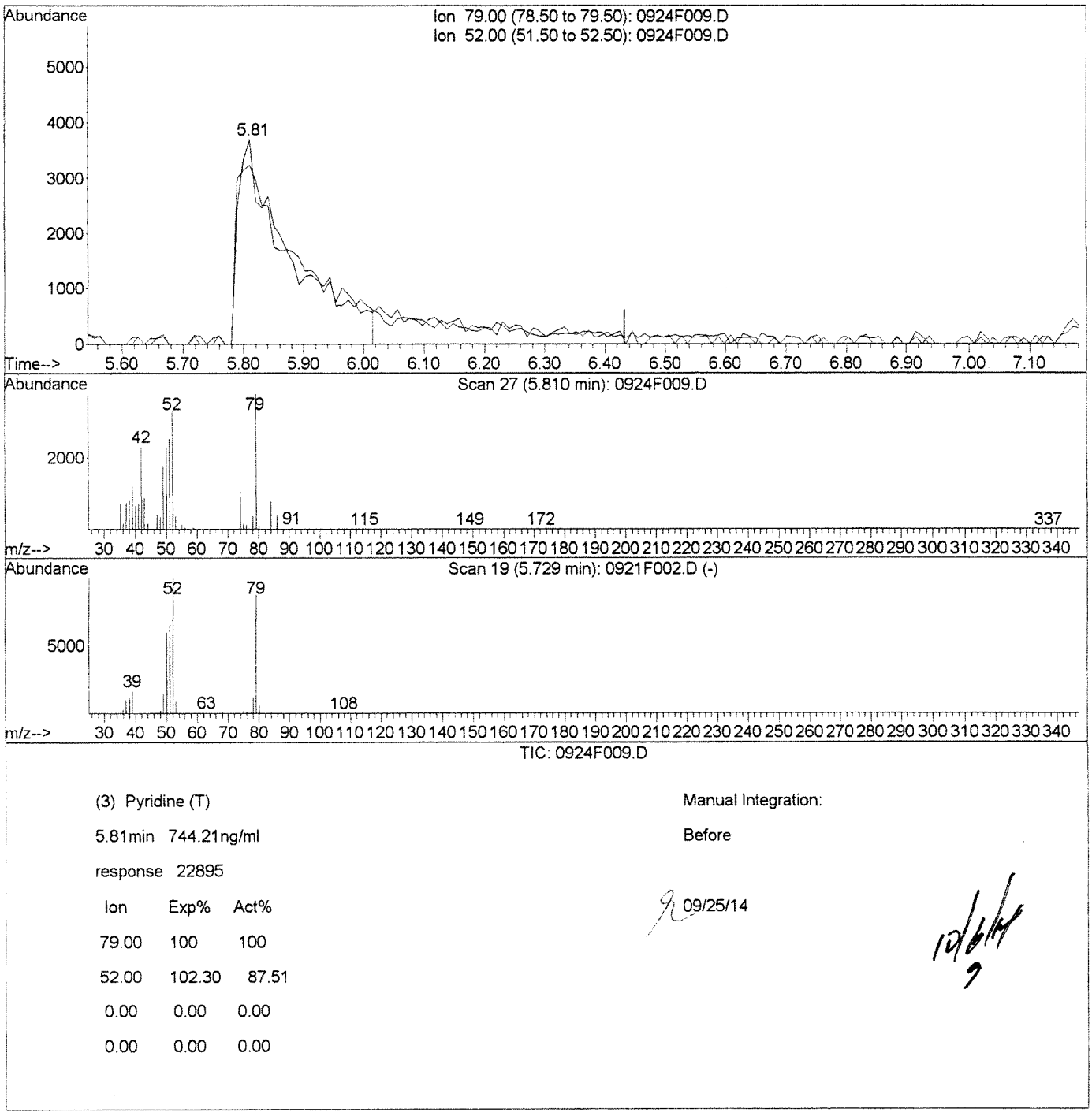
10/16/14

0924F009.D 092414_BNLL.M Thu Sep 25 08:17:38 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F009.D

(3) Pyridine (T)

5.81min 744.21ng/ml

response 22895

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	87.51
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

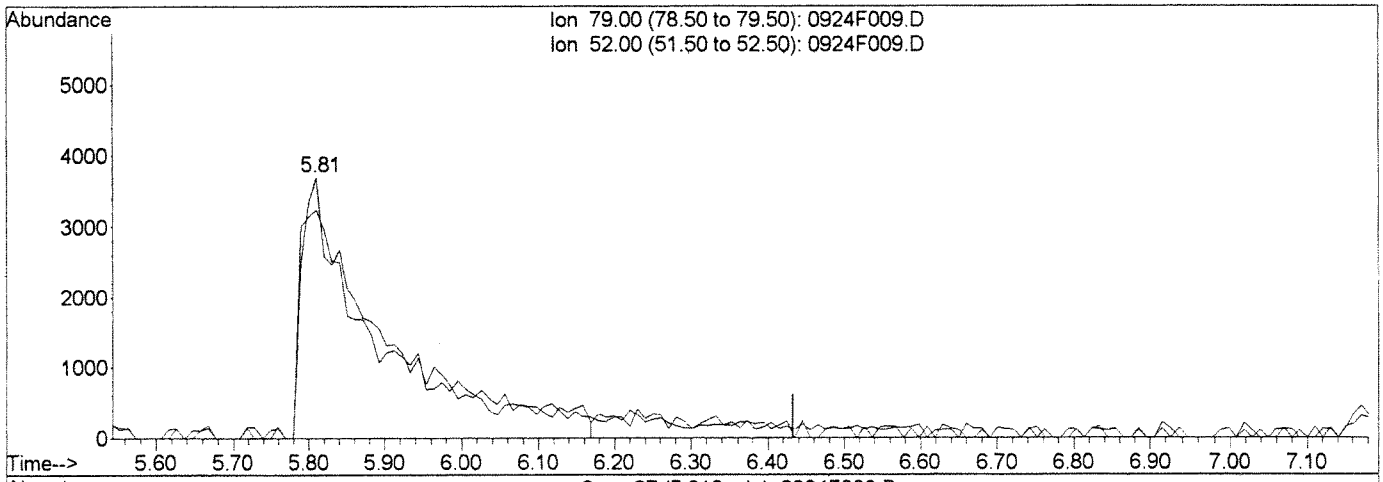
10/6/14

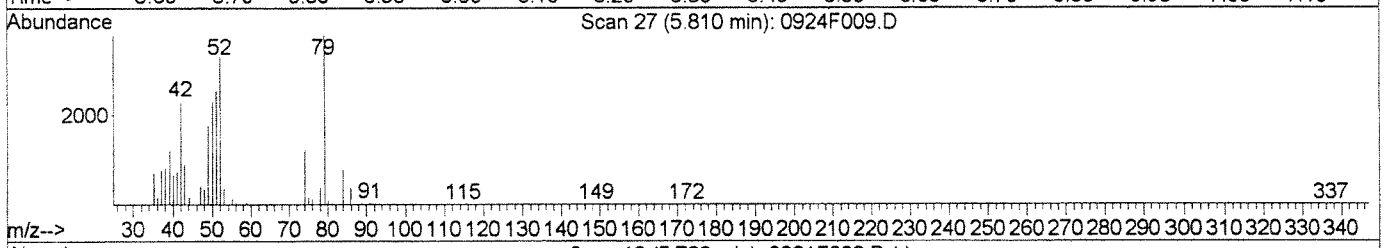
0924F009.D 092414_BNLL.M Thu Sep 25 08:17:41 2014

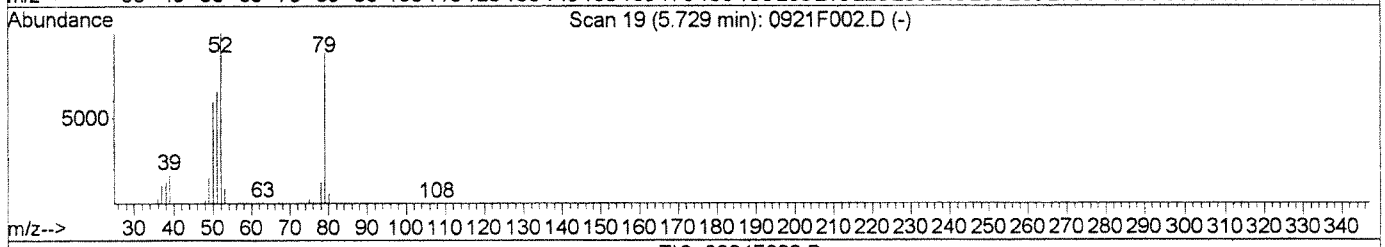
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(3) Pyridine (T)

5.81min 875.21ng/ml m

response 26925

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	87.51
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

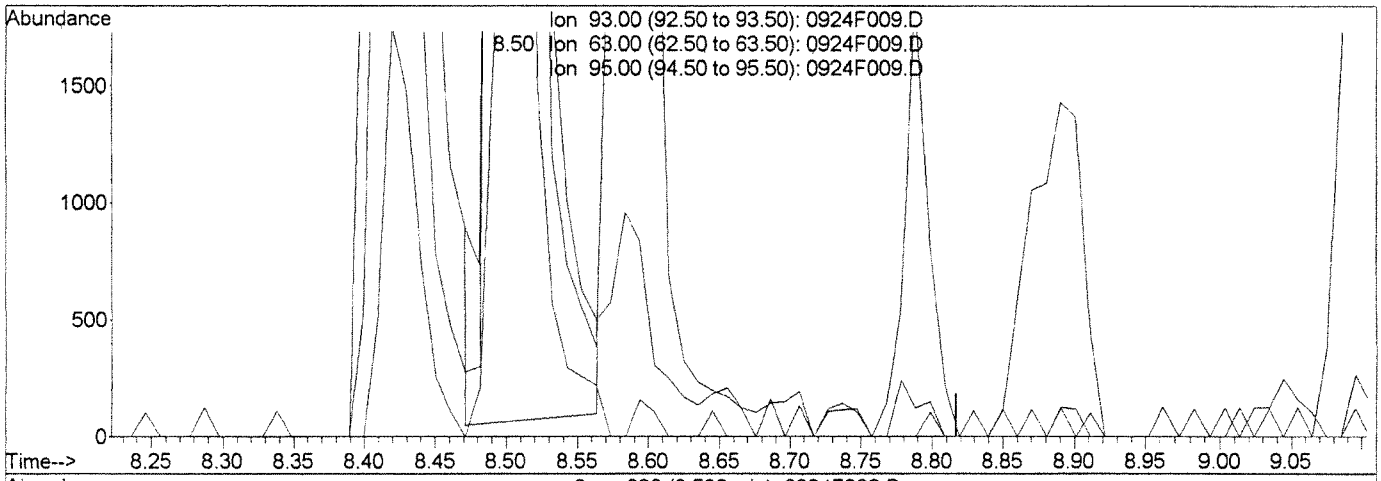
10/6/14

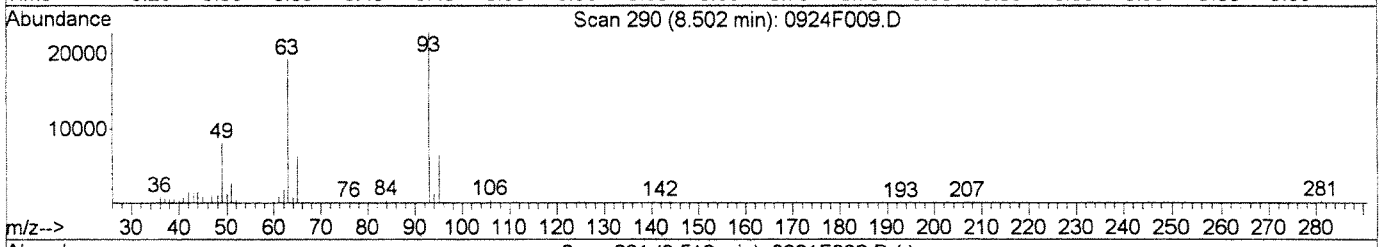
0924F009.D 092414_BNLL.M Thu Sep 25 08:17:46 2014

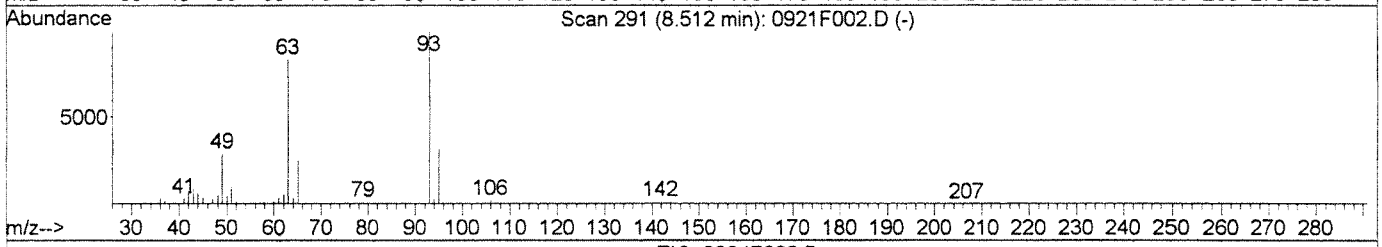
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(5) Bis(2-chloroethyl) Ether (T)

8.50min 997.31ng/ml

response 34255

Ion	Exp%	Act%
93.00	100	100
63.00	82.40	85.08
95.00	31.50	29.12
0.00	0.00	0.00

Manual Integration:

Before

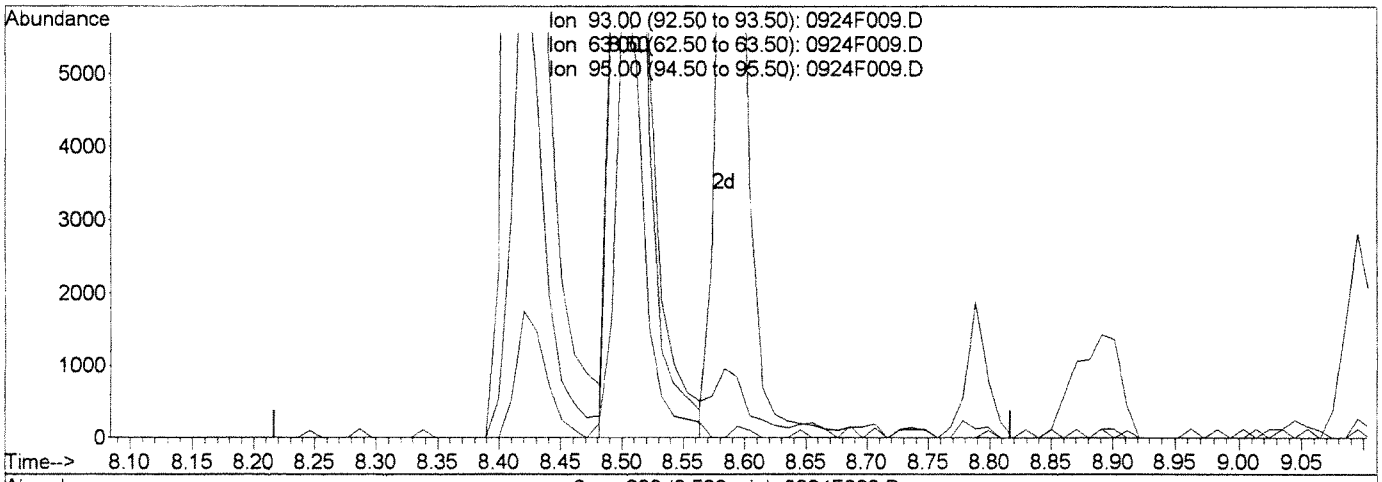
09/25/14

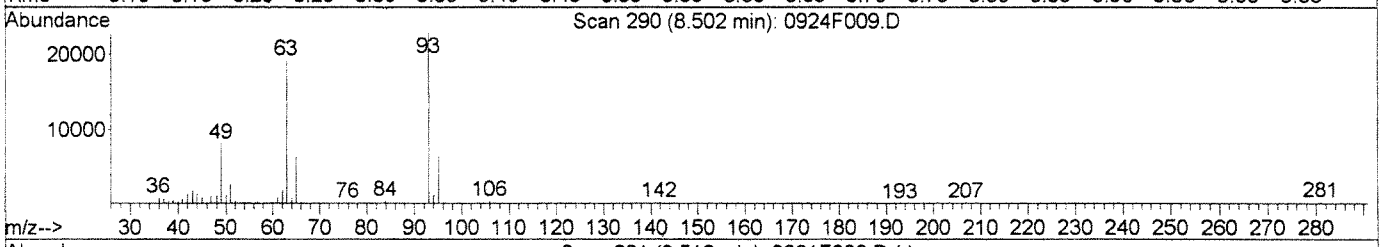
0924F009.D 092414_BNLL.M Thu Sep 25 08:17:54 2014

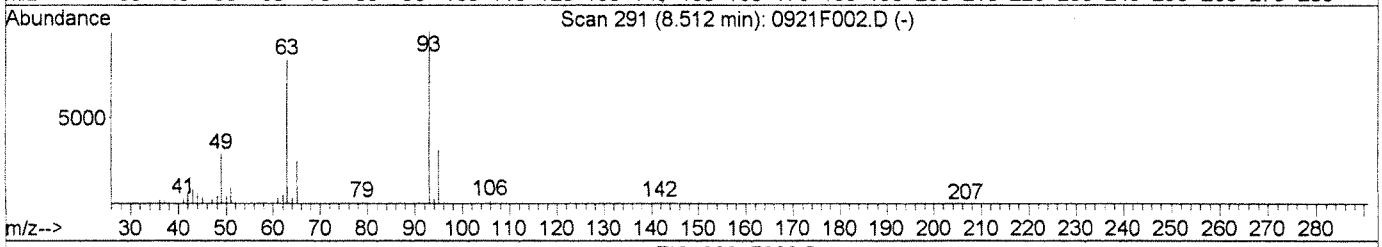
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(5) Bis(2-chloroethyl) Ether (T)

8.50min 995.65ng/ml m

response 34198

Ion	Exp%	Act%
93.00	100	100
63.00	82.40	84.41
95.00	31.50	28.48
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

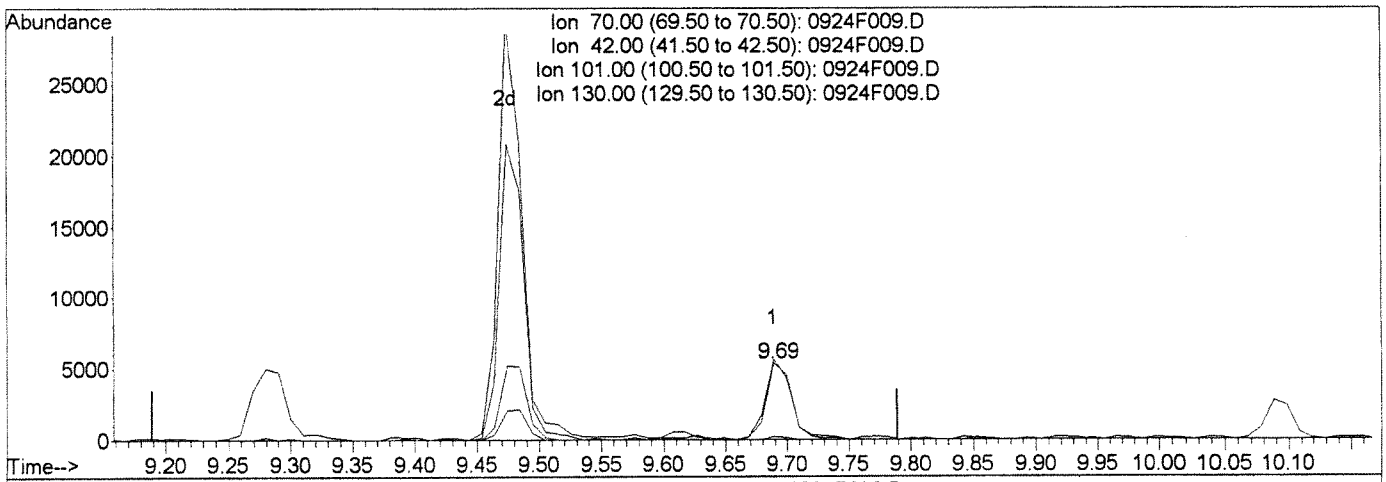
10/6/14

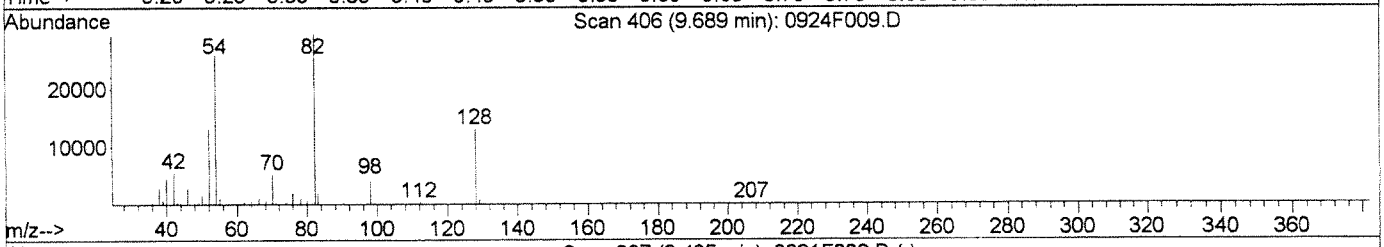
0924F009.D 092414_BNLL.M Thu Sep 25 08:18:03 2014

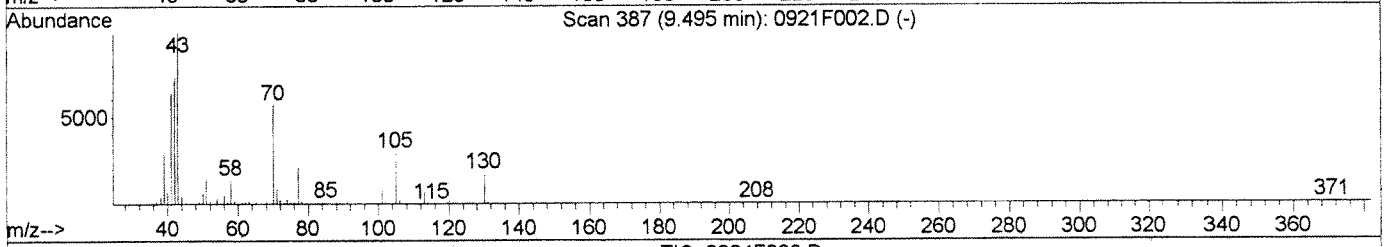
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:18 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 08:37:55 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(18) N-Nitrosodi-n-propylamine (TP)

9.69min 252.97ng/ml

response 7640

Ion	Exp%	Act%
70.00	100	100
42.00	111.30	105.25
101.00	12.00	0.00
130.00	31.30	3.94

Manual Integration:

Before

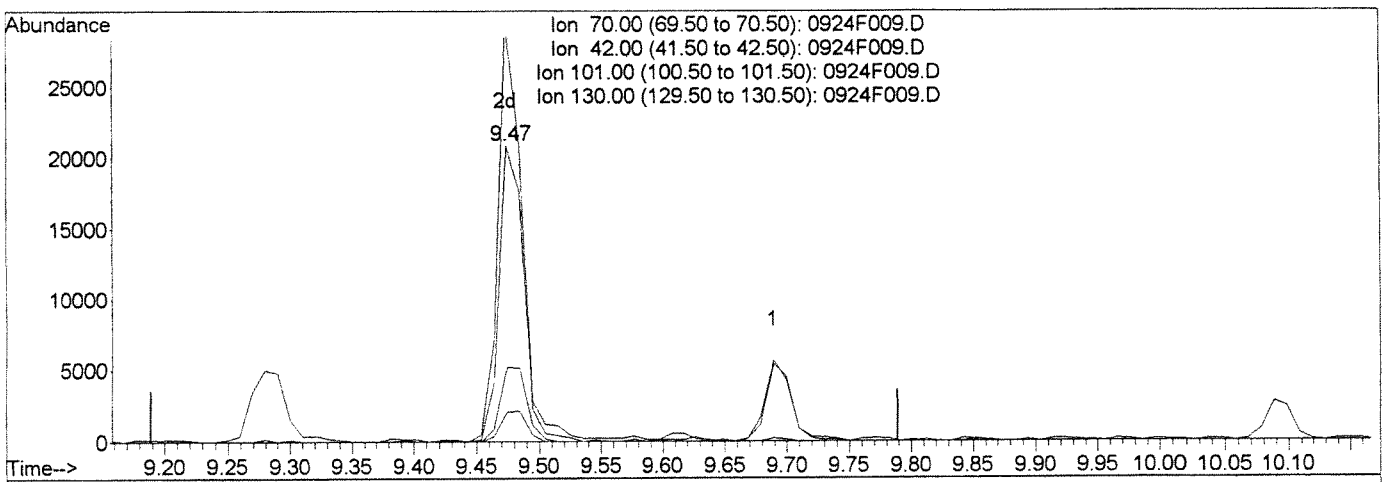
09/25/14

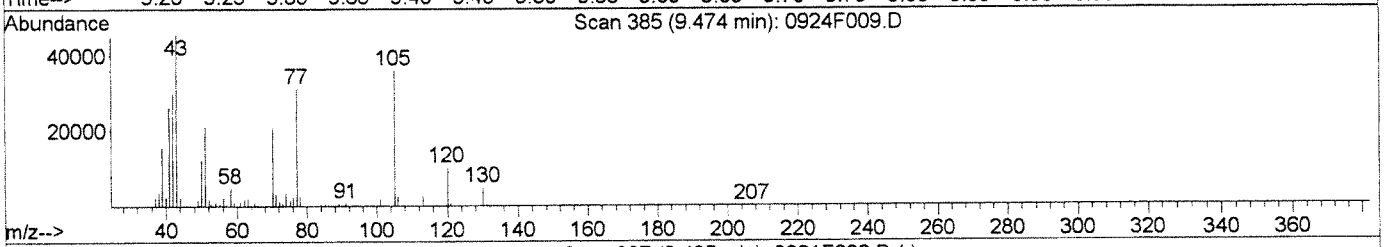
0924F009.D 092414_BNLL.M Thu Sep 25 08:56:42 2014

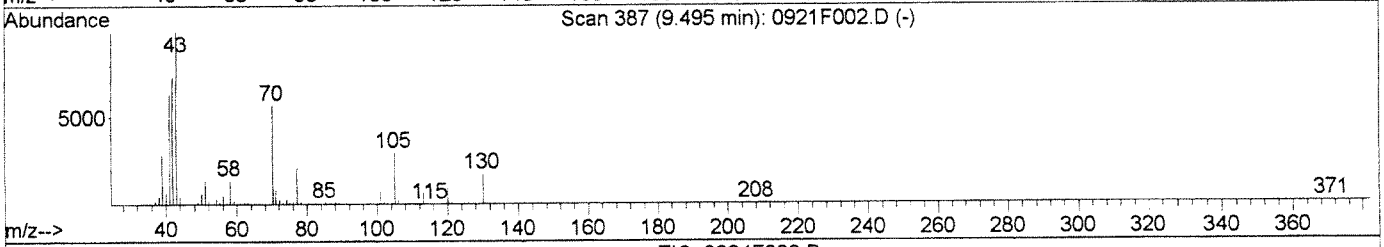
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:56 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 08:37:55 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(18) N-Nitrosodi-n-propylamine (TP)

9.47min 942.99ng/ml m

response 28480

Ion	Exp%	Act%
70.00	100	100
42.00	111.30	142.01#
101.00	12.00	9.91
130.00	31.30	24.86

Manual Integration:

After

WP

09/25/14

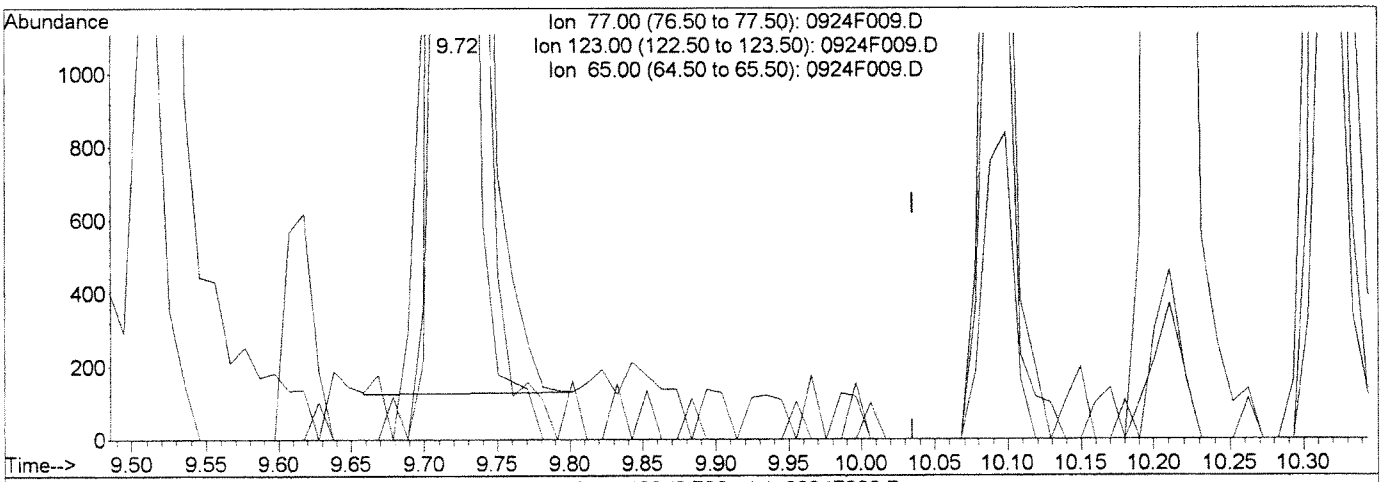
10/6/14

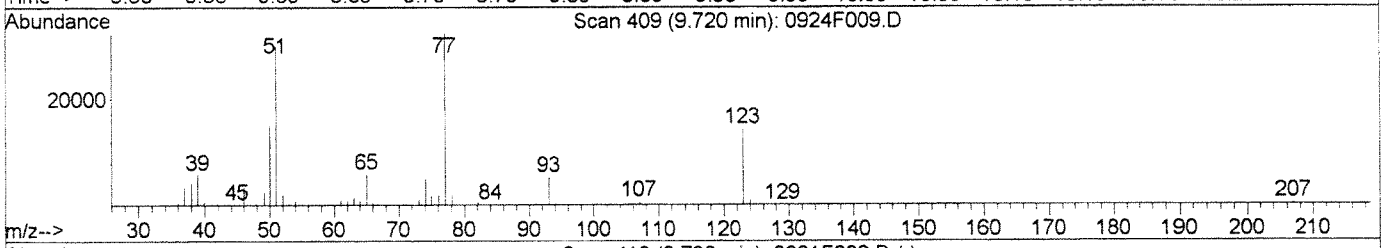
0924F009.D 092414_BNLL.M Thu Sep 25 08:56:49 2014

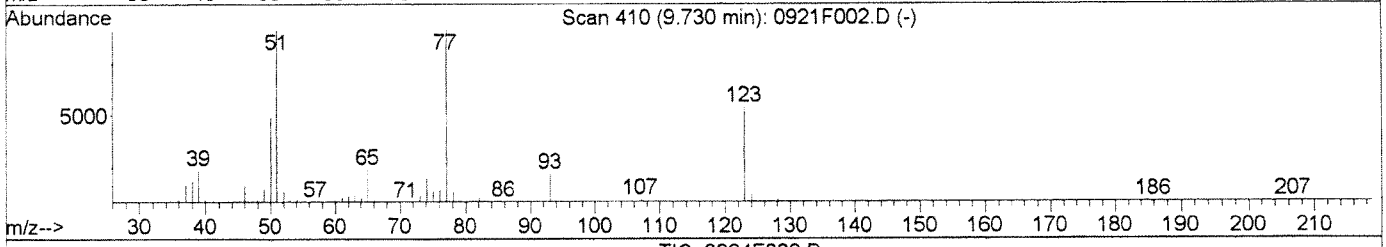
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:17 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(21) Nitrobenzene (T)

9.72min 948.10ng/ml

response 40325

Ion	Exp%	Act%
77.00	100	100
123.00	65.90	44.56
65.00	17.50	18.41
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

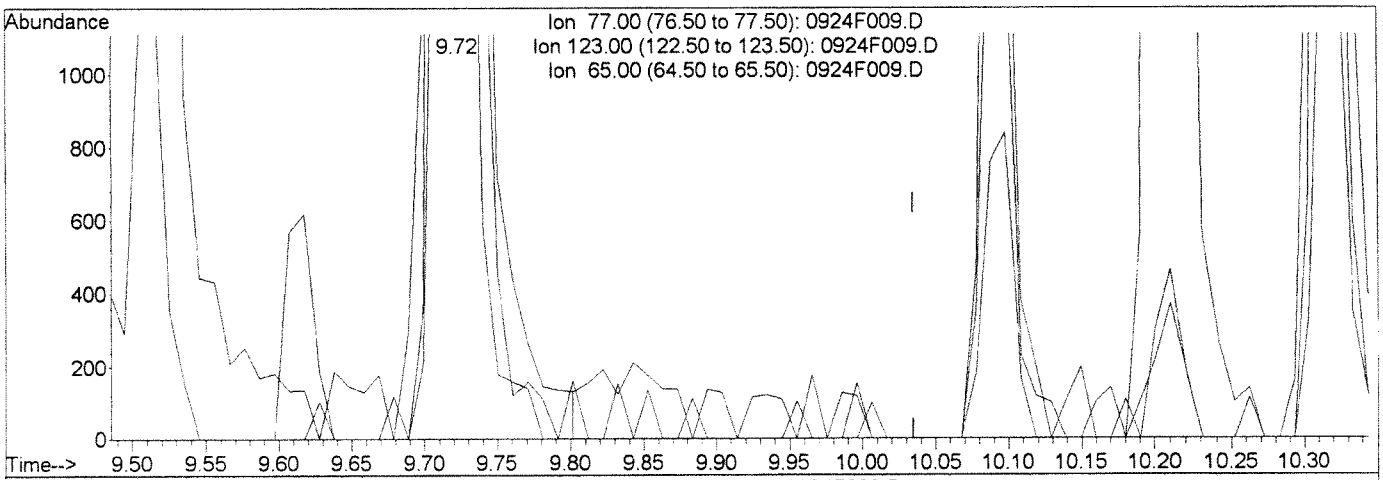
12/6/14

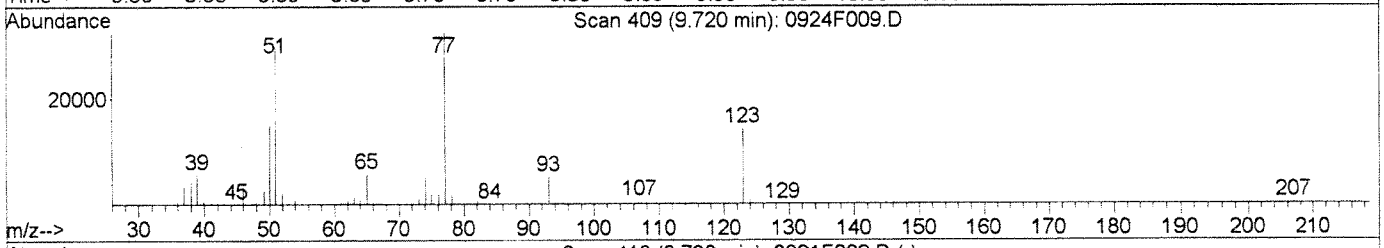
0924F009.D 092414_BNLL.M Thu Sep 25 08:18:23 2014

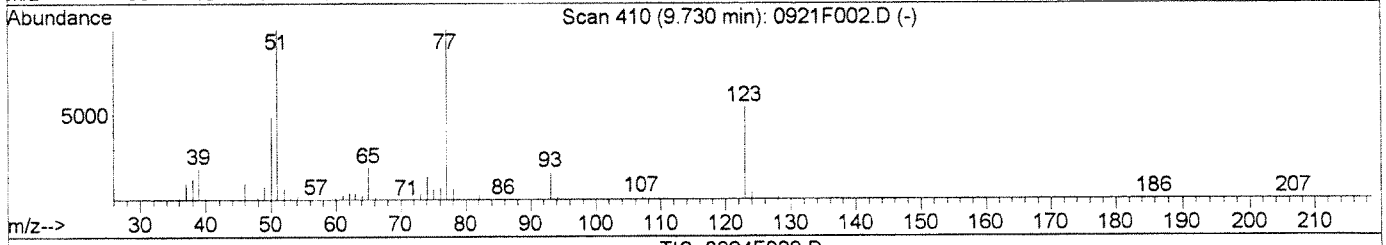
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F009.D Vial: 7
Acq On : 24 Sep 2014 9:00 pm Operator: TLorr
Sample : SVO_LL ICAL @ 1.0ppm | SVM46-42G Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:18 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F009.D

(21) Nitrobenzene (T)

9.72min 971.28ng/ml m

response 41311

Ion	Exp%	Act%
77.00	100	100
123.00	65.90	44.38
65.00	17.50	18.34
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

0924F009.D 092414_BNLL.M Thu Sep 25 08:18:27 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:26 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	26325	1000.00	ng/ml	-0.01
22) Naphthalene-d8	10.80	136	89894	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	53182	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	93052	1000.00	ng/ml	0.00
70) Chrysene-d12	20.66	240	92371	1000.00	ng/ml	0.02
79) Perylene-d12	24.37	264	83849	1000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	58428	1973.77	ng/ml	-0.01
Spiked Amount 3750.000	Range 38 - 110		Recovery = 52.63%			
6) Phenol-d6	8.40	99	74018	1751.36	ng/ml	-0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 46.70%			
20) Nitrobenzene-d5	9.69	82	76237	1999.40	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 79.98%			
40) 2-Fluorobiphenyl	12.56	172	161950	1978.21	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 79.13%			
61) 2,4,6-Tribromophenol	14.94	330	27400	2124.05	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 56.64%			
73) Terphenyl-d14	18.73	244	156943	1810.86	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 72.43%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.73	42	77028m	3023.53	ng/ml	
3) Pyridine	5.75	79	54306m	1939.72	ng/ml	
5) Bis(2-chloroethyl) Ether	8.51	93	60483	1934.96	ng/ml	99
7) Phenol	8.42	94	78901	1816.54	ng/ml#	29
8) Aniline	8.41	93	84315	1954.99	ng/ml#	37
9) 2-Chlorophenol	8.59	128	69186	1674.53	ng/ml	86
10) 1,3-Dichlorobenzene	8.79	146	81850	1935.07	ng/ml	95
11) 1,4-Dichlorobenzene	8.90	146	83078	1884.52	ng/ml	97
12) 1,2-Dichlorobenzene	9.12	146	77292	1765.64	ng/ml	93
13) Benzyl Alcohol	9.10	108	37780	1726.46	ng/ml	74
14) Bis(2-chloroisopropyl) Eth	9.28	45	116897	1537.77	ng/ml#	64
15) 2-Methylphenol	9.28	107	48120	1617.57	ng/ml#	74
16) Acetophenone	9.48	105	88712	1855.87	ng/ml	94
17) Hexachloroethane	9.61	117	39622	1952.65	ng/ml	93
18) N-Nitrosodi-n-propylamine	9.48	70	53943	1962.63	ng/ml	82
19) 4-Methylphenol	9.52	107	72864	1681.69	ng/ml	96
21) Nitrobenzene	9.72	77	77236	1995.41	ng/ml	78
23) Isophorone	10.09	82	126946	2531.98	ng/ml	89
24) 2-Nitrophenol	10.21	139	41781	2450.70	ng/ml	80
25) 2,4-Dimethylphenol	10.32	122	47859	1868.16	ng/ml#	78

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:26 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	10.45	93	73797	2218.15	ng/ml	97
27)	2,4-Dichlorophenol	10.61	162	64895	2406.37	ng/ml	96
28)	Benzoic Acid	10.50	122	19765m	1880.70	ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	75068	2331.65	ng/ml	95
30)	Naphthalene	10.84	128	195304	2029.19	ng/ml	99
31)	4-Chloroaniline	10.94	127	82647	2174.45	ng/ml	85
32)	Hexachlorobutadiene	11.04	225	52136	2885.16	ng/ml	98
33)	4-Chloro-3-methylphenol	11.77	107	62399	2633.86	ng/ml	95
34)	2-Methylnaphthalene	11.94	141	111267	2212.31	ng/ml	89
35)	1-Methylnaphthalene	12.11	141	100573	2194.57	ng/ml#	88
37)	Hexachlorocyclopentadiene	12.20	237	46900	1807.07	ng/ml	98
38)	2,4,6-Trichlorophenol	12.42	196	46649	2011.29	ng/ml	97
39)	2,4,5-Trichlorophenol	12.51	196	48227	1909.87	ng/ml	97
41)	2-Chloronaphthalene	12.73	162	135952	1871.35	ng/ml	96
42)	2-Nitroaniline	12.93	65	49011	2266.71	ng/ml#	76
43)	Acenaphthylene	13.41	152	201849	1863.29	ng/ml	99
44)	Dimethyl Phthalate	13.24	163	165922	2009.27	ng/ml	98
45)	2,6-Dinitrotoluene	13.34	165	40122	2052.40	ng/ml	62
46)	Acenaphthene	13.69	154	118762	1906.28	ng/ml	97
47)	3-Nitroaniline	13.60	138	38232	1798.03	ng/ml	76
48)	2,4-Dinitrophenol	13.78	184	12031	1946.19	ng/ml#	41
49)	Dibenzofuran	13.98	168	188874	1915.55	ng/ml	69
50)	4-Nitrophenol	13.98	109	29880	2877.59	ng/ml#	1
51)	2,4-Dinitrotoluene	13.99	165	57553	2218.93	ng/ml	68
52)	2,3,4,6-Tetrachlorophenol	14.21	232	38696	2071.02	ng/ml	98
53)	Fluorene	14.54	166	150797	1974.50	ng/ml	95
54)	4-Chlorophenyl Phenyl Ethe	14.56	204	81252	2078.69	ng/ml	97
55)	Diethyl Phthalate	14.41	149	177750	1958.18	ng/ml	100
56)	4-Nitroaniline	14.61	138	37071	1712.94	ng/ml#	57
57)	2-Methyl-4,6-dinitrophenol	14.66	198	27222	2101.64	ng/ml	78
58)	N-Nitrosodiphenylamine	14.77	169	99570	1906.43	ng/ml	99
59)	Azobenzene	14.82	77	162533	2212.13	ng/ml	83
62)	4-Bromophenyl Phenyl Ether	15.36	248	46633	2060.15	ng/ml	98
63)	Hexachlorobenzene	15.43	284	52890	2069.49	ng/ml	93
64)	Pentachlorophenol	15.79	266	23917	1378.24	ng/ml	98
65)	Phenanthrene	16.11	178	195418	1830.34	ng/ml	98
66)	Anthracene	16.20	178	202283	1810.28	ng/ml	99
67)	Carbazole	16.49	167	181678	1707.85	ng/ml	96
68)	Di-n-butyl Phthalate	17.11	149	259734	1803.28	ng/ml	98
69)	Fluoranthene	18.06	202	198302	1787.06	ng/ml	95
71)	Benzidine	18.33	184	83745	2015.57	ng/ml	96

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:26 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.43	202	214610	1657.97	ng/ml	98
74)	Butyl Benzyl Phthalate	19.60	149	122015	1863.53	ng/ml	86
75)	3,3'-Dichlorobenzidine	20.63	252	79985	2103.21	ng/ml	98
76)	Benz(a)anthracene	20.63	228	202597	1902.83	ng/ml	99
77)	Chrysene	20.72	228	193098	1859.85	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.85	149	174224	1879.91	ng/ml	99
80)	Di-n-octyl Phthalate	22.67	149	293130	1906.08	ng/ml	95
81)	Benzo(b)fluoranthene	23.44	252	178835	1827.26	ng/ml	95
82)	Benzo(k)fluoranthene	23.51	252	190409	1867.28	ng/ml	96
83)	Benzo(a)pyrene	24.23	252	173020	1901.32	ng/ml	93
84)	Indeno(1,2,3-cd)pyrene	26.63	276	161015	2049.99	ng/ml	89
85)	Dibenz(a,h)anthracene	26.70	278	175572	2223.58	ng/ml	90
86)	Benzo(g,h,i)perylene	27.11	276	177665	2087.69	ng/ml	92

10/6/14
T

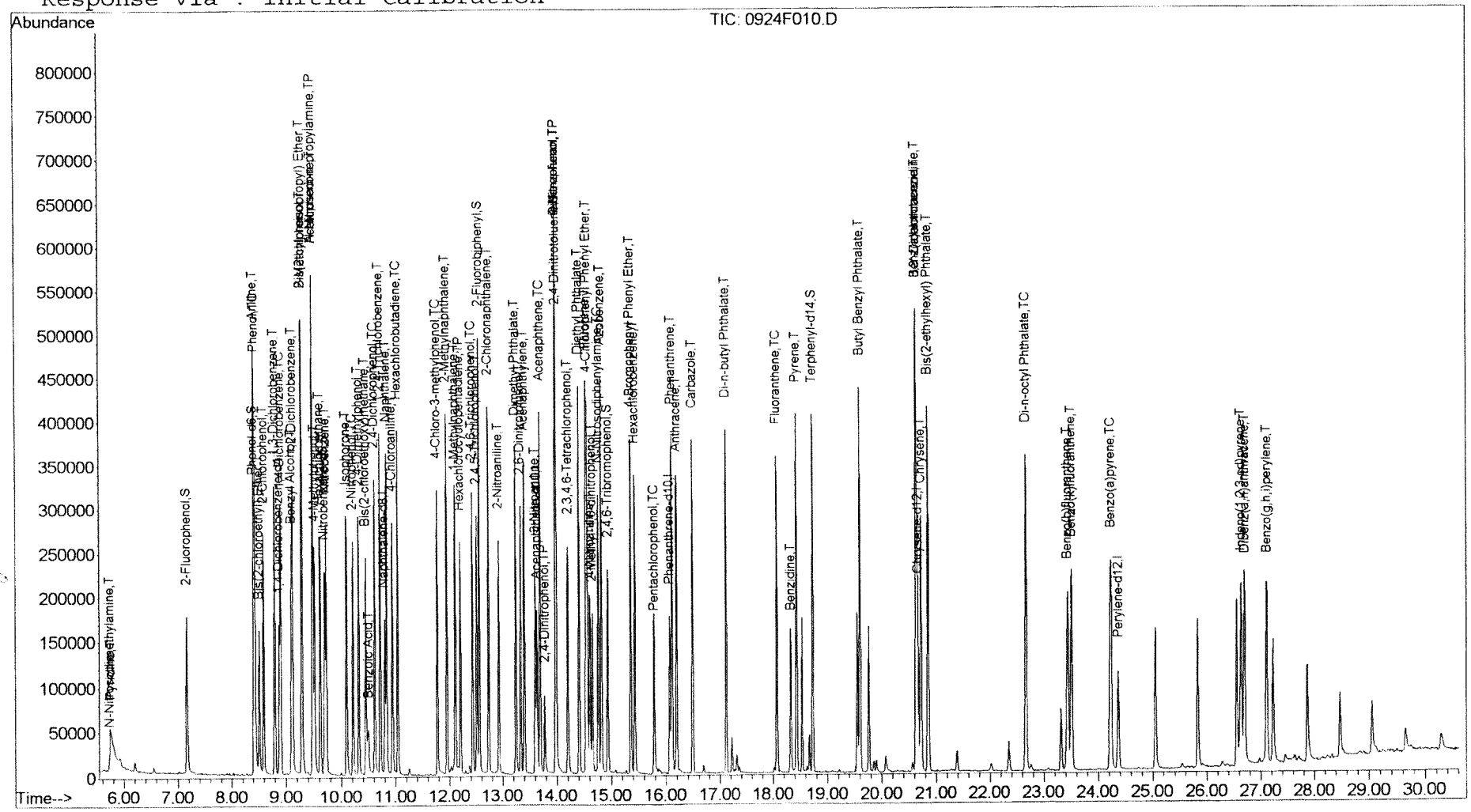
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F010.D 092414_BNLL.M Thu Sep 25 08:29:41 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:20 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration

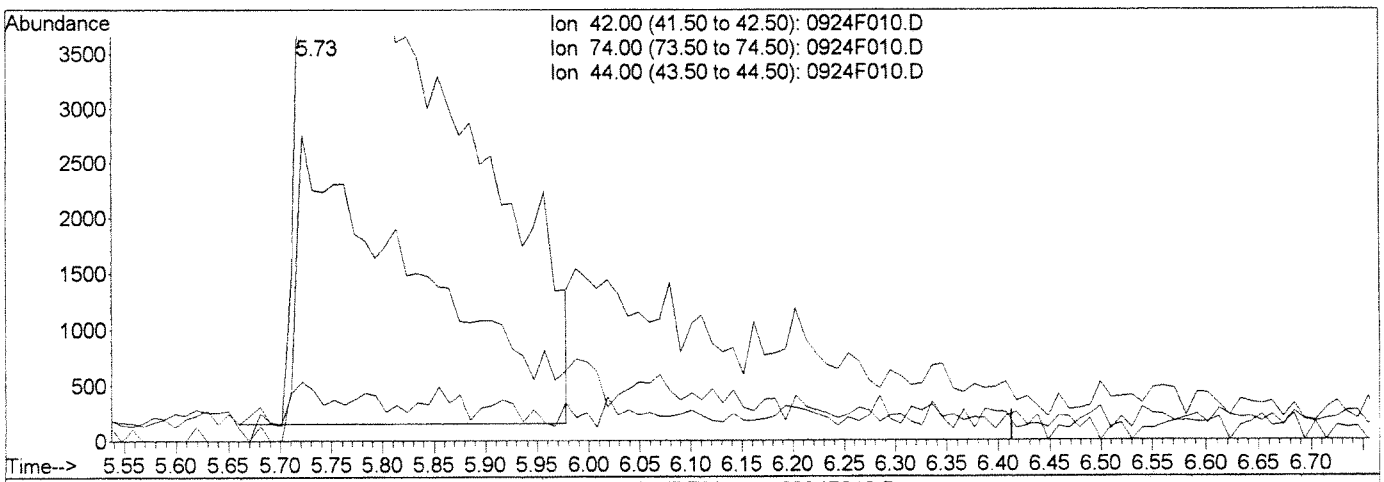


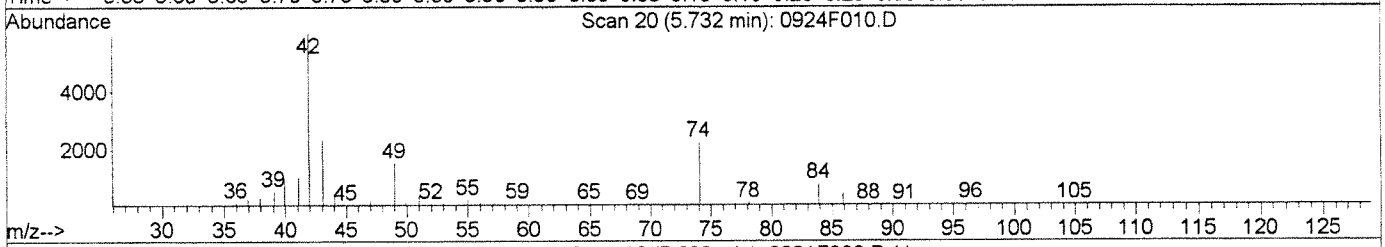
3049
SEP 25 2014

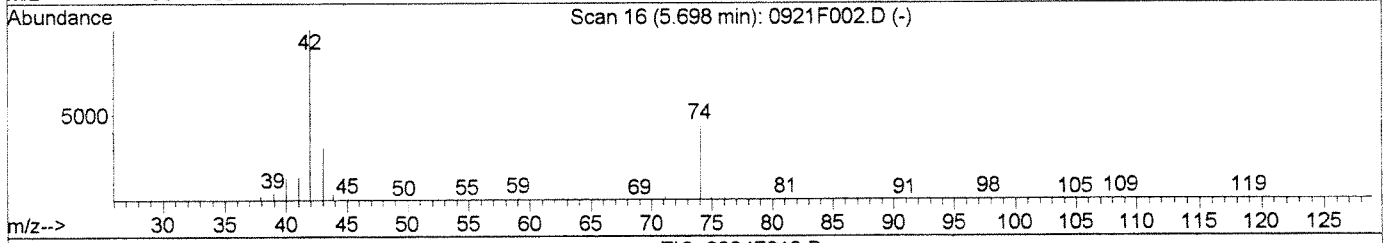
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F010.D

(2) N-Nitrosodimethylamine (T)

5.73min 2035.63ng/ml

response 51860

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	38.62
44.00	10.20	5.98
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

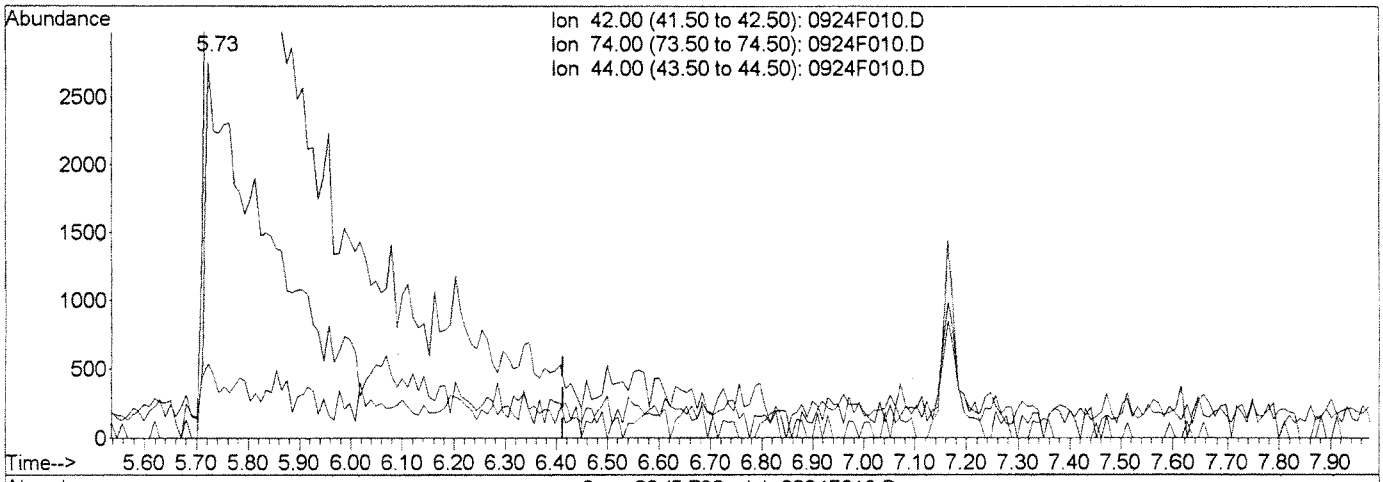
10/6/14

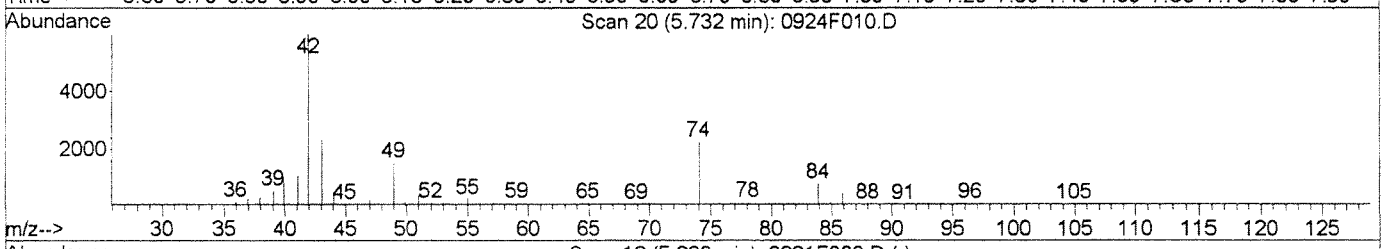
0924F010.D 092414_BNLL.M Thu Sep 25 08:19:17 2014

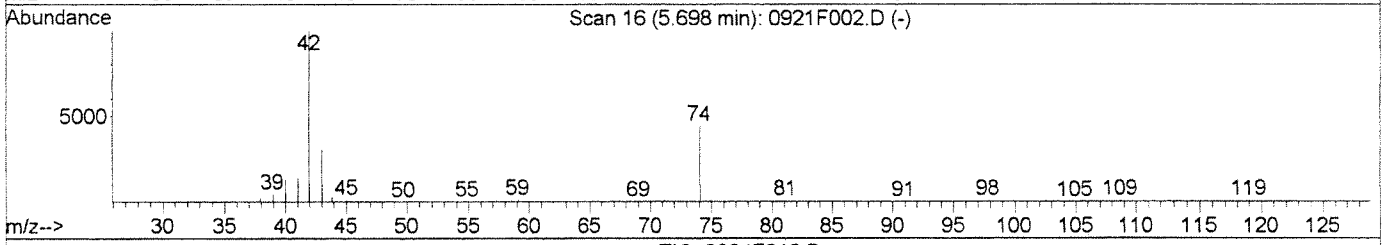
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:19 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F010.D

(2) N-Nitrosodimethylamine (T)

5.73min 3023.53ng/ml m

response 77028

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	37.60
44.00	10.20	7.76
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

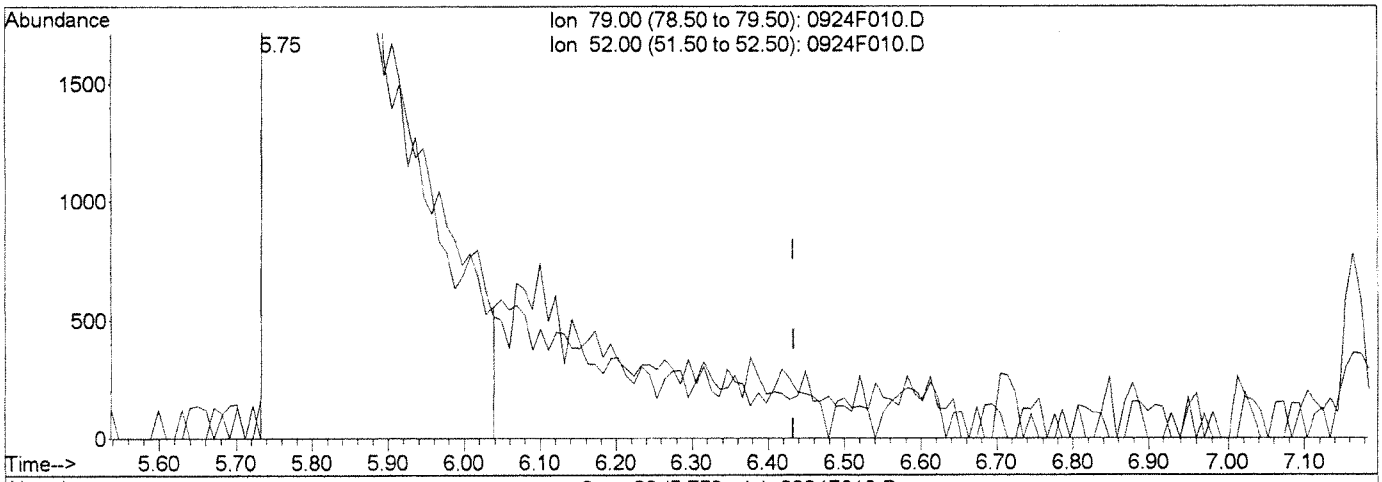
10/6/14

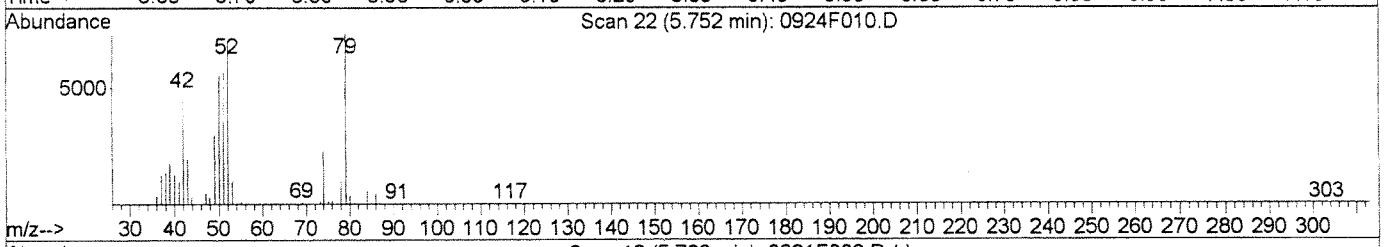
0924F010.D 092414_BNLL.M Thu Sep 25 08:19:55 2014

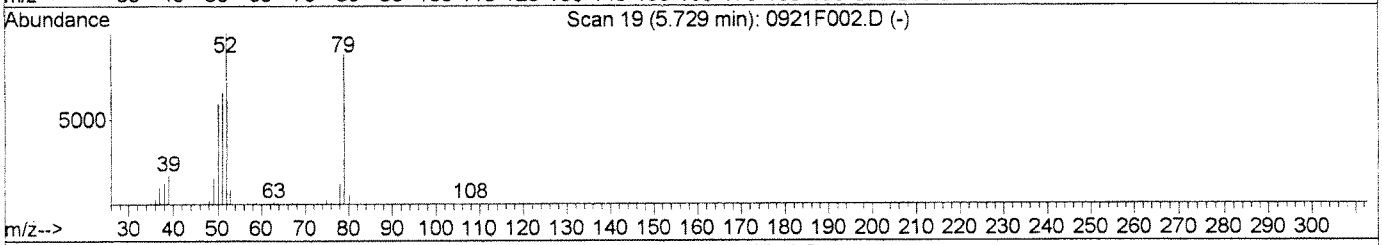
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:19 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F010.D

(3) Pyridine (T)

5.75min 1690.27ng/ml

response 47322

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	94.95
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

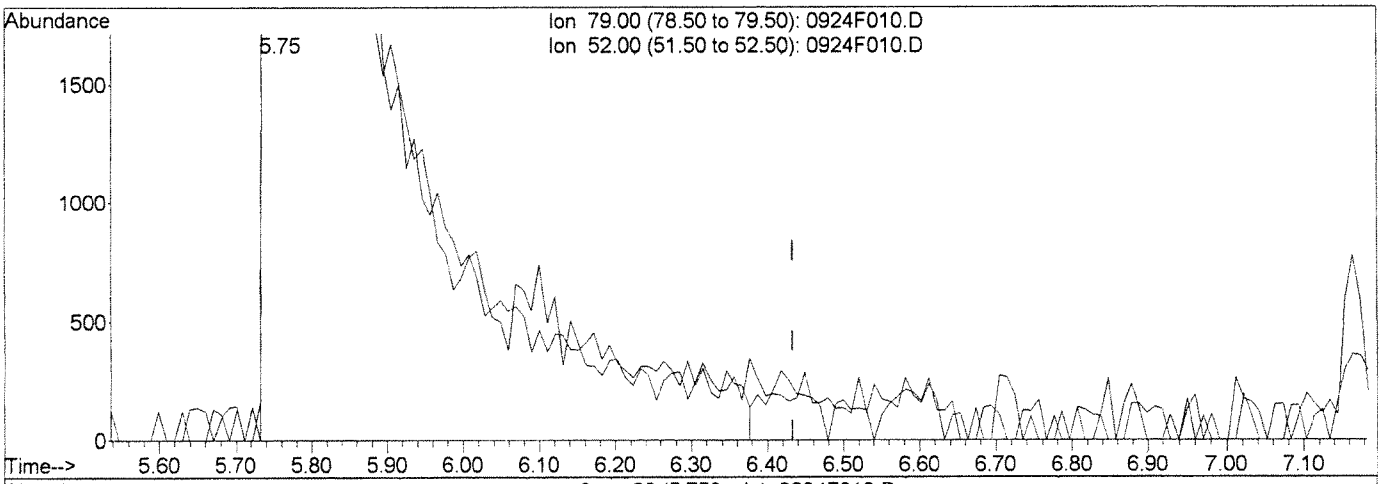
10/16/14

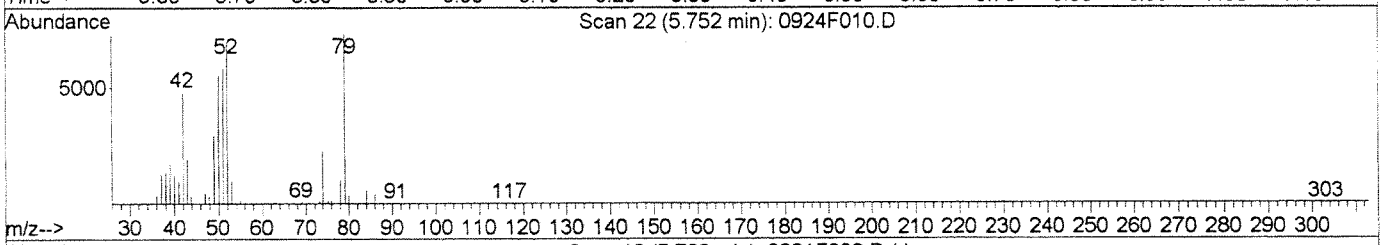
0924F010.D 092414_BNLL.M Thu Sep 25 08:20:00 2014

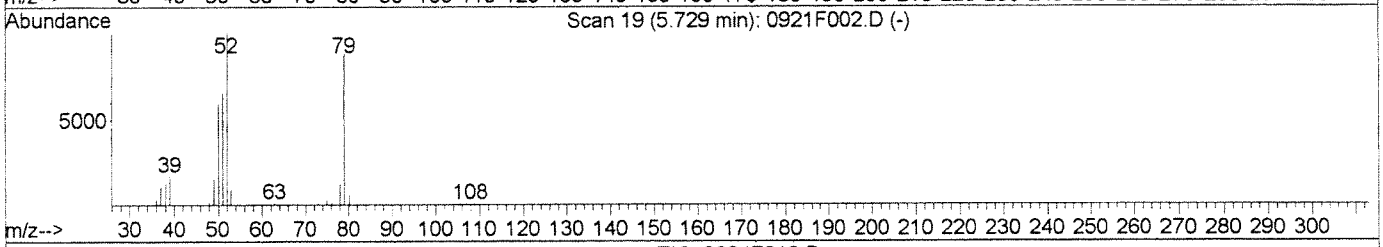
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:20 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F010.D

(3) Pyridine (T)

5.75min 1939.72ng/ml m

response 54306

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	94.95
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

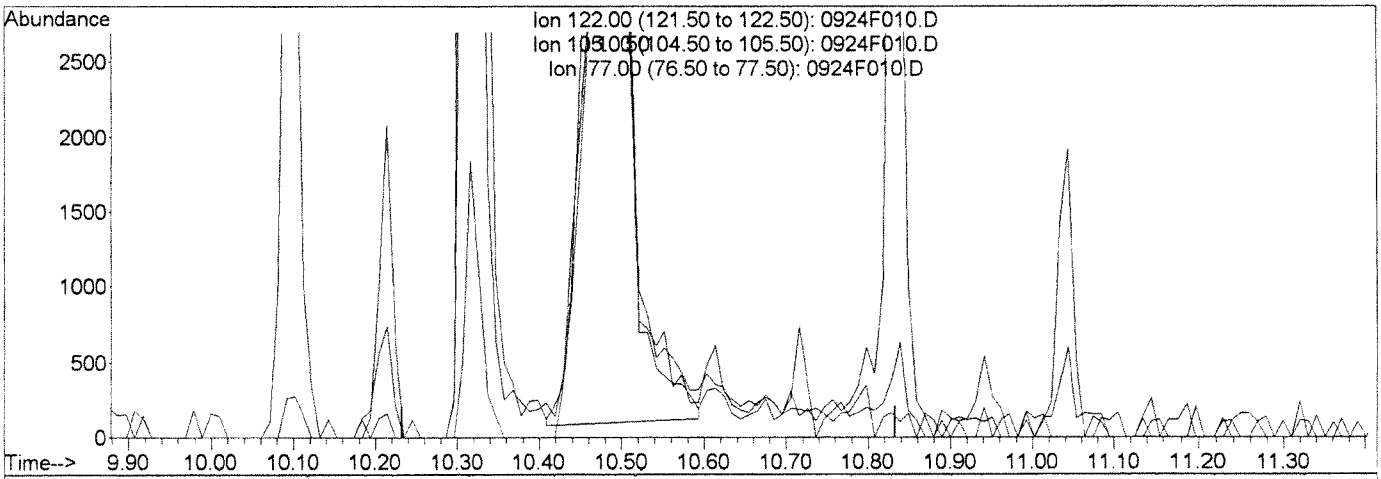
12/6 JH

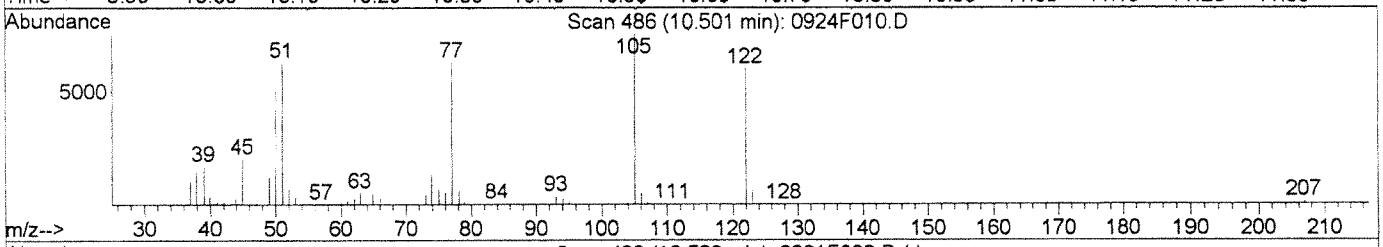
0924F010.D 092414_BNLL.M Thu Sep 25 08:20:07 2014

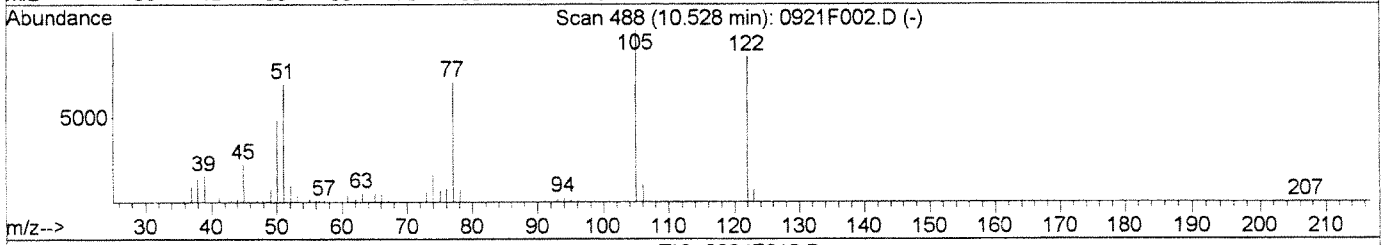
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:20 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F010.D

(28) Benzoic Acid (T)

10.50min 1817.50ng/ml

response 18649

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	127.35
77.00	82.70	102.60
0.00	0.00	0.00

Manual Integration:

Before

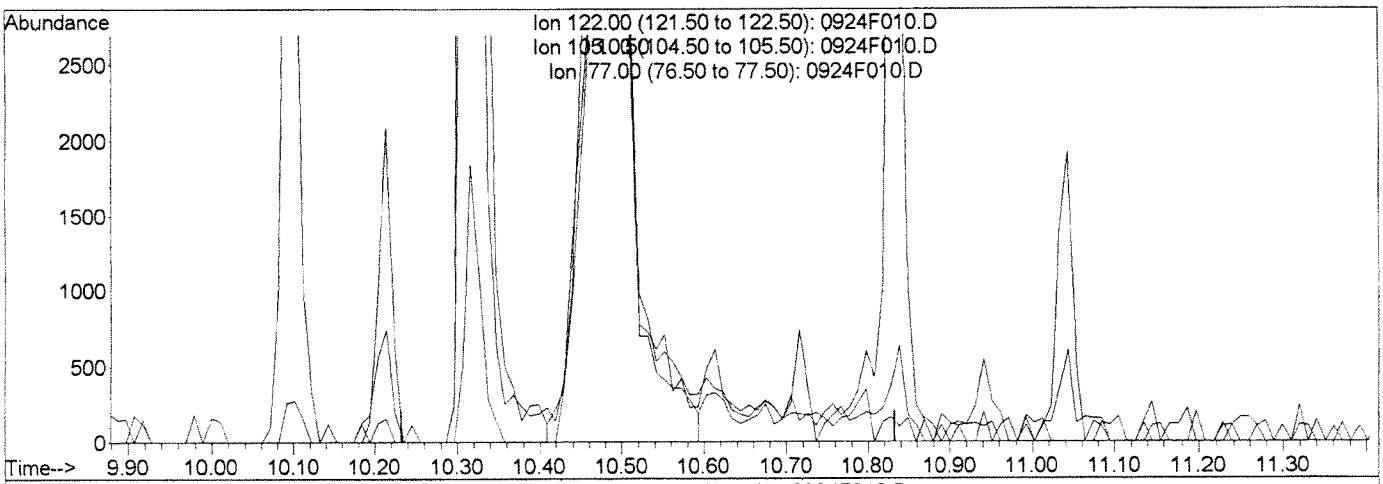
09/25/14

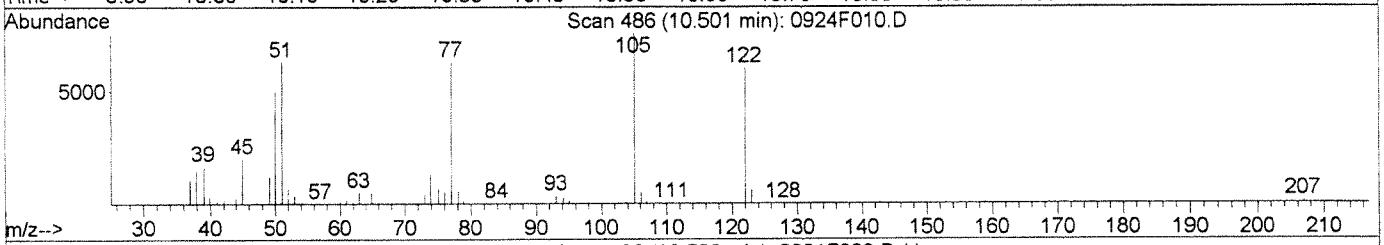
0924F010.D 092414_BNLL.M Thu Sep 25 08:20:26 2014

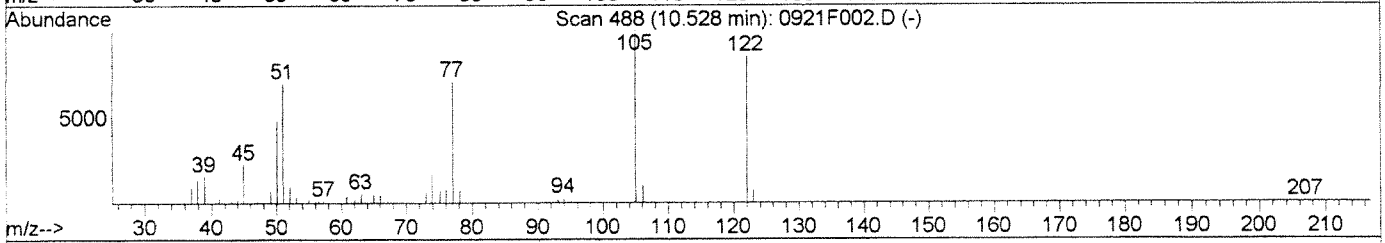
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F010.D Vial: 8
Acq On : 24 Sep 2014 9:40 pm Operator: TLorr
Sample : SVO_LL ICAL @ 2.0ppm | SVM46-42H Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:20 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F010.D

(28) Benzoic Acid (T)

10.50min 1880.70ng/ml m

response 19765

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	124.76
77.00	82.70	104.35
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

0924F010.D 092414_BNLL.M Thu Sep 25 08:20:32 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:28 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	26876	1000.00	ng/ml	-0.01
22) Naphthalene-d8	10.80	136	95174	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.63	164	55190	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.08	188	95411	1000.00	ng/ml	0.02
70) Chrysene-d12	20.66	240	94444	1000.00	ng/ml	0.02
79) Perylene-d12	24.38	264	81064	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	92205	3050.93	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 81.36%			
6) Phenol-d6	8.40	99	119824	2777.06	ng/ml	-0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 74.05%			
20) Nitrobenzene-d5	9.69	82	121440	3119.61	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 124.78%			
40) 2-Fluorobiphenyl	12.56	172	251053	2955.02	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 118.20%			
61) 2,4,6-Tribromophenol	14.94	330	43724	3305.68	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 88.15%			
73) Terphenyl-d14	18.73	244	259324	2926.49	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 117.06%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.69	42	109625m	4214.82	ng/ml	
3) Pyridine	5.71	79	82055m	2870.79	ng/ml	
5) Bis(2-chloroethyl) Ether	8.51	93	93784	2938.81	ng/ml	97
7) Phenol	8.42	94	130578	2944.67	ng/ml#	39
8) Aniline	8.41	93	132054	2999.12	ng/ml#	11
9) 2-Chlorophenol	8.59	128	112857	2675.52	ng/ml	89
10) 1,3-Dichlorobenzene	8.79	146	130662	3025.74	ng/ml	96
11) 1,4-Dichlorobenzene	8.90	146	135433	3009.15	ng/ml	95
12) 1,2-Dichlorobenzene	9.12	146	125425	2806.43	ng/ml	95
13) Benzyl Alcohol	9.10	108	59331	2655.71	ng/ml	78
14) Bis(2-chloroisopropyl) Eth	9.28	45	185541	2390.73	ng/ml#	65
15) 2-Methylphenol	9.28	107	80151	2639.06	ng/ml#	77
16) Acetophenone	9.48	105	140291	2874.74	ng/ml	92
17) Hexachloroethane	9.61	117	62950	3038.69	ng/ml	97
18) N-Nitrosodi-n-propylamine	9.49	70	87261	3109.76	ng/ml	93
19) 4-Methylphenol	9.52	107	115496	2610.99	ng/ml	96
21) Nitrobenzene	9.72	77	121915	3085.13	ng/ml	80
23) Isophorone	10.10	82	193933	3653.46	ng/ml	95
24) 2-Nitrophenol	10.22	139	65109	3607.15	ng/ml	76
25) 2,4-Dimethylphenol	10.33	122	77611	2861.44	ng/ml	85

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:28 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	10.45	93	117536	3336.84	ng/ml	96
27)	2,4-Dichlorophenol	10.61	162	100719	3527.56	ng/ml	97
28)	Benzoic Acid	10.53	122	34865m	2617.22	ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	114747	3366.37	ng/ml	96
30)	Naphthalene	10.84	128	297666	2921.15	ng/ml	98
31)	4-Chloroaniline	10.94	127	125968	3130.36	ng/ml	85
32)	Hexachlorobutadiene	11.04	225	80063	4184.82	ng/ml	98
33)	4-Chloro-3-methylphenol	11.77	107	95812	3819.86	ng/ml	96
34)	2-Methylnaphthalene	11.94	141	171560	3221.87	ng/ml	89
35)	1-Methylnaphthalene	12.10	141	160688	3311.81	ng/ml#	92
37)	Hexachlorocyclopentadiene	12.20	237	77254	2868.32	ng/ml	99
38)	2,4,6-Trichlorophenol	12.43	196	73111	3037.53	ng/ml	98
39)	2,4,5-Trichlorophenol	12.51	196	79763	3043.83	ng/ml	97
41)	2-Chloronaphthalene	12.73	162	211221	2801.63	ng/ml	95
42)	2-Nitroaniline	12.93	65	79036	3522.35	ng/ml#	70
43)	Acenaphthylene	13.41	152	314293	2795.71	ng/ml	99
44)	Dimethyl Phthalate	13.25	163	260155	3035.78	ng/ml	99
45)	2,6-Dinitrotoluene	13.34	165	64611	3184.85	ng/ml#	51
46)	Acenaphthene	13.69	154	188551	2916.36	ng/ml	97
47)	3-Nitroaniline	13.61	138	61296	2777.83	ng/ml	85
48)	2,4-Dinitrophenol	13.79	184	25899	3101.12	ng/ml	77
49)	Dibenzofuran	13.98	168	293952	2872.78	ng/ml	70
50)	4-Nitrophenol	13.98	109	49378	4582.32	ng/ml#	8
51)	2,4-Dinitrotoluene	13.99	165	93944	3490.19	ng/ml#	49
52)	2,3,4,6-Tetrachlorophenol	14.21	232	61819	3188.19	ng/ml	99
53)	Fluorene	14.54	166	236892	2988.95	ng/ml	96
54)	4-Chlorophenyl Phenyl Ethe	14.56	204	128134	3158.82	ng/ml	93
55)	Diethyl Phthalate	14.41	149	280925	2982.20	ng/ml	98
56)	4-Nitroaniline	14.62	138	59599	2653.69	ng/ml#	42
57)	2-Methyl-4,6-dinitrophenol	14.67	198	48521	3173.49	ng/ml	94
58)	N-Nitrosodiphenylamine	14.77	169	153813	2837.86	ng/ml	98
59)	Azobenzene	14.82	77	253210	3320.89	ng/ml	81
62)	4-Bromophenyl Phenyl Ether	15.36	248	71721	3090.14	ng/ml	94
63)	Hexachlorobenzene	15.44	284	83490	3186.05	ng/ml	90
64)	Pentachlorophenol	15.79	266	40451	2273.40	ng/ml	99
65)	Phenanthrene	16.12	178	311613	2846.50	ng/ml	99
66)	Anthracene	16.20	178	330550	2885.03	ng/ml	99
67)	Carbazole	16.49	167	297135	2724.14	ng/ml	95
68)	Di-n-butyl Phthalate	17.11	149	433750	2936.98	ng/ml	98
69)	Fluoranthene	18.08	202	328561	2887.72	ng/ml	94
71)	Benzidine	18.33	184	105381	2480.64	ng/ml	97

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:28 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.43	202	362612	2739.87	ng/ml	97
74)	Butyl Benzyl Phthalate	19.60	149	193096	2884.42	ng/ml	79
75)	3,3'-Dichlorobenzidine	20.63	252	124343	3197.83	ng/ml	99
76)	Benz(a)anthracene	20.64	228	315926	2902.10	ng/ml	98
77)	Chrysene	20.73	228	292399	2754.46	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.86	149	262567	2770.96	ng/ml	98
80)	Di-n-octyl Phthalate	22.67	149	429448	2888.43	ng/ml	92
81)	Benzo(b)fluoranthene	23.45	252	274535	2901.45	ng/ml	94
82)	Benzo(k)fluoranthene	23.52	252	288762	2929.09	ng/ml	95
83)	Benzo(a)pyrene	24.25	252	257221	2923.71	ng/ml	93
84)	Indeno(1,2,3-cd)pyrene	26.64	276	255746	3367.94	ng/ml	89
85)	Dibenz(a,h)anthracene	26.70	278	277417	3634.13	ng/ml	95
86)	Benzo(g,h,i)perylene	27.12	276	276936	3365.99	ng/ml	92

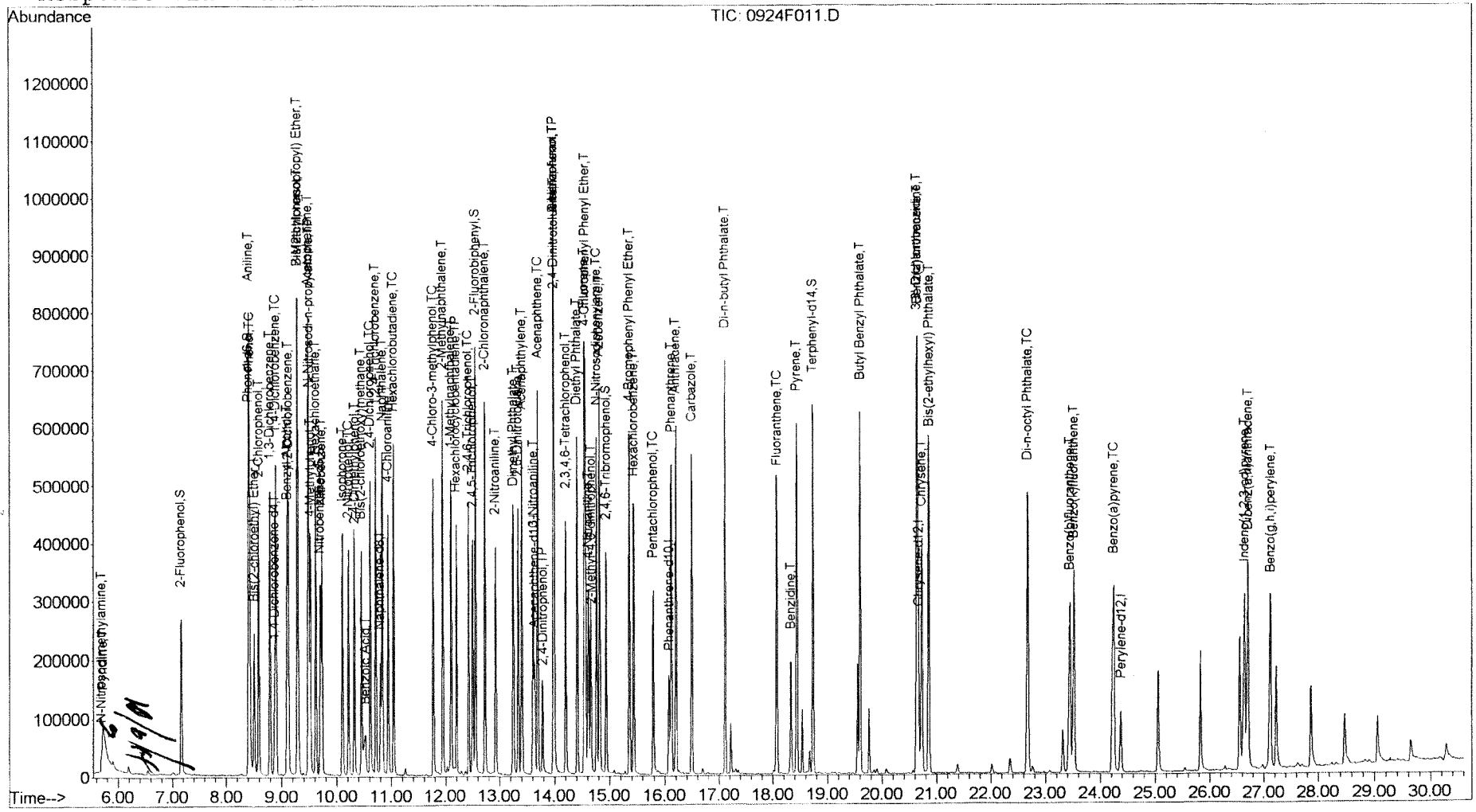
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F011.D 092414_BNLL.M Thu Sep 25 08:29:42 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:22 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



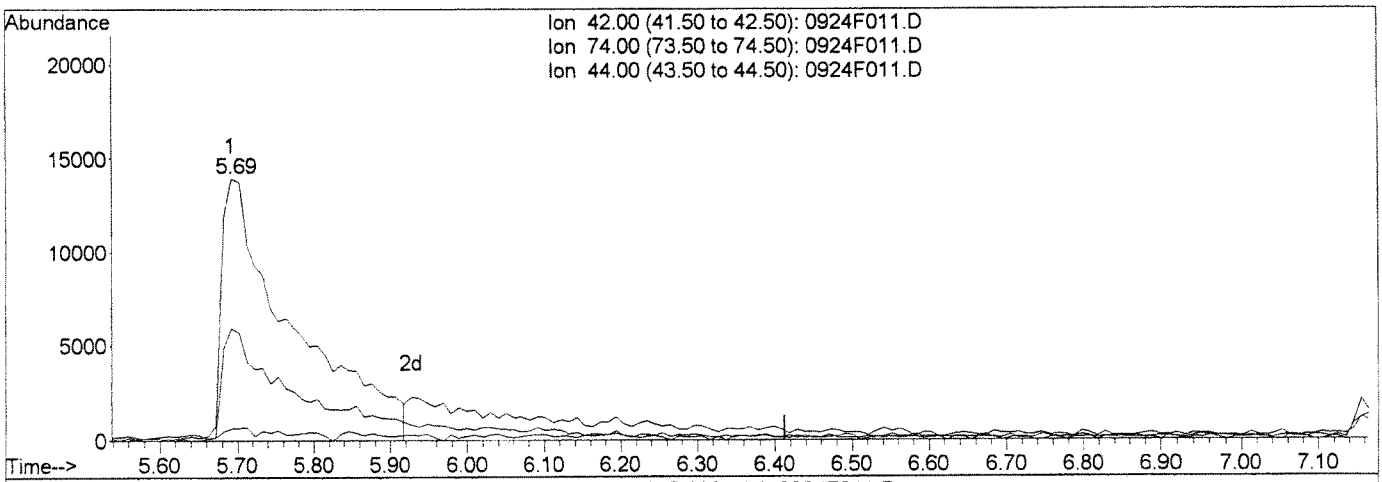
3059

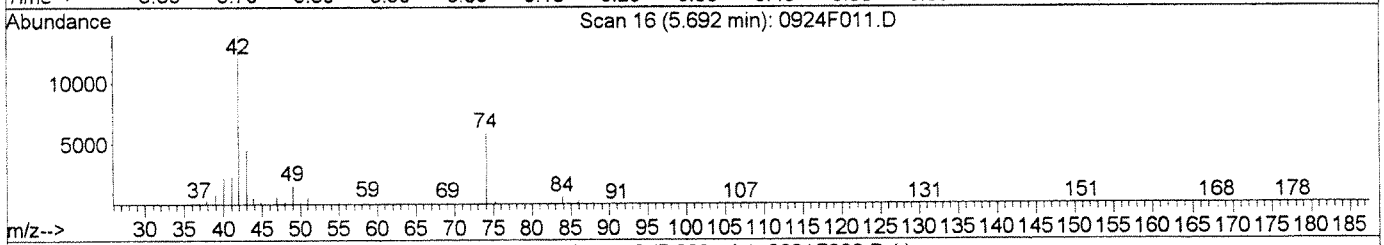
SEP 2 5 2014

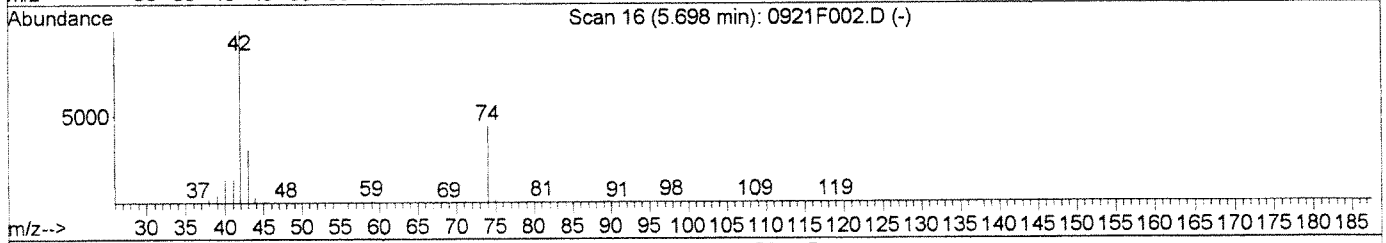
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F011.D

(2) N-Nitrosodimethylamine (T)

5.69min 3433.34ng/ml

response 89299

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	41.67
44.00	10.20	2.81
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

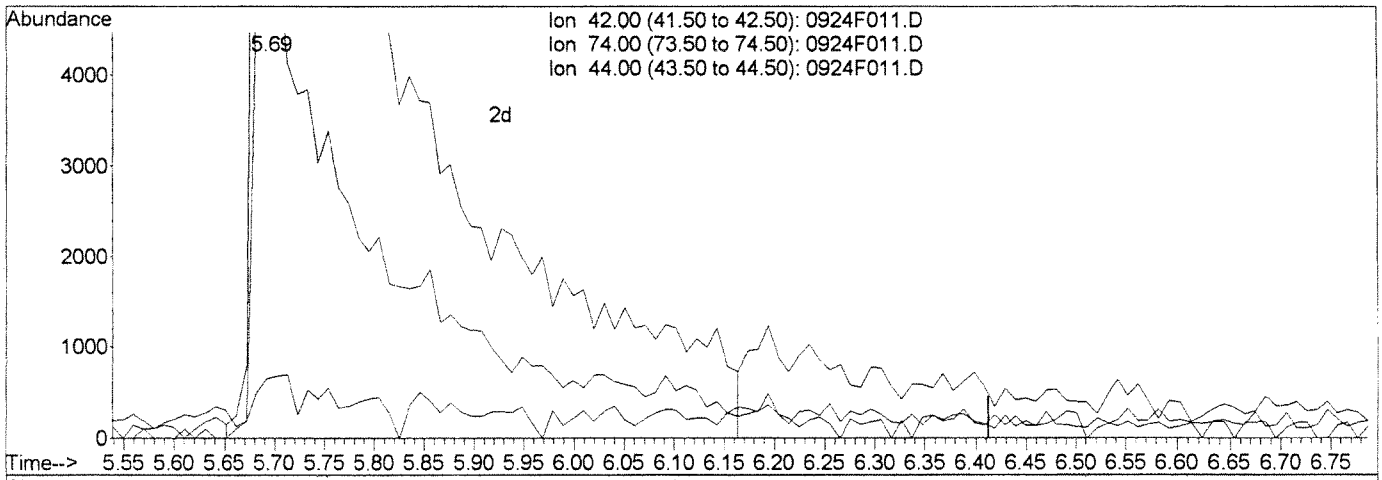
10/1/14

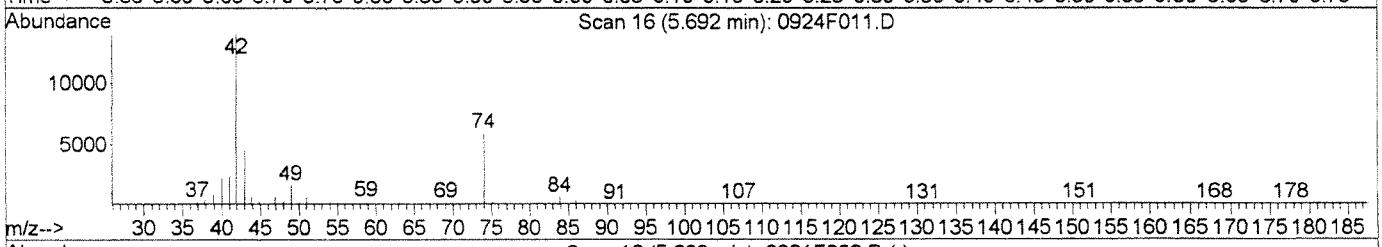
0924F011.D 092414_BNLL.M Thu Sep 25 08:21:41 2014

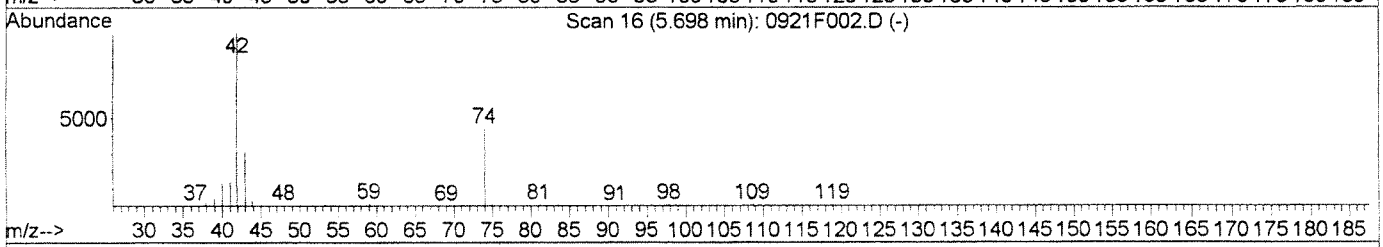
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:21 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F011.D

(2) N-Nitrosodimethylamine (T)

5.69min 4214.82ng/ml m

response 109625

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	42.40
44.00	10.20	4.67
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

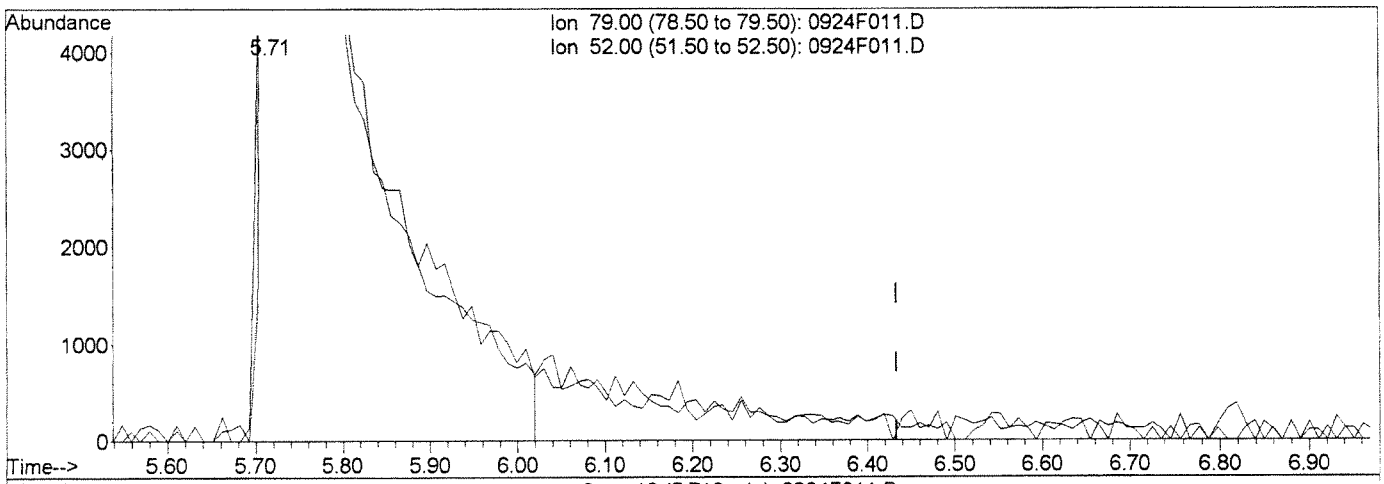
10/6/14

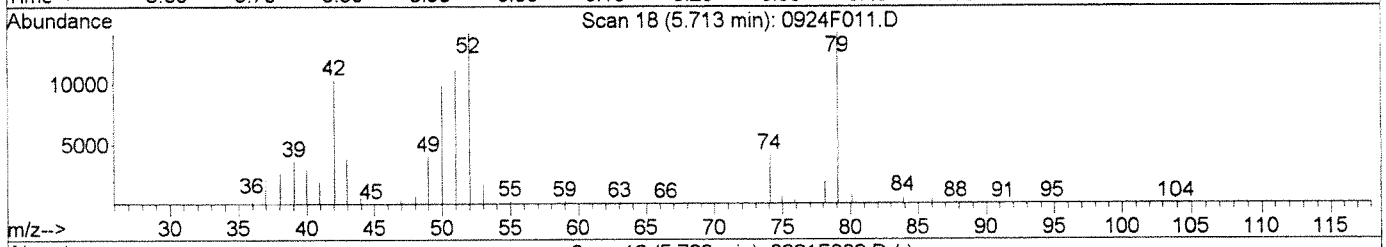
0924F011.D 092414_BNLL.M Thu Sep 25 08:22:02 2014

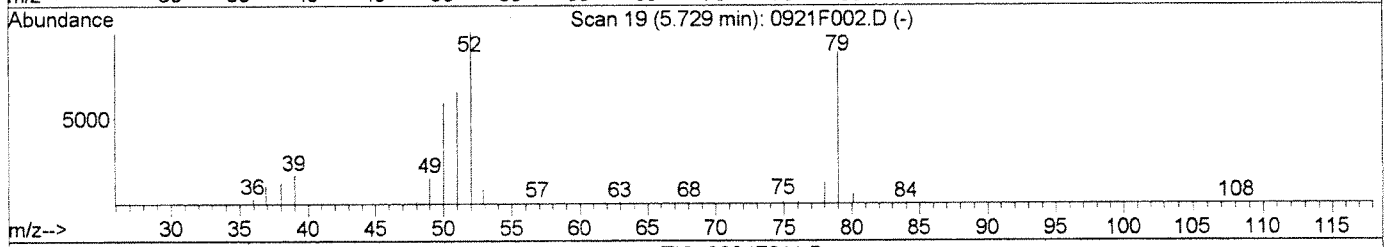
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:21 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F011.D

(3) Pyridine (T)

5.71min 2692.08ng/ml

response 76947

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	99.91
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

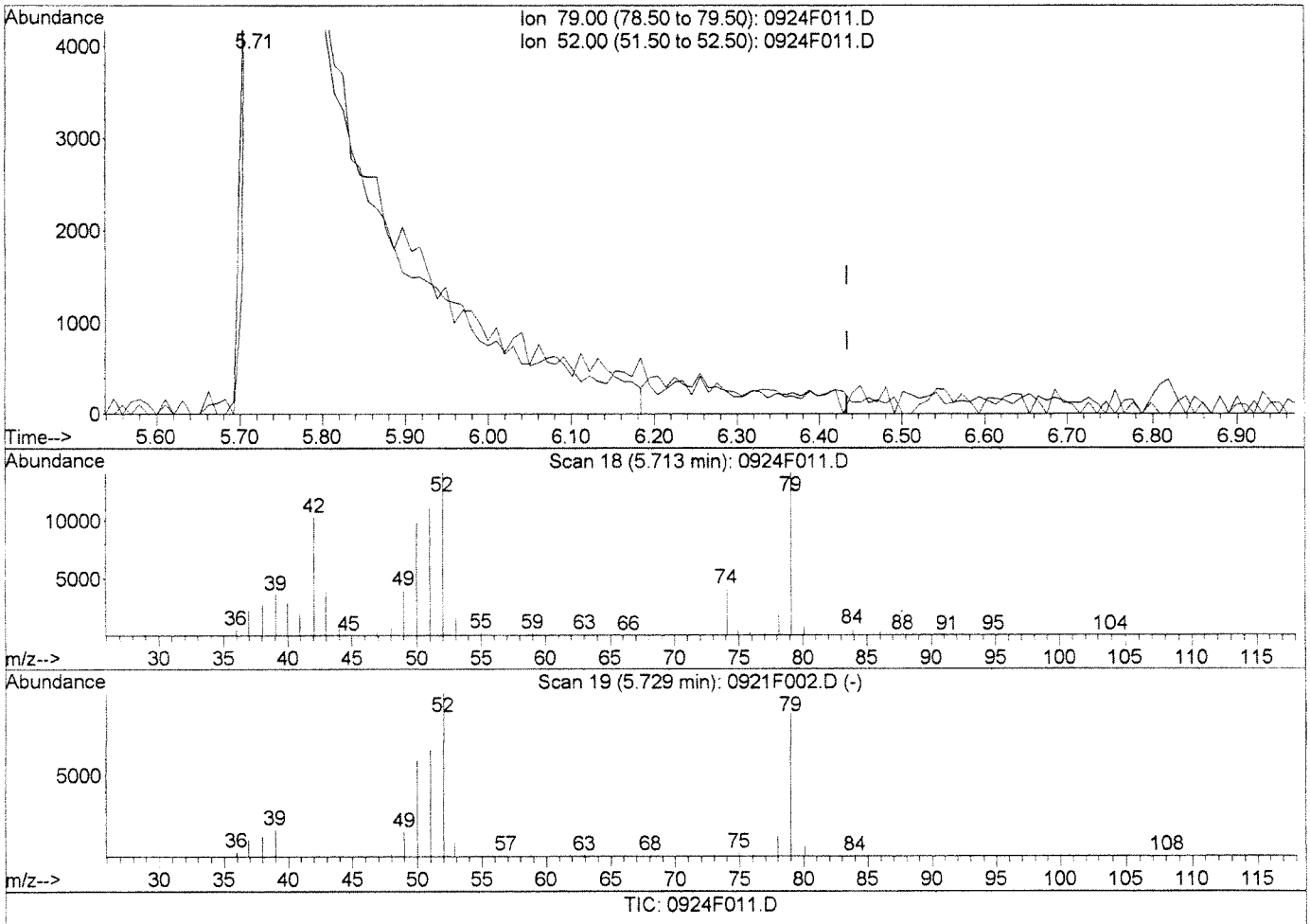
10/6/14

0924F011.D 092414_BNLL.M Thu Sep 25 08:22:07 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F011.D

(3) Pyridine (T)

5.71min 2870.79ng/ml m

response 82055

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	99.91
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

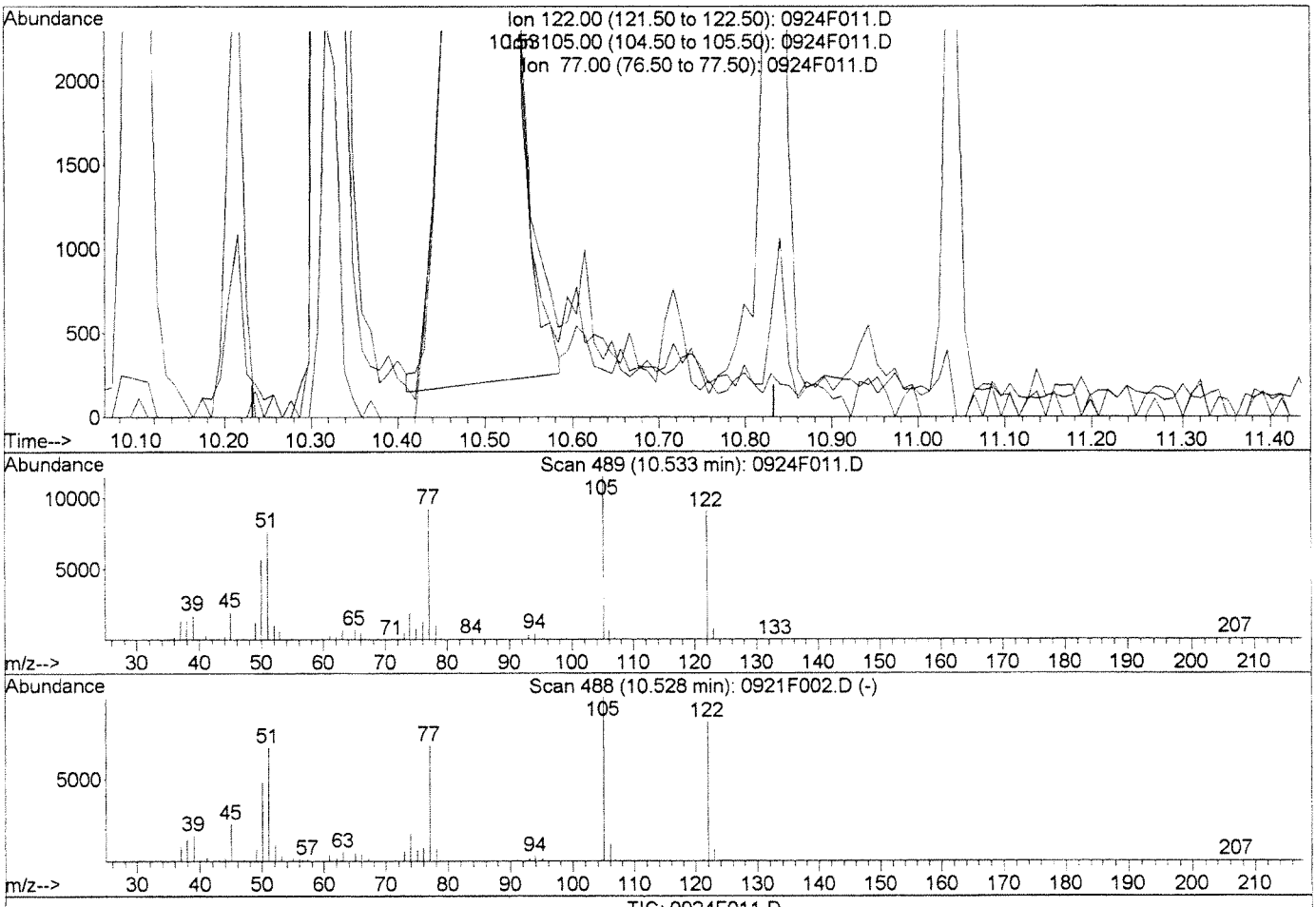
10/6/14

0924F011.D 092414_BNLL.M Thu Sep 25 08:22:12 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration



TIC: 0924F011.D

(28) Benzoic Acid (T)

10.53min 2504.93ng/ml

response 32720

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	131.29
77.00	82.70	103.40
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

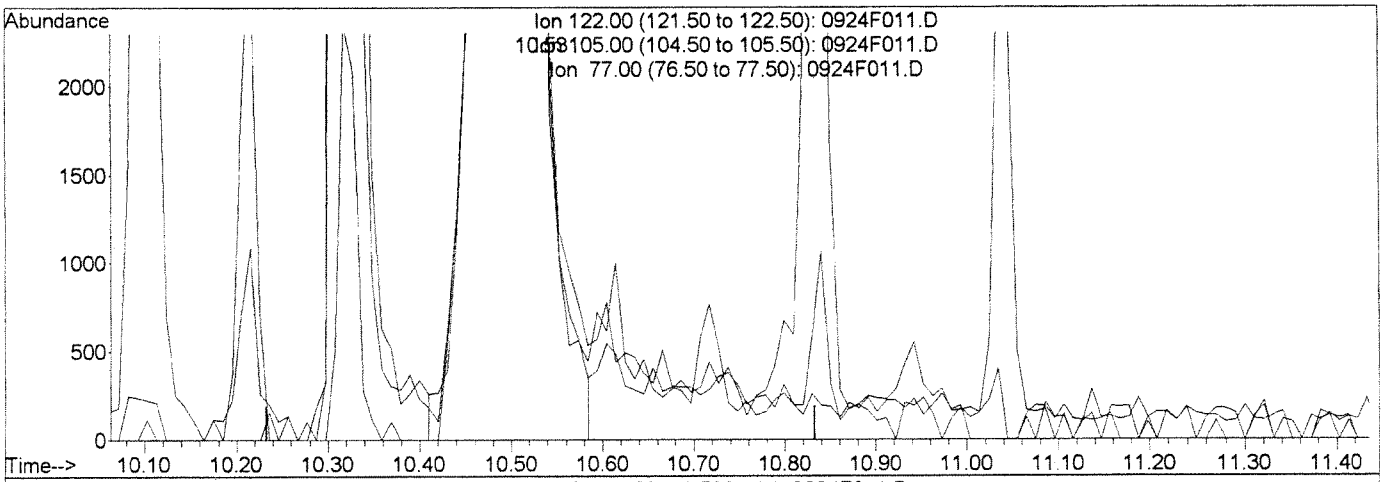
10/6/14

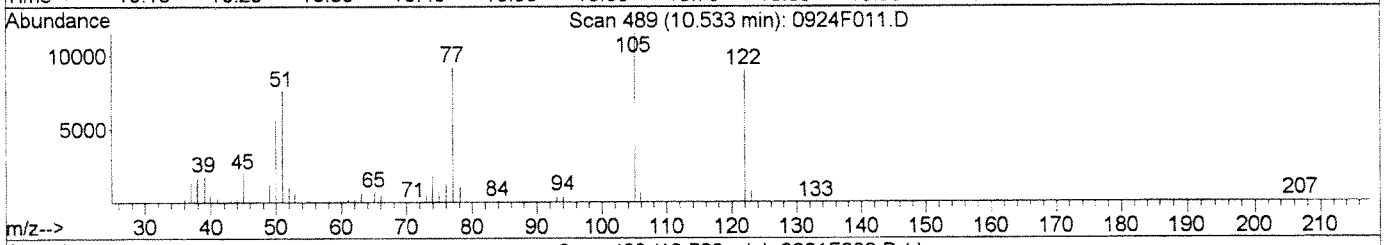
0924F011.D 092414_BNLL.M Thu Sep 25 08:22:32 2014

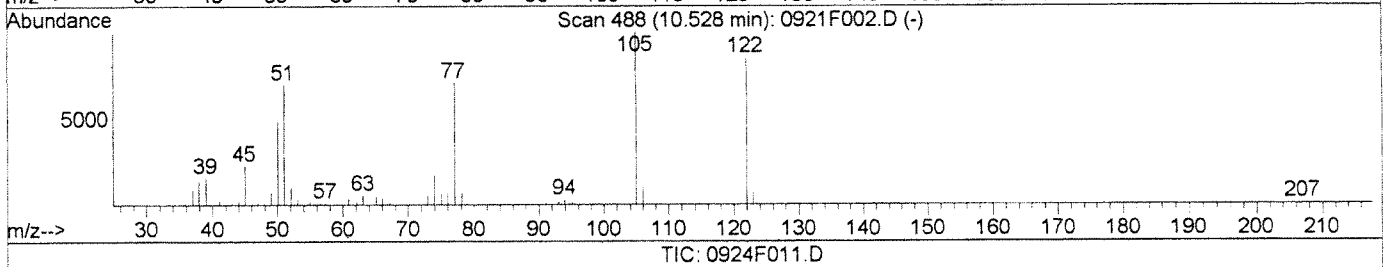
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F011.D Vial: 9
Acq On : 24 Sep 2014 10:19 pm Operator: TLorr
Sample : SVO_LL ICAL @ 3.0ppm | SVM46-42I Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F011.D

(28) Benzoic Acid (T)

10.53min 2617.22ng/ml m

response 34865

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	127.52
77.00	82.70	102.46
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/6/14

0924F011.D 092414_BNLL.M Thu Sep 25 08:22:38 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:30 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	22370	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	106482	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	59188	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	103430	1000.00	ng/ml	0.01
70) Chrysene-d12	20.67	240	100650	1000.00	ng/ml	0.02
79) Perylene-d12	24.38	264	87046	1000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	119614	4755.09	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 126.80%#			
6) Phenol-d6	8.41	99	173831	4840.24	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 129.07%#			
20) Nitrobenzene-d5	9.71	82	210930	6509.92	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 260.40%#			
40) 2-Fluorobiphenyl	12.56	172	485376	5327.22	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 213.09%#			
61) 2,4,6-Tribromophenol	14.95	330	80838	5637.79	ng/ml	0.01
Spiked Amount 3750.000	Range 38 - 157		Recovery = 150.34%			
73) Terphenyl-d14	18.73	244	490218	5191.04	ng/ml	0.01
Spiked Amount 2500.000	Range 54 - 158		Recovery = 207.64%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.66	42	164766m	7610.90	ng/ml	
3) Pyridine	5.71	79	111420m	4683.36	ng/ml	
5) Bis(2-chloroethyl) Ether	8.51	93	131674	4957.26	ng/ml	97
7) Phenol	8.43	94	193926	5254.14	ng/ml#	50
8) Aniline	8.42	93	183531	5007.84	ng/ml#	1
9) 2-Chlorophenol	8.59	128	156762	4464.97	ng/ml	89
10) 1,3-Dichlorobenzene	8.80	146	185110	5150.04	ng/ml	96
11) 1,4-Dichlorobenzene	8.90	146	190843	5094.41	ng/ml	94
12) 1,2-Dichlorobenzene	9.11	146	193005	5188.45	ng/ml	93
13) Benzyl Alcohol	9.10	108	111141	5976.84	ng/ml#	70
14) Bis(2-chloroisopropyl) Eth	9.29	45	292098	4521.87	ng/ml#	67
15) 2-Methylphenol	9.29	107	132324	5234.53	ng/ml#	74
16) Acetophenone	9.48	105	246014	6056.59	ng/ml	93
17) Hexachloroethane	9.61	117	102076	5919.89	ng/ml	97
18) N-Nitrosodi-n-propylamine	9.49	70	157756	6754.47	ng/ml	83
19) 4-Methylphenol	9.52	107	217453	5906.11	ng/ml	96
21) Nitrobenzene	9.74	77	210180	6390.09	ng/ml	83
23) Isophorone	10.11	82	382902	6447.37	ng/ml	93
24) 2-Nitrophenol	10.22	139	121475	6015.23	ng/ml	74
25) 2,4-Dimethylphenol	10.33	122	155238	5115.66	ng/ml	85

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:30 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	10.45	93	227863	5782.02	ng/ml	96
27)	2,4-Dichlorophenol	10.62	162	205483	6432.52	ng/ml	98
28)	Benzoic Acid	10.58	122	70978m	4078.85	ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	229892	6028.18	ng/ml	96
30)	Naphthalene	10.84	128	587837	5156.13	ng/ml	98
31)	4-Chloroaniline	10.95	127	249762	5547.57	ng/ml	85
32)	Hexachlorobutadiene	11.05	225	164268	7674.33	ng/ml	98
33)	4-Chloro-3-methylphenol	11.77	107	191797	6834.57	ng/ml	91
34)	2-Methylnaphthalene	11.95	141	344201	5777.58	ng/ml	90
35)	1-Methylnaphthalene	12.11	141	315247	5807.30	ng/ml#	89
37)	Hexachlorocyclopentadiene	12.20	237	162081	5611.32	ng/ml	99
38)	2,4,6-Trichlorophenol	12.43	196	139347	5398.36	ng/ml	98
39)	2,4,5-Trichlorophenol	12.51	196	151242	5381.68	ng/ml	98
41)	2-Chloronaphthalene	12.74	162	409607	5066.02	ng/ml	96
42)	2-Nitroaniline	12.94	65	145376	6041.25	ng/ml	82
43)	Acenaphthylene	13.41	152	587729	4874.86	ng/ml	99
44)	Dimethyl Phthalate	13.26	163	466101	5071.60	ng/ml	99
45)	2,6-Dinitrotoluene	13.35	165	117138	5384.03	ng/ml	66
46)	Acenaphthene	13.70	154	338307	4879.22	ng/ml	99
47)	3-Nitroaniline	13.63	138	107924	4560.56	ng/ml	90
48)	2,4-Dinitrophenol	13.79	184	58291	4971.27	ng/ml#	57
49)	Dibenzofuran	13.98	168	540706	4927.36	ng/ml	68
50)	4-Nitrophenol	13.98	109	94409	8169.44	ng/ml#	1
51)	2,4-Dinitrotoluene	14.01	165	168255	5828.75	ng/ml	76
52)	2,3,4,6-Tetrachlorophenol	14.21	232	111442	5359.17	ng/ml	96
53)	Fluorene	14.55	166	432307	5086.13	ng/ml	94
54)	4-Chlorophenyl Phenyl Ethe	14.57	204	237431	5457.89	ng/ml	94
55)	Diethyl Phthalate	14.42	149	509263	5040.99	ng/ml	99
56)	4-Nitroaniline	14.64	138	107720	4472.34	ng/ml#	52
57)	2-Methyl-4,6-dinitrophenol	14.67	198	95174	5268.13	ng/ml#	46
58)	N-Nitrosodiphenylamine	14.77	169	283553	4878.19	ng/ml	96
59)	Azobenzene	14.82	77	462779	5659.45	ng/ml	81
62)	4-Bromophenyl Phenyl Ether	15.37	248	132846	5279.98	ng/ml	92
63)	Hexachlorobenzene	15.45	284	156375	5504.74	ng/ml	90
64)	Pentachlorophenol	15.80	266	83184	4312.59	ng/ml	98
65)	Phenanthrene	16.12	178	586544	4942.51	ng/ml	99
66)	Anthracene	16.21	178	607084	4887.80	ng/ml	99
67)	Carbazole	16.50	167	570984	4828.94	ng/ml	98
68)	Di-n-butyl Phthalate	17.12	149	847140	5291.38	ng/ml	98
69)	Fluoranthene	18.08	202	620350	5029.54	ng/ml	94
71)	Benzidine	18.32	184	137637	3040.16	ng/ml	98

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:30 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.45	202	670436	4753.41	ng/ml	98
74)	Butyl Benzyl Phthalate	19.60	149	352354	4938.84	ng/ml	81
75)	3,3'-Dichlorobenzidine	20.65	252	223697	5398.28	ng/ml	99
76)	Benz(a)anthracene	20.65	228	565374	4873.31	ng/ml	98
77)	Chrysene	20.74	228	525889	4648.53	ng/ml	98
78)	Bis(2-ethylhexyl) Phthalat	20.86	149	452456	4480.50	ng/ml	98
80)	Di-n-octyl Phthalate	22.68	149	764576	4789.07	ng/ml	95
81)	Benzo(b)fluoranthene	23.46	252	486092	4784.27	ng/ml	93
82)	Benzo(k)fluoranthene	23.54	252	504922	4769.75	ng/ml	94
83)	Benzo(a)pyrene	24.26	252	477217	5051.53	ng/ml	92
84)	Indeno(1,2,3-cd)pyrene	26.66	276	534092	6550.14	ng/ml	87
85)	Dibenz(a,h)anthracene	26.73	278	560203	6834.26	ng/ml	91
86)	Benzo(g,h,i)perylene	27.14	276	558167	6317.97	ng/ml	96

10/1/14

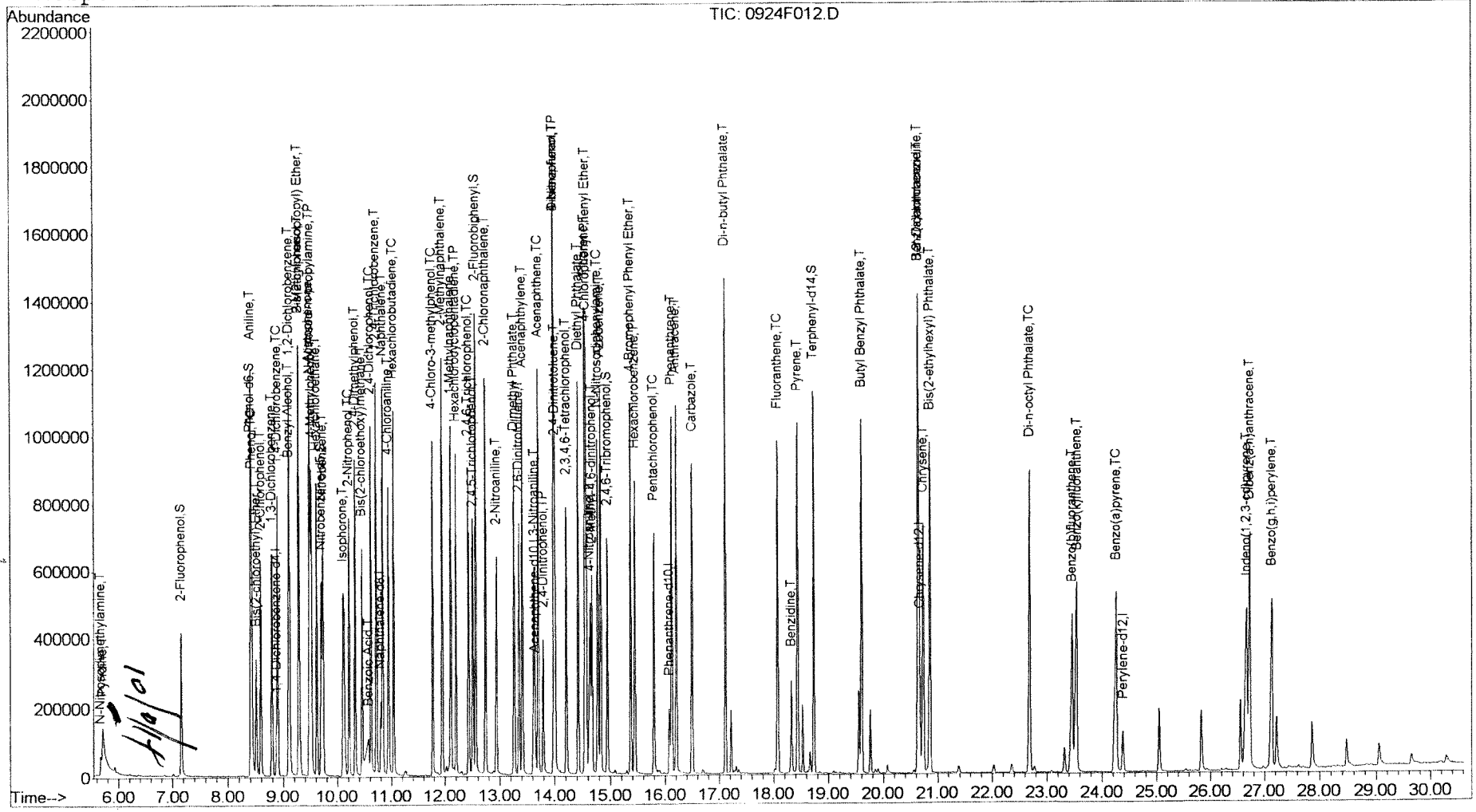
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F012.D 092414_BNLL.M Thu Sep 25 08:29:44 2014 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



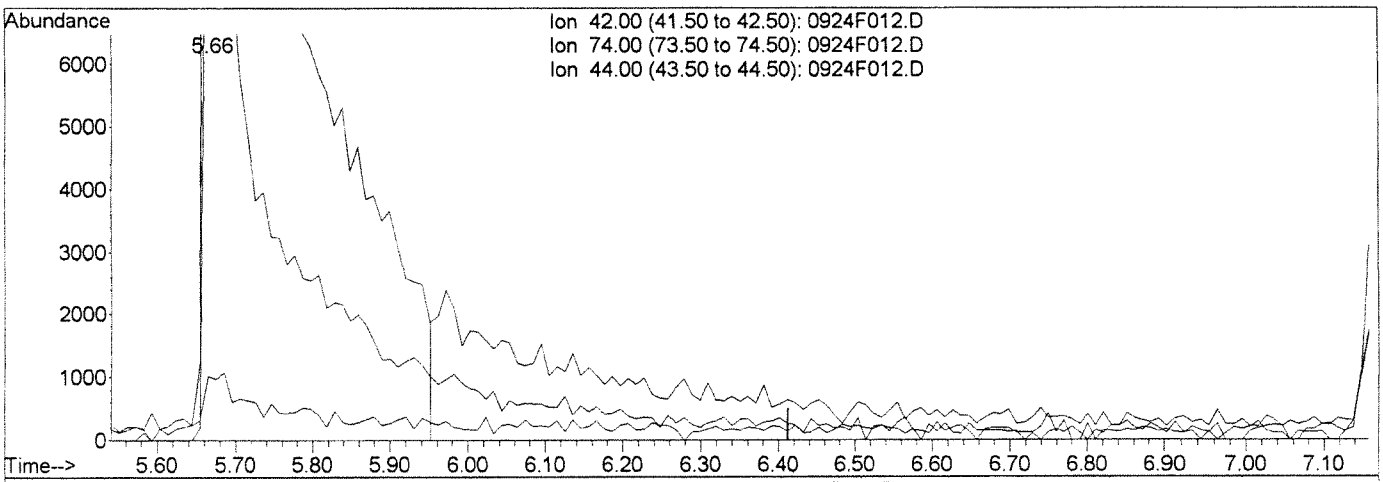
3069

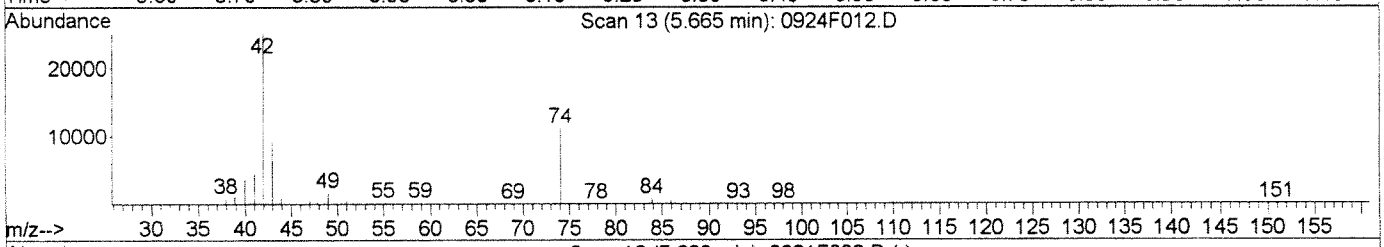
SEP 25 2014

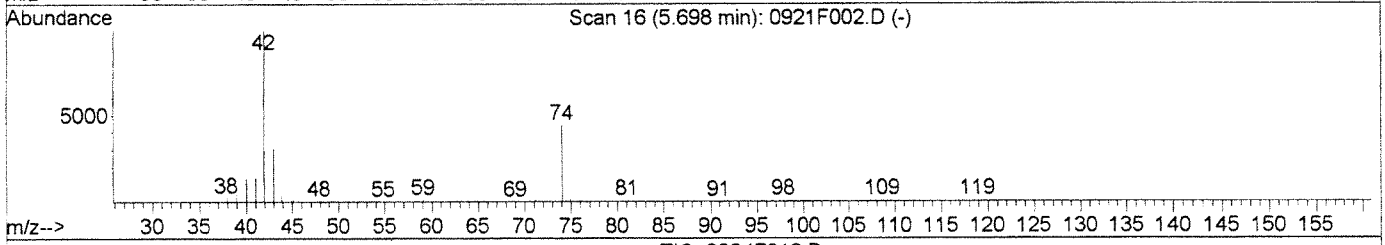
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F012.D

(2) N-Nitrosodimethylamine (T)

5.66min 6557.81ng/ml

response 141968

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	44.67
44.00	10.20	2.88
0.00	0.00	0.00

Manual Integration:

Before

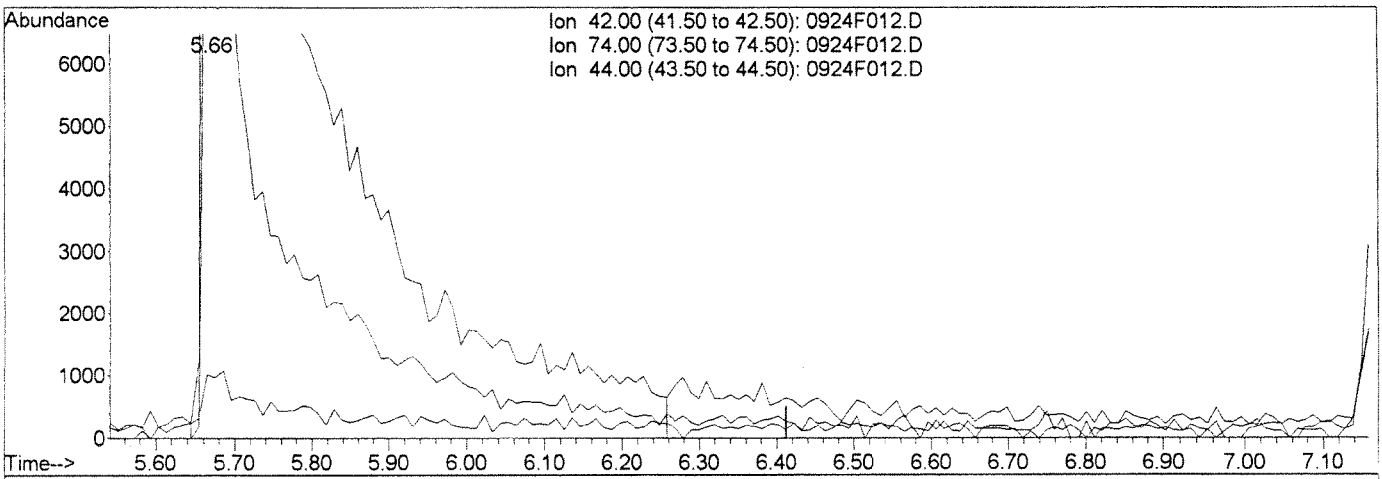
09/25/14

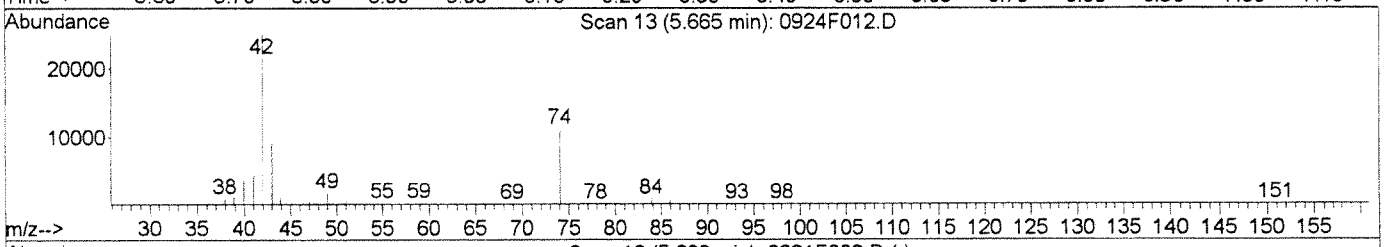
0924F012.D 092414_BNLL.M Thu Sep 25 08:23:18 2014

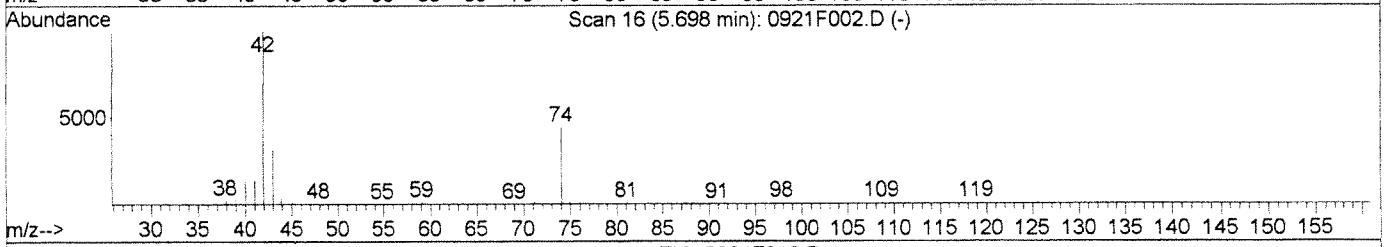
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F012.D

(2) N-Nitrosodimethylamine (T)

5.66min 7610.90ng/ml m

response 164766

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	44.67
44.00	10.20	4.04
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

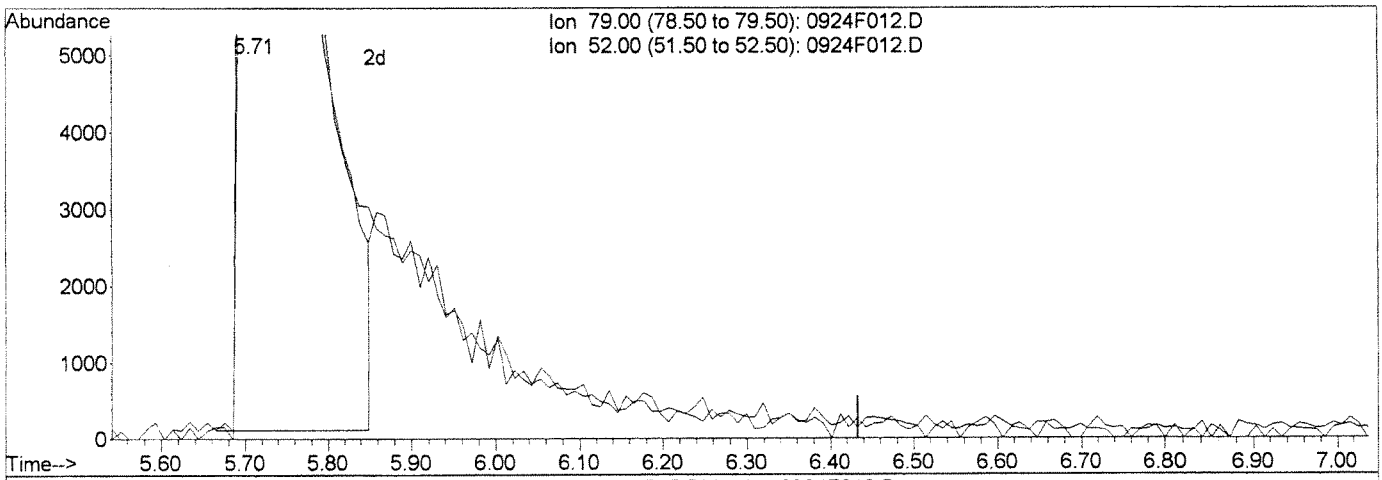
10/6/14

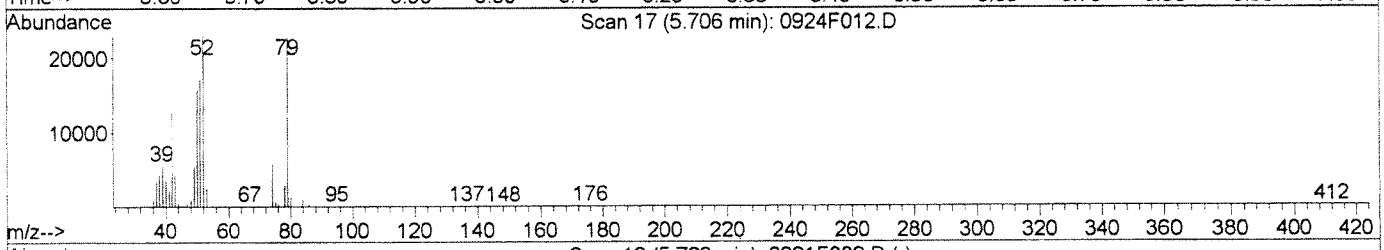
0924F012.D 092414_BNLL.M Thu Sep 25 08:23:27 2014

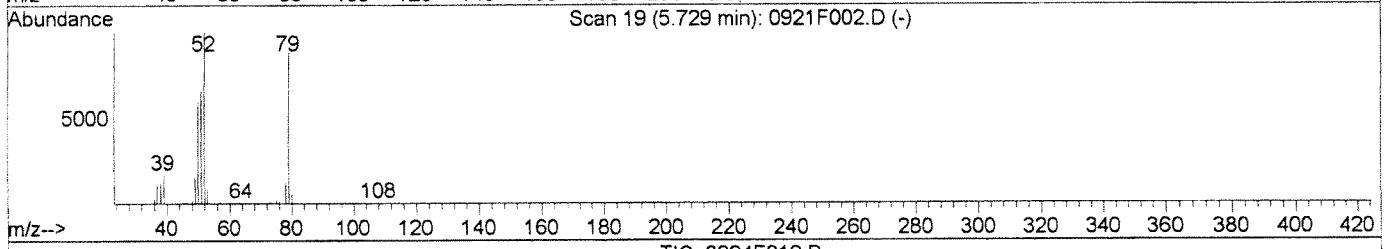
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F012.D

(3) Pyridine (T)

5.71min 3641.90ng/ml

response 86643

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	100.78
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

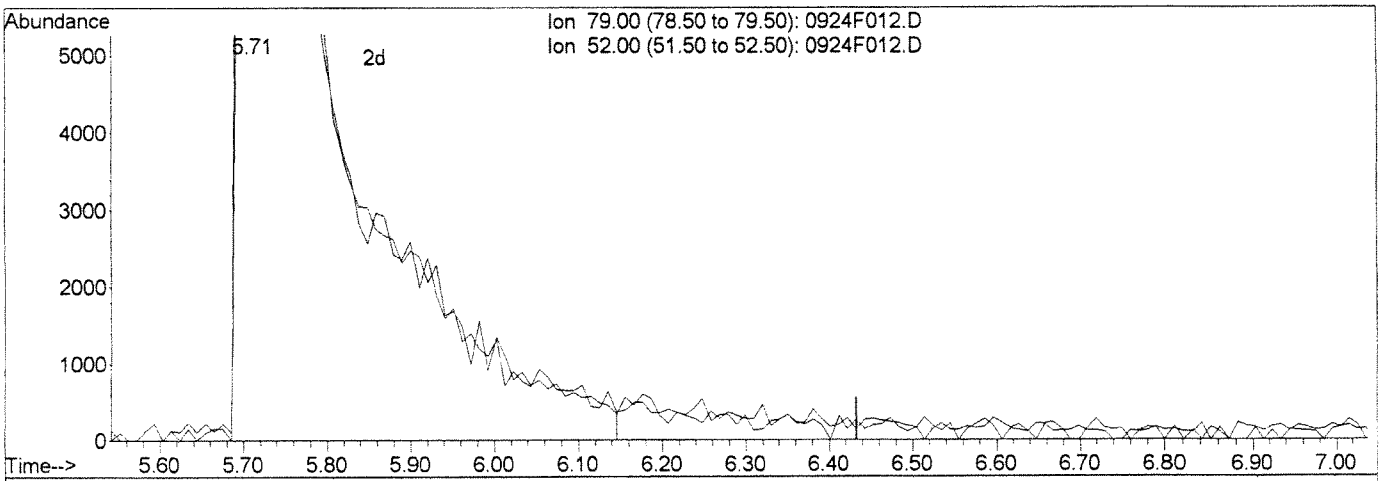
10/6/14

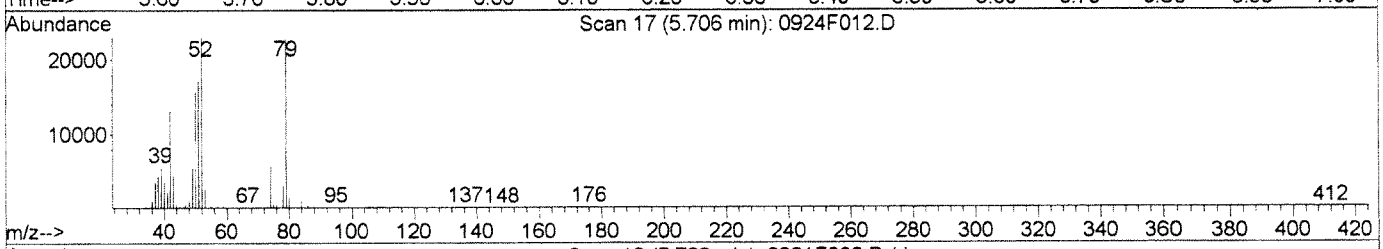
0924F012.D 092414_BNLL.M Thu Sep 25 08:23:31 2014

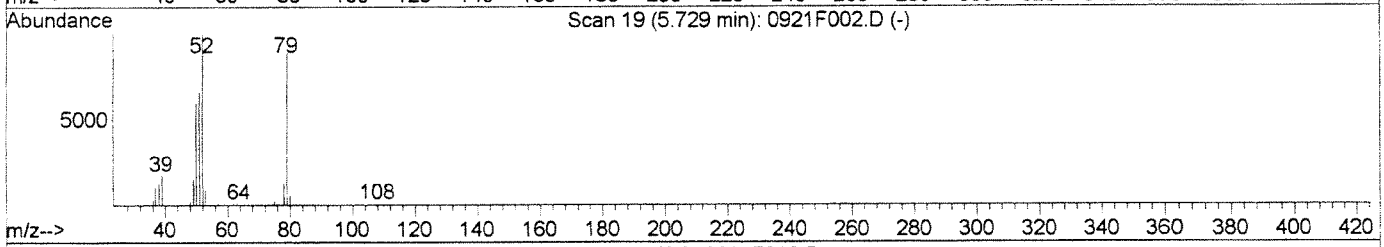
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F012.D

(3) Pyridine (T)

5.71min 4683.36ng/ml m

response 111420

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	100.94
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

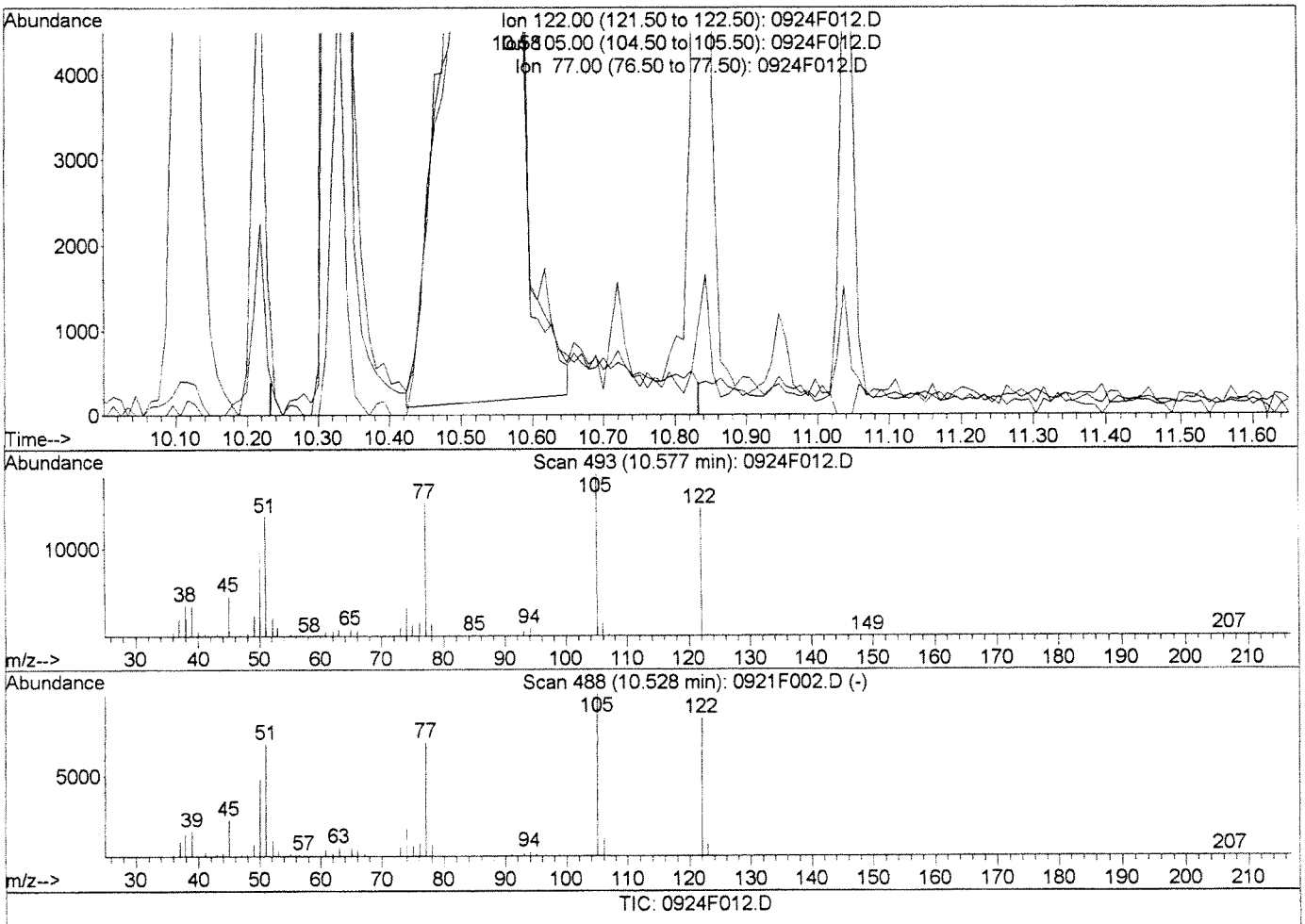
10/6/14

0924F012.D 092414_BNLL.M Thu Sep 25 08:23:38 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration



TIC: 0924F012.D

(28) Benzoic Acid (T)

10.58min 3979.56ng/ml

response 68763

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	129.61
77.00	82.70	104.45
0.00	0.00	0.00

Manual Integration:

Before

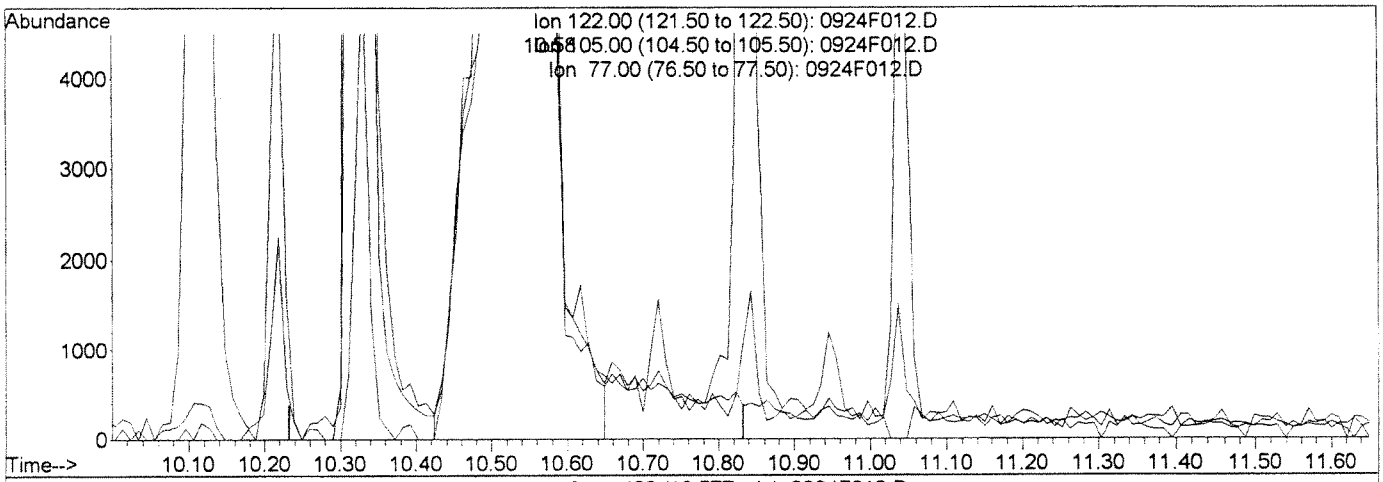
09/25/14

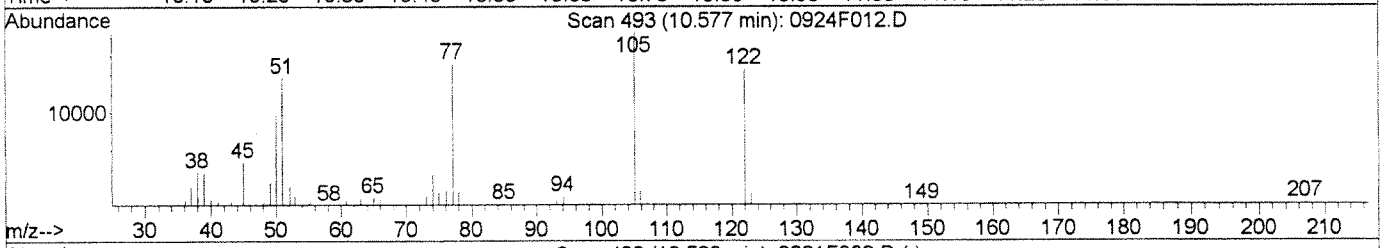
0924F012.D 092414_BNLL.M Thu Sep 25 08:23:55 2014

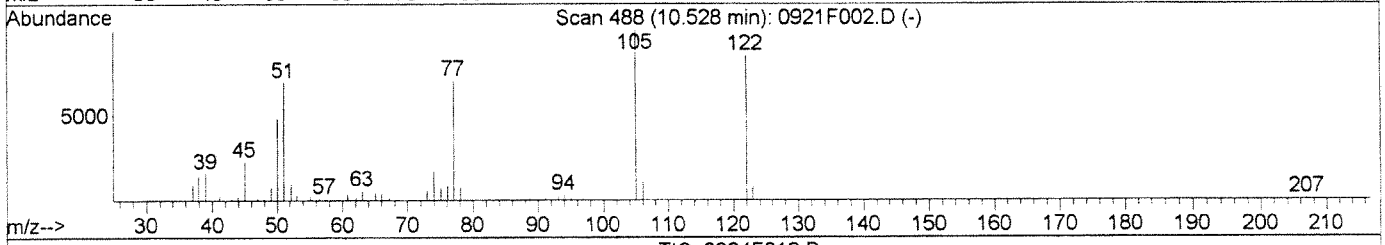
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F012.D Vial: 10
Acq On : 24 Sep 2014 10:59 pm Operator: TLorr
Sample : SVO_LL ICAL @ 5.0ppm | SVM46-42J Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F012.D

(28) Benzoic Acid (T)

10.58min 4078.85ng/ml m

response 70978

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	127.10
77.00	82.70	104.22
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/1/14

0924F012.D 092414_BNLL.M Thu Sep 25 08:24:00 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:32 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	27779	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	99976	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	66658	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.08	188	109313	1000.00	ng/ml	0.02
70) Chrysene-d12	20.69	240	115841	1000.00	ng/ml	0.05
79) Perylene-d12	24.38	264	99299	1000.00	ng/ml	0.05
System Monitoring Compounds						
4) 2-Fluorophenol	7.16	112	239081	7653.70	ng/ml	-0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 204.10%#			
6) Phenol-d6	8.41	99	309319	6935.78	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 184.95%#			
20) Nitrobenzene-d5	9.71	82	331774	8245.73	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 329.83%#			
40) 2-Fluorobiphenyl	12.56	172	732470	7138.28	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 285.53%#			
61) 2,4,6-Tribromophenol	14.96	330	133551	8812.83	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 157		Recovery = 235.01%#			
73) Terphenyl-d14	18.75	244	741498	6822.24	ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 272.89%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.66	42	311762m	11596.88	ng/ml	
3) Pyridine	5.70	79	222737m	7539.39	ng/ml	
5) Bis(2-chloroethyl) Ether	8.52	93	249945	7577.67	ng/ml	97
7) Phenol	8.43	94	340335	7425.43	ng/ml#	42
8) Aniline	8.42	93	317452	6975.39	ng/ml#	24
9) 2-Chlorophenol	8.59	128	287114	6585.39	ng/ml	85
10) 1,3-Dichlorobenzene	8.80	146	342896	7682.33	ng/ml	95
11) 1,4-Dichlorobenzene	8.90	146	353252	7593.66	ng/ml	95
12) 1,2-Dichlorobenzene	9.13	146	348382	7541.78	ng/ml	96
13) Benzyl Alcohol	9.12	108	162943	7056.39	ng/ml#	70
14) Bis(2-chloroisopropyl) Eth	9.29	45	479918	5982.82	ng/ml#	71
15) 2-Methylphenol	9.30	107	210847	6716.70	ng/ml#	76
16) Acetophenone	9.49	105	372649	7387.84	ng/ml	89
17) Hexachloroethane	9.62	117	167540	7824.52	ng/ml	98
18) N-Nitrosodi-n-propylamine	9.50	70	225169	7763.60	ng/ml	84
19) 4-Methylphenol	9.52	107	323168	7068.29	ng/ml	94
21) Nitrobenzene	9.74	77	325442	7967.80	ng/ml	81
23) Isophorone	10.14	82	524443	9405.32	ng/ml	94
24) 2-Nitrophenol	10.22	139	177158	9343.43	ng/ml	73
25) 2,4-Dimethylphenol	10.33	122	216127	7585.66	ng/ml	84

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:32 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	10.47	93	318364	8604.20 ng/ml	98
27)	2,4-Dichlorophenol	10.63	162	288851	9630.73 ng/ml	92
28)	Benzoic Acid	10.62	122	113056m	6226.25 ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	323619	9038.10 ng/ml	96
30)	Naphthalene	10.84	128	840521	7852.28 ng/ml	99
31)	4-Chloroaniline	10.96	127	345904	8183.00 ng/ml	90
32)	Hexachlorobutadiene	11.05	225	227679	11328.98 ng/ml	100
33)	4-Chloro-3-methylphenol	11.78	107	278482	10569.32 ng/ml	89
34)	2-Methylnaphthalene	11.96	141	498895	8919.15 ng/ml	93
35)	1-Methylnaphthalene	12.11	141	453023	8888.41 ng/ml#	89
37)	Hexachlorocyclopentadiene	12.21	237	244106	7504.00 ng/ml	99
38)	2,4,6-Trichlorophenol	12.44	196	211869	7288.07 ng/ml	97
39)	2,4,5-Trichlorophenol	12.51	196	229534	7252.27 ng/ml	96
41)	2-Chloronaphthalene	12.75	162	616118	6766.21 ng/ml	98
42)	2-Nitroaniline	12.94	65	219730	8107.83 ng/ml#	73
43)	Acenaphthylene	13.41	152	917909	6760.30 ng/ml	99
44)	Dimethyl Phthalate	13.27	163	724176	6996.65 ng/ml	99
45)	2,6-Dinitrotoluene	13.36	165	186740	7621.29 ng/ml	75
46)	Acenaphthene	13.70	154	542288	6944.66 ng/ml	99
47)	3-Nitroaniline	13.64	138	169584	6363.07 ng/ml	90
48)	2,4-Dinitrophenol	13.80	184	102851	6564.20 ng/ml#	59
49)	Dibenzofuran	13.99	168	873201	7065.59 ng/ml	75
50)	4-Nitrophenol	14.00	109	151594	11647.75 ng/ml#	36
51)	2,4-Dinitrotoluene	14.02	165	272893	8394.23 ng/ml	76
52)	2,3,4,6-Tetrachlorophenol	14.22	232	186562	7966.24 ng/ml	93
53)	Fluorene	14.56	166	728466	7610.02 ng/ml	95
54)	4-Chlorophenyl Phenyl Ethe	14.57	204	397188	8107.08 ng/ml	90
55)	Diethyl Phthalate	14.44	149	816059	7172.60 ng/ml	99
56)	4-Nitroaniline	14.66	138	172167	6347.02 ng/ml#	52
57)	2-Methyl-4,6-dinitrophenol	14.69	198	155478	7309.82 ng/ml	76
58)	N-Nitrosodiphenylamine	14.78	169	461660	7052.25 ng/ml	98
59)	Azobenzene	14.84	77	804796	8739.12 ng/ml	86
62)	4-Bromophenyl Phenyl Ether	15.38	248	218112	8202.35 ng/ml	96
63)	Hexachlorobenzene	15.45	284	245965	8192.52 ng/ml	98
64)	Pentachlorophenol	15.80	266	139852	6860.27 ng/ml	99
65)	Phenanthrene	16.13	178	905561	7220.04 ng/ml	99
66)	Anthracene	16.22	178	944692	7196.64 ng/ml	99
67)	Carbazole	16.50	167	843009	6745.82 ng/ml	96
68)	Di-n-butyl Phthalate	17.12	149	1179816	6972.73 ng/ml	98
69)	Fluoranthene	18.08	202	901228	6913.54 ng/ml	95
71)	Benzidine	18.34	184	141329	2712.34 ng/ml	98

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 2 5 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:32 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.45	202	991587	6108.43	ng/ml	98
74)	Butyl Benzyl Phthalate	19.61	149	570933	6953.17	ng/ml	87
75)	3,3'-Dichlorobenzidine	20.66	252	389385	8164.43	ng/ml	99
76)	Benz(a)anthracene	20.67	228	976219	7311.17	ng/ml	98
77)	Chrysene	20.75	228	909810	6987.53	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.86	149	837779	7208.27	ng/ml	98
80)	Di-n-octyl Phthalate	22.70	149	1419433	7793.80	ng/ml	94
81)	Benzo(b)fluoranthene	23.48	252	875035	7549.64	ng/ml	94
82)	Benzo(k)fluoranthene	23.57	252	842846	6979.48	ng/ml	95
83)	Benzo(a)pyrene	24.28	252	798627	7410.63	ng/ml	92
84)	Indeno(1,2,3-cd)pyrene	26.68	276	773291	8313.45	ng/ml	87
85)	Dibenz(a,h)anthracene	26.74	278	817272	8740.11	ng/ml	93
86)	Benzo(g,h,i)perylene	27.16	276	801156	7949.40	ng/ml	93

10/6/14

(#) = qualifier out of range (m) = manual integration
0924F013.D 092414_BNLL.M Thu Sep 25 08:29:45 2014 Page 3

SEP 25 2014

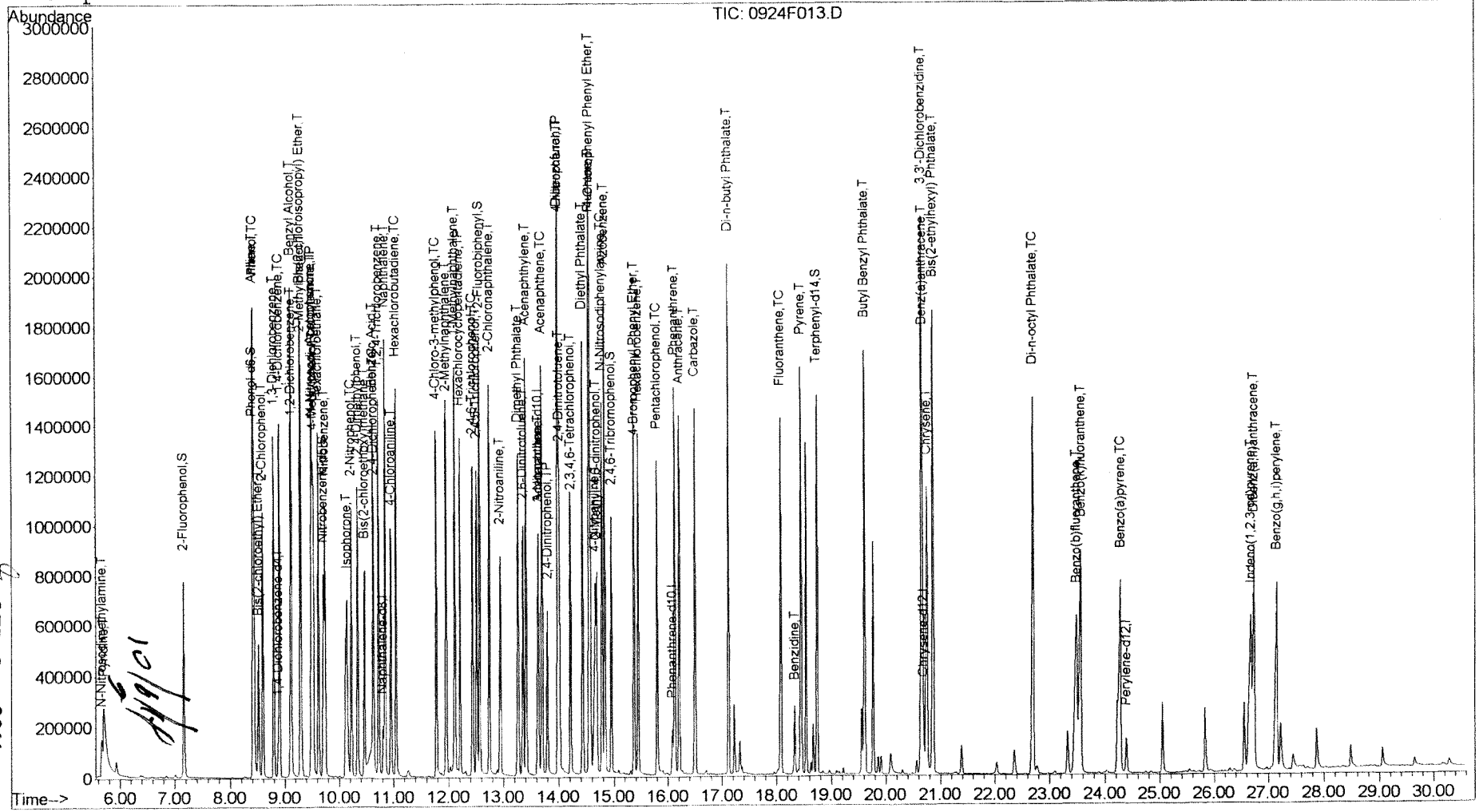
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F013.D
Acq On : 24 Sep 2014 11:38 pm
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:25 2014

Vial: 11
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



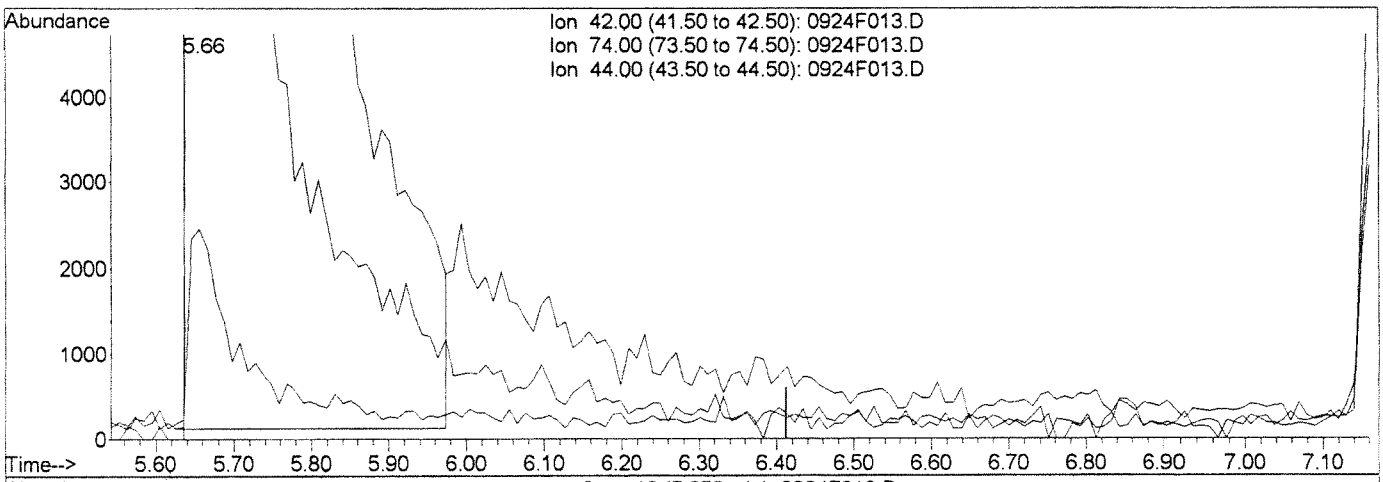
3079

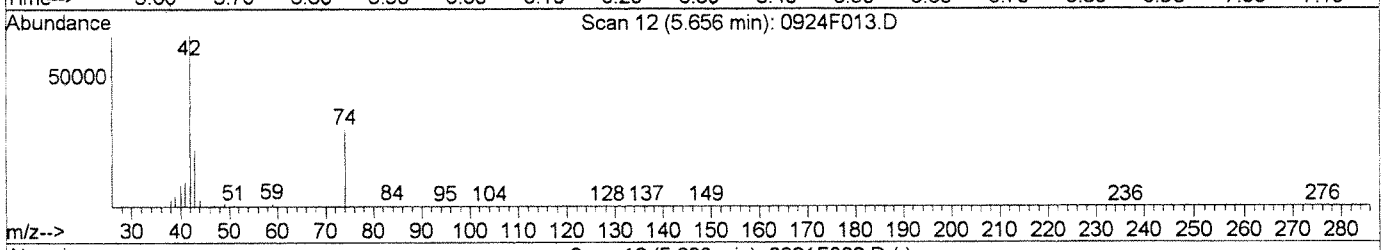
SEP 25 2014

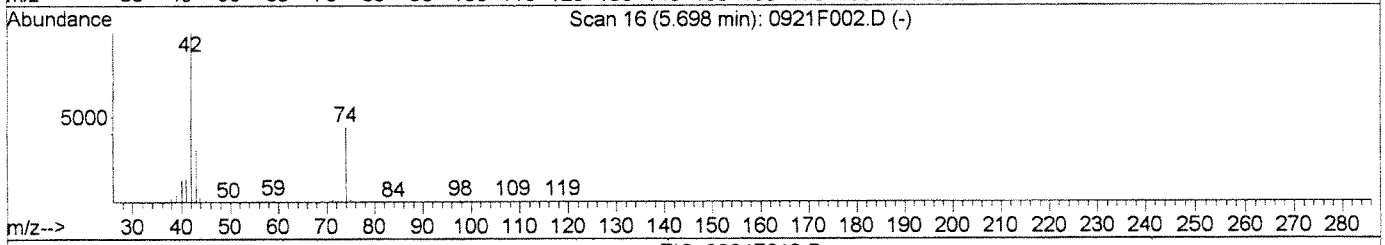
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F013.D

(2) N-Nitrosodimethylamine (T)

5.66min 10748.39ng/ml

response 288952

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	45.33
44.00	10.20	3.47
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

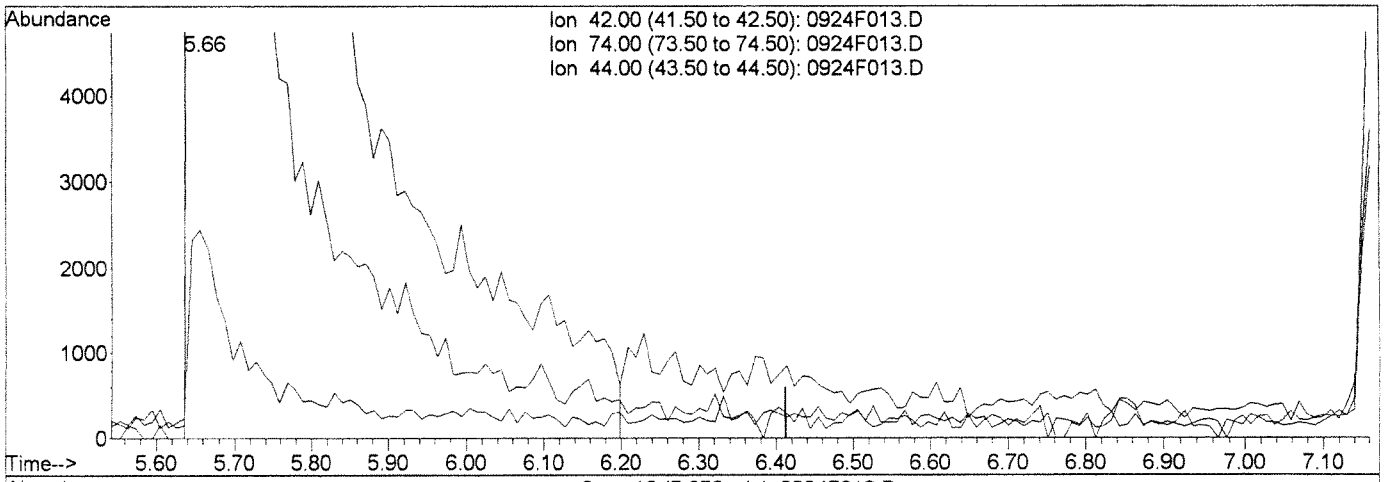
10/6/14

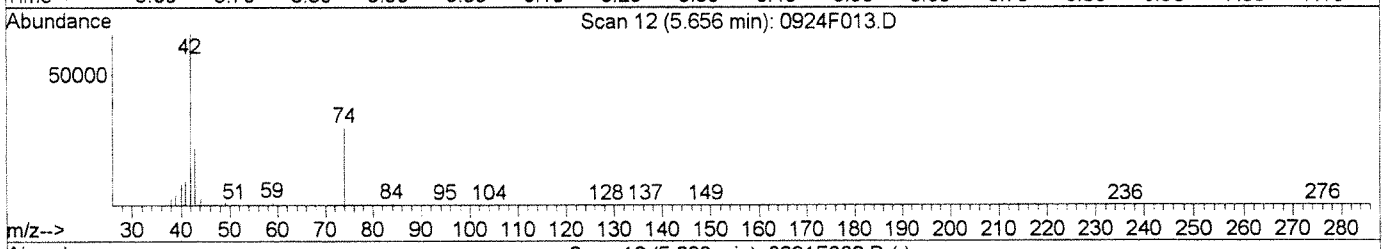
0924F013.D 092414_BNLL.M Thu Sep 25 08:24:40 2014

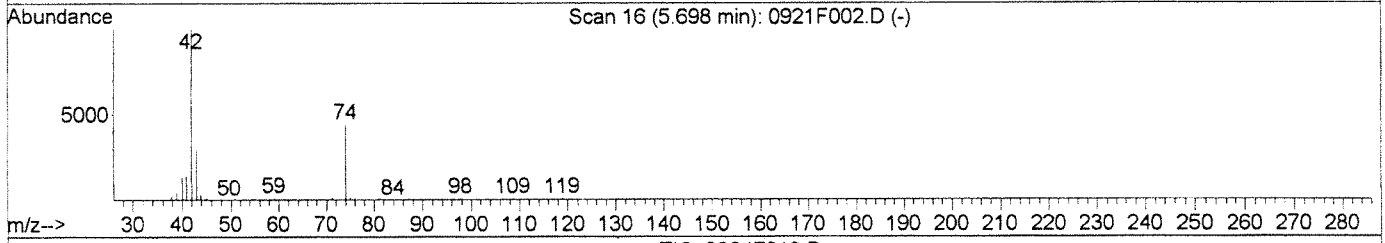
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:24 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F013.D

(2) N-Nitrosodimethylamine (T)

5.66min 11596.88ng/ml m

response 311762

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	45.24
44.00	10.20	3.74
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

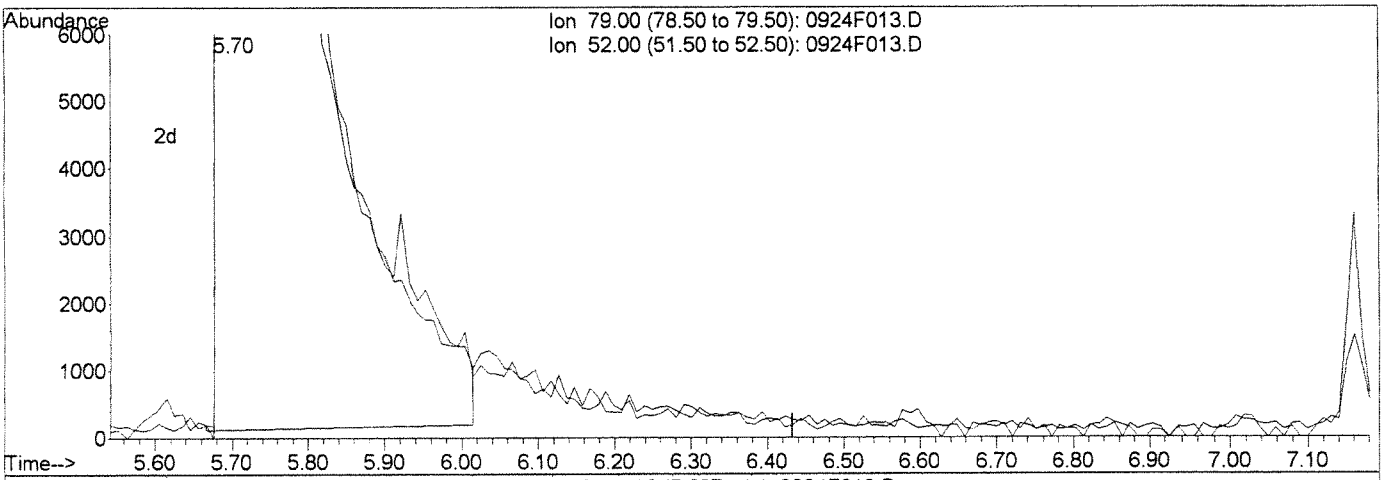
10/1/14

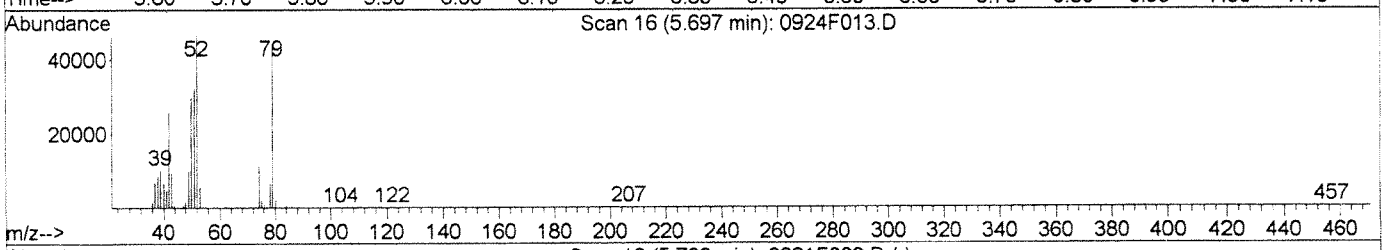
0924F013.D 092414_BNLL.M Thu Sep 25 08:24:46 2014

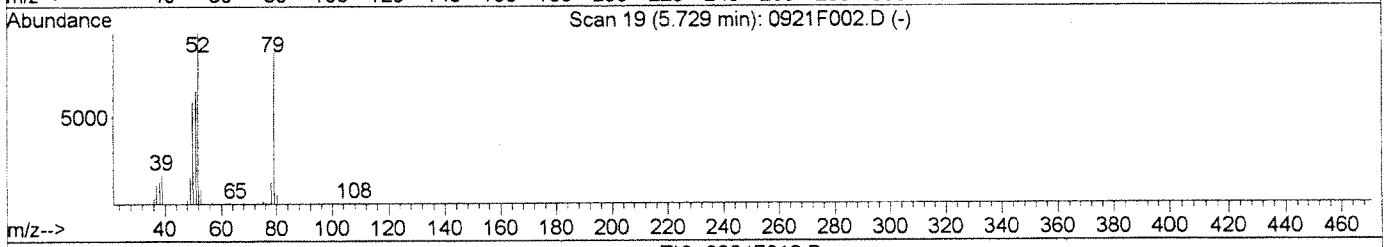
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:24 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F013.D

(3) Pyridine (T)

5.70min 7174.16ng/ml

response 211947

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	105.69
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

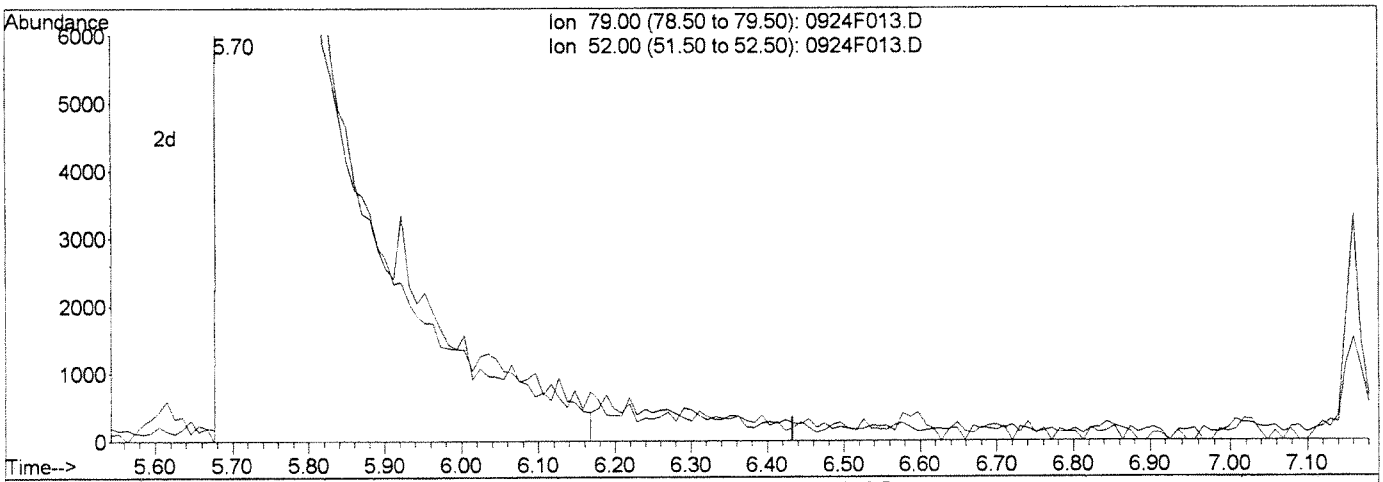
09/25/14

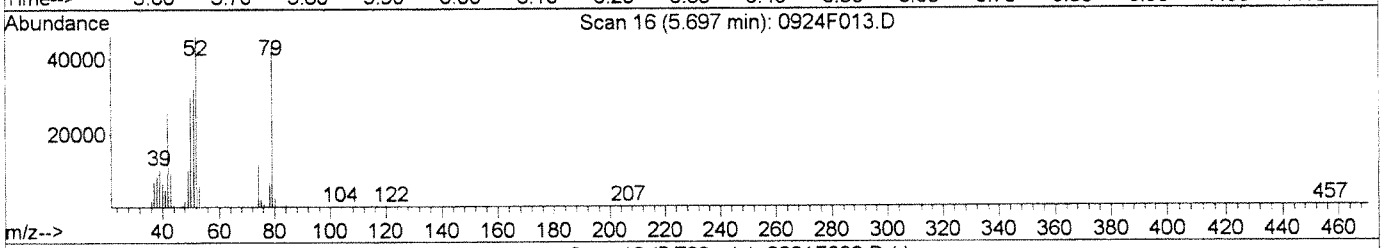
0924F013.D 092414_BNLL.M Thu Sep 25 08:24:50 2014

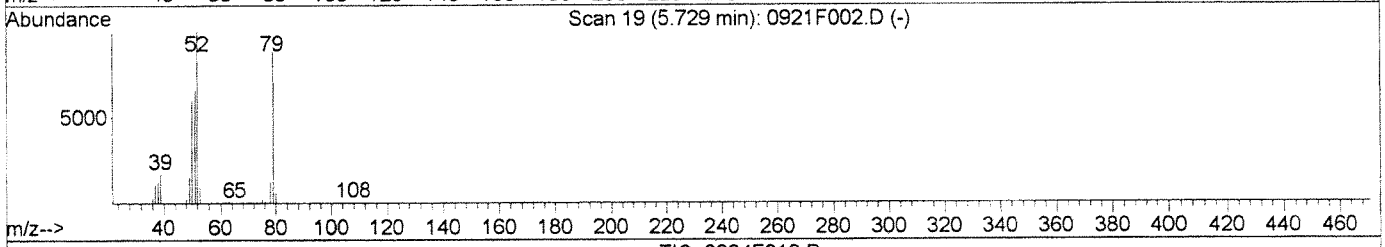
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:24 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F013.D

(3) Pyridine (T)

5.70min 7539.39ng/ml m

response 222737

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	105.65
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

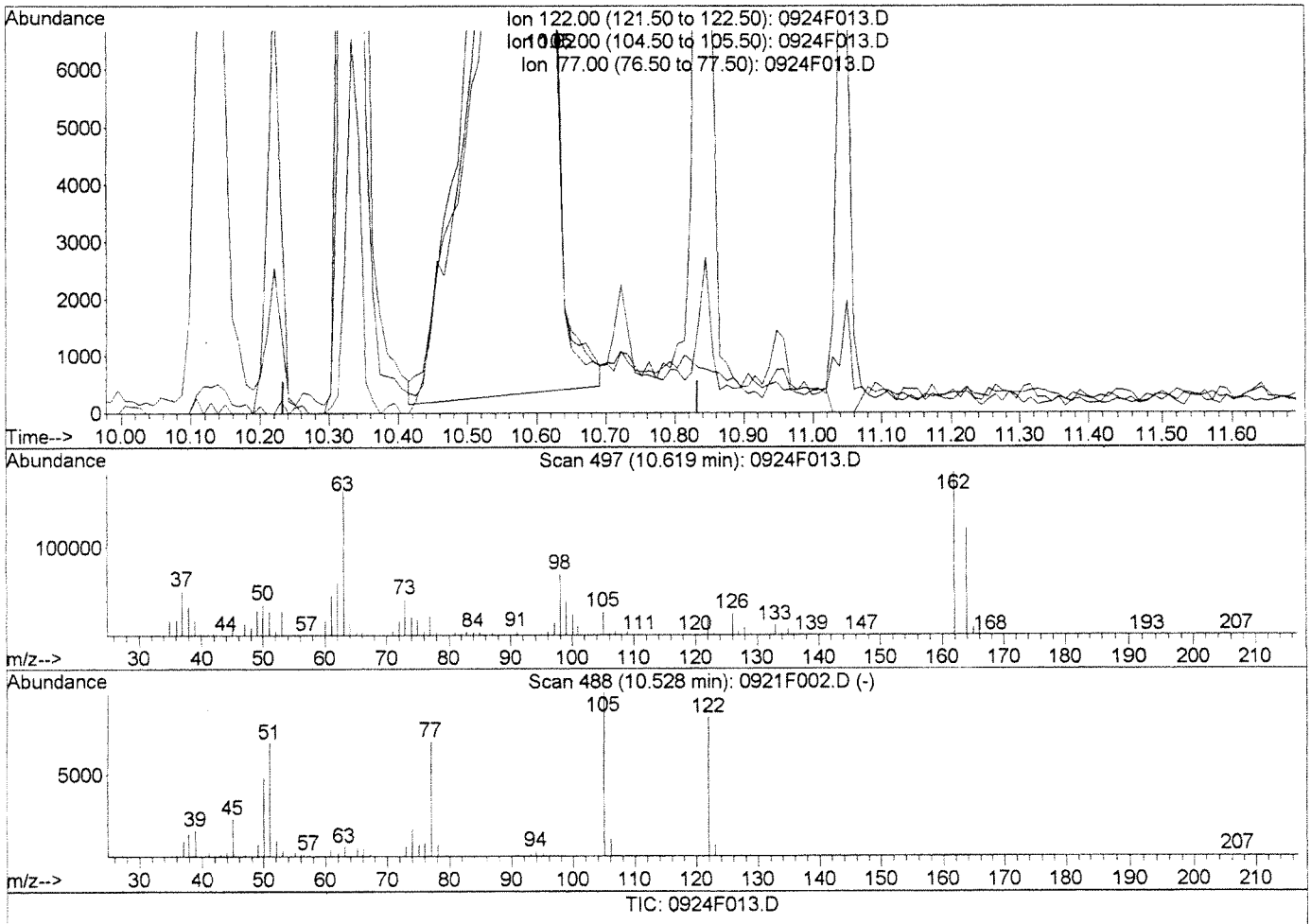
10/6/14

0924F013.D 092414_BNLL.M Thu Sep 25 08:24:55 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:24 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration



TIC: 0924F013.D

(28) Benzoic Acid (T)

10.62min 6042.97ng/ml

response 108987

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	139.44#
77.00	82.70	116.54#
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

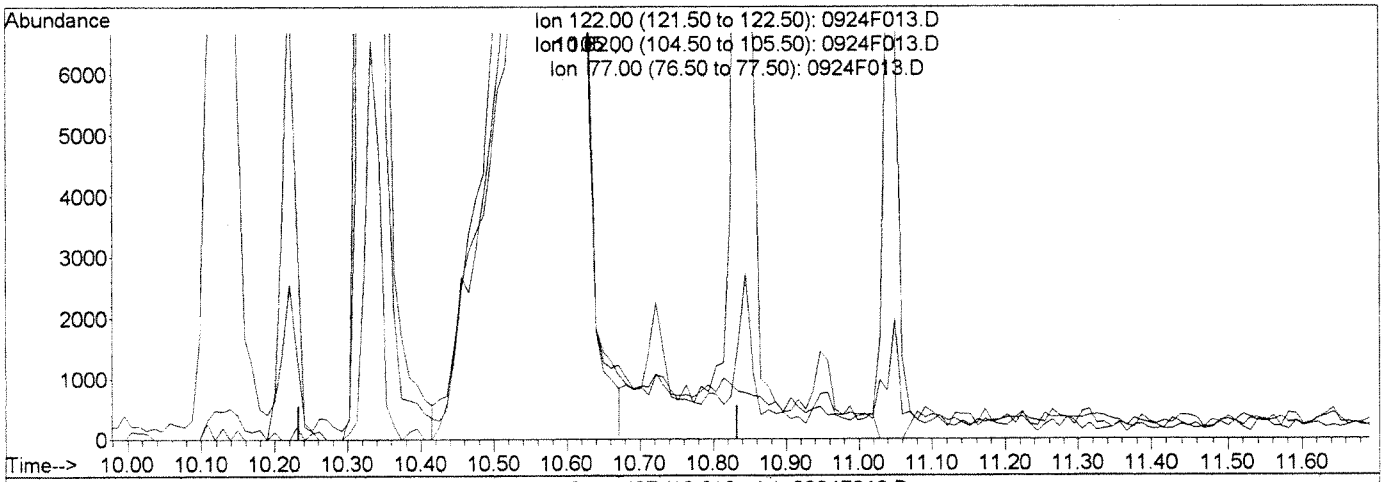
10/6/14

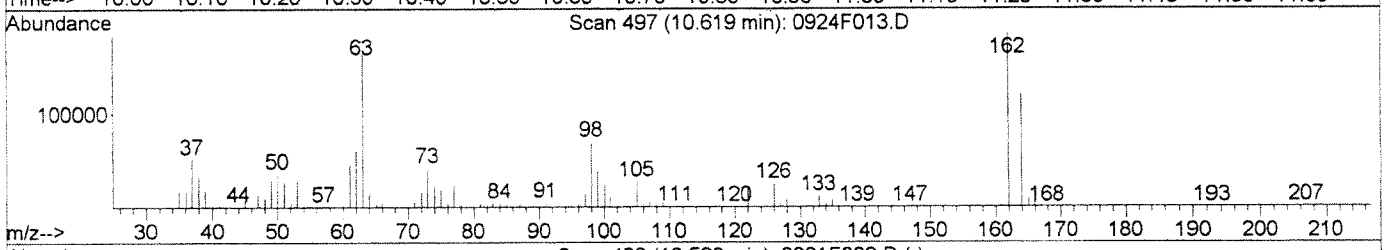
0924F013.D 092414_BNLL.M Thu Sep 25 08:25:10 2014

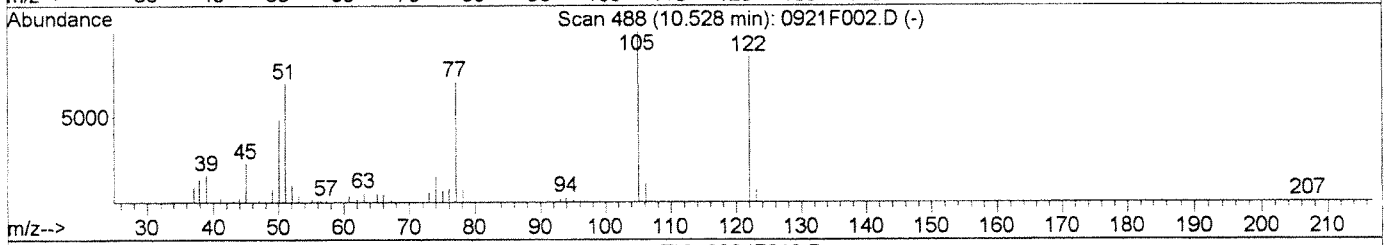
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F013.D Vial: 11
Acq On : 24 Sep 2014 11:38 pm Operator: TLorr
Sample : SVO_LL ICAL @ 7.0ppm | SVM46-42K Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:25 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F013.D

(28) Benzoic Acid (T)

10.62min 6226.25ng/ml m

response 113056

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	135.57
77.00	82.70	115.05#
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/6/14

0924F013.D 092414_BNLL.M Thu Sep 25 08:25:18 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:35 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.88	152	31690	1000.00 ng/ml	0.00
22) Naphthalene-d8	10.80	136	76174	1000.00 ng/ml	0.00
36) Acenaphthene-d10	13.64	164	66265	1000.00 ng/ml	0.00
60) Phenanthrene-d10	16.08	188	132337	1000.00 ng/ml	0.02
70) Chrysene-d12	20.69	240	121902	1000.00 ng/ml	0.05
79) Perylene-d12	24.39	264	98277	1000.00 ng/ml	0.06
System Monitoring Compounds					
4) 2-Fluorophenol	7.17	112	437622	12280.61 ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 327.48%#		
6) Phenol-d6	8.43	99	482396	9481.71 ng/ml	0.01
Spiked Amount 3750.000	Range 43 - 128		Recovery = 252.85%#		
20) Nitrobenzene-d5	9.72	82	413452	9007.54 ng/ml	0.01
Spiked Amount 2500.000	Range 30 - 139		Recovery = 360.30%#		
40) 2-Fluorobiphenyl	12.57	172	860576	8436.47 ng/ml	0.01
Spiked Amount 2500.000	Range 37 - 126		Recovery = 337.46%#		
61) 2,4,6-Tribromophenol	14.97	330	248316	13535.16 ng/ml	0.04
Spiked Amount 3750.000	Range 38 - 157		Recovery = 360.94%#		
73) Terphenyl-d14	18.75	244	1207826	10560.21 ng/ml	0.02
Spiked Amount 2500.000	Range 54 - 158		Recovery = 422.41%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	5.69	42	554889m	18093.32 ng/ml	
3) Pyridine	5.73	79	381894m	11331.33 ng/ml	
5) Bis(2-chloroethyl) Ether	8.53	93	410945	10921.18 ng/ml	99
7) Phenol	8.45	94	547727	10475.47 ng/ml	66
8) Aniline	8.43	93	490899	9455.34 ng/ml#	30
9) 2-Chlorophenol	8.60	128	471876	9487.44 ng/ml	86
10) 1,3-Dichlorobenzene	8.81	146	567189	11139.16 ng/ml	95
11) 1,4-Dichlorobenzene	8.91	146	581912	10965.25 ng/ml	96
12) 1,2-Dichlorobenzene	9.13	146	533699	10127.66 ng/ml	95
13) Benzyl Alcohol	9.12	108	204858	7776.68 ng/ml#	68
14) Bis(2-chloroisopropyl) Eth	9.30	45	674640	7372.34 ng/ml#	68
15) 2-Methylphenol	9.30	107	279198	7796.42 ng/ml#	73
16) Acetophenone	9.49	105	477971	8306.41 ng/ml	92
17) Hexachloroethane	9.62	117	235009	9620.95 ng/ml	95
18) N-Nitrosodi-n-propylamine	9.51	70	274002	8281.38 ng/ml	90
19) 4-Methylphenol	9.53	107	397791	7626.67 ng/ml	95
21) Nitrobenzene	9.75	77	406578	8725.76 ng/ml	82
23) Isophorone	10.14	82	547651	12890.46 ng/ml	93
24) 2-Nitrophenol	10.22	139	200498	13878.57 ng/ml	67
25) 2,4-Dimethylphenol	10.34	122	232725	10720.53 ng/ml	87

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:35 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	10.47	93	333214	11819.49 ng/ml	97
27)	2,4-Dichlorophenol	10.63	162	304055	13305.36 ng/ml	94
28)	Benzoic Acid	10.63	122	162356m	10478.30 ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	348568	12776.73 ng/ml	96
30)	Naphthalene	10.84	128	872166	10693.89 ng/ml	98
31)	4-Chloroaniline	10.96	127	354985	11021.89 ng/ml	87
32)	Hexachlorobutadiene	11.05	225	229019	14956.44 ng/ml	99
33)	4-Chloro-3-methylphenol	11.78	107	303753	15130.71 ng/ml	90
34)	2-Methylnaphthalene	11.96	141	521022	12225.29 ng/ml	92
35)	1-Methylnaphthalene	12.11	141	485196	12494.25 ng/ml#	89
37)	Hexachlorocyclopentadiene	12.21	237	262731	8124.45 ng/ml	99
38)	2,4,6-Trichlorophenol	12.44	196	250169	8656.59 ng/ml	95
39)	2,4,5-Trichlorophenol	12.51	196	284698	9048.55 ng/ml	99
41)	2-Chloronaphthalene	12.75	162	728864	8051.85 ng/ml	97
42)	2-Nitroaniline	12.95	65	304543	11304.00 ng/ml#	76
43)	Acenaphthylene	13.42	152	1294875	9593.17 ng/ml	100
44)	Dimethyl Phthalate	13.28	163	1118441	10869.95 ng/ml	99
45)	2,6-Dinitrotoluene	13.37	165	269814	11077.03 ng/ml	68
46)	Acenaphthene	13.71	154	810973	10447.09 ng/ml	100
47)	3-Nitroaniline	13.65	138	271911	10263.05 ng/ml	82
48)	2,4-Dinitrophenol	13.81	184	190197	9523.26 ng/ml#	49
49)	Dibenzofuran	14.00	168	1389885	11313.09 ng/ml	80
50)	4-Nitrophenol	14.02	109	269302	20814.58 ng/ml#	63
51)	2,4-Dinitrotoluene	14.04	165	460558	14250.86 ng/ml	85
52)	2,3,4,6-Tetrachlorophenol	14.23	232	324023	13917.91 ng/ml	89
53)	Fluorene	14.56	166	1280857	13460.00 ng/ml	96
54)	4-Chlorophenyl Phenyl Ethe	14.58	204	718019	14742.54 ng/ml	94
55)	Diethyl Phthalate	14.46	149	1475739	13047.65 ng/ml	97
56)	4-Nitroaniline	14.70	138	302929m	11233.85 ng/ml	
57)	2-Methyl-4,6-dinitrophenol	14.71	198	278616	12414.41 ng/ml#	51
58)	N-Nitrosodiphenylamine	14.81	169	848582	13039.69 ng/ml	99
59)	Azobenzene	14.85	77	1413679	15441.90 ng/ml	87
62)	4-Bromophenyl Phenyl Ether	15.39	248	391436	12159.33 ng/ml	91
63)	Hexachlorobenzene	15.46	284	444261	12222.87 ng/ml	97
64)	Pentachlorophenol	15.81	266	256777	10404.45 ng/ml	100
65)	Phenanthrene	16.14	178	1649470	10863.17 ng/ml	100
66)	Anthracene	16.23	178	1713711	10783.70 ng/ml	99
67)	Carbazole	16.51	167	1497427	9897.80 ng/ml	96
68)	Di-n-butyl Phthalate	17.13	149	2110759	10304.28 ng/ml	98
69)	Fluoranthene	18.09	202	1527102	9676.64 ng/ml	94
71)	Benzidine	18.34	184	194458	3546.42 ng/ml	97

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 07:55:35 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
72)	Pyrene	18.46	202	1625830	9517.56 ng/ml	99
74)	Butyl Benzyl Phthalate	19.63	149	864218	10001.66 ng/ml	94
75)	3,3'-Dichlorobenzidine	20.68	252	588802	11731.87 ng/ml	98
76)	Benz(a)anthracene	20.68	228	1445662	10288.63 ng/ml	97
77)	Chrysene	20.77	228	1346471	9827.00 ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.87	149	1247132	10196.84 ng/ml	97
80)	Di-n-octyl Phthalate	22.71	149	2062643	11443.31 ng/ml	97
81)	Benzo(b)fluoranthene	23.51	252	1343067	11708.24 ng/ml	94
82)	Benzo(k)fluoranthene	23.59	252	1185040m	9915.19 ng/ml	
83)	Benzo(a)pyrene	24.29	252	1155271	10831.49 ng/ml	92
84)	Indeno(1,2,3-cd)pyrene	26.71	276	1235210m	13417.52 ng/ml	
85)	Dibenz(a,h)anthracene	26.76	278	1263265	13650.16 ng/ml	94
86)	Benzo(g,h,i)perylene	27.18	276	1216149	12192.61 ng/ml	95

(#) = qualifier out of range (m) = manual integration
10/6/14

SEP 25 2014

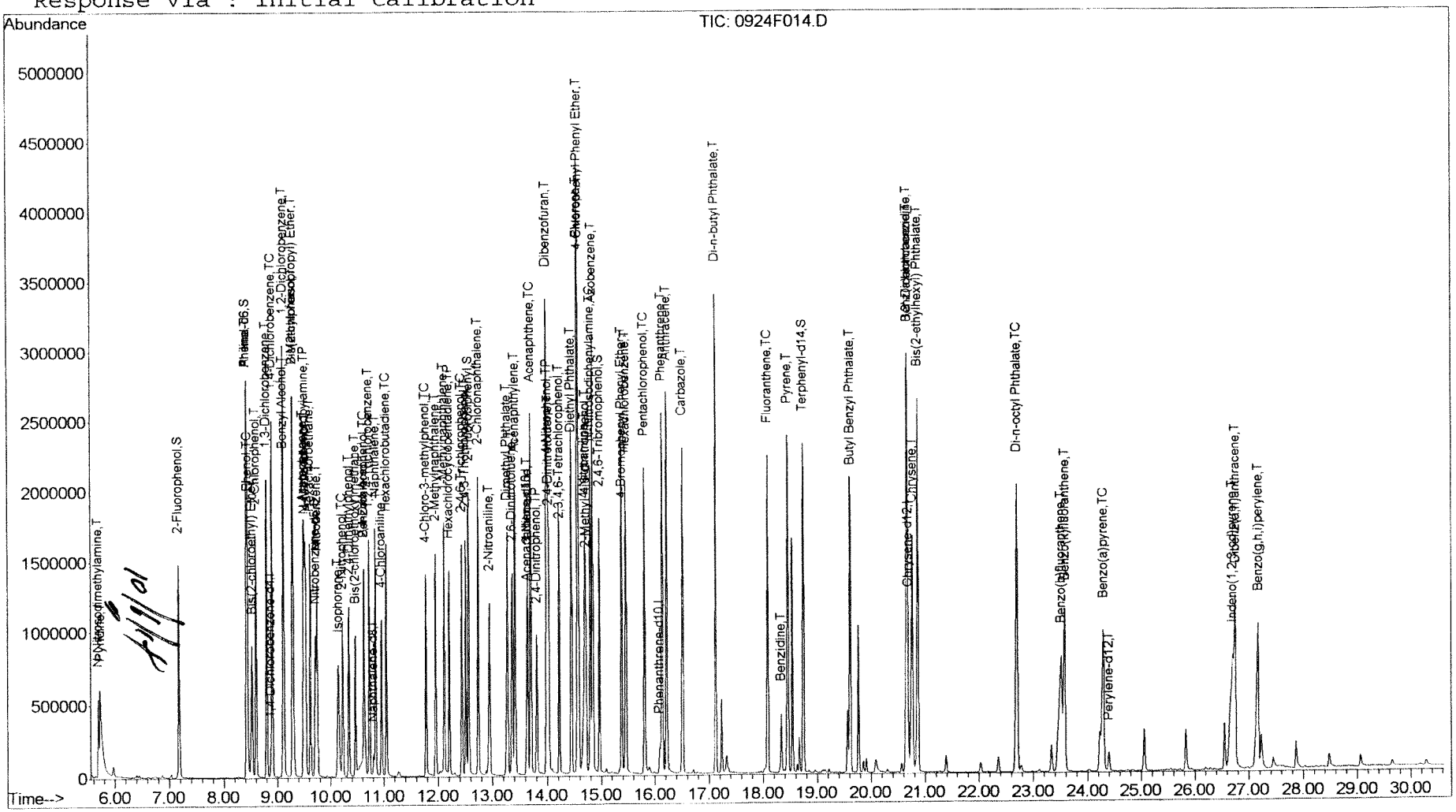
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F014.D
Acq On : 25 Sep 2014 12:17 am
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014

Vial: 12
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Initial Calibration



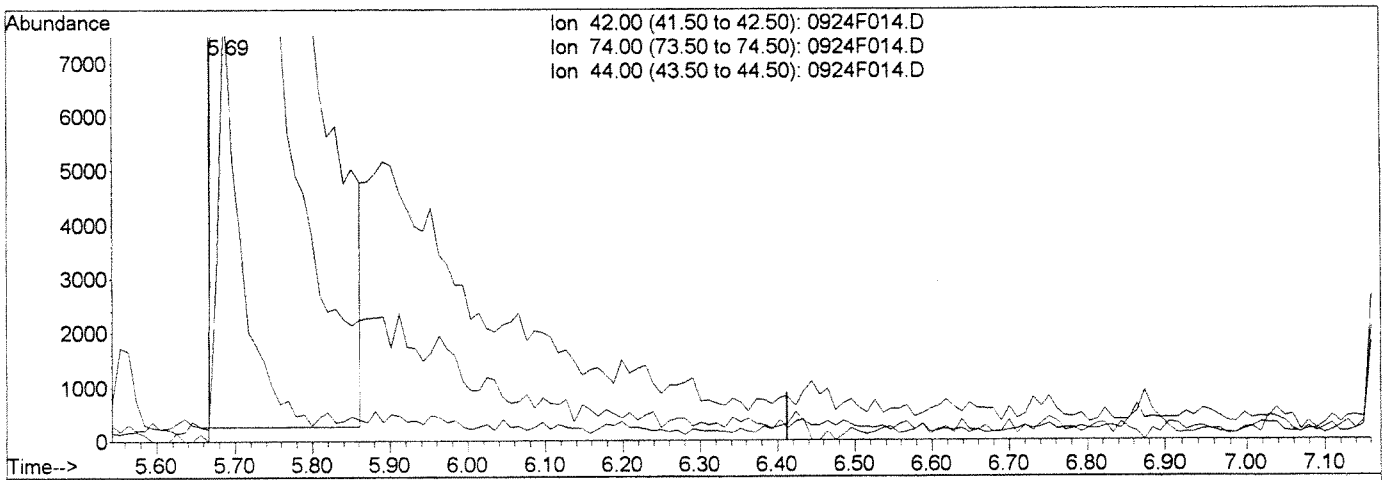
3089

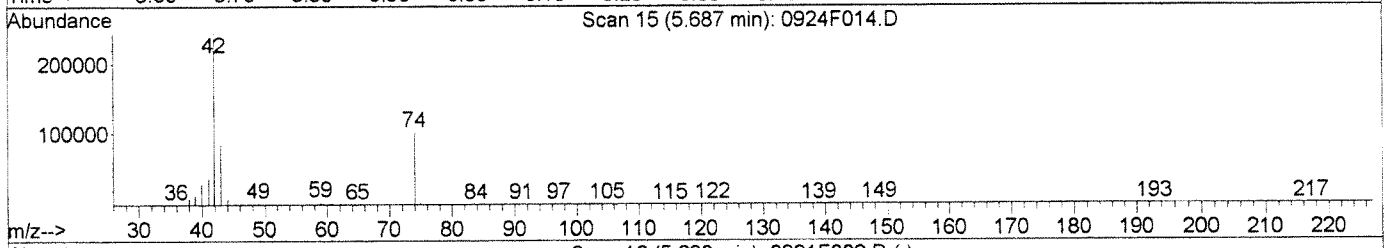
SEP 25 2014

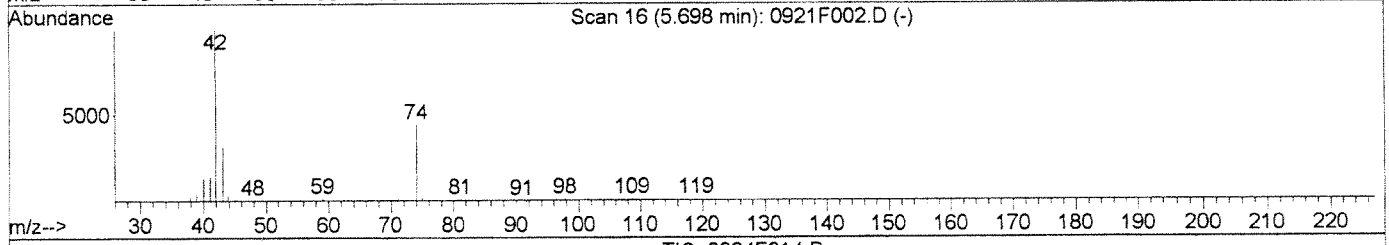
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 7:55 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(2) N-Nitrosodimethylamine (T)

5.69min 16228.78ng/ml

response 497707

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	41.50
44.00	10.20	3.21
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

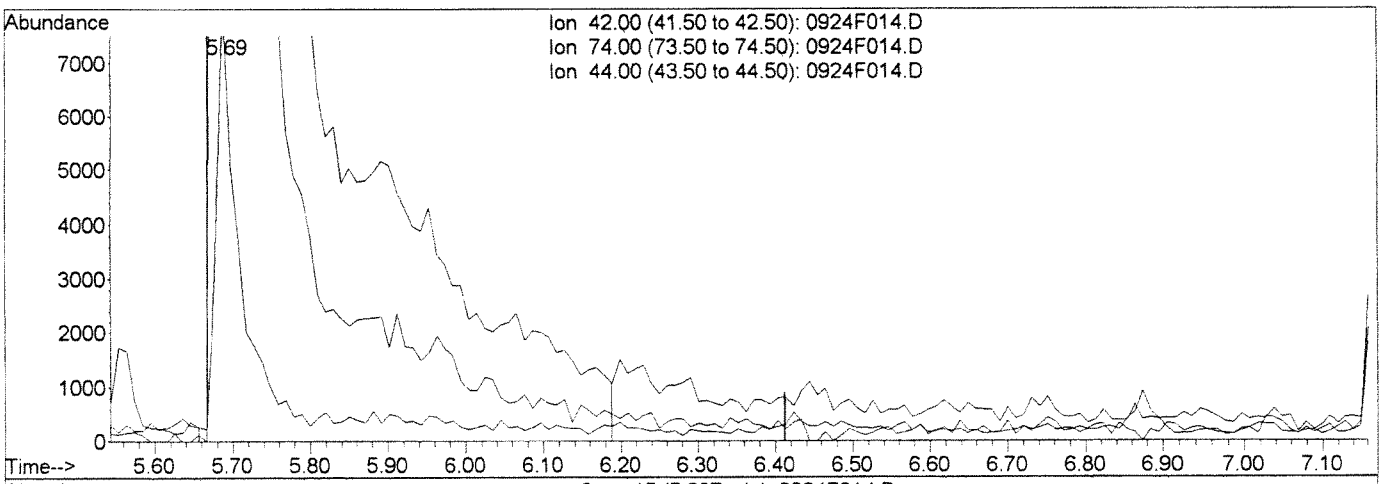
10/6/14

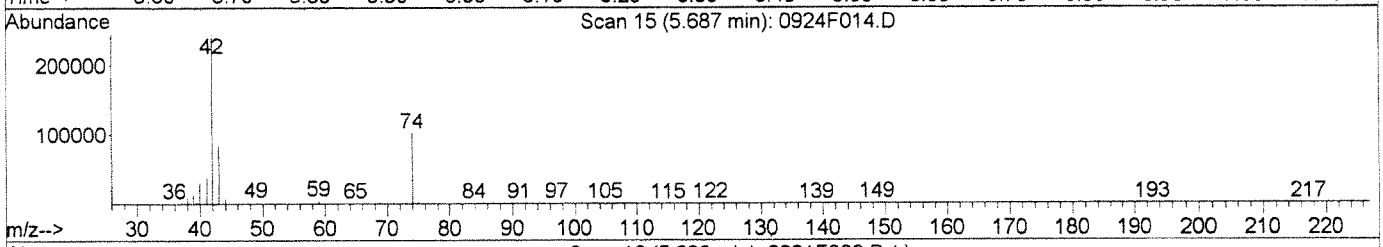
0924F014.D 092414_BNLL.M Thu Sep 25 08:25:58 2014

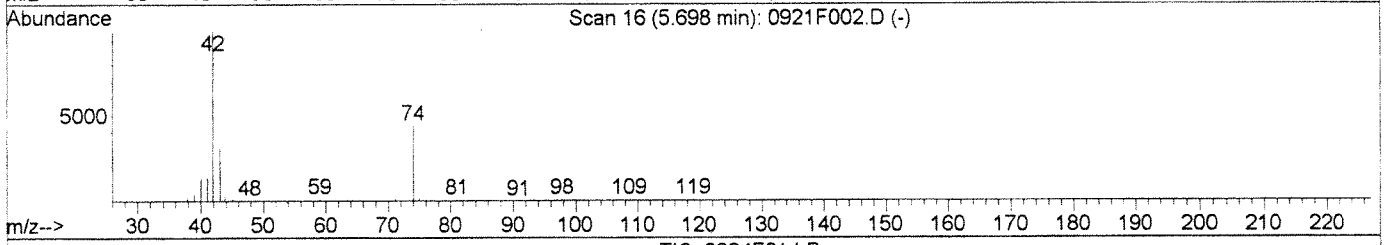
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:26 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(2) N-Nitrosodimethylamine (T)

5.69min 18093.32ng/ml m

response 554889

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	41.51
44.00	10.20	3.32
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

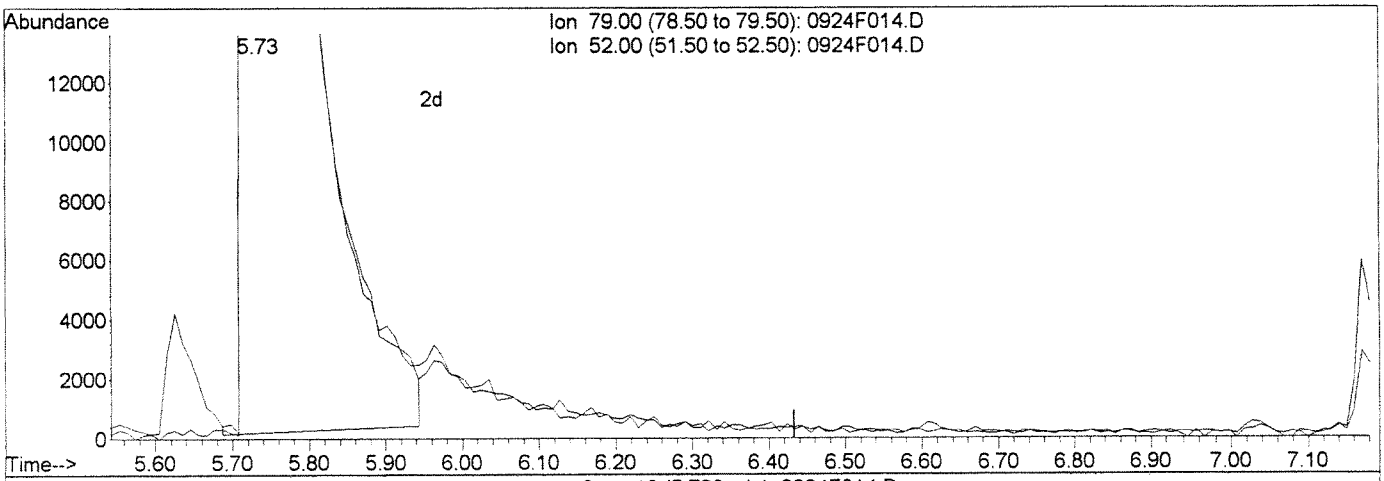
10/6/14

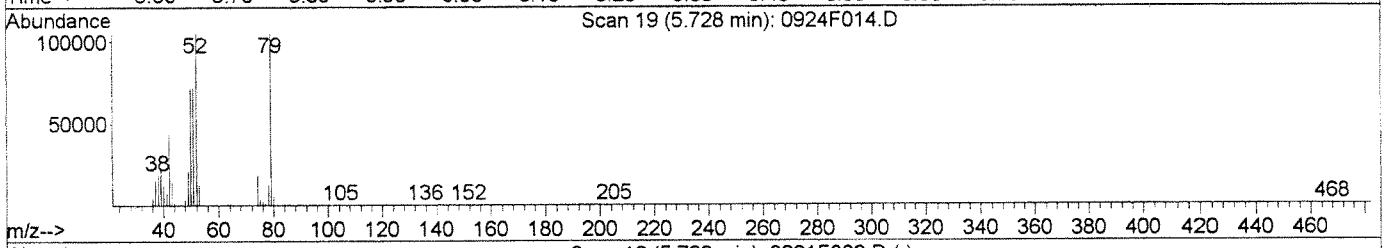
0924F014.D 092414_BNLL.M Thu Sep 25 08:26:04 2014

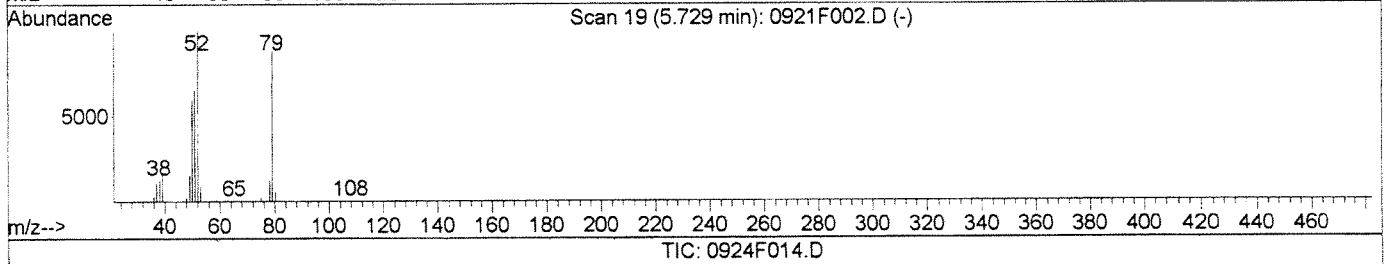
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:26 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(3) Pyridine (T)

5.73min 10572.01ng/ml

response 356303

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	100.12
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

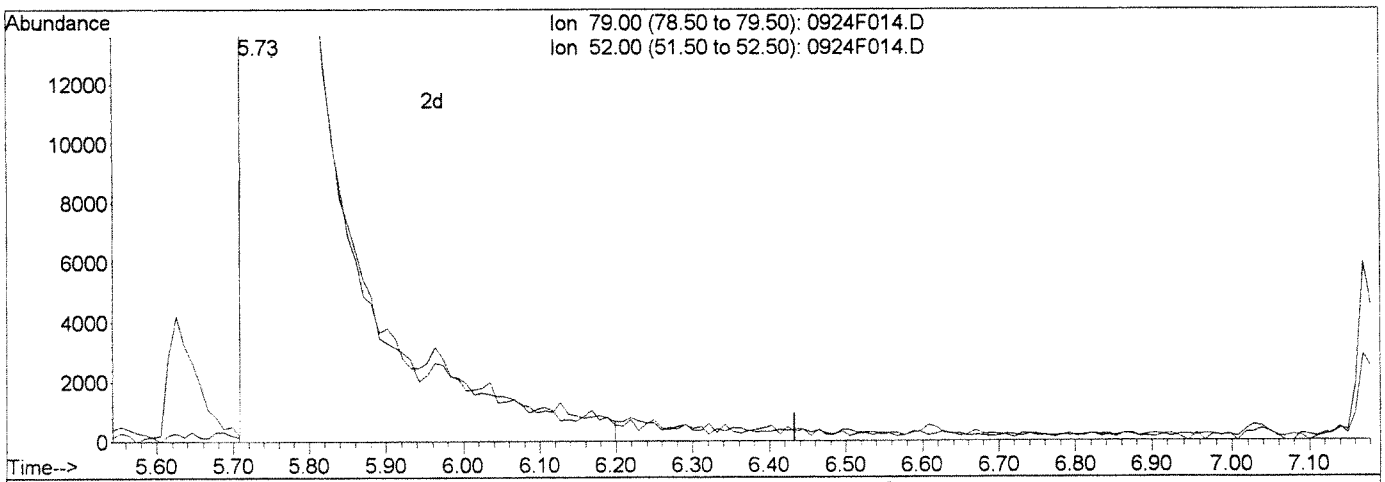
09/25/14

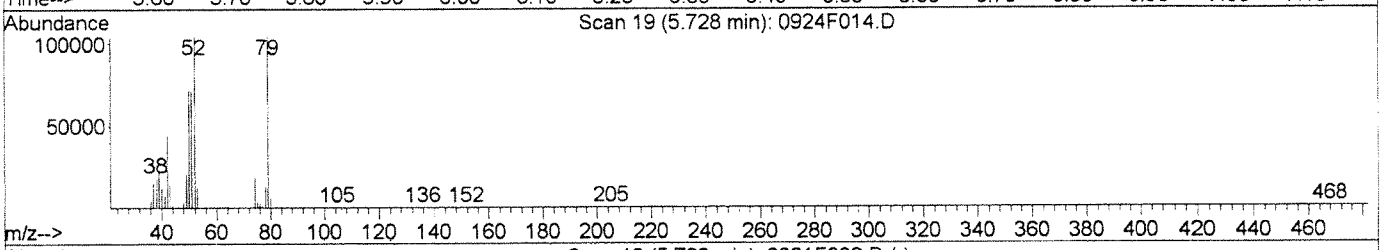
0924F014.D 092414_BNLL.M Thu Sep 25 08:26:09 2014

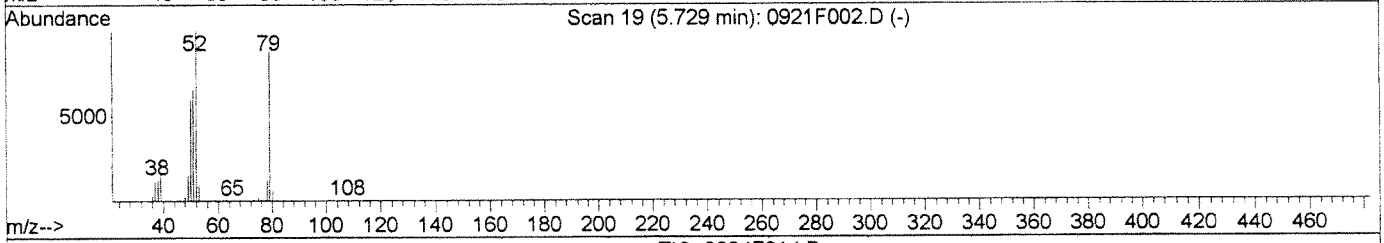
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:26 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(3) Pyridine (T)

5.73min 11331.33ng/ml m

response 381894

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	100.01
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

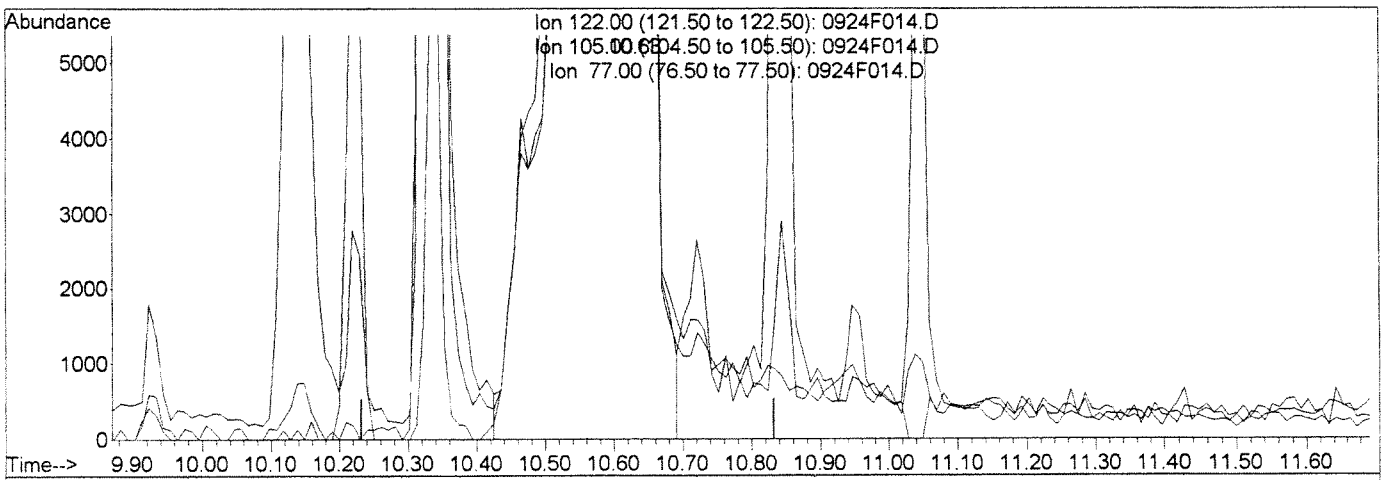
09/25/14

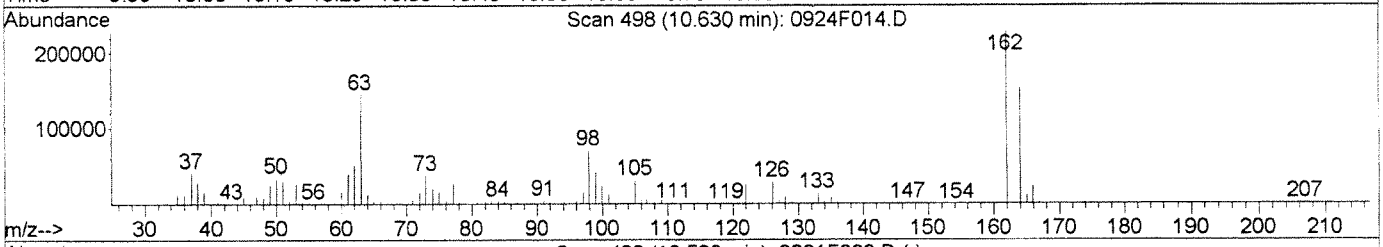
0924F014.D 092414_BNLL.M Thu Sep 25 08:26:15 2014

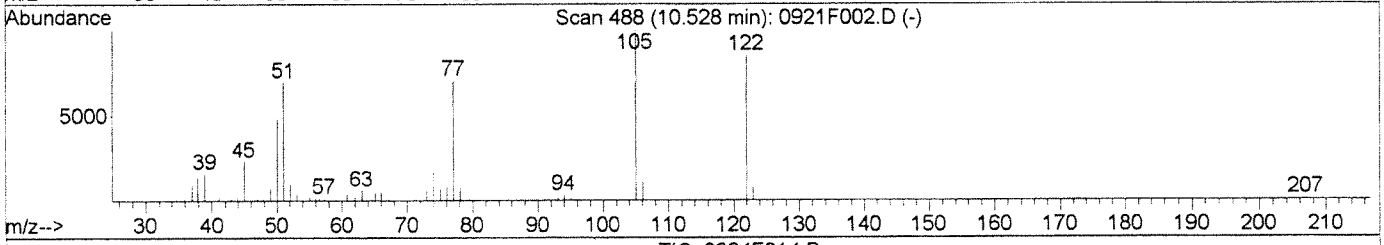
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:26 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Single Level Calibration







TIC: 0924F014.D

(28) Benzoic Acid (T)

10.63min 10478.30ng/ml m

response 162356

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	118.67
77.00	82.70	100.31
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

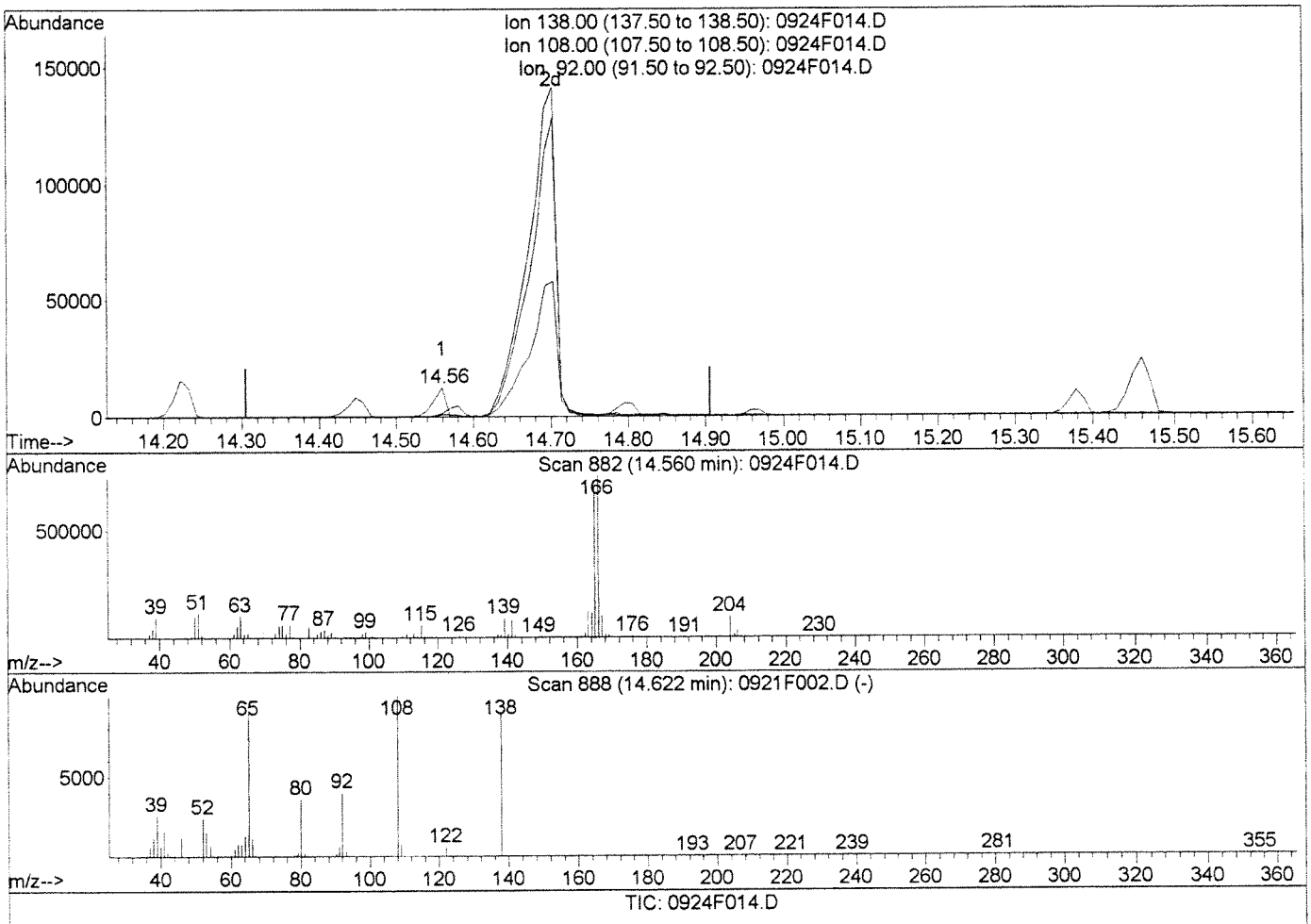
0924F014.D 092414_BNLL.M Thu Sep 25 08:26:37 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D
Acq On : 25 Sep 2014 12:17 am
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:26 2014

Vial: 12
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F014.D

(56) 4-Nitroaniline (T)

14.56min 531.79ng/ml

response 14340

Ion	Exp%	Act%
138.00	100	100
108.00	64.00	7.57#
92.00	35.40	9.65
0.00	0.00	0.00

Manual Integration:

Before

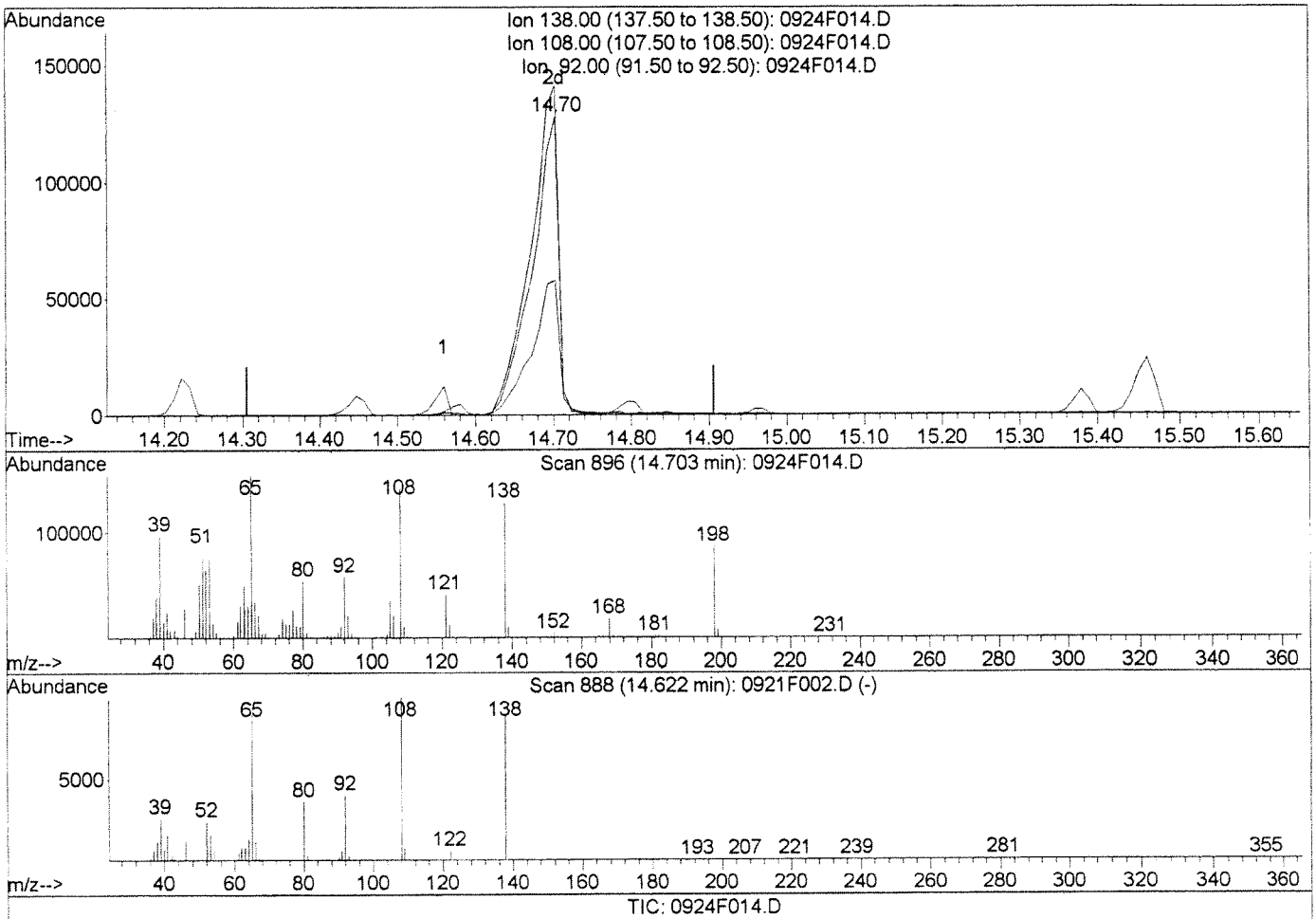
09/25/14

0924F014.D 092414_BNLL.M Thu Sep 25 08:27:07 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration



TIC: 0924F014.D

(56) 4-Nitroaniline (T)

14.70min 11233.85ng/ml m

response 302929

Ion	Exp%	Act%
138.00	100	100
108.00	64.00	110.41#
92.00	35.40	45.16
0.00	0.00	0.00

Manual Integration:

After

WP

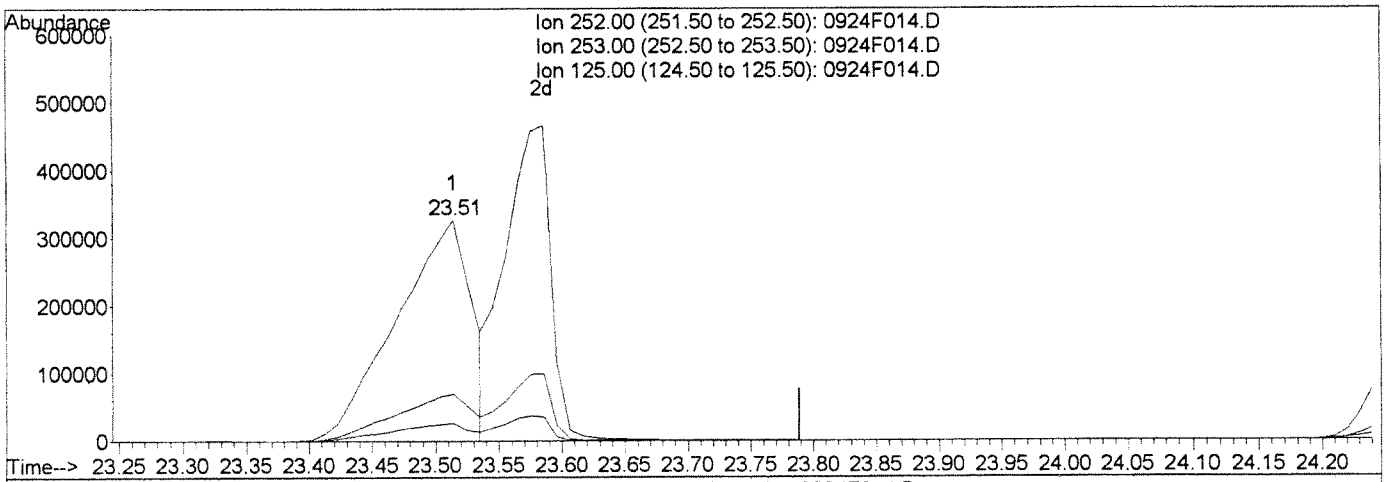
09/25/14

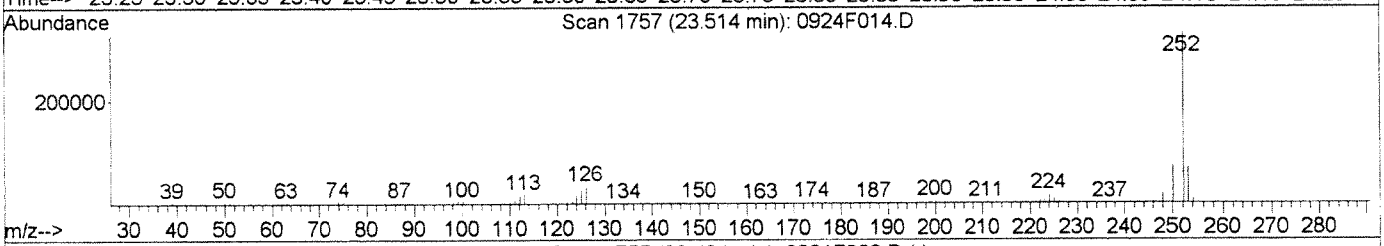
0924F014.D 092414_BNLL.M Thu Sep 25 08:27:14 2014

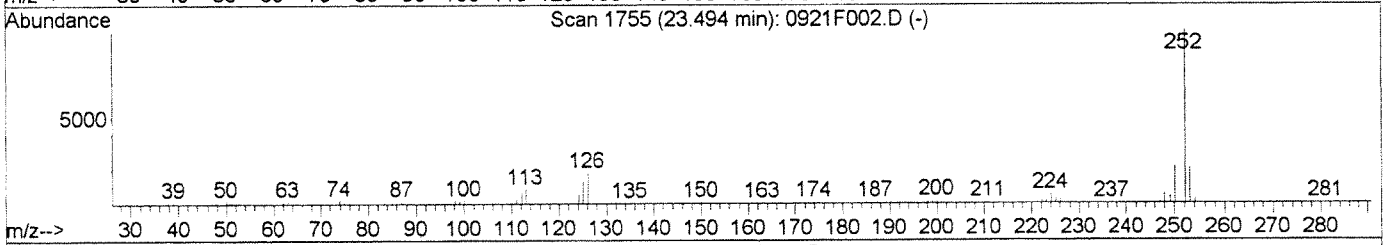
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(82) Benzo(k)fluoranthene (T)

23.51min 11237.40ng/ml

response 1343067

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	21.27
125.00	13.30	8.01
0.00	0.00	0.00

Manual Integration:

Before

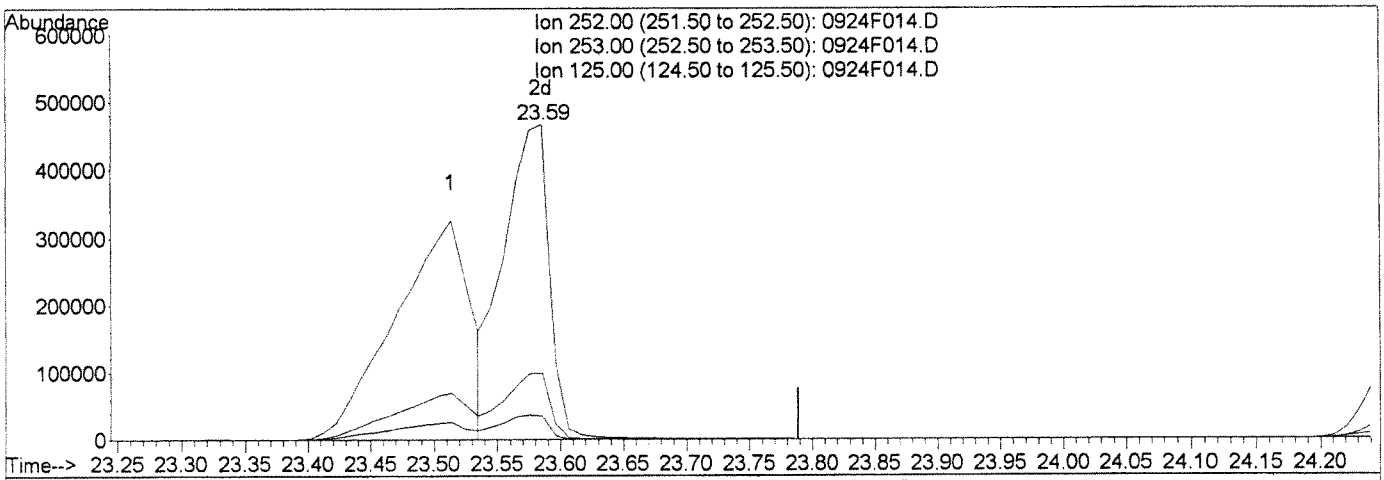
09/25/14

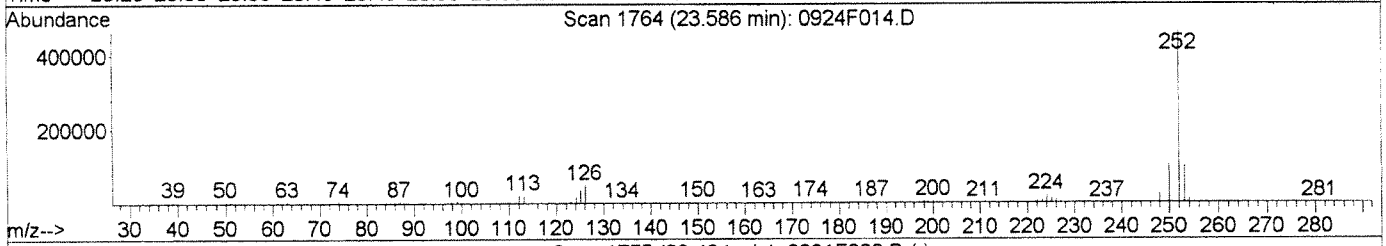
0924F014.D 092414_BNLL.M Thu Sep 25 08:27:42 2014

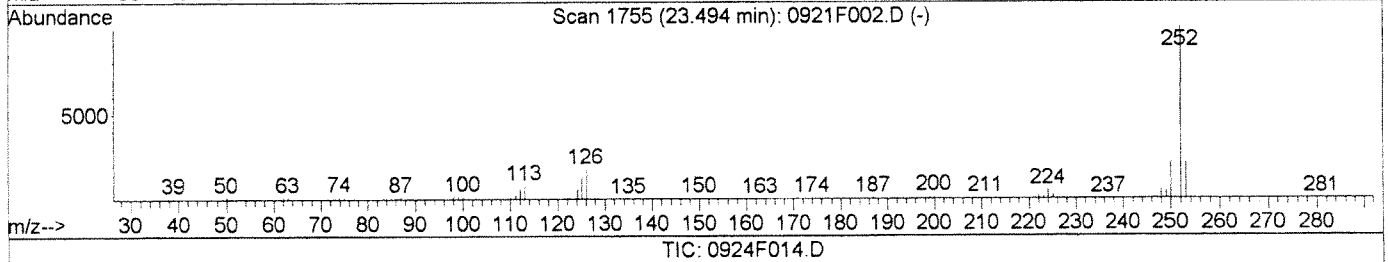
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(82) Benzo(k)fluoranthene (T)

23.59min 9915.19ng/ml m

response 1185040

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	21.35
125.00	13.30	7.52
0.00	0.00	0.00

Manual Integration:

After

WP

09/25/14

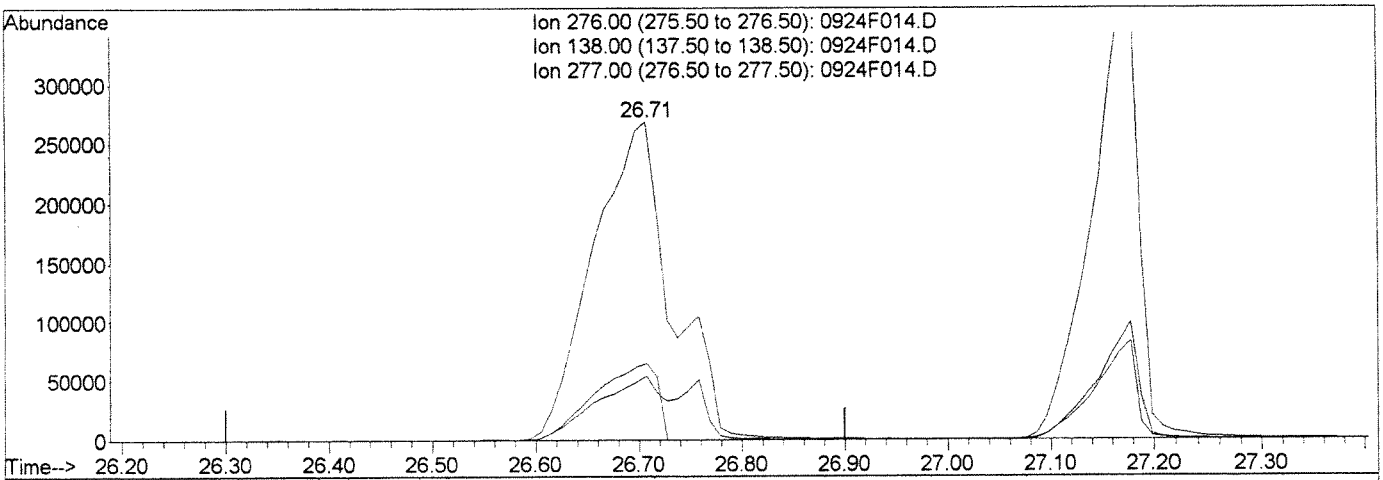
0924F014.D 092414_BNLL.M Thu Sep 25 08:27:46 2014

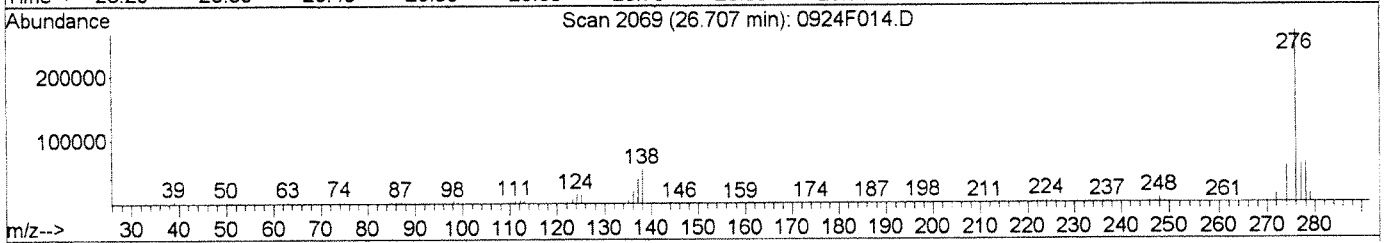
Quantitation Report (Qedit)

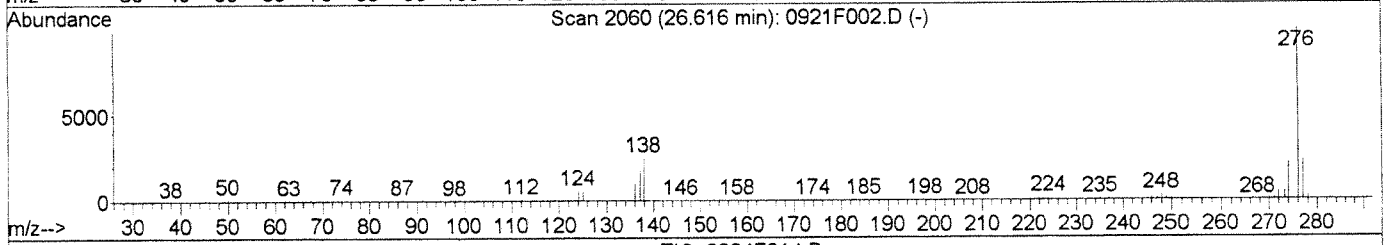
Data File : J:\MS06\DATA\092414\0924F014.D
Acq On : 25 Sep 2014 12:17 am
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014

Vial: 12
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.71min 15470.28ng/ml

response 1424186

Ion	Exp%	Act%
276.00	100	100
138.00	28.70	20.11
277.00	24.00	24.15
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

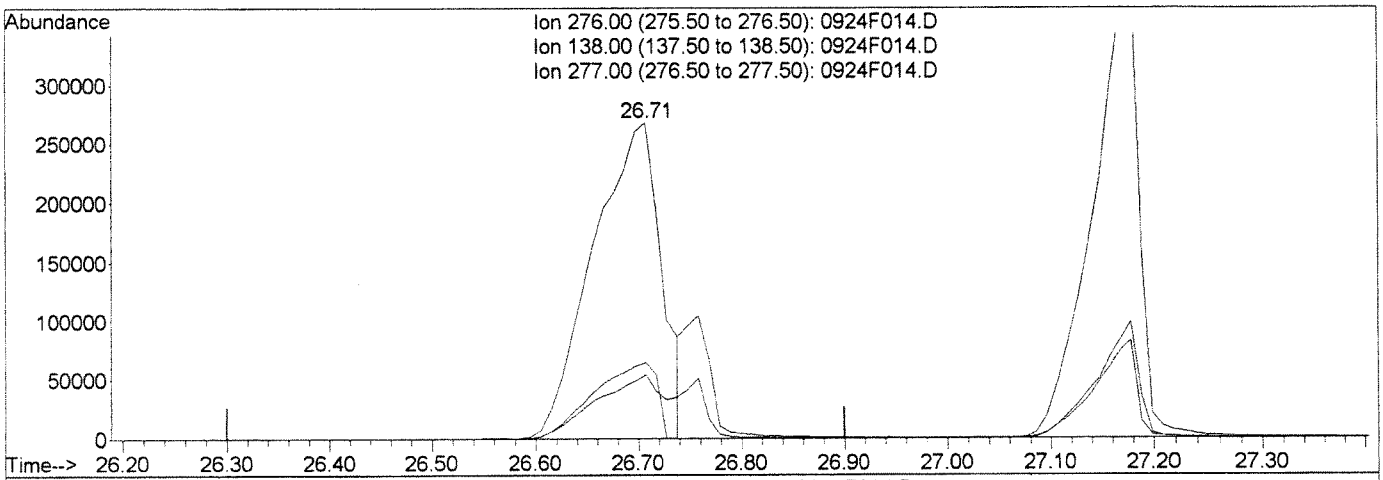
10/6/14

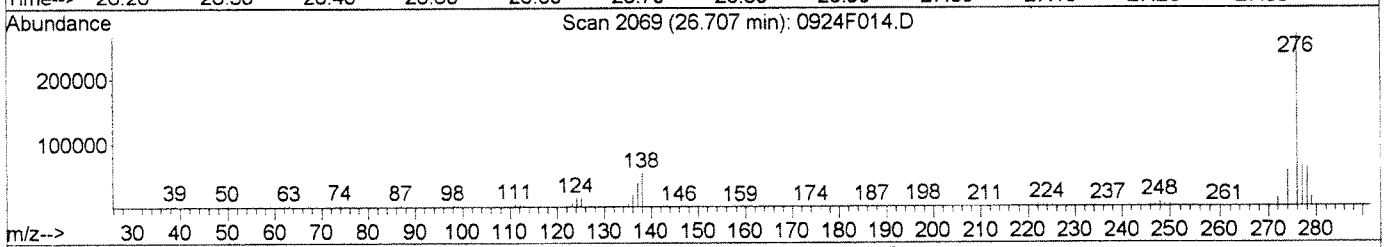
0924F014.D 092414_BNLL.M Thu Sep 25 08:27:54 2014

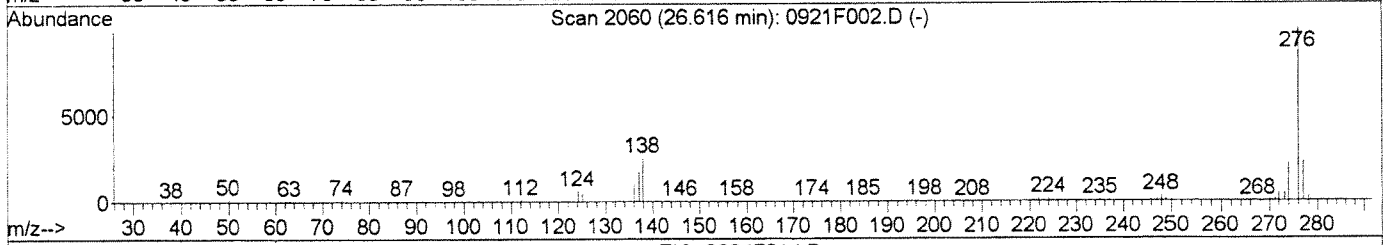
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F014.D Vial: 12
Acq On : 25 Sep 2014 12:17 am Operator: TLorr
Sample : SVO_LL ICAL @ 10ppm | SVM46-42L Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 8:27 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Fri Sep 19 10:40:51 2014
Response via : Multiple Level Calibration







TIC: 0924F014.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.71min 13417.52ng/ml m

response 1235210

Ion	Exp%	Act%
276.00	100	100
138.00	28.70	20.21
277.00	24.00	24.15
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

09/25/14

10/6/14

0924F014.D 092414_BNLL.M Thu Sep 25 08:27:58 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:21:34 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	34324	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	95933	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	84314	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.08	188	139200	1000.00	ng/ml	0.00
70) Chrysene-d12	20.67	240	132919	1000.00	ng/ml	0.00
79) Perylene-d12	24.38	264	117326	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	7.18	112	128680	3154.53	ng/ml	0.02
Spiked Amount 3750.000	Range 38 - 110		Recovery = 84.12%			
6) Phenol-d6	8.40	99	135657	2584.58	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 68.92%			
20) Nitrobenzene-d5	9.70	82	124479	2251.29	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 139		Recovery = 90.05%			
40) 2-Fluorobiphenyl	12.56	172	329800	2540.50	ng/ml	0.00
Spiked Amount 2500.000	Range 37 - 126		Recovery = 101.62%			
61) 2,4,6-Tribromophenol	14.95	330	64100	3096.19	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 157		Recovery = 82.57%			
73) Terphenyl-d14	18.74	244	337946	2684.44	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery = 107.38%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.67	42	153991m	3054.98	ng/ml	
3) Pyridine	5.72	79	113879m	3110.57	ng/ml	
5) Bis(2-chloroethyl) Ether	8.52	93	110529	2563.44	ng/ml	99
7) Phenol	8.42	94	151444	2592.46	ng/ml#	16
8) Aniline	8.42	93	168269	2865.75	ng/ml#	1
9) 2-Chlorophenol	8.60	128	131157	2646.61	ng/ml	90
10) 1,3-Dichlorobenzene	8.79	146	146439	2595.76	ng/ml	94
11) 1,4-Dichlorobenzene	8.90	146	149277	2551.57	ng/ml	95
12) 1,2-Dichlorobenzene	9.12	146	137497	2457.37	ng/ml	95
13) Benzyl Alcohol	9.10	108	65519	2430.37	ng/ml#	61
14) Bis(2-chloroisopropyl) Eth	9.28	45	154772	1823.31	ng/ml#	49
15) 2-Methylphenol	9.28	107	85827	2397.75	ng/ml	80
17) Hexachloroethane	9.61	117	63623	2270.72	ng/ml	96
18) N-Nitrosodi-n-propylamine	9.49	70	72851	1763.24	ng/ml	93
19) 4-Methylphenol	9.52	107	116368	2211.49	ng/ml	96
21) Nitrobenzene	9.72	77	115739	2066.67	ng/ml	77
23) Isophorone	10.10	82	199918	2928.37	ng/ml	94
24) 2-Nitrophenol	10.21	139	66202	2969.86	ng/ml	72
25) 2,4-Dimethylphenol	10.32	122	79205	2809.28	ng/ml	88
26) Bis(2-chloroethoxy)methane	10.45	93	109205	2708.29	ng/ml	98

(#) = qualifier out of range (m) = manual integration

SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:21:34 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	2,4-Dichlorophenol	10.61	162	105269	2948.34	ng/ml	96
28)	Benzoic Acid	10.54	122	49686m	4176.70	ng/ml	
29)	1,2,4-Trichlorobenzene	10.72	180	109715	2670.94	ng/ml	91
30)	Naphthalene	10.84	128	296054	2778.27	ng/ml	99
31)	4-Chloroaniline	10.94	127	138204	3142.94	ng/ml	82
32)	Hexachlorobutadiene	11.04	225	80732	2818.45	ng/ml	97
33)	4-Chloro-3-methylphenol	11.77	107	127431	3738.66	ng/ml	91
34)	2-Methylnaphthalene	11.94	141	202798	3324.90	ng/ml	92
35)	1-Methylnaphthalene	12.11	141	207027	3697.76	ng/ml#	90
37)	Hexachlorocyclopentadiene	12.20	237	87222	2168.41	ng/ml	98
38)	2,4,6-Trichlorophenol	12.43	196	99198	2747.33	ng/ml	98
39)	2,4,5-Trichlorophenol	12.51	196	107206	2753.66	ng/ml	96
41)	2-Chloronaphthalene	12.73	162	262665	2439.75	ng/ml	94
42)	2-Nitroaniline	12.94	65	110334	2713.64	ng/ml	81
43)	Acenaphthylene	13.41	152	400292	2512.22	ng/ml	99
44)	Dimethyl Phthalate	13.25	163	352445	2638.07	ng/ml	98
45)	2,6-Dinitrotoluene	13.35	165	87990	2709.57	ng/ml	66
46)	Acenaphthene	13.69	154	261661	2699.18	ng/ml	97
47)	3-Nitroaniline	13.62	138	87922	2874.36	ng/ml	93
48)	2,4-Dinitrophenol	13.79	184	41221	3219.07	ng/ml#	52
49)	Dibenzofuran	13.98	168	422008	2737.02	ng/ml	66
50)	4-Nitrophenol	13.99	109	77503	3269.00	ng/ml#	53
51)	2,4-Dinitrotoluene	14.00	165	127739	2787.02	ng/ml	72
52)	2,3,4,6-Tetrachlorophenol	14.21	232	99341	3424.58	ng/ml	94
53)	Fluorene	14.54	166	338327	2800.04	ng/ml	95
54)	4-Chlorophenyl Phenyl Ethe	14.56	204	181019	2747.45	ng/ml	90
55)	Diethyl Phthalate	14.42	149	399503	2686.08	ng/ml	100
56)	4-Nitroaniline	14.63	138	83196	2938.50	ng/ml#	49
57)	2-Methyl-4,6-dinitrophenol	14.67	198	74910	3245.79	ng/ml#	61
58)	N-Nitrosodiphenylamine	14.77	169	238005	2986.08	ng/ml	99
59)	Azobenzene	14.82	77	344633	2485.41	ng/ml	76
62)	4-Bromophenyl Phenyl Ether	15.36	248	99497	2735.36	ng/ml	88
63)	Hexachlorobenzene	15.44	284	115669	2755.72	ng/ml	93
64)	Pentachlorophenol	15.79	266	62334	3035.43	ng/ml	98
65)	Phenanthrene	16.12	178	427143	2718.18	ng/ml	99
66)	Anthracene	16.20	178	450185	2808.65	ng/ml	99
67)	Carbazole	16.50	167	390443	2652.22	ng/ml	97
68)	Di-n-butyl Phthalate	17.11	149	571990	2732.39	ng/ml	97
69)	Fluoranthene	18.07	202	409576	2580.42	ng/ml	93
71)	Benzidine	18.33	184	148576	2688.14	ng/ml	98
72)	Pyrene	18.44	202	434153	2442.86	ng/ml	99

(#) = qualifier out of range (m) = manual integration

10/6/14

SEP 2 5 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:21:34 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Butyl Benzyl Phthalate	19.61	149	247863	2705.43	ng/ml	93
75)	3,3'-Dichlorobenzidine	20.64	252	161758	2798.43	ng/ml	99
76)	Benz(a)anthracene	20.64	228	401288	2588.69	ng/ml	96
77)	Chrysene	20.72	228	253640	1746.30	ng/ml	98
78)	Bis(2-ethylhexyl) Phthalat	20.86	149	333460	2602.60	ng/ml	97
80)	Di-n-octyl Phthalate	22.68	149	571925	2770.18	ng/ml	94
81)	Benzo(b)fluoranthene	23.46	252	387277	2900.69	ng/ml	93
82)	Benzo(k)fluoranthene	23.53	252	377208	2778.89	ng/ml	95
83)	Benzo(a)pyrene	24.26	252	369953	2845.97	ng/ml	93
84)	Indeno(1,2,3-cd)pyrene	26.65	276	327581m	2592.23	ng/ml	
85)	Dibenz(a,h)anthracene	26.71	278	318457	2409.26	ng/ml	89
86)	Benzo(g,h,i)perylene	27.12	276	350191	2579.09	ng/ml	96

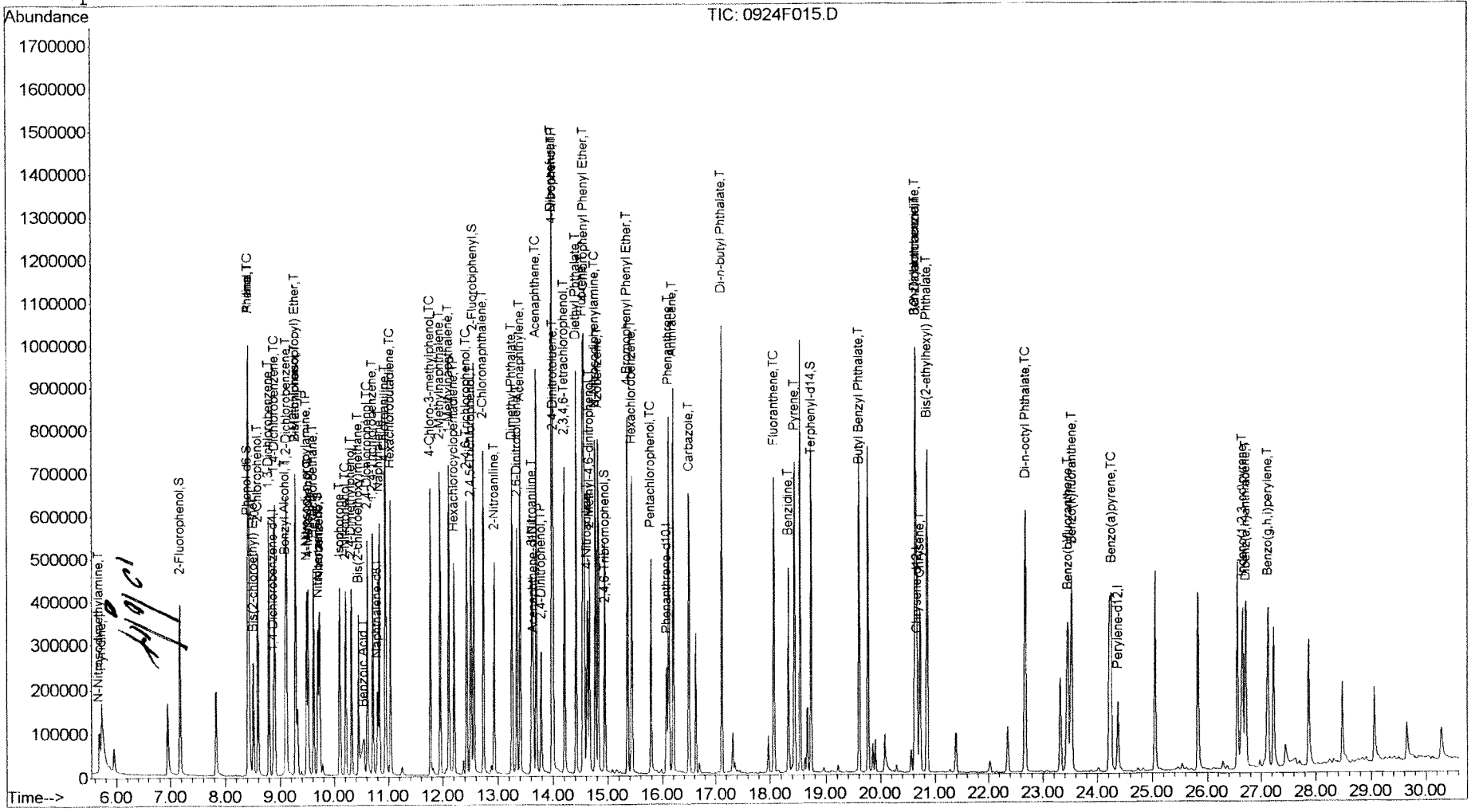
(#) = qualifier out of range (m) = manual integration
0924F015.D 092414_BNLL.M Thu Sep 25 10:31:02 2014 Page 3

10/6/14
SEP 25 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:30 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration



3104

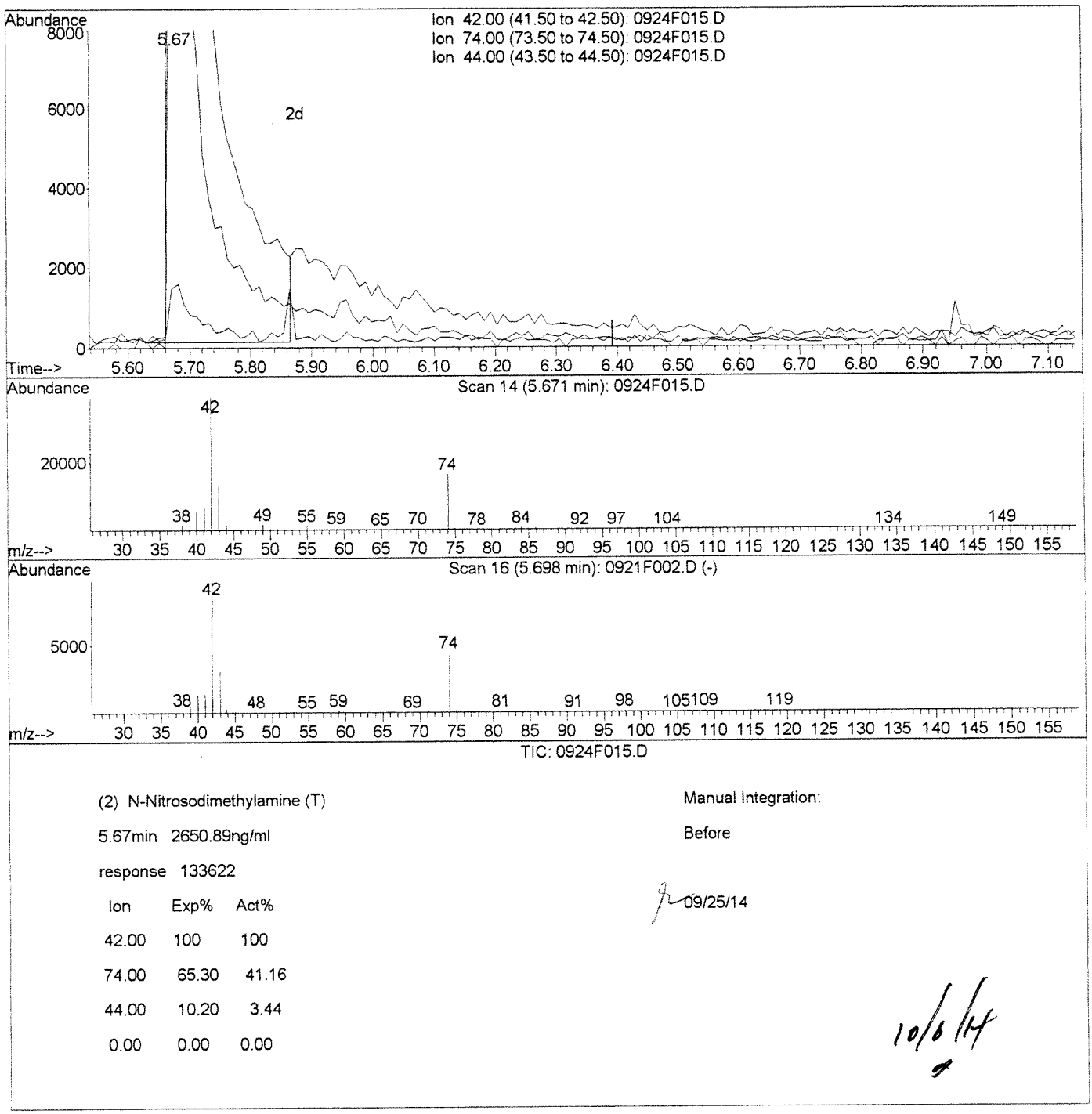
SEP 25 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D
Acq On : 25 Sep 2014 12:57 am
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:21 2014

Vial: 13
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration



(2) N-Nitrosodimethylamine (T)

5.67min 2650.89ng/ml

response 133622

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	41.16
44.00	10.20	3.44
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

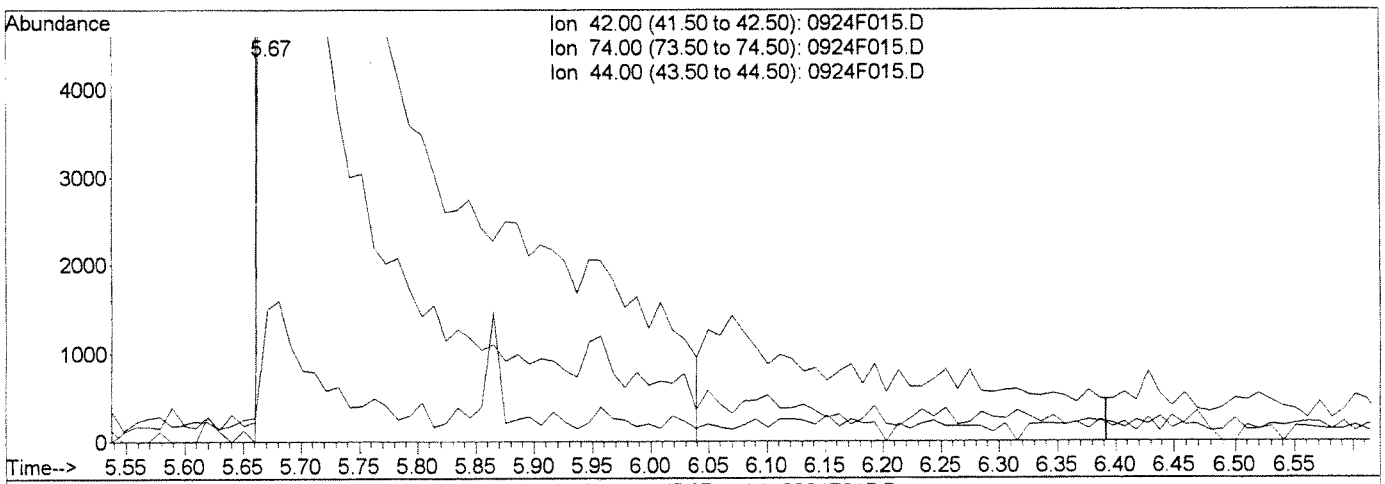
10/6/14

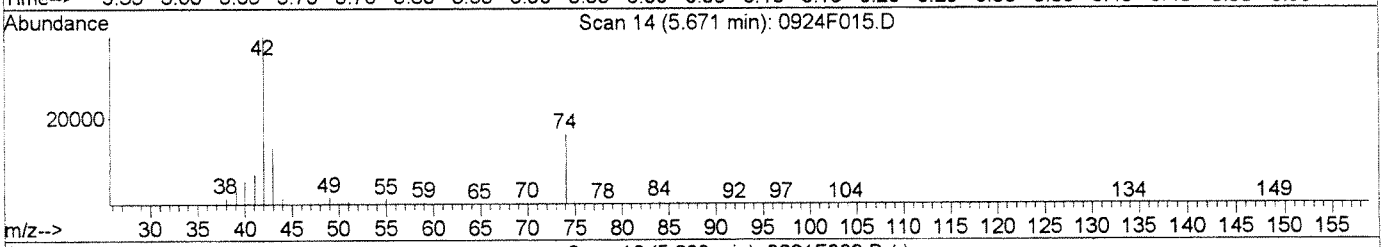
0924F015.D 092414_BNLL.M Thu Sep 25 10:21:49 2014

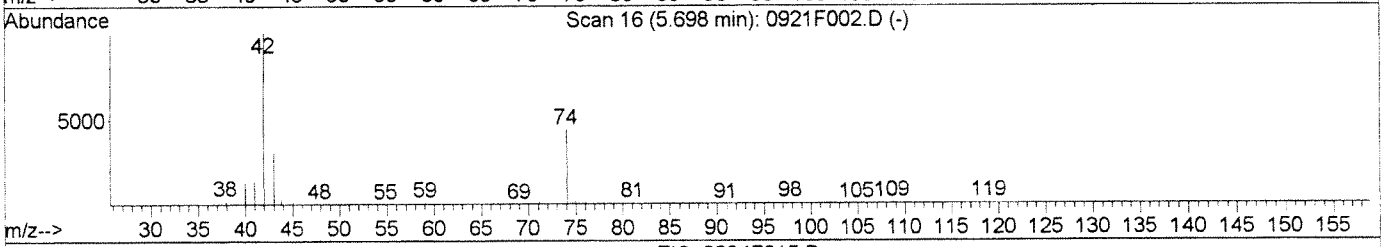
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:30 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration







TIC: 0924F015.D

(2) N-Nitrosodimethylamine (T)

5.67min 3054.98ng/ml m

response 153991

Ion	Exp%	Act%
42.00	100	100
74.00	65.30	41.29
44.00	10.20	3.80
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

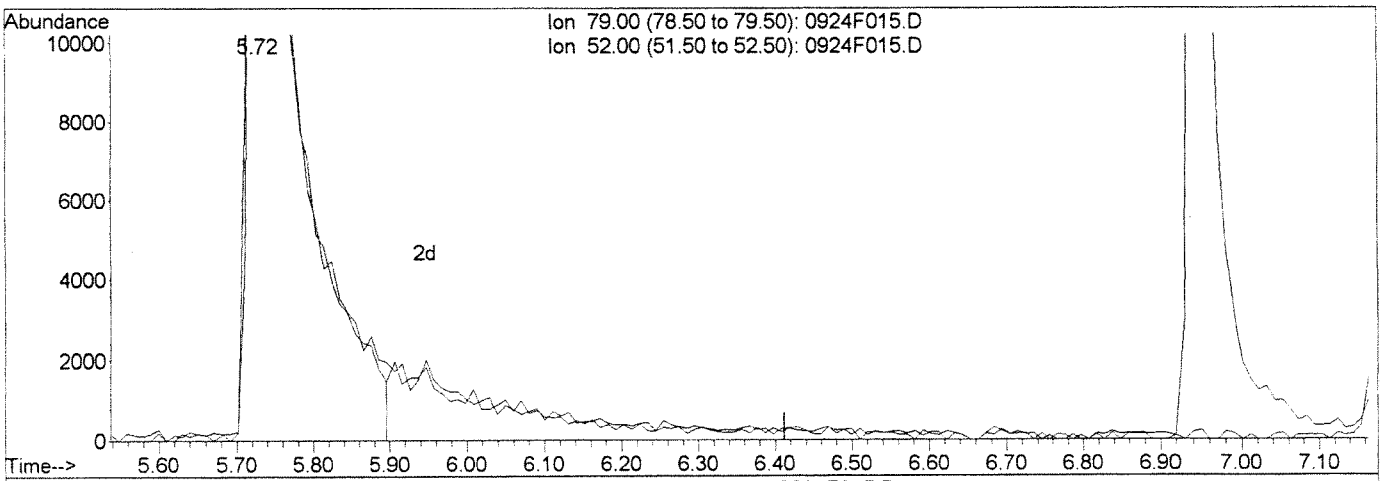
10/6/14

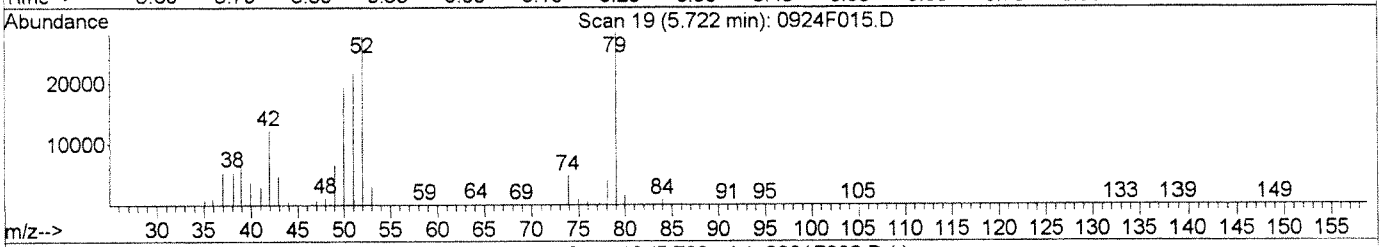
0924F015.D 092414_BNLL.M Thu Sep 25 10:30:30 2014

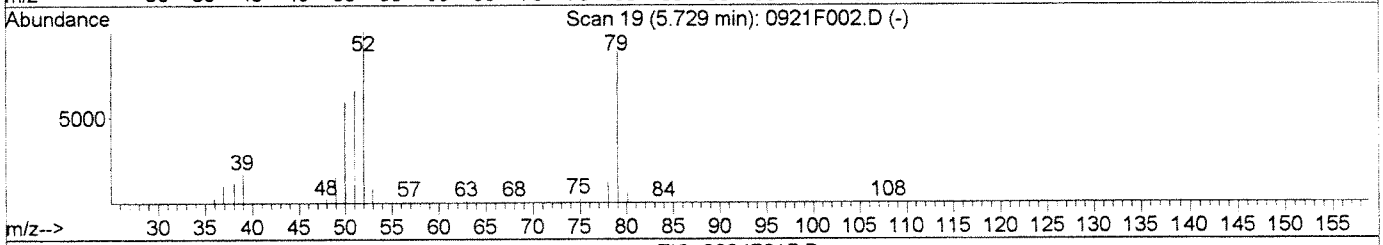
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:21 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration







TIC: 0924F015.D

(3) Pyridine (T)

5.72min 2669.74ng/ml

response 97740

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	98.11
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

JL 09/25/14

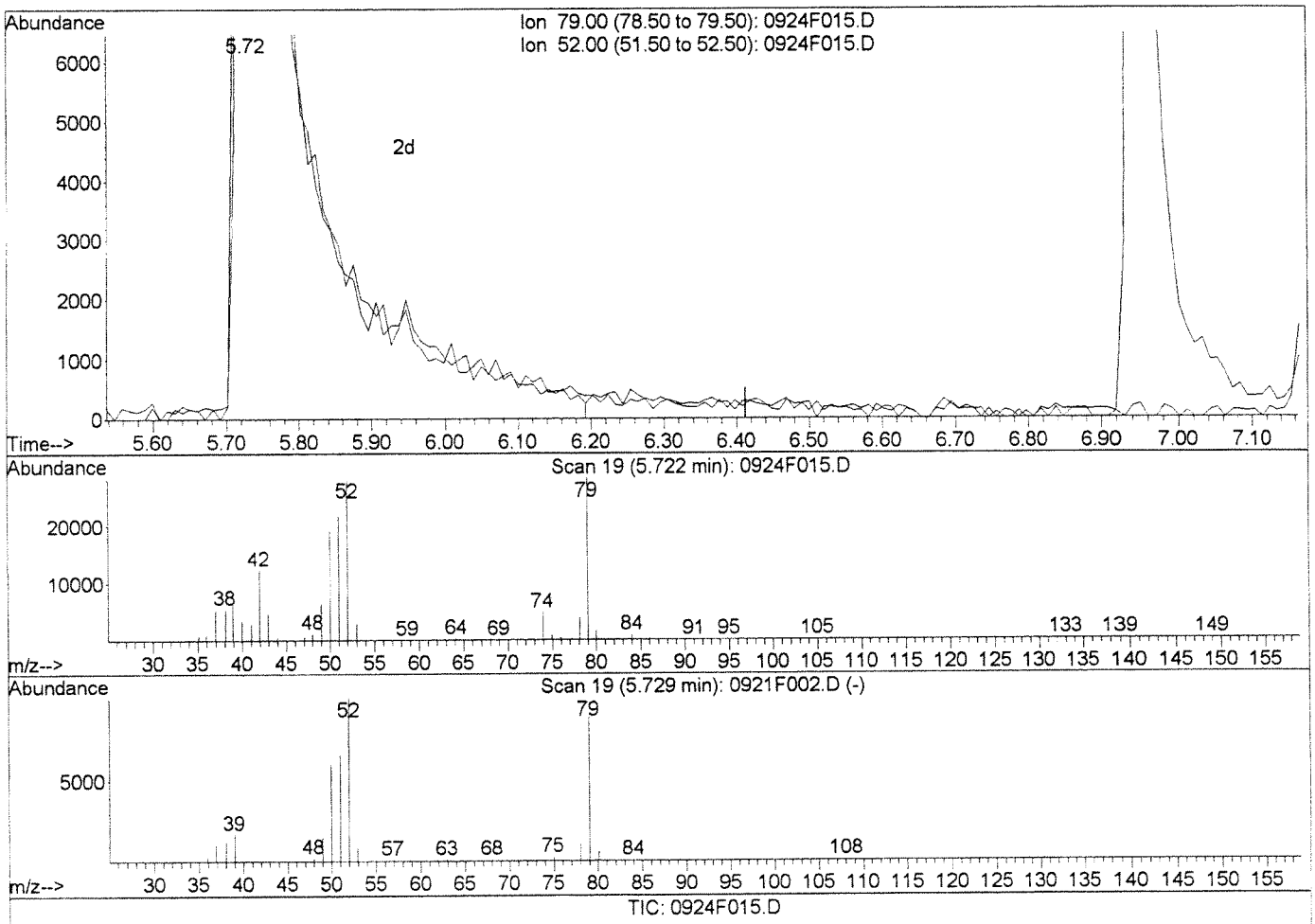
10/6/14

0924F015.D 092414_BNLL.M Thu Sep 25 10:22:00 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:30 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration



TIC: 0924F015.D

(3) Pyridine (T)

5.72min 3110.57ng/ml m

response 113879

Ion	Exp%	Act%
79.00	100	100
52.00	102.30	98.75
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

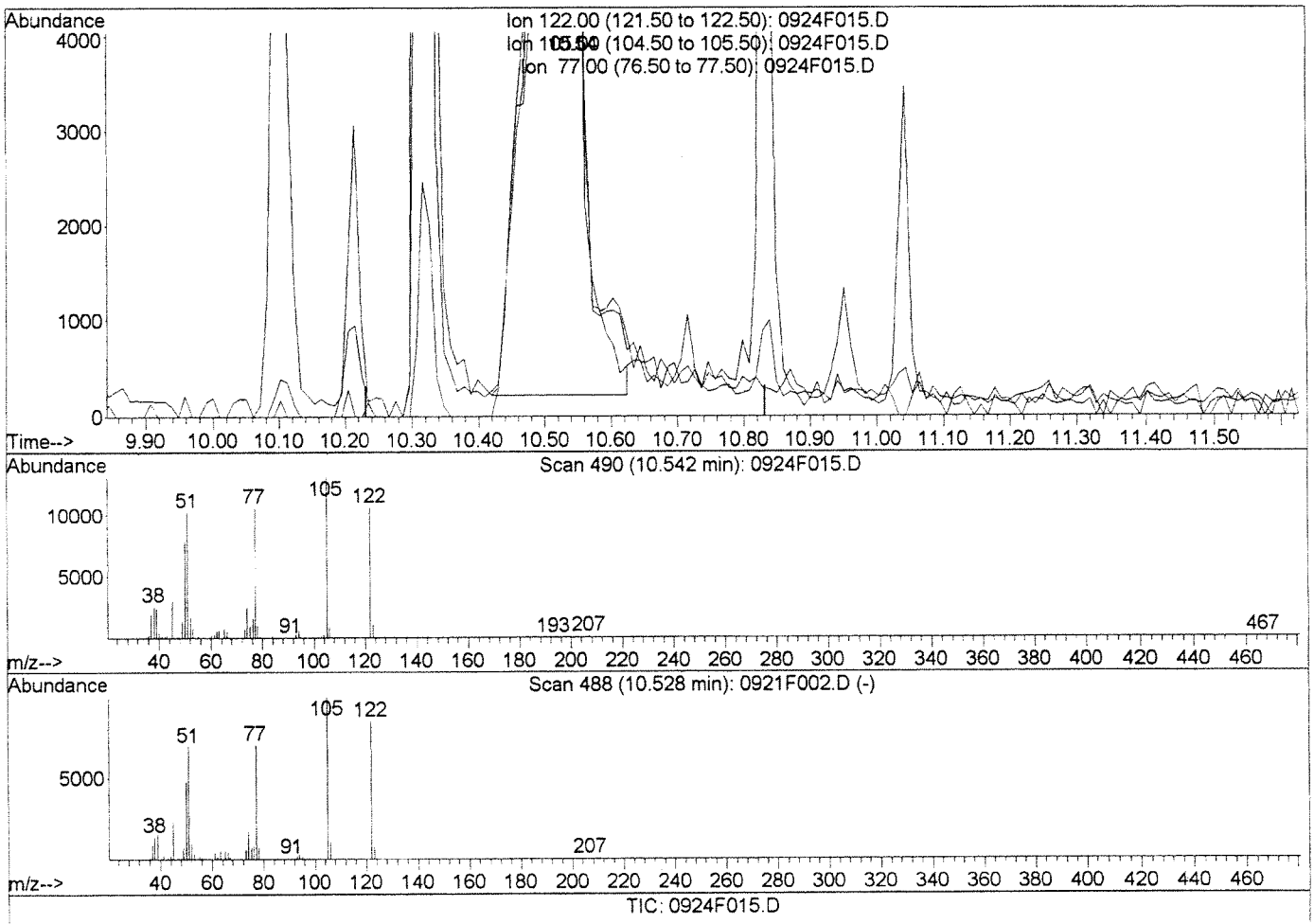
09/25/14

0924F015.D 092414_BNLL.M Thu Sep 25 10:30:44 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration



TIC: 0924F015.D

(28) Benzoic Acid (T)

10.54min 4039.99ng/ml

response 47329

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	125.47
77.00	82.70	99.14
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

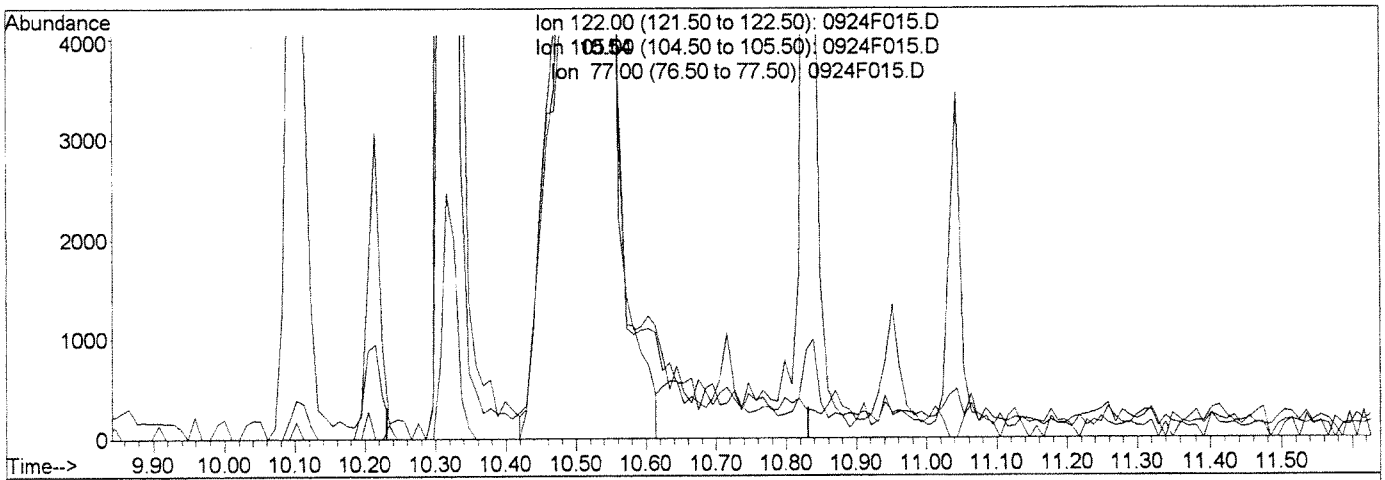
10/16/14

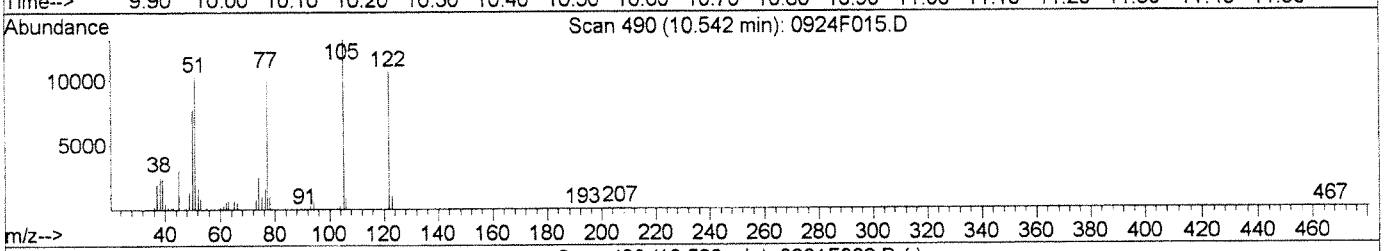
0924F015.D 092414_BNLL.M Thu Sep 25 10:22:30 2014

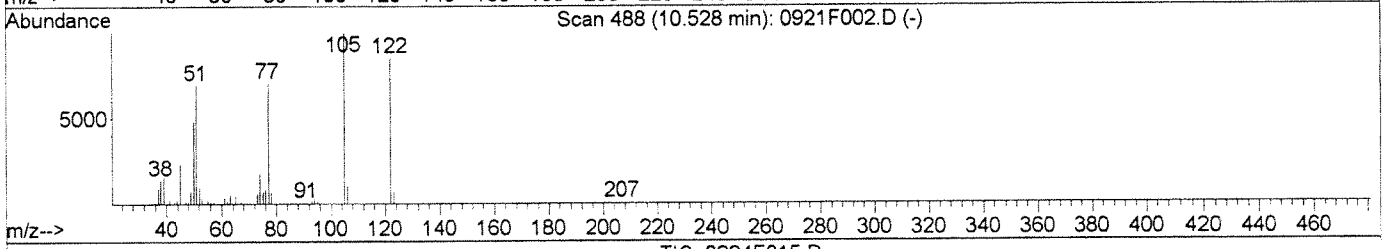
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Single Level Calibration







TIC: 0924F015.D

(28) Benzoic Acid (T)

10.54min 4176.70ng/ml m

response 49686

Ion	Exp%	Act%
122.00	100	100
105.00	108.60	122.87
77.00	82.70	99.53
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

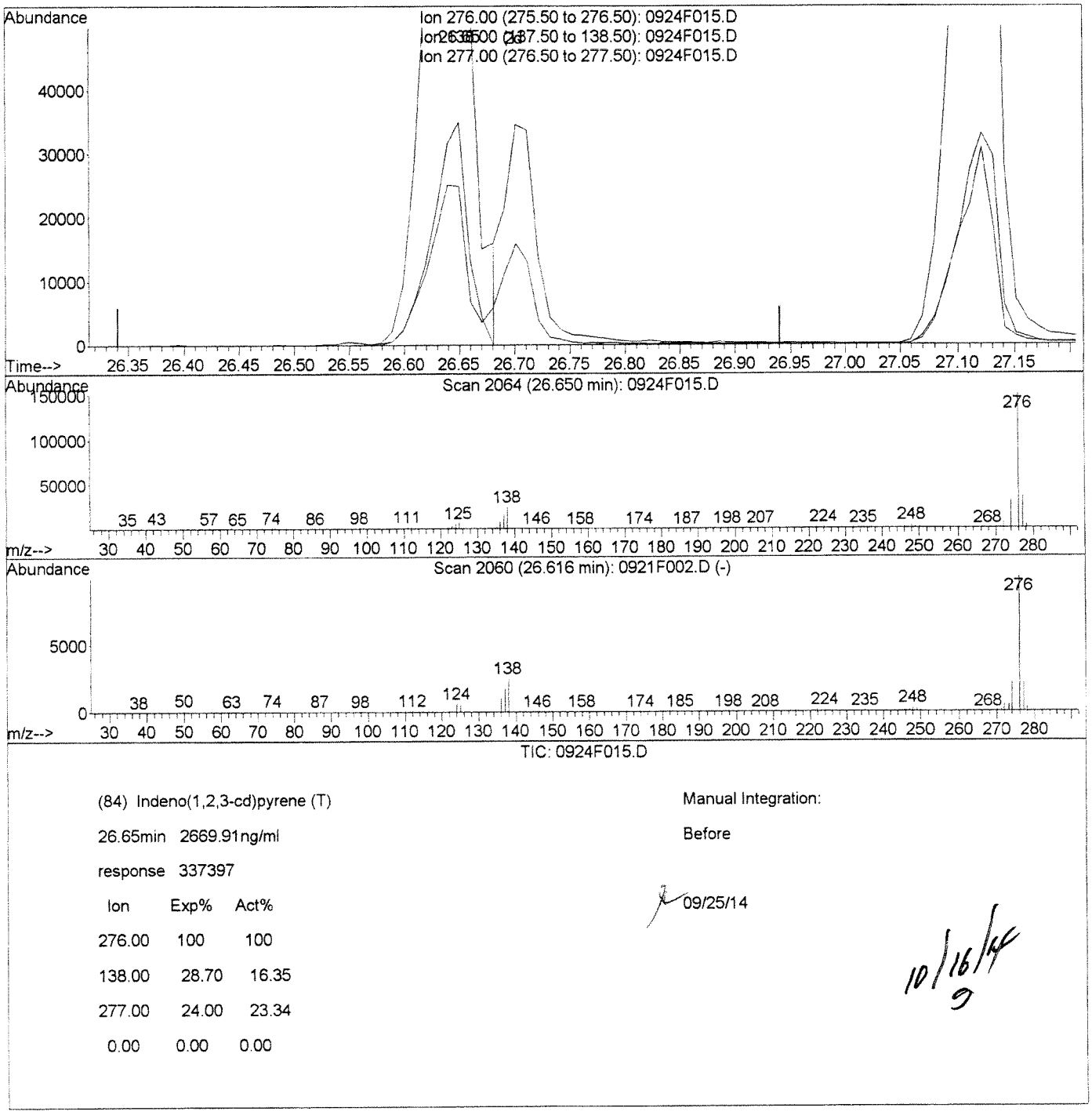
10/16/14

0924F015.D 092414_BNLL.M Thu Sep 25 10:22:40 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:22 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Multiple Level Calibration



TIC: 0924F015.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.65min 2669.91ng/ml

response 337397

Ion	Exp%	Act%
276.00	100	100
138.00	28.70	16.35
277.00	24.00	23.34
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

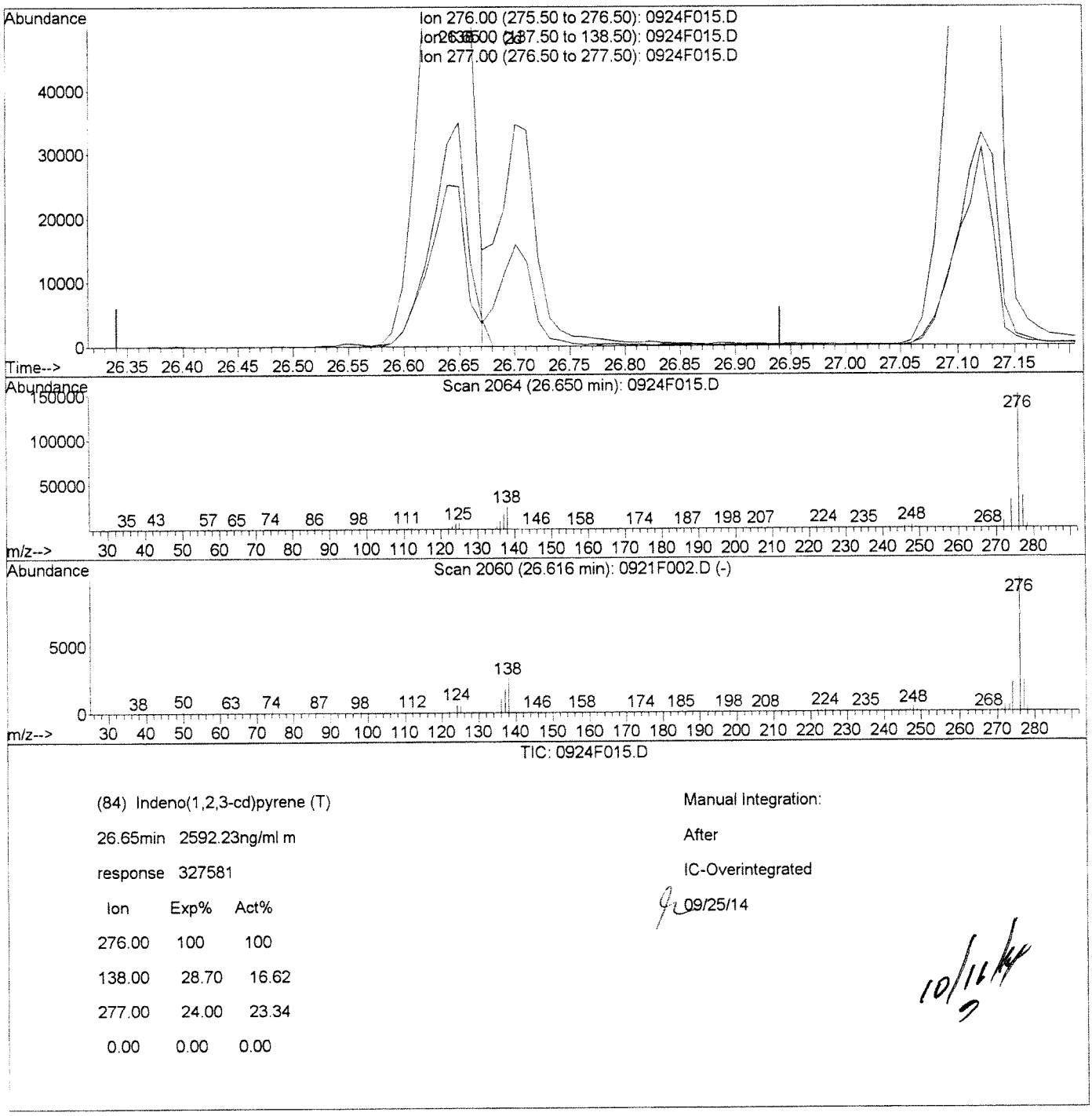
10/16/14

0924F015.D 092414_BNLL.M Thu Sep 25 10:23:13 2014

Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092414\0924F015.D Vial: 13
Acq On : 25 Sep 2014 12:57 am Operator: TLorr
Sample : SVO_LL ICV @ 3.0ppm | SVM46-42M Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:23 2014 Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Multiple Level Calibration



TIC: 0924F015.D

(84) Indeno(1,2,3-cd)pyrene (T)

26.65min 2592.23ng/ml m

response 327581

Ion	Exp%	Act%
276.00	100	100
138.00	28.70	16.62
277.00	24.00	23.34
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

09/25/14

10/16

0924F015.D 092414_BNLL.M Thu Sep 25 10:23:18 2014

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F016.D Vial: 14
Acq On : 25 Sep 2014 1:36 am Operator: TLorr
Sample : SVO_LL PAH ICV @ 3.0ppm | SVM46-64B Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:19:01 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.87	152	32196	1000.00	ng/ml	0.00
22) Naphthalene-d8	10.80	136	118855	1000.00	ng/ml	0.00
36) Acenaphthene-d10	13.64	164	66213	1000.00	ng/ml	0.00
60) Phenanthrene-d10	16.07	188	109409	1000.00	ng/ml	0.00
70) Chrysene-d12	20.67	240	123308	1000.00	ng/ml	0.00
79) Perylene-d12	24.38	264	109527	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 110		Recovery =	0.00%#		
6) Phenol-d6	0.00	99	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 43 - 128		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 30 - 139		Recovery =	0.00%#		
40) 2-Fluorobiphenyl	0.00	172	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 37 - 126		Recovery =	0.00%#		
61) 2,4,6-Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 38 - 157		Recovery =	0.00%#		
73) Terphenyl-d14	18.72	244	613	5.25	ng/ml	0.00
Spiked Amount 2500.000	Range 54 - 158		Recovery =	0.21%#		
Target Compounds						Qvalue
30) Naphthalene	10.83	128	410664	3110.58	ng/ml	99
34) 2-Methylnaphthalene	11.95	141	251489	3328.00	ng/ml	91
35) 1-Methylnaphthalene	12.10	141	229251	3305.02	ng/ml#	87
43) Acenaphthylene	13.40	152	433924	3467.78	ng/ml	99
46) Acenaphthene	13.69	154	254957	3349.01	ng/ml	100
49) Dibenzofuran	13.98	168	390311	3223.48	ng/ml	82
50) 4-Nitrophenol	13.98	109	2275	Below Cal	#	1
53) Fluorene	14.54	166	314197	3311.21	ng/ml	97
65) Phenanthrene	16.12	178	391790	3172.09	ng/ml	99
66) Anthracene	16.20	178	387263	3073.97	ng/ml	99
67) Carbazole	16.49	167	373381	3226.93	ng/ml	96
69) Fluoranthene	18.07	202	429184	3440.21	ng/ml	96
72) Pyrene	18.44	202	458923	2783.50	ng/ml	98
76) Benz(a)anthracene	20.65	228	454173	3158.21	ng/ml	99
77) Chrysene	20.73	228	419179	3110.97	ng/ml	98
81) Benzo(b)fluoranthene	23.45	252	430748	3456.02	ng/ml	94
82) Benzo(k)fluoranthene	23.53	252	442691	3493.53	ng/ml	95
83) Benzo(a)pyrene	24.26	252	418513	3448.78	ng/ml	93
84) Indeno(1,2,3-cd)pyrene	26.66	276	383097	3247.41	ng/ml	87
85) Dibenz(a,h)anthracene	26.72	278	396979	3217.17	ng/ml	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F016.D Vial: 14
Acq On : 25 Sep 2014 1:36 am Operator: TLorr
Sample : SVO_LL PAH ICV @ 3.0ppm | SVM46-64B Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:19:01 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
86) Benzo(g,h,i)perylene	27.13	276	395366	3119.13	ng/ml	94

10/1/14

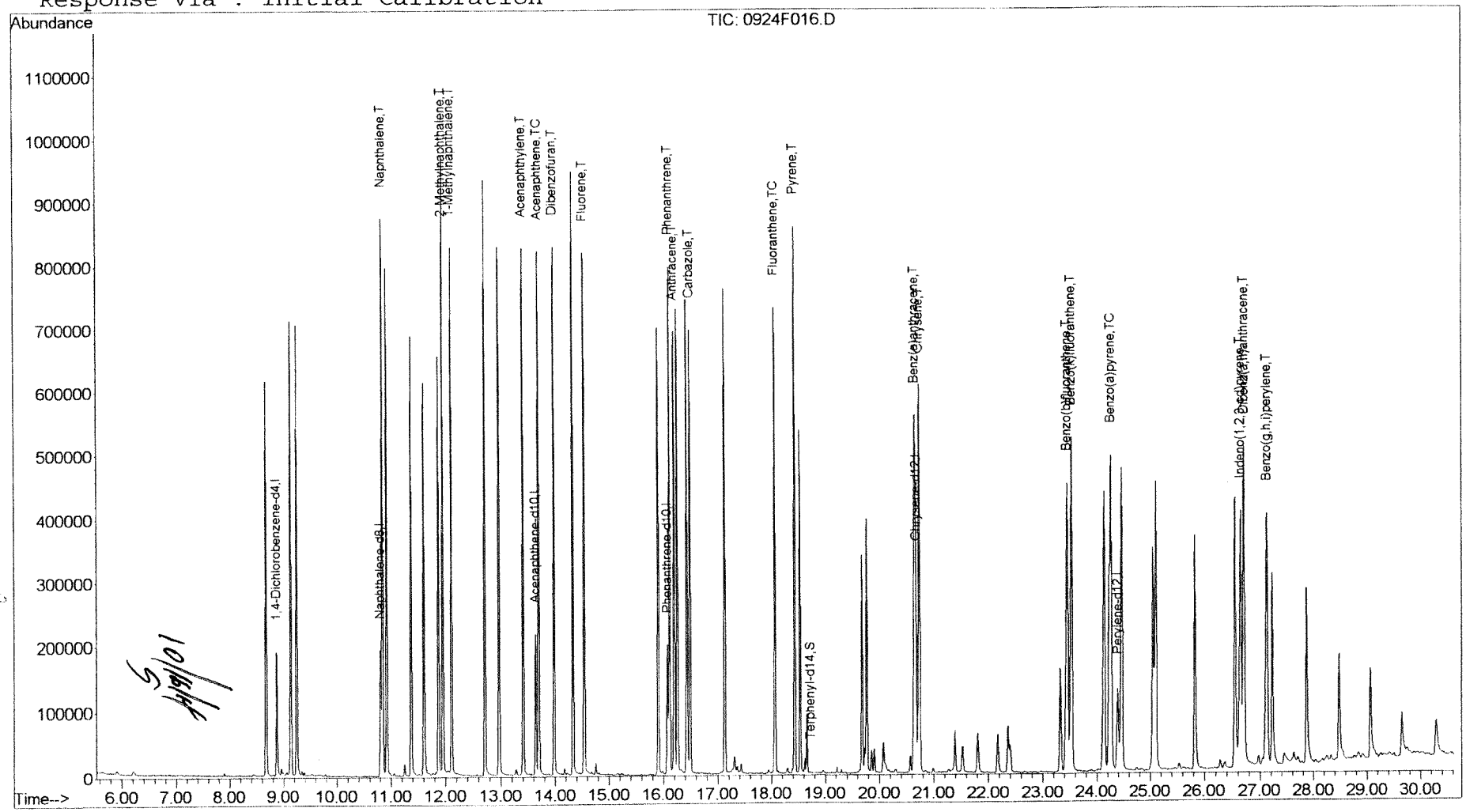
SEP 25 2014

(#) = qualifier out of range (m) = manual integration
0924F016.D 092414_BNLL.M Thu Sep 25 10:20:47 2014 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092414\0924F016.D Vial: 14
Acq On : 25 Sep 2014 1:36 am Operator: TLorr
Sample : SVO_LL PAH ICV @ 3.0ppm | SVM46-64B Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 10:20 2014 Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 09:32:17 2014
Response via : Initial Calibration



SEP 25 2014

3115

Injection Log

Directory: J:\MS06\DATA\092514

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0925A003.D	1.	SVO_LL CCV @ 3.0ppm | SVM47-56D	-tune	25 Sep 2014 20:1
2	100	0925F001.D	1.	PRIMER NR		25 Sep 2014 18:5
3	1	0925F002.D	1.	DFTPP @ 2.5ppm | SVM47-56C NR		25 Sep 2014 19:3
4	2	0925F003.D	1.	SVO_LL CCV @ 3.0ppm | SVM47-56D		25 Sep 2014 20:1
5	3	0925F004.D	1.	SVO_LL CLP ICV @ 3.0ppm | SVM45-72H NR		25 Sep 2014 20:4
6	4	0925F005.D	1.	KWG1412928-3 | MB		25 Sep 2014 21:2
7	5	0925F006.D	1.	KWG1412928-1 | LCS		25 Sep 2014 22:0
8	6	0925F007.D	1.	KWG1412928-2 | DLCS		25 Sep 2014 22:4
9	7	0925F008.D	1.	KWG1412107-4 | DLCS		25 Sep 2014 23:2
10	8	0925F009.D	5.	KWG1412107-6 | SRM 5X		26 Sep 2014 00:0
11	9	0925F010.D	1.	K1408804-005		26 Sep 2014 00:4
12	10	0925F011.D	1.	K1408804-023		26 Sep 2014 01:2
13	11	0925F012.D	1.	K1408804-045		26 Sep 2014 02:0
14	12	0925F013.D	1.	K1409921-012		26 Sep 2014 02:4
15	13	0925F014.D	1.	K1409921-013		26 Sep 2014 03:2
16	14	0925F015.D	1.	K1409921-014		26 Sep 2014 04:0
17	15	0925F016.D	1.	K1409921-015		26 Sep 2014 04:4
18	16	0925F017.D	1.	K1409921-016		26 Sep 2014 05:2
19	17	0925F018.D	1.	K1409921-017		26 Sep 2014 06:0
20	18	0925F019.D	1.	K1409921-018		26 Sep 2014 06:4

RUN# 413465
CAL# 13569

10/6/14
5

SEP 26 2014

Exception Report

Data File: J:\MS06\DATA\092514\0925A003.D
Lab ID: KWG1413176-1
RunType: TUNE
Matrix: WATER

Date Acquired: 09/25/2014 20:10
Date Quantitated:
Batch ID: KWG1413176
Analysis Method: DFTPP
ListJoinID: LJ1747

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: SEP 2 6 2014

Secondary Review: 10/6/14

Printed: 09/26/2014 17:40:02
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925A003.D		**Instrument:** MS06
Acqu Date:	09/25/2014 20:10	**Quant Date:**	**Vial:** 2
Run Type:	TUNE		**Dilution:** 1.0
Lab ID:	KWG1413176-1		**Soln Conc. Units:**

Bottle ID:		**Tier:**	**Matrix:** WATER
Prod Code:	8270D SVO LL	**Collect Date:**	**Receive Date:** 09/26/2014

Analysis Lot:	KWG1413176	**Prep Lot:**	**Report Group:**
Analysis Method:	DFTPP	**Prep Method:**	
Prep Ref:		**Prep Date:**	

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.		**Calibration ID:** CAL13569
Title:			**Report List ID:** LJ1747
Tune Ref:			**Method ID:** MJ190
MB Ref:			**Quant based on Report List**

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	62.9	8721	Pass
68	69	0	2	0.4	37	Pass
69	198	0	100	60.4	8364	Pass
70	69	0	2	0.3	25	Pass
127	198	25	75	45.8	6340	Pass
197	198	0	1	0.0	0	Pass
198	198	100	100	100.0	13855	Pass
199	198	5	9	7.2	997	Pass
275	198	10	30	23.9	3318	Pass
365	198	0.75	100	3.6	492	Pass
441	443	0.01	100	11.1	192	Pass
442	198	40	110	66.0	9146	Pass
443	442	15	24	18.9	1729	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

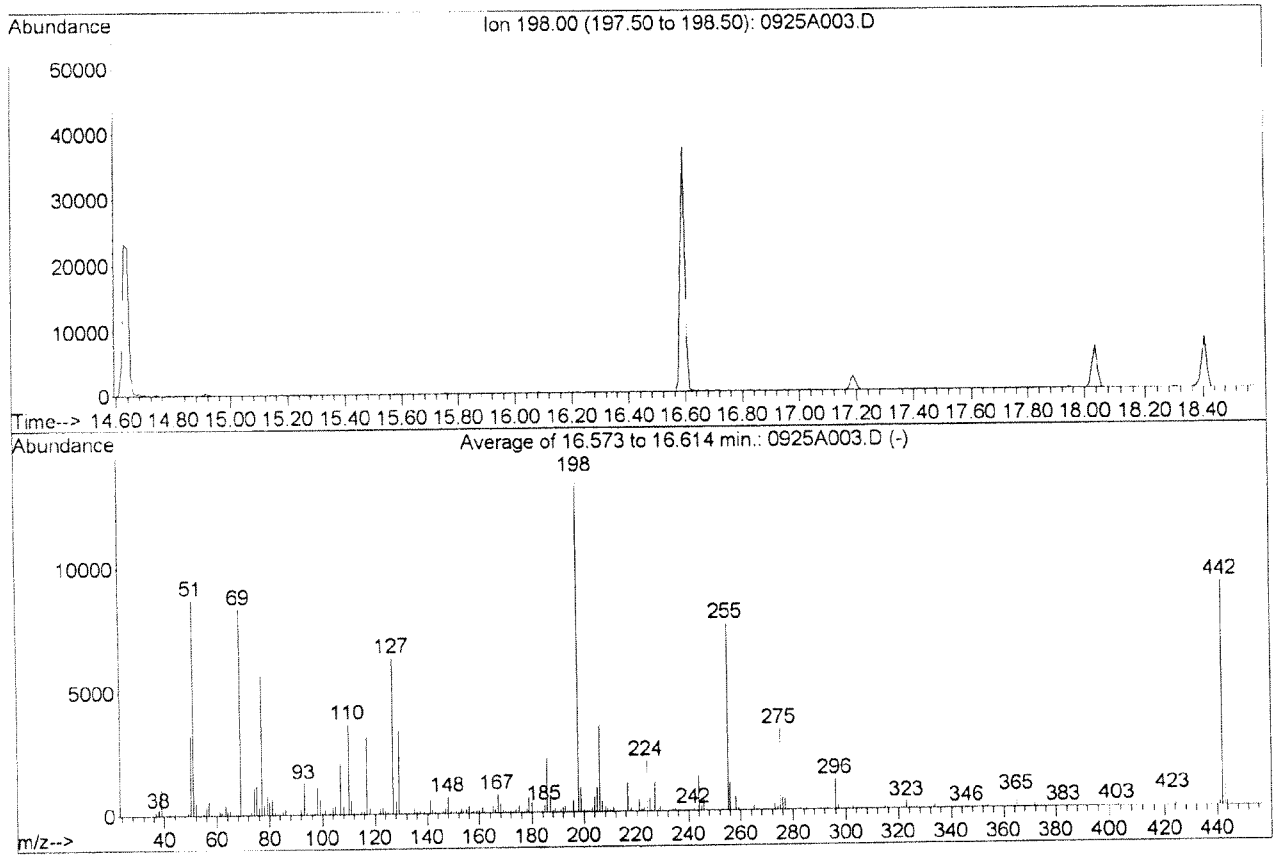
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS06\DATA\092514\0925A003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00



Spectrum Information: Average of 16.573 to 16.614 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	62.9	8721	PASS
68	69	0.00	2	0.4	37	PASS
69	198	0.00	100	60.4	8364	PASS
70	69	0.00	2	0.3	25	PASS
127	198	25	75	45.8	6340	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	13855	PASS
199	198	5	9	7.2	997	PASS
275	198	10	30	23.9	3318	PASS
365	198	0.75	100	3.6	492	PASS
441	443	0.01	100	11.1	192	PASS
442	198	40	110	66.0	9146	PASS
443	442	15	24	18.9	1729	PASS

0925A003.D 092414_BNLL.M Fri Sep 26 17:24:34 2014

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.90	126	50.95	8721	61.75	118	73.95	1077
37.85	169	52.00	519	63.05	416	75.00	1235
38.10	290	54.95	107	64.00	143	76.05	297
38.95	1073	55.20	36	65.00	199	77.05	5685
42.00	79	55.95	337	66.15	23	78.00	412
42.95	60	56.80	29	67.00	63	78.20	34
44.00	180	57.00	557	67.95	37	79.00	816
47.70	29	57.70	35	68.95	8364	80.05	543
48.80	39	58.10	26	70.05	25	81.00	608
49.00	137	59.00	31	72.85	32	81.95	138
49.95	3300	61.05	181	73.10	146	82.95	104

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.90	23	94.70	71	104.90	333	116.00	113
84.10	20	95.85	50	106.95	2116	116.95	3159
85.05	123	96.85	22	108.05	333	117.95	237
85.95	262	97.05	20	110.00	3677	119.90	22
88.00	26	98.00	1131	111.00	534	121.20	28
89.00	28	99.00	599	111.20	22	121.70	22
90.70	21	99.90	71	111.90	23	122.00	199
91.00	56	101.00	235	112.10	48	122.95	282
91.90	244	102.15	23	112.90	26	123.95	128
93.05	1282	103.00	102	113.50	20	124.95	75
94.05	126	103.95	282	114.95	106	127.05	6340

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.05	512	139.00	110	151.10	69	161.05	253
129.00	3401	141.00	548	151.95	56	162.00	62
129.95	332	142.00	152	152.80	43	163.05	20
130.95	40	143.05	100	153.00	162	163.75	23
131.95	21	144.10	20	154.00	133	164.15	20
132.35	25	146.05	95	155.05	212	165.00	283
132.95	53	146.70	32	156.00	304	165.95	70
133.95	134	147.00	204	156.90	57	166.15	142
135.00	257	148.00	695	157.85	86	166.95	762
136.00	93	149.05	110	159.00	88	167.95	382
137.00	129	150.20	24	160.00	129	168.90	92

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.95	34	178.90	639	189.05	170	201.15	24
170.95	60	179.95	409	190.05	31	201.35	29
171.95	84	180.95	222	191.05	100	202.90	133
172.95	131	182.05	48	192.00	235	204.00	623
174.00	142	182.70	30	192.95	259	205.00	1024
175.05	304	183.80	53	193.80	64	206.00	3523
175.90	47	184.10	29	194.55	31	207.00	446
176.30	38	185.00	311	195.95	462	208.00	211
176.90	258	186.00	2211	197.95	13855	208.95	91
177.50	24	187.05	677	198.90	997	209.85	65
178.15	140	187.95	89	199.90	114	210.10	40

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.50	25	225.00	532	238.90	24	252.65	28
211.05	183	226.95	1168	240.40	35	253.05	30
214.90	43	227.90	180	240.80	31	253.25	31
215.70	24	228.25	32	241.40	23	254.95	7590
216.90	1184	228.95	200	241.90	102	255.95	1154
218.05	130	230.95	33	244.00	1449	256.85	37
220.95	481	233.90	76	245.00	240	257.95	605
222.00	80	234.90	97	245.90	453	258.95	90
222.35	70	236.10	37	246.90	63	265.00	231
222.90	140	236.85	55	248.85	27	265.90	24
223.95	2062	237.10	29	251.55	21	269.60	20

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
272.00	41	283.25	21	321.05	25	352.75	21
273.00	273	283.95	24	323.05	311	353.05	38
274.00	141	285.05	69	323.95	41	353.95	97
275.00	3318	292.90	88	327.00	72	364.95	492
276.00	497	296.00	1246	327.90	21	365.80	28
276.95	432	296.90	185	333.10	21	371.90	158
277.80	22	302.85	130	333.95	182	372.90	26
278.00	36	304.00	25	334.80	26	383.05	33
280.95	20	313.85	21	345.90	69	389.90	22
282.45	22	314.90	115	351.85	66	401.90	34
283.05	25	315.95	56	352.15	20	402.10	28

Average of 16.573 to 16.614 min.: 0925A003.D
SVO_LL CCV @ 3.0ppm | SVM47-56D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
402.95	94	444.00	173				
403.90	26						
420.85	44						
421.10	29						
422.00	35						
423.00	498						
424.05	104						
441.05	192						
441.65	22						
442.00	9146						
442.95	1729						

Exception Report

Data File: J:\MS06\DATA\092514\0925F003.D
Lab ID: KWG1413176-2
RunType: CCV
Matrix: WATER

Date Acquired: 09/25/2014 20:10
Date Quantitated: 09/25/2014 20:43
Batch ID: KWG1413176
Analysis Method: 8270D
MethodJoinID: MJ1290

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Bis(2-chloroisopropyl) Ether	-39.2	NA	30	NR
	N-Nitrosodi-n-propylamine	-41.2	NA	30	
	Nitrobenzene	-31.1	NA	30	
	Benzoic Acid	39.2	NA	30	

Primary Review: SEP 26 2014

Secondary Review: 09/26/14

Printed: 09/26/2014 17:39:59
u:\Stealth\Crystal rpt\except2.rpt

Quantitation Report

Data File:	J:\MS06\DATA\092514\0925F003.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 20:10	**Quant Date:**	09/25/2014 20:43	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413176-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D SVO LL	**Collect Date:**		**Receive Date:**	09/26/2014

Analysis Lot:	KWG1413176	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS06\METHODS\BNA\092414_BNLL.			**Calibration ID:**	CAL13569
Title:					
Tune Ref:	J:\MS06\DATA\092514\0925F002.D			**Method ID:**	MJ1293
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	8.85	-0.02	152	16267	1,000.00	OK
2	Naphthalene-d8	10.77	-0.03	136	91208	1,000.00	OK
3	Acenaphthene-d10	13.61	-0.02	164	46496	1,000.00	OK
4	Phenanthrene-d10	16.04	-0.04	188	80413	1,000.00	OK
5	Chrysene-d12	20.62	-0.04	240	74218	1,000.00	OK
6	Perylene-d12	24.32	-0.06	264	84303	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	7.15			112	58551	3,029		12-109	NA	
1	Phenol-d6	8.40			99	81705	3,285		23-106	NA	
1	Nitrobenzene-d5	9.68			82	107366	4,097		26-110	NA	
3	2-Fluorobiphenyl	12.53			172	236728	3,307		31-94	NA	
4	2,4,6-Tribromophenol	14.92			330	39844	3,332		23-127	NA	
5	Terphenyl-d14	18.70			244	239190	3,403		40-127	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	5.71			42	80594**m**	3,374			
1	Pyridine	5.73			79	50406**m**	2,905			
1	Bis(2-chloroethyl) Ether	8.48			93	58251	2,851			
1	Phenol	8.41			94	85623	3,093			
1	Aniline	8.40			93	83094	2,986			
1	2-Chlorophenol	8.57			128	69679	2,967			
1	1,3-Dichlorobenzene	8.77			146	81088	3,033			
1	1,4-Dichlorobenzene	8.88			146	83931	3,027			
1	1,2-Dichlorobenzene	9.09			146	87204	3,289			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F003.D			Instrument:	MS06
Acqu Date:	09/25/2014 20:10	Quant Date:	09/25/2014 20:43	Vial:	2
Run Type:	CCV			Dilution:	1.0
Lab ID:	KWG1413176-2			Soln Conc. Units:	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Benzyl Alcohol	9.07			108	56335	4,409			
1	Bis(2-chloroisopropyl) Ether	9.26			45	134114	3,334			
1	2-Methylphenol	9.27			107	66193	3,902			
1	Acetophenone	9.45			105	126435	4,115			NR
1	Hexachloroethane	9.58			117	50323	3,790			
1	N-Nitrosodi-n-propylamine	9.46			70	80261	4,099			
1	4-Methylphenol	9.50			107	109908	4,407			
1	Nitrobenzene	9.71			77	104014	3,919			
2	Isophorone	10.09			82	201208	3,100			
2	2-Nitrophenol	10.19			139	66103	3,119			
2	2,4-Dimethylphenol	10.31			122	90789	3,387			
2	Bis(2-chloroethoxy)methane	10.43			93	117149	3,056			
2	2,4-Dichlorophenol	10.60			162	108883	3,208			
2	Benzoic Acid	10.50			122	23896m	2,532			
2	1,2,4-Trichlorobenzene	10.69			180	123282	3,157			
2	Naphthalene	10.81			128	306609	3,026			
2	4-Chloroaniline	10.92			127	132340	3,165			
2	Hexachlorobutadiene	11.02			225	90563	3,325			
2	4-Chloro-3-methylphenol	11.75			107	93410	2,883			
2	2-Methylnaphthalene	11.92			141	171889	2,964			
2	1-Methylnaphthalene	12.08			141	158922	2,986			
3	Hexachlorocyclopentadiene	12.17			237	76107	3,258			
3	2,4,6-Trichlorophenol	12.41			196	67752	3,403			
3	2,4,5-Trichlorophenol	12.49			196	72107	3,359			
3	2-Chloronaphthalene	12.71			162	198538	3,344			
3	2-Nitroaniline	12.90			65	70080	3,126			
3	Acenaphthylene	13.38			152	276074	3,142			
3	Dimethyl Phthalate	13.23			163	225882	3,066			
3	2,6-Dinitrotoluene	13.31			165	55426	3,095			
3	Acenaphthene	13.67			154	159599	2,985			
3	3-Nitroaniline	13.59			138	51168	3,033			
3	2,4-Dinitrophenol	13.76			184	15694	2,500			
3	Dibenzofuran	13.95			168	248887	2,927			
3	4-Nitrophenol	13.97			109	46583	3,527			
3	2,4-Dinitrotoluene	13.96			165	80120	3,170			
3	2,3,4,6-Tetrachlorophenol	14.18			232	52382	3,275			
3	Fluorene	14.52			166	204324	3,066			
3	4-Chlorophenyl Phenyl Ether	14.54			204	111313	3,064			
3	Diethyl Phthalate	14.38			149	242769	2,960			
3	4-Nitroaniline	14.60			138	51104	3,273			
3	2-Methyl-4,6-dinitrophenol	14.63			198	34417	2,797			
3	N-Nitrosodiphenylamine	14.74			169	133585	3,039			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS06\DATA\092514\0925F003.D			**Instrument:**	MS06
Acqu Date:	09/25/2014 20:10	**Quant Date:**	09/25/2014 20:43	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1413176-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Azobenzene	14.79			77	217637	2,846			
4	4-Bromophenyl Phenyl Ether	15.34			248	65381	3,111			
4	Hexachlorobenzene	15.41			284	76402	3,151			
4	Pentachlorophenol	15.76			266	35900	3,028			
4	Phenanthrene	16.08			178	279331	3,077			
4	Anthracene	16.16			178	297287	3,211			
4	Carbazole	16.46			167	264361	3,109			
4	Di-n-butyl Phthalate	17.07			149	409659	3,388			
4	Fluoranthene	18.04			202	308320	3,363			
5	Benzidine	18.29			184	91213	2,956		N	
5	Pyrene	18.41			202	331403	3,340			
5	Butyl Benzyl Phthalate	19.56			149	159335	3,115			
5	3,3'-Dichlorobenzidine	20.60			252	109928	3,406			
5	Benz(a)anthracene	20.60			228	268794	3,105			
5	Chrysene	20.68			228	253613	3,127			
5	Bis(2-ethylhexyl) Phthalate	20.81			149	232981	3,257			
6	Di-n-octyl Phthalate	22.62			149	454821	3,066			
6	Benzo(b)fluoranthene	23.39			252	291891	3,043			
6	Benzo(k)fluoranthene	23.47			252	292050	2,994			
6	Benzo(a)pyrene	24.20			252	275859	2,953			
6	Indeno(1,2,3-cd)pyrene	26.59			276	276133	3,041			
6	Dibenz(a,h)anthracene	26.65			278	287869	3,031			
6	Benzo(g,h,i)perylene	27.06			276	288026	2,952			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F003.D Vial: 2
Acq On : 25 Sep 2014 8:10 pm Operator: TLorr
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D Inst : MS06
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:41:29 2014 Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	8.85	152	16267	1000.00	ng/ml	-0.03
22) Naphthalene-d8	10.77	136	91208	1000.00	ng/ml	-0.03
36) Acenaphthene-d10	13.61	164	46496	1000.00	ng/ml	-0.03
60) Phenanthrene-d10	16.04	188	80413	1000.00	ng/ml	-0.04
70) Chrysene-d12	20.62	240	74218	1000.00	ng/ml	-0.05
79) Perylene-d12	24.32	264	84303	1000.00	ng/ml	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.15	112	58551	3028.64	ng/ml	0.00
Spiked Amount 3750.000	Range 38 - 110		Recovery = 80.76%			
6) Phenol-d6	8.40	99	81705	3284.63	ng/ml	0.00
Spiked Amount 3750.000	Range 43 - 128		Recovery = 87.59%			
20) Nitrobenzene-d5	9.68	82	107366	4097.25	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 139		Recovery = 163.89%#			
40) 2-Fluorobiphenyl	12.53	172	236728	3306.75	ng/ml	-0.03
Spiked Amount 2500.000	Range 37 - 126		Recovery = 132.27%#			
61) 2,4,6-Tribromophenol	14.92	330	39844	3331.54	ng/ml	-0.03
Spiked Amount 3750.000	Range 38 - 157		Recovery = 88.84%			
73) Terphenyl-d14	18.70	244	239190	3402.72	ng/ml	-0.03
Spiked Amount 2500.000	Range 54 - 158		Recovery = 136.11%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	5.71	42	80594m	3373.70	ng/ml	
3) Pyridine	5.73	79	50406m	2905.15	ng/ml	
5) Bis(2-chloroethyl) Ether	8.48	93	58251	2850.62	ng/ml	98
7) Phenol	8.41	94	85623	3092.72	ng/ml	96
8) Aniline	8.40	93	83094	2986.03	ng/ml#	73
9) 2-Chlorophenol	8.57	128	69679	2966.82	ng/ml	98
10) 1,3-Dichlorobenzene	8.77	146	81088	3032.87	ng/ml	98
11) 1,4-Dichlorobenzene	8.88	146	83931	3027.11	ng/ml	97
12) 1,2-Dichlorobenzene	9.09	146	87204	3288.54	ng/ml	98
13) Benzyl Alcohol	9.07	108	56335	4409.34	ng/ml	83
14) Bis(2-chloroisopropyl) Eth	9.26	45	134114	3333.74	ng/ml	74
15) 2-Methylphenol	9.27	107	66193	3901.96	ng/ml	96
16) Acetophenone	9.45	105	126435	4114.66	ng/ml	92
17) Hexachloroethane	9.58	117	50323	3789.71	ng/ml	96
18) N-Nitrosodi-n-propylamine	9.46	70	80261	4098.94	ng/ml	81
19) 4-Methylphenol	9.50	107	109908	4407.29	ng/ml	98
21) Nitrobenzene	9.71	77	104014	3918.99	ng/ml	96
23) Isophorone	10.09	82	201208	3099.95	ng/ml	98
24) 2-Nitrophenol	10.19	139	66103	3119.04	ng/ml	91
25) 2,4-Dimethylphenol	10.31	122	90789	3386.97	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:41:29 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Bis(2-chloroethoxy)methane	10.43	93	117149	3055.81	ng/ml	98
27) 2,4-Dichlorophenol	10.60	162	108883	3207.54	ng/ml	99
28) Benzoic Acid	10.50	122	23896m	2532.35	ng/ml	
29) 1,2,4-Trichlorobenzene	10.69	180	123282	3156.70	ng/ml	98
30) Naphthalene	10.81	128	306609	3026.38	ng/ml	99
31) 4-Chloroaniline	10.92	127	132340	3165.49	ng/ml	95
32) Hexachlorobutadiene	11.02	225	90563	3325.45	ng/ml	97
33) 4-Chloro-3-methylphenol	11.75	107	93410	2882.50	ng/ml	98
34) 2-Methylnaphthalene	11.92	141	171889	2964.13	ng/ml	98
35) 1-Methylnaphthalene	12.08	141	158922	2985.59	ng/ml	97
37) Hexachlorocyclopentadiene	12.17	237	76107	3257.54	ng/ml	99
38) 2,4,6-Trichlorophenol	12.41	196	67752	3402.62	ng/ml	98
39) 2,4,5-Trichlorophenol	12.49	196	72107	3358.56	ng/ml	99
41) 2-Chloronaphthalene	12.71	162	198538	3344.03	ng/ml	99
42) 2-Nitroaniline	12.90	65	70080	3125.52	ng/ml	97
43) Acenaphthylene	13.38	152	276074	3141.89	ng/ml	99
44) Dimethyl Phthalate	13.23	163	225882	3065.92	ng/ml	100
45) 2,6-Dinitrotoluene	13.31	165	55426	3095.02	ng/ml	89
46) Acenaphthene	13.67	154	159599	2985.44	ng/ml	97
47) 3-Nitroaniline	13.59	138	51168	3033.38	ng/ml	98
48) 2,4-Dinitrophenol	13.76	184	15694	2500.32	ng/ml	87
49) Dibenzofuran	13.95	168	248887	2927.14	ng/ml	86
50) 4-Nitrophenol	13.97	109	46583	3527.46	ng/ml#	1
51) 2,4-Dinitrotoluene	13.96	165	80120	3169.87	ng/ml	94
52) 2,3,4,6-Tetrachlorophenol	14.18	232	52382	3274.50	ng/ml	98
53) Fluorene	14.52	166	204324	3066.42	ng/ml	99
54) 4-Chlorophenyl Phenyl Ethe	14.54	204	111313	3063.62	ng/ml	98
55) Diethyl Phthalate	14.38	149	242769	2959.89	ng/ml	97
56) 4-Nitroaniline	14.60	138	51104	3273.12	ng/ml	95
57) 2-Methyl-4,6-dinitrophenol	14.63	198	34417	2797.08	ng/ml	69
58) N-Nitrosodiphenylamine	14.74	169	133585	3039.19	ng/ml	99
59) Azobenzene	14.79	77	217637	2846.16	ng/ml	98
62) 4-Bromophenyl Phenyl Ether	15.34	248	65381	3111.49	ng/ml	96
63) Hexachlorobenzene	15.41	284	76402	3150.91	ng/ml	88
64) Pentachlorophenol	15.76	266	35900	3027.79	ng/ml	97
65) Phenanthrene	16.08	178	279331	3077.07	ng/ml	98
66) Anthracene	16.16	178	297287	3210.67	ng/ml	98
67) Carbazole	16.46	167	264361	3108.58	ng/ml	99
68) Di-n-butyl Phthalate	17.07	149	409659	3387.58	ng/ml	98
69) Fluoranthene	18.04	202	308320	3362.56	ng/ml	99
71) Benzidine	18.29	184	91213	2955.55	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:41:29 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Quant Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration
DataAcq Meth : BNALL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	18.41	202	331403	3339.57	ng/ml	98
74)	Butyl Benzyl Phthalate	19.56	149	159335	3114.68	ng/ml	99
75)	3,3'-Dichlorobenzidine	20.60	252	109928	3405.92	ng/ml	95
76)	Benz(a)anthracene	20.60	228	268794	3105.42	ng/ml	100
77)	Chrysene	20.68	228	253613	3127.16	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	20.81	149	232981	3256.58	ng/ml	99
80)	Di-n-octyl Phthalate	22.62	149	454821	3065.92	ng/ml	98
81)	Benzo(b)fluoranthene	23.39	252	291891	3042.65	ng/ml	97
82)	Benzo(k)fluoranthene	23.47	252	292050	2994.33	ng/ml	97
83)	Benzo(a)pyrene	24.20	252	275859	2953.40	ng/ml	98
84)	Indeno(1,2,3-cd)pyrene	26.59	276	276133	3041.06	ng/ml	97
85)	Dibenz(a,h)anthracene	26.65	278	287869	3030.96	ng/ml	96
86)	Benzo(g,h,i)perylene	27.06	276	288026	2952.19	ng/ml	96

(#) = qualifier out of range (m) = manual integration

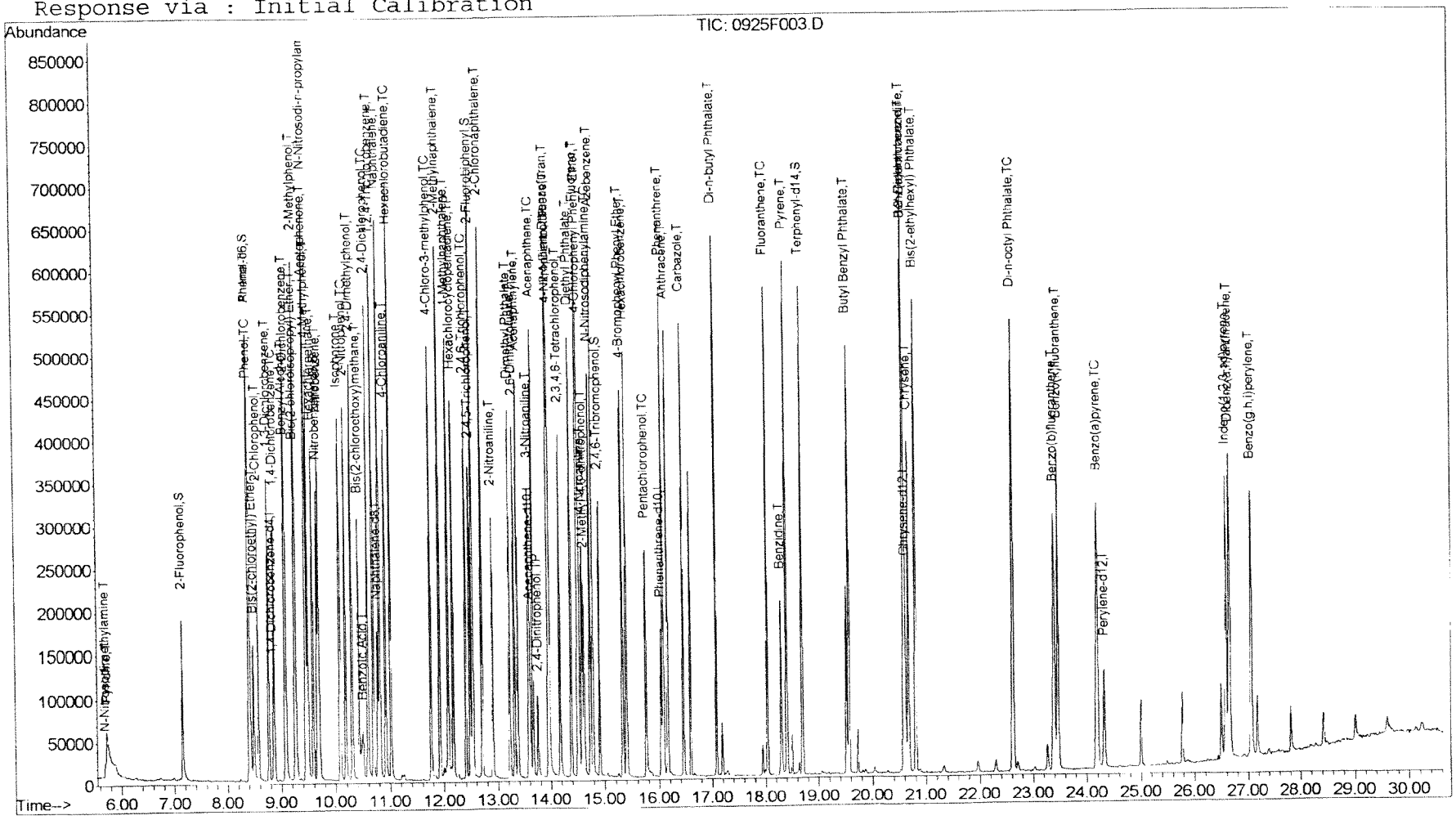
Quantitation Report (QT Reviewed)

Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: 092414_BNLL.RES

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Initial Calibration

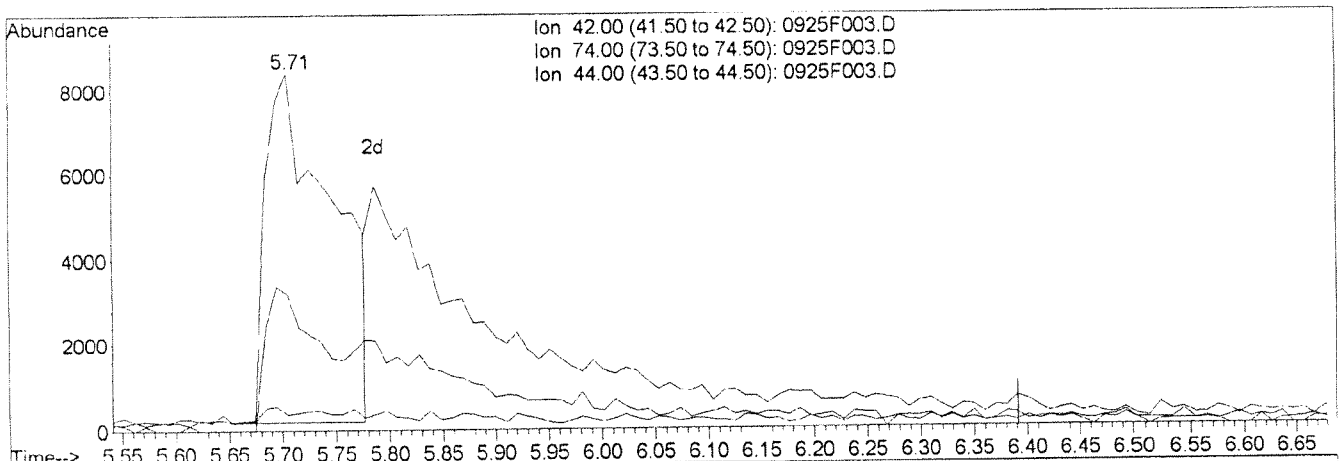


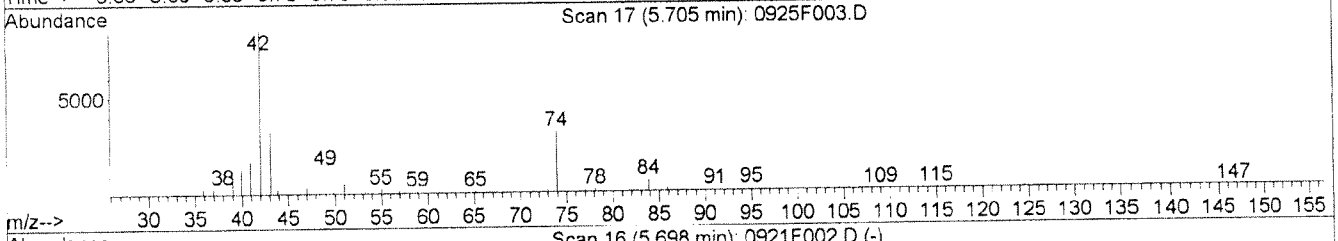
Quantitation Report (Qedit)

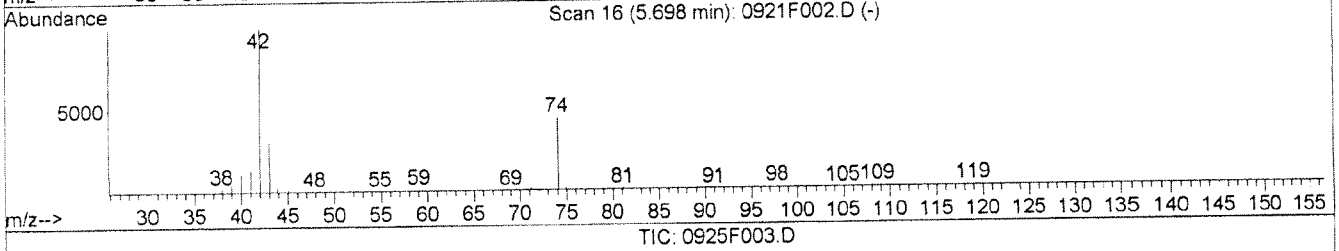
Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:41 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F003.D

(2) N-Nitrosodimethylamine (T)

5.71min 1502.58ng/ml

response 35895

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	38.77
44.00	4.70	2.31
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:43:20 2014

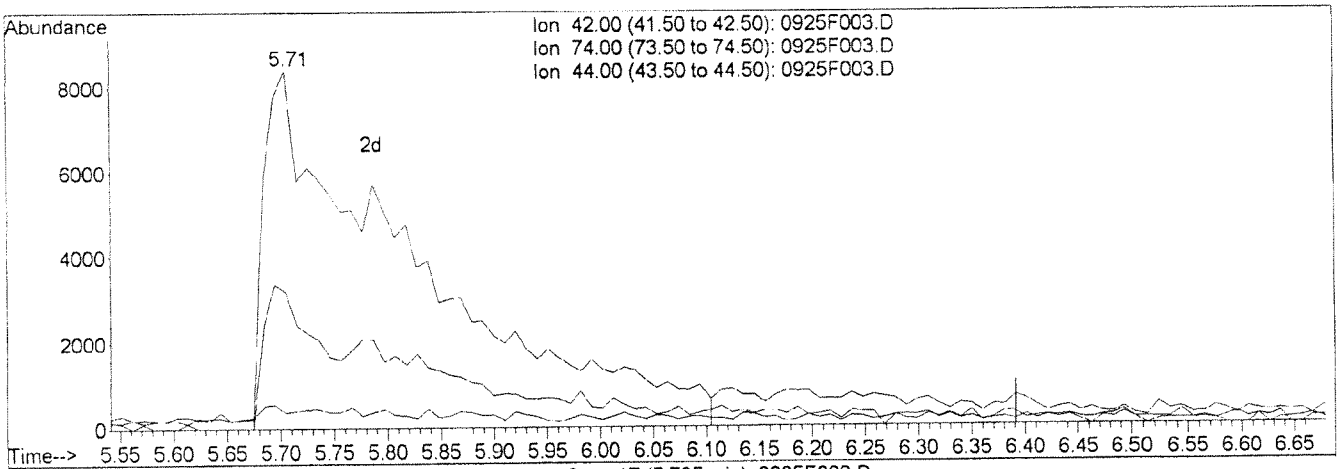
Quantitation Report (Qedit)

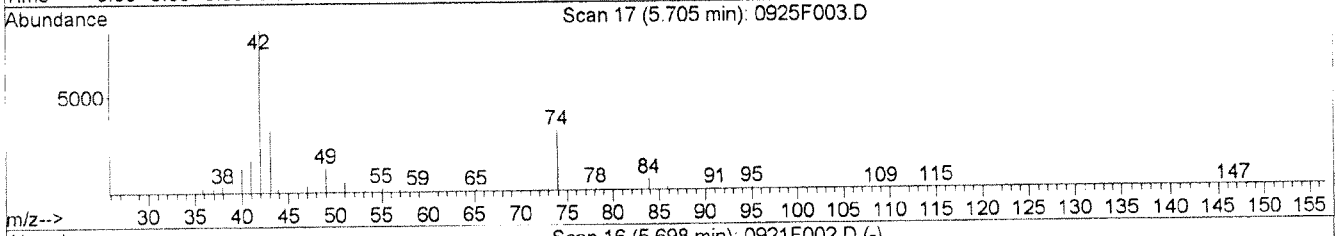
Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

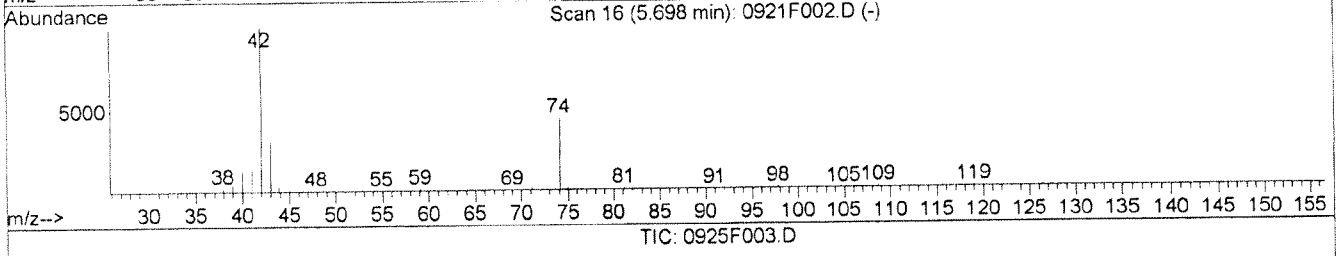
Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F003.D

(2) N-Nitrosodimethylamine (T)

5.71min 3373.70ng/ml m

response 80594

Ion	Exp%	Act%
42.00	100	100
74.00	42.40	37.95
44.00	4.70	4.30
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

10/6/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:43:26 2014

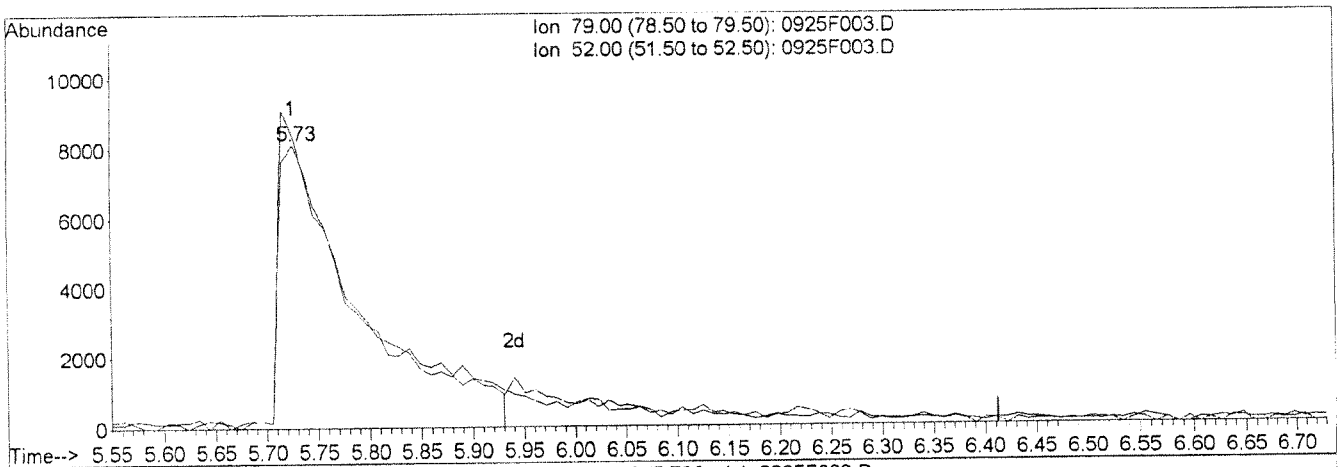
Quantitation Report (Qedit)

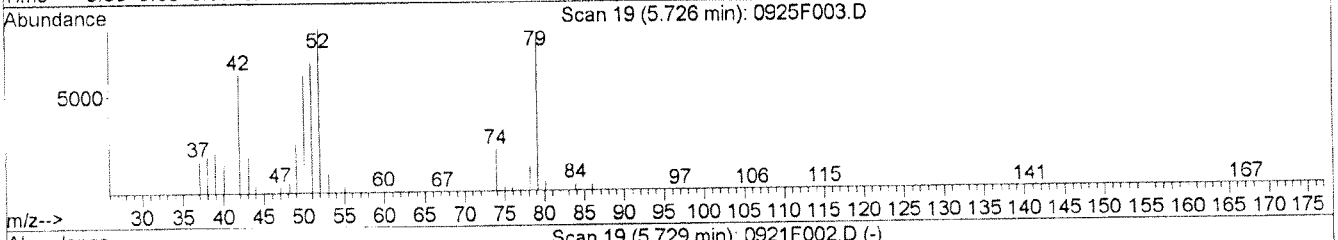
Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

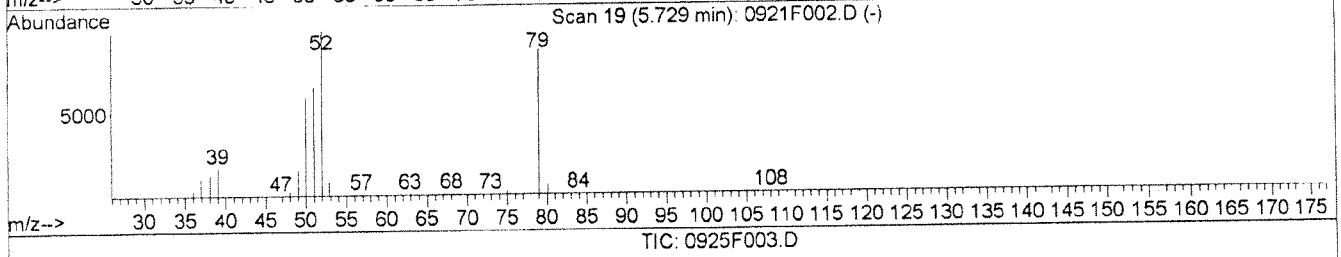
Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F003.D

(3) Pyridine (T)

5.73min 2561.59ng/ml

response 44445

Ion	Exp%	Act%
79.00	100	100
52.00	99.90	102.39
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

10/6/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:43:31 2014

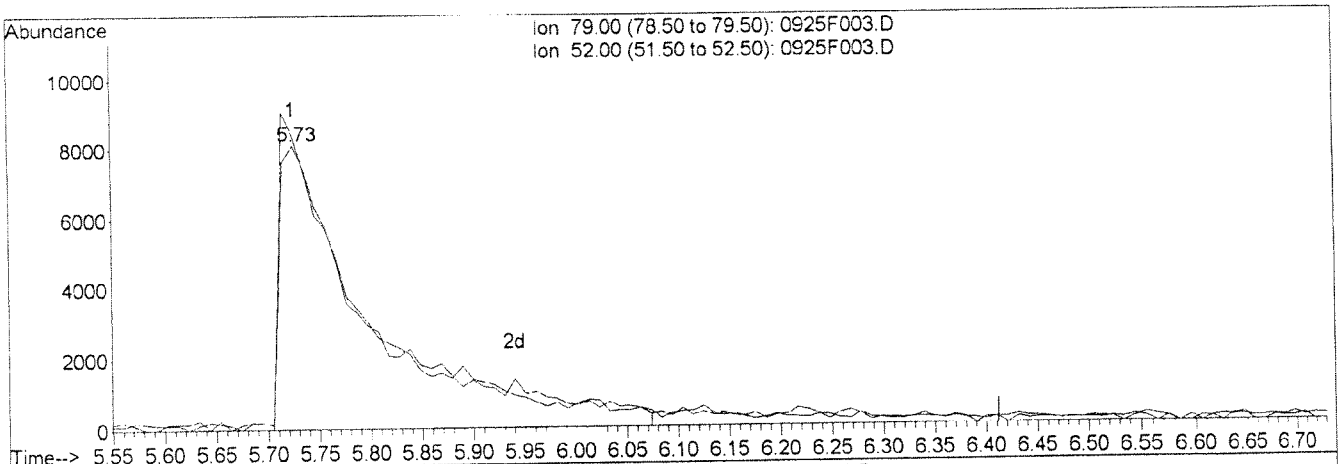
Quantitation Report (Qedit)

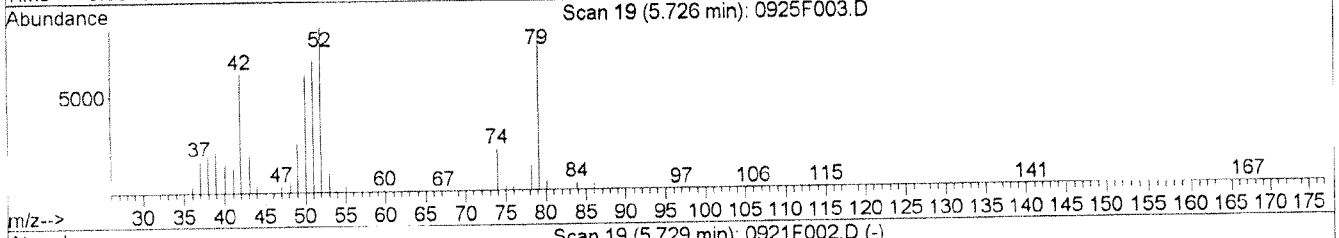
Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

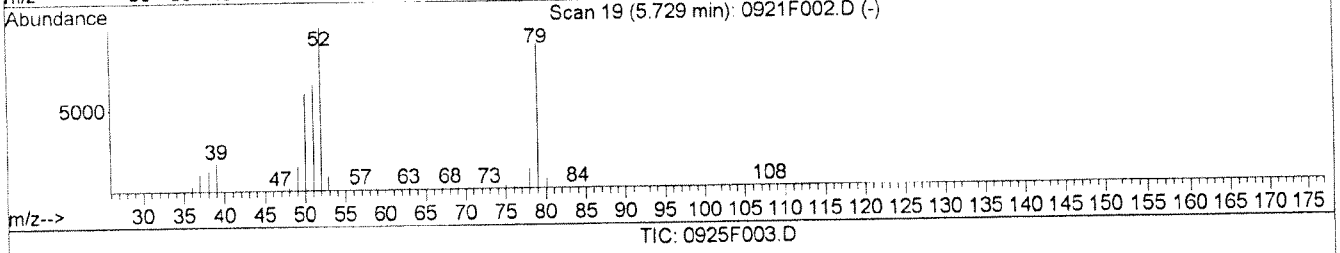
Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration







TIC: 0925F003.D

(3) Pyridine (T)

5.73min 2905.15ng/ml m

response 50406

Ion	Exp%	Act%
79.00	100	100
52.00	99.90	103.66
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

09/25/14

10/6/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:43:37 2014

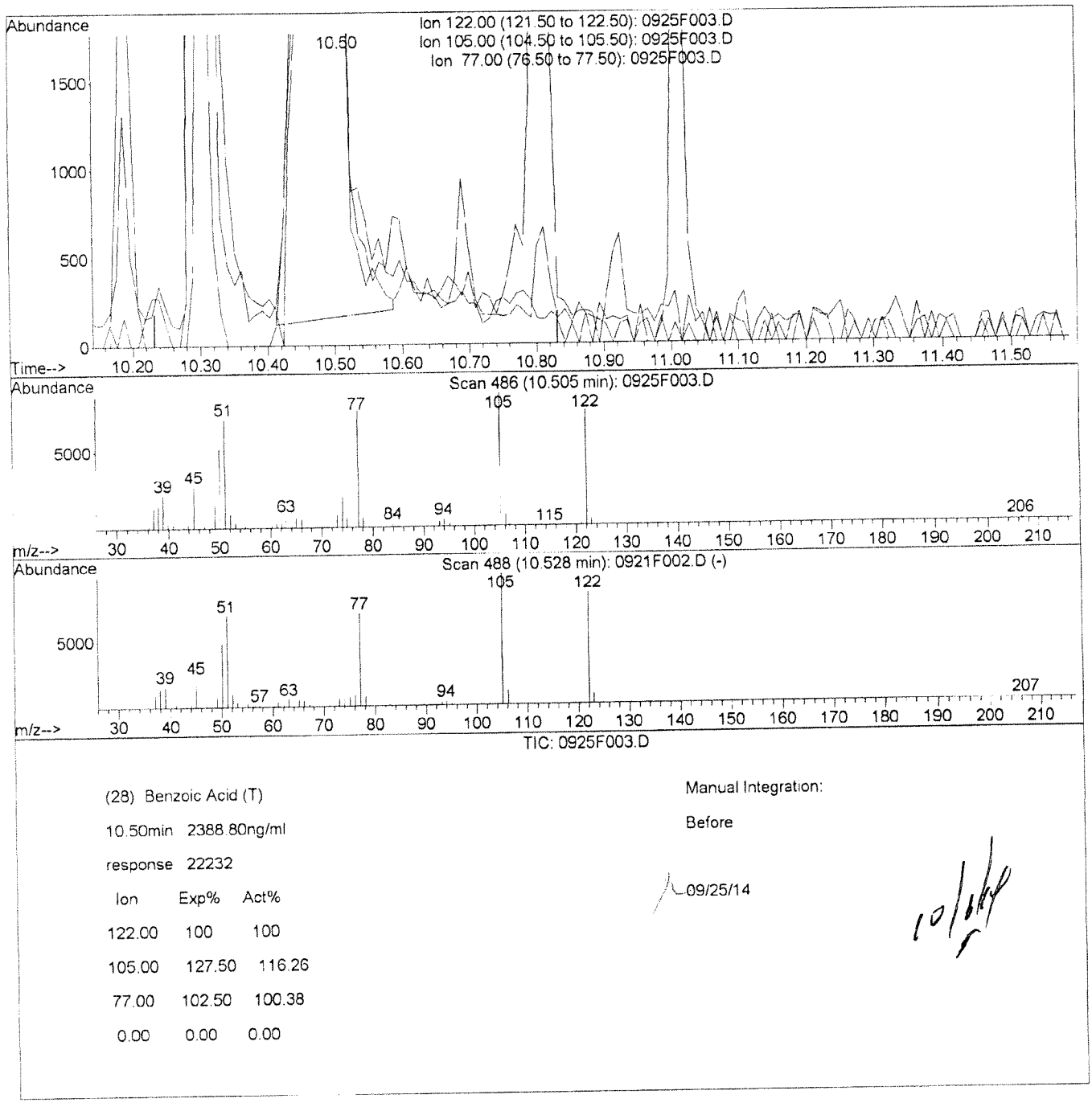
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration



TIC: 0925F003.D

(28) Benzoic Acid (T)

10.50min 2388.80ng/ml

response 22232

Ion	Exp%	Act%
122.00	100	100
105.00	127.50	116.26
77.00	102.50	100.38
0.00	0.00	0.00

Manual Integration:

Before

09/25/14

10/6/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:43:54 2014

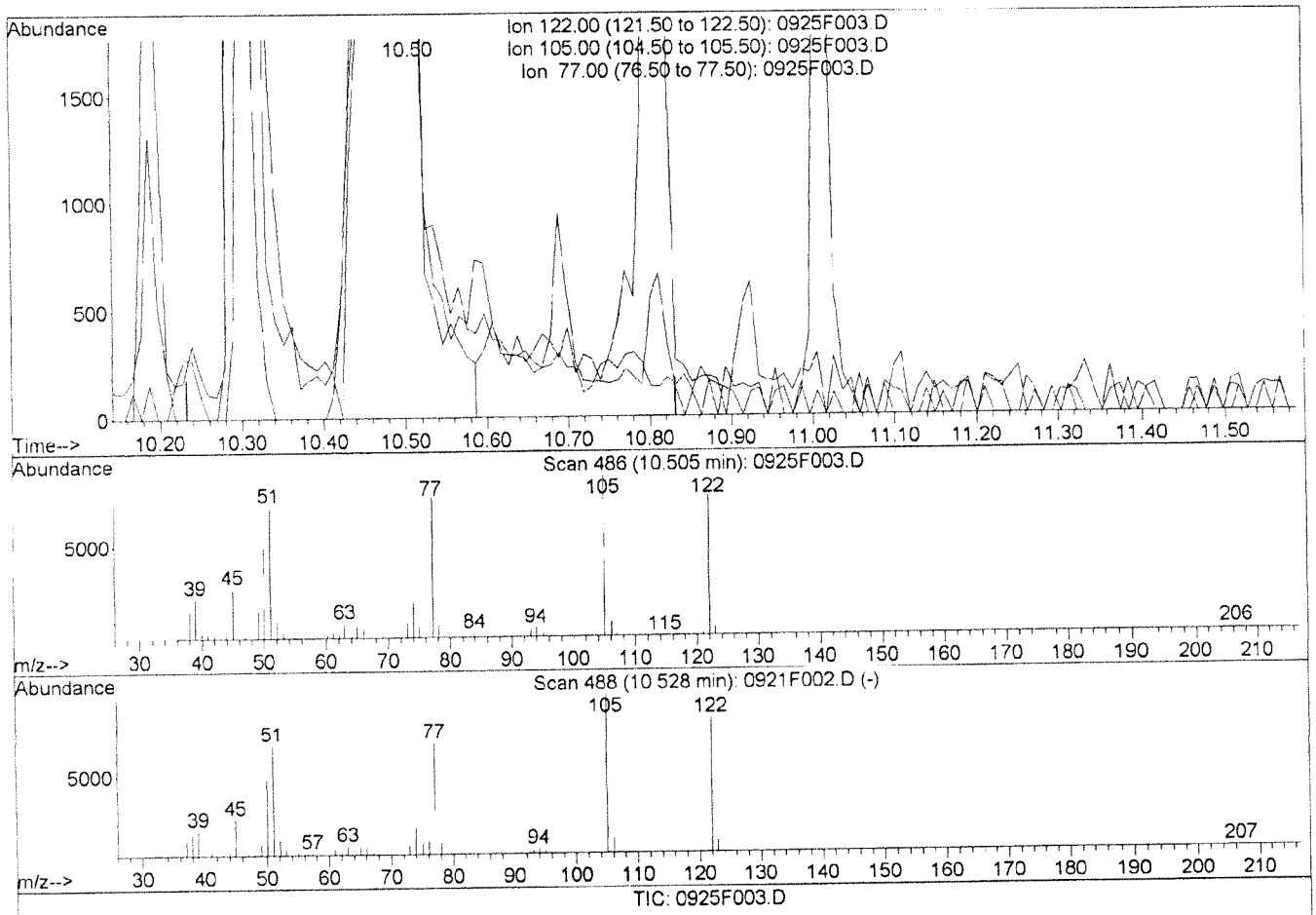
Quantitation Report (Qedit)

Data File : J:\MS06\DATA\092514\0925F003.D
Acq On : 25 Sep 2014 8:10 pm
Sample : SVO_LL CCV @ 3.0ppm | SVM47-56D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Sep 25 20:43 2014

Vial: 2
Operator: TLorr
Inst : MS06
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS06\METHODS\BNA\092414_BNLL.M (RTE Integrator)
Title : 8270LL ICAL
Last Update : Thu Sep 25 13:00:01 2014
Response via : Single Level Calibration



TIC: 0925F003.D

(28) Benzoic Acid (T)

10.50min 2532.35ng/ml m

response 23896

Ion	Exp%	Act%
122.00	100	100
105.00	127.50	114.78
77.00	102.50	100.91
0.00	0.00	0.00

Manual Integration:

After

BLC

09/25/14

10/16/14

0925F003.D 092414_BNLL.M Thu Sep 25 20:44:00 2014

Preparation Information

Group ID:	KWG1412928	**Prep Method:**	EPA 3520C	**Prep Date:**	09/22/14 14:40
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1409921-012	WS-091514-RB-SW03	8270D SVO LL	WATER	1060ml	2ml
K1409921-013	WS-091514-RB-SW04	8270D SVO LL	WATER	1060ml	2ml
K1409921-014	WS-091514-RB-SW05	8270D SVO LL	WATER	1000ml	2ml
K1409921-015	WS-091514-RB-SW02	8270D SVO LL	WATER	1060ml	2ml
K1409921-016	WS-091514-RB-SW01	8270D SVO LL	WATER	1060ml	2ml
K1409921-017	WS-091514-RB-FD10	8270D SVO LL	WATER	980ml	2ml
K1409921-018	RINSE BLANK 9-15	8270D SVO LL	WATER	1060ml	2ml
KWG1412928-1	Lab Control Sample	8270D SVO LL	WATER	1000ml	2ml
KWG1412928-2	Duplicate Lab Control Sampl	8270D SVO LL	WATER	1000ml	2ml
KWG1412928-3	Method Blank	8270D SVO LL	WATER	1060ml	2ml

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1409921-012	1376877	SVM46-67C	50uL			ZDumke
K1409921-013	1376878	SVM46-67C	50uL			ZDumke
K1409921-014	1376879	SVM46-67C	50uL			ZDumke
K1409921-015	1376880	SVM46-67C	50uL			ZDumke
K1409921-016	1376881	SVM46-67C	50uL			ZDumke
K1409921-017	1376882	SVM46-67C	50uL			ZDumke
K1409921-018	1376876	SVM46-67C	50uL			ZDumke
KWG1412928-1	1376883	SVM46-67C	50uL	SVM47-30A	50uL	ZDumke
KWG1412928-2	1376884	SVM46-67C	50uL	SVM47-30A	50uL	ZDumke
KWG1412928-3	1376885	SVM46-67C	50uL			ZDumke

Comments: IS: SVM47-4E

Started By: CPollard Assisted By: _____ Training: Yes / No

Completed By: NCisney Assisted By: _____ Yes / No

Reviewed By: Christin R Hart Date: 09.25.14 Storage: SVM Lab

Chain of Custody

Relinquished By: _____ Date: 9/25/14

Received By: _____ Date: 09/25/14 Extracts Examined: Yes / No

Preparation Information

Due 9/24/14

Group ID: KWG1412928 **Prep Method:** EPA 3520C [redacted] **Prep Date:** 09/22/14 00:00
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol. mL	Surr. Added	Spike Added
1	K1409921-012 ★	WS-091514-RB-SW03	03	✓	8270D SVOLL	WATER	1060	7	N/A	2	50ul	—
2	K1409921-013	WS-091514-RB-SW04	03	/	8270D SVOLL	WATER	1060	7		2		—
3	K1409921-014	WS-091514-RB-SW05	02	/	8270D SVOLL	WATER	1000	7		2		—
4	K1409921-015 ★	WS-091514-RB-SW02	03	/	8270D SVOLL	WATER	1060	7		2		—
5	K1409921-016	WS-091514-RB-SW01	02	/	8270D SVOLL	WATER	1060	7		2		—
6	K1409921-017	WS-091514-RB-FD10	03	/	8270D SVOLL	WATER	980	7		2		—
7	K1409921-018	RINSE BLANK 9-15	03	/	8270D SVOLL	WATER	1060	5		2		—
8	KWG1412928-1	Lab Control Sample			8270D SVOLL	WATER	1000	5		2		50ul
9	KWG1412928-2	Duplicate Lab Control Sample			8270D SVOLL	WATER	1000	5		2		↓
10	KWG1412928-3	Method Blank			8270D SVOLL	WATER	1060	5	↓	2	↓	—

Comments: ★Samples went ~~to~~ ① to a lower than desired volume on #218639 SEVAP (~2mL).

① EFENCE 9/24/14

Surrogate ID: SVM46-67C, 100/150ppm, exp 12-05-14, 50ml, 20 Bpp

Spike ID: SVM47-30A, 100ppm, exp 02-18-15, 50ml, 20 Bpp

Witness: 9/22/14

Started By: CPollard Assisted By:

Completed By: 9/24/14 Assisted By:

Additional Prep Information For EPA 3520C for waters by EXT-3520

ervice Request KM09921 **Workgroup** KWG1412928

M (GC²) Lot#: DL130 Sulfuric Acid Lot#: 1051813 NaOH Lot#: —

I<2 (Time/Date/Initial): 1435hrs/09-22-14/CP

I>11 (Time/Date/Initial): —

ntinuous Start₁ (Time/Date/Initial): 1440hrs/09-22-14/CP

ntinuous Stop₁ (Time/Date/Initial): 0940hrs/09-23-14/CP

ntinuous Start₂ (Time/Date/Initial): —

ntinuous Stop₂ (Time/Date/Initial): —

lfate Lot # 138246 Glass Wool Lot#: 03413999

Evap (Time/Date/Initial): 1115/9.24.14/NC S-Evap Therm. ID: X-SVM-12

mp as measured: 73.0 °C Correction factor: 0.0 °C Adjusted temp: 73.0 °C

Evap (Time/Date/Initial): ~~1115/9.24~~ ① ~~1245/9.25~~ ② 1245/9.24.14/NC N-Evap Therm. ID: PCH-0011A

mp as measured: ~~30.0~~ 29.0 °C Correction factor: 0.0 °C Adjusted temp: ①~~30.0~~ 29.0 °C

ean-up #1: — Time/Date/Initial: —

ean-up #2: — Time/Date/Initial: —

chive Storage: ~~1520/9.24.14/NC~~ ① Fancy Sauce

te Completed (Time/Date/Initial): 1520/9.24.14/NC

mments/Observations:

XENC 9/24/14

Bench Sheet Review Check List

- Hold Times Met (if no, Reason:)
- Prep date, dept, method, product code correct in stealth
- Spike Information correct
- Weights/Volumes and units correct on raw and final bench sheets
- Sample IDs have been checked—Bottle numbers appended if required
- Names present for: Started by, Completed by, relinquished by, and witnessed by.
- Training has been circled
- Extract Storage recorded
- Additional Prep Sheet completely filled out (NA or line out Blanks)
- All clean-ups have been noted on additional prep sheet
- Signed service request with Form V, if applicable, has been attached

APPENDIX H

Figures of Groundwater and Surface Water Results Prior to 2024

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- MONITORING WELL LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL

GM-B-3R	8/13/2014
bis(2-Ethylhexyl)phthalate (DEHP)	1.0 U
Hexachlorobutadiene	0.20 U
Tetrachloroethene	0.50 U
Trichloroethene	0.50 U
Vinyl chloride	0.50 U

SAMPLE LOCATION
SAMPLE DATE
RESULT (µg/L)
PARAMETER
EXCEEDANCE

Parameter	Cleanup Level (µg/L)
2,4-Dimethylphenol	97
Benzene	1.6
bis(2-Ethylhexyl)phthalate (DEHP)	0.046
Hexachlorobutadiene	0.01
Tetrachloroethene	2.9
Trichloroethene	0.7
Vinyl chloride	0.18

GM-B-3R	11/30/1998	1/11/1999	8/13/2014
2,4-Dimethylphenol	10 U	10 U	4.0 U
Benzene	5.0 U	5.0 U	0.50 U
bis(2-Ethylhexyl)phthalate (DEHP)	6 U	6 U	1.0 U
Hexachlorobutadiene	4 U	4 U	0.20 U
Tetrachloroethene	5.0 U	5.0 U	0.50 U
Trichloroethene	5.0 U	5.0 U	0.50 U
Vinyl chloride	10 U	10 U	0.50 U

GM-B-3	9/26/1984	9/16/1988
Tetrachloroethene	2 U/2 U	1 U
Trichloroethene	2 U/2 U	1 U

GM-B-3R

DRAINAGE

DRAINAGE

GM-B-6	10/1/1984	9/6/1988
Tetrachloroethene	**2500/1400**	**3900**
Trichloroethene	**10200/8800**	**4950**

GM-B-6A	12/1/1998	1/12/1999	8/13/2014
2,4-Dimethylphenol	10 U	10 U	3.9 U
Benzene	5.0 U	5.0 U	0.50 U
bis(2-Ethylhexyl)phthalate (DEHP)	**23**	**12**	**2.0 J**
Hexachlorobutadiene	**2.6 J**	4 U	0.20 U
Tetrachloroethene	**8.0**	5.0 U	0.50 U
Trichloroethene	5.0 U	5.0 U	0.50 U
Vinyl chloride	10 U	10 U	**0.31 J**

GM-B-6R	12/1/1998	1/12/1999	8/13/2014
2,4-Dimethylphenol	**280**	**380**	7.7
Benzene	**11**	**12**	**4.4**
bis(2-Ethylhexyl)phthalate (DEHP)	6 U	6 U	**3.9 J**
Hexachlorobutadiene	**21**	**47**	**4.0**
Tetrachloroethene	**1800**	**2800**	**260**
Trichloroethene	**3800**	**6500**	**270**
Vinyl chloride	**75**	**98**	**15**

GM-B-6A
GM-B-6R

GM-B-2	9/26/1984	9/16/1988	12/1/1998	1/12/1999	8/12/2014
2,4-Dimethylphenol	-	-	36	38	12
Benzene	-	-	**7.1**	**7.2**	**2.1**
bis(2-Ethylhexyl)phthalate (DEHP)	-	-	6 U	**3.6 J**	**1.9 J**
Hexachlorobutadiene	-	-	4 U	4 U	0.19 U
Tetrachloroethene	-	1 U	5.0 U	5.0 U	0.50 U
Trichloroethene	**2 U/2.8**	1 U	5.0 U	5.0 U	0.50 U
Vinyl chloride	-	-	10 U	10 U	**0.25 J**

GM-B-2
GM-B-2A

GM-B-2A	12/1/1998	1/11/1999	8/12/2014
2,4-Dimethylphenol	10 U/10 U	10 U/10 U	3.8 U/3.8 U
Benzene	5.0 U/5.0 U	5.0 U/5.0 U	5.0 U/5.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	**11/13**	**14/18**	**6.6 J/5.3 J**
Hexachlorobutadiene	4 U/4 U	4 U/4 U	0.19 U/0.19 U
Tetrachloroethene	5.0 U/5.0 U	5.0 U/5.0 U	0.50 U/0.50 U
Trichloroethene	5.0 U/5.0 U	5.0 U/5.0 U	0.50 U/0.50 U
Vinyl chloride	10 U/10 U	10 U/10 U	0.50 U/0.50 U

DRAINAGE

GM-B-1A
GM-B-1

MARINE VIEW DRIVE

DRAINAGE

GATE

DRAINAGE

GM-B-1	9/26/1984	9/16/1988	11/30/1998	1/11/1999	8/13/2014
2,4-Dimethylphenol	-	-	7.3 J	6.0 J	20 U
Benzene	-	-	**5.6**	**5.0**	**5.5**
bis(2-Ethylhexyl)phthalate (DEHP)	-	-	**3.4 J**	**39**	5.0 U
Hexachlorobutadiene	-	-	4 U	4 U	1.0 U
Tetrachloroethene	2 U/2 U	1 U	5.0 U	5.0 U	2.5 U
Trichloroethene	2 U/2 U	1 U	5.0 U	5.0 U	2.5 U
Vinyl chloride	-	-	10 U	10 U	2.5 UJ

GM-B-1A	11/30/1998	1/11/1999	8/13/2014
2,4-Dimethylphenol	10 U	10 U	3.9 U
Benzene	5.0 U	5.0 U	0.50 U
bis(2-Ethylhexyl)phthalate (DEHP)	**17**	**20**	0.97 U
Hexachlorobutadiene	4 U	4 U	0.20 U
Tetrachloroethene	5.0 U	5.0 U	0.50 U
Trichloroethene	5.0 U	5.0 U	0.50 U
Vinyl chloride	10 U	10 U	0.50 U

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SCALE IN FEET

GROUNDWATER RESULTS - VOCS/SVOCS 1984-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE
H.1

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G011 - Last Saved By: MJerome on 1/22/25

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- MONITORING WELL LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL

GM-B-3R	8/13/2014
Arsenic	4.7
Copper	**5.06**
Lead	3.15
Manganese	**2010**
Mercury	0.0101
Nickel	3.62
Zinc	21.7

SAMPLE LOCATION
SAMPLE DATE
RESULT (µg/L)
PARAMETER
EXCEEDANCE

Parameter	Cleanup Level (µg/L)
Arsenic	5
Chromium	4.13
Copper	3.1
Lead	8.1
Manganese	100
Mercury	0.025
Nickel	8.2
Zinc	81

GM-B-3R	11/30/1998	1/11/1999	8/13/2014
Arsenic	**8.2**	5 U	4.7
Chromium	**6.6**	**10.0**	2.82
Copper	**18.0**	**17.9**	**5.06**
Lead	16.0 U	**19.0**	3.15
Manganese	**6070**	**6310**	**2010**
Mercury	**0.2**	**0.2**	0.0101
Nickel	**10.0**	6.7	3.62
Zinc	**112**	**109**	21.7

GM-B-3R

DRAINAGE

DRAINAGE

DRAINAGE

GM-B-6A
GM-B-6R

GM-B-1A
GM-B-1

GM-B-2
GM-B-2A

GATE

DRAINAGE

DRAINAGE

MARINE VIEW DRIVE

GM-B-6A	12/1/1998	1/12/1999	8/13/2014
Arsenic	**10.0**	5 U	0.4 J
Chromium	**73.0**	**15.2**	2.19
Copper	**70.0**	**15.6**	2.12
Lead	**105**	**27.6**	2.46
Manganese	**331**	**183**	77.6
Mercury	**0.4**	0.2 U	0.00243
Nickel	**36.0**	**8.7**	1.48
Zinc	**308**	**93.8**	14.8

GM-B-6R	12/1/1998	1/12/1999	8/13/2014
Arsenic	**8.2**	**10.9**	**9.3 J**
Chromium	5 U	5 U	1.21 J
Copper	5 U	5 U	**3.57 J**
Lead	23.0 U	**23.5**	**70.0 J**
Manganese	11.0	14.6	**102 J**
Mercury	0.2 U	0.2 U	**0.0267 J**
Nickel	**48.0**	**54.8**	**20.1 J**
Zinc	61.0	50 U	23.3 J

GM-B-2	12/1/1998	1/12/1999	8/12/2014
Arsenic	5 U	**17.4**	**9.5**
Chromium	5 U	5 U	2.38
Copper	5 U	**8.2**	**6.17**
Lead	3 U	**62.7**	**42.8**
Manganese	5 U	**143**	**228**
Mercury	0.2 U	0.2 U	0.0166
Nickel	5 U	**51.7**	**43.5**
Zinc	50 U	**333**	**348**

GM-B-2A	12/1/1998	1/11/1999	8/12/2014
Arsenic	**12.0/14.0**	5 U/5 U	3.4/3.5
Chromium	**113/108**	**22.6/21.9**	**7.22/7.83**
Copper	**66.0/59.0**	**13.3/13.0**	**6.35/6.64**
Lead	**96.0/92.0**	**24.2/24.4**	7.42/8.10
Manganese	**636/606**	**417/416**	**366/375**
Mercury	**0.2/0.3**	0.2 U/0.2 U	0.00407/0.00326
Nickel	**34.0/33.0**	**8.7/8.7**	4.04/4.45
Zinc	**251/249**	**74.1/81.7**	42.1/46.7

GM-B-1	11/30/1998	1/11/1999	8/13/2014
Arsenic	**37.0**	**38.8**	**50.7 J**
Chromium	**12.0**	**19.5**	**19.5 J**
Copper	**15.0**	**50.8**	**33.7 J**
Lead	**63.0**	**421**	**253 J**
Manganese	**128**	**198**	**164 J**
Mercury	0.2 U	**0.3**	**0.0894 J**
Nickel	**92.0**	**110**	**119 J**
Zinc	**120**	**670**	**441 J**

GM-B-1A	11/30/1998	1/11/1999	8/13/2014
Arsenic	5 U	5 U	0.4 J
Chromium	**22.0**	**11.2**	2.91
Copper	**54.0**	**14.0**	**5.77**
Lead	19.0 U	7.6 U	0.744
Manganese	**398**	**296**	**219**
Mercury	0.2 U	0.2 U	0.00162
Nickel	**17.0**	7.7	3.49
Zinc	69.0	50 U	20.4

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SCALE IN FEET

GROUNDWATER RESULTS - METALS 1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE H.2

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G012 - Last Saved By: MJerome on 1/22/25

LEGEND

PROPERTY LINE

DRAINAGE SWALE

MONITORING WELL LOCATION

ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL

ESTIMATED LIMIT OF LIME WASTE FILL

GM-B-3R	8/13/2014
4,4'-DDE	0.001 U
alpha-BHC	0.001 U
Aroclor-1254 (PCB-1254)	**0.013**
Cyanide (total)	4.7 U
gamma-BHC (lindane)	0.001 U
Hexachlorobenzene	0.001 U

SAMPLE LOCATION

SAMPLE DATE

RESULT (µg/L)

PARAMETER

EXCEEDANCE

Parameter	Cleanup Level (µg/L)
4,4'-DDE	0.00000088
alpha-BHC	0.000048
Aroclor-1254 (PCB-1254)	0.000104
Cyanide (total)	1
Endrin aldehyde	0.035
gamma-BHC (lindane)	0.16
Hexachlorobenzene	0.000005

GM-B-3R	11/30/1998	1/11/1999	8/13/2014
4,4'-DDE	0.05 U	0.05 U	0.001 U
alpha-BHC	0.05 U	0.05 U	0.001 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	**0.013**
Cyanide (total)	10 U	10 U	4.7 U
Endrin aldehyde	0.05 U	0.05 U	-
gamma-BHC (lindane)	0.05 U	0.05 U	0.001 U
Hexachlorobenzene	1 U	1 U	0.001 U

GM-B-3R

DRAINAGE

DRAINAGE

GM-B-6A	12/1/1998	1/12/1999	8/13/2014
4,4'-DDE	0.05 U	0.05 U	0.0011 U
alpha-BHC	**0.06**	0.05 U	0.0011 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	**0.0051 J**
Cyanide (total)	10 U	10 U	4.7 U
Endrin aldehyde	0.05 U	0.05 U	0.0011 U
gamma-BHC (lindane)	**0.22**	0.05 U	0.0011 U
Hexachlorobenzene	1 U	1 U	**0.00026 J**

GM-B-6A
GM-B-6R

GM-B-1A	11/30/1998	1/11/1999	8/13/2014
4,4'-DDE	0.05 U	0.05 U	0.001 U
alpha-BHC	0.05 U	0.05 U	0.001 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	**0.0021 J**
Cyanide (total)	10 U	10 U	4.7 U
Endrin aldehyde	0.05 U	0.05 U	0.001 U
gamma-BHC (lindane)	0.05 U	0.05 U	0.001 U
Hexachlorobenzene	1 U	1 U	0.001 U

GM-B-6R	12/1/1998	1/12/1999	8/13/2014
4,4'-DDE	0.05 U	0.05 U	0.0052 U
alpha-BHC	0.05 U	0.05 U	0.0052 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	0.094 U
Cyanide (total)	10 U	10 U	1 J
Endrin aldehyde	0.05 U	0.05 U	0.032 U
gamma-BHC (lindane)	0.05 U	0.05 U	0.0052 U
Hexachlorobenzene	1 U	1 U	**0.021**

GM-B-1A
GM-B-1

DRAINAGE

GM-B-1	11/30/1998	1/11/1999	8/13/2014
4,4'-DDE	0.05 U	**0.057 J**	0.0051 U
alpha-BHC	0.05 U	0.05 U	0.0051 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	**0.67**
Cyanide (total)	10 U	10 U	**4.5 J**
Endrin aldehyde	0.5 U	**0.21 J**	0.0092 U
gamma-BHC (lindane)	0.05 U	0.05 U	0.0056 U
Hexachlorobenzene	1 U	1 U	0.019 U

GM-B-2
GM-B-2A

GM-B-2	12/1/1998	1/12/1999	8/12/2014
4,4'-DDE	0.05 U	0.05 U	0.005 U
alpha-BHC	0.05 U	0.05 U	0.005 U
Aroclor-1254 (PCB-1254)	1.0 U	1.0 U	**0.037**
Cyanide (total)	10 U	10 U	4.7 U
Endrin aldehyde	0.05 U	0.05 U	0.005 U
gamma-BHC (lindane)	0.05 U	0.05 U	0.005 U
Hexachlorobenzene	1 U	1 U	0.0065 U

GM-B-2A	12/1/1998	1/11/1999	8/12/2014
4,4'-DDE	0.05 U/0.05 U	0.05 U/0.05 U	0.0011 U/0.001 U
alpha-BHC	0.05 U/0.05 U	0.05 U/0.05 U	0.0011 U/0.001 U
Aroclor-1254 (PCB-1254)	1.0 U/1.0 U	1.0 U/1.0 U	**0.029/0.027**
Cyanide (total)	10 U/10 U	10 U/10 U	4.7 U/4.7 U
Endrin aldehyde	0.05 U/0.05 U	0.05 U/0.05 U	0.0018 U/0.0022 U
gamma-BHC (lindane)	0.10 J/0.05 U	0.05 U/0.05 U	0.0011 U/0.001 U
Hexachlorobenzene	1 U/1 U	1 U/1 U	0.0011 U/0.001 U

GATE

DRAINAGE

DRAINAGE

MARINE VIEW DRIVE

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SCALE IN FEET

GROUNDWATER RESULTS - PCBs, PESTICIDES AND GENERAL CHEMISTRY 1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE H.3

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G013 - Last Saved By: MJerome on 1/22/25

LEGEND

- PROPERTY LINE
- DRAINAGE SWALE
- ⊠ SURFACE WATER SAMPLE LOCATION
- ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL
- ESTIMATED LIMIT OF LIME WASTE FILL

SW-05	9/15/2014
Aluminum	230
Antimony	1.30
Arsenic	**6.13**
Barium	14.6

SAMPLE LOCATION
SAMPLE DATE
RESULT (µg/L)
PARAMETER
EXCEEDANCE

Parameter	Cleanup Level (µg/L)
Aluminum	NV
Antimony	90
Arsenic	5
Barium	NV
Beryllium	273
Cadmium	7.9
Calcium	NV
Chromium	4.13
Cobalt	NV
Copper	3.1
Iron	NV
Lead	8.1
Magnesium	NV
Manganese	100
Mercury	0.025
Nickel	8.2
Potassium	NV
Selenium	71
Silver	0.91
Sodium	NV
Thallium	0.223
Vanadium	NV
Zinc	81

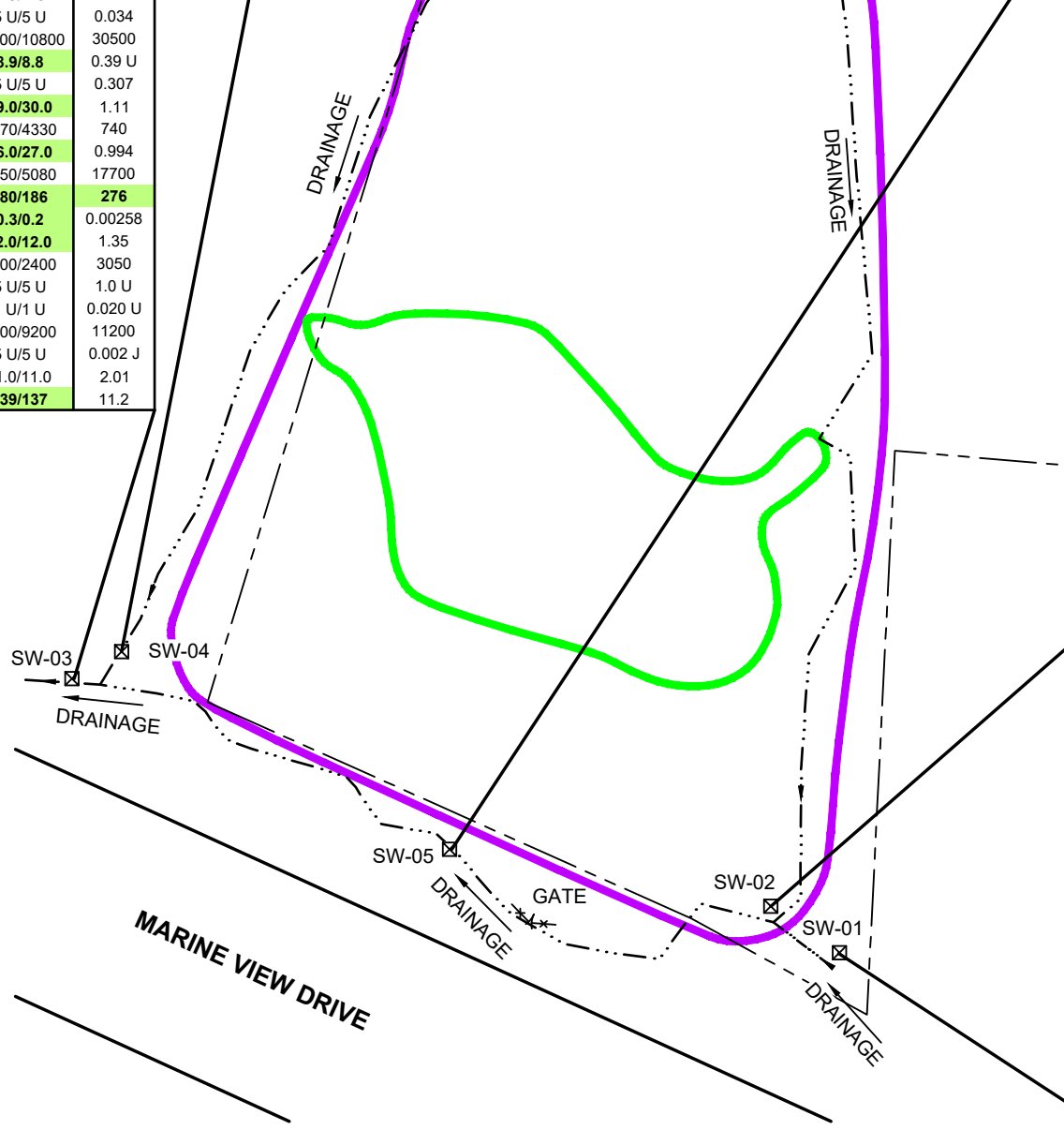
SW-04	11/20/1998	9/15/2014
Aluminum	2380	200
Antimony	5 U	0.30
Arsenic	5 U	1.37
Barium	37.0	26.5
Beryllium	2 U	0.020 U
Cadmium	5 U	0.033
Calcium	28800	31000
Chromium	**5.5**	0.45 U
Cobalt	5 U	0.327
Copper	**15.0**	1.34
Iron	3290	828
Lead	**9.6**	1.16
Magnesium	15900	17900
Manganese	**258**	**265**
Mercury	**0.2**	0.00358
Nickel	**9.1**	1.34
Potassium	4100	3100
Selenium	5 U	1.0 U
Silver	1 U	0.020 U
Sodium	15000	11300
Thallium	5 U	0.020 U
Vanadium	6.9	2.06
Zinc	50.0	12.2

SW-03	11/20/1998	9/15/2014
Aluminum	4360/4080	155
Antimony	7.2/6.1	0.30
Arsenic	**19.0/22.0**	1.34
Barium	39.0/39.0	25.5
Beryllium	2 U/2 U	0.020 U
Cadmium	5 U/5 U	0.034
Calcium	10900/10800	30500
Chromium	**8.9/8.8**	0.39 U
Cobalt	5 U/5 U	0.307
Copper	**29.0/30.0**	1.11
Iron	4370/4330	740
Lead	**26.0/27.0**	0.994
Magnesium	5050/5080	17700
Manganese	**180/186**	**276**
Mercury	**0.3/0.2**	0.00258
Nickel	**12.0/12.0**	1.35
Potassium	2300/2400	3050
Selenium	5 U/5 U	1.0 U
Silver	1 U/1 U	0.020 U
Sodium	8300/9200	11200
Thallium	5 U/5 U	0.002 J
Vanadium	11.0/11.0	2.01
Zinc	**139/137**	11.2

SW-05	9/15/2014
Aluminum	230
Antimony	1.30
Arsenic	**6.13**
Barium	14.6
Beryllium	0.020 U
Cadmium	0.081
Calcium	24200
Chromium	0.61 U
Cobalt	0.149
Copper	2.77
Iron	536
Lead	2.70
Magnesium	17300
Manganese	89.5
Mercury	0.00605
Nickel	1.00
Potassium	2450
Selenium	1.0 U
Silver	0.011 J
Sodium	9480
Thallium	0.020 U
Vanadium	3.39
Zinc	21.3

SW-02	11/20/1998	9/15/2014
Aluminum	330	45.7 J/144 J
Antimony	5 U	0.47 J/1.26 J
Arsenic	**5.2**	**2.21 J/5.29 J**
Barium	21.0	14.4/14.2
Beryllium	2 U	0.020 U/0.020 U
Cadmium	5 U	0.046 J/0.083 J
Calcium	27700	23700/24100
Chromium	5 U	0.46 U/0.78 U
Cobalt	5 U	0.091 J/0.197 J
Copper	**13.0**	**1.13 J/3.18 J**
Iron	853	314 J/592 J
Lead	**9.6**	1.22 J/3.47 J
Magnesium	18700	16200/17200
Manganese	54.0	35.4 J/93.1 J
Mercury	0.2 U	0.00381 J/0.00769 J
Nickel	8.0	0.80 J/1.05 J
Potassium	5000	3040/2450
Selenium	5 U	1.0 U/1.0 U
Silver	1 U	0.020 U/0.007 J
Sodium	20000	9670/9350
Thallium	5 U	0.020 U/0.003 J
Vanadium	5 U	4.28/3.49
Zinc	**95.0**	11.1 J/28.8 J

SW-01	11/20/1998	9/15/2014
Aluminum	3540	46.6
Antimony	5 U	1.37
Arsenic	**11.0**	3.42
Barium	27.0	10.7
Beryllium	2 U	0.020 U
Cadmium	5 U	0.020
Calcium	8040	23600
Chromium	**7.0**	0.62 U
Cobalt	5 U	0.091
Copper	**9.9**	1.43
Iron	2980	204
Lead	7.0	0.448
Magnesium	3360	17200
Manganese	92.0	62.4
Mercury	**0.2**	0.0017
Nickel	**8.6**	0.57 U
Potassium	1800	2190
Selenium	5 U	1.0 U
Silver	1 U	0.020 U
Sodium	2600	8870
Thallium	5 U	0.020 U
Vanadium	8.5	3.36
Zinc	50 U	12.3



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SCALE IN FEET

SURFACE WATER RESULTS - METALS 1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

FIGURE H.4

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G014 - Last Saved By: MJerome on 1/21/25

LEGEND

PROPERTY LINE

STREAM SWALE

SURFACE WATER SAMPLE LOCATION

ESTIMATED LIMIT OF SAND AND SHREDDER RESIDUE FILL

ESTIMATED LIMIT OF LIME WASTE FILL

SW-04	9/15/2014
Aroclor-1016 (PCB-1016)	0.0050 U
Aroclor-1221 (PCB-1221)	0.010 U
Aroclor-1232 (PCB-1232)	0.0050 U
Aroclor-1242 (PCB-1242)	0.0026 J
Aroclor-1248 (PCB-1248)	0.0050 U
Aroclor-1254 (PCB-1254)	0.0025 J
Aroclor-1260 (PCB-1260)	0.0022 J
Hexachlorobenzene	0.001 U

SAMPLE LOCATION

SAMPLE DATE

RESULT (µg/L)

PARAMETER

EXCEEDANCE

Parameter	Cleanup Level (µg/L)
Aroclor-1016 (PCB-1016)	0.003
Aroclor-1221 (PCB-1221)	NV
Aroclor-1232 (PCB-1232)	NV
Aroclor-1242 (PCB-1242)	NV
Aroclor-1248 (PCB-1248)	NV
Aroclor-1254 (PCB-1254)	0.000104
Aroclor-1260 (PCB-1260)	NV
Hexachlorobenzene	0.000005

SW-04	11/20/1998	9/15/2014
Aroclor-1016 (PCB-1016)	1.0 U	0.0050 U
Aroclor-1221 (PCB-1221)	1.0 U	0.010 U
Aroclor-1232 (PCB-1232)	1.0 U	0.0050 U
Aroclor-1242 (PCB-1242)	1.0 U	0.0026 J
Aroclor-1248 (PCB-1248)	1.0 U	0.0050 U
Aroclor-1254 (PCB-1254)	1.0 U	0.0025 J
Aroclor-1260 (PCB-1260)	1.0 U	0.0022 J
Hexachlorobenzene	1 U	0.001 U

SW-03	11/20/1998	9/15/2014
Aroclor-1016 (PCB-1016)	1.0 U/1.0 U	0.0050 U
Aroclor-1221 (PCB-1221)	1.0 U/1.0 U	0.010 U
Aroclor-1232 (PCB-1232)	1.0 U/1.0 U	0.0050 U
Aroclor-1242 (PCB-1242)	1.0 U/1.0 U	0.0022 J
Aroclor-1248 (PCB-1248)	1.0 U/1.0 U	0.0050 U
Aroclor-1254 (PCB-1254)	1.0 U/1.0 U	0.0024 J
Aroclor-1260 (PCB-1260)	1.0 U/1.0 U	0.0015 J
Hexachlorobenzene	1 U/1 U	0.001 U

SW-05	9/15/2014
Aroclor-1016 (PCB-1016)	0.0050 U
Aroclor-1221 (PCB-1221)	0.010 U
Aroclor-1232 (PCB-1232)	0.0050 U
Aroclor-1242 (PCB-1242)	0.0038 J
Aroclor-1248 (PCB-1248)	0.0050 U
Aroclor-1254 (PCB-1254)	0.0088 J
Aroclor-1260 (PCB-1260)	0.0056 J
Hexachlorobenzene	0.0003 J

SW-02	11/20/1998	9/15/2014
Aroclor-1016 (PCB-1016)	1.0 U	0.0051 U/0.0050 U
Aroclor-1221 (PCB-1221)	1.0 U	0.011 U/0.010 U
Aroclor-1232 (PCB-1232)	1.0 U	0.0051 U/0.0050 U
Aroclor-1242 (PCB-1242)	1.0 U	0.0056/0.0029 J
Aroclor-1248 (PCB-1248)	1.0 U	0.0051 U/0.0050 U
Aroclor-1254 (PCB-1254)	1.0 U	0.017 J/0.0042 J
Aroclor-1260 (PCB-1260)	1.0 U	0.0095 J/0.0025 J
Hexachlorobenzene	1 U	0.0011 U/0.00023 J

SW-01	11/20/1998	9/15/2014
Aroclor-1016 (PCB-1016)	1.0 U	0.0050 U
Aroclor-1221 (PCB-1221)	1.0 U	0.010 U
Aroclor-1232 (PCB-1232)	1.0 U	0.0050 U
Aroclor-1242 (PCB-1242)	1.0 U	0.0016 J
Aroclor-1248 (PCB-1248)	1.0 U	0.0050 U
Aroclor-1254 (PCB-1254)	1.0 U	0.0010 J
Aroclor-1260 (PCB-1260)	1.0 U	0.0020 J
Hexachlorobenzene	1 U	0.00028 J

SW-03
SW-04
SW-05
SW-02
SW-01
GATE
DRAINAGE
DRAINAGE
DRAINAGE
DRAINAGE
DRAINAGE
MARINE VIEW DRIVE

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SCALE IN FEET

SURFACE WATER RESULTS - PCBS AND PESTICIDES 1998-2014

1913 MARINE VIEW DRIVE SITE
TACOMA, WASHINGTON

Geosyntec consultants

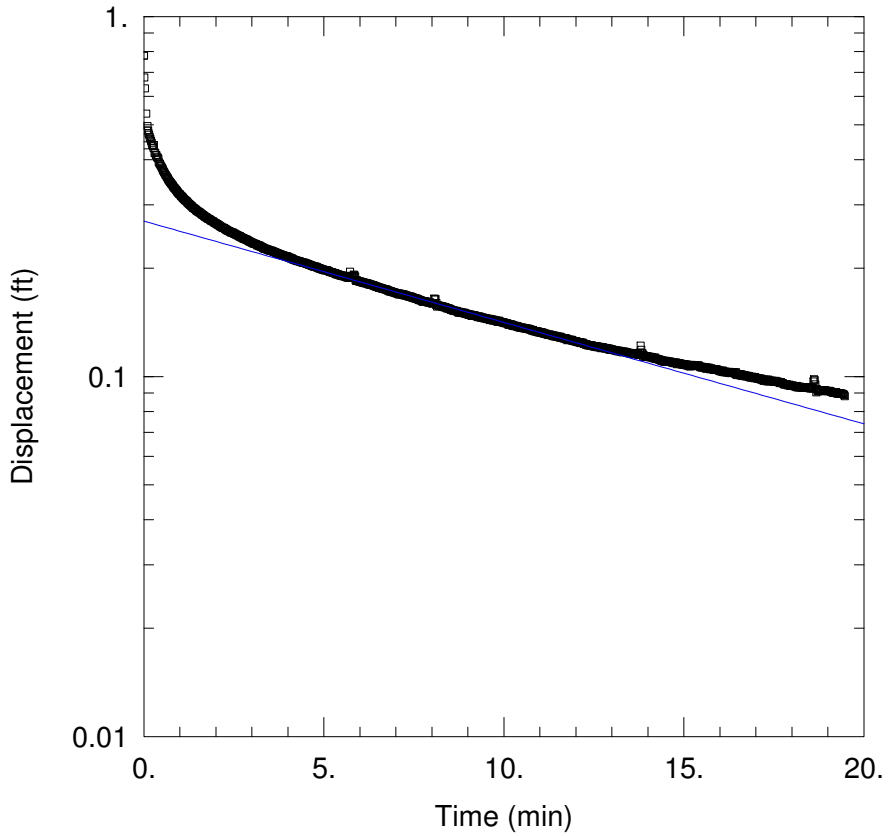
FIGURE H.5

PROJECT NO: TR0837 | JANUARY 2025

C:_GEO-ACC\ACCDOCS\GEOSYNTEC\GSH_TACOMA\PROJECT FILES\CADD\06_MARINE VIEW-DATA GAP RPT\DWGS\SHEETS\TR0837.06-G015 - Last Saved By: MJerome on 1/21/25

APPENDIX I

Slug Test Results



GM-B-1 FALLING HEAD TEST 1

Data Set: I:\...\GM-B-1 FH1.aqt
Date: 08/05/15 Time: 18:36:26

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 6.268E-5 cm/sec
y0 = 0.27 ft

AQUIFER DATA

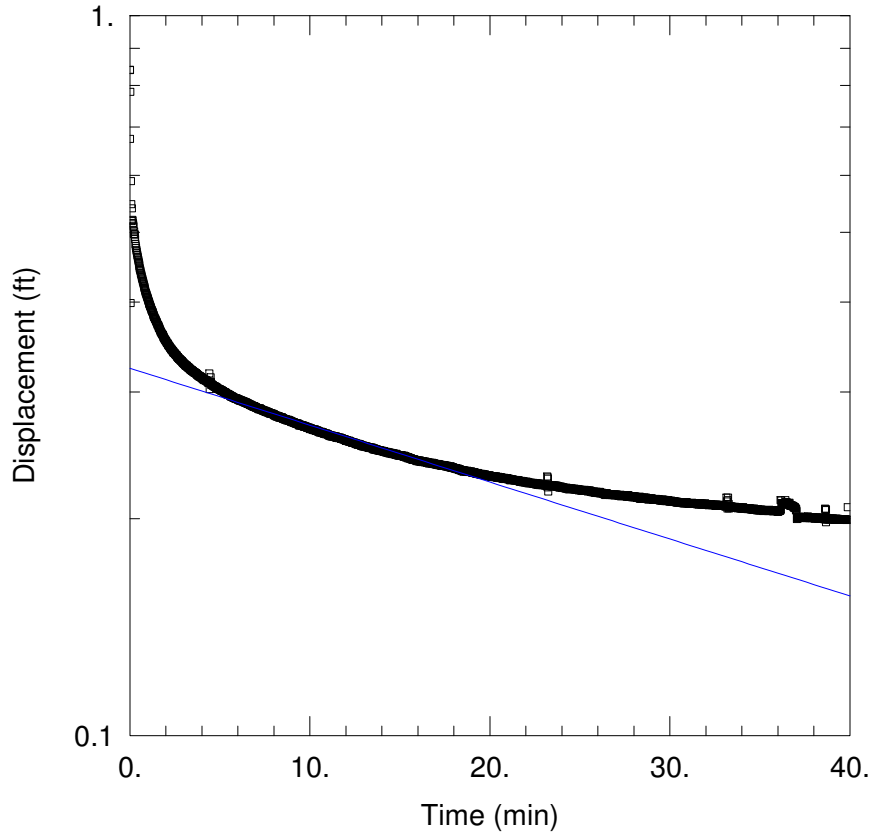
Saturated Thickness: 12.49 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1)

Initial Displacement: 0.78 ft
Total Well Penetration Depth: 12.49 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 12.49 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1 FALLING HEAD TEST 2

Data Set: I:\...\GM-B-1 FH2.aqt
Date: 08/05/15 Time: 18:35:57

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.76E-5 cm/sec
y0 = 0.3237 ft

AQUIFER DATA

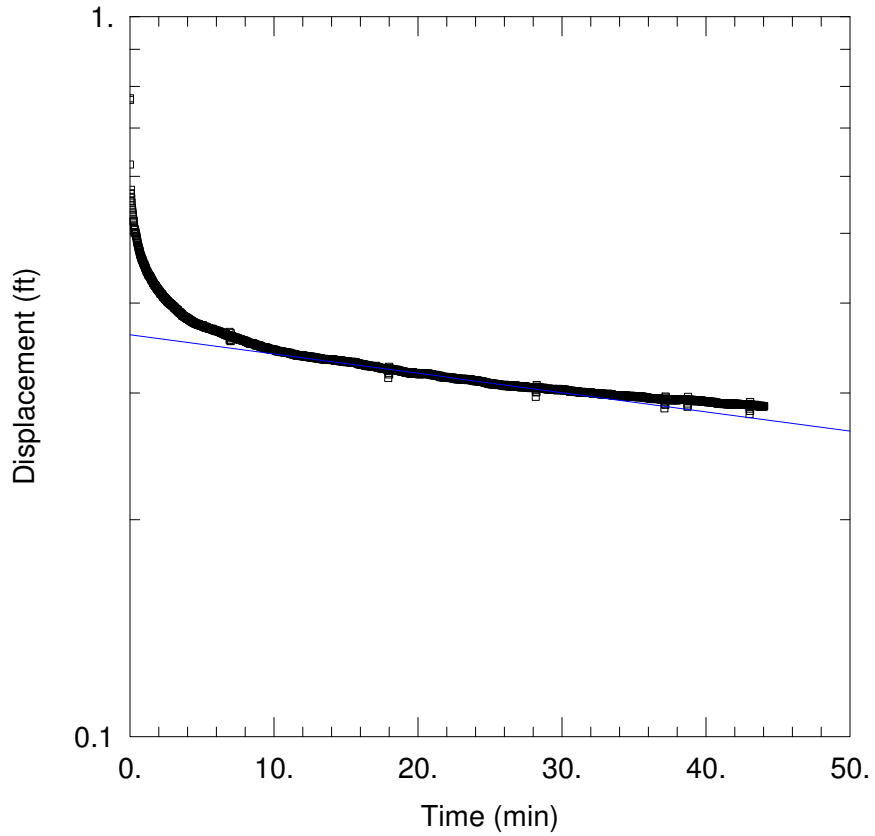
Saturated Thickness: 12.49 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1)

Initial Displacement: 0.84 ft
Total Well Penetration Depth: 12.49 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 12.49 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1 RISING HEAD TEST 1

Data Set: I:\...\GM-B-1 RH1.aqt
Date: 08/05/15 Time: 18:35:11

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 5.963E-6 cm/sec
y0 = 0.3614 ft

AQUIFER DATA

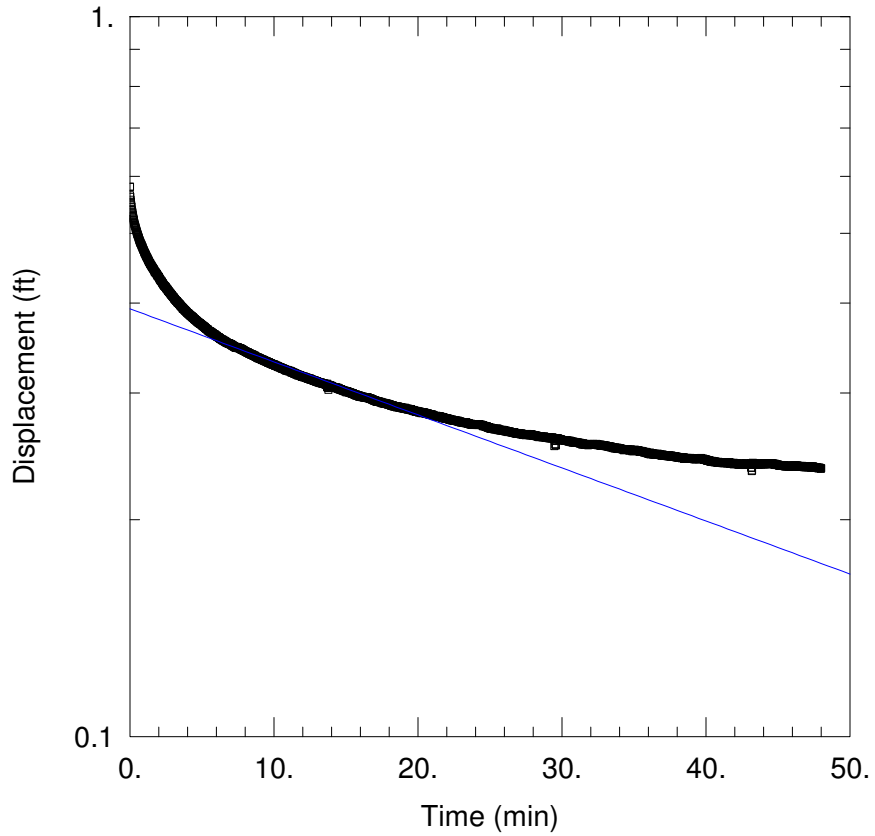
Saturated Thickness: 12.49 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1)

Initial Displacement: 0.77 ft
Total Well Penetration Depth: 12.49 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 12.49 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1 RISING HEAD TEST 2

Data Set: I:\...\GM-B-1 RH2.aqt
Date: 08/05/15 Time: 18:37:10

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.641E-5 cm/sec
y0 = 0.3927 ft

AQUIFER DATA

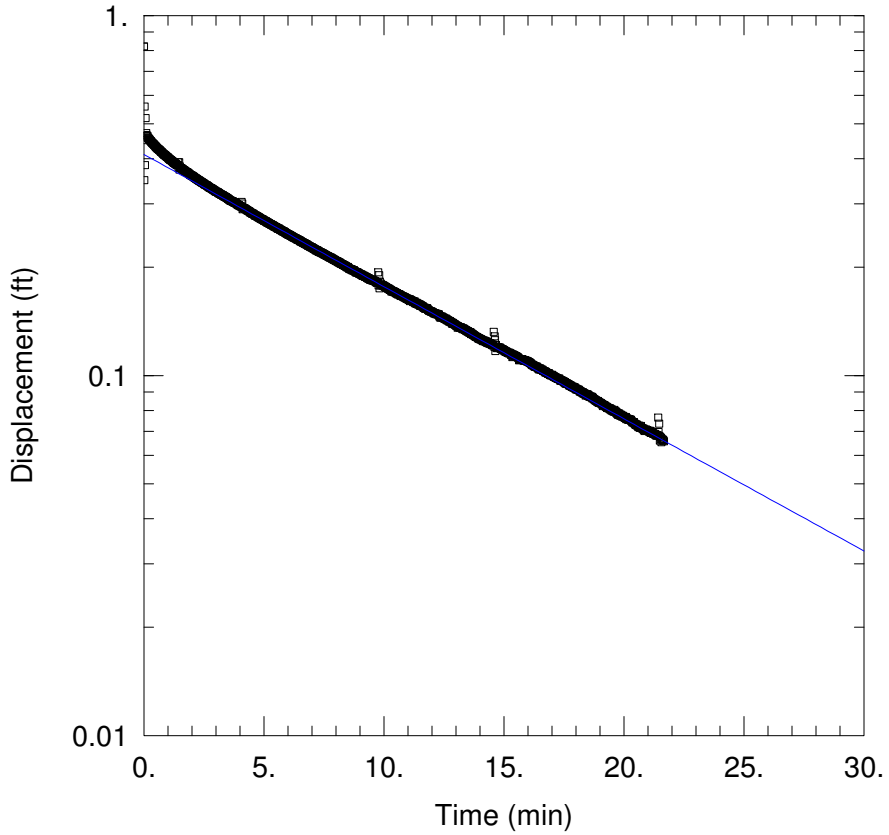
Saturated Thickness: 12.49 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1)

Initial Displacement: 0.58 ft
Total Well Penetration Depth: 12.49 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 12.49 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1A FALLING HEAD TEST 1

Data Set: I:\...\GM-B-1A FH1.aqt
Date: 08/05/15 Time: 18:41:52

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 9.083E-5 cm/sec
y0 = 0.4112 ft

AQUIFER DATA

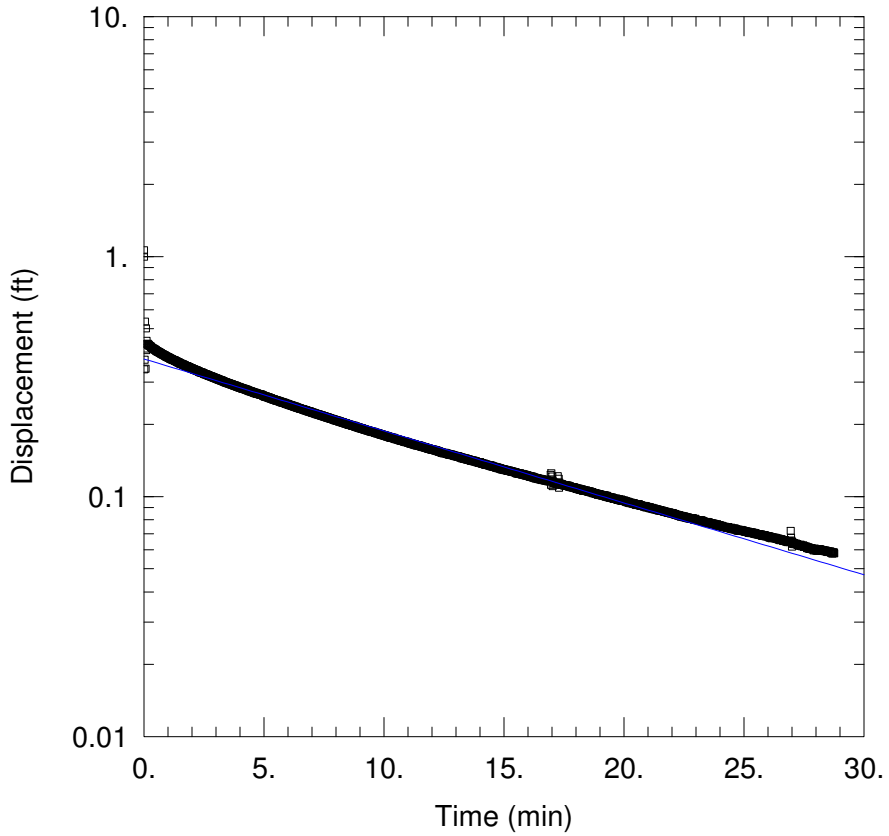
Saturated Thickness: 22.34 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1A)

Initial Displacement: 0.82 ft
Total Well Penetration Depth: 22.34 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.34 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1A FALLING HEAD TEST 2

Data Set: I:\...\GM-B-1A FH2.aqt
Date: 08/05/15 Time: 18:41:07

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.419E-5 cm/sec
y0 = 0.3744 ft

AQUIFER DATA

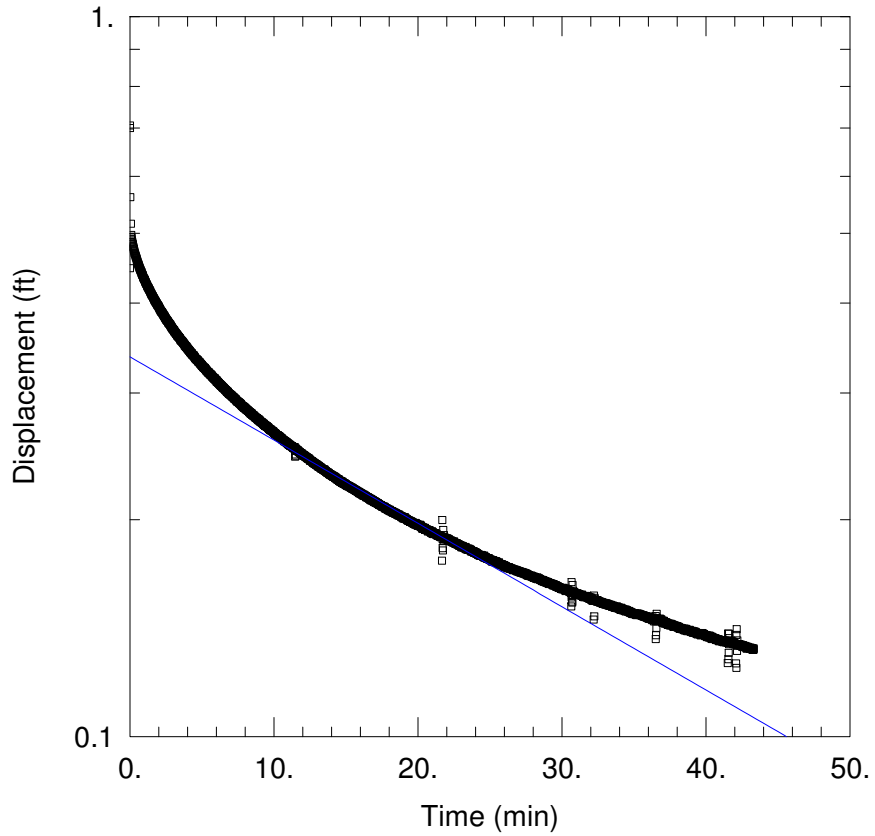
Saturated Thickness: 22.34 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1A)

Initial Displacement: 1. ft
Total Well Penetration Depth: 22.34 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.34 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1A RISING HEAD TEST 1

Data Set: I:\...\GM-B-1A RH1.aqt
Date: 08/05/15 Time: 18:40:35

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 2.863E-5 cm/sec
y0 = 0.3369 ft

AQUIFER DATA

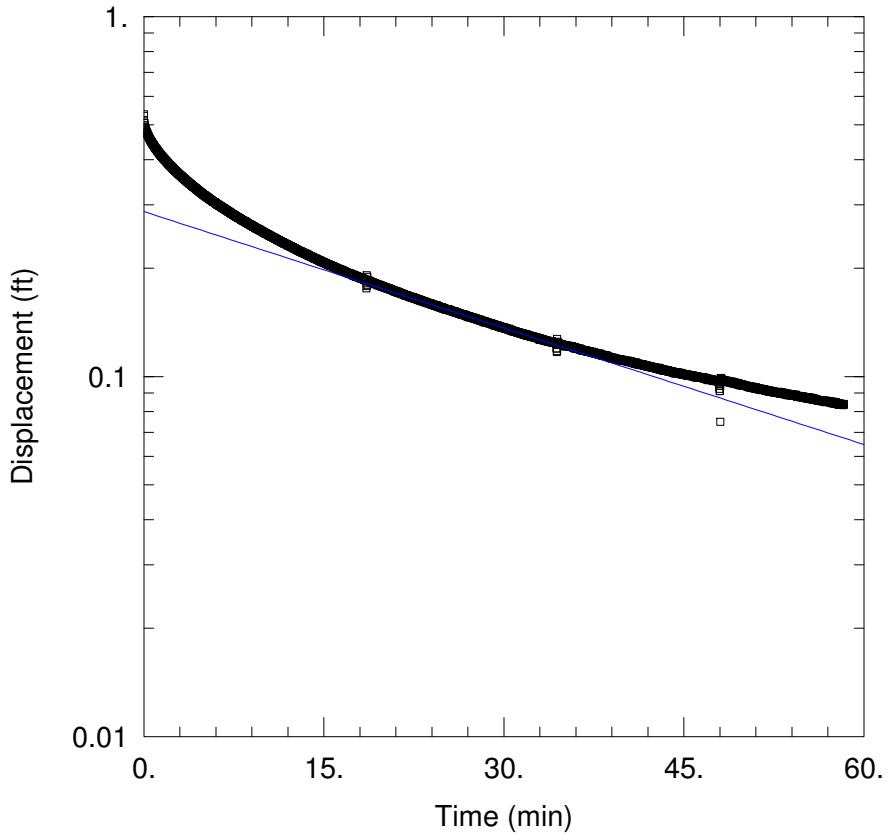
Saturated Thickness: 22.34 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1A)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 22.34 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.34 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-1A RISING HEAD TEST 2

Data Set: I:\...\GM-B-1A RH2.aqt
Date: 08/05/15 Time: 18:42:28

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 2.668E-5 cm/sec
y0 = 0.2871 ft

AQUIFER DATA

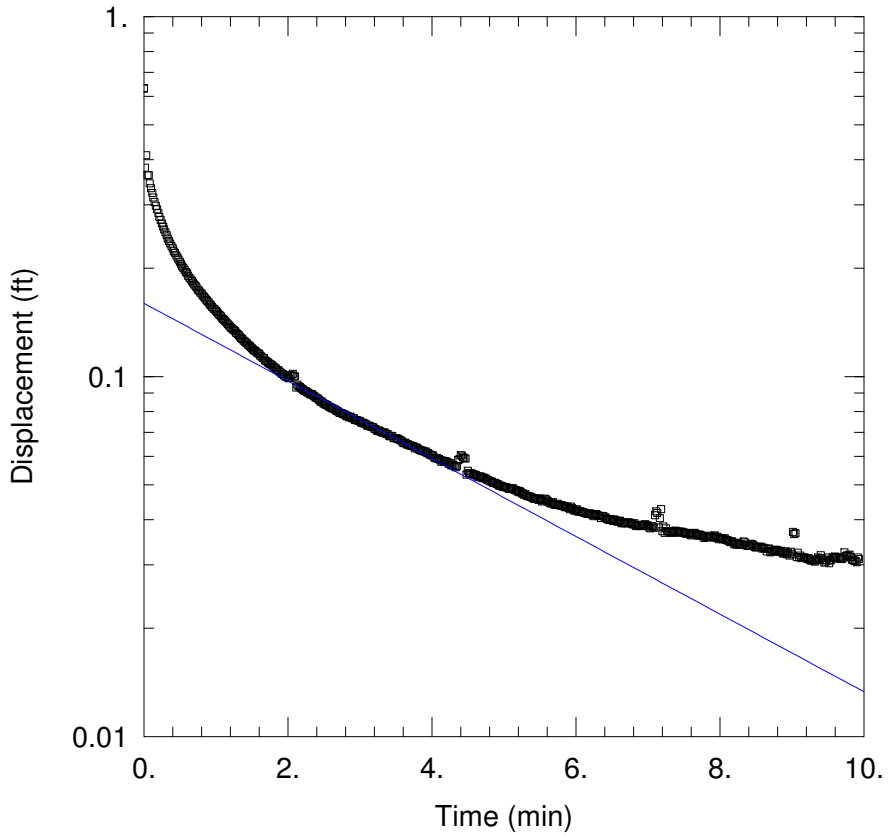
Saturated Thickness: 22.34 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-1A)

Initial Displacement: 0.53 ft
Total Well Penetration Depth: 22.34 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.34 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-2 FALLING HEAD TEST 1

Data Set: I:\...\GM-B-2 FH1.aqt
Date: 08/05/15 Time: 18:46:19

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

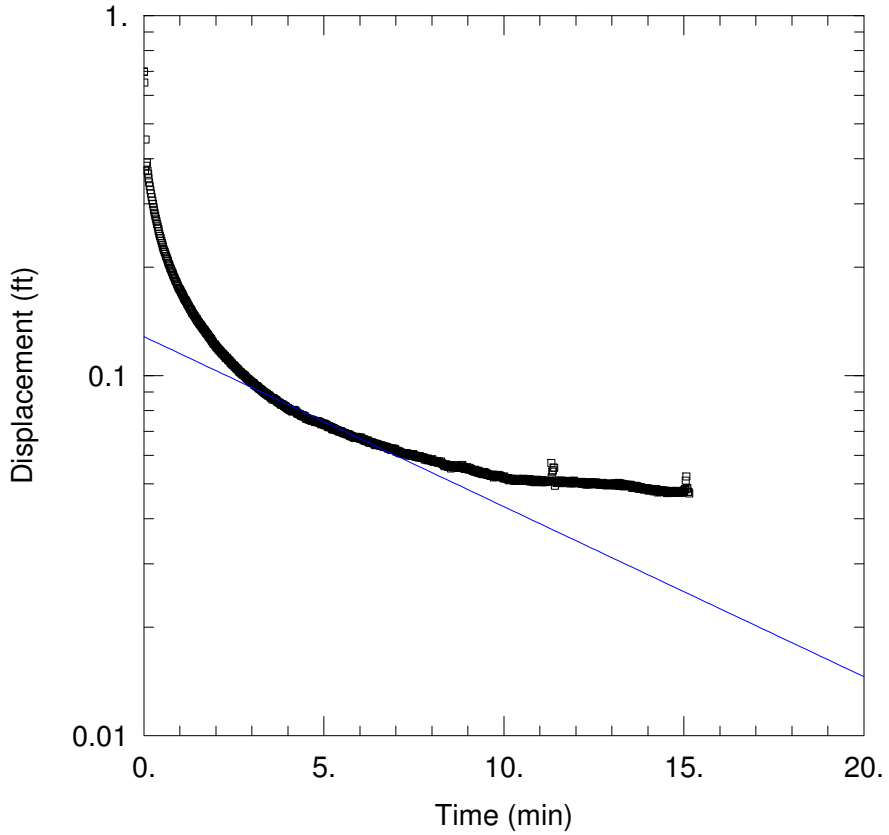
K = 0.0002293 cm/sec
y0 = 0.1597 ft

AQUIFER DATA

Saturated Thickness: 10. ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2)

Initial Displacement: 0.63 ft
Total Well Penetration Depth: 9.3 ft
Casing Radius: 0.0833 ft
Static Water Column Height: 10. ft
Screen Length: 4.3 ft
Well Radius: 0.354 ft



GM-B-2 FALLING HEAD TEST 2

Data Set: I:\...\GM-B-2 FH2.aqt
Date: 08/05/15 Time: 18:45:50

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001004 cm/sec
y0 = 0.1283 ft

AQUIFER DATA

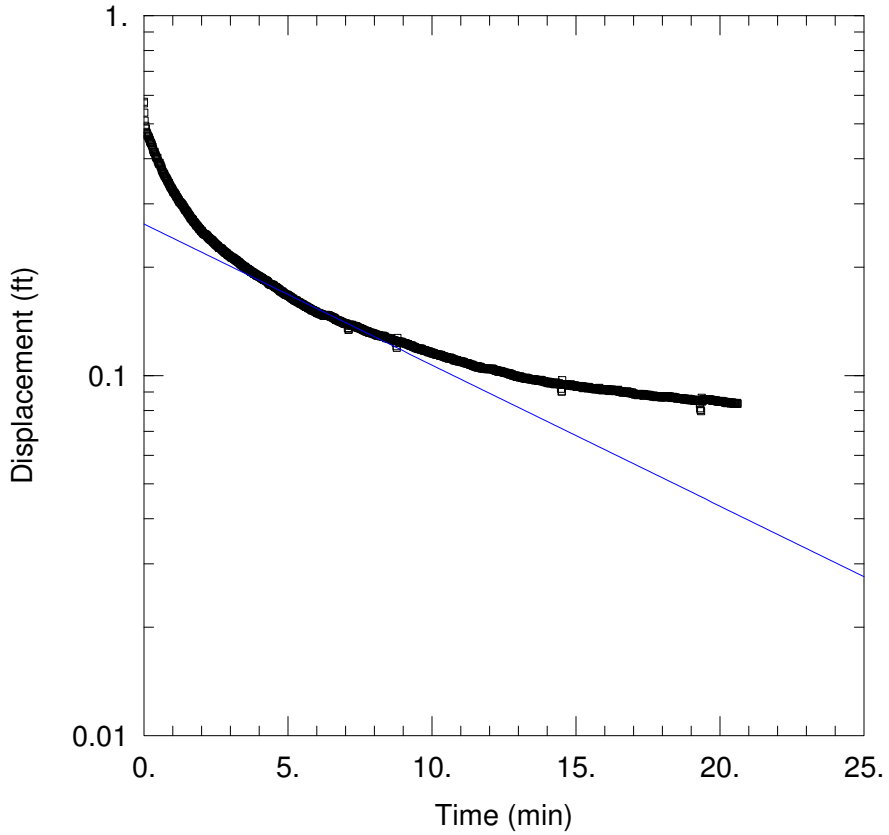
Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2)

Initial Displacement: 0.7 ft
Total Well Penetration Depth: 9.3 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10. ft
Screen Length: 4.3 ft
Well Radius: 0.354 ft



GM-B-2 RISING HEAD TEST 1

Data Set: I:\...\GM-B-2 RH1.aqt
Date: 08/05/15 Time: 18:45:24

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 8.33E-5 cm/sec
y0 = 0.2638 ft

AQUIFER DATA

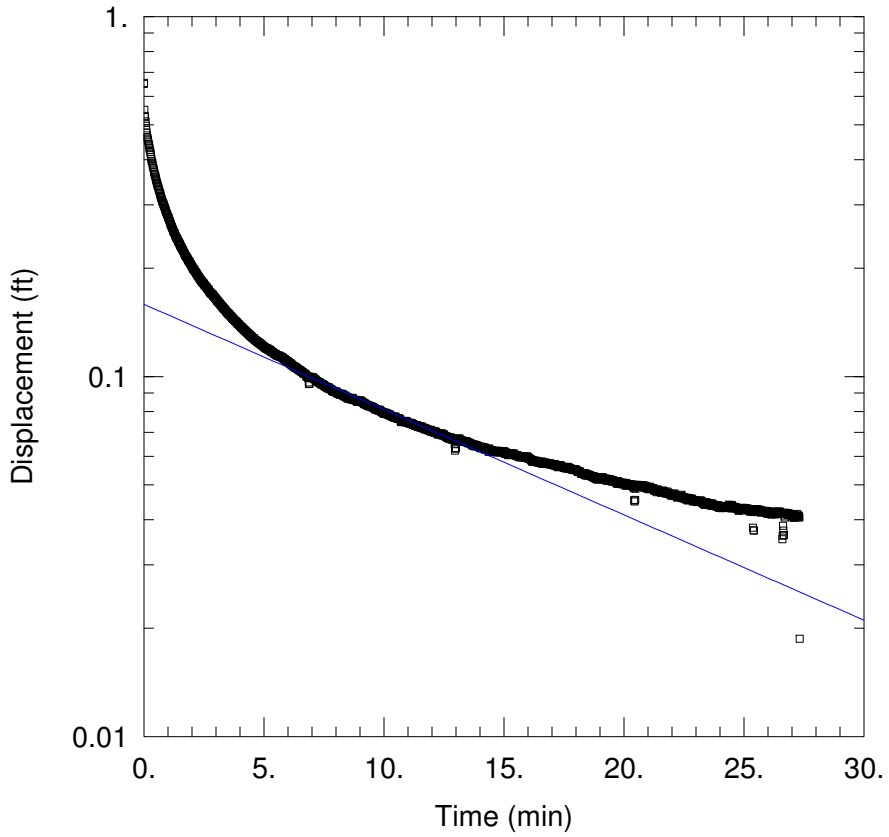
Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2)

Initial Displacement: 0.57 ft
Total Well Penetration Depth: 9.3 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10. ft
Screen Length: 4.3 ft
Well Radius: 0.354 ft



GM-B-2 RISING HEAD TEST 2

Data Set: I:\...\GM-B-2 RH2.aqt
Date: 08/05/15 Time: 18:46:46

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 6.215E-5 cm/sec
y0 = 0.1587 ft

AQUIFER DATA

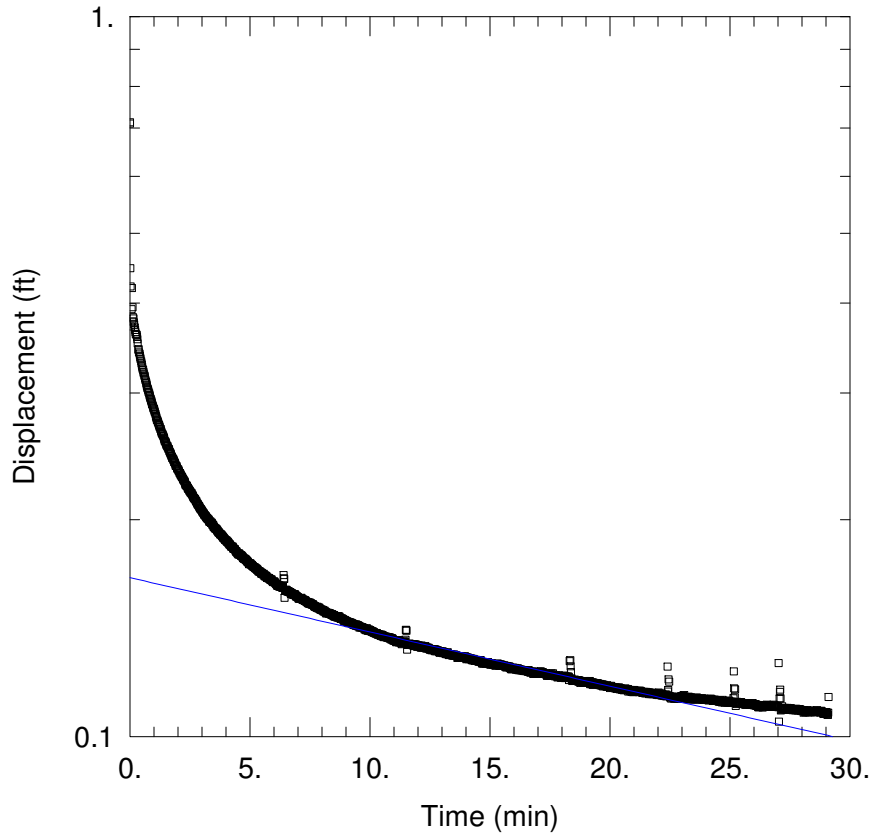
Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2)

Initial Displacement: 0.65 ft
Total Well Penetration Depth: 9.3 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10. ft
Screen Length: 4.3 ft
Well Radius: 0.354 ft



GM-B-2A FALLING HEAD TEST 1

Data Set: I:\...\GM-B-2A FH1.aqt
Date: 08/05/15 Time: 18:49:08

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.864E-5 cm/sec
y0 = 0.1662 ft

AQUIFER DATA

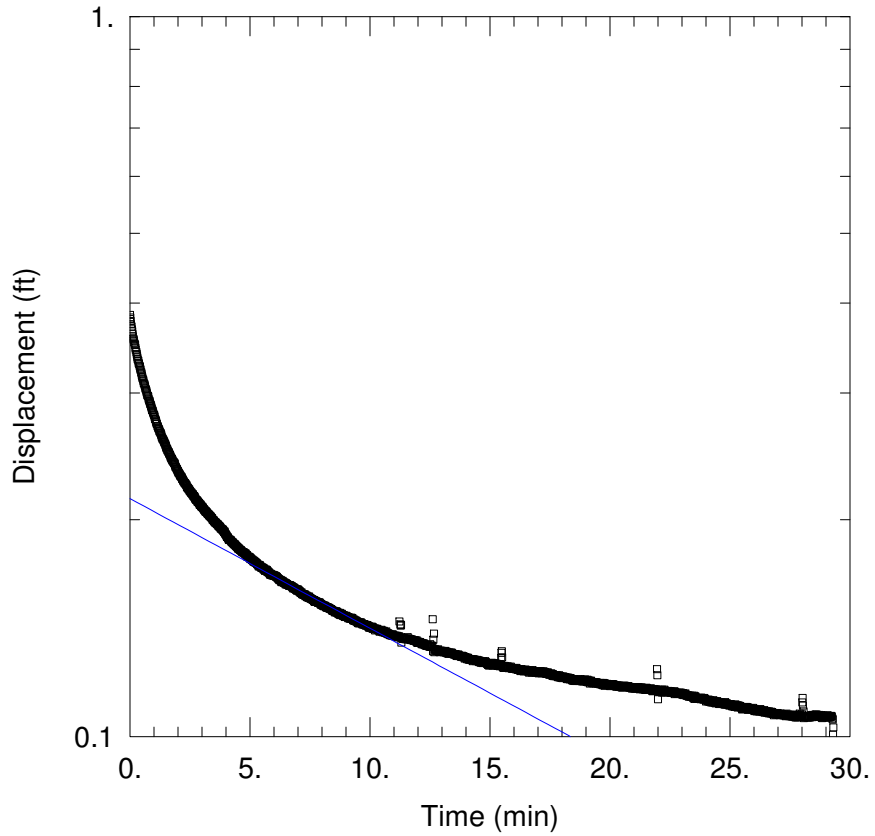
Saturated Thickness: 22.37 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2A)

Initial Displacement: 0.71 ft
Total Well Penetration Depth: 22.37 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.37 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-2A FALLING HEAD TEST 2

Data Set: I:\...\GM-B-2A FH2.aqt
Date: 08/05/15 Time: 18:48:35

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 4.456E-5 cm/sec
y0 = 0.214 ft

AQUIFER DATA

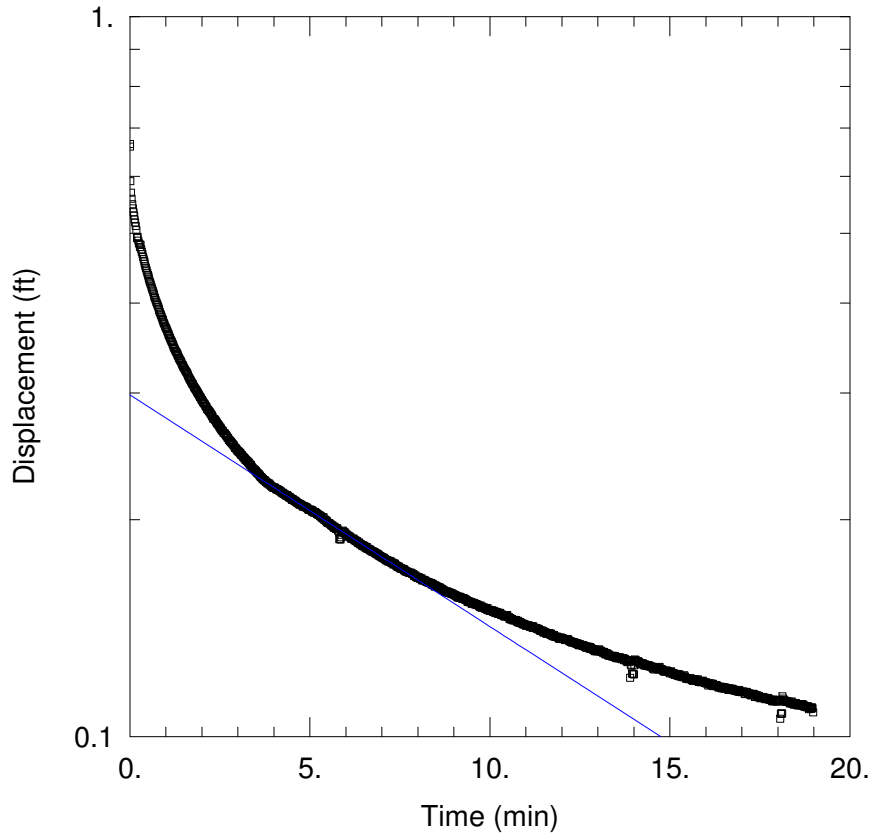
Saturated Thickness: 22.37 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2A)

Initial Displacement: 0.38 ft
Total Well Penetration Depth: 22.37 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.37 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-2A RISING HEAD TEST 1

Data Set: I:\...\GM-B-2A RH1.aqt
Date: 08/05/15 Time: 18:48:05

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.961E-5 cm/sec
y0 = 0.2982 ft

AQUIFER DATA

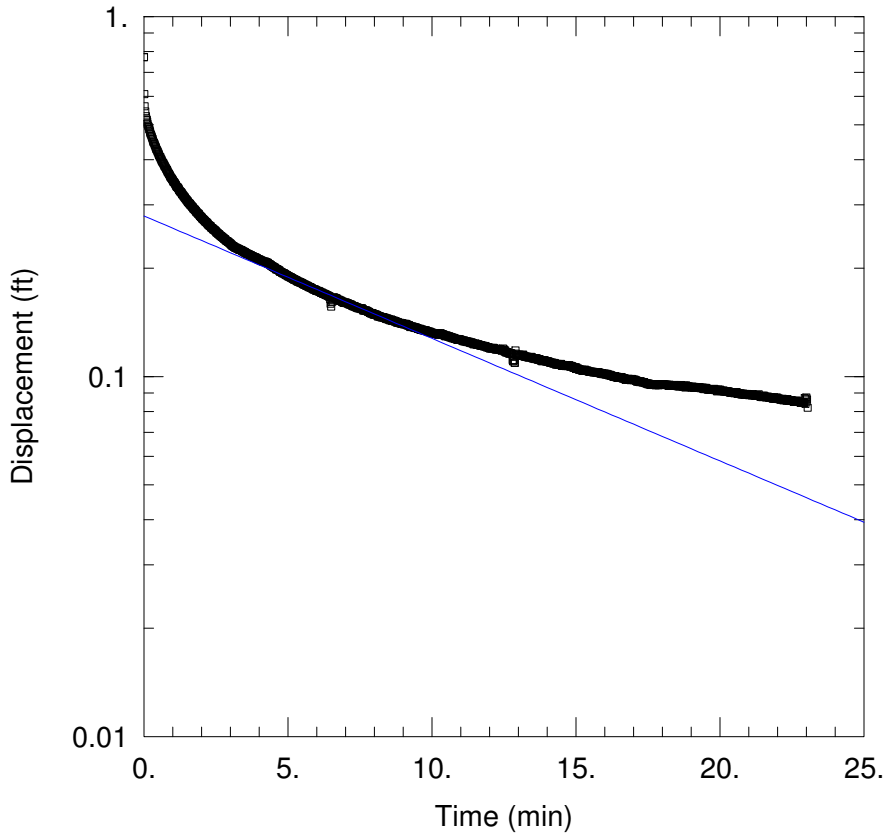
Saturated Thickness: 22.37 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2A)

Initial Displacement: 0.66 ft
Total Well Penetration Depth: 22.37 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.37 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-2A RISING HEAD TEST 2

Data Set: I:\...\GM-B-2A RH2.aqt
Date: 08/05/15 Time: 18:49:36

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 8.421E-5 cm/sec
y0 = 0.2793 ft

AQUIFER DATA

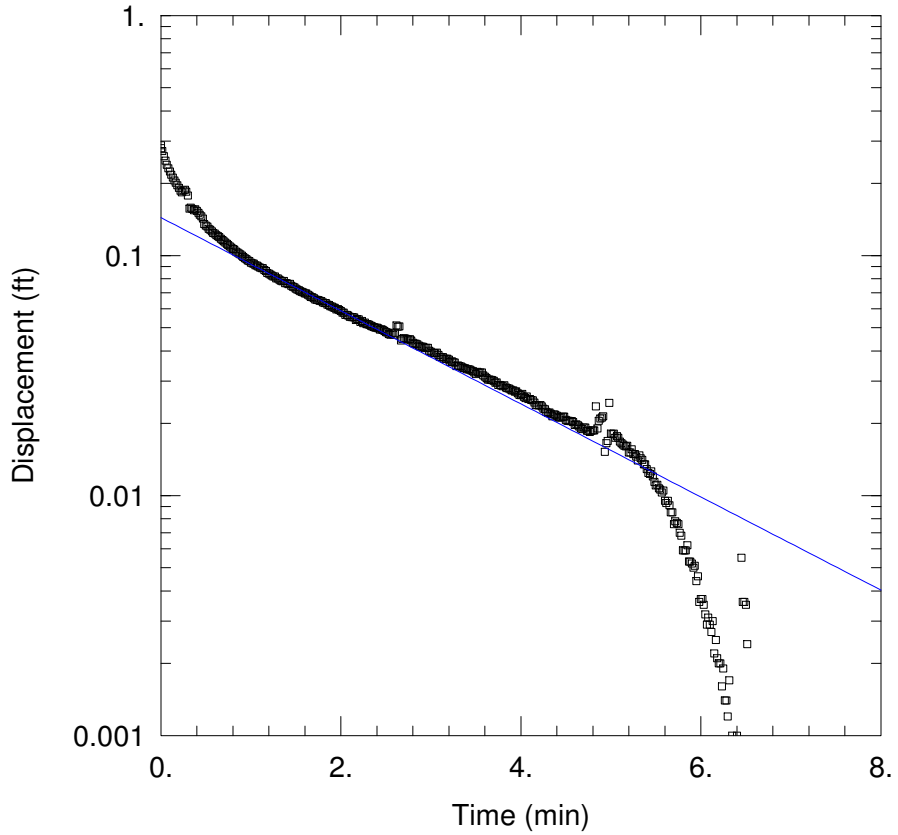
Saturated Thickness: 22.37 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-2A)

Initial Displacement: 0.77 ft
Total Well Penetration Depth: 22.37 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 22.37 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-3R FALLING HEAD TEST 1

Data Set: I:\...\GM-B-3R FH1.aqt
Date: 08/05/15 Time: 18:52:57

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0005391 cm/sec
y0 = 0.1438 ft

AQUIFER DATA

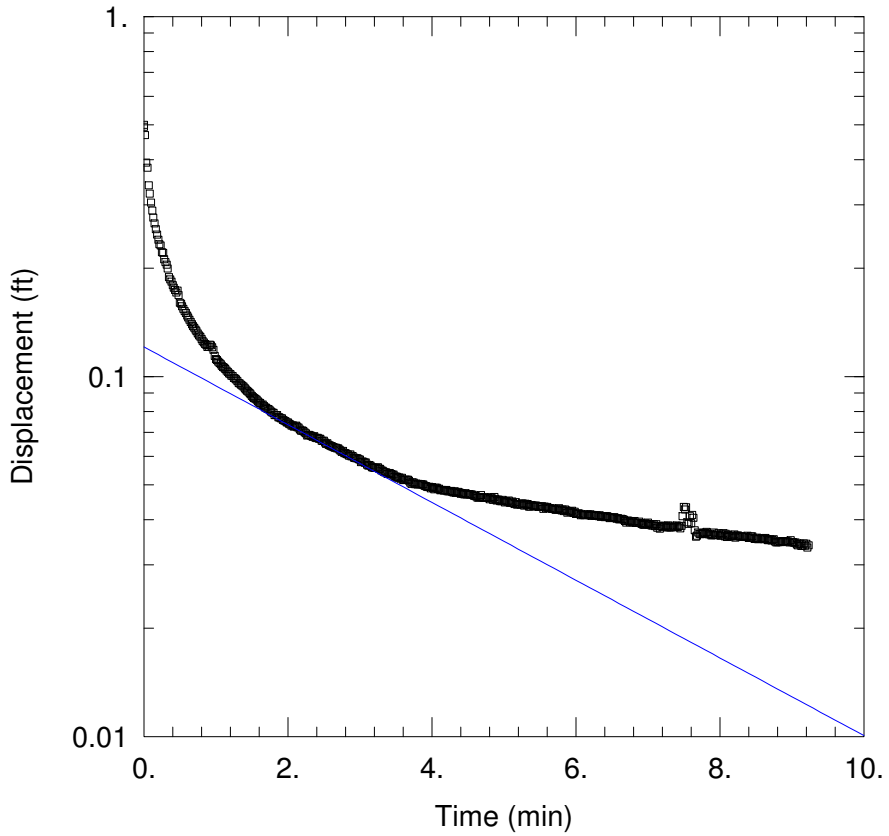
Saturated Thickness: 10.94 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.28 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-3R FALLING HEAD TEST 2

Data Set: I:\...\GM-B-3R FH2.aqt
Date: 08/05/15 Time: 18:53:14

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

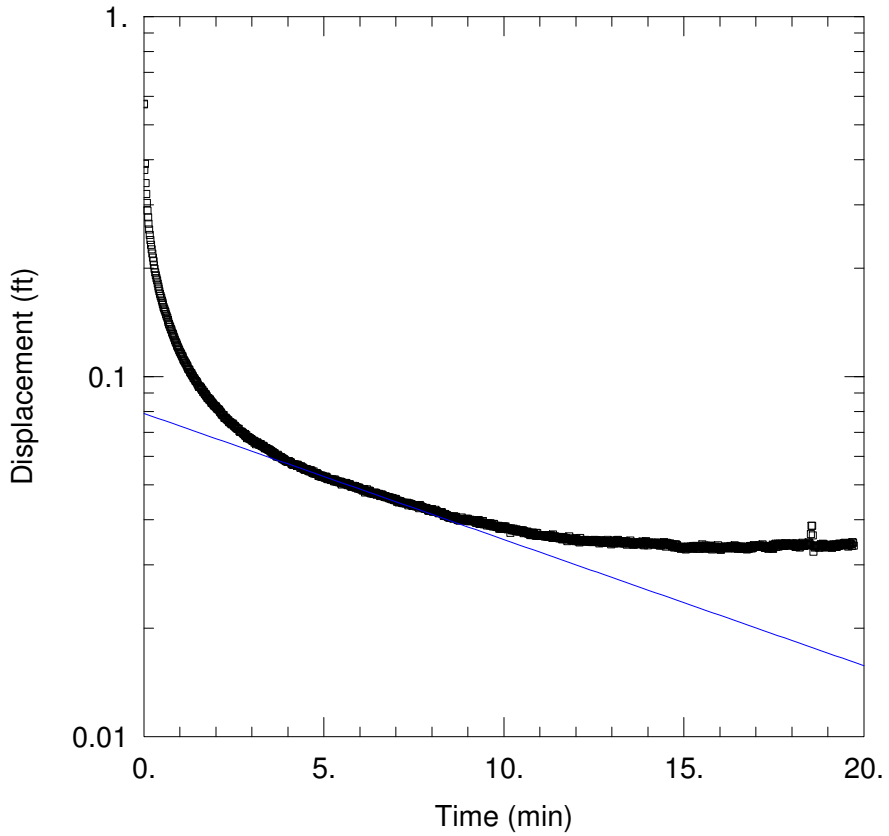
K = 0.0002999 cm/sec
y0 = 0.1208 ft

AQUIFER DATA

Saturated Thickness: 10.94 ft
Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.5 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft
Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-3R FALLING HEAD TEST 3

Data Set: I:\...\GM-B-3R FH3.aqt
Date: 08/05/15 Time: 18:52:21

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 9.737E-5 cm/sec
y0 = 0.07898 ft

AQUIFER DATA

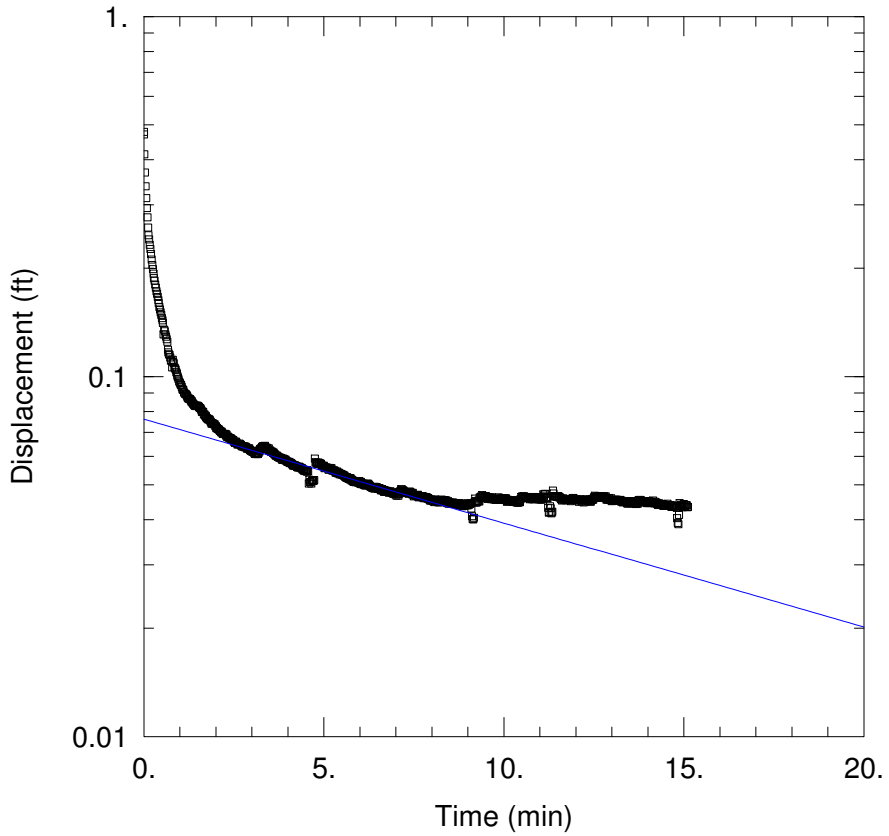
Saturated Thickness: 10.94 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.57 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-3R RISING HEAD TEST 1

Data Set: I:\...\GM-B-3R RH1.aqt
Date: 08/05/15 Time: 18:54:54

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 8.024E-5 cm/sec
y0 = 0.07614 ft

AQUIFER DATA

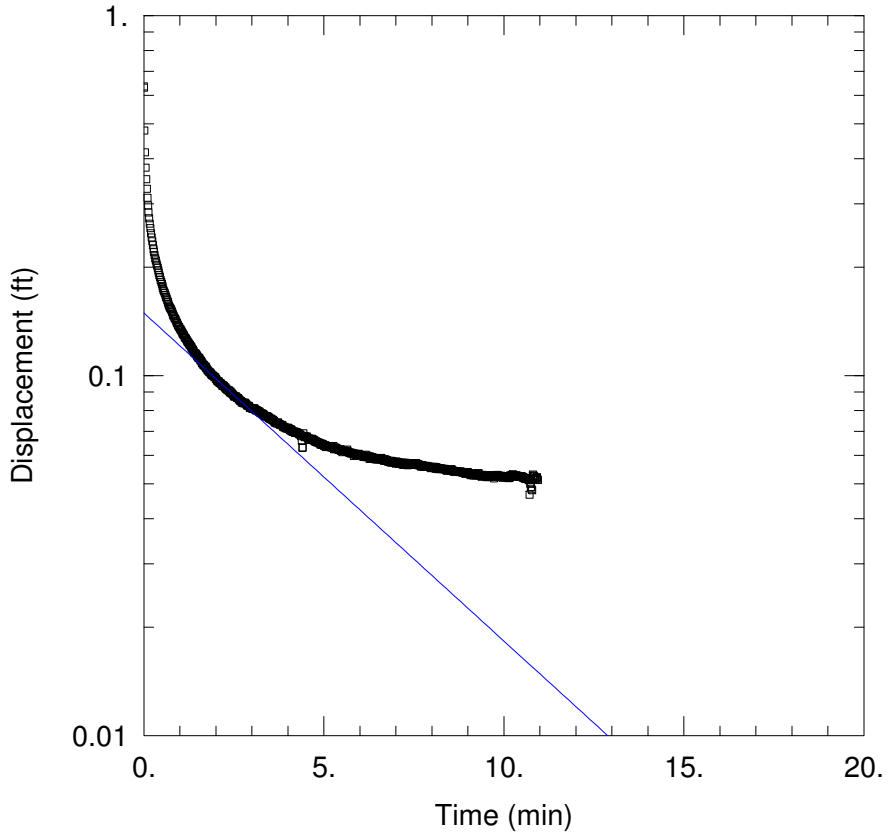
Saturated Thickness: 10.94 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.47 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-3R RISING HEAD TEST 2

Data Set: I:\...\GM-B-3R RH2.aqt
Date: 08/05/15 Time: 18:54:27

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0002532 cm/sec
y0 = 0.1492 ft

AQUIFER DATA

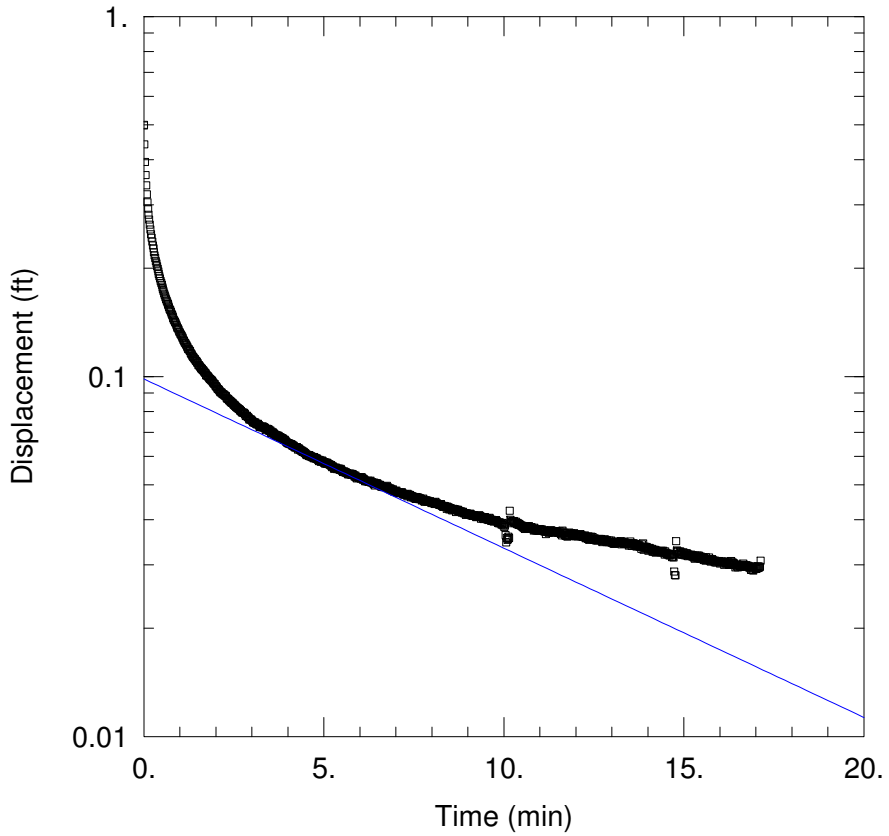
Saturated Thickness: 10.94 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.63 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-3R RISING HEAD TEST 3

Data Set: I:\...\GM-B-3R RH3.aqt
Date: 08/05/15 Time: 18:55:18

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001306 cm/sec
y0 = 0.09842 ft

AQUIFER DATA

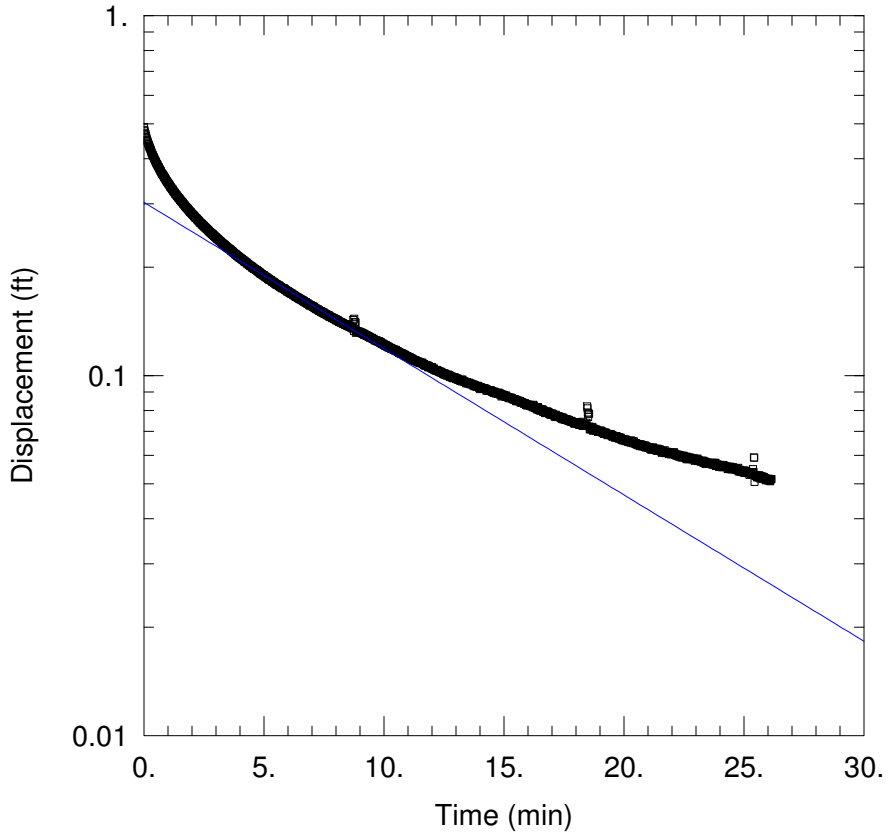
Saturated Thickness: 10.94 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-3R)

Initial Displacement: 0.5 ft
Total Well Penetration Depth: 10.94 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.94 ft
Screen Length: 3.73 ft
Well Radius: 0.354 ft



GM-B-6A FALLING HEAD TEST 1

Data Set: I:\...\GM-B-6A FH1.aqt
Date: 08/05/15 Time: 18:57:21

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001051 cm/sec
y0 = 0.3027 ft

AQUIFER DATA

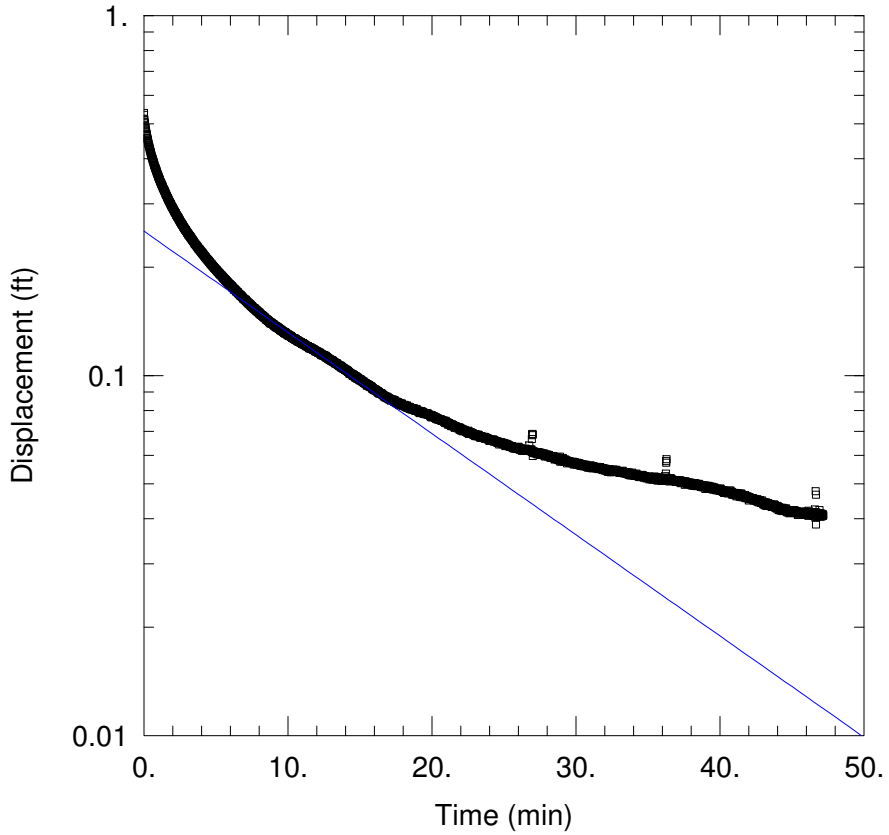
Saturated Thickness: 29.53 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6A)

Initial Displacement: 0.49 ft
Total Well Penetration Depth: 29.53 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 29.53 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-6A FALLING HEAD TEST 2

Data Set: I:\...\GM-B-6A FH2.aqt
Date: 08/05/15 Time: 18:56:57

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.274E-5 cm/sec
y0 = 0.2518 ft

AQUIFER DATA

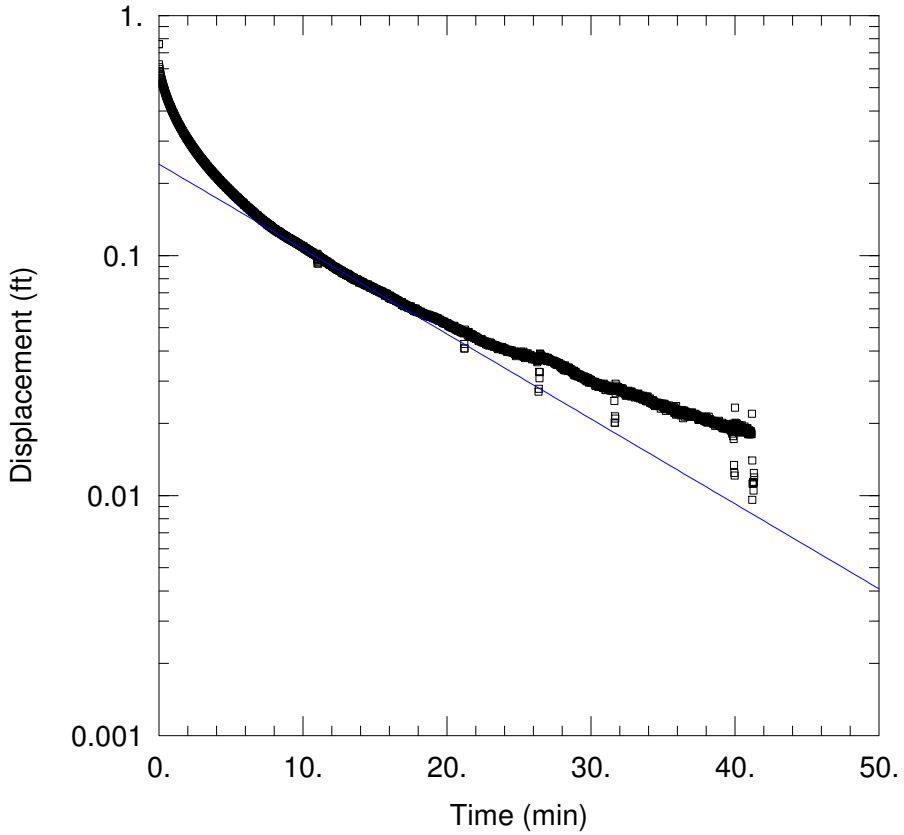
Saturated Thickness: 29.53 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6A)

Initial Displacement: 0.53 ft
Total Well Penetration Depth: 29.53 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 29.53 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-6A RISING HEAD TEST 1

Data Set: I:\...\GM-B-6A RH1.aqt
Date: 08/05/15 Time: 18:56:31

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 9.157E-5 cm/sec
y0 = 0.2405 ft

AQUIFER DATA

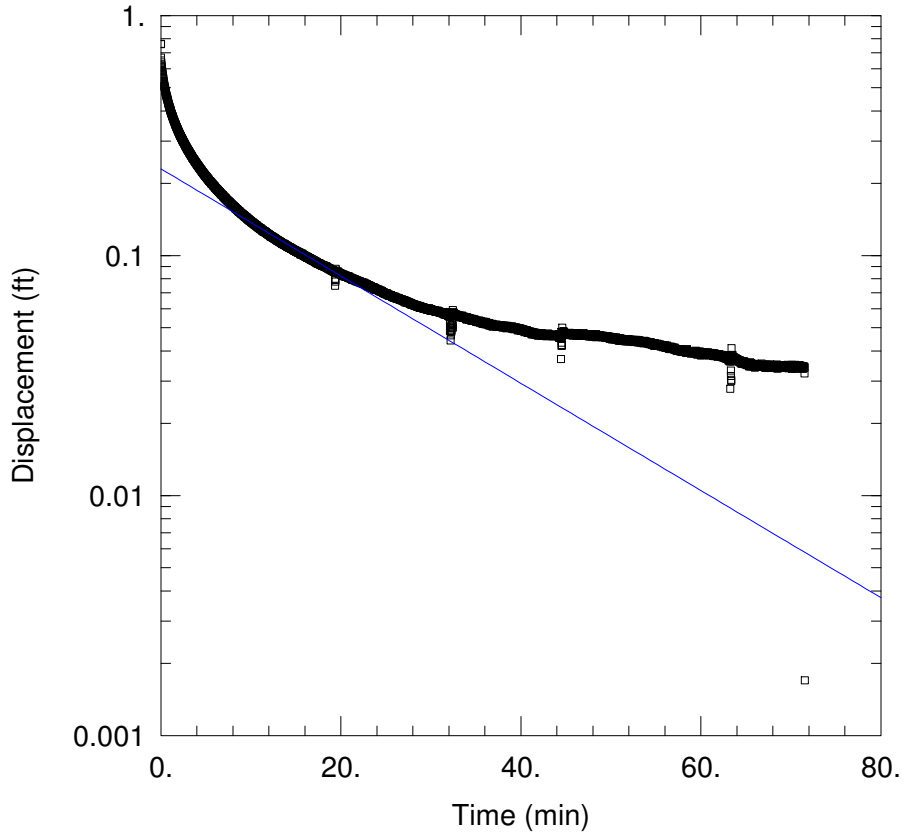
Saturated Thickness: 29.53 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6A)

Initial Displacement: 0.76 ft
Total Well Penetration Depth: 29.53 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 29.53 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-6A RISING HEAD TEST 2

Data Set: I:\...\GM-B-6A RH2.aqt
Date: 08/05/15 Time: 18:57:47

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 5.778E-5 cm/sec
y0 = 0.2297 ft

AQUIFER DATA

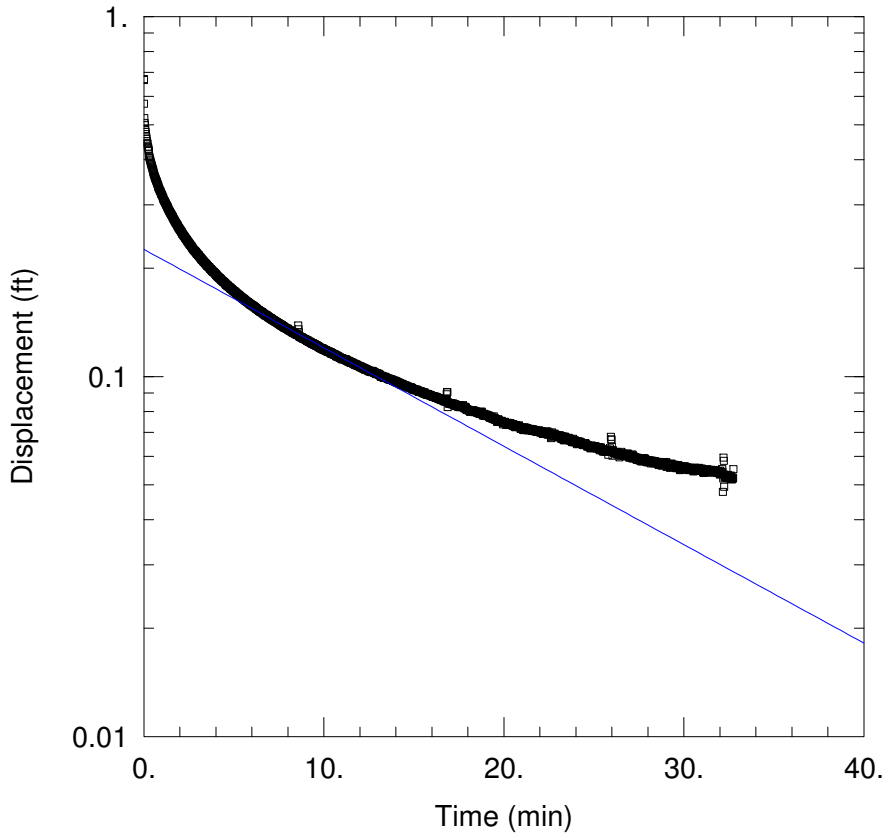
Saturated Thickness: 29.53 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6A)

Initial Displacement: 0.76 ft
Total Well Penetration Depth: 29.53 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 29.53 ft
Screen Length: 5. ft
Well Radius: 0.354 ft



GM-B-6R FALLING HEAD TEST 1

Data Set: I:\...\GM-B-6R FH1.aqt
Date: 08/06/15 Time: 10:39:01

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001086 cm/sec
y0 = 0.2255 ft

AQUIFER DATA

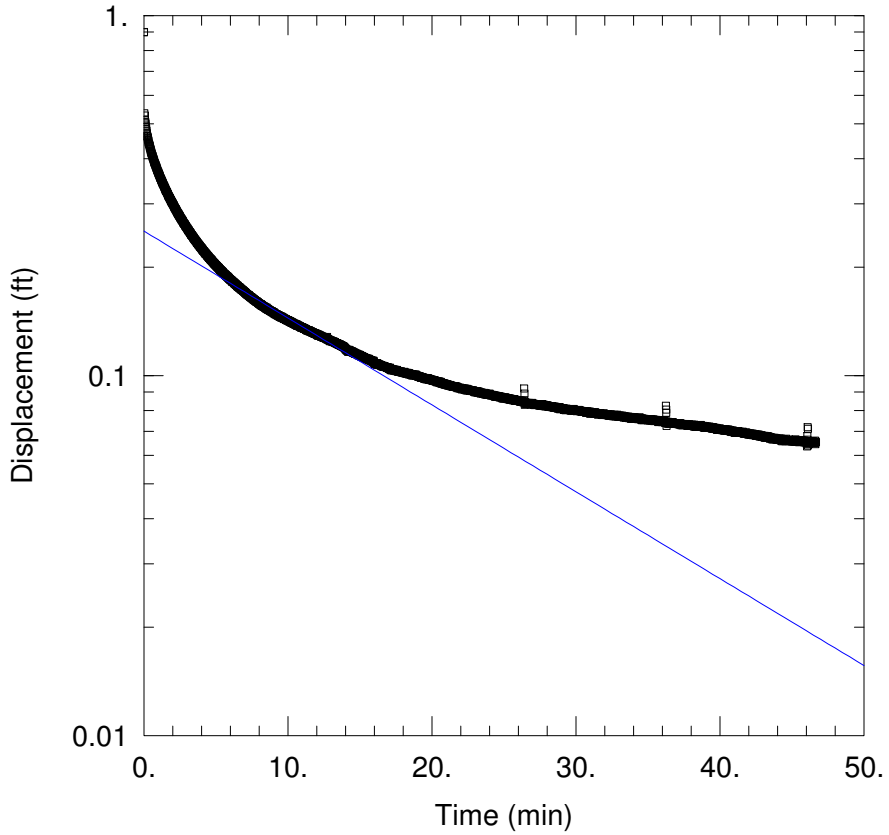
Saturated Thickness: 10.14 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6R)

Initial Displacement: 0.67 ft
Total Well Penetration Depth: 10.14 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.14 ft
Screen Length: 2.38 ft
Well Radius: 0.354 ft



GM-B-6R FALLING HEAD TEST 2

Data Set: I:\...\GM-B-6R FH2.aqt
Date: 08/06/15 Time: 10:38:41

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 9.589E-5 cm/sec
y0 = 0.2518 ft

AQUIFER DATA

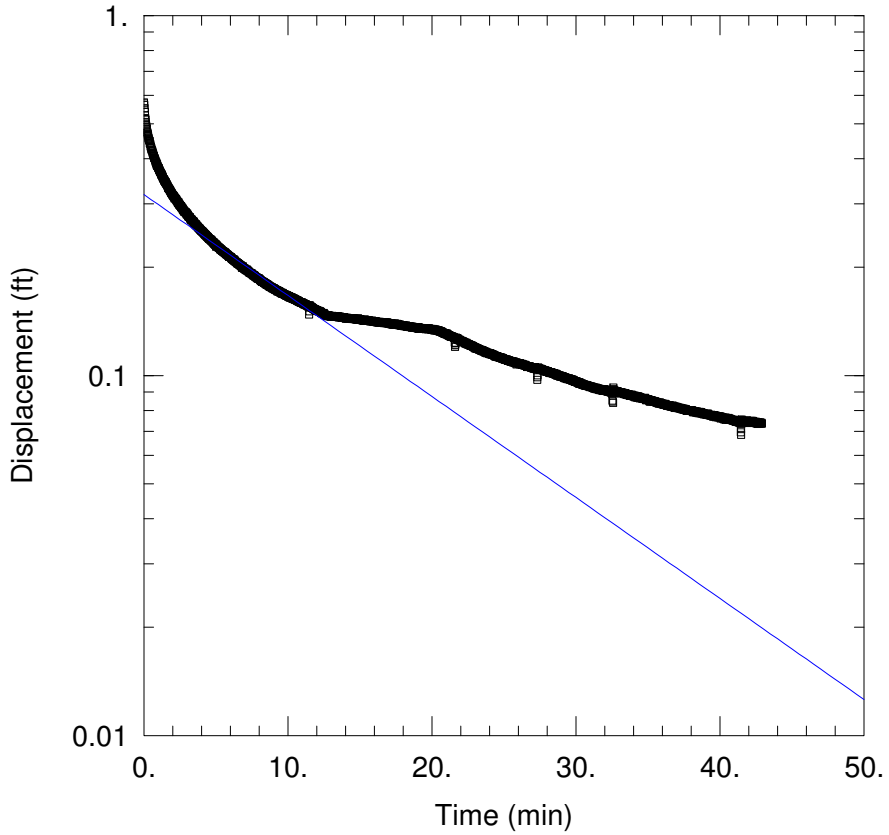
Saturated Thickness: 10.14 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6R)

Initial Displacement: 0.9 ft
Total Well Penetration Depth: 10.14 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.14 ft
Screen Length: 2.38 ft
Well Radius: 0.354 ft



GM-B-6R RISING HEAD TEST 1

Data Set: I:\...\GM-B-6R RH1.aqt
Date: 08/06/15 Time: 10:38:18

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001115 cm/sec
y0 = 0.3183 ft

AQUIFER DATA

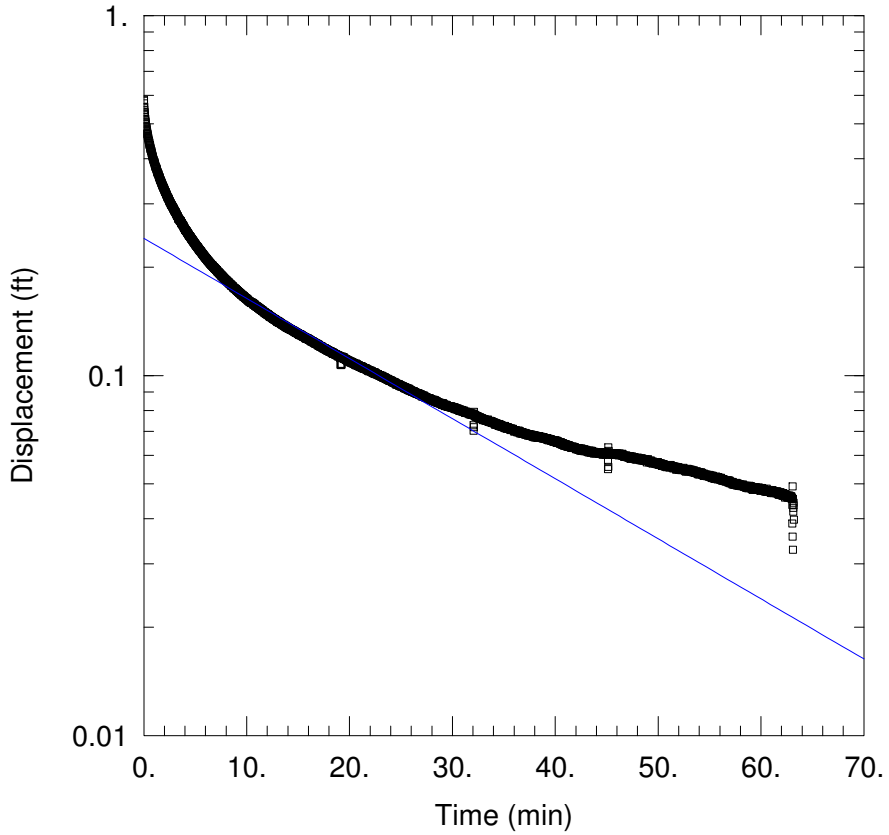
Saturated Thickness: 10.14 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6R)

Initial Displacement: 0.57 ft
Total Well Penetration Depth: 10.14 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.14 ft
Screen Length: 2.38 ft
Well Radius: 0.354 ft



GM-B-6R RISING HEAD TEST 2

Data Set: I:\...\GM-B-6R RH2.aqt
Date: 08/06/15 Time: 10:40:04

PROJECT INFORMATION

Company: Conestoga-Rovers & Associates
Client: GSHI
Project: 009973
Location: 1913 Marine View Drive
Test Date: 12/19/14

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 6.634E-5 cm/sec
y0 = 0.2405 ft

AQUIFER DATA

Saturated Thickness: 10.14 ft

Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA (GM-B-6R)

Initial Displacement: 0.58 ft
Total Well Penetration Depth: 10.14 ft
Casing Radius: 0.0833 ft

Static Water Column Height: 10.14 ft
Screen Length: 2.38 ft
Well Radius: 0.354 ft

APPENDIX J

2024 Field Forms

TR0837J: 5/14/24 Marine View Drive (MVD) Field Notes
Glenn Springs Holdings – Monitoring Well Redevelopment
Geosyntec Staff: Stephen Strehl (SS)
Subcontractor: Holt Services

0700 Holt at the GSH GWTP for safety orientation
0745 SS at GWTP for H&S
0805 SS and Holt head to the MVD Site
0810 on site
815 walk site, H&S meeting – Holt begins bailing w/ stainless steel hand bailers on GM-B-1A and GM-B-1 into 5 gallon bucket. Sediment removed, water turbid. Once sediment removed, and well exhibited hard bottom, well screen was surged with surge block and then a downwell typhoon pump was installed and surged periodically until water cleared and was below <50. This process was repeated for every well. Each Jplug replaced with new.

0900: Begin on GM-B-2 and GM-B-2A. Bailed 5 gallons each of turbid water and sediment.
945 GM-B-2A switch to pump, hard bottom, continued to pump
1005: GM-B-2A, stopped to recharge, mostly clear
1030: finish GM-B-2A. 25 gallons purged. Clear.
1035 start pumping GM-B-2: purged 25 gallons, clear. <50
1100: start bailing on GM-B-1A, GM-B-1, 5 gals each via bailer, very turbid. No issues on getting to bottom. Observation: 1A pumping slower. 1B: pumping faster, very cloudy, silty @10 gal Bad recharge. 1A not clearing up. Moving to next and will return.
1300: Started on GM-B-6A: Pumping slow, bad recharge. GM-B-6R: pumping continuous
1415: 6R <50 (hard bottom). 6A @120NTU: still soft bottom, tapped and turbidity increased. Needs more pumping
1520: 6A at <50 NTU
1525 move to GM-B-3R
1540: start purge on 3R

Depth Measurements:

Well ID	**Total depth (ft)**	**Total Gallons Purged**
GM-B-1	13.88	30
GM-B-2	11.81	25
GM-B-3R	14.43	25
GM-B-6R	13.74	35
Well ID	**Total depth (ft)**	**Total Gallons Purged**
GM-B-1A	22.18	25
BM-B-2A	22.35	25
GM-B-6A	26.89	40

1620: Move back to Back to GM-B-1A to pump. Bad recharge. Still turbid ~200 NTU. Pumped another 10 gallons for total of 25. NTU @ ~150.
1715: off site with Holt. Approximately 200 gallons total purged and disposed of at the GSH GWTP.
1730: SS off site for Aspect field annex to drop off equipment.
1830: SS at Aspect field annex.

Glenn Springs Holdings - Marine View Drive Property
Property Groundwater Monitoring Wells
5/14/2024 Well Redevelopment Notes

Shallow Groundwater								
Well ID	**Year of Install**	**Well Diameter (in)**	**Screen Interval (ft)**	**Total depth (ft)**	**Actions Completed**	**Purge Volume (Gallons)**	**Turbidty & Clarity**	**Observations**
GM-B-1	1984	2	8-13	13.88	Bailed, Surged, Purged, New Jplug	30	< 50 NTU, Clear	No Odors, Hard Bottom
GM-B-2	1984	2	5-10	11.81	Bailed, Surged, Purged, New Jplug	25	< 50 NTU, Clear	No Odors, Hard Bottom
GM-B-3R	1998	2	7-12	14.43	Bailed, Surged, Purged, New Jplug	25	< 50 NTU, Clear	No Odors, Hard Bottom, Slow Recharge
GM-B-6R	1998	2	7-12	13.74	Bailed, Surged, Purged, New Jplug	35	< 50 NTU, Clear	No Odors, Hard Bottom
Deeper Groundwater								
Well ID	**Year of Install**	**Well Diameter (in)**	**Screen Interval (ft)**	**Total depth (ft)**	**Actions Completed**	**Purge Volume (Gallons)**	< 50 NTU, Clear	**Observations**
GM-B-1A	1998	2	15-20	22.18	Bailed, Surged, Purged, New Jplug	25	150 NTU, Turbid	No Odors, Hard Bottom, Slow Recharge
BM-B-2A	1998	2	15-20	22.35	Bailed, Surged, Purged, New Jplug	25	< 50 NTU, Clear	No Odors, Hard Bottom
GM-B-6A	1998	2	19-24	26.89	Bailed, Surged, Purged, New Jplug	40	< 50 NTU, Clear	No Odors, Hard Bottom

Notes:
NTU: Nephelometric Turbidity Unit
Total depth measured from top of casing
Well redevelopment completed by Holt Drilling with Geosyntec oversight on 5/14/2024
All wells purged first by stainless steel hand bailer until sediment removed, then purged by electric down well pump until clear
Purge water containerized on property and transported to the Glenn Springs Holding Groundwater Treatment Plant in Tacoma, WA for proper disposal

Aspect CONSULTING

Sample ID: GW-061024-RN-B1, GW-061024-RN-DUP

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-1 Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property
Project Number: TR0837J-01-01 Org: 8130
Date: 06/10/2024
Sampled by: RWN
Measuring Point of Well: NTOC
Screened Interval (ft. bgs): 8'-13'
Filter Pack Interval (ft. bgs): -

Starting Water Level (ft TOC): 1.42
Sample Intake Depth (ft TOC): ~10ft (midscreen)
Total Depth After Sampling (ft TOC): 13.94
Casing Diameter (inches): 2"

Casing Volume 12.52 (ft Water) x 0.62 (L/ft) = 7.76 (L)
Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

WELL CONDITION

Vault Condition: Fair condition Well Sealed? yes Lock Present? Broken Lock replaced
Standing Water in Vault? N/A Ecology Well Tag Present (and Number if yes)? missing tag

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1540			1.42						60.8	Begin Purging
1545	1.0	0.20	2.85	13.00	2261.2	0.10	7.03	-132.9	40.5	clearing up, slight organic odor
1550	2.0	0.20	2.96	13.51	2275.0	0.09	7.04	-131.2	30.8	
1555	3.0	0.20	3.47	13.92	2312.1	0.08	7.05	-128.7	28.7	WL = 3.47 ft
1600	4.0	0.20	3.82	12.95	2293.6	0.05	7.06	-129.7	30.9	WL = 3.82 ft
1605	5.0	0.20	3.91	13.20	2306.7	0.05	7.06	-126.4	25.0	
1610	6.0	0.20	4.20	12.91	2313.8	0.04	7.08	-127.8	27.6	
1615	7.0	0.20	4.31	12.85	2322.0	0.03	7.08	-124.8	27.4	All parameters Stabilized
1620										Sample

Total Liters Purged: ~11.50 Total Casing Volumes Removed: 1.48 Ending Water Level (ft TOC): 8.27

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1620	40	VOA	3	N/A	~~HCl~~ (Comment) N/A	~~Clear~~ Brown	29.1	VOCs Analysis
	1000	Amber	2	N/A	N/A			SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
	250	Poly	1	N/A	NaOH			Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator
Purging Equipment: Bladder Pump + Controller/Compressor Decon Equipment: Alconox + Distilled Water
Disposal of Discharged Water: Drum on-site

Observations/Comments: Field dup Sample collected here (GW-061024-RN-DUP) time put on the label = 1200. Slight organic odor, no Sheen, Slight brown color. Lots of bubbling. Very Challenging to obtain no head Space in the VOAs. HCl from VOAs removed due to heavy bubbling causing head Space. VOAs are Unpreserved.

Aspect CONSULTING

Sample ID: GW-061024-RN-B1A

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-1A Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property
Project Number: TR0837J-01-01 Org: 8130
Date: 06/10/2024
Sampled by: RWN
Measuring Point of Well: NTOC
Screened Interval (ft. bgs): 15' - 20'
Filter Pack Interval (ft. bgs): –

Starting Water Level (ft TOC): 0.38
Sample Intake Depth (ft TOC): ~18 ft (midscreen)
Total Depth After Sampling (ft TOC): 22.23
Casing Diameter (inches): 2"

Casing Volume 21.85 (ft Water) x 0.62 (L/ft) = 13.55 (L)
Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

WELL CONDITION

Vault Condition: Fair condition
Well Sealed? Yes.
Lock Present? Yes.
Standing Water in Vault? Yes, below J-plug
Ecology Well Tag Present (and Number if yes)? Missing tag

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1420			0.38						235	Begin Purging
1425	1.50	0.30	2.50	12.09	383.78	0.12	6.51	-50.8	302	Cloudy, no odor, no sheen
1430	2.75	0.25	2.62	12.54	379.94	0.11	6.52	-51.4	224	
1435	4.00	0.25	2.89	12.42	380.40	0.08	6.49	-50.3	156	(Wait for turbidity)
1440	5.25	0.25	3.08	12.46	380.64	0.07	6.49	-51.2	98.7	
1445	6.50	0.25	3.19	12.22	381.05	0.07	6.49	-51.8	83.6	
1450	7.75	0.25	3.21	12.29	382.03	0.06	6.48	-51.9	68.9	
1455	9.00	0.25	3.33	12.28	381.87	0.05	6.47	-52.7	51.6	Pump
1500	10.25	0.25	3.46	12.14	380.20	0.05	6.47	-53.2	47.5	↓
1505	11.50	0.25	3.60	12.07	380.60	0.04	6.47	-54.1	48.9	All parameters stabilized
1510										Sample

Total Liters Purged: ~13.50 Total Casing Volumes Removed: ~1.0 Ending Water Level (ft TOC): 4.16

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1510	40	VOA	3	N/A	HCl	Cloudy	41.3	VOCs Analysis
↓	1000	Amber	2	N/A	N/A	↓	↓	SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
	250	Poly	1	N/A	NaOH			Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator
Purging Equipment: Bladder Pump + Controller/Compressor
Decon Equipment: Alconox + Distilled Water
Disposal of Discharged Water: Drum on-site
Observations/Comments: Cloudy, no odor, no sheen. Pump/controller setting: 4 cpm, <20 psi Max Pressure. 7.5 sec discharge and refill.

Aspect CONSULTING

Sample ID: GW-061024-RN-B2

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-2 Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property
Project Number: TR0837J-01-01 Org: 8130
Date: 06/10/2024
Sampled by: RWN
Measuring Point of Well: NTOC
Screened Interval (ft. bgs): 5' - 10'
Filter Pack Interval (ft. bgs): -
Casing Volume 9.49 (ft Water) x 0.62 (L/ft) = 5.88 (L)
Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

Starting Water Level (ft TOC): 2.35
Sample Intake Depth (ft TOC): ~8ft (midscreen)
Total Depth After Sampling (ft TOC): 11.84
Casing Diameter (inches): 2"

WELL CONDITION

Vault Condition: Fair Condition Well Sealed? Yes. Lock Present? Yes.
Standing Water in Vault? N/A Ecology Well Tag Present (and Number if yes)? Missing tags.

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1232			2.35						65.5	Begin purging
1237	1.25	0.25	3.01	11.72	1011.3	0.15	6.85	-87.5	87.2	Cloudy, Slight Organic odor.
1242	2.50	0.25	2.86	12.95	987.04	0.18	6.92	-95.6	85.1	flow rate adjusted
1247	3.25	0.15	2.80	12.94	1014.0	0.13	6.88	-93.0	87.3	
1252	4.00	0.15	2.83	12.67	1020.1	0.10	6.87	-91.2	60.8	
1257	4.75	0.15	3.03	12.01	1023.2	0.09	6.89	-95.2	49.6	(wait for turbidity)
1302	5.50	0.15	3.14	11.83	1047.7	0.09	6.91	-97.7	43.2	↓
1307	6.25	0.15	3.10	11.89	1058.7	0.09	6.90	-97.7	34.3	↓
1312	8.00	0.25	3.13	11.95	1063.8	0.08	6.91	-99.1	27.4	↓
1317	9.25	0.25	3.18	11.93	1087.5	0.07	6.92	-99.8	25.3	↓
1322	10.50	0.25	3.21	11.94	1096.2	0.07	6.92	-100.1	24.8	All parameters stabilized
1325										Sample

Total Liters Purged: ~12.75 Total Casing Volumes Removed: 2.17 Ending Water Level (ft TOC): 3.24

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1325	40	VOA	3	N/A	HCl	clear	23.6	VOCs Analysis
↓	1000	Amber	2	N/A	N/A	↓	↓	SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
↓	500	Poly	1	N/A	NaOH	↓	↓	Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator
Purging Equipment: Bladder Pump + Controller/Compressor Decon Equipment: Alconox + Distilled Water
Disposal of Discharged Water: Drum on-site
Observations/Comments: Turbidity >750 NTU at beginning of Purging. Pump Controller Setting: 4 cpm ~20 psi max pressure. Slight organic odor, no sheen, clear.

Aspect CONSULTING

Sample ID: GW-061024-RN-B2A

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-2A Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property
Project Number: TR0837J-01-01 Org: 8130
Date: 06/10/2024
Sampled by: RWN
Measuring Point of Well: NTOC
Screened Interval (ft. bgs): 15' - 20'
Filter Pack Interval (ft. bgs): -
Casing Volume 22.37 (ft Water) x 0.62 (L/ft) = 13.87 (L)
Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

Starting Water Level (ft TOC): 0.00 (water at top of casing)
Sample Intake Depth (ft TOC): ~18 ft (mid screen)
Total Depth After Sampling (ft TOC): 22.37
Casing Diameter (inches): 2"

WELL CONDITION

Vault Condition: Fair condition
Well Sealed? Locked Property
Lock Present? Yes
Standing Water in Vault? N/A
Ecology Well Tag Present (and Number if yes)? Missing tag.

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1015			0.00						75.2	Begin purging
1020	1.50	0.30	2.35	11.12	232.48	0.20	6.50	-54.2	48.7	Flow rate adjusted
1025	2.75	0.25	2.86	11.11	229.72	0.11	6.44	-51.8	30.7	Clearing up, no odor, no sheen
1030	4.00	0.25	2.86	11.12	227.88	0.08	6.50	-55.7	28.7	Wait for turbidity to clear up.
1035	5.25	0.25	2.89	11.15	225.65	0.06	6.49	-52.5	15.0	↓
1040	6.50	0.25	2.92	11.07	227.23	0.06	6.49	-51.8	15.5	↓
1045	7.75	0.25	3.04	11.16	230.95	0.07	6.52	-54.7	15.7	All parameters Stabilized
1150										Sample

Total Liters Purged: ~9.50 Total Casing Volumes Removed: 0.68 Ending Water Level (ft TOC): 2.29

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1150	40	VOA	3	N/A	HCl	Clear	10.5	VOCs Analysis
↓	1000	Amber	2	N/A	N/A	↓	↓	SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
↓	500	Poly	1	N/A	NaOH	↓	↓	Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator
Purging Equipment: Bladder Pump + Controller/Compressor
Decon Equipment: Alconox + Distilled Water
Disposal of Discharged Water: Drum on-site
Observations/Comments: Turbidity 750 NTU at beginning of purging. Pump/Controller Setting: 4 cycles/min, ~20 psi/60 ft H_2O Maximum Pressure. No odor, no sheen.

Aspect CONSULTING

Sample ID: GW-061124-RN-B3R

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-3R Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property Project Number: TR0837J-01-01 Org: 8130

Date: 06/11/2024

Sampled by: RWN

Measuring Point of Well: NTOC

Screened Interval (ft. bgs): 7'-12'

Filter Pack Interval (ft. bgs): –

Casing Volume 12.07 (ft Water) x 0.62 (L/ft) = 7.48 (L)

Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

Starting Water Level (ft TOC): 2.39

Sample Intake Depth (ft TOC): ~10ft (midscreen)

Total Depth After Sampling (ft TOC): 14.46

Casing Diameter (inches): 2"

WELL CONDITION

Vault Condition: Fair Condition Well Sealed? Yes. Lock Present? Yes

Standing Water in Vault? N/A Ecology Well Tag Present (and Number if yes)? missing tag

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
0928			2.39						141	Begin purging
0933	1.25	0.25	2.68	11.14	647.32	0.68	6.48	-58.1	65.9	clearing up, no odor, no sheen
0938	2.50	0.25	2.72	11.20	646.28	1.13	6.52	-62.8	41.6	↓
0943	3.75	0.25	2.72	11.24	644.31	1.38	6.53	-59.7	41.8	↓
0948	5.00	0.25	2.79	11.27	643.24	1.59	6.54	-56.8	37.8	(wait for DO)
0953	6.25	0.25	2.79	11.23	642.36	1.79	6.55	-54.7	30.1	(wait for turbidity and DO)
0958	6.75	0.10	2.85	11.25	641.50	2.02	6.55	-52.0	32.4	↓
1003	7.25	0.10	2.85	11.24	641.24	2.15	6.56	-50.1	29.6	↓
1008	7.75	0.10	2.85	11.30	640.76	2.05	6.55	-48.1	30.7	All parameters Stabilized
~~10~~										
1010										Sample

Total Liters Purged: ~13.0 Total Casing Volumes Removed: 1.74 Ending Water Level (ft TOC): 3.43

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks	
1010	40	VOA	~~3~~ 9	N/A	HCl	Clear	27.5	VOCs Analysis	+ MS/MSD
↓	1000	Amber	~~2~~ 6	N/A	N/A	↓	↓	SVOCs Analysis	
	1000	Amber	~~1~~ 3	N/A	N/A			PCBs Analysis	
	1000	Amber	~~1~~ 3	N/A	N/A			Pesticides + Hexachlorobenzene Analyses	
	500	Poly	~~1~~ 3	N/A	HNO3			Total Metals Analysis	
↓	500	Poly	~~1~~ 3	N/A	NaOH	↓	↓	Cyanide Analysis	

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator

Purging Equipment: Bladder Pump + Controller/Compressor Decon Equipment: Alconox + Distilled Water

Disposal of Discharged Water: Drum on-site

Observations/Comments: MS/MSD Samples Collected here. In total, 27 Counts of bottle-wares. Pump/Controller Settings: 4 cpm, 10 psi max pressure, 7.5 sec discharge and refill. DO took a while to Stabilize. Clear, no odor, no Sheen.

Aspect CONSULTING

Sample ID: ~~GM-B-~~ RWN GW-061124-RW-B6A

* Artesian Well

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B-6A Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property Project Number: TR0837J-01-01 Org: 8130

Date: 06/11/2024

Sampled by: RWN

Measuring Point of Well: NTOC + 2.7 ft of PVC

Screened Interval (ft. bgs): 19'-24'

Filter Pack Interval (ft. bgs): –

Starting Water Level (ft TOC): 0.050

Sample Intake Depth (ft TOC): 25.2

Total Depth After Sampling (ft TOC): 28.96

Casing Diameter (inches): 2"

All TOC + 2.7 ft of PVC

Casing Volume 28.91 (ft Water) x 0.62 (L/ft) = 17.92 (L)

Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

WELL CONDITION

Vault Condition: Fair condition Well Sealed? yes Lock Present? yes

Standing Water in Vault? yes, due to being artesian Ecology Well Tag Present (and Number if yes)? missing tag

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1255			0.050						183	Begin purging
1300	~~7.00~~ 9.00	0.30	0.25	11.62	274.79	0.72	6.74	-52.8	205	cloudy, no odor, no sheen
1305	9.00	0.30	0.46	11.54	274.43	1.02	6.81	-59.1	143	clearing up
1310	10.00	0.20	1.20	11.50	272.74	0.96	6.81	-57.8	111	↓
1315	11.00	0.20	1.57	11.60	272.13	1.53	6.81	-56.7	88.7	↓
1320	12.00	0.20	1.64	11.66	271.19	1.07	6.79	-54.7	70.1	↓
1325	13.00	0.20	1.67	11.66	271.44	1.13	6.79	-54.1	70.0	Wait for turbidity and DO
1330	14.00	0.20	1.67	11.68	269.49	1.06	6.77	-53.2	62.9	↓
1335	15.00	0.20	1.67	11.66	269.70	1.02	6.77	-51.8	55.2	Wait for turbidity
1340	16.00	0.20	1.73	11.66	268.45	0.95	6.77	-50.8	46.0	↓
1345	17.00	0.20	1.75	11.77	268.50	0.72	6.76	-49.3	44.4	↓
1350	18.00	0.20	1.79	11.74	266.34	0.77	6.77	-48.5	43.1	Turbidity Stabilized
1355	19.00	0.20	1.82	11.80	267.27	0.76	6.70	-44.9	42.6	
1400	20.00	0.20	1.86	11.78	266.28	0.73	6.74	-50.7	38.0	
1405	21.00	0.20	1.86	12.02	265.74	0.62	6.74	-51.1	38.6	All Parameters Stabilized
1410										Sample

Total Liters Purged: ~26.0 Total Casing Volumes Removed: 1.45 Ending Water Level (ft TOC): 2.02

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1410	40	VOA	3	N/A	HCl	32.8	Clear	VOCs Analysis
↓	1000	Amber	2	N/A	N/A	↓	↓	SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
↓	500	Poly	1	N/A	NaOH	↓	↓	Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator

Purging Equipment: Bladder Pump + Controller/Compressor Decon Equipment: Alconox + Distilled Water

Disposal of Discharged Water: Drum on-site

Observations/Comments: Elevation of TOC + 2.7 ft of PVC. 6.0 L had been purged / flown out when Aquatroll started measuring parameters. Same pump settings as other wells.

Aspect CONSULTING

Sample ID: GW-061124-RN-BGR

GROUNDWATER SAMPLING RECORD

WELL NUMBER: GM-B- 6R Page: 1 of 1

Project Name: Glenn Springs Holdings - Marine View Drive Property Project Number: TR0837J-01-01 Org: 8130

Date: 06/ 11 /2024

Sampled by: RWN

Measuring Point of Well: NTOC

Screened Interval (ft. bgs): 7'-12'

Filter Pack Interval (ft. bgs): -

Starting Water Level (ft TOC): 0.30

Sample Intake Depth (ft TOC): ~10ft (midscreen)

Total Depth After Sampling (ft TOC): 13.76

Casing Diameter (inches): 2"

Casing Volume 13.46 (ft Water) x 0.62 (L/ft) = 8.35 (L)

Casing volumes: 3/4"= 0.09 L/ft 2" = 0.62 L/ft 4" = 2.46 L/ft 6" = 5.56 L/ft

WELL CONDITION

Vault Condition: Fair condition Well Sealed? Yes. Lock Present? Yes.

Standing Water in Vault? N/A Ecology Well Tag Present (and Number if yes)? Missing tag

PURGING MEASUREMENTS

Stabilization Criteria (for 3 consecutive readings):		Typical 0.1-0.5 Lpm	Stable (<0.3 ft target)	na	± 3%	± 10% (or ± 0.5 mg/L if < 1 mg/L)	± 0.1	± 10 mV	± 10% (or 3 succesive < 10 NTU)	
Time	Cumul. Volume (L)	Purge Rate (mL/min)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1453			0.30						39.9	Begin Purging
1458	1.00	0.20	1.64	13.00	894.21	0.53	7.14	-139.5	24.5	Slight rubber odor, no Sheen
1503	2.25	0.25	1.37	13.51	894.94	0.27	7.15	-141.2	21.4	Rubber-like odor, no Sheen
1508	3.50	0.25	1.44	13.64	894.89	0.29	7.17	-141.0	22.8	
1513	4.75	0.25	1.50	13.15	899.29	0.40	7.20	-140.8	22.7	All Parameters Stabilized
1515										Sample

Total Liters Purged: ~5.50 Total Casing Volumes Removed: 0.66 Ending Water Level (ft TOC): 3.00

SAMPLE INVENTORY

Time	(mL) Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1515	40	VOA	3	N/A	HCl	Clear	23.7	VOCs Analysis
↓	1000	Amber	2	N/A	N/A	↓	↓	SVOCs Analysis
	1000	Amber	1	N/A	N/A			PCBs Analysis
	1000	Amber	1	N/A	N/A			Pesticides + Hexachlorobenzene Analyses
	500	Poly	1	N/A	HNO3			Total Metals Analysis
↓	500	Poly	1	N/A	NaOH	↓	↓	Cyanide Analysis

METHODS

Parameters measured with (instrument model & serial number): Aquatroll Water Quality Meter 500 Series, HACH 2100Q Turbidimeter, 150 ft. Water Level Indicator

Purging Equipment: Bladder Pump + Controller/Compressor Decon Equipment: Alconox + Distilled Water

Disposal of Discharged Water: Drum on-site

Observations/Comments: Pump/Controller Settings: Same as other Wells. Slight rubber-like odor, no Sheen, Parameters Stabilized quickly.

TR0837J - GSH Marine View Dr 06/10/2024 RWN

Arrival: 0758 (GSH office)

Departure: 1815 (from Site to Seattle)

Weather = 56-70°F, cloudy, 5 mph SW wind

Equipment: - Bladder pump - Turbidimeter
- Controller/Compressor - Aquatroll 500
- WLI 150' - Decon Supplies
- PPE Level D - Fieldwork tools

0600 At the annex, load equipment

0706 Leave Seattle.

0758 Aspect arrives at GSH office. Pick up drum and Master key.

0845 Aspect on-site at 1913 Marine View Dr

0850 Access all wells

0900 GM-B-1 and GM-B-1A have hornet nests all around J-plug. RWN goes to Lowe's to buy bug spray/Wasp-Hornet Killer.

0923 Back on-site. Spray the nests.

0937 GM-B-1 and GM-B-1A opened.

0940 Begin Site-wide WL measurements.

Time	Well ID	DTW (ft NTUC)	Notes
0940	GM-B-2A	0.00 (water at top	of casing)
0941	GM-B-2	2.34	No well tag
0945	GM-B-6R	0.36	No well tag
0946	GM-B-6A	0.00 (water at top	of casing)
1015	GM-B-1A	0.79	No well tag
1017	GM-B-1	1.90	Lock replaced.
1020	GM-B-3R	2.50	No well tag.

0946 GM-B-6A has become somewhat artesian. High pressure gw flowing out of the well filling up the well vault. RWN closed the J-plug and use hand pump to bail water from inside the vault.

1020 Finish measuring WLs. Communicate with PM about GM-B-6A

1030 Calibrate AT500. Rick on-site to check on GM-B-6A.

1045 Finish Calibrating AT500. Rick headed off-site. GM-B-6A will be Sampled last.

1050 Set up at GM-B-2A. Intake of bladder pump set midscreen at ~18 ft.

1115 Start purging GM-B-2A

1150 Start Sampling GW-061024-RN-B2A

1210 Finished Sampling. Set up at GM-B-2.

1232 Start Purging GM-B-2. Intake set at ~8ft.

1325 Start Sampling GW-061024-RN-B2

1345 Finished Sampling. Move on to GM-B-1A

1420 Start purging GM-B-1A. Intake at ~18ft.

1510 Start Sampling GW-061024-RN-B1A

1525 Finished Sampling. Move to GM-B-1.

1540 Start Purging GM-B-1

Rite in the Rain

1620	Start Sampling GW-061024-RN-B1 A field dup collected here (GW-061024-RN-Dup). Tim for field dup: 1200.
1645	All Sample Containers Show that Sample water bubbles aggresively.
1700	Inform Stephen that HCl in the VOAs reacted with groundwater and bubbles Showed up creating head space
1705	Stephen Suggested dumping all HCl Preservatives, collect gw samples w/ no Preservative and inform the lab.
1730	Finish Sampling. Start Packing up.
1815	Aspect Off-Site. Back to Seattle.
1900	At the annex. Drop off dead batteries, grab more tubing.
1930	Done

06/10/2024

Arrival: 0815 (Oxy office) RWN

Departure: 1615 (Back to Seattle).

Weather: 66-69°F, Partly cloudy, 13mph SW wind.

Equipment:
- Bladder pump - Air compressor/controller
- Turbidimeter - Aquatroll Water Quality
- Water Level Indicator
- Decon supplies, PPE, fieldwork tools.

0700 At the corner Seattle, grab extra batteries, and other supplies.

0715 Drive to Tacoma.

0815 At Oxy office, grab apparatus for artesian well.

0838 On-site. Drive to GM-B-3R.

0850 Set up bladder pump. Intake depth at ~10ft

0928 Start purging GM-B-3R. Aquatroll Calibrated.

1010 Start Sampling GW-061124-RN-B3R

1120 Finish Sampling. 27 bottles filled up for MS/MSD sample.

1140 Try to set up apparatus for the artesian well GM-B-6A.

1145 Not enough pressure to push water through the apparatus.

1200 Rice on-site to extend the well pvc to allow water to equilibrate.

1205 About 2.7 ft of pvc added to the well casing. Water was still slowly rising but RN deployed well and started pumping to avoid water flowing out into the well vault.

1255 Start purging/recording parameters at GM-B-6A. About 6L had been purged out when AT500 started measuring parameters.

1410 Start Sampling GW-061124-RN-B6A

1430 Finish Sampling. Remove PVC extension. Move on to GM-B-6R

1453 Start purging GM-B-6R

1515 Start Sampling GW-061124-RN-B6R

1538 Finish sampling. Start Packing up.

1545 Collect GW-061124-RN-RB (Rinsate) using bladder pump.

1600 Finish collecting rinsate blank.

1605 IDW Management: 1 count of drum of purge water ~50% full left on-site. Labeled. Placed by the gate.

1610 Pack up.

1615 Aspect Off-Site.

1700 Back in Seattle. Thoroughly decon equipment for storage.

1800 Done

06/11/2024

APPENDIX K

Data Verification Report

Data Verification Report

May 22, 2024
Revision: December 12, 2024

To	Rick Bieber	**Project No.**	12637306
Copy to	Stephen Strehl, Jesse Orth, Julie Lidstone	**DVR No.**	1
From	Jeffrey Cloud/eew	**Contact No.**	1 971 925 3756
Project Name	Glenn Springs Holdings, Inc.	**Email**	Jeffrey.Cloud@ghd.com
Subject	Analytical Results and Data Verification of Report EV24040001 Surfacewater and Groundwater Sampling Tacoma Marine View Tacoma, Washington March 2024		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for water samples collected in support of the Surfacewater and Groundwater Sampling at the Tacoma Marine View site in Tacoma, Washington during March 2024. Samples were submitted to ALS Environmental, located in Everett, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The analytical results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control data, matrix spikes and field QC data.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020

These items will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the requested parameters are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of a few analytes present at low concentrations. Several sample results were qualified as non-detect due to contamination as evidenced by the associated blank (see Table 4).

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), semi-volatile organic compound (SVOC), pesticide and polychlorinated biphenyl (PCB) analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

5. Laboratory Control Sample Analyses

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of one per analytical batch.

5.1 Organic Analyses

The LCS/LCSD contained all analytes of interest. All LCS/LCSD recoveries and RPD values were within associated control limits, demonstrating acceptable analytical accuracy and precision with a few exceptions. Where high recoveries or RPDs were found the associated sample results were non-detect and were not impacted. Where low aldrin recoveries were found the associated sample results were qualified as estimated due to the implied low bias (see Table 5).

5.2 Inorganic Analyses

The LCS and LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS and LCS/LCSD recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

6. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1.

6.1 Organic Analyses

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with the exception of two low acetone recoveries. The associated sample result was qualified as estimated due to the implied low bias (see Table 6).

6.2 Inorganic Analyses

The MS/MSD samples were spiked with the analyte of interest and the results were evaluated using the "Guidelines". All percent recoveries and the RPD value were within the control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest with the exception of methylene chloride present at a low concentration. The associated sample result with a concentration similar to the blank was qualified as non-detect due to contamination as evidenced by the blank (see Table 7).

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent. If the reported concentration in both the investigative sample and its duplicate are less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

Data were reported down to the laboratory's quantitation limit (QL), which is defined as the method detection limit (MDL) with sample-specific adjustments for dilutions, aliquot size, volumes, etc. Positive analyte detections less than the RL but greater than the QL were reported as estimated (J) in Table 3 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the RL in Table 3.

If multiple QC results exhibit variability and/or high/low directional biases as related to a sample result, then any directional bias indicators are removed from the final sample result qualification.

9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards

Jeffrey Cloud
Data Management Team – Data Validator

Table 1

Sample Collection and Analysis Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

					Analysis/Parameters							
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Mercury**	**Metals**	**Cyanide**	**Pesticides**	**PCBs**	**VOCs**	**SVOCs**	**Comments**
MVD-032824-SS-SW01	SW-01	Water	03/28/2024	10:45	X	X	X	X	X	X	X	
MVD-032824-SS-SW02	SW-02	Water	03/28/2024	11:00	X	X	X	X	X	X	X	
MVD-032824-SS-DUP2	SW-02	Water	03/28/2024	11:05	X	X	X	X	X	X	X	FD (MVD-032824-SS-SW02)
MVD-032824-SS-SW03	SW-03	Water	03/28/2024	09:55	X	X	X	X	X	X	X	
MVD-032824-SS-SW05	SW-05	Water	03/28/2024	10:15	X	X	X	X	X	X	X	MS/MSD
MVD-032824-SS-SW07	SW-07	Water	03/28/2024	11:30	X	X	X	X	X	X	X	
MVD-032824-SS-SW08	SW-08	Water	03/28/2024	11:45	X	X	X	X	X	X	X	
MVD-032824-SS-TRIP BLANK	--	Water	03/28/2024	--						X		Trip Blank

Notes:

FD	- Field Duplicate sample of sample in parenthesis
MS/MSD	- Matrix Spike/Matrix Spike Duplicate
VOCs	- Volatile Organic Compounds
SVOCs	- Semi-volatile Organic Compounds
PCBs	- Polychlorinated Biphenyls
"--"	- Not Applicable

Table 2

Analytical Methods
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Parameter	Method	Matrix
Volatile Organic Compounds (VOCs)	SW-846 8260[(1)]	Water
Semi-volatile Organic Compounds (SVOCs)	SW-846 8270[(1)]	Water
	SW-846 8270 SIM[(1)]	Water
Polychlorinated Biphenyls (PCBs)	SW-846 8082[(1)]	Water
Metals	EPA 200.8[(2)]	Water
Mercury	SW-846 1631E[(1)]	Water
Organochlorine Pesticides	SW-846 8081[(1)]	Water
Cyanide	SM 4500 CN E[(3)]	Water

Notes:

(1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

(2) - EPA - U.S. Environmental Protection Agency. Analytical Methodology (October, 2007)

(3) - SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions

SIM - Selected Ion Monitoring

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-01	SW-02	SW-02	SW-03
	Sample Name:	MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
	Sample Date:	03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		SW-01	SW-02	SW-02	SW-03
Sample Name:		MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
Sample Date:		03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
2-Phenylbutane (sec-Butylbenzene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	25 U	0.72 J	0.52 J	0.61 J
Acrylonitrile	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cymene (p-Isopropyltoluene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromochloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-01	SW-02	SW-02	SW-03
	Sample Name:	MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
	Sample Date:	03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Isopropyl benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
N-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Propylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
tert-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	0.20 U	0.20 U	0.20 U	0.20 U
Xylenes (total)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		SW-01	SW-02	SW-02	SW-03
Sample Name:		MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
Sample Date:		03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
3-Nitroaniline	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		SW-01	SW-02	SW-02	SW-03
Sample Name:		MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
Sample Date:		03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
4-Bromophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Acenaphthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Acenaphthylene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(a)anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(a)pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(b)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(g,h,i)perylene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(k)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic acid	µg/L	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Chloroethoxy)methane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	0.30 J	2.0 U	2.0 U	2.0 U
Butyl benzylphthalate (BBP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-01**	**SW-02**	**SW-02**	**SW-03**
Sample Name:		**MVD-032824-SS-SW01**	**MVD-032824-SS-SW02**	**MVD-032824-SS-DUP2**	**MVD-032824-SS-SW03**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**	**03/28/2024**
				Duplicate	
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
Chrysene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Di-n-butylphthalate (DBP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibenz(a,h)anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Diethyl phthalate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dimethyl phthalate	µg/L	0.32 J	0.28 J	2.0 U	0.30 J
Fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Fluorene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Hexachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Indeno(1,2,3-cd)pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodi-n-propylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Nitrobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Pentachlorophenol	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Phenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-01	SW-02	SW-02	SW-03
	Sample Name:	MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
	Sample Date:	03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
Pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Pyridine	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Semi-volatile Organic Compounds, SIM					
1-Methylnaphthalene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
2-Methylnaphthalene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Anthracene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)anthracene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(b)fluoranthene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(g,h,i)perylene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Chrysene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Dibenz(a,h)anthracene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Fluoranthene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Fluorene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Hexachlorobenzene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Indeno(1,2,3-cd)pyrene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Naphthalene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Phenanthrene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U
Pyrene	µg/L	0.020 U	0.020 U	0.020 U	0.020 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		SW-01	SW-02	SW-02	SW-03
Sample Name:		MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
Sample Date:		03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Polychlorinated Bipnenyls					
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Pesticides					
4,4'-DDD	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
4,4'-DDE	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
4,4'-DDT	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Aldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
alpha-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Dieldrin	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan I	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan II	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan sulfate	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Endrin	µg/L	0.050 U	0.050 U	0.050 U	0.050 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-01	SW-02	SW-02	SW-03
	Sample Name:	MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
	Sample Date:	03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Pesticides (Continued)					
Endrin aldehyde	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Endrin ketone	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
gamma-BHC (lindane)	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
gamma-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor epoxide	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Methoxychlor	µg/L	0.050 U	0.050 U	0.050 U	0.050 U
Toxaphene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Metals					
Mercury	ng/L	1.9	3.2	3.1	2.8
Aluminum	µg/L	37 J	99	100	100
Antimony	µg/L	1.1	1.0 U	1.0 U	2.6
Arsenic	µg/L	2.3	1.7	1.6	4.8
Barium	µg/L	11	13	13	24
Beryllium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	22000	22000	21000	24000
Chromium	µg/L	0.85 J	0.79 J	1.2 J	0.89 J
Cobalt	µg/L	0.15 J	0.11 J	0.11 J	0.35 J
Copper	µg/L	2.2	2.0 U	2.0 U	2.9
Iron	µg/L	230	320	320	640
Lead	µg/L	0.20 J	0.98 J	0.90 J	0.88 J

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-01	SW-02	SW-02	SW-03
	Sample Name:	MVD-032824-SS-SW01	MVD-032824-SS-SW02	MVD-032824-SS-DUP2	MVD-032824-SS-SW03
	Sample Date:	03/28/2024	03/28/2024	03/28/2024	03/28/2024
				Duplicate	
Parameters	**Unit**				
Metals (Continued)					
Magnesium	µg/L	16000	15000	15000	15000
Manganese	µg/L	71	23	22	120
Nickel	µg/L	0.80 J	0.93 J	0.92 J	2.1
Potassium	µg/L	2100	2400	2300	2600
Selenium	µg/L	4.0 U	4.0 U	4.0 U	4.0 U
Silver	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Sodium	µg/L	8700	9800	9600	12000
Thallium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	µg/L	7.3	7.9	7.2	6.6
Zinc	µg/L	16	10	9.7	51
General Chemistry					
Cyanide (total)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U
1,2,3-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	µg/L	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.010 U	0.010 U	0.010 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,3-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
2,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Volatile Organic Compounds (Continued)				
2-Hexanone	µg/L	10 U	10 U	10 U
2-Phenylbutane (sec-Butylbenzene)	µg/L	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U
Acetone	µg/L	0.61 J	0.71 J	0.54 J
Acrylonitrile	µg/L	10 U	10 U	10 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U
Bromobenzene	µg/L	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	2.0 U	2.0 U	2.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
Chlorobromomethane	µg/L	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U
Cymene (p-Isopropyltoluene)	µg/L	2.0 U	2.0 U	2.0 U
Dibromochloromethane	µg/L	2.0 U	2.0 U	2.0 U
Dibromomethane	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-05	SW-07	SW-08
	Sample Name:	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08
	Sample Date:	03/28/2024	03/28/2024	03/28/2024
Parameters	**Unit**			
Volatile Organic Compounds (Continued)				
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U
Isopropyl benzene	µg/L	2.0 U	2.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
N-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U
N-Propylbenzene	µg/L	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U
tert-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	0.20 U	0.20 U	0.20 U
Xylenes (total)	µg/L	2.0 U	2.0 U	2.0 U
Semi-volatile Organic Compounds				
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Semi-volatile Organic Compounds (Continued)				
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
1-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	2.0 U	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	2.0 U	2.0 U	2.0 U
2,4-Dinitrophenol	µg/L	10 U	10 U	10 U
2,4-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U
2,6-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	µg/L	2.0 U	2.0 U	2.0 U
2-Chlorophenol	µg/L	2.0 U	2.0 U	2.0 U
2-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U
2-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U
2-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U
2-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U
3&4-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	2.0 U	2.0 U	2.0 U
3-Nitroaniline	µg/L	5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-methylphenol	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Semi-volatile Organic Compounds (Continued)				
4-Bromophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	2.0 U	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U
4-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U
4-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U
Acenaphthene	µg/L	2.0 U	2.0 U	2.0 U
Acenaphthylene	µg/L	2.0 U	2.0 U	2.0 U
Aniline	µg/L	2.0 U	2.0 U	2.0 U
Anthracene	µg/L	2.0 U	2.0 U	2.0 U
Azobenzene	µg/L	2.0 U	2.0 U	2.0 U
Benzo(a)anthracene	µg/L	2.0 U	2.0 U	2.0 U
Benzo(a)pyrene	µg/L	2.0 U	2.0 U	2.0 U
Benzo(b)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U
Benzo(g,h,i)perylene	µg/L	2.0 U	2.0 U	2.0 U
Benzo(k)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U
Benzoic acid	µg/L	10 U	10 U	10 U
Benzyl alcohol	µg/L	2.0 U	2.0 U	2.0 U
bis(2-Chloroethoxy)methane	µg/L	2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)ether	µg/L	2.0 U	2.0 U	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	2.0 U	2.0 U	2.0 U
Butyl benzylphthalate (BBP)	µg/L	2.0 U	2.0 U	2.0 U
Carbazole	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Semi-volatile Organic Compounds (Continued)				
Chrysene	µg/L	2.0 U	2.0 U	2.0 U
Di-n-butylphthalate (DBP)	µg/L	2.0 U	2.0 U	2.0 U
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	2.0 U	2.0 U
Dibenz(a,h)anthracene	µg/L	2.0 U	2.0 U	2.0 U
Dibenzofuran	µg/L	2.0 U	2.0 U	2.0 U
Diethyl phthalate	µg/L	2.0 U	2.0 U	2.0 U
Dimethyl phthalate	µg/L	2.0 U	2.0 U	2.0 U
Fluoranthene	µg/L	2.0 U	2.0 U	2.0 U
Fluorene	µg/L	2.0 U	2.0 U	2.0 U
Hexachlorobenzene	µg/L	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 U	2.0 U
Hexachloroethane	µg/L	2.0 U	2.0 U	2.0 U
Indeno(1,2,3-cd)pyrene	µg/L	2.0 U	2.0 U	2.0 U
Isophorone	µg/L	2.0 U	2.0 U	2.0 U
N-Nitrosodi-n-propylamine	µg/L	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	µg/L	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	µg/L	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U
Nitrobenzene	µg/L	2.0 U	2.0 U	2.0 U
Pentachlorophenol	µg/L	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	2.0 U	2.0 U	2.0 U
Phenol	µg/L	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Location ID:		**SW-05**	**SW-07**	**SW-08**
Sample Name:		**MVD-032824-SS-SW05**	**MVD-032824-SS-SW07**	**MVD-032824-SS-SW08**
Sample Date:		**03/28/2024**	**03/28/2024**	**03/28/2024**
Parameters	**Unit**			
Semi-volatile Organic Compounds (Continued)				
Pyrene	µg/L	2.0 U	2.0 U	2.0 U
Pyridine	µg/L	2.0 U	2.0 U	2.0 U
Semi-volatile Organic Compounds, SIM				
1-Methylnaphthalene	µg/L	0.020 U	0.020 U	0.020 U
2-Methylnaphthalene	µg/L	0.020 U	0.020 U	0.020 U
Acenaphthene	µg/L	0.020 U	0.020 U	0.020 U
Acenaphthylene	µg/L	0.020 U	0.020 U	0.020 U
Anthracene	µg/L	0.020 U	0.020 U	0.020 U
Benzo(a)anthracene	µg/L	0.020 U	0.020 U	0.020 U
Benzo(a)pyrene	µg/L	0.020 U	0.020 U	0.020 U
Benzo(b)fluoranthene	µg/L	0.020 U	0.020 U	0.020 U
Benzo(g,h,i)perylene	µg/L	0.020 U	0.020 U	0.020 U
Benzo(k)fluoranthene	µg/L	0.020 U	0.020 U	0.020 U
Chrysene	µg/L	0.020 U	0.020 U	0.020 U
Dibenz(a,h)anthracene	µg/L	0.020 U	0.020 U	0.020 U
Fluoranthene	µg/L	0.020 U	0.020 U	0.020 U
Fluorene	µg/L	0.020 U	0.020 U	0.020 U
Hexachlorobenzene	µg/L	0.020 U	0.020 U	0.020 U
Indeno(1,2,3-cd)pyrene	µg/L	0.020 U	0.020 U	0.020 U
Naphthalene	µg/L	0.020 U	0.020 U	0.020 U
Phenanthrene	µg/L	0.020 U	0.020 U	0.020 U
Pyrene	µg/L	0.020 U	0.020 U	0.020 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-05	SW-07	SW-08
	Sample Name:	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08
	Sample Date:	03/28/2024	03/28/2024	03/28/2024
Parameters	**Unit**			
Polychlorinated Bipnenyls				
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.10 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L	0.10 U	0.10 U	0.10 U
Pesticides				
4,4'-DDD	µg/L	0.050 U	0.050 U	0.050 U
4,4'-DDE	µg/L	0.050 U	0.050 U	0.050 U
4,4'-DDT	µg/L	0.050 U	0.050 U	0.050 U
Aldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U
alpha-Chlordane	µg/L	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	0.050 U	0.050 U	0.050 U
delta-BHC	µg/L	0.050 U	0.050 U	0.050 U
Dieldrin	µg/L	0.050 U	0.050 U	0.050 U
Endosulfan I	µg/L	0.050 U	0.050 U	0.050 U
Endosulfan II	µg/L	0.050 U	0.050 U	0.050 U
Endosulfan sulfate	µg/L	0.050 U	0.050 U	0.050 U
Endrin	µg/L	0.050 U	0.050 U	0.050 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-05	SW-07	SW-08
	Sample Name:	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08
	Sample Date:	03/28/2024	03/28/2024	03/28/2024
Parameters	**Unit**			
Pesticides (Continued)				
Endrin aldehyde	µg/L	0.050 U	0.050 U	0.050 U
Endrin ketone	µg/L	0.050 U	0.050 U	0.050 U
gamma-BHC (lindane)	µg/L	0.050 U	0.050 U	0.050 U
gamma-Chlordane	µg/L	0.050 U	0.050 U	0.050 U
Heptachlor	µg/L	0.050 U	0.050 U	0.050 U
Heptachlor epoxide	µg/L	0.050 U	0.050 U	0.050 U
Methoxychlor	µg/L	0.050 U	0.050 U	0.050 U
Toxaphene	µg/L	2.0 U	2.0 U	2.0 U
Metals				
Mercury	ng/L	2.5	2.8	2.6
Aluminum	µg/L	99	790	130
Antimony	µg/L	1.4	1.0 U	1.0 U
Arsenic	µg/L	2.2	2.4	1.6
Barium	µg/L	18	15	13
Beryllium	µg/L	0.24 J	1.0 U	1.0 U
Cadmium	µg/L	0.15 J	1.0 U	1.0 U
Calcium	µg/L	22000	19000	21000
Chromium	µg/L	0.92 J	1.9 J	0.94 J
Cobalt	µg/L	0.23 J	0.57 J	0.12 J
Copper	µg/L	2.7	3.8	2.0 U
Iron	µg/L	480	2300	330
Lead	µg/L	0.81 J	4.3	0.82 J

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

	Location ID:	SW-05	SW-07	SW-08
	Sample Name:	MVD-032824-SS-SW05	MVD-032824-SS-SW07	MVD-032824-SS-SW08
	Sample Date:	03/28/2024	03/28/2024	03/28/2024
Parameters	**Unit**			
Metals (Continued)				
Magnesium	µg/L	15000	12000	15000
Manganese	µg/L	72	67	35
Nickel	µg/L	1.7 J	2.3	0.93 J
Potassium	µg/L	2500	1400	2300
Selenium	µg/L	4.0 U	4.0 U	4.0 U
Silver	µg/L	1.0 U	1.0 U	1.0 U
Sodium	µg/L	11000	9700	10000
Thallium	µg/L	0.38 J	1.0 U	1.0 U
Vanadium	µg/L	6.1	8.3	7.2
Zinc	µg/L	38	13	8.2
General Chemistry				
Cyanide (total)	mg/L	0.050 U	0.050 U	0.050 U

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
SIM - Selected Ion Monitoring

Table 4

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Parameter	Analysis Date (mm/dd/yyyy)	Analyte	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Metals	04/11/2024	Antimony	0.17 J	MVD-032824-SS-SW02	0.85 J	1.0 U	µg/L
				MVD-032824-SS-DUP2	0.69 J	1.0 U	µg/L
				MVD-032824-SS-SW07	0.57 J	1.0 U	µg/L
				MVD-032824-SS-SW08	0.50 J	1.0 U	µg/L
		Copper	0.081 J	MVD-032824-SS-SW02	1.5 J	2.0 U	µg/L
				MVD-032824-SS-DUP2	1.4 J	2.0 U	µg/L
				MVD-032824-SS-SW08	1.3 J	2.0 U	µg/L

Notes:

* - Blank result adjusted for sample factors where applicable

U - Not detected at the associated concentration

J - Estimated concentration

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Parameter	LCS Date (mm/dd/yyyy)	Analyte	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample ID	Qualified Result	Units
Pesticides	04/04/2024	Aldrin	53.9	44.7	19	50-137	25	MVD-032824-SS-SW01	0.050 UJ	µg/L
								MVD-032824-SS-SW02	0.050 UJ	µg/L
								MVD-032824-SS-DUP2	0.050 UJ	µg/L
								MVD-032824-SS-SW03	0.050 UJ	µg/L
								MVD-032824-SS-SW05	0.050 UJ	µg/L
								MVD-032824-SS-SW07	0.050 UJ	µg/L
								MVD-032824-SS-SW08	0.050 UJ	µg/L

Notes:

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference
UJ - Not detected; associated concentration is estimated

Table 6

Qualified Sample Results Due to Outlying MS/MSD Results
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
VOCs	BMaVtDch-0 Q32C824-SS-SW05	Acetone	46.6	45.3	3	50-150	25	0.61 J	µg/L

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration
VOCs - Volatile Organic Compounds

Table 7

Qualified Sample Data Due to Analyte Concentrations in the Trip Blanks
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
March 2024

Parameter	Blank Date (mm/dd/yyyy)	Analyte	Blank Result *	Associated Sample ID	Original Result	Qualified Result	Units
VOCs	03/28/2024	Methylene chloride	2.2 J	MVD-032824-SS-SW01	1.9 J	5.0 U	µg/L

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated concentration
J - Estimated concentration
VOCs - Volatile Organic Compounds

Data Verification Report

July 26, 2024

To	Rick Bieber	**Project No.**	12637306
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From	Jeffrey Cloud/eew	**Contact No.**	1 971 925 3756
Project Name	Glenn Springs Holdings, Inc.	**Email**	Jeffrey.Cloud@ghd.com
Subject	Analytical Results and Data Verification of Report EV24060108 Surfacewater and Groundwater Sampling Tacoma Marine View Tacoma, Washington June 2024		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for water samples collected in support of the Surfacewater and Groundwater Sampling at the Tacoma Marine View site in Tacoma, Washington during June 2024. Samples were submitted to ALS Environmental, located in Everett, Washington. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The analytical results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control data, matrix spikes and field QC data.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020

These items will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the requested parameters are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times with the exception of the samples for pesticide analysis. The associated sample results were qualified as estimated due to the implied low bias (see Table 4).

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), semi-volatile organic compound (SVOC), pesticide and polychlorinated biphenyl (PCB) analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the associated control limits with the exception of SVOC analyses. It is generally acceptable for SVOC analyses that one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria with the exception of a few low SVOC surrogate recoveries. The associated sample results were qualified as estimated due to the implied low bias (see Table 5).

5. Laboratory Control Sample Analyses

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of one per analytical batch.

5.1 Organic Analyses

The LCS/LCSD contained all analytes of interest. All LCS/LCSD recoveries and RPD values were within associated control limits, demonstrating acceptable analytical accuracy and precision.

5.2 Inorganic Analyses

The LCS and LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS and LCS/LCSD recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision (where applicable) with the exception of one high sodium recovery. The associated sample results were qualified as estimated due to the implied high bias (see Table 6).

6. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1. If only the MS or MSD was outside of the control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

6.1 Organic Analyses

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with a few exceptions. Where high recoveries were found the associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

6.2 Inorganic Analyses

The MS/MSD samples were spiked with the analyte of interest and the results were evaluated using the "Guidelines". All percent recoveries and the RPD value were within the control limits, demonstrating acceptable analytical accuracy and precision with a few exceptions. Where a high copper RPD was found the associated non-detect results were not impacted and the associated sample detections were qualified as estimated due to variability. Where low manganese recoveries were found the associated sample results were qualified as estimated due to the implied low bias (see Table 7).

7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample, one equipment blank and one field duplicate sample set.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

7.2 Equipment Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, one equipment blank was submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest with the exception of a few analytes present at low concentrations. Several sample results with concentrations similar to the blank were qualified as shown in Table 8 due to contamination as evidenced by the blank.

7.3 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent. If the reported concentration in both the investigative sample and its duplicate are less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with a few exceptions. The associated sample results and their duplicates were qualified as estimated due to variability (see Table 9).

8. Analyte Reporting

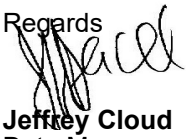
Data were reported down to the laboratory's quantitation limit (QL), which is defined as the method detection limit (MDL) with sample-specific adjustments for dilutions, aliquot size, volumes, etc. Positive analyte detections less than the RL but greater than the QL were reported as estimated (J) in Table 3 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the RL in Table 3.

If multiple QC results exhibit variability and/or high/low directional biases as related to a sample result, then any directional bias indicators are removed from the final sample result qualification.

9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards



Jeffrey Cloud
Data Management Team – Data Validator

Table 1

Sample Collection and Analysis Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters							Comments
					Metals	Mercury	Cyanide	Pesticides	PCBs	VOCs	SVOCs	
GW-061024-RN-B1	B-1	Water	06/10/2024	16:20	X	X	X	X	X	X	X	
GW-061024-RN-DUP	B-1	Water	06/10/2024	--	X	X	X	X	X	X	X	FD (GW-061024-RN-B1)
GW-061024-RN-B1A	B-1A	Water	06/10/2024	15:10	X	X	X	X	X	X	X	
GW-061024-RN-B2	B-2	Water	06/10/2024	13:25	X	X	X	X	X	X	X	
GW-061024-RN-B2A	B-2A	Water	06/10/2024	11:50	X	X	X	X	X	X	X	
GW-061124-RN-B3R	B-3R	Water	06/11/2024	10:10	X	X	X	X	X	X	X	MS/MSD
GW-061124-RN-B6A	B-6A	Water	06/11/2024	14:10	X	X	X	X	X	X	X	
GW-061124-RN-B6R	B-6R	Water	06/11/2024	15:15								
GW-061124-RN-RB	--	Water	06/11/2024	15:45								Equipment Blank
Trip Blank	--	Water	06/11/2024	--						X		Trip Blank

Notes:

FD	- Field Duplicate sample of sample in parenthesis
MS/MSD	- Matrix Spike/Matrix Spike Duplicate
VOCs	- Volatile Organic Compounds
SVOCs	- Semi-volatile Organic Compounds
PCBs	- Polychlorinated Biphenyls
"--"	- Not Applicable

Table 2

Analytical Methods
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Method	Matrix
Volatile Organic Compounds (VOCs)	SW-846 8260[(1)]	Water
Semivolatile Organic Compounds (SVOCs)	SW-846 8270[(1)]	Water
Organochlorine Pesticides	SW-846 8081[(1)]	Water
Polychlorinated Biphenyls (PCBs)	SW-846 8082[(1)]	Water
Metals	EPA 200.8[(2)]	Water
Mercury	EPA 245.1[(2)]	Water
Cyanide	SM 4500 CN E[(3)]	Water

Notes:

(1) - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

(2) - EPA - U.S. Environmental protection Agency. Analytical Methodology (October, 2007)

(3) - SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-1**	**GM-B-1**	**GM-B-1A**	**GM-B-2**
Sample Name:		**GW-061024-RN-B1**	**GW-061024-RN-DUP**	**GW-061024-RN-B1A**	**GW-061024-RN-B2**
Sample Date:		**06/10/2024**	**06/10/2024**	**06/10/2024**	**06/10/2024**
			Duplicate		
Parameters	**Unit**				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	2.0 U	2.1	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
2-Phenylbutane (sec-Butylbenzene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	25 U	25 U	25 U	25 U
Acrylonitrile	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	2.8	4.5	2.0 U	2.0 U
Bromobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cymene (p-Isopropyltoluene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromochloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	4.1

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Isopropyl benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
N-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Propylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.5
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
tert-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	10
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	0.20 U	0.20 U	0.20 U	0.20
Xylenes (total)	µg/L	3.9 J	6.5 J	2.0 U	4.6
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
1-Methylnaphthalene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,4,5-Trichlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,4,6-Trichlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,4-Dichlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	5.9 J	2.0 UJ	2.0 U	9.1
2,4-Dinitrophenol	µg/L	10 U	10 UJ	10 U	10 U
2,4-Dinitrotoluene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,6-Dichlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Chloronaphthalene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Chlorophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Methylnaphthalene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Methylphenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Nitroaniline	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
2-Nitrophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
3&4-Methylphenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
3-Nitroaniline	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U
4,6-Dinitro-2-methylphenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
4-Bromophenyl phenyl ether	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
4-Chloroaniline	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
4-Chlorophenyl phenyl ether	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
4-Nitroaniline	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
4-Nitrophenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Acenaphthene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Acenaphthylene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Aniline	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Anthracene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Azobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzo(a)anthracene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzo(a)pyrene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzo(b)fluoranthene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzo(g,h,i)perylene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzo(k)fluoranthene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Benzoic acid	µg/L	10 U	10 UJ	10 U	10 U
Benzyl alcohol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
bis(2-Chloroethoxy)methane	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
bis(2-Chloroethyl)ether	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	13 J	2.0 UJ	2.0 U	4.3
Butyl benzylphthalate (BBP)	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Carbazole	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Chrysene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Di-n-butylphthalate (DBP)	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Dibenz(a,h)anthracene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Dibenzofuran	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
Diethyl phthalate	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Dimethyl phthalate	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Fluoranthene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Fluorene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Hexachlorobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Hexachloroethane	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Indeno(1,2,3-cd)pyrene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Isophorone	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
N-Nitrosodi-n-propylamine	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
N-Nitrosodimethylamine	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
N-Nitrosodiphenylamine	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Nitrobenzene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Pentachlorophenol	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U
Phenanthrene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Phenol	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Pyrene	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Pyridine	µg/L	2.0 U	2.0 UJ	2.0 U	2.0 U
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		GM-B-1	GM-B-1	GM-B-1A	GM-B-2
Sample Name:		GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
Sample Date:		06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Polychlorinated Biphenyls (Continued)					
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.10	0.10 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Pesticides					
4,4'-DDD	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
4,4'-DDE	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
4,4'-DDT	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Aldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
alpha-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
alpha-Chlordane	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
beta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
delta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Dieldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan I	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan II	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan sulfate	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin aldehyde	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin ketone	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
gamma-BHC (lindane)	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

	Location ID:	GM-B-1	GM-B-1	GM-B-1A	GM-B-2
	Sample Name:	GW-061024-RN-B1	GW-061024-RN-DUP	GW-061024-RN-B1A	GW-061024-RN-B2
	Sample Date:	06/10/2024	06/10/2024	06/10/2024	06/10/2024
			Duplicate		
Parameters	**Unit**				
Pesticides (Continued)					
gamma-Chlordane	µg/L	0.054 J-	0.050 UJ	0.050 UJ	0.050 UJ
Heptachlor	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Heptachlor epoxide	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Methoxychlor	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Toxaphene	µg/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Metals					
Aluminum	µg/L	1500	1400	630	280
Antimony	µg/L	3.4	3.0	1.0 U	1.0 U
Arsenic	µg/L	61	60	1.0 U	15
Barium	µg/L	1900	2000	27	2600
Beryllium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	4.6	4.3	1.0 U	1.3
Calcium	µg/L	35000	36000	45000	73000
Chromium	µg/L	16	14	2.0 U	2.7
Cobalt	µg/L	6.7	6.6	1.0 U	8.3
Copper	µg/L	31 J	28 J	2.0 U	9.1 J
Iron	µg/L	19000	17000	8700	29000
Lead	µg/L	290	270	1.0 U	76
Magnesium	µg/L	64000	62000	14000	21000
Manganese	µg/L	120 J-	110 J-	220 J-	290 J-
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	150	150	2.0 U	59
Potassium	µg/L	36000	36000	5200	11000

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-1**	**GM-B-1**	**GM-B-1A**	**GM-B-2**
Sample Name:		**GW-061024-RN-B1**	**GW-061024-RN-DUP**	**GW-061024-RN-B1A**	**GW-061024-RN-B2**
Sample Date:		**06/10/2024**	**06/10/2024**	**06/10/2024**	**06/10/2024**
			Duplicate		
Parameters	**Unit**				
Metals (Continued)					
Selenium	µg/L	4.0 U	4.0 U	4.0 U	4.0 U
Silver	µg/L	1.0 U	1.0 U	34	28
Sodium	µg/L	470000 J+	470000 J+	13000 J+	130000 J+
Thallium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	µg/L	10	11	5.3	2.0 U
Zinc	µg/L	520	470	3.9	910
General Chemistry					
Cyanide (total)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,2-Dichloropropane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
2-Phenylbutane (sec-Butylbenzene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	25 U	25 U	25 U	25 U
Acrylonitrile	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon disulfide	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Carbon tetrachloride	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	4.5
cis-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cymene (p-Isopropyltoluene)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromochloromethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dibromomethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Volatile Organic Compounds (Continued)					
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Isopropyl benzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
N-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
N-Propylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Styrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
tert-Butylbenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,2-Dichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
trans-1,3-Dichloropropene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichloroethene	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Vinyl chloride	µg/L	0.20 U	0.20 U	0.23	2.6
Xylenes (total)	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
1,2-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
1,3-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
1,4-Dichlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
1-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2,3,4,6-Tetrachlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.4 U
2,4-Dinitrophenol	µg/L	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2,6-Dichlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Chloronaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Chlorophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylnaphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
2-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
3-Nitroaniline	µg/L	5.0 U	5.0 U	5.0 U	5.0 UJ
4,6-Dinitro-2-methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Bromophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Chloro-3-methylphenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Chlorophenyl phenyl ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
4-Nitroaniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
4-Nitrophenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Acenaphthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Acenaphthylene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Aniline	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Azobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzo(a)anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzo(a)pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzo(b)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzo(g,h,i)perylene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzo(k)fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Benzoic acid	µg/L	10 U	10 U	10 U	10 U
Benzyl alcohol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
bis(2-Chloroethoxy)methane	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
bis(2-Chloroethyl)ether	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Butyl benzylphthalate (BBP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Carbazole	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Chrysene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Di-n-butylphthalate (DBP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Dibenz(a,h)anthracene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Dibenzofuran	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Location ID:		**GM-B-2A**	**GM-B-3R**	**GM-B-6A**	**GM-B-6R**
Sample Name:		**GW-061024-RN-B2A**	**GW-061124-RN-B3R**	**GW-061124-RN-B6A**	**GW-061124-RN-B6R**
Sample Date:		**06/10/2024**	**06/11/2024**	**06/11/2024**	**06/11/2024**
Parameters	**Unit**				
Semi-volatile Organic Compounds (Continued)					
Diethyl phthalate	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Dimethyl phthalate	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Fluoranthene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Fluorene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Hexachlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Hexachloroethane	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Indeno(1,2,3-cd)pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Isophorone	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
N-Nitrosodi-n-propylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
N-Nitrosodimethylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
N-Nitrosodiphenylamine	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Naphthalene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Nitrobenzene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Pentachlorophenol	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Phenol	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Pyrene	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Pyridine	µg/L	2.0 U	2.0 U	2.0 U	2.0 UJ
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

	Location ID:	GM-B-2A	GM-B-3R	GM-B-6A	GM-B-6R
	Sample Name:	GW-061024-RN-B2A	GW-061124-RN-B3R	GW-061124-RN-B6A	GW-061124-RN-B6R
	Sample Date:	06/10/2024	06/11/2024	06/11/2024	06/11/2024
Parameters	**Unit**				
Polychlorinated Biphenyls (Continued)					
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Aroclor-1268 (PCB-1268)	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Pesticides					
4,4'-DDD	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
4,4'-DDE	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
4,4'-DDT	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Aldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
alpha-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
alpha-Chlordane	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
beta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
delta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Dieldrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan I	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan II	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endosulfan sulfate	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin aldehyde	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Endrin ketone	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
gamma-BHC (lindane)	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

	Location ID:	GM-B-2A	GM-B-3R	GM-B-6A	GM-B-6R
	Sample Name:	GW-061024-RN-B2A	GW-061124-RN-B3R	GW-061124-RN-B6A	GW-061124-RN-B6R
	Sample Date:	06/10/2024	06/11/2024	06/11/2024	06/11/2024
Parameters	**Unit**				
Pesticides (Continued)					
gamma-Chlordane	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Heptachlor	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Heptachlor epoxide	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Methoxychlor	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 UJ
Toxaphene	µg/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ
Metals					
Aluminum	µg/L	280	310	830	95
Antimony	µg/L	1.0 U	1.0 U	1.0 U	1.2
Arsenic	µg/L	3.1	6.7	1.8	4.4
Barium	µg/L	16	62	16	89
Beryllium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	µg/L	15000	34000	20000	59000
Chromium	µg/L	2.4	2.8	7.6	2.0 U
Cobalt	µg/L	1.0 U	4.7	1.0 U	1.0 U
Copper	µg/L	2.0 U	3.8 J	6.4 J	2.0 U
Iron	µg/L	14000	26000	7300	17000
Lead	µg/L	1.3	1.6	4.1	27
Magnesium	µg/L	13000	25000	14000	29000
Manganese	µg/L	400 J-	1900 J-	100 J-	250 J-
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	µg/L	2.0 U	29	4.2	5.6
Potassium	µg/L	4700	8700	4500	16000

Table 3

Analytical Results Summary
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

	Location ID:	GM-B-2A	GM-B-3R	GM-B-6A	GM-B-6R
	Sample Name:	GW-061024-RN-B2A	GW-061124-RN-B3R	GW-061124-RN-B6A	GW-061124-RN-B6R
	Sample Date:	06/10/2024	06/11/2024	06/11/2024	06/11/2024
Parameters	**Unit**				
Metals (Continued)					
Selenium	µg/L	4.0 U	4.0 U	4.0 U	4.0 U
Silver	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Sodium	µg/L	12000 J+	68000 J+	17000 J+	120000 J+
Thallium	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vanadium	µg/L	4.9	2.5 U	7.3	5.2 J+
Zinc	µg/L	11	14	24	27
General Chemistry					
Cyanide (total)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U

Notes:

U - Not detected at the associated reporting limit
J- Estimated concentration
J+ - Estimated concentration; implied high bias
J- - Estimated concentration; implied low bias
UJ - Not detected; associated reporting limit is estimated

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results	Units
Pesticides	GW-061024-RN-B1	7 days	9 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L
				beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.054 J-	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L
	GW-061024-RN-B1A	7 days	9 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L
				beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results	Units
Pesticides	GW-061024-RN-B1A	7 days	9 days	Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L
	GW-061024-RN-B2	7 days	9 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L
				beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results		Units
Pesticides	GW-061024-RN-B2	7 days	9 days	Toxaphene	2.0	UJ	µg/L
	GW-061024-RN-B2A	7 days	9 days	4,4'-DDD	0.050	UJ	µg/L
				4,4'-DDE	0.050	UJ	µg/L
				4,4'-DDT	0.050	UJ	µg/L
				Aldrin	0.050	UJ	µg/L
				alpha-BHC	0.050	UJ	µg/L
				alpha-Chlordane	0.050	UJ	µg/L
				beta-BHC	0.050	UJ	µg/L
				delta-BHC	0.050	UJ	µg/L
				Dieldrin	0.050	UJ	µg/L
				Endosulfan I	0.050	UJ	µg/L
				Endosulfan II	0.050	UJ	µg/L
				Endosulfan sulfate	0.050	UJ	µg/L
				Endrin	0.050	UJ	µg/L
				Endrin aldehyde	0.050	UJ	µg/L
				Endrin ketone	0.050	UJ	µg/L
				gamma-BHC (lindane)	0.050	UJ	µg/L
				gamma-Chlordane	0.050	UJ	µg/L
				Heptachlor	0.050	UJ	µg/L
				Heptachlor epoxide	0.050	UJ	µg/L
				Methoxychlor	0.050	UJ	µg/L
				Toxaphene	2.0	UJ	µg/L
Pesticides	GW-061024-RN-DUP	7 days	9 days	4,4'-DDD	0.050	UJ	µg/L
				4,4'-DDE	0.050	UJ	µg/L
				4,4'-DDT	0.050	UJ	µg/L
				Aldrin	0.050	UJ	µg/L
				alpha-BHC	0.050	UJ	µg/L
				alpha-Chlordane	0.050	UJ	µg/L
				beta-BHC	0.050	UJ	µg/L
				delta-BHC	0.050	UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results	Units
Pesticides	GW-061024-RN-DUP	7 days	9 days	Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L
	GW-061124-RN-B3R	7 days	8 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L
				beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results	Units
Pesticides	GW-061124-RN-B3R	7 days	8 days	Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L
	GW-061124-RN-B6A	7 days	8 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L
				beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L
	GW-061124-RN-B6R	7 days	8 days	4,4'-DDD	0.050 UJ	µg/L
				4,4'-DDE	0.050 UJ	µg/L
				4,4'-DDT	0.050 UJ	µg/L
				Aldrin	0.050 UJ	µg/L
				alpha-BHC	0.050 UJ	µg/L
				alpha-Chlordane	0.050 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Holding Time Criteria	Holding Time	Analyte	Qualified Sample Results	Units
Pesticides	GW-061124-RN-B6R	7 days	8 days	beta-BHC	0.050 UJ	µg/L
				delta-BHC	0.050 UJ	µg/L
				Dieldrin	0.050 UJ	µg/L
				Endosulfan I	0.050 UJ	µg/L
				Endosulfan II	0.050 UJ	µg/L
				Endosulfan sulfate	0.050 UJ	µg/L
				Endrin	0.050 UJ	µg/L
				Endrin aldehyde	0.050 UJ	µg/L
				Endrin ketone	0.050 UJ	µg/L
				gamma-BHC (lindane)	0.050 UJ	µg/L
				gamma-Chlordane	0.050 UJ	µg/L
				Heptachlor	0.050 UJ	µg/L
				Heptachlor epoxide	0.050 UJ	µg/L
				Methoxychlor	0.050 UJ	µg/L
				Toxaphene	2.0 UJ	µg/L

Notes:

J- - Estimated concentration; implied low bias

UJ - Not detected; associated concentration is estimated

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result	Units
SVOCs	GW-061124-RN-B6R	Nitrobenzene-D5	45.3	53.125	1,2,4-Trichlorobenzene	2.0 UJ	µg/L
		Terphenyl-d14	51.2	58-132	1,2-Dichlorobenzene	2.0 UJ	µg/L
					1,3-Dichlorobenzene	2.0 UJ	µg/L
					1,4-Dichlorobenzene	2.0 UJ	µg/L
					1-Methylnaphthalene	2.0 UJ	µg/L
					2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	2.0 UJ	µg/L
					2,4-Dinitrotoluene	2.0 UJ	µg/L
					2,6-Dinitrotoluene	2.0 UJ	µg/L
					2-Chloronaphthalene	2.0 UJ	µg/L
					2-Methylnaphthalene	2.0 UJ	µg/L
					2-Nitroaniline	2.0 UJ	µg/L
					3,3'-Dichlorobenzidine	2.0 UJ	µg/L
					3-Nitroaniline	5.0 UJ	µg/L
					4-Bromophenyl phenyl ether	2.0 UJ	µg/L
					4-Chloroaniline	2.0 UJ	µg/L
					4-Chlorophenyl phenyl ether	2.0 UJ	µg/L
					4-Nitroaniline	2.0 UJ	µg/L
					Acenaphthene	2.0 UJ	µg/L
					Acenaphthylene	2.0 UJ	µg/L
					Aniline	2.0 UJ	µg/L
					Anthracene	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061124-RN-B6R	Nitrobenzene-D5	45.3	53.125	Azobenzene	2.0 UJ	µg/L
		Terphenyl-d14	51.2	58-132	Benzo(a)anthracene	2.0 UJ	µg/L
					Benzo(a)pyrene	2.0 UJ	µg/L
					Benzo(b)fluoranthene	2.0 UJ	µg/L
					Benzo(g,h,i)perylene	2.0 UJ	µg/L
					Benzo(k)fluoranthene	2.0 UJ	µg/L
					bis(2-Chloroethoxy)methane	2.0 UJ	µg/L
					bis(2-Chloroethyl)ether	2.0 UJ	µg/L
					bis(2-Ethylhexyl)phthalate (DEHP)	2.0 UJ	µg/L
					Butyl benzylphthalate (BBP)	2.0 UJ	µg/L
					Carbazole	2.0 UJ	µg/L
					Chrysene	2.0 UJ	µg/L
					Di-n-butylphthalate (DBP)	2.0 UJ	µg/L
					Di-n-octyl phthalate (DnOP)	2.0 UJ	µg/L
					Dibenz(a,h)anthracene	2.0 UJ	µg/L
					Dibenzofuran	2.0 UJ	µg/L
					Diethyl phthalate	2.0 UJ	µg/L
					Dimethyl phthalate	2.0 UJ	µg/L
					Fluoranthene	2.0 UJ	µg/L
					Fluorene	2.0 UJ	µg/L
					Hexachlorobenzene	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061124-RN-B6R	Nitrobenzene-D5	45.3	53.125	Hexachlorobutadiene	2.0 UJ	µg/L
		Terphenyl-d14	51.2	58-132	Hexachlorocyclopentadiene	2.0 UJ	µg/L
					Hexachloroethane	2.0 UJ	µg/L
					Indeno(1,2,3-cd)pyrene	2.0 UJ	µg/L
					Isophorone	2.0 UJ	µg/L
					N-Nitrosodi-n-propylamine	2.0 UJ	µg/L
					N-Nitrosodimethylamine	2.0 UJ	µg/L
					N-Nitrosodiphenylamine	2.0 UJ	µg/L
					Naphthalene	2.0 UJ	µg/L
					Nitrobenzene	2.0 UJ	µg/L
					Phenanthrene	2.0 UJ	µg/L
					Pyrene	2.0 UJ	µg/L
					Pyridine	2.0 UJ	µg/L
	GW-061024-RN-DUP	2,4,6-Tribromophenol	26.9	45-143	1,2,4-Trichlorobenzene	2.0 UJ	µg/L
		2-Fluorobiphenyl	21.1	30.3-127	1,2-Dichlorobenzene	2.0 UJ	µg/L
		2-Fluorophenol	14.6	29-105	1,3-Dichlorobenzene	2.0 UJ	µg/L
		Nitrobenzene-D5	23.0	53-125	1,4-Dichlorobenzene	2.0 UJ	µg/L
		Terphenyl-d14	31.0	58-132	1-Methylnaphthalene	2.0 UJ	µg/L
					2,2'-Oxybis(2-chloropropane) (bis(2-Chloroisopropyl) ether)	2.0 UJ	µg/L
					2,3,4,6-Tetrachlorophenol	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061024-RN-DUP	2,4,6-Tribromophenol	26.9	45-143	2,4,5-Trichlorophenol	2.0 UJ	µg/L
		2-Fluorobiphenyl	21.1	30.3-127	2,4,6-Trichlorophenol	2.0 UJ	µg/L
		2-Fluorophenol	14.6	29-105	2,4-Dichlorophenol	2.0 UJ	µg/L
		Nitrobenzene-D5	23.0	53-125	2,4-Dimethylphenol	2.0 UJ	µg/L
		Terphenyl-d14	31.0	58-132	2,4-Dinitrophenol	10 UJ	µg/L
					2,4-Dinitrotoluene	2.0 UJ	µg/L
					2,6-Dichlorophenol	2.0 UJ	µg/L
					2,6-Dinitrotoluene	2.0 UJ	µg/L
					2-Chloronaphthalene	2.0 UJ	µg/L
					2-Chlorophenol	2.0 UJ	µg/L
					2-Methylnaphthalene	2.0 UJ	µg/L
					2-Methylphenol	2.0 UJ	µg/L
					2-Nitroaniline	2.0 UJ	µg/L
					2-Nitrophenol	2.0 UJ	µg/L
					3&4-Methylphenol	2.0 UJ	µg/L
					3,3'-Dichlorobenzidine	2.0 UJ	µg/L
					3-Nitroaniline	5.0 UJ	µg/L
					4,6-Dinitro-2-methylphenol	2.0 UJ	µg/L
					4-Bromophenyl phenyl ether	2.0 UJ	µg/L
					4-Chloro-3-methylphenol	2.0 UJ	µg/L
					4-Chloroaniline	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061024-RN-DUP	2,4,6-Tribromophenol	26.9	45-143	4-Chlorophenyl phenyl ether	2.0 UJ	µg/L
		2-Fluorobiphenyl	21.1	30.3-127	4-Nitroaniline	2.0 UJ	µg/L
		2-Fluorophenol	14.6	29-105	4-Nitrophenol	2.0 UJ	µg/L
		Nitrobenzene-D5	23.0	53-125	Acenaphthene	2.0 UJ	µg/L
		Terphenyl-d14	31.0	58-132	Acenaphthylene	2.0 UJ	µg/L
					Aniline	2.0 UJ	µg/L
					Anthracene	2.0 UJ	µg/L
					Azobenzene	2.0 UJ	µg/L
					Benzo(a)anthracene	2.0 UJ	µg/L
					Benzo(a)pyrene	2.0 UJ	µg/L
					Benzo(b)fluoranthene	2.0 UJ	µg/L
					Benzo(g,h,i)perylene	2.0 UJ	µg/L
					Benzo(k)fluoranthene	2.0 UJ	µg/L
					Benzoic acid	10 UJ	µg/L
					Benzyl alcohol	2.0 UJ	µg/L
					bis(2-Chloroethoxy)methane	2.0 UJ	µg/L
					bis(2-Chloroethyl)ether	2.0 UJ	µg/L
					bis(2-Ethylhexyl)phthalate (DEHP)	2.0 UJ	µg/L
					Butyl benzylphthalate (BBP)	2.0 UJ	µg/L
					Carbazole	2.0 UJ	µg/L
					Chrysene	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061024-RN-DUP	2,4,6-Tribromophenol	26.9	45-143	Di-n-butylphthalate (DBP)	2.0 UJ	µg/L
		2-Fluorobiphenyl	21.1	30.3-127	Di-n-octyl phthalate (DnOP)	2.0 UJ	µg/L
		2-Fluorophenol	14.6	29-105	Dibenz(a,h)anthracene	2.0 UJ	µg/L
		Nitrobenzene-D5	23.0	53-125	Dibenzofuran	2.0 UJ	µg/L
		Terphenyl-d14	31.0	58-132	Diethyl phthalate	2.0 UJ	µg/L
					Dimethyl phthalate	2.0 UJ	µg/L
					Fluoranthene	2.0 UJ	µg/L
					Fluorene	2.0 UJ	µg/L
					Hexachlorobenzene	2.0 UJ	µg/L
					Hexachlorobutadiene	2.0 UJ	µg/L
					Hexachlorocyclopentadiene	2.0 UJ	µg/L
					Hexachloroethane	2.0 UJ	µg/L
					Indeno(1,2,3-cd)pyrene	2.0 UJ	µg/L
					Isophorone	2.0 UJ	µg/L
					N-Nitrosodi-n-propylamine	2.0 UJ	µg/L
					N-Nitrosodimethylamine	2.0 UJ	µg/L
					N-Nitrosodiphenylamine	2.0 UJ	µg/L
					Naphthalene	2.0 UJ	µg/L
					Nitrobenzene	2.0 UJ	µg/L

Table 5

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

			Surrogate	Control Limits		Qualified	
Parameter	**Sample ID**	**Surrogate**	**% Recovery**	**% Recovery**	**Analyte**	**Result**	**Units**
SVOCs	GW-061024-RN-DUP	2,4,6-Tribromophenol	26.9	45-143	Pentachlorophenol	5.0 UJ	µg/L
		2-Fluorobiphenyl	21.1	30.3-127	Phenanthrene	2.0 UJ	µg/L
		2-Fluorophenol	14.6	29-105	Phenol	2.0 UJ	µg/L
		Nitrobenzene-D5	23.0	53-125	Pyrene	2.0 UJ	µg/L
		Terphenyl-d14	31.0	58-132	Pyridine	2.0 UJ	µg/L

Notes:

UJ - Not detected; associated concentration is estimated
SVOCs - Semi-volatile Organic Compounds

Table 6

Qualified Sample Results Due to Outlying LCS/LCSD Results
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	LCS Date (mm/dd/yyyy)	Analyte	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample ID	Qualified Result		Units
Metals	06/14/2024	Sodium	103	106	2	80-105	10	GW-061024-RN-B1	470000	J+	µg/L
								GW-061024-RN-B1A	13000	J+	µg/L
								GW-061024-RN-B2	130000	J+	µg/L
								GW-061024-RN-B2A	12000	J+	µg/L
								GW-061124-RN-B3R	68000	J+	µg/L
								GW-061124-RN-B6A	17000	J+	µg/L
								GW-061124-RN-B6R	120000	J+	µg/L
								GW-061024-RN-DUP	470000	J+	µg/L

Notes:

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference
J+ - Estimated concentration; implied high bias

Table 7

Qualified Sample Results Due to Outlying MS/MSD Results
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	GW-061124-RN-B3R	Copper	124	108	13	85.4-109	2.84	GW-061024-RN-B1	31 J	µg/L
								GW-061024-RN-B2	9.1 J	µg/L
								GW-061124-RN-B3R	3.8 J	µg/L
								GW-061124-RN-B6A	6.4 J	µg/L
								GW-061024-RN-DUP	28 J	µg/L
		Manganese	77.4	78.4	0	82.2-110	4.52	GW-061024-RN-B1	120 J-	µg/L
								GW-061024-RN-B1A	220 J-	µg/L
								GW-061024-RN-B2	290 J-	µg/L
								GW-061024-RN-B2A	400 J-	µg/L
								GW-061124-RN-B3R	1900 J-	µg/L
								GW-061124-RN-B6A	100 J-	µg/L
								GW-061124-RN-B6R	250 J-	µg/L
								GW-061024-RN-DUP	110 J-	µg/L

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration
J- - Estimated concentration; implied low bias

Table 8

Qualified Sample Data Due to Analyte Concentrations in the Equipment Blanks
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Equipment Blank ID	Blank Date (dd/mm/yyyy)	Analyte	Blank Result *	Associated Sample ID	Original Result	Qualified Result	Units
SVOCs	GW-061124-RN-RB	6/11/2024	2,4-Dimethylphenol	6.5	GW-061124-RN-B6R	2.4	2.4 U	µg/L
Metals	GW-061124-RN-RB	6/11/2024	Vanadium	3.6	GW-061124-RN-B3R	2.5	2.5 U	µg/L
					GW-061124-RN-B6R	5.2	5.2 J+	µg/L

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated concentration
J+ - Estimated concentration; implied high bias
SVOCs - Semi-volatile Organic Compounds

Table 9

Qualified Sample Data Due to Variability in Field Duplicate Results
Surfacewater and Groundwater Sampling
Glenn Springs Holdings, Inc. - Tacoma Marine View
Tacoma, Washington
June 2024

Parameter	Analyte	RPD	Diff	RL	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
VOCs	Xylenes (total)	--	2.6	2	GW-061024-RN-B1	3.9 J	GW-061024-RN-DUP	6.5 J	µg/L
SVOCs	2,4-Dimethylphenol	--	3.9	2	GW-061024-RN-B1	5.9 J	GW-061024-RN-DUP	2.0 UJ	µg/L
	bis(2-Ethylhexyl)phthalate (DEHP)	146.7	--	--	GW-061024-RN-B1	13 J	GW-061024-RN-DUP	2.0 UJ	µg/L

Notes:

RPD - Relative Percent Difference (i.e., >50% for waters/air or >100% for soils)
Diff - Difference (i.e., >1X RL for waters/air or >2XRL for soils)
RL - Reporting limit
"--" - Not Applicable
J - Estimated concentration
UJ - Not detected; associated concentration is estimated
VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds